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9

10 **UNITED STATES DISTRICT COURT**  
11 **CENTRAL DISTRICT OF CALIFORNIA**

12 TERRY SONNEVELDT, ESTHER  
13 WRIGHT SCHNEIDER, SHANNON  
14 PROVEN, MICHAEL BIBBO, ALAN  
MESHBERG, BRIAN HUME, AMIE  
15 LEVASSEUR, JEAN LEVASSEUR,  
16 CHRISTOPHER LACASSE, BETH  
PICKERD, DAN PICKERD, TIM  
17 HALWAS, ERIN MATHENY, LEWIS  
18 DELVECCHIO, and JON SOWARDS,  
on behalf of themselves and all others  
19 similarly situated,

20 Plaintiffs,

21 v.

22  
23 MAZDA MOTOR OF AMERICA, INC.  
24 D/B/A MAZDA NORTH AMERICAN  
25 OPERATIONS and MAZDA MOTOR  
CORPORATION,

26 Defendants.  
27  
28

**Case No. 8:19-cv-1298**

CLASS ACTION

**CLASS ACTION COMPLAINT**

**DEMAND FOR JURY TRIAL**

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1 The allegations herein are based on personal knowledge as to Plaintiffs' own  
2 conduct and are made on information and belief as to all other matters based on an  
3 investigation by counsel:<sup>1</sup>

4 **I. INTRODUCTION**

5 1. In modern vehicles, the useful life of the engine is between 150,000 and  
6 300,000 miles. Mazda Motor of America, Inc. d/b/a Mazda North American  
7 Operations ("MNAO") and Mazda Motor Corporation ("MMC" and together with  
8 MNAO, "Mazda" or "Defendants") represent that the water pumps installed in the  
9 Class Vehicles, as defined below, should last for the useful life of the engines without  
10 the need for any service, maintenance or repair. Indeed, Mazda omits the water pump  
11 from the service and maintenance schedules, which identify any vehicle components  
12 that need to be maintained, repaired, or replaced. And not only does Mazda represent  
13 that the water pump will not need to be serviced or maintained, but the internal  
14 location of the water pump in the engine conceals it from view or inspection when  
15 other routine service is being performed on the Class Vehicles.

16 2. Despite knowing for more than a decade that their vehicles incorporating  
17 the Mazda Cyclone engine, branded as the MZI Cyclone engine (the "Cyclone  
18 Engine"), contain a defect in design, manufacturing, materials and/or workmanship  
19 that causes the water pump to suddenly and prematurely fail well-before the end of  
20 the useful life of the engine, which leads to catastrophic engine failure or a costly  
21 replacement due to the water pump's inaccessible placement in the engine, Mazda  
22 fails to provide such information about this "Water Pump Defect" to the public or  
23 correct the Water Pump Defect.

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25 <sup>1</sup> Counsel's investigation includes an analysis of publicly available information,  
26 including consumer complaints to the National Highway Traffic Safety  
27 Administration ("NHTSA") and additional analysis. Plaintiffs believe that a  
28 reasonable opportunity for discovery will provide further support for the claims  
alleged herein.

1           3.       Beginning in 2007 and continuing through the 2016 model year, Mazda  
2 has incorporated the Cyclone Engine into hundreds of thousands of vehicles, which  
3 includes the CX-9 for model years 2007 through 2016 and the Mazda 6 for model  
4 years 2009 through 2013 (the “Class Vehicles”). Unbeknownst to purchasers and  
5 lessees of the Class Vehicles at the time of purchase or lease, the Class Vehicles  
6 contain the Water Pump Defect.

7           4.       Plaintiffs Esther Wright Schneider, Shannon Proven, Michael Bibbo,  
8 Alan Meshberg, Brian Hume, Amie and Jean Levasseur, Terry Sonneveldt,  
9 Christopher Lacasse, Beth and Dan Pickerd, Tim Halwas, Erin Matheny, Lewis  
10 Delvecchio, and Jon Sowards (“Plaintiffs”) bring this class action against Mazda,  
11 individually and on behalf of all persons or entities in the United States who  
12 purchased, leased or own a Class Vehicle, asserting claims for fraud by  
13 omission/fraudulent concealment, negligent misrepresentation, breach of express and  
14 implied warranties, violation of the Magnuson-Moss Warranty Act, 15 U.S.C. §  
15 2301, *et seq.*, violation of the Song-Beverly Consumer Warranty Act, Cal. Civ. Code  
16 § 1791, *et seq.*, and violations of the California, Colorado, Illinois, Louisiana,  
17 Massachusetts, Michigan, North Carolina, Pennsylvania, Texas, and Virginia  
18 consumer protection statutes on behalf of the Classes (defined below).

19           5.       The Cyclone Engine contains an internal chain-driven water pump,  
20 which means the timing chain is connected to the water pump and provides the power  
21 the water pump needs to circulate coolant through the engine when the engine is  
22 running.

23           6.       The chain-driven water pump in the Class Vehicles is located internal to  
24 the Cyclone Engine, behind numerous engine components, including the timing chain  
25 cover. Because of this, it is hidden from view even during other routine maintenance  
26 or service within the engine compartment. As a result of the Water Pump Defect,  
27 coolant is able to leak from the water pump into the oil pan and/or other engine  
28 components, allowing it to mix with the engine’s oil. Often, this mixture of engine oil

1 and coolant circulates throughout the engine leading to destruction of the engine, as  
2 happened with numerous Plaintiffs and others.

3 7. Plaintiffs and members of the Classes relied on Mazda's representation  
4 that the water pump in the Class Vehicles did not require maintenance, service, repair  
5 or replacement.

6 8. Thus, consumers are not warned that they are likely to suffer a sudden  
7 water pump failure that poses significant safety risks when the Class Vehicles  
8 suddenly become inoperable, nor are they warned that due to the relatively  
9 inaccessible location of the water pump in the engine, the cost to repair or replace the  
10 defective water pump is significant even in situations where the entire engine is not  
11 destroyed.

12 9. Upon information and belief, MMC worked in conjunction with Ford  
13 Motor Company ("Ford") with respect to the design, engineering, development,  
14 and/or testing of the Cyclone Engine. In fact, Ford also incorporated the Cyclone  
15 Engine into millions of its own vehicles, under the brand name *Duratec*.

16 10. Based on pre-production testing and design failure mode analysis,  
17 warranty claims and consumer complaints, as well as complaints to NHTSA, and/or  
18 Ford, *inter alia*, Defendants were aware of the Water Pump Defect in the Class  
19 Vehicles but concealed the defect from Plaintiffs and members of the Classes.  
20 Indeed, despite being aware of the defect and numerous complaints, Mazda  
21 knowingly, actively and affirmatively omitted and/or concealed the existence of the  
22 Water Pump Defect to increase profits by selling additional Class Vehicles and by  
23 unlawfully transferring the cost of repair or replacement of the water pump and  
24 damaged engine parts to Plaintiffs and members of the Classes.

25 11. Knowledge and information regarding the Water Pump Defect and the  
26 associated safety risk was in the exclusive and superior possession of Defendants,  
27 their partner Ford, and their authorized dealers, and was not provided to Plaintiffs and  
28 members of the Classes, who could not reasonably discover the defect through due

1 diligence. To be sure, despite Defendants’ knowledge, Mazda continued selling  
2 defective vehicles, has failed to disclose the existence of the Water Pump Defect to  
3 Plaintiffs and members of the Classes, has not issued a recall and has not remedied  
4 the defect and/or compensated Class Vehicle purchasers, owners or lessees for this  
5 material defect.

6 12. No reasonable consumer expects to purchase or lease a vehicle that  
7 contains a concealed Water Pump Defect which creates the safety hazards and  
8 significant monetary losses detailed herein. The Water Pump Defect is material to  
9 Plaintiffs and members of the Classes because when they purchased or leased their  
10 Class Vehicles, they reasonably expected that the Class Vehicles would be free from  
11 water pump defects — especially given the fact that Mazda recommends no  
12 inspection, service, or maintenance on the water pump within the normal expected  
13 useful life of the Class Vehicles. Had Defendants disclosed the Water Pump Defect,  
14 Plaintiffs and members of the Classes would not have purchased or leased the Class  
15 Vehicles, or would have paid less for their Class Vehicles.

16 13. Indeed, the Water Pump Defect presents a significant safety risk for  
17 Plaintiffs and members of the Classes because when the water pump suddenly and  
18 unexpectedly fails and causes catastrophic engine failure, Class Vehicles lose engine  
19 power, including the ability to accelerate, maintain speed, readily control steering  
20 and/or fully engage the brakes. Thus, drivers and occupants of the Class Vehicles are  
21 at risk for serious accidents as a result of Defendants’ failure to disclose the existence  
22 of the Water Pump Defect and corresponding safety risk.

23 14. This hazardous defect has resulted in numerous complaints to NHTSA  
24 and to authorized Mazda dealerships throughout the country. For example, many  
25 Mazda customers have reported sudden engine failure while driving as a result of the  
26 Water Pump Defect, leading to dangerous on-road situations when their vehicles lose  
27 power suddenly.

28 ///

1           15. In the United States, MNAO provides warranty coverage for Class  
2 Vehicles under one or more warranties. For illustrative purposes, MNAO currently  
3 offers New Vehicle Limited Warranty coverage for Class Vehicles sold under the  
4 Mazda brand for 3 years or 36,000 miles and extended warranty coverage for  
5 Powertrain components for 5 years or 60,000 miles.<sup>2</sup>

6           16. Defendants MMC and MNAO breached their express and implied  
7 warranties through which Mazda promised to, *inter alia*, (1) provide Class Vehicles  
8 fit for the ordinary purpose for which they were sold; and (2) repair and correct  
9 manufacturing defects or defects in materials or workmanship of any parts they  
10 supplied, including the water pump and corresponding damaged engine parts.  
11 Because the Water Pump Defect was present at the time of sale or lease of the Class  
12 Vehicles and concealed from Plaintiffs and members of the Classes, MNAO, on  
13 behalf of itself and MMC, was required to repair or replace the water pump and  
14 corresponding damaged engine parts resulting from the Water Pump Defect under the  
15 terms of the warranties. Yet, on information and belief, MNAO has failed to repair or  
16 replace the defective and damaged parts free of charge under Mazda's warranties.

17           17. Furthermore, given the latent nature of the Water Pump Defect,  
18 Defendants knew or should have known that the majority of water pump failures  
19 likely would occur outside of the warranty periods and has wrongfully transferred the  
20 significant costs of repair or replacement to Plaintiffs and members of the Classes  
21 through Defendants' fraudulent concealment and/or fraudulent omission of the  
22 defect. These costs are significant and range in the thousands of dollars, and no  
23 reasonable consumer expects to incur such costs during the useful life of the engine,  
24 especially given Defendants' representations in the maintenance schedules. In light of  
25 this, Defendants' attempt to enforce warranty limitations against Plaintiffs and the  
26 Classes is unconscionable.

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27 <sup>2</sup> See, e.g., Exhibit A (2012 Mazda CX-9 Warranty Booklet). See also  
28 <https://www.mazdausa.com/owners/warranty>.

1 18. As a result of the Water Pump Defect and the placement of the water  
2 pump internal to the Cyclone Engine, repair or replacement of the water pump can  
3 lead to Plaintiffs and Class members being forced to pay over \$1,500 for replacement  
4 of the water pump alone or as much as \$11,000 to replace a destroyed engine.

5 19. Thus, as a direct result of Defendants' unlawful conduct, Plaintiffs and  
6 members of the Classes have been harmed and are entitled to, *inter alia*, actual  
7 damages, including: damages for diagnosis, repair and/or replacement of the water  
8 pump, damaged engine parts or the entire engine; damages for the diminished value  
9 of their vehicles; compensatory, statutory and punitive damages, attorneys' fees,  
10 costs, restitution and/or injunctive and declaratory relief.

11 **II. JURISDICTION AND VENUE**

12 20. This Court has jurisdiction over this action pursuant to 28 U.S.C. §  
13 1332(d)(2). The matter in controversy, exclusive of interest and costs, exceeds the  
14 sum or value of \$5,000,000 and is a class action in which there are more than 100  
15 members of the Classes, members of the Classes (as defined below) are citizens of  
16 states different from Defendants and greater than two-thirds of the members of the  
17 Classes reside in states other than the state in which Defendants are citizens. This  
18 Court also has jurisdiction over supplemental state law claims pursuant to 28 U.S.C.  
19 § 1367 and jurisdiction over the Magnuson-Moss Warranty Act claim by virtue of  
20 diversity jurisdiction being exercised under the Class Action Fairness Act ("CAFA").

21 21. Venue properly lies in this District pursuant to 28 U.S.C. § 1391(a), (b)  
22 and (c) because: Defendant MNAO maintains operational facilities in this District; a  
23 substantial part of the events or omissions giving rise to Plaintiffs' claims occurred in  
24 this District; Defendants conduct a substantial amount of business in this District; and  
25 Defendant MNAO is headquartered in this District. Accordingly, Defendants have  
26 sufficient contacts with this District to subject Defendants to personal jurisdiction in  
27 the District and venue is proper.

28 ///



1 **III. PARTIES**

2 **A. Plaintiffs**

3 22. Plaintiff Esther Wright Schneider is a citizen of the State of California  
4 and resides in Corte Madera, California. On or about October 3, 2011, Plaintiff  
5 Wright Schneider leased a new 2011 Mazda CX-9 Touring Edition in Encinitas,  
6 California for personal, family, or household purposes. On or about October 19,  
7 2014, Plaintiff Wright Schneider purchased her vehicle after the initial lease expired.  
8 On or about May 13, 2018, Ms. Wright Schneider's vehicle suffered immediate  
9 catastrophic engine failure due to the Water Pump Defect while she was driving on  
10 the highway, without any prior warning there was a problem with the vehicle's  
11 engine. The engine failure was diagnosed as the result of the failed water pump and  
12 occurred at or around 114,000 miles. As a result of the Water Pump Defect, Plaintiff  
13 Wright Schneider was forced to pay approximately \$3,800 to have her vehicle  
14 diagnosed and repaired.

15 23. Plaintiff Shannon Proven is a citizen of the States of Colorado and  
16 resides in Englewood, Colorado. In 2007, Plaintiff Proven purchased a new 2007  
17 Mazda CX-9 in Denver, Colorado for personal, family or household purposes. On or  
18 about June 2017, Ms. Proven's vehicle suffered immediate catastrophic engine failure  
19 due to the Water Pump Defect while she was driving, without any prior warning there  
20 was a problem with the vehicle's engine. The engine failure was diagnosed as a result  
21 of the failed water pump and occurred at or around 96,000 miles. As a result of the  
22 Water Pump Defect, Plaintiff Proven was forced to pay approximately \$500 to have  
23 her vehicle towed to her home and has lost the use of her vehicle.

24 24. Plaintiff Michael Bibbo is a citizen of the State of Colorado and resides  
25 in Denver, Colorado. In September 2013, Plaintiff Bibbo purchased a used 2012  
26 Mazda CX-9 in Fort Lauderdale, Florida for personal, family, or household purposes.  
27 On or about March 30, 2019, Mr. Bibbo's vehicle suffered immediate catastrophic  
28 engine failure due to the Water Pump Defect, without any prior warning there was a

1 problem with the vehicle's engine. The engine failure was diagnosed as a result of the  
2 failed water pump and occurred at or around 91,000 miles. As a result of the Water  
3 Pump Defect, Plaintiff Bibbo was forced to sell his vehicle for \$700, significantly  
4 less than the value he would have received had the engine been in working order.

5 25. Plaintiff Alan Meshberg is a citizen of the State of Colorado and resides  
6 in Parker, Colorado. In October 2009, Plaintiff Meshberg purchased a used 2008  
7 Mazda CX-9 in Naperville, Illinois for personal, family, or household purposes. On  
8 or about May 17, 2016, Mr. Meshberg's water pump failed due the Water Pump  
9 Defect in his Class Vehicle, without any prior warning that there was a problem with  
10 the water pump. The water pump failure was diagnosed at or around 98,000 miles. As  
11 a result of the Water Pump Defect, Plaintiff Meshberg was forced to pay  
12 approximately \$1,900 to have a new water pump installed. Subsequently, on or about  
13 August 8, 2016, his vehicle suffered a catastrophic engine failure, as a result of the  
14 damage of the previous water pump failure. As a result of the Water Pump Defect,  
15 Plaintiff Meshberg was then forced to pay approximately \$1,300 to purchase a used  
16 CX-9 engine and \$3,500 to an authorized Mazda dealership to install the used engine.

17 26. Plaintiff Brian Hume is a citizen of the State of Louisiana and resides in  
18 Luling, Louisiana. In February 2016, Plaintiff Hume purchased a new 2015 Mazda  
19 CX-9 in Metairie, Louisiana for personal, family, or household purposes. On or about  
20 May 14, 2019, Mr. Hume's water pump failed due to the Water Pump Defect in his  
21 Class Vehicle, without any prior warning that there was a problem with the water  
22 pump. The water pump failure was diagnosed at or around 83,000 miles. As a result  
23 of the Water Pump Defect, Plaintiff Hume was forced to pay approximately \$2,500 to  
24 have a new water pump installed.

25 27. Plaintiffs Amie and Jean Levasseur are citizens of the Commonwealth of  
26 Massachusetts and reside in Melrose, Massachusetts. On January 4, 2014, the  
27 Levasseurs purchased a used 2011 Mazda CX-9 in Wakefield, Massachusetts for  
28 personal, family, or household purposes. On or about May 26, 2019, the Levasseurs'

1 vehicle suffered a water pump failure due to the Water Pump Defect, without any  
2 prior warning there was a problem with the vehicle. The failure occurred at around  
3 91,000 miles. As a result of the Water Pump Defect, the Levasseurs were forced to  
4 pay over \$500 to have their vehicle diagnosed and were forced to trade in the car for  
5 reduced value.

6 28. Plaintiff Terry Sonneveldt is a citizen of the State of Michigan and  
7 resides in Traverse City, Michigan. In October 2018, Plaintiff Sonneveldt purchased  
8 a used 2012 Mazda CX-9 in Traverse City, Michigan for personal, family, or  
9 household purposes. On or about April 6, 2019, Mr. Sonneveldt's vehicle suffered  
10 immediate catastrophic engine failure due to the Water Pump Defect, without any  
11 prior warning there was a problem with the vehicle's engine. The engine failure was  
12 diagnosed as the result of the failed water pump and occurred at or around 115,000  
13 miles. As a result of the Water Pump Defect, Plaintiff Sonneveldt was forced to pay  
14 over \$5,200 to have his vehicle towed and his engine rebuilt.

15 29. Plaintiff Christopher Lacasse is a citizen of the State of North Carolina  
16 and resides in Holly Springs, North Carolina. In November 2016, Plaintiff Lacasse  
17 purchased a used 2010 Mazda CX-9 Touring Edition, in Sanford, North Carolina for  
18 personal, family, or household purposes. On or about November 20, 2018, Mr.  
19 Lacasse's vehicle suffered immediate catastrophic engine failure due to the Water  
20 Pump Defect, without any prior warning there was a problem with the vehicle's  
21 engine. The engine failure was diagnosed as the result of the failed water pump and  
22 occurred at or around 98,000 miles. As a result of the Water Pump Defect, Plaintiff  
23 Lacasse was forced to pay approximately \$4,100 to have his vehicle diagnosed,  
24 towed, and equipped with a salvaged used engine. He also paid approximately \$500  
25 in car rental costs while his Class Vehicle was being repaired.

26 30. Plaintiffs Beth and Dan Pickerd are citizens of the Commonwealth of  
27 Pennsylvania and reside in West Chester, Pennsylvania. In January 2013, the  
28 Pickerds purchased a new 2012 Mazda CX-9 in West Chester, Pennsylvania for

1 personal, family, or household purposes. On or about January 24, 2019, the Pickerds'  
2 vehicle suffered immediate catastrophic engine failure due to the Water Pump Defect,  
3 without any prior warning there was a problem with the vehicle's engine. The engine  
4 failure was diagnosed as the result of the failed water pump and occurred at or around  
5 93,000 miles. As a result of the Water Pump Defect, the Pickerds lost the use of their  
6 vehicle and were forced to purchase a new vehicle.

7 31. Plaintiff Erin Matheny is a citizen of the State of Texas and resides in  
8 Denton, Texas. In January 2013, Plaintiff Matheny purchased a new 2012 Mazda  
9 CX-9, in McKinney, Texas for personal, family, or household purposes. On or about  
10 June 21, 2018, Ms. Matheny's vehicle suffered immediate catastrophic engine failure  
11 due to the Water Pump Defect in her Class Vehicle, without any prior warning that  
12 there was a problem with the vehicle's engine. The engine failure was diagnosed as  
13 the result of a failed water pump and occurred at or around 85,000 miles. As a result  
14 of the Water Pump Defect, Plaintiff Matheny was forced to pay approximately  
15 \$4,100 to have her engine repaired.

16 32. Plaintiff Tim Halwas is a citizen of the State of Texas and resides in  
17 Dallas, Texas. In July 2009, Plaintiff Halwas purchased a new 2009 Mazda CX-9 in  
18 McKinney, Texas, for personal, family, or household purposes. On or about May 21,  
19 2019, Mr. Halwas' vehicle suffered immediate catastrophic engine failure due to the  
20 Water Pump Defect in his Class Vehicle, without any prior warning that there was a  
21 problem with the vehicle's engine. The engine failure was diagnosed as the result of a  
22 failed water pump and occurred at or around 107,000 miles. As a result of the Water  
23 Pump Defect, Plaintiff Halwas was forced to pay approximately \$100 to have his  
24 vehicle diagnosed and has lost use of his vehicle.

25 33. Plaintiff Lewis Delvecchio is a citizen of the State of Virginia and  
26 resides in Chesterfield, Virginia. In April 2009, Plaintiff Delvecchio purchased a new  
27 2009 Mazda 6, in North Chesterfield, Virginia, for personal, family, or household  
28 purposes. On or about November 20, 2017, Mr. Delvecchio's water pump failed due

1 to the Water Pump Defect in his Class Vehicle, without any prior warning that there  
2 was a problem with the water pump. The water pump failure was diagnosed at or  
3 around 120,900 miles. As a result of the Water Pump Defect, Plaintiff Delvecchio  
4 was forced to pay approximately \$1,700 to have a new water pump installed.

5 34. Plaintiff Jon Sowards is a citizen of the State of Kentucky and resides in  
6 Bowling Green, Kentucky. In 2017, Plaintiff Sowards purchased a used 2015 Mazda  
7 CX-9 in Virginia, for personal, family, or household purposes. On or about January  
8 12, 2019, Mr. Sowards' Class Vehicle suffered a catastrophic engine failure, without  
9 any prior warning that there was a problem with the water pump. The engine failure  
10 was diagnosed as the result of a failed water pump and occurred at or around 67,000  
11 miles. As a result of the Water Pump Defect, Plaintiff Sowards was forced to pay  
12 approximately \$8,600 to have the engine replaced with a rebuilt engine.

13 **B. Defendants**

14 35. Defendant Mazda Motor of America, Inc. d/b/a Mazda North American  
15 Operations is a California corporation, with its corporate headquarters located in  
16 Irvine, California.

17 36. MNAO markets, warrants, and sells Mazda-branded vehicles and  
18 vehicle parts and accessories throughout the United States, through its network of  
19 authorized dealers. MNAO engages in interstate commerce by selling vehicles  
20 through its authorized dealers located in every state of the United States, including  
21 within this District. MNAO's contracts with its authorized dealers enable it to  
22 exercise significant control over the dealerships and gives it full authority to approve  
23 or deny warranty repairs. Upon information and belief, MNAO is MMC's designated  
24 agent in the United States to interface with NHTSA. MNAO also performs some  
25 research and design operations at MMC's behest, and oversees any North American  
26 based manufacturing for MMC.

27 37. Defendant Mazda Motor Corporation is a Japanese corporation, with its  
28 corporate headquarters located in Fuchū, Aki District, Hiroshima Prefecture, Japan.

1 38. MMC is the parent corporation of MNAO. MMC designs, engineers,  
2 manufactures, markets and/or sells vehicles throughout the world through its  
3 subsidiaries and agents, including MNAO.

4 39. MMC exercises significant control over the operations of MNAO such  
5 that MNAO is MMC's agent. The current Chief Executive Officer of MNAO was  
6 appointed by MMC, and was MMC's former head of the global sales and marketing  
7 division located at its Hiroshima headquarters.

8 40. Upon information and belief, the owner's manuals, warranty booklets,  
9 maintenance schedules, advertisements and other promotional materials relating to  
10 the Class Vehicles were developed and/or approved by MNAO at its headquarters in  
11 Irvine, California, using information from MMC, and then disseminated by MNAO at  
12 the behest of MMC throughout the United States. At all times relevant to this action,  
13 Defendant MNAO made decisions related to advertisements, marketing, sales,  
14 warranties, including decisions regarding covered repairs, and recalls of the Class  
15 Vehicles, at its Irvine, California headquarters, which is located within this District.

16 41. At all times relevant to this action, Defendants and/or its agents  
17 manufactured, distributed, sold, leased and warranted the Class Vehicles, containing  
18 the defect described herein, throughout the United States.

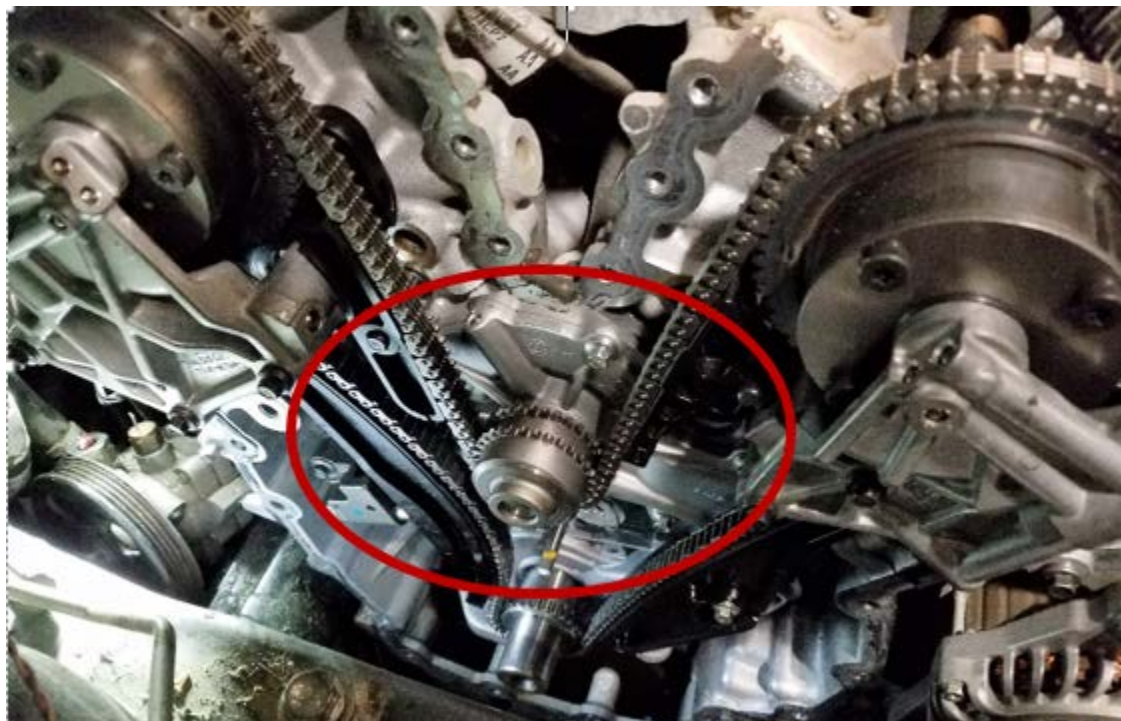
19 **IV. FACTUAL ALLEGATIONS**

20 **A. Chain-Driven Water Pumps**

21 42. Chain-driven water pumps are relatively new to the automobile industry.  
22 Historically, water pumps were located external to the engine block and driven by an  
23 accessory belt drive system. When such external water pumps fail, notice is provided  
24 to the driver of the vehicle in the form of coolant leaking onto the ground, steam  
25 coming from the engine and/or dashboard warning lights indicating that the vehicle is  
26 overheating. More recently, automakers have attempted to remove items from the  
27 accessory drive belt in order to improve engine efficiency.

28 ///

1           43. A chain-driven water pump is located within the engine block behind the  
2 timing chain cover and relies on the timing chain to deliver its power, as shown in the  
3 image below (the water pump is circled):



16           44. An engine's timing chain is driven by the crankshaft and turns the  
17 camshaft, keeping it in sync with the crankshaft. The timing chain is constantly  
18 lubricated by oil, to ensure that it operates smoothly and without friction. On certain  
19 vehicles, including the Class Vehicles, the timing chain is connected to the water  
20 pump and provides the power the water pump needs to circulate coolant through the  
21 engine when the engine is running.

22           45. A water pump can circulate up to 7,500 gallons of coolant per hour,  
23 which is required to prevent the engine from overheating. A typical water pump is  
24 made up of numerous components, including, *inter alia*, a shaft, bearing assembly,  
25 seal, gasket, housing that encases the water pump and a weep hole designed to let a  
26 small amount of leaked coolant escape rather than being forced into the water pump  
27 bearing assembly. Failure of one or more of the above components, *inter alia*, may  
28

1 lead to water pump failure, which can cause the engine to overheat or coolant to leak  
2 into engine parts or oil, causing catastrophic engine failure.

3 46. Beginning in 2007, with the Cyclone Engine, Mazda began using an  
4 internal chain-driven water pump, which it incorporated into the Class Vehicles. The  
5 Cyclone Engine uses a double overhead camshaft (“DOHC”) configuration with two  
6 camshafts connected to the crankshaft by a timing chain to ensure that the operating  
7 cycle is timed correctly.

8 47. The engine cooling system in the Cyclone Engine, including the water  
9 pump, is intended to be a closed system, so that the coolant does not leak into engine  
10 parts or mix with the engine’s oil and circulate throughout the engine.

11 48. However, when the water pump fails in the Class Vehicles, coolant is  
12 able to escape from the closed system and leak into other engine parts, including,  
13 *inter alia*, the timing chain, crankcase and/or oil pan, where it mixes with the  
14 engine’s oil. If coolant mixes with engine oil, that mixture is then carried throughout  
15 the other parts of the engine, where it causes friction and leads to sudden,  
16 catastrophic engine failure.

17 **B. The Water Pump Defect**

18 49. Defendant MMC is a manufacturer of vehicles sold by Defendant  
19 MNAO under the Mazda brand name throughout the United States. Defendants  
20 designed and manufactured the Class Vehicles, and Defendant MNAO imported,  
21 distributed, marketed and/or sold the Class Vehicles in the United States. Defendant  
22 MNAO also provides service and maintenance for the Class Vehicles through its  
23 extensive network of authorized dealers and service providers nationwide, using  
24 information provided by MMC.

25 50. Each of the Class Vehicles is equipped with the Cyclone Engine, which  
26 was introduced by Mazda in 2007, and incorporated into hundreds of thousands of  
27 Class Vehicles. Mazda can identify the Class Vehicles by their vehicle identification  
28 numbers.



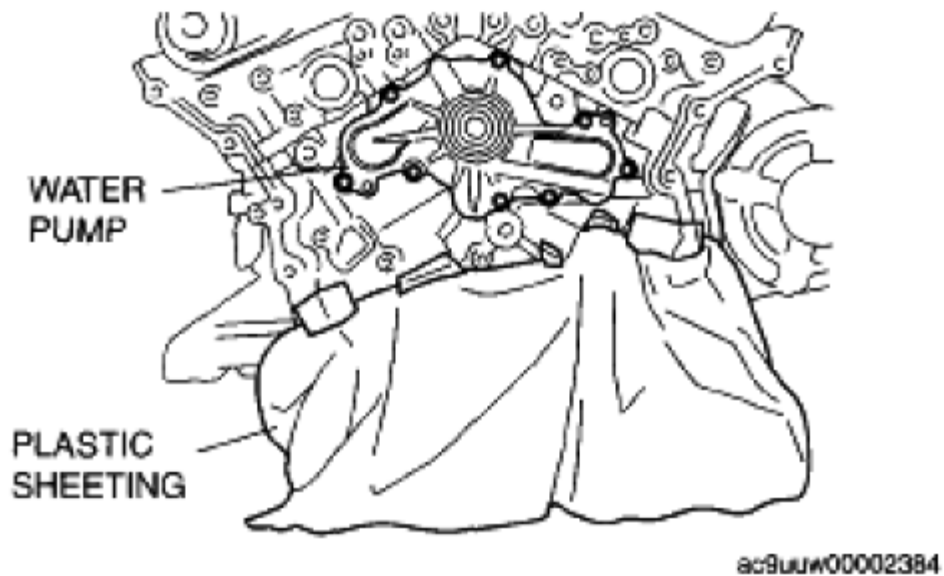
1           51. Plaintiffs and members of the Classes purchased, leased and/or own  
2 Class Vehicles that contain the Water Pump Defect, which causes failure of the water  
3 pump prematurely and without warning. The Water Pump Defect often leads to  
4 catastrophic engine failure, causing a sudden loss of normal operation of the vehicle,  
5 and requiring thousands of dollars in repairs or replacement of the entire engine.

6           52. The Cyclone Engine, and the Class Vehicles which are equipped with  
7 the engine, contain the Water Pump Defect, which is the result of defects in design,  
8 manufacturing, materials and/or workmanship. By designing, manufacturing,  
9 assembling, inspecting, distributing, selling and leasing the Class Vehicles with the  
10 Water Pump Defect, Mazda rendered the Class Vehicles defective and unsafe for  
11 their intended use and purpose.

12           53. The engine cooling system in the Class Vehicles is designed, engineered  
13 and/or manufactured in a manner that causes coolant from a failed or failing water  
14 pump to leak into engine parts, including, *inter alia*, the timing chain, crankcase  
15 and/or oil pan. The Water Pump Defect allows coolant to mix with the engine oil  
16 which can then spread throughout the entire engine. This often causes immediate  
17 catastrophic engine failure, without the operator of the vehicle having any prior  
18 notice of the problem or of the imminent failure.

19           54. This mixture of oil and coolant resulting from the Water Pump Defect  
20 has been described as a “chocolate milk” substance, which is devastating to an  
21 engine. In fact, in instructions sent to its authorized dealers, Mazda directs mechanics  
22 to both remove the oil pan drain plug and line the cylinder block with plastic sheeting  
23 as illustrated below to prevent engine coolant from penetrating or accumulating in the  
24 oil pan:

25       ///  
26       ///  
27       ///  
28       ///



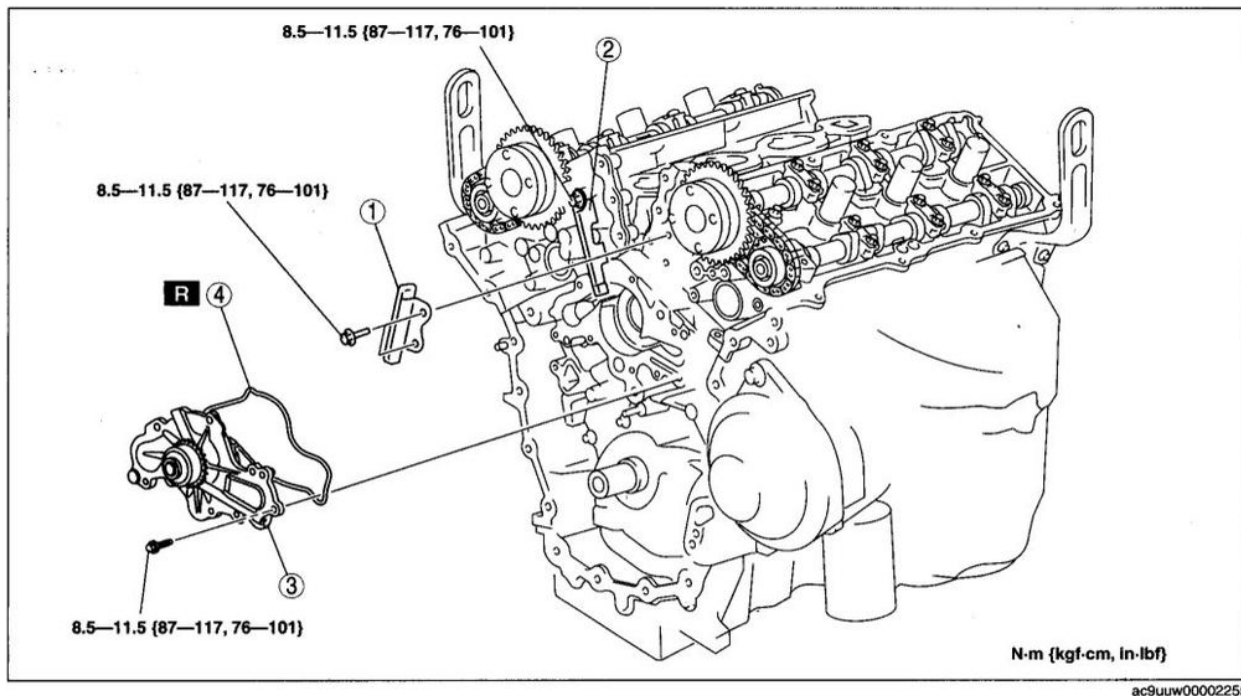
55. Once this “chocolate milk” substance is created and spread throughout an engine, the engine will seize, and replacement of the entire engine is required. This often occurs while the vehicle is being driven, with no warning to drivers of the Class Vehicles and poses a safety risk when the engine suddenly fails during operation.

56. Mazda provides no warning to Plaintiffs and members of the Classes regarding the Water Pump Defect and associated safety risk. Rather, Mazda publishes owner’s manuals and maintenance schedules which represent that the water pump does not need to be serviced, repaired or replaced during at least the first 120,000 miles of the Class Vehicles’ lives.<sup>3</sup> Mazda’s maintenance schedules inform customers of the parts that are required to be maintained or replaced at certain intervals, up to 120,000 miles, and wholly omit the water pump. Instead, Mazda represents that the water pump is expected to last for the useful life of the engine, or at least 120,000 miles, without the need for maintenance, repair or replacement. As a result, Plaintiffs and members of the Classes rely on Mazda’s representations that the water pumps in

<sup>3</sup> See, e.g., Exhibit B (2012 CX-9 Maintenance Schedule); Exhibit C (2011 Mazda6 Maintenance Schedule); Exhibit D (2012 CX-9 Owners’ Manual); Exhibit E (2011 Mazda6 Owners’ Manual).

1 the Class Vehicles do not need to be repaired or replaced before the Class Vehicles  
2 reach 120,000 miles.

3 57. A water pump, by itself, for the Cyclone Engine, one of which is shown  
4 in the figure, immediately below the R, retails for approximately \$125 (excluding  
5 labor):



18 58. However, the location of the water pump in Class Vehicles makes it  
19 labor-intensive and extremely expensive to replace. Numerous engine components,  
20 including, *inter alia*, the timing chain, guides and cover, have to be removed in order  
21 to access the water pump. Given the internal placement of the water pump, replacing  
22 the water pump in the Cyclone Engine typically requires at least 12-14 hours of work,  
23 at an expense of over \$1500.

24 59. While unreasonable, this expense pales in comparison to the expense of  
25 replacing the entire engine as a result of the Water Pump Defect, which can range  
26 from \$4000-\$9000 for a replacement engine.

27 ///

28 ///

1           60. As alleged herein, Plaintiffs and members of the Classes unknowingly  
2 purchased or leased vehicles that contain the Water Pump Defect and suffered actual  
3 damages, including diminished market value, related to their purchase or lease of the  
4 Class Vehicles as a direct result of Defendants' misrepresentations and omissions  
5 regarding the standard, quality or grade of the Class Vehicles and/or the existence of  
6 the Water Pump Defect and its associated safety risk. The fact that the Class Vehicles  
7 contain the Water Pump Defect is material to Plaintiffs and members of the Classes  
8 because it leads to a serious safety risk, exorbitant repair or replacement costs, and  
9 diminishes the value of the Class Vehicles.

10           61. As a result of Defendants' fraudulent concealment and material  
11 omissions, including its failure to disclose the presence of the Water Pump Defect in  
12 the Class Vehicles, Defendants have caused Plaintiffs and members of the Classes to  
13 suffer actual damages, including, but not limited to, out-of-pocket expenses and the  
14 diminished value of their vehicles.

15           **C. Defendants Touted Reliability, Quality and Safety in Its Marketing**  
16           **and Advertising**

17           62. Defendant MNAO engages in direct marketing to consumers, such as  
18 Plaintiffs and members of the Classes via TV and radio commercials, print  
19 advertising, and the publication of vehicle brochures which are distributed through its  
20 network of authorized Mazda dealerships, in order to induce consumers to purchase  
21 its vehicles. Defendant MMC has input and exercises approval over the marketing  
22 activities of MNAO. This comprehensive advertising campaign is ongoing.

23           63. Mazda touts the quality and reliability of its vehicles. "Peace of mind  
24 also comes standard," was one phrase used in its marketing materials to advertise the  
25 terms of the New-Vehicle Limited Warranty.<sup>4</sup>

26           ///

27           

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28           <sup>4</sup> See <https://cdn.dealereprocess.net/cdn/brochures/mazda/2011-cx9.pdf> (last visited  
June 28, 2019).



64. Mazda also claimed that it was “[p]laying it safe by engineering to the next level. Our obsessive engineers go the distance to help keep you safe. The numerous active and passive safety features in the CX-9 are painstakingly crafted to give you and your family one feeling: peace of mind.”<sup>5</sup> Mazda promised “the CX-9 will get you to your destination swiftly and safely”<sup>6</sup> and that “[o]ur engineers went crazy to give you peace of mind.”<sup>7</sup>

65. The promise of such close review of the quality of the vehicle was also made in the 2009 Mazda6 brochure, which stated that the vehicle, “sees the scrutiny of over 100 inspectors. Each empowered to reject any part or component that fails to measure up. In fact, by the time you see a new Mazda 6, it’s already seen a grueling gauntlet of over 800 inspections.”<sup>8</sup>

66. Similarly, in the brochure for the 2011 Mazda 6, Defendants claimed, “During its rigorous development, some 400 Mazda engineers subjected crucial MAZDA 6 components to testing that simulated 10 years of extreme use. Then, to further prove its reliability, they drove a fleet of MAZDA 6 test cars for a total of

<sup>5</sup> See [https://www.mazdausa.com/MusaWeb/musa2/pdf/brochures/2013/2013\\_cx9\\_brochure.pdf](https://www.mazdausa.com/MusaWeb/musa2/pdf/brochures/2013/2013_cx9_brochure.pdf) (last visited June 28, 2019).

<sup>6</sup> *Id.*

<sup>7</sup> See [https://www.mazdausa.com/MusaWeb/musa2/pdf/brochures/2012/2012\\_cx9\\_brochure.pdf](https://www.mazdausa.com/MusaWeb/musa2/pdf/brochures/2012/2012_cx9_brochure.pdf) (last visited June 28, 2019).

<sup>8</sup> See [http://www.auto-brochures.com/makes/Mazda/6/Mazda\\_US%206\\_2009.pdf](http://www.auto-brochures.com/makes/Mazda/6/Mazda_US%206_2009.pdf) (last visited on June 28, 2019).

1 more than one million miles. In fact, by the time you see a MAZDA 6, it will have  
2 survived a demanding gauntlet of quality control standards that are among the  
3 strictest in the industry” to promise reliability and durability for “many years down  
4 the road.”<sup>9</sup>



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13 67. In that same brochure, Mazda stated, “As with every Mazda, safety  
14 engineering goes hand in hand with performance engineering in the MAZDA 6.” And  
15 that vehicles had Dynamic Stability Control “to help provide predictable, stable  
16 handling in emergency situations,” and were designed with other safety features so  
17 that “[d]anger is averted. And you journey safely on.”<sup>10</sup>

18 68. Mazda further claims that “its overall focus on quality, detail and safety  
19 adds even more to its appeal,” and that “[y]our family’s safety is our priority.  
20 Precisely why we’ve engineered Mazda CX-9 to be among the safest crossovers in its  
21 class.”<sup>11</sup>

22 ///  
23 ///

24 \_\_\_\_\_

25 <sup>9</sup> See [https://www.mazdausa.com/MusaWeb/musa2/pdf/brochures/2011/2011\\_mazda6\\_brochure.pdf](https://www.mazdausa.com/MusaWeb/musa2/pdf/brochures/2011/2011_mazda6_brochure.pdf) (last visited on June 28, 2019).

26 <sup>10</sup> *Id.*

27 <sup>11</sup> See <https://cdn.dealereprocess.net/cdn/brochures/mazda/2011-cx9.pdf> (last visited  
28 June 28, 2019); see also [https://allcarcentral.com/Mazda-pdf/2010\\_cx9\\_brochureMazda.pdf](https://allcarcentral.com/Mazda-pdf/2010_cx9_brochureMazda.pdf) (last visited June 28, 2019).

1           69. Further, in its owners' manuals, Defendants stated, "We assure you that  
2 all of us at Mazda have an ongoing interest in your motoring pleasure and in your full  
3 satisfaction with your Mazda product."<sup>12</sup>

4           70. Mazda Warranty Booklets also carried such promises. "You'll also be  
5 pleased to know how strongly we stand behind every Mazda vehicle," and "[w]e're  
6 committed to making sure you enjoy your Mazda for years to come."<sup>13</sup>

7           71. Defendants make such claims while knowing that they are selling and  
8 have sold hundreds of thousands of Class Vehicles equipped with the Water Pump  
9 Defect and corresponding safety risk. These claims help Defendants to conceal the  
10 Defect's existence in order to sell more vehicles and avoid the financial responsibility  
11 to repair and/or replace defective water pumps or any engine components damaged  
12 by the water pump's failure.

13           **D. Defendants' Knowledge of the Defect and Associated Safety Risk**

14           72. Defendants fraudulently, intentionally, negligently and/or recklessly  
15 omitted and concealed from Plaintiffs and members of the Classes the defect in the  
16 Class Vehicles even though Defendants knew or should have known of the Water  
17 Pump Defect in Class Vehicles.

18           73. Knowledge and information regarding the Water Pump Defect were in  
19 the exclusive and superior possession of Mazda, their partner Ford, and their dealers,  
20 and that information was not provided to Plaintiffs and members of the Classes.  
21 Based on pre-production testing, pre-production design failure mode analysis,  
22 production design failure mode analysis, early consumer complaints made to  
23 Defendants' and Ford's network of exclusive dealers, aggregate warranty data  
24 compiled from those dealers, repair orders and parts data received from the dealers,  
25 consumer complaints to dealers and NHTSA and testing performed in response to

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26  
27 <sup>12</sup> See e.g., Exhibit D (2012 Mazda CX-9 Owners' Manual); Exhibit E (2011 Mazda 6  
Owners' Manual).

28 <sup>13</sup> See e.g., Exhibit A (2012 Mazda CX-9 Warranty Booklet).

1 consumer complaints, *inter alia*, Defendants was aware (or should have been aware)  
2 of the Water Pump Defect in the Class Vehicles and fraudulently concealed the defect  
3 and safety risk from Plaintiffs and members of the Classes.

4 74. Defendants knew, or should have known, that the Water Pump Defect  
5 and the associated safety risk was material to owners and lessees of Class Vehicles  
6 and was not known or reasonably discoverable by Plaintiffs and members of the  
7 Classes before they purchased or leased Class Vehicles or within the applicable  
8 warranty periods.

9 75. Notwithstanding Defendants' exclusive and superior knowledge of the  
10 Water Pump Defect, Defendants failed to disclose the defect to consumers at the time  
11 of purchase or lease of the Class Vehicles (or any time thereafter) and continues to  
12 sell Class Vehicles containing the defect. Defendants intentionally concealed that the  
13 Water Pump Defect presents a safety risk to consumers, including Plaintiffs and  
14 members of the Classes, and the public.

15 76. Consumers who purchased or leased Class Vehicles have filed numerous  
16 complaints with NHTSA reporting the Water Pump Defect, reporting the need to pay  
17 exorbitant amounts to repair or replace the water pump and damaged engine parts and  
18 detailing their experiences of catastrophic engine failure, which put the safety of  
19 drivers and their passengers at risk.

20 77. Federal law requires Mazda to monitor defects which can cause a safety  
21 issue and report them within five (5) days. MNAO, as MMC's agent in the United  
22 States, regularly monitors NHTSA complaints in order to meet its reporting  
23 requirements under federal law and was provided knowledge of the defect through  
24 these complaints, *inter alia*.

25 78. Below are consumer complaints made to NHTSA regarding the Water  
26 Pump Defect in Class Vehicles:

- 27 • **April 30, 2016 – 2009 Mazda CX-9**  
28 NHTSA ID Number: 10862356



1 Incident Date April 23, 2016  
2 Consumer Location BOCA RATON, FL  
3 Vehicle Identification Number JM3TB28A290

4 **Summary of Complaint:**

5 SUV WOULD GO OFF IN THE MIDDLE OF THE ROAD OR  
6 HIGHWAY THEN TRAVELING A HIGH SPEED. TOOK IT TO  
7 DEALER, THEY SAY THAT THEY FOUND OIL & WATER MIX IN  
8 THE ENGINE DUE TO WATER PUMP FAILURE, MULTIPLE  
9 SYMPTOMS WOULD OCCUR AS DUE TO THIS CONDITION.  
10 THIS ISSUE IS VERY SERIES, FIRST YOU GET NO INDICATION  
11 OF THE PROBLEM, NOT SURE WHY THE WATER PUMP  
12 FAILURE CAUSES WATER TO ENTER THE MOTOR AND MIX  
13 WITH OIL, IT MUST BE A MAZDA DESIGN PROBLEM, WHICH  
14 THEY SEEM TO KNOW ABOUT AND NEVER ISSUED A RECAL  
15 TO GET ALL THE CAR FIXED. IF YOU ARE DRIVING WITH  
16 YOUR FAILURE AT 50 MPE IN A HIGHWAY THE CAR WILL  
17 JUST GO OFF AND YOU CAN GET IMPACTED AT THE REAR  
18 WITH VERY HORRIBLE CONSEQUENCES. WILL MAZDA ISSUE  
19 A RECAL FOR SUCH A SERIES ISSUE?

20 • **October 25, 2017 – 2010 Mazda CX-9**

21 NHTSA ID Number: 11039779  
22 Incident Date October 21, 2017  
23 Consumer Location NEWPORT NEWS, VA  
24 Vehicle Identification Number Not Available

25 **Summary of Complaint:**

26 TAKATA RECALL I HAVE A MAZDA CX9 2010, I GOT NO  
27 INDICATION THAT THERE WAS A PROBLEM WITH MY WATER  
28 PUMP. THE CARE DID NOT OVER HEAT, IT DID NOT STALL  
AND I WAS NO STEAM COMING FROM THE CAR. I DROVE MY  
VEHICLE TO THE OTHER SIDE OF THE WATER MORE THAN 20  
MILES FROM MY HOME, SO THAT I COULD GO TO WORK. IF  
IT WERE NOT FOR THE PHARMACIST AT MY JOB I WOULD  
HAVE GOTTEN IN MY CAR AND DROVE OFF. HE NOTICE A  
PUDDLE UNDER MY CAR AND ASKED ME TO COME OUTSIDE  
SO HE COULD INVESTIGATE THE SITUATION FURTHER. HE  
SAW WHERE THE FLUID WAS COMING FROM AND WENT  
UNDER THE CAR TO TOUCH THE FLUID AND FOUND THAT IT  
WAS MY ANTI-FREEZE. IF I KNEW I HAD A PROBLEM I  
WOULD HAVE NEVER DRIVEN THE CAR THAT FAR FROM  
HOME. I GOT A QUOTE FROM THE DEALER THAT IT WOULD

1 COST ME \$2050 TO REPAIR THE WATER PUMP. AS I DID  
2 RESEARCH, I FOUND THAT THIS IS SOMETHING THAT GOES  
3 ON WITH THESE VEHICLES AND THERE IS NO REAL WAY  
4 AROUND HAVING TO PAY THE DEALER THAT TYPE OF  
5 MONEY TO REPAIR THEPROBLEM BECAUSE OF THE WAY  
6 THE PUMP IS PLACED INSIDE OF THE ENGINE CAVITY. AT  
7 THIS POINT I DO NOT KNOW WHAT TO DO BECAUSE I DO  
8 NOT HAVE THE MONEY FOR THIS TYPE OF REPAIR ON A  
9 VEHICLE THAT WAS DESIGNED TO SCREW ME OVER. I WISH I  
10 DID MY RESEARCH BEFORE BUYING THIS VEHICLE. IF I HAD  
11 THE CHANCE TO DO IT ALL OVER AGAIN I WOULD NOT PICK  
12 A VEHICLE THAT REQUIRES ONLY THE DEALER TO REPAIR  
13 IT. I THINK THAT THIS IS UNFAIR FOR ANY CONSUMER TO  
14 HAVE TO PAY THAT AMOUNT OF MONEY BECAUSE OF THE  
15 DAMAGE THE WATER PUMP HAS DONE TO THE ENGINE  
16 BECAUSE OF ITS PLACEMENT. I AM SO UPSET AND NOT  
17 HAPPY ABOUT HOW MY FIRST CAR (THAT I LOVE)  
18 EXPERIENCE HAS TURNED OUT. I THANK GOD THAT I WAS  
19 NOT ON THE HIGHWAY. I COULD HAVE DIED THAT DAY.

20 • **May 17, 2019 – 2010 Mazda CX-9**

21 NHTSA ID Number: 112083019

22 Incident Date May 15, 2019

23 Consumer Location BOULDER, CO

24 Vehicle Identification Number JM3TB3MV6A0

25 **Summary of Complaint:**

26 THE ENGINE OVERHEATED WHILE DRIVING ON A HIGHWAY  
27 AT HIGH SPEED AND FAILED WITHOUT WARNING. AFTER  
28 INVESTIGATION IT WAS FOUND THAT WATER PUMP  
MALFUNCTIONED FORCING COOLANT INTO THE ENGINE. IT  
IS NOT COMPLETELY INOPERABLE AND THE CAR HAS ONLY  
AROUND 80,000 MILES ON IT. THIS IS A MAJOR SAFETY  
ISSUE! THE CAR WAS SERVICED AND OIL CHANGED JUST A  
FEW MONTHS BEFORE THIS HAPPENED. THIS IS A MAJOR  
DESIGN FLAW ON MAZDA'S PART, WHICH THEY SEEM TO  
KNOW ABOUT AND NEVER ISSUED A RECALL TO GET ALL  
THE CARS FIXED. REPLACING AN ENGINE IS NOT  
SOMETHING MOST FAMILIES HAVE THE BUDGET FOR OR  
EVEN THINK ABOUT WHEN THE CAR IS LESS THAN 10 YEARS  
OLD. THERE WERE NO WARNING SIGNS OF WATER PUMP  
FAILURE. MAZDA NEEDS TO WARN CX-9 OWNERS WITH TSB

1 OR RECALL THE WATER PUMP. THE WATER PUMP IS NOT  
2 BURIED INSIDE THE ENGINE AND CANNOT BE VISUALLY  
3 INSPECTED. HAVING A VEHICLE SHUT OFF ABRUPTLY WHEN  
4 TRAVELING AT HIGH SPEEDS IS A SERIOUS RISK FOR BOTH  
5 DRIVER, VEHICLE OCCUPANTS AND SURROUNDING  
6 MOTORISTS. I HOPE NHTSA TAKES THIS COMPLAINT  
7 SERIOUSLY AND TAKES ACTION BEFORE A SERIOUS OR  
8 FATAL INJURY OCCURS.

9 • **March 2, 2019 – 2014 Mazda CX-9**

10 NHTSA ID Number: 11183665

11 Incident Date February 21, 2019

12 Consumer Location ARLINGTON, TX

13 Vehicle Identification Number JM3TB2BA0E0

14 **Summary of Complaint:**

15 THE ENGINE SPUTTERED AND STOPPED WITHOUT WARNING  
16 WHILE DRIVING. IT TURNED OUT THE WATER PUMP WENT  
17 OUT AND SPILLED WATER INTERNALLY IN THE ENGINE. THE  
18 CAR HAS 73,000 MILES ON IT AND IT APPEARS THAT THIS  
19 HAS BEEN HAPPENING TO OTHER OWNERS OF THIS VEHICLE  
20 ROUTINELY, AND MAZDA HAS KEPT THIS DESIGN FLAW AND  
21 SAFETY CONCERN A SECRET. IT IS COSTING OVER \$2,200 TO  
22 REPAIR, AND I BELIEVE THAT MAZDA SHOULD BE HELD  
23 ACCOUNTABLE FOR IT. THANK YOU. (XXXX) PARTS OF THIS  
24 DOCUMENT HAVE BEEN REDACTED TO PROTECT  
25 PERSONALLY IDENTIFIABLE INFORMATION PURSUANT TO  
26 THE FREEDOM OF INFORMATION ACT (FOIA), 5 U.S.C.  
27 552(B)(6).

28 • **December 27, 2017 – 2012 Mazda CX-9**

NHTSA ID Number: 11056892

Incident Date December 20, 2017

Consumer Location CYPRESS, TX

Vehicle Identification Number JM3TB2CAXC0

**Summary of Complaint:**

IF WATER PUMP FAILS THE ENGINE WILL SHUT DOWN  
WITHOUT WARNING OR ANY TYPE OF CHECK ENGINE LIGHT  
OR ALERT. COOLANT WILL FLOOD CRANKCASE  
IMMEDIATELY AND RUIN THE ENGINE. THIS OCCURRED  
WHILE DRIVING CREATING A SERIOUS SAFETY ISSUE  
POTENTIALLY CAUSING A COLLISION.

1  
2 • **September 8, 2018 – 2011 Mazda6**

NHTSA ID Number: 11128193

3 Incident Date August 31, 2018

4 Consumer Location GLADSTONE, OR

5 Vehicle Identification Number IYVHZ8CB2B5

6 **Summary of Complaint:**

7 VEHICLE HAS A 3.7L DURATEC ENGINE DESIGNED BY FORD. I  
8 WAS ENTERING THE HIGHWAY AT ABOUT 55MPH, CHECK  
9 ENGINE LIGHT WENT ON, THEN VEHICLE SHUT OFF, AND I  
10 LOST BOTH POWER AND STEERING. WAS ABLE TO GET TO  
11 SIDE OF THE HIGHWAY WITHOUT CRASHING. STEAM/SMOKE  
12 WAS COMING OUT OF THE HOOD AND THE TEMP GAUGE  
13 WAS PINNED AT H. DEALERSHIP ADVISED THAT COOLANT  
14 HAD GOTTEN MIXED WITH OIL AND ENGINE WAS  
15 DESTROYED. COST TO REPAIR - \$7400 USED \$13K NEW  
16 ENGINE. TOLD IT WAS NOT DU ETO ANY NEGLECT OR  
17 MAINTENANCE ISSUE. IT WAS A WATER PUMP FAILURE.  
18 THERE IS A DESIGN FLAW IN THIS ENGINE. THE WATER  
19 PUMP IS INTEGRATED INTO THE ENGINE AND TIMING CHAIN.  
20 WHEN THE PUMP FAILS IT DAMAGES THE ENGINE,  
21 ALLOWING COOLANT TO MIX WITH THE OIL. NUMEROUS  
22 FORD AND MAZDA OWNERS HAVE HAD THIS PROBLEM BUT  
23 BECAUSE IT USUALLY HAPPENS AT OR AFTER 100K MILES  
24 THE MANUFACTURERS DO NOT REPORT IT. THEY WILL ALSO  
25 DO NOTHING TO HELP THE CUSTOMER WHO IS LEFT WITH A  
26 HUGE REPAIR BILL OR A TOTALED CAR. PLEASE HELP ME  
27 AND OTHER OWNERS. I HAVE RESEARCH WITH THE NAMES  
28 OF OTHER OWNERS WHO HAD THE SAME PROBLEM WITH  
THEIR FORD OR MAZDA.

22 • **July 18, 2018 – 2010 Mazda CX-9**

23 NHTSA ID Number: 11112186

24 Incident Date July 15, 2018

25 Consumer Location LOWER MERION, PA

26 Vehicle Identification Number JM3TB3MV2A0

27 **Summary of Complaint:**

28 WHILE TRAVELING 65MPH ON HIGH WITH FAMILY THE  
ENGINE SHUT DOWN, ENGINE LIGHT APPEARED AND WE  
WERE NEARLY STRUCK BY ANOTHER VEHICLE WHEN  
PULLING OVER. CX-9 WAS TOWED 75 MILES TO MECHANIC

1 WHO INFORMED US COOLANT ENTERED THE ENGINE FROM  
2 FAILED WATER PUMP AND ENGINE NEEDS REPLACEMENT  
3 (\$4000). MAZDA SERVICE MANAGE CONFIRMED THIS IS NOT  
4 UNCOMMON AND CONFIRMED ENGINE WILL NEED TO BE  
5 REPLACED. WHEN RESEARCHING CX-9 WATER PUMP  
6 FAILURE ONLINE I FOUND MANY DISTURBING  
7 TESTIMONIALS OF OTHER CX-0 OWNERS WITH SIMILAR  
8 EXPERIENCES. THERE WERE NO WARNING SIGNS OF WATER  
9 PUMP FAILURE. MAZDA NEEDS TO WARN CX-9 OWNERS  
10 WITH TSB OR RECALL THE WATER PUMP. THE WATER PUMP  
11 IS NOT BURIED INSIDE THE ENGINE AND CANNOT BE  
12 VISUALLY INSPECTED. HAVING A VEHICLE SHUT OFF  
13 ABRUPTLY WHEN TRAVELING AT HIGH SPEEDS IS A SERIOUS  
14 RISK FOR BOTH DRIVER, VEHICLE OCCUPANTS AND  
15 SURROUNDING MOTORISTS. I HOPE NSTSA TAKES THIS  
16 COMPLAINT SERIOUSLY AND TAKES ACTION BEFORE A  
17 SERIOUS OR FATAL INJURY OCCURS.

18 • **February 5, 2018– 2011 Mazda CX-9**

19 NHTSA ID Number: 11067353

20 Incident Date February 5, 2018

21 Consumer Location SAN DIEGO, CA

22 Vehicle Identification Number JM3TB2CA3B0

23 **Summary of Complaint:**

24 MAZDA CX-9 2011 HAS UN-DETECTED WATER PUMP LEAKS  
25 WHICH CAUSE TO ENGINE OVERHEAT AND EVENTUAL  
26 ENGINE DEATH. MAXDA CORPORATE IS UNWILLING TO CO-  
27 OPERATE. CAR SUDDENLY CAME TO A HALT SHOWING  
28 ENGINE LIGHT ON.

• **January 13, 2018 – 2012 Mazda CX-9**

NHTSA ID Number: 11062538

Incident Date January 8, 2018

Consumer Location NEWARK, DE

Vehicle Identification Number JM3TB3CV0C0

**Summary of Complaint:**

WHILE DRIVING MY VEHICLE ON THE HIGHWAY MY CAR  
WOULD NOT ACCELERATE WHEN I PRESSED ON THE GAS.  
MY RPM'S WENT UP TO 4 AND WOULD DROP DOWN WHEN I  
LET OFF THE GAS. WITHIN MINUTES MY STEERING WHEEL  
LOCKED UP AND THE CAR BASICALLY SHUT DOWN. I HAD

1 TO TRY AND DRIFT TO THE SHOULDER IN HIGH SPEED  
2 TRAFFIC. WHEN I GOT TO THE SHOULDER THE CAR STARTED  
3 SMOKING. I HAD THE CAR TOWED TO THE MAZDA  
4 DEALERSHIP. THEY TOLD ME MY WATER PUM WENT AND  
5 LEAKED FLUID THROUGHOUT THE ENGINE, RUESULTING IN  
6 ME NEEDING A NEW \$8,000 ENGINE. THEY TOLD ME THAT  
7 MAZDA DESIGNED THE CX9 WHERE THE WATER PUM IS IN  
8 THE ENGINE BLOCK BEHIND THE TIMING BELT AND IT IS  
9 NOT SOMETHING THEY CAN EASILY INSPECT WHEN I BRING  
10 MY CAR IN FOR SERVICE. SO WHEN A WATER PUMP GOES ON  
11 THESE MAZDA CX-9'S IT REULSTS IN THE CONSUMER  
12 NEEDING A WHOLE NEW ENGINE. THEY ALSO STATED THAT  
13 THERE ARE NO INDICATORS THAT WILL NOTIFY YOU IF  
14 THERE IS A PROBLEM WITH THE WATER PUMP TO AVOID  
15 THIS FROM HAPPENING. THE SAFETY ISSUE IS THAT MY CAR  
16 WAS ON THE HIGHWAY AT THE TIME THIS OCCURRED WITH  
17 VEHICLES GOING AT HIGH SPEEDS. MY CAR BASICALLY  
18 SLOWED DOWN SIGNIFICANTLY AND EVENTUALLY  
19 STOPPED AND I COULD NOT TURN THE STEERING WHEEL TO  
20 BETTER ASSIST ME GETTING OUT OF THE WAY OF THE HIGH  
21 SPEED TRAFFIC.

16 • **July 22, 2018 – 2010 Mazda CX-9**

17 NHTSA ID Number: 11112905

18 Incident Date April 11, 2018

19 Consumer Location CHELMSFORD, MA

20 Vehicle Identification Number JM3TB3MV9A0

21 **Summary of Complaint:**

22 CAR WAS ALWAYS SERVICED REGULARLY. ONE DAY I WAS  
23 ABOUT TO GET ON A BUSY HIGHWAY INTO BOSTON JUST  
24 BEFORE RUSH HOUR, WHEN MY CAR SUDDENLY MADE A  
25 LOUD KNOCKING NOISE IN THE ENGINE. I IMMEDIATELY  
26 PULLED OVER AND THEN THE CAR SHUT OFF. NO LIGHTS  
27 EVER CAME ON BEFOREHAND AND NO LEAKING OF FLUIDS  
28 EVER HAPPENED BEFORE INCIDENT. HAD IT TOWED TO  
MAZDA DEALER, WHO AT FIRST TOLD THEY WOULDN'T BE  
ABLE TO EVEN LOOK AT IT FOR 6 DAYS. FRIEND WORKED  
THERE AND GOT MECHANICS TO LOOK AT IT RIGHT AWAY.  
THEY SAID THE WATER PUMP WAS GONE AND IT WOULD  
\$3500 TO FIX IT. THE WORST PART OF IT WAS, THAT  
ACCORDING TO THE DEALERSHIP, THEY KNOW THERE IS A

1 FLAW WITH WHERE THE WATER PUMP IS LOCATED IN THE  
2 ENGINE, AND THAT BECAUSE OF THIS THE ENGINE WAAS  
3 MOST LIKELY GONE AS WELL. IN THEIR WORDS, THEY  
4 HAVE REPLACED MANY WATER PUMPS IN THESE SAME  
5 SITUATIONS OVER THE YWEARS, AND ONLY ONE CAR  
6 DIDN'T NEED A NEW ENGINE. THEY RECOMMENDED FIXING  
7 THE WATER PUMP, THEN PUTTING IN A NEW ENGINE--\$10,000  
8 WORTH OF WORK. WE BOUGHT THIS CAR CERTIFIED PRE-  
9 OWNED FROM A DEALERSHIP. IT ONLY HAD 108,000 MILES  
10 ON IT AND THE EXTENDED WARRANTY HAD JUST ENDED 8  
11 MONTHS BEFORE. I HAVE NUMEROUS OTHER CARS IN MY  
12 LIFETIME AND NEVER HAVE I HAD TO REPLACE AN ENTIRE  
13 ENGINE, JUST BECAUSE THE WATER PUMP WAS GONE! THIS  
14 CAR SHOULD HAVE BEEN WORTH ABOUT \$9K-\$11K FOR  
15 RESALE, AND INSTEAD MAZDA WANTED TO GIVE US \$2K  
16 TOWARDS A DOWN PAYMENT FOR LEASING ANOTHER OF  
17 THEIR CARS. THEY GAVE US A RATE THAT THEY CLAIMED  
18 WAS A SPECIAL ONE, HOWEVER, I FOUND OUT THAT I  
19 COULD GET AN EVEN BETTER ONE ONLINE MYSELF! WHEN  
20 WE CALLED THEM ON THIS AND WE SAID WE WERE TIRED  
21 OF DEALING WITH THIS, THEY SAID THEY WOULDN'T TALK  
22 WITH US ANYMORE. VERY DISAPPOINTING TO A FAMILY  
23 THAT CAREFULLY WATCHES ITS MONEY AND BUDGETS FOR  
24 EMERGENCIES, BUT WEREN'T PREPARED TO NEED AN  
25 ENTIRELY NEW CAR BEFORE THE OTHER WAS EVEN PAID  
26 FOR! SO UNFAIR!

19 • **January 18, 2019 – 2010 Mazda CX-9**

20 NHTSA ID Number: 11170858

21 Incident Date January 12, 2019

22 Consumer Location CARSON CITY, NV

23 Vehicle Identification Number JM3TB3MA8A0

24 **Summary of Complaint:**

25 ON JAN 12, 2019 WE WERE DRIVING HOME AND WITHOUT  
26 WARNING THE TEMPERATURE GAUGE SPIKED AND THE  
27 CHECK ENGINE LIGHT CAME ON. THE ENGINE STOPPED AND  
28 I WAS ABLE TO GET THE VEHICLE OFF THE ROAD. I LOOKED  
TO SEE THE COOLANT RESERVOIR WAS EMPTY. I WAS ABLE  
TO REFILL IT, THINKING POSSIBLE THERE WAS A LEAK. IT  
GOT US HOME SAFELY. THE NEXT DAY, ENROUTE TO THE  
RADIATOR SHOP; THE SAME THING HAPPENED. AFTER A

1 TOW HOME, THEN A TOW TO THE RADIATOR SHOP AND  
2 EVENTUALLY A TOW HOME, IT WAS DIAGNOSED AS A  
3 WATER PUMP FAILURE AND NOW A NEW ENGINE IS THE  
4 ANSWER FOR THE REPAIR. THERE WAS ABSOLUTELY NO  
5 WARNING TO THIS HAPPENING AND THE WATER PUMP IS  
6 INTERNAL. I UNDERSTAND THAT THE PUMP CAN/WILL  
7 WEAR OUT. I GET IT. WHERE IT'S LOCATED IS A JOKE AND  
8 I'VE READ IT'S AT LEAST A \$1500 - \$2000 FIX, JUST FOR THE  
9 PUMP REPLACEMENT. THE MAIN ISSUE IS THE NO WARNING  
10 WHATSOEVER!

11 • **April 27, 2019 – 2007 Mazda CX-9**

12 NHTSA ID Number: 11204124

13 Incident Date April 3, 2019

14 Consumer Location GROVER, NC

15 Vehicle Identification Number JM3TB28Y270

16 **Summary of Complaint:**

17 I WAS DRIVING HOME ON A BUSY INTERSTATE WHEN MY  
18 CAR STARTED SHAKING AND LOSING POWER. THE CAR  
19 LOST ALL POWER AND I COULDN'T TURN THE STEERING  
20 WHEEL TO GET OUT OF THE WAY OF OTHER DRIVERS. I WAS  
21 ALMOST HIT MORE THAN ONCE BY OTHER CARS. AFTER  
22 HAVING THE VEHICLE TOWED AND A LICENSED MECHANIC  
23 LOOK AT IT, I WAS TOLD THE WATER PUMP FAILED AND  
24 LEAKED WATER AND COOLANT INTO MY ENGINE WHICH  
25 COMPLETELY DISABLED MY ENGINE.

26 • **March 26, 2019 – 2010 Mazda CX-9**

27 NHTSA ID Number: 11191697

28 Incident Date March 26, 2019

Consumer Location LA PORTE, TX

Vehicle Identification Number JM3TB2MA0A0

**Summary of Complaint:**

VEHICLE WAS IN MOTION ON A BUSY STREET WHEN  
SUDDENLY THE CHECK ENGINE LIGHT CAME ON THE AC  
STOPPED COMING OUT COLD, AND THE CAR STOPPED  
ACCELERATING WOULD ONLY GO UP TO 20 MPC, THE CAR  
STARTED MAKING RATTLING NOISES AND I DROVE BY TO  
THE NEAREST PLACE TO STOP AND WATER FELL OUT OF  
THE FRONT BOTTOM RIGHT OF THE CAR.. THE WATER PUMP  
MESSED UP



1  
2 • **March 10, 2019 – 2012 Mazda CX-9**

NHTSA ID Number: 11185636

3 Incident Date February 21, 2019

4 Consumer Location BRONX, NY

5 Vehicle Identification Number JM3TB2DV4C0

6 **Summary of Complaint:**

7 VEHICLE STALLED WHILE EXITING THE HIGHWAY, ENGINE  
8 LIGHT ON, NOISE FROM TIMING CHAIN AREA, VEHICLE  
9 OVERHEATS, WATER PUMP FAILURE PUSHES ANTIFREEZE  
10 INTO THE OIL COMPARTMENT CAUSING THE ENGINE TO GET  
11 DAMAGES WITHIN MINUTES WHITEOUT A WARNING. THIS IS  
12 OBVIOUSLY A MAJOR VERY EXPENSIVE SAFETY ISSUE.

13 • **March 1, 2019 – 2011 Mazda CX-9**

NHTSA ID Number: 11193329

14 Incident Date January 1, 2019

15 Consumer Location JAMESTOWN, NY

16 Vehicle Identification Number JM3TB2BV5B0

17 **Summary of Complaint:**

18 MAZDA CX-9 HAS UN-DETECTED WATER PUMP LEAKS  
19 WHICH CAUSE TO ENGINE OVERHEAT AND EVENTUAL  
20 ENGINE DEATH. MAZDA CORPORATE IS UNWILLING TO CO-  
21 OPERATE. CAR SUDDENLY CAME TO A HALT SHOWING  
22 ENGINE LIGHT ON..AND I HAD TO REPLACE THE BRAKE  
23 BOOSTER ALSO BECAUSE WHEN I WAS DRIVING THE  
24 VEHICLE IT TURN OFF ON ME EVERYWHERE AND I HAD TO  
25 PAY OUT OF MY POCKET AND IM STILL PAYING FOR THIS  
26 VEHICLE RIGHT NOW MY VEHICLE IS IN A GARAGE BECAUSE  
27 IS NOT DRIVABLE

28 • **February 21, 2019 – 2012 Mazda CX-9**

NHTSA ID Number: 11181656

Incident Date November 12, 2018

Consumer Location MUSKEGO, WI

Vehicle Identification Number JM3TB3CA9C0

**Summary of Complaint:**

I OWN A 2012 MAZDA XX9, WHICH I PURCHASED NEW. ON  
OMONDAY MORNING (NOVEMBER 12, 2018) MY (CHECK  
ENGINE LIGHT CAME ON) AND SO I TOOK IT IMMEDIATELY  
TO THE DEALERSHIP FOR DIAGNOSIS. MY CAR WAS

1 RUNNING BEAUTIFULLY, SO I JUST ASSUMED WITH THE  
2 WEATHER CHANG, PERHAPS THE GAS CAP WASN'T  
3 TIGHTENED, AND THEY JUST NEEDED TO CLEAR THE CODS.  
4 IT TURNS OUT THE WATER PUMP FAILED AND APPARENTLY  
5 DESTROYED THE ENTIRE ENGINE. WHICH BECAME  
6 APPARENT AS I DROVE IT TO THE DEALERSHIP FOR  
7 DIAGNOSIS, PER THEIR RECOMMENDATION. MY CAR IS  
8 WELL MAINTAINED BASED ON THE DEALER  
9 RECOMMENDATIONS AND IS CONSISTENTLY SERVICED AT  
10 THE MAZDA DEALERSHIP. THE CAR IS IN FANTASTIC  
11 CONDITION WITH ONLY 90,000. AS AN OWNER, I DID  
12 EVERYTHING BY THE BOOK IN TERMS OF MAINTENANCE  
13 FOR MY CAR. I AM LETTING YOU KNOW, MAZDA HAS A  
14 SERIOUS PROBLEM AND IT'S A SAFETY ISSUE, AS WELL. IF A  
15 WATER PUMP CAN JUST FAIL WITHOUT WARNING AND  
16 COMPLETELY SHUT DOWN AN ENGINE, THAT'S NOT GOOD.  
17 IT THINK THIS IS FAR MORE DANGEROUS THAN THE AIR BAG  
18 RECALL, WHICH IS ONLY A CONCERN IF YOU GET IN AN  
19 ACCIDENT. THERE IS NO WARNING ON THE WATER PUMP  
20 FAILING, AS IT'S SELF-CONTAINED WITHIN THE POWER  
21 TRAIN AND THE ONLY WAY TO CHECK THIS PART IS BY  
22 REMOVING THE ENTIRE ENGINE, WHICH LEADS ME TO  
23 BELIEVE THIS PART WAS NOT DESIGNED TO BE A WEAR  
24 PART. IT'S AN ENGINEERING DESIGN FLAW, THAT CAN  
25 CAUSE BODILY HARM IF IT FAILS, BECAUSE IT TAKES OUT  
26 THE ENTIRE ENGINE AND YOU CONTORL OVER THE  
27 VEHICLE.  
28

- **January 28, 2019 – 2012 Mazda CX-9**

NHTSA ID Number: 11172673

Incident Date January 23, 2019

Consumer Location WEST CHESTER, PA

Vehicle Identification Number JM3TB3BV2C0

**Summary of Complaint:**

24 WHILE DRIVING MY MAZDA CAR, IT SUDDENLY STARTED  
25 BUCKING AND CHECK ENGINE LIGHT CAME ON. CAR WAS  
26 TOWED TO THE DEALERSHIP. PER MAZDA MECHANIC,  
27 WATER PUMP MALFUNCTIONED FORCING COOLANT INTO  
28 THE ENGINE. FEEL THIS POSES A SIGNIFICANT SAFETY ISSUE  
AS THERE WAS VERY LITTLE WARNING POSING ROKS OF  
ACCIDENT, ENGINE OVERHEATING AND POTENTIAL FIRE.

1 THIS APPEARS TO BE A COMMON ISSUE AS MULTIPLE OTHER  
2 POSTS REPORTED

3 • **November 14, 2018 – 2013 Mazda CX-9**

4 NHTSA ID Number: 11067353

5 Incident Date November 13, 2018

6 Consumer Location CHANTILLY, VA

7 Vehicle Identification Number JM3TB3CV3D0

8 **Summary of Complaint:**

9 THE VEHICLE WAS BEING DRIVEN AT THE TIME ON A BUSY  
10 CITY STREET. WE NOTICED SOME NOISES WHICH WAS  
11 SOUNDING LIKE METAL CLANKING. THIS BECAME LOUDER  
12 IMMEDIATELY IN THE SPAN OF 5MINS AND THE  
13 TEMPERATURE SENSOR WENT OFF ON THE DASHBOARD.  
14 THE VEHICLES WAS BECOMING UNRESPONSIVE TO BRAKES  
15 IN THE MIDDLE OF COMMUTE TRAFFIC. LUCKILY WE GOT  
16 THE VEHICLE STOPPED ON THE SIDE OF THE SHOULDER  
17 WITHOUT ANY INJURIES TO ANYONE. UPON GETTING THE  
18 VEHICLE CHCKED BY AN ASE CERTIFIED MECHANIC, IT WAS  
19 DIAGNOSED THAT THE INTERNAL WATER PUMP  
20 (SUGGESTED AS A BAD DESIGN BY THEM AND MANY  
21 OTHERS HAVE REPORTED SIMILAR STALLING SITUATIONS  
22 ON THE INTERNET) SOMEHOW MIXED UP THE COOLANT AND  
23 THE OIL FORMING A SLUDGE AND WAS UNABLE TO  
24 CONTROL THE TEMPERATURE AND LACK OF LUBRICATION  
25 CAUSED THE METAL CLANKING. THIS HAS RENDERED THE  
26 VEHICLE COMPLETELY INOPERABLE ONLY AFTER 5YEARS.  
27 SEEMS LIKE ENGINE NEEDS TO BE REPLACED. THIS RAISES  
28 SERIOUS SAFETY CONCERN THAT IS THIS HAPPENED ON A  
HIGHWAY OR IN THE MIDST OF TRAFFIC, THERE COULD BE  
SERIOUS LOSS OF LIFE OR INJURY TO THE PASSENGERS.  
UPON CHECKING WITH MAZDA, IT WAS RULED THAT THERE  
IS NO RECALL FOR SOMETHING LIKE THIS YET. THIS STANCE  
FROM MAZDA IS BEING UTTERLY NOT RESPONSIBLE FOR  
THEIR DESIGN FLAWS AND PUTTING A PRODUCT OUT IN THE  
MARKET.

79. Upon information and belief, Defendants also exchanged reports from  
dealers and consumers, and NHTSA complaints regarding the Water Pump Defect in

1 Mazda and Ford vehicles incorporating the Cyclone Engine with Ford. As a result,  
2 Defendants also received the following NHTSA complaint:

3 • **December 18, 2015 – 2010 Ford Flex**

4 NHTSA ID Number: 10811218

5 Incident Date December 15, 2015

6 Consumer Location LAKE ELSINORE, CA

7 Vehicle Identification Number 2FMHK6CC9AB

8 **Summary of Complaint:**

9 WHILE WAITING AT A LIGHT IN MY 2010 FORD FLEX THE  
10 ENGINE WAS IDLING ROUGH, AFTER THE SIGNAL TURNED  
11 GREEN THE POWER SEEMED LOW AND SLUGGISH AS I  
12 ACCELERATED. WHEN I WAS AT ABOUT 45 MPH THE ENGINE  
13 POWER RETURNED AND SEEMED MORE NORMAL,  
14 SUDDENLY WITHOUT NOTICE THE ENGINE TURNED OFF AND  
15 ALL DASH LIGHTS ILLUMINATED. I WAS ABLE TO PULL INTO  
16 A DRIVE WAY BUT WAS VERY HARD AS THERE WAS NO  
17 POWER STEERING. I WAS ABLE TO COAST TO A STOP  
18 SAFELY. ONCE STOPPED THERE WAS A VERY STRONG SMELL  
19 OF COOLANT. I OPENED THE HOOD AND FOUND A LARGE  
20 AMOUNT OF COOLANT ON RIGHT SIDE OF ENGINE. MY CAR  
21 WAS TOWED TO MY HOME TO FIGURE OUT WHAT THE ISSUE  
22 COULD BE. ON FURTHER INSPECTION IT IS SUSPECTED THAT  
23 THE WATER PUMP FAILED WHICH IS INTERNAL TO THE  
24 TIMING CHAIN COVER AND THEREFORE DUMPED A LARGE  
25 AMOUNT OF COOLANT INTO THE CRANKCASE WHICH THEN  
26 CONTAMINATED THE ENGINE OIL AND OVER FILLED THE  
27 OIL PAN. I WAS FORTUNATE THAT THIS OCCURRED ON A  
28 CITY STREET AND NOT ON THE FREEWAY AS THIS COULD  
HAVE CAUSED A MAJOR ACCIDENT. ON FURTHER RESEARCH  
I HAVE FOUND THIS HAS OCCURRED MANY TIMES. THE  
ENGINE IN QUESTION IS THE CYCLONE ENGINE AND IS  
FORDS LATEST V6 FAMILY OF GASOLINE ENGINES  
INTRODUCED IN 2006, AND IS KNOWN AS THE DURATEC 35  
WHICH DISPLACES 3.5 L, THE DURATEC 37 WHICH DISPLACES  
3.7L AND THE ECOBOOST 35 WHICH IS A TWIN TURBO  
CHARGED VARIANT OF THE DURATEC 35, THESE ENGINES  
ARE INSTALLED IN THE FOLLOWING VEHICLES, 2007–  
PRESENT FORD EDGE, 2010–2012 FORD FUSION SPORT, 2011–  
PRESENT FORD MUSTANG, 2009–PRESENT FORD FLEX, 2010–

1 PRESENT FORD TAURUS SHO, 2013–PRESENT POLICE  
2 INTERCEPTOR SEDAN, 2011–PRESENT FORD EXPLORER, 2013–  
3 PRESENT FORD POLICE INTERCEPTOR UTILITY, 2011–  
4 PRESENT FORD F-150, 2015–PRESENT FORD  
5 EXPEDITION/EXPEDITION EL, 2014–PRESENT FORD TRANSIT,  
6 2015–PRESENT LINCOLN NAVIGATOR/NAVIGATOR L, 2010–  
7 PRESENT LINCOLN MKS, 2010–PRESENT LINCOLN MKT, 2007–  
8 PRESENT LINCOLN MKX, 2007–PRESENT MAZDA CX-9(MZI).

9 80. Numerous owners and lessees of Class Vehicles have also posted about  
10 their experiences with the Water Pump Defect in the Class Vehicles on internet  
11 forums created to discuss Mazda cars, such as Mazdas247.com. Upon information  
12 and belief, these complaints, detailing both the failures and the responses of  
13 Defendants and Mazda authorized dealerships, began as early as 2010.

14 81. Due to the extreme expense and often delays in the availability of parts,  
15 particularly since Mazda is no longer manufacturing new Cyclone Engines, many  
16 owners and lessees of Class Vehicles decline to repair the engines and instead opt to  
17 trade in the vehicles for significantly reduced values.

18 82. Mazda stopped incorporating the Cyclone Engine into its vehicles as of  
19 the 2016 model year, immediately after Ford finished its total divestiture of Mazda  
20 shares. However, complaints from current owners to Mazda and to NHTSA about  
21 water pump failures continue to this day.

## 22 **V. TOLLING OF THE STATUTE OF LIMITATIONS AND ESTOPPEL**

23 83. Any applicable statute of limitations has been tolled by Defendants'  
24 knowing and active concealment of the Water Pump Defect and the  
25 misrepresentations and omissions alleged herein. Through no fault or lack of  
26 diligence, Plaintiffs and members of the Classes were deceived regarding the Class  
27 Vehicles and could not reasonably discover the Water Pump Defect or Defendants'  
28 deception with respect to the defect.

84. Plaintiffs and members of the Classes did not discover and did not know  
of any facts that would have caused a reasonable person to suspect that Defendants

1 were concealing a defect and/or that the Class Vehicles contained a Water Pump  
2 Defect and corresponding safety risk. As alleged herein, the existence of the Water  
3 Pump Defect was material to Plaintiffs and members of the Classes at all relevant  
4 times. Within the time period of any applicable statutes of limitations, Plaintiffs and  
5 members of the Classes could not have discovered through the exercise of reasonable  
6 diligence the existence of the Water Pump Defect or that Defendants were concealing  
7 the defect.

8 85. At all times, Defendants are and were under a continuous duty to  
9 disclose to Plaintiffs and members of the Classes the true standard, quality and grade  
10 of the Class Vehicles and to disclose the Water Pump Defect and corresponding  
11 safety risk.

12 86. Defendants knowingly, actively and affirmatively concealed the facts  
13 alleged herein. Plaintiffs and members of the Classes reasonably relied on  
14 Defendants' knowing, active, and affirmative concealment.

15 87. For these reasons, all applicable statutes of limitation have been tolled  
16 based on the discovery rule and Defendants' fraudulent concealment, and Defendants  
17 are estopped from relying on any statutes of limitations in defense of this action.

18 **VI. CLASS ACTION ALLEGATIONS**

19 88. Plaintiffs bring this action pursuant to Federal Rules of Civil Procedure  
20 23(a) and 23(b)(2) and/or (b)(3) on behalf of the following Class and Sub-Classes:

21 **Nationwide Class:** All persons or entities in the United States who purchased,  
22 leased or own a Class Vehicle (the "Nationwide Class" or "Class");

23 **California Sub-Class:** All persons or entities who purchased or leased a Class  
24 Vehicle in the State of California and all persons or entities in the State of  
25 California who purchased, leased or own a Class Vehicle (the "California Sub-  
26 Class");

27 **Colorado Sub-Class:** All persons or entities who purchased or leased a Class  
28 Vehicle in the State of Colorado and all persons or entities in the State of

1 Colorado who purchased, leased or own a Class Vehicle (the “Colorado Sub-  
2 Class”);

3 **Florida Sub-Class:** All persons or entities who purchased or leased a Class  
4 Vehicle in the State of Florida and all persons or entities in the State of Florida  
5 who purchased, leased or own a Class Vehicle (the “Florida Sub-Class”);

6 **Illinois Sub-Class:** All persons or entities who purchased or leased a Class  
7 Vehicle in the State of Illinois and all persons or entities in the State of Illinois  
8 who purchased, leased or own a Class Vehicle (the “Illinois Sub-Class”);

9 **Louisiana Sub-Class:** All persons or entities who purchased or leased a Class  
10 Vehicle in the State of Louisiana and all persons or entities in the State of  
11 Louisiana who purchased, leased or own a Class Vehicle (the “Louisiana Sub-  
12 Class”);

13 **Massachusetts Sub-Class:** All persons or entities who purchased or leased a  
14 Class Vehicle in the Commonwealth of Massachusetts and all persons or  
15 entities in the Commonwealth of Massachusetts who purchased, leased or own  
16 a Class Vehicle (the “Massachusetts Sub-Class”);

17 **Michigan Sub-Class:** All persons or entities who purchased or leased a Class  
18 Vehicle in the State of Michigan and all persons or entities in the State of  
19 Michigan who purchased, leased or own a Class Vehicle (the “Michigan Sub-  
20 Class”);

21 **North Carolina Sub-Class:** All persons or entities who purchased or leased a  
22 Class Vehicle in the State of North Carolina and all persons or entities in the  
23 State of North Carolina who purchased, leased or own a Class Vehicle (the  
24 “North Carolina Sub-Class”);

25 **Pennsylvania Sub-Class:** All persons or entities who purchased or leased a  
26 Class Vehicle in the State of Pennsylvania and all persons or entities in the  
27 State of Pennsylvania who purchased, leased or own a Class Vehicle (the  
28 “Pennsylvania Sub-Class”);

**Texas Sub-Class:** All persons or entities who purchased or leased a Class  
Vehicle in the State of Texas and all persons or entities in the State of Texas  
who purchased, leased or own a Class Vehicle (the “Texas Sub-Class”); and

1           **Virginia Sub-Class:** All persons or entities who purchased or leased a Class  
2           Vehicle in the State of Virginia and all persons or entities in the State of  
3           Virginia who purchased, leased or own a Class Vehicle (the “Virginia Sub-  
4           Class”).

5           89. Excluded from the Class and Sub-Classes are Defendants and their  
6           parents, subsidiaries and corporate affiliates. Plaintiffs reserve the right to revise the  
7           definition of the Class and Sub-Classes based upon subsequently discovered  
8           information and reserve the right to establish additional subclasses where appropriate.  
9           The Class and Sub-Classes are collectively referred to herein as the “Classes.”

10           90. The Classes are so numerous that joinder of all members is  
11           impracticable. Plaintiffs believe that there are at least thousands of proposed  
12           members of the Classes throughout the United States.

13           91. Common questions of law and fact exist as to all members of the Classes  
14           and predominate over any issues solely affecting individual members of the Classes.  
15           The common and predominating questions of law and fact include, but are not limited  
16           to:

- 17           • Whether the Class Vehicles contain the Water Pump Defect;
- 18           • Whether the Water Pump Defect is a design defect and/or a defect in  
19           material, manufacturing and/or workmanship;
- 20           • Whether the Water Pump Defect in the Class Vehicles presents a safety  
21           risk;
- 22           • Whether and when Defendants knew or should have known about the  
23           Water Pump Defect;
- 24           • Whether Defendants knew or should have known that the Water Pump  
25           Defect in Class Vehicles presents a safety risk;
- 26           • Whether Defendants had a duty to disclose the Water Pump Defect;
- 27           • Whether Defendants breached their duty to disclose the Water Pump  
28           Defect;

///  
28



- 1 • Whether Defendants intentionally and knowingly concealed, suppressed  
2 and/or omitted material facts concerning the standard, quality or grade  
3 of the Class Vehicles and/or the Water Pump Defect;
- 4 • Whether Defendants negligently omitted material facts concerning the  
5 standard, quality or grade of the Class Vehicles and/or the Water Pump  
6 Defect;
- 7 • Whether Defendants made material omissions concerning the standard,  
8 quality or grade of the Class Vehicles and/or the Water Pump Defect;
- 9 • Whether members of the Classes would pay less for a Class Vehicle if  
10 Defendants, at the time of purchase or lease, disclosed the Water Pump  
11 Defect;
- 12 • Whether members of the Classes would have purchased or leased a  
13 Class Vehicle if Defendants, at the time of purchase or lease, disclosed  
14 the Water Pump Defect;
- 15 • Whether Defendants actively concealed material facts from Plaintiffs  
16 and members of the Classes in order to, *inter alia*, sell more Class  
17 Vehicles and/or transfer repair or replacement costs to Plaintiffs and  
18 members of the Classes;
- 19 • Whether Defendants breached express and/or implied warranties to  
20 Plaintiffs and members of the Classes;
- 21 • Whether Defendants violated the warranty against redhibitory defects,  
22 La. Civ. Code Art. 2520, 2524;
- 23 • Whether Defendants violated the Magnuson-Moss Warranty Act, 15  
24 U.S.C. § 2301, *et seq.*;
- 25 • Whether Defendants violated the Song-Beverly Consumer Warranty  
26 Act, Cal. Civ. Code § 1791, *et seq.*;
- 27 • Whether Defendants violated the Consumer Legal Remedies Act, Cal.  
28 Civ. Code § 1750, *et seq.*;

- 1 • Whether Defendants violated the Unfair Competition Law, Cal. Bus. &
- 2 Prof. Code § 17200, *et seq.*;
- 3 • Whether Defendants violated the Colorado Consumer Protection Act,
- 4 Colo. Rev. Stat. § 6-1-101, *et seq.*;
- 5 • Whether Defendants violated the Florida Deceptive & Unfair Trade
- 6 Practices Act, Fla. Stat. § 501.201, *et seq.*;
- 7 • Whether Defendants violated the Illinois Consumer Fraud and
- 8 Deceptive Trade Practices Act, 815 ILCS 505/1, *et seq.*;
- 9 • Whether Defendants violated the Louisiana Product Liability Act, L.A.
- 10 R.S. 9:2800.51, *et seq.*;
- 11 • Whether Defendants violated the Massachusetts Consumer Protection
- 12 Act, Mass. Gen. Laws 93A, § 1, *et seq.*
- 13 • Whether Defendants violated the Michigan Consumer Protection Act,
- 14 Mich. Comp. Laws § 445.903, *et seq.*;
- 15 • Whether Defendants violated the North Carolina Deceptive Trade
- 16 Practices Act, N.C. Gen. Stat § 75-1.1, *et seq.*;
- 17 • Whether Defendants violated the Pennsylvania Unfair Trade Practices
- 18 and Consumer Protection Law, 73 P.S. §§ 201-1, *et seq.*;
- 19 • Whether Defendants violated the Texas Deceptive Trade Practice-
- 20 Consumer Protection Act, Tex. Bus. & Com. Code § 17.41, *et seq.*;
- 21 • Whether Defendants violated the Virginia Consumer Protection Act,
- 22 Va. Code Ann. §§ 59.1-196, *et seq.*; and
- 23 • Whether damages, restitution, equitable, injunctive, compulsory or
- 24 other relief are warranted.

25 92. Plaintiffs' claims are typical of the claims of the Classes Plaintiffs seek  
26 to represent. As alleged herein, Plaintiffs and the Classes sustained damages arising  
27 out of the same unlawful actions and conduct by Defendants.

28 ///

1           93. Plaintiffs are willing and prepared to serve the Classes in a  
2 representative capacity with all of the obligations and duties material thereto.  
3 Plaintiffs will fairly and adequately protect the interests of the Classes and have no  
4 interests adverse to or in conflict with the interests of the other members of the  
5 Classes.

6           94. Plaintiffs' interests are co-extensive with and are not antagonistic to  
7 those of absent members within the Classes. Plaintiffs will undertake to represent  
8 and protect the interests of absent members within the Classes and will vigorously  
9 prosecute this action.

10           95. Plaintiffs have engaged the services of the undersigned counsel.  
11 Counsel is experienced in complex litigation, will adequately prosecute this action  
12 and will assert and protect the rights of, and otherwise represent, Plaintiffs and absent  
13 members of the Classes.

14           96. A class action is superior to all other available methods for the fair and  
15 efficient adjudication of this controversy. Plaintiffs know of no difficulty to be  
16 encountered in the management of this litigation that would preclude its maintenance  
17 as a class action.

18           97. Class action status is warranted under Rule 23(b)(3) because questions  
19 of law or fact common to the members of the Classes predominate over any questions  
20 affecting only individual members, and a class action is superior to other available  
21 methods for the fair and efficient adjudication of this controversy.

22           98. The Classes may also be certified under Rule 23(b)(2) because  
23 Defendants has acted on grounds generally applicable to the Classes, thereby making  
24 it appropriate to award final injunctive relief or corresponding declaratory relief with  
25 respect to the Classes.

26           99. The interest of members within the Classes in individually controlling  
27 the prosecution of separate actions is theoretical and not practical. The Classes have  
28

1 a high degree of similarity and are cohesive, and Plaintiffs anticipate no difficulty in  
2 the management of this matter as a class action.

3 100. The nature of notice to the proposed Classes is contemplated to be by  
4 direct mail upon certification of the Classes or, if such notice is not practicable, by  
5 the best notice practicable under the circumstance including, *inter alia*, email,  
6 publication in major newspapers and/or on the internet.

7 **VII. CLAIMS FOR RELIEF**

8 **A. California Counts**

9 **COUNT I**

10 **Negligent Misrepresentation**

11 **(On behalf of the California Sub-Class against MNAO and MMC)**

12 101. Plaintiff Wright Schneider incorporates and re-alleges each preceding  
13 paragraph as though fully set forth herein.

14 102. Plaintiff Wright Schneider brings this count on behalf herself and the  
15 members of the California Sub-Class.

16 103. Defendants owed a duty to disclose the Water Pump Defect and its  
17 corresponding safety risk to Plaintiff Wright Schneider and members of the  
18 California Sub-Class because Defendants possessed superior and exclusive  
19 knowledge regarding the defect and the associated risks.

20 104. Defendants negligently omitted material facts including the standard,  
21 quality or grade of the Class Vehicles and/or presence of the Water Pump Defect in  
22 the Class Vehicles. As a direct result of Defendants' negligent conduct, Plaintiff  
23 Wright Schneider and members of the California Sub-Class have suffered actual  
24 damages.

25 105. The Water Pump Defect is material to Plaintiff Wright Schneider and  
26 members of the California Sub-Class because Plaintiff Wright Schneider and  
27 members of the California Sub-Class had a reasonable expectation that the vehicles  
28 would not contain a defect, such as the Water Pump Defect, that leads to exorbitant  
repair costs and exposes them and other vehicle occupants to a safety risk. No

1 reasonable consumer expects a vehicle to contain a concealed defect in design,  
2 manufacture, materials or workmanship, such as the Water Pump Defect, that can  
3 lead to thousands of dollars in repair or replacement costs, and can cause catastrophic  
4 engine failure with little to no warning or time to take preventative measures or safely  
5 remove the vehicle from the road.

6 106. Plaintiff Wright Schneider and members of the California Sub-Class  
7 would not have purchased the Class Vehicles but for Defendants' negligent  
8 omissions of material facts regarding the nature and quality of the Class Vehicles  
9 and/or existence of the Water Pump Defect and corresponding safety risk, or would  
10 have paid less for the Class Vehicles. Plaintiff Wright Schneider and members of the  
11 California Sub-Class justifiably relied upon Defendants' negligent omissions of  
12 material facts.

13 107. As a direct and proximate result of Defendants' negligent omissions of  
14 material facts regarding the standard, quality or grade of the Class Vehicles and/or  
15 the presence of the Water Pump Defect and corresponding safety risk, Plaintiff  
16 Wright Schneider and members of the California Sub-Class have suffered an  
17 ascertainable loss and actual damages in an amount to be determined at trial.

18 **COUNT II**  
19 **Breach of Express Warranty**  
20 **(On behalf of the California Sub-Class against MNAO)**

21 108. Plaintiff Wright Schneider incorporates and re-alleges each preceding  
22 paragraph as though fully set forth herein.

23 109. Plaintiff Wright Schneider brings this count on behalf of herself and the  
24 California Sub-Class.

25 110. Defendant MNAO represented in the maintenance schedules and  
26 warranty guides for the Class Vehicles that there would be no need to replace or  
27 service the water pumps. Such representations formed the basis of the bargain in  
28

1 Plaintiff Wright Schneider and members of the California Sub-Class's decisions to  
2 purchase or lease the Class Vehicles.

3 111. Defendant MNAO also marketed the Class Vehicles as safe, built to last  
4 and reliable vehicles. These statements helped conceal the existence of the Water  
5 Pump Defect and its corresponding safety risk from Plaintiff Wright Schneider and  
6 members of the California Sub-Class.

7 112. Defendant MNAO is and was at all relevant times a merchant and seller  
8 of motor vehicles (i.e., the Class Vehicles) within the meaning of the Uniform  
9 Commercial Code.

10 113. With respect to leases, Defendant MNAO is and was at all relevant times  
11 a lessor of motor vehicles (i.e., the Class Vehicles) within the meaning of the  
12 Uniform Commercial Code.

13 114. The Class Vehicles are and were at all relevant times goods within the  
14 meaning of the Uniform Commercial Code.

15 115. In connection with the purchase or lease of each of the Class Vehicles,  
16 Defendant MNAO provides maintenance schedules and warranty guides which omit  
17 any mention of the water pumps as a component requiring routine inspection, service,  
18 or replacement.

19 116. In connection with the purchase or lease of each of the Class Vehicles,  
20 Defendant MNAO also provides warranty coverage for the Class Vehicles under one  
21 or more manufacturer's warranties. For illustrative purposes, Defendant MNAO  
22 currently offers New Vehicle Limited Warranty coverage for Class Vehicles sold  
23 under the Mazda brand for 3 years or 36,000 miles and extended warranty coverage  
24 for Powertrain components for 5 years or 60,000 miles.<sup>14</sup> Under the warranties  
25 provided to Plaintiff Wright Schneider and members of the California Sub-Class,  
26 Defendant MNAO promised to repair or replace covered components arising out of

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27 <sup>14</sup> See, e.g., Exhibit A (2012 Mazda CX-9 Warranty Booklet). See also  
28 <https://www.mazdausa.com/owners/warranty>.

1 defects in materials and/or workmanship, including the Water Pump Defect, at no  
2 cost to owners and lessees of the Class Vehicles and within a reasonable time. As  
3 alleged herein, Defendant MNAO breached these warranties.

4 117. Defendant MNAO's warranties formed a basis of the bargain that was  
5 reached when Plaintiff Wright Schneider and members of the California Sub-Class  
6 purchased or leased their Class Vehicles. Given the latent nature of the Water Pump  
7 Defect, Defendants knew or should have known that the majority of the water pump  
8 failures (and corresponding engine damage) occur outside of the warranty periods.

9 118. Plaintiff Wright Schneider and members of the California Sub-Class  
10 experienced the existence of the Water Pump Defect within the warranty periods but  
11 had no knowledge of the existence of the defect and associated safety risk, which  
12 were known and concealed by Defendant MNAO. Despite the existence of the  
13 warranties, Defendant MNAO failed to adequately inform Plaintiff Wright Schneider  
14 and members of the California Sub-Class that the Class Vehicles contained the Water  
15 Pump Defect and failed to provide a suitable repair or replacement of the Water  
16 Pump Defect free of charge within a reasonable time.

17 119. Defendant MNAO breached the express warranty promising to repair  
18 and correct a manufacturing defect or defect in materials or workmanship of any parts  
19 it supplied.

20 120. On information and belief, Defendant MNAO has not suitably repaired  
21 or replaced the Water Pump Defect free of charge for Plaintiff Wright Schneider and  
22 members of the California Sub-Class despite the existence of the defect in the Class  
23 Vehicles at the time of sale or lease.

24 121. Defendant MNAO further breached its express warranties by selling  
25 Class Vehicles that were defective with respect to engine materials, workmanship,  
26 design and manufacture, and were accompanied by an owner's manual and/or  
27 maintenance schedule that incorporated no inspection and service intervals for the  
28

1 water pump although Defendant MNAO knew of the Water Pump Defect and that the  
2 water pump required periodic inspection and service.

3 122. Class Vehicles were not of merchantable quality and were unfit for the  
4 ordinary purposes for which passenger vehicles are used because of engine materials,  
5 workmanship, design and/or manufacturing defects which cause engine failure and/or  
6 failure to perform as warranted.

7 123. Defendant MNAO was provided notice of the Water Pump Defect by  
8 numerous consumer complaints made to its authorized dealers nationwide,  
9 complaints to NHTSA and through its own testing. Affording Defendant MNAO a  
10 reasonable opportunity to cure its breach of written warranties would be unnecessary  
11 and futile here because Defendant MNAO has known of and concealed the Water  
12 Pump Defect and has failed to provide a suitable repair or replacement of the Water  
13 Pump Defect free of charge within a reasonable time.

14 124. Defendant MNAO was further provided notice by Plaintiff Wright  
15 Schneider of its breach of express warranties by notice via letter dated May 13, 2019.  
16 Plaintiff Wright Schneider also provided notice by presenting her Mazda CX-9 for  
17 repair to Marin Mazda on May 20, 2019 in San Rafael, California. Upon information  
18 and belief, Marin Mazda is an authorized dealer of Defendant MNAO and its duly  
19 authorized agent to perform warranty repairs. Despite these notices, Defendant  
20 MNAO did not cure its breach of express warranties and failed to provide a suitable  
21 repair or replacement of the Water Pump Defect free of charge within a reasonable  
22 time.

23 125. Any attempt by Defendant MNAO to disclaim or limit recovery to the  
24 terms of the express warranties is unconscionable and unenforceable here.  
25 Specifically, Defendant MNAO's warranty limitation is unenforceable because it  
26 knowingly sold or leased a defective product without informing consumers about the  
27 defect. The time limits contained in Defendant MNAO's warranty periods were also  
28 unconscionable and inadequate to protect Plaintiff Wright Schneider and members of



1 the California Sub-Class. Among other things, Plaintiff Wright Schneider and  
2 members of the California Sub-Class did not determine these time limitations, the  
3 terms of which unreasonably favored Defendant MNAO. A gross disparity in  
4 bargaining power existed between Defendant MNAO and members of the Classes,  
5 and Defendant MNAO knew or should have known that the Class Vehicles were  
6 defective at the time of sale or lease and that the Water Pump Defect posed a safety  
7 risk.

8 126. Further, the limited warranty promising to repair and/or correct a  
9 manufacturing defect fails in its essential purpose because the contractual remedy is  
10 insufficient to make Plaintiff Wright Schneider and members of the California Sub-  
11 Class whole because, on information and belief, Defendant MNAO has failed and/or  
12 has refused to adequately provide the promised remedies within a reasonable time.

13 127. Defendant MNAO knew that the Class Vehicles were inherently  
14 defective and did not conform to their warranties, and Plaintiff Wright Schneider and  
15 members of the California Sub-Class were induced to purchase or lease the Class  
16 Vehicles under false and/or fraudulent pretenses.

17 128. Defendant's MNAO warranties formed a basis of the bargain that was  
18 reached when Plaintiff Wright Schneider and members of the California Sub-Class  
19 purchased or leased their Class Vehicles.

20 129. Plaintiff Wright Schneider and members of the California Sub-Class  
21 experienced the existence of the Water Pump Defect within the warranty periods but  
22 had no knowledge of the existence of the defect, which was known and concealed by  
23 Defendant MNAO. Despite the existence of the warranties, Defendant MNAO failed  
24 to inform Plaintiff Wright Schneider and members of the California Sub-Class that  
25 the Class Vehicles contained the Water Pump Defect during the warranty periods,  
26 and, thus, wrongfully transferred the costs of repair or replacement of the water pump  
27 and damaged engine parts to Plaintiff Wright Schneider and members of the  
28 California Sub-Class.

1 130. Because of the Water Pump Defect, the Class Vehicles are not reliable  
2 and owners of these vehicles have lost confidence in the ability of Class Vehicles to  
3 perform the function of safe reliable transportation.

4 131. As a direct and proximate result of Defendant MNAO’s breach of  
5 express warranties, Plaintiff Wright Schneider and members of the California Sub-  
6 Class have been damaged in an amount to be determined at trial.

7 132. Finally, because of Defendant MNAO’s breach of express warranty as  
8 set forth herein, Plaintiff Wright Schneider and members of the California Sub-Class  
9 assert, as additional and/or alternative remedies, the revocation of acceptance of the  
10 goods and the return to Plaintiff Wright Schneider and members of the California  
11 Sub-Class of the purchase or lease price of all Class Vehicles currently owned or  
12 leased, and for such other incidental and consequential damages as allowed.

13 **COUNT III**  
14 **Breach of Implied Warranty of Merchantability**  
15 **(On behalf of the California Sub-Class against MNAO and MMC)**

16 133. Plaintiff Wright Schneider incorporates and re-alleges each preceding  
17 paragraph as though fully set forth herein.

18 134. Plaintiff Wright Schneider brings this count on behalf of herself and the  
19 California Sub-Class.

20 135. Plaintiff Wright Schneider and members of the California Sub-Class  
21 purchased or leased the Class Vehicles, manufactured by MMC and/or MNAO, from  
22 MNAO by and through its authorized agents for retail sales, or were otherwise  
23 expected to be the eventual purchasers of the Class Vehicles when bought from a  
24 third party. At all relevant times, Defendants were the manufacturer, distributor,  
25 warrantor and/or seller of Class Vehicles. Defendants knew or had reason to know of  
26 the specific use for which the Class Vehicles were purchased or leased.

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1           136. Defendants are and were at all relevant times a merchant and seller of  
2 motor vehicles (i.e., the Class Vehicles) within the meaning of the Uniform  
3 Commercial Code.

4           137. With respect to leases, Defendants are and were at all relevant times a  
5 lessor of motor vehicles (i.e., the Class Vehicles) within the meaning of the Uniform  
6 Commercial Code.

7           138. The Class Vehicles are and were at all relevant times goods within the  
8 meaning of the Uniform Commercial Code.

9           139. Defendants impliedly warranted that the Class Vehicles were in  
10 merchantable condition and fit for the ordinary purpose for which vehicles are used.

11           140. The Class Vehicles, when sold or leased and at all times thereafter, were  
12 not in merchantable condition and were and are not fit for the ordinary purpose of  
13 providing safe and reliable transportation. The Class Vehicles contain an inherent  
14 defect – the Water Pump Defect – (at the time of sale or lease and thereafter) and  
15 present an undisclosed safety risk to drivers and occupants. Thus, Defendants  
16 breached the implied warranty of merchantability.

17           141. Through its maintenance schedules, Defendants further represented that  
18 the water pump would not need repair or replacement and/or fraudulently concealed  
19 the need for repair or replacement of the water pump by omitting the water pump  
20 from the maintenance schedules. Defendants cannot disclaim its implied warranty as  
21 it knowingly sold or leased a defective product.

22           142. Defendants were provided notice of the Water Pump Defect by  
23 numerous consumer complaints made to its authorized dealers nationwide,  
24 complaints to NHTSA and through their own testing. Affording Defendants a  
25 reasonable opportunity to cure their breach of implied warranties would be  
26 unnecessary and futile here because Defendants have known of and concealed the  
27 Water Pump Defect and, on information and belief, have refused to repair or replace  
28 the Water Pump Defect free of charge within a reasonable time.

1 143. Defendants were further provided notice by Plaintiff Wright Schneider  
2 of their breach of implied warranties by notice via letter dated May 13, 2019 directed  
3 to MNAO. Plaintiff Wright Schneider also provided notice by presenting her Mazda  
4 CX-9 for repair to Marin Mazda on May 20, 2019 in San Rafael, California. Upon  
5 information and belief, Marin Mazda is an authorized dealer of MNAO and its duly  
6 authorized agent to perform warranty repairs. Despite these notices, Defendants did  
7 not cure the breach of implied warranties and failed to provide a suitable repair or  
8 replacement of the Water Pump Defect free of charge within a reasonable time.

9 144. As a direct and proximate result of Defendants breach of the implied  
10 warranty of merchantability, Plaintiff Wright Schneider and members of the  
11 California Sub-Class have been damaged in an amount to be proven at trial.

12 145. Any attempt by Defendants to disclaim or limit the implied warranty of  
13 merchantability vis-à-vis consumers is unconscionable and unenforceable here.  
14 Specifically, MNAO's warranty limitation is unenforceable because it knowingly  
15 sold or leased a defective product without informing consumers about the defect.  
16 The time limits contained in MNAO's warranty periods were also unconscionable  
17 and inadequate to protect Plaintiff Wright Schneider and members of the California  
18 Sub-Class. Among other things, Plaintiff Wright Schneider and members of the  
19 California Sub-Class did not determine these time limitations, the terms of which  
20 unreasonably favored Defendants. A gross disparity in bargaining power existed  
21 between Defendants and members of the Classes, and MNAO knew or should have  
22 known that the Class Vehicles were defective at the time of sale or lease and that the  
23 Water Pump Defect posed a safety risk.

24 146. Plaintiff Wright Schneider and members of the California Sub-Class  
25 have been excused from performance of any warranty obligations as a result of  
26 Defendants' conduct described herein.

27 147. The applicable statute of limitations for the implied warranty claim has  
28 been tolled by the discovery rule and/or fraudulent concealment.

**COUNT IV**  
**Violation of the Song-Beverly Consumer Warranty Act,**  
**Cal. Civ. Code § 1791 *et seq.***  
**(On behalf of the California Sub-Class against MNAO and MMC)**

148. Plaintiff Wright Schneider incorporates and re-alleges each preceding paragraph as though fully set forth herein.

149. Plaintiff Wright Schneider brings this count on behalf of herself and the California Sub-Class.

150. Plaintiff Wright Schneider and members of the California Sub-Class purchased or leased the Class Vehicles, manufactured by MMC and/or MNAO, from MNAO by and through its authorized agents for retail sales, or were otherwise expected to be the eventual purchasers of the Class Vehicles when bought from a third party. At all relevant times, Defendants were the manufacturer, distributor, warrantor and/or seller of Class Vehicles. Defendants knew or had reason to know of the specific use for which the Class Vehicles were purchased or leased.

151. Defendant MNAO provided Plaintiff Wright Schneider and members of the California Sub-Class with one or more express warranties. For illustrative purposes, MNAO currently offers New Vehicle Limited Warranty coverage for Class Vehicles sold under the Mazda brand for 3 years or 36,000 miles and extended warranty coverage for Powertrain components for 5 years or 60,000 miles.<sup>15</sup> Under warranties provided to members of the Classes, MNAO promised to repair or replace covered defective components arising out of defects in materials and/or workmanship, including the Water Pump Defect, at no cost to owners and lessees of the Class Vehicles. As alleged herein, MNAO breached these warranties.

152. Plaintiff Wright Schneider and members of the California Class experienced the Water Pump Defect within the warranty periods but Defendants failed to inform Plaintiff Wright Schneider and members of the California Sub-Class

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<sup>15</sup> See, e.g., Exhibit A (2012 Mazda CX-9 Warranty Booklet). See also <https://www.mazdausa.com/owners/warranty>.

1 of the existence of the Water Pump Defect and associated safety hazard, and failed to  
2 provide a suitable repair or replacement of the defective water pump and/or any  
3 damaged engine components free of charge within a reasonable time.

4 153. Defendants impliedly warranted that the Class Vehicles were in  
5 merchantable condition and fit for the ordinary purpose for which vehicles are used.

6 154. The Class Vehicles, when sold or leased and at all times thereafter, were  
7 not in merchantable condition and were and are not fit for the ordinary purpose of  
8 providing safe and reliable transportation. The Class Vehicles contain an inherent  
9 defect – the Water Pump Defect – (at the time of sale or lease and thereafter) and  
10 present an undisclosed safety risk to drivers and occupants. Thus, Defendants  
11 breached the implied warranty of merchantability.

12 155. Through its maintenance schedules, Defendant MNAO further  
13 represented that the water pump would not need repair or replacement and/or  
14 fraudulently concealed the need for repair or replacement of the water pump by  
15 omitting the water pump from the maintenance schedules. MNAO cannot disclaim  
16 its implied warranty as it knowingly sold or leased a defective product.

17 156. Defendants were provided notice of the Water Pump Defect by  
18 numerous consumer complaints made to MNAO's authorized dealers nationwide,  
19 complaints to NHTSA and through their own testing. Affording Defendants a  
20 reasonable opportunity to cure their breach of implied warranties would be  
21 unnecessary and futile here because Defendants have known of and concealed the  
22 Water Pump Defect and, on information and belief, have refused to repair or replace  
23 the Water Pump Defect free of charge within a reasonable time.

24 157. Defendants breached their express and/or implied warranties in violation  
25 of Cal. Civ. Code § 1791 *et seq.*

26 158. As a direct and proximate result of Defendants breach of their express  
27 and/or implied warranties, Plaintiff Wright Schneider and members of the California  
28 Sub-Class have been damaged in an amount to be proven at trial.

1 159. Plaintiff Wright Schneider and members of the California Sub-Class  
2 have been excused from performance of any warranty obligations as a result of  
3 Defendants' conduct described herein.

4 160. Plaintiff Wright Schneider and members of the California Sub-Class  
5 seek actual damages, costs, attorneys' fees, and statutory damages as a result of  
6 Defendants' willful conduct alleged herein. Plaintiff Wright Schneider and members  
7 of the California Sub-Class also seek reimbursement, replacement of the defective  
8 water pump and/or the engine components damaged by the defective water pump,  
9 and/or the revocation of the purchase or lease of the Class Vehicles, and all other  
10 relief available under Cal Civ. Code § 1794.

11 161. The applicable statute of limitations for the implied warranty claim has  
12 been tolled by the discovery rule and/or fraudulent concealment.

13 **COUNT V**

14 **Violation of the Magnuson-Moss Warranty Act ("MMWA"),**  
15 **15 U.S.C. § 2301, et seq.**

16 **(On behalf of the Nationwide Class or, alternatively,**  
17 **on behalf of the California Sub-Class against MNAO and MMC)**

18 162. Plaintiff Wright Schneider incorporates and re-alleges each preceding  
19 paragraph as though fully set forth herein.

20 163. Plaintiff Wright Schneider bring this count on behalf of herself and the  
21 members of the Nationwide Class or, alternatively, on behalf of the California Sub-  
22 Class.

23 164. Plaintiff Wright Schneider satisfies the MMWA jurisdictional  
24 requirement because she alleges diversity jurisdiction under CAFA, 28 U.S.C. §  
25 1332(d)(2).

26 165. Plaintiff Wright Schneider and members of the Classes are "consumers"  
27 within the meaning of the Magnuson-Moss Warranty Act, 15 U.S.C. § 2301(3).

28 166. Defendants are "suppliers" and "warrantors" within the meaning of the  
Magnuson-Moss Warranty Act, 15 U.S.C. § 2301(4)-(5).

1 167. The Class Vehicles are “consumer products” within the meaning of the  
2 Magnuson-Moss Warranty Act, 15 U.S.C. § 2301(1).

3 168. The MMWA provides a cause of action for any consumer who is  
4 damaged by the failure of a warrantor to comply with a written or implied warranty.  
5 *See* 15 U.S.C. § 2310(d)(1).

6 169. Defendant MNAO provided Plaintiff Wright Schneider and members of  
7 the Classes with one or more express warranties, which are covered under 15 U.S.C.  
8 § 2301(6). For illustrative purposes, MNAO currently offers New Vehicle Limited  
9 Warranty coverage for Class Vehicles sold under the Mazda brand for 3 years or  
10 36,000 miles and extended warranty coverage for Powertrain components for 5 years  
11 or 60,000 miles.<sup>16</sup> Under warranties provided to members of the Classes, MNAO  
12 promised to repair or replace covered defective components arising out of defects in  
13 materials and/or workmanship, including the Water Pump Defect, at no cost to  
14 owners and lessees of the Class Vehicles. As alleged herein, MNAO breached these  
15 warranties.

16 170. Plaintiff Wright Schneider and members of the Classes experienced the  
17 Water Pump Defect within the warranty periods but MNAO failed to inform Plaintiff  
18 Wright Schneider and members of the Classes of the existence of the Water Pump  
19 Defect and associated safety risk, and failed to provide a suitable remedy or repair of  
20 the Water Pump Defect free of charge within a reasonable time.

21 171. Defendants were provided notice by letter dated May 13, 2019 that  
22 Plaintiffs would pursue a claim under the MMWA on behalf of a class.

23 172. Any attempt by MNAO to disclaim or limit its express or implied  
24 warranties is unconscionable and unenforceable here. Specifically, MNAO’s  
25 warranty limitations are unenforceable because it knowingly sold or leased a  
26 defective product without informing consumers about the defect. The time limits

27 \_\_\_\_\_  
28 <sup>16</sup> *See, e.g.,* Exhibit A (2012 Mazda CX-9 Warranty Booklet). *See also*  
<https://www.mazdausa.com/owners/warranty>.



1 contained in MNAO's warranty periods are also unconscionable and inadequate to  
2 protect Plaintiff Wright Schneider and members of the Classes. Among other things,  
3 Plaintiff Wright Schneider and members of the Classes did not determine these time  
4 limitations, the terms of which unreasonably favored MNAO. A gross disparity in  
5 bargaining power existed between MNAO and members of the Classes, and MNAO  
6 knew or should have known that the Class Vehicles were defective at the time of sale  
7 or lease and that they posed a safety risk.

8 173. The Class Vehicles' implied warranties are covered under 15 U.S.C. §  
9 2301(7).

10 174. Defendants breached these warranties by failing to disclose and  
11 fraudulently concealing information regarding the standard, quality or grade of the  
12 Class Vehicles and/or the presence of the Water Pump Defect and corresponding  
13 safety risk. Without limitation, the Class Vehicles share a common defect in design,  
14 material, manufacturing and/or workmanship that fails to operate as represented by  
15 Defendants and presents a safety risk.

16 175. Affording Defendants a reasonable opportunity to cure their breach of  
17 warranties would be unnecessary and futile. At the time of sale or lease of each Class  
18 Vehicle and all relevant times thereafter, Defendants knew, or were reckless in not  
19 knowing, of the material omissions concerning the standard, quality or grade of the  
20 Class Vehicles and the presence of the Water Pump Defect and corresponding safety  
21 risk, but failed to repair or replace the Water Pump Defect and/or disclose the defect.  
22 Under the circumstances, the remedies available under any informal settlement  
23 procedure would be inadequate and any requirement that Plaintiff Wright Schneider  
24 resort to an informal dispute resolution procedure and/or afford Defendants a  
25 reasonable opportunity to cure its breach of warranties is excused and thereby  
26 deemed satisfied.

27 176. Plaintiff Wright Schneider and members of the Classes would suffer  
28 economic hardship if they returned their Class Vehicles, but did not receive the return

1 of all payments made by them to Defendants MNAO. Thus, Plaintiff Wright  
2 Schneider and members of the Classes have not re-accepted their Class Vehicles by  
3 retaining them.

4 177. The amount in controversy of Plaintiff Wright Schneider's individual  
5 claims meets or exceeds the sum of \$25. The amount in controversy of this action  
6 exceeds the sum of \$50,000, exclusive of interest and costs, computed on the basis of  
7 all claims to be determined in this lawsuit.

8 178. Plaintiff Wright Schneider, individually and on behalf of members of the  
9 Classes, seeks all damages permitted by law, including diminution in the value of the  
10 Class Vehicles, in an amount to be proven at trial.

11 **COUNT VI**  
12 **Fraud by Omission or Fraudulent Concealment**  
13 **(On behalf of the California Sub-Class against MNAO and MMC)**

14 179. Plaintiff Wright Schneider incorporates and re-alleges each preceding  
15 paragraph as though fully set forth herein.

16 180. Plaintiff Wright Schneider brings this count on behalf of herself and the  
17 members of the California Sub-Class.

18 181. Defendants intentionally and knowingly concealed, suppressed and/or  
19 omitted material facts including the standard, quality or grade of the Class Vehicles  
20 and the fact that the Class Vehicles contain a Water Pump Defect and corresponding  
21 safety risk, with the intent that Plaintiff Wright Schneider and members of the  
22 California Sub-Class rely on Defendants' omissions. As a direct result of  
23 Defendants' fraudulent conduct, Plaintiff Wright Schneider and members of the  
24 California Sub-Class have suffered actual damages.

25 182. Defendants knew (at the time of sale or lease and thereafter) that the  
26 Class Vehicles contained the Water Pump Defect, concealed the defect and never  
27 intended to repair or replace the Water Pump Defect during the warranty periods. To  
28

1 date, Defendants have not provided Plaintiff Wright Schneider and members of the  
2 California Sub-Class with a repair or remedy for the Water Pump Defect.

3 183. Defendants owed a duty to disclose the Water Pump Defect and its  
4 corresponding safety risk to Plaintiff Wright Schneider and members of the  
5 California Sub-Class because Defendants possessed superior and exclusive  
6 knowledge regarding the defect. Further, Defendants had a duty to disclose any  
7 information relating to the safety, quality, functionality and reliability of Class  
8 Vehicles because they consistently marketed the Class Vehicles as safe.

9 184. Once Defendants made representations to the public about safety,  
10 quality, functionality, and reliability, Defendants were under a duty to disclose these  
11 omitted facts, because where one does speak one must speak the whole truth and not  
12 conceal any facts which materially qualify those facts stated. One who volunteers  
13 information must be truthful, and the telling of a half-truth calculated to deceive is  
14 fraud. Rather than disclose the defect, Defendants intentionally and knowingly  
15 concealed, suppressed and/or omitted material facts including the standard, quality or  
16 grade of the Class Vehicles and the presence of the Water Pump Defect and  
17 corresponding safety risk, to sell additional Class Vehicles and avoid the cost of  
18 repair or replacement.

19 185. The Water Pump Defect is material to Plaintiff Wright Schneider and  
20 members of the California Sub-Class because Plaintiff Wright Schneider and  
21 members of the California Sub-Class had a reasonable expectation that the vehicles  
22 would not contain a defect, such as the Water Pump Defect, that leads to exorbitant  
23 repair costs and exposes them and other vehicle occupants to a safety risk. No  
24 reasonable consumer expects a vehicle to contain a concealed defect in design,  
25 manufacture, materials or workmanship, such as the Water Pump Defect, that can  
26 lead to thousands of dollars in repair or replacement costs, and can cause catastrophic  
27 engine failure with little to no warning or time to take preventative measures or safely  
28 remove the vehicle from the road.

1           186. Plaintiff Wright Schneider and members of the California Sub-Class  
2 would not have purchased or leased the Class Vehicles but for Defendants’ omissions  
3 and concealment of material facts regarding the nature and quality of the Class  
4 Vehicles and existence of the Water Pump Defect and corresponding safety risk, or  
5 would have paid less for the Class Vehicles.

6           187. Defendants knew their concealment and suppression of material facts  
7 was false and misleading and knew the effect of concealing those material facts.  
8 Defendants knew their concealment and suppression of the Water Pump Defect  
9 would sell more Class Vehicles and would discourage Plaintiff Wright Schneider and  
10 members of the California Sub-Class from seeking replacement or repair of the Water  
11 Pump Defect during the applicable warranty periods. Further, Defendants intended to  
12 induce Plaintiff Wright Schneider and members of the California Sub-Class into  
13 purchasing or leasing the Class Vehicles and to discourage them from seeking  
14 replacement or repair of the Water Pump Defect in order to decrease costs and  
15 increase profits.

16           188. Defendants acted with malice, oppression and fraud.

17           189. Plaintiff Wright Schneider and members of the California Sub-Class  
18 reasonably relied upon Defendants’ knowing concealment and omissions. As a direct  
19 and proximate result of Defendants’ omissions and active concealment of material  
20 facts regarding the Water Pump Defect and associated safety risk, Plaintiff Wright  
21 Schneider and members of the California Sub-Class have suffered actual damages in  
22 an amount to be determined at trial.

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**COUNT VII**  
**Violation of the Consumers Legal Remedies Act (“CLRA”),**  
**Cal. Civ. Code § 1750, et seq.**  
**(On behalf of the Nationwide Class, or alternatively, the California Sub-Class**  
**against MNAO and MMC)**

190. Plaintiffs Wright Schneider, Proven, Bibbo, Meshberg, Hume, the Levasseurs, Sonneveldt, Lacasse, the Pickerds, Halwas, Matheny, DelVecchio, and Sowards (“Plaintiffs” for the purposes of this count) incorporate and re-allege each preceding paragraph as though fully set forth herein.

191. Plaintiffs bring this count on behalf of themselves and the members of the Nationwide Class. Alternatively, Plaintiff Wright Schneider brings this count on behalf of the California Sub-Class.

192. CLRA “protect[s] consumers against unfair and deceptive business practices.” *See* Cal. Civ. Code § 1760.

193. Plaintiffs and members of the Classes are persons within the context of the CLRA, *see* Cal. Civ. § 1761(d), who purchased and/or leased class vehicles for personal, family, or household use.

194. The Class Vehicles are goods within the meaning of Cal. Civ. Code § 1761(a).

195. Defendants violated and continue to violate the CLRA by engaging in unfair and deceptive trade practices, including, *inter alia*: (1) representing that the Class Vehicles have characteristics which they do not; (2) representing that the Class Vehicles are of a particular standard when they are of another; and (3) advertising the Class Vehicles with the intent not to sell them as advertised. *See* Cal. Civ. Code § 1170.

196. Defendants further violated the CLRA by failing to disclose within the warranty period, or any time thereafter, the material fact that the Class Vehicles possessed the Water Pump Defect and its corresponding safety hazard.

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1           197. Defendants also violated the CLRA by actively concealing the material  
2 fact that the Class Vehicles possessed the Water Pump Defect and its corresponding  
3 safety hazard and/or transferring the cost of repair or replacement of the Water Pump  
4 Defect to Plaintiffs and members of the Classes.

5           198. The fact that the Water Pump Defect exists in the Class Vehicles and  
6 exposes consumers to a corresponding safety hazard is material because Plaintiffs and  
7 members of the Classes had a reasonable expectation that the vehicles would not  
8 suffer from a defect that may cause catastrophic engine failure and its corresponding  
9 safety hazard.

10           199. Defendants has knowingly and willfully engaged in deceptive and unfair  
11 trade practices, including, but not limited to, deception, fraud, false pretense, false  
12 promise, misrepresentation and the knowing concealment, suppression and omission  
13 of materials facts concerning the Class Vehicles' Water Pump Defect and  
14 corresponding safety risk in connection with the sale and/or advertisement of Class  
15 Vehicles. Defendants unconscionably marketed the Class Vehicles to uninformed  
16 consumers in order to maximize profits by selling additional Class Vehicles  
17 containing the undisclosed defect and corresponding safety hazard.

18           200. Defendants fraudulently, intentionally, negligently and/or recklessly  
19 misrepresented to Plaintiffs and members of the Classes that the water pump in the  
20 Class Vehicles would not require maintenance, repair or replacement and  
21 fraudulently omitted the water pump from its maintenance schedules.

22           201. Upon information and belief, Defendants' decisions to fraudulently,  
23 intentionally, negligently and/or recklessly misrepresent to Plaintiffs and members of  
24 the Classes that the water pump in the Class Vehicles would not require maintenance,  
25 repair or replacement and to fraudulently omit the water pump from its maintenance  
26 schedules was made in California.

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1 202. Information regarding the Water Pump Defect as described in this  
2 Complaint is material to consumers in that the defect results in exorbitant repair or  
3 replacement costs, can cause catastrophic engine failure and poses a safety risk.

4 203. Defendants' unlawful acts and practices affect the public interest, and  
5 trade and commerce in the State of California, and present a continuing safety hazard  
6 to Plaintiffs and the members of the Classes, including the California Sub-Class.

7 204. As a proximate and direct result of Defendants' violations of the CLRA,  
8 Plaintiffs and members of the Classes have suffered premature failure of the water  
9 pump and/or engine failure, diminution of Class Vehicle resale value, increased  
10 repair and maintenance costs and other substantial monetary damages and  
11 inconvenience.

12 205. With this filing, and on this Count, Plaintiffs and members of the  
13 Classes seek an order enjoining Defendants' unfair and deceptive practices.

14 206. Defendants' violations of the CLRA were willful and oppressive.

15 207. Plaintiffs have provided Defendants with notice of their violations of the  
16 CLRA pursuant to Cal. Civ. Code § 1782(a) by letter dated May 13, 2019. More than  
17 thirty days have passed and, to date, Defendants has failed to remedy its violations of  
18 the CLRA. Therefore, Plaintiffs and members of the Classes are entitled to seek  
19 monetary relief for Defendants' violation of the CLRA.

20 208. Plaintiffs and members of the Classes seek actual damages, punitive  
21 damages, statutory damages, restitution, attorneys' fees and any other relief proper  
22 under the CLRA. *See* Cal. Civ. Code § 1780.

23 **COUNT VIII**

24 **Violation of Unfair Competition Law (the "UCL"),**  
25 **Cal. Bus. & Prof. Code § 17200 *et seq.***

26 **(On behalf of the Nationwide, or alternatively, the California Sub-Class against**  
27 **MNAO and MMC)**

28 209. Plaintiffs Wright Schneider, Proven, Bibbo, Meshberg, Hume, the  
Levasseurs, Sonneveldt, Lacasse, the Pickerds, Halwas, Matheny, Delvecchio, and

1 Sowards (“Plaintiffs” for the purposes of this count) incorporate and re-allege each  
2 preceding paragraph as though fully set forth herein.

3 210. Plaintiffs bring this count on behalf of themselves and the members of  
4 the Nationwide Class. Alternatively, Plaintiff Wright Schneider brings this count on  
5 behalf of the California Sub-Class.

6 211. The California Business & Professions Code § 17200 *et seq.* (the  
7 “UCL”) prohibits “any unlawful, unfair or fraudulent business act or practice.”

8 212. As alleged herein, Defendants have violated the UCL by engaging in  
9 unlawful, unfair and fraudulent business acts or practices.

10 213. In violation of the UCL, Defendants employed unfair, unlawful and  
11 deceptive acts or practices, fraud, false pretense, misrepresentations, or concealment,  
12 suppression or omission of a material fact with intent that other rely upon such  
13 concealment, suppression or omission, in connection with the sale and/or lease of  
14 Class Vehicles. Defendants knowingly concealed, suppressed and/or omitted  
15 material facts regarding the Water Pump Defect and corresponding safety hazard and  
16 misrepresented the standard, quality or grade of the Class Vehicles, which directly  
17 caused harm to Plaintiffs and members of the Classes.

18 214. Defendants actively suppressed the fact of the Water Pump Defect’s  
19 existence in Class Vehicles and that it presents a safety hazard because of materials,  
20 workmanship, design and/or manufacturing defects. Further, Defendants employed  
21 unfair, unlawful and fraudulent business practices to deny repair or replacement of  
22 the defective Water Pump within a reasonable time in violation of the UCL.

23 215. Upon information and belief, Defendants’ decisions to actively suppress  
24 the fact of the Water Pump Defect’s existence in Class Vehicles and its  
25 corresponding safety hazard was made in California. Further, Defendants’ decisions  
26 to employ unfair, unlawful and fraudulent business practices to deny repair or  
27 replacement of the defective Water Pump within a reasonable time in violation of the  
28 UCL were made in California.



1           216. Defendants breached the CLRA, and Defendant MNAO breached the  
2 Song-Beverly Consumer Warranty Act, and the Magnuson-Moss Warranty Act as  
3 alleged herein in violation of the UCL.

4           217. Defendants' unfair, unlawful and fraudulent business practices were  
5 likely to deceive a reasonable consumer. Plaintiffs and members of the Classes have  
6 no reasonable way to know that Class Vehicles contained the Water Pump Defect and  
7 that the Class Vehicles were defective in materials, workmanship, design and/or  
8 manufacture and posed a corresponding safety risk. Defendants possessed superior  
9 knowledge as to the quality and characteristic of the Class Vehicles, including the  
10 Water Pump Defect and its associated safety risk, and any reasonable consumer  
11 would have relied on Defendants' misrepresentations and omissions as did Plaintiffs  
12 and members of the Classes.

13           218. Defendants intentionally and knowingly misrepresented and omitted  
14 facts regarding the Water Pump Defect in the Class Vehicles and its associated safety  
15 hazard with the intent to mislead Plaintiffs and the members of the Classes.  
16 Defendants knew, or should have known, that the Class Vehicles possessed the Water  
17 Pump Defect and exposes consumers to a corresponding safety hazard.

18           219. Defendants owed a duty to disclose the Water Pump Defect and its  
19 corresponding safety hazard to Plaintiffs and the members of the Classes because  
20 Defendants possessed superior knowledge regarding the defect and the corresponding  
21 safety hazard. Defendants also owed a duty to disclose the Water Pump Defect  
22 because Defendants made partial representations regarding the safety of the Class  
23 Vehicles and thus owed a duty to reveal the complete truth to Plaintiffs and members  
24 of the Classes. Defendants had a duty to disclose any information relating to the  
25 safety, quality, functionality and reliability of Class Vehicles because they  
26 consistently marketed the Class Vehicles as safe.

27           220. Once Defendants made representations to the public about safety,  
28 quality, functionality, and reliability, Defendants was under a duty to disclose these

1 omitted facts, because where one does speak one must speak the whole truth and not  
2 conceal any facts which materially qualify those facts stated. One who volunteers  
3 information must be truthful, and the telling of a half-truth calculated to deceive is  
4 fraud. Rather than disclose the defect, Defendants engaged in unfair, unlawful and  
5 fraudulent business practices in order to sell additional Class Vehicles and avoid the  
6 cost of repair or replacement of the defective water pumps and/or the damaged  
7 engines.

8 221. Defendants' unfair, unlawful and fraudulent acts or practices,  
9 affirmative misrepresentations and/or material omissions regarding the Water Pump  
10 Defect were intended to mislead consumers and misled Plaintiffs and members of the  
11 Classes.

12 222. At all relevant times, Defendants' unfair and deceptive acts or practices,  
13 affirmative misrepresentations and/or omissions regarding the Water Pump Defect  
14 and its corresponding safety hazard were material to Plaintiffs and members of the  
15 Classes. When Plaintiffs and members of the Classes purchased or leased their Class  
16 Vehicles, they reasonably relied on the reasonable expectation that the Class Vehicles  
17 would be free from defects that pose an unavoidable safety hazard. Had Defendants  
18 disclosed that the Class Vehicles contained the Water Pump Defect and/or pose an  
19 unavoidable safety hazard, Plaintiffs and members of the Classes would not have  
20 purchased or leased the Class Vehicles, or would have paid less for their vehicles.

21 223. Defendants had a continuous duty to Plaintiff Wright Schneider and  
22 members of the Classes to refrain from unfair, unlawful and fraudulent practices  
23 under the UCL and to disclose the Water Pump Defect and associated safety hazard.  
24 Defendants' unfair, unlawful and fraudulent acts or practices, affirmative  
25 misrepresentations and/or material omissions regarding the Water Pump Defect and  
26 corresponding safety hazard are substantially injurious to consumers. As a result of  
27 Defendants' knowing, intentional concealment and/or omission of the Water Pump  
28 Defect and associated safety hazard in violation of the UCL, Plaintiffs and members

1 of the Classes have suffered damages to be determined at trial. Owners and lessees of  
2 Class Vehicles also suffered an ascertainable loss in the form of, *inter alia*, out-of-  
3 pocket costs for diagnosis and repair or replacement of the defective water pumps,  
4 and the diminished value of their vehicles as a result of Defendants' unfair, unlawful  
5 and fraudulent acts and practices in the course of its business.

6 224. Defendants have knowingly and willfully engaged in the unfair,  
7 unlawful and fraudulent business practices alleged herein. Further, Defendants  
8 unconscionably marketed the Class Vehicles to uninformed consumers in order to  
9 maximize profits by selling additional Class Vehicles containing the undisclosed  
10 defect and corresponding safety hazard.

11 225. Defendants' unfair, unlawful and fraudulent acts and practices have  
12 harmed and continue to harm Plaintiffs and members of the Classes, have negatively  
13 affected the public interest, and present a continuing safety hazard to Plaintiffs and  
14 members of the Classes, including the California Sub-Class.

15 226. Plaintiffs and members of the Classes seek an order enjoining  
16 Defendants' unfair, unlawful, and fraudulent practices and award costs, attorneys'  
17 fees and restitution, disgorgement of funds, and any other just and proper relief  
18 available under the UCL and California law.

19 **B. Colorado Counts**

20 **COUNT IX**

21 **Breach of Express Warranty**

22 **(On behalf of the Colorado Sub-Class against MNAO)**

23 227. Plaintiff Shannon Proven incorporates and re-alleges each preceding  
24 paragraph as though fully set forth herein.

25 228. Plaintiff Proven brings this count on behalf of herself and the Colorado  
26 Sub-Class.

27 229. Defendant MNAO represented in the maintenance schedules and  
28 warranty guides for the Class Vehicles that there would be no need to replace or  
service the water pumps. Such representations formed the basis of the bargain in

1 Plaintiff Proven's and members of the Colorado Sub-Class's decisions to purchase or  
2 lease the Class Vehicles.

3 230. Defendant MNAO also marketed the Class Vehicles as safe, built to last  
4 and reliable vehicles. These statements helped conceal the existence of the Water  
5 Pump Defect and its corresponding safety risk from Plaintiff Proven and members of  
6 the Colorado Sub-Class.

7 231. Defendant MNAO is and was at all relevant times a merchant and seller  
8 of motor vehicles (i.e., the Class Vehicles) within the meaning of the Uniform  
9 Commercial Code.

10 232. With respect to leases, Defendant MNAO is and was at all relevant times  
11 a lessor of motor vehicles (i.e., the Class Vehicles) within the meaning of the  
12 Uniform Commercial Code.

13 233. The Class Vehicles are and were at all relevant times goods within the  
14 meaning of the Uniform Commercial Code.

15 234. In connection with the purchase or lease of each of the Class Vehicles,  
16 Defendant MNAO provides maintenance schedules and warranty guides which omit  
17 any mention of the water pumps as a component requiring routine inspection, service,  
18 or replacement.

19 235. In connection with the purchase or lease of each of the Class Vehicles,  
20 Defendant MNAO also provides warranty coverage for the Class Vehicles under one  
21 or more manufacturer's warranties. For illustrative purposes, Defendant MNAO  
22 currently offers New Vehicle Limited Warranty coverage for Class Vehicles sold  
23 under the Mazda brand for 3 years or 36,000 miles and extended warranty coverage  
24 for Powertrain components for 5 years or 60,000 miles.<sup>17</sup> Under the warranties  
25 provided to Plaintiff Proven and members of the Colorado Sub-Class, Defendant  
26 MNAO promised to repair or replace covered components arising out of defects in

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27 <sup>17</sup> See, e.g., Exhibit A (2012 Mazda CX-9 Warranty Booklet). See also  
28 <https://www.mazdausa.com/owners/warranty>.

1 materials and/or workmanship, including the Water Pump Defect, at no cost to  
2 owners and lessees of the Class Vehicles and within a reasonable time. As alleged  
3 herein, Defendant MNAO breached these warranties.

4 236. Defendant MNAO's warranties formed a basis of the bargain that was  
5 reached when Plaintiff Proven and members of the Colorado Sub-Class purchased or  
6 leased their Class Vehicles. Given the latent nature of the Water Pump Defect,  
7 Defendant MNAO knew or should have known that the majority of the water pump  
8 failures (and corresponding engine damage) occur outside of the warranty periods.

9 237. Plaintiff Proven and members of the Colorado Sub-Class experienced  
10 the existence of the Water Pump Defect within the warranty periods but had no  
11 knowledge of the existence of the defect and associated safety risk, which were  
12 known and concealed by Defendant MNAO. Despite the existence of the warranties,  
13 Defendant MNAO failed to adequately inform Plaintiff Proven and members of the  
14 Colorado Sub-Class that the Class Vehicles contained the Water Pump Defect and  
15 failed to provide a suitable repair or replacement of the Water Pump Defect free of  
16 charge within a reasonable time.

17 238. Defendant MNAO breached the express warranty promising to repair  
18 and correct a manufacturing defect or defect in materials or workmanship of any parts  
19 it supplied.

20 239. On information and belief, Defendant MNAO has not suitably repaired  
21 or replaced the Water Pump Defect free of charge for Plaintiff Proven and members  
22 of the Colorado Sub-Class despite the existence of the defect in the Class Vehicles at  
23 the time of sale or lease.

24 240. Defendant MNAO further breached its express warranties by selling  
25 Class Vehicles that were defective with respect to engine materials, workmanship,  
26 design and manufacture, and were accompanied by an owner's manual and/or  
27 maintenance schedule that incorporated no inspection and service intervals for the  
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1 water pump although Defendant MNAO knew of the Water Pump Defect and that the  
2 water pump required periodic inspection and service.

3 241. Class Vehicles were not of merchantable quality and were unfit for the  
4 ordinary purposes for which passenger vehicles are used because of engine materials,  
5 workmanship, design and/or manufacturing defects which cause engine failure and/or  
6 failure to perform as warranted.

7 242. Defendant MNAO was provided notice of the Water Pump Defect by  
8 numerous consumer complaints made to its authorized dealers nationwide,  
9 complaints to NHTSA and through its own testing. Affording Defendant MNAO a  
10 reasonable opportunity to cure its breach of written warranties would be unnecessary  
11 and futile here because Defendant MNAO has known of and concealed the Water  
12 Pump Defect and has failed to provide a suitable repair or replacement of the Water  
13 Pump Defect free of charge within a reasonable time.

14 243. Any attempt by Defendant MNAO to disclaim or limit recovery to the  
15 terms of the express warranties is unconscionable and unenforceable here.  
16 Specifically, Defendant MNAO's warranty limitation is unenforceable because it  
17 knowingly sold or leased a defective product without informing consumers about the  
18 defect. The time limits contained in Defendant MNAO's warranty periods were also  
19 unconscionable and inadequate to protect Plaintiff Proven and members of the  
20 Colorado Sub-Class. Among other things, Plaintiff Proven and members of the  
21 Colorado Sub-Class did not determine these time limitations, the terms of which  
22 unreasonably favored Defendant MNAO. A gross disparity in bargaining power  
23 existed between Defendant MNAO and members of the Classes, and Defendant  
24 MNAO knew or should have known that the Class Vehicles were defective at the  
25 time of sale or lease and that the Water Pump Defect posed a safety risk.

26 244. Further, the limited warranty promising to repair and/or correct a  
27 manufacturing defect fails in its essential purpose because the contractual remedy is  
28 insufficient to make Plaintiff Proven and members of the Colorado Sub-Class whole

1 because, on information and belief, Defendant MNAO has failed and/or has refused  
2 to adequately provide the promised remedies within a reasonable time.

3 245. Defendant MNAO knew that the Class Vehicles were inherently  
4 defective and did not conform to their warranties, and Plaintiff Proven and members  
5 of the Colorado Sub-Class were induced to purchase or lease the Class Vehicles  
6 under false and/or fraudulent pretenses.

7 246. Defendant MNAO's warranties formed a basis of the bargain that was  
8 reached when Plaintiff Proven and members of the Colorado Sub-Class purchased or  
9 leased their Class Vehicles.

10 247. Plaintiff Proven and members of the Colorado Sub-Class experienced  
11 the existence of the Water Pump Defect within the warranty periods but had no  
12 knowledge of the existence of the defect, which was known and concealed by  
13 Defendant MNAO. Despite the existence of the warranties, Defendant MNAO failed  
14 to inform Plaintiff Proven and members of the Colorado Sub-Class that the Class  
15 Vehicles contained the Water Pump Defect during the warranty periods, and, thus,  
16 wrongfully transferred the costs of repair or replacement of the water pump and  
17 damaged engine parts to Plaintiff Proven and members of the Colorado Sub-Class.

18 248. Because of the Water Pump Defect, the Class Vehicles are not reliable  
19 and owners of these vehicles have lost confidence in the ability of Class Vehicles to  
20 perform the function of safe reliable transportation.

21 249. As a direct and proximate result of Defendant MNAO's breach of  
22 express warranties, Plaintiff Proven and members of the Colorado Sub-Class have  
23 been damaged in an amount to be determined at trial.

24 250. Finally, because of Defendant MNAO's breach of express warranty as  
25 set forth herein, Plaintiff Proven and members of the Colorado Sub-Class assert, as  
26 additional and/or alternative remedies, the revocation of acceptance of the goods and  
27 the return to Plaintiff Proven and members of the Colorado Sub-Class of the purchase  
28

1 or lease price of all Class Vehicles currently owned or leased, and for such other  
2 incidental and consequential damages as allowed.

3 **COUNT X**  
4 **Breach of Implied Warranty of Merchantability**  
5 **(On behalf of the Colorado Sub-Class against MNAO)**

6 251. Plaintiff Proven incorporates and re-alleges each preceding paragraph as  
7 though fully set forth herein.

8 252. Plaintiff Proven brings this count on behalf of herself and the Colorado  
9 Sub-Class.

10 253. Plaintiff Proven and members of the Colorado Sub-Class purchased or  
11 leased the Class Vehicles, manufactured by MMC and/or MNAO, from MNAO by  
12 and through its authorized agents for retail sales, or were otherwise expected to be the  
13 eventual purchasers of the Class Vehicles when bought from a third party. At all  
14 relevant times, Defendants were the manufacturer, distributor, warrantor and/or seller  
15 of Class Vehicles. Defendants knew or had reason to know of the specific use for  
16 which the Class Vehicles were purchased or leased.

17 254. Defendants are and were at all relevant times a merchant and seller of  
18 motor vehicles (i.e., the Class Vehicles) within the meaning of the Uniform  
19 Commercial Code.

20 255. With respect to leases, Defendants are and were at all relevant times a  
21 lessor of motor vehicles (i.e., the Class Vehicles) within the meaning of the Uniform  
22 Commercial Code.

23 256. The Class Vehicles are and were at all relevant times goods within the  
24 meaning of the Uniform Commercial Code.

25 257. Defendants impliedly warranted that the Class Vehicles were in  
26 merchantable condition and fit for the ordinary purpose for which vehicles are used.

27 258. The Class Vehicles, when sold or leased and at all times thereafter, were  
28 not in merchantable condition and were and are not fit for the ordinary purpose of



1 providing safe and reliable transportation. The Class Vehicles contain an inherent  
2 defect – the Water Pump Defect – (at the time of sale or lease and thereafter) and  
3 present an undisclosed safety risk to drivers and occupants. Thus, Defendants  
4 breached the implied warranty of merchantability.

5 259. Through its maintenance schedules, MNAO further represented that the  
6 water pump would not need repair or replacement and/or fraudulently concealed the  
7 need for repair or replacement of the water pump by omitting the water pump from  
8 the maintenance schedules. Defendant MNAO cannot disclaim its implied warranty  
9 as it knowingly sold or leased a defective product.

10 260. Defendants were provided notice of the Water Pump Defect by  
11 numerous consumer complaints made to MNAO’s authorized dealers nationwide,  
12 complaints to NHTSA and through their own testing. Affording Defendants a  
13 reasonable opportunity to cure their breach of implied warranties would be  
14 unnecessary and futile here because Defendants have known of and concealed the  
15 Water Pump Defect and, on information and belief, have refused to repair or replace  
16 the Water Pump Defect free of charge within a reasonable time.

17 261. As a direct and proximate result of Defendants’ breach of the implied  
18 warranty of merchantability, Plaintiff Proven and members of the Colorado Sub-  
19 Class have been damaged in an amount to be proven at trial.

20 262. Any attempt by Defendants to disclaim or limit the implied warranty of  
21 merchantability vis-à-vis consumers is unconscionable and unenforceable here.  
22 Specifically, MNAO’s warranty limitation is unenforceable because it knowingly  
23 sold or leased a defective product without informing consumers about the defect.  
24 The time limits contained in MNAO’s warranty periods were also unconscionable  
25 and inadequate to protect Plaintiff Proven and members of the Colorado Sub-Class.  
26 Among other things, Plaintiff Proven and members of the Colorado Sub-Class did not  
27 determine these time limitations, the terms of which unreasonably favored MNAO.  
28 A gross disparity in bargaining power existed between MNAO and members of the

1 Classes, and Defendants knew or should have known that the Class Vehicles were  
2 defective at the time of sale or lease and that the Water Pump Defect posed a safety  
3 risk.

4 263. Plaintiff Proven and members of the Colorado Sub-Class have been  
5 excused from performance of any warranty obligations as a result of Defendants'  
6 conduct described herein.

7 264. The applicable statute of limitations for the implied warranty claim has  
8 been tolled by the discovery rule and/or fraudulent concealment.

9 **COUNT XI**  
10 **Violation of the Magnuson-Moss Warranty Act (“MMWA”),**  
11 **15 U.S.C. § 2301, et seq.**  
12 **(On behalf of the Nationwide Class or, alternatively,**  
13 **on behalf of the Colorado Sub-Class against MNAO and MMC)**

14 265. Plaintiff Proven incorporates and re-alleges each preceding paragraph as  
15 though fully set forth herein.

16 266. Plaintiff Proven brings this count on behalf of herself and the members  
17 of the Nationwide Class or, alternatively, on behalf of the Colorado Sub-Class.

18 267. Plaintiff Proven satisfies the MMWA jurisdictional requirement because  
19 she alleges diversity jurisdiction under CAFA, 28 U.S.C. § 1332(d)(2).

20 268. Plaintiff Proven and members of the Classes are “consumers” within the  
21 meaning of the Magnuson-Moss Warranty Act, 15 U.S.C. § 2301(3).

22 269. Defendants are “suppliers” and “warrantors” within the meaning of the  
23 Magnuson-Moss Warranty Act, 15 U.S.C. § 2301(4)-(5).

24 270. The Class Vehicles are “consumer products” within the meaning of the  
25 Magnuson-Moss Warranty Act, 15 U.S.C. § 2301(1).

26 271. The MMWA provides a cause of action for any consumer who is  
27 damaged by the failure of a warrantor to comply with a written or implied warranty.  
28 *See* 15 U.S.C. § 2310(d)(1).

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1           272. Defendant MNAO provided Plaintiff Proven and members of the  
2 Classes with one or more express warranties, which are covered under 15 U.S.C. §  
3 2301(6). For illustrative purposes, MNAO currently offers New Vehicle Limited  
4 Warranty coverage for Class Vehicles sold under the Mazda brand for 3 years or  
5 36,000 miles and extended warranty coverage for Powertrain components for 5 years  
6 or 60,000 miles.<sup>18</sup> Under warranties provided to members of the Classes, MNAO  
7 promised to repair or replace covered defective components arising out of defects in  
8 materials and/or workmanship, including the Water Pump Defect, at no cost to  
9 owners and lessees of the Class Vehicles. As alleged herein, MNAO breached these  
10 warranties.

11           273. Plaintiff Proven and members of the Classes experienced the Water  
12 Pump Defect within the warranty periods but MNAO failed to inform Plaintiff  
13 Proven and members of the Classes of the existence of the Water Pump Defect and  
14 associated safety risk, and failed to provide a suitable remedy or repair of the Water  
15 Pump Defect free of charge within a reasonable time.

16           274. Defendants were provided notice by letter dated May 13, 2019 directed  
17 to MNAO that Plaintiffs would pursue a claim under the MMWA on behalf of a  
18 class.

19           275. Any attempt by Defendants to disclaim or limit its express or implied  
20 warranties is unconscionable and unenforceable here. Specifically, MNAO's  
21 warranty limitations are unenforceable because it knowingly sold or leased a  
22 defective product without informing consumers about the defect. The time limits  
23 contained in MNAO's warranty periods are also unconscionable and inadequate to  
24 protect Plaintiff Proven and members of the Classes. Among other things, Plaintiff  
25 Proven and members of the Classes did not determine these time limitations, the  
26 terms of which unreasonably favored MNAO. A gross disparity in bargaining power

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27 <sup>18</sup> See, e.g., Exhibit A (2012 Mazda CX-9 Warranty Booklet). See also  
28 <https://www.mazdausa.com/owners/warranty>.

1 existed between MNAO and members of the Classes, and MNAO knew or should  
2 have known that the Class Vehicles were defective at the time of sale or lease and  
3 that they posed a safety risk.

4 276. The Class Vehicles' implied warranties are covered under 15 U.S.C. §  
5 2301(7).

6 277. Defendants breached these warranties by failing to disclose and  
7 fraudulently concealing information regarding the standard, quality or grade of the  
8 Class Vehicles and/or the presence of the Water Pump Defect and corresponding  
9 safety risk. Without limitation, the Class Vehicles share a common defect in design,  
10 material, manufacturing and/or workmanship that fails to operate as represented by  
11 Defendants and presents a safety risk.

12 278. Affording Defendants a reasonable opportunity to cure its breach of  
13 warranties would be unnecessary and futile. At the time of sale or lease of each Class  
14 Vehicle and all relevant times thereafter, Defendants knew, or were reckless in not  
15 knowing, of the material omissions concerning the standard, quality or grade of the  
16 Class Vehicles and the presence of the Water Pump Defect and corresponding safety  
17 risk, but failed to repair or replace the Water Pump Defect and/or disclose the defect.  
18 Under the circumstances, the remedies available under any informal settlement  
19 procedure would be inadequate and any requirement that Plaintiff Proven resort to an  
20 informal dispute resolution procedure and/or afford Defendants a reasonable  
21 opportunity to cure its breach of warranties is excused and thereby deemed satisfied.

22 279. Plaintiff Proven and members of the Classes would suffer economic  
23 hardship if they returned their Class Vehicles, but did not receive the return of all  
24 payments made by them to Defendants. Thus, Plaintiff Proven and members of the  
25 Classes have not re-accepted their Class Vehicles by retaining them.

26 280. The amount in controversy of Plaintiff Proven's individual claims meets  
27 or exceeds the sum of \$25. The amount in controversy of this action exceeds the sum  
28

1 of \$50,000, exclusive of interest and costs, computed on the basis of all claims to be  
2 determined in this lawsuit.

3 281. Plaintiff Proven, individually and on behalf of members of the Classes,  
4 seeks all damages permitted by law, including diminution in the value of the Class  
5 Vehicles, in an amount to be proven at trial.

6 **COUNT XII**  
7 **Fraud by Omission or Fraudulent Concealment**  
8 **(On behalf of the Colorado Sub-Class against MNAO and MMC)**

9 282. Plaintiff Proven incorporates and re-alleges each preceding paragraph as  
10 though fully set forth herein.

11 283. Plaintiff Proven brings this count on behalf of herself and the members  
12 of the Colorado Sub-Class.

13 284. Defendants intentionally and knowingly concealed, suppressed and/or  
14 omitted material facts including the standard, quality or grade of the Class Vehicles  
15 and the fact that the Class Vehicles contain a Water Pump Defect and corresponding  
16 safety risk, with the intent that Plaintiff Proven and members of the Colorado Sub-  
17 Class rely on Defendants' omissions. As a direct result of Defendants' fraudulent  
18 conduct, Plaintiff Proven and members of the Colorado Sub-Class have suffered  
19 actual damages.

20 285. Defendants knew (at the time of sale or lease and thereafter) that the  
21 Class Vehicles contained the Water Pump Defect, concealed the defect and never  
22 intended to repair or replace the Water Pump Defect during the warranty periods. To  
23 date, Defendants have not provided Plaintiff Proven and members of the Colorado  
24 Sub-Class with a repair or remedy for the Water Pump Defect.

25 286. Defendants owed a duty to disclose the Water Pump Defect and its  
26 corresponding safety risk to Plaintiff Proven and members of the Colorado Sub-Class  
27 because Defendants possessed superior and exclusive knowledge regarding the  
28 defect. Further, Defendants had a duty to disclose any information relating to the

1 safety, quality, functionality and reliability of Class Vehicles because they  
2 consistently marketed the Class Vehicles as safe.

3 287. Once Defendants made representations to the public about safety,  
4 quality, functionality, and reliability, Defendants were under a duty to disclose these  
5 omitted facts, because where one does speak one must speak the whole truth and not  
6 conceal any facts which materially qualify those facts stated. One who volunteers  
7 information must be truthful, and the telling of a half-truth calculated to deceive is  
8 fraud. Rather than disclose the defect, Defendants intentionally and knowingly  
9 concealed, suppressed and/or omitted material facts including the standard, quality or  
10 grade of the Class Vehicles and the presence of the Water Pump Defect and  
11 corresponding safety risk, to sell additional Class Vehicles and avoid the cost of  
12 repair or replacement.

13 288. The Water Pump Defect is material to Plaintiff Proven and members of  
14 the Colorado Sub-Class because Plaintiff Proven and members of the Colorado Sub-  
15 Class had a reasonable expectation that the vehicles would not contain a defect, such  
16 as the Water Pump Defect, that leads to exorbitant repair costs and exposes them and  
17 other vehicle occupants to a safety risk. No reasonable consumer expects a vehicle to  
18 contain a concealed defect in design, manufacture, materials or workmanship, such as  
19 the Water Pump Defect, that can lead to thousands of dollars in repair or replacement  
20 costs, and can cause catastrophic engine failure with little to no warning or time to  
21 take preventative measures or safely remove the vehicle from the road.

22 289. Plaintiff Proven and members of the Colorado Sub-Class would not have  
23 purchased or leased the Class Vehicles but for Defendants' omissions and  
24 concealment of material facts regarding the nature and quality of the Class Vehicles  
25 and existence of the Water Pump Defect and corresponding safety risk, or would  
26 have paid less for the Class Vehicles.

27 290. Defendants knew their concealment and suppression of material facts  
28 was false and misleading and knew the effect of concealing those material facts.

1 Defendants knew their concealment and suppression of the Water Pump Defect  
2 would sell more Class Vehicles and would discourage Plaintiff Proven and members  
3 of the Colorado Sub-Class from seeking replacement or repair of the Water Pump  
4 Defect during the applicable warranty periods. Further, Defendants intended to  
5 induce Plaintiff Proven and members of the Colorado Sub-Class into purchasing or  
6 leasing the Class Vehicles and to discourage them from seeking replacement or repair  
7 of the Water Pump Defect in order to decrease costs and increase profits.

8 291. Defendants acted with malice, oppression and fraud.

9 292. Plaintiff Proven and members of the Colorado Sub-Class reasonably  
10 relied upon Defendants' knowing concealment and omissions. As a direct and  
11 proximate result of Defendants' omissions and active concealment of material facts  
12 regarding the Water Pump Defect and associated safety risk, Plaintiff Proven and  
13 members of the Colorado Sub-Class have suffered actual damages in an amount to be  
14 determined at trial.

15 **COUNT XIII**

16 **Violation of the Colorado Consumer Protection Act,  
17 Colo. Rev. Stat § 6-1-101 et seq.**

18 **(On behalf of the Colorado Sub-Class against MNAO and MMC)**

19 293. Plaintiff Proven incorporates and re-alleges each preceding paragraph as  
20 though fully set forth herein.

21 294. Plaintiff Proven asserts this count on behalf of herself and members of  
22 the Colorado Sub-Class.

23 295. Defendants are each a person within the context of the Colorado  
24 Consumer Protection Act, Colo. Rev. Stat. § 6-1-101 et seq. (the "CCPA"). See  
25 Colo. Rev. Stat. § 6-1-102(6).

26 296. As alleged herein, Defendants committed unfair and deceptive acts or  
27 practices in the conduct of trade or commerce in violation of the CCPA. See Colo.  
28 Rev. Stat. § 6-1-101.

///

1           297. Defendants violated the CCPA by *inter alia*: “(e) [k]nowingly mak[ing]  
2 a false representation as to the characteristics, ingredients, uses, benefits, alterations,  
3 or quantities of goods . . . ; (g) [r]epresent[ing] that goods, food, services, or property  
4 are of a particular standard, quality, or grade, or that goods are of a particular style or  
5 model, if he knows or should know that they are of another . . . ; (i) [a]dvertis[ing]  
6 goods, services, or property with intent not to sell them as advertised . . . ; and (u)  
7 [f]ail[ing] to disclose material information concerning goods, services, or property  
8 which information was known at the time of an advertisement or sale if such failure  
9 to disclose such information was intended to induce the consumer to enter into a  
10 transaction.” Colo. Rev. Stat. § 6-1-105.

11           298. In violation of the CCPA, Defendants employed unfair and deceptive  
12 acts or practices, fraud, false pretense, misrepresentations, or concealment,  
13 suppression or omission of a material fact with intent that others rely upon such  
14 concealment, suppression or omission, in connection with the sale and/or lease of  
15 Class Vehicles. Defendants knowingly failed to disclose, concealed, suppressed  
16 and/or omitted material facts regarding the Water Pump Defect and associated safety  
17 hazard and misrepresented the standard, quality or grade of the Class Vehicles, which  
18 directly caused harm to the Plaintiff Proven and the Colorado Sub-Class.

19           299. Defendants actively suppressed the fact that the water pump in Class  
20 Vehicles is defective and presents a safety hazard because of materials, workmanship,  
21 design and/or manufacturing defects. Further, Defendants employed unfair and  
22 deceptive trade practices to deny repair or replacement of the Water Pump Defect  
23 within a reasonable time in violation of the CCPA. Defendant MNAO also breached  
24 its warranties as alleged herein in violation of the CCPA.

25           300. Defendants’ unfair and deceptive trade practices were likely to deceive a  
26 reasonable consumer. Plaintiff Proven and members of the Colorado Sub-Class had  
27 no reasonable way to know that Class Vehicles contained a Water Pump Defect  
28 within their engines which were defective in materials, workmanship, design and/or



1 manufacture and posed a safety risk. Defendants possessed superior knowledge as to  
2 the quality and characteristics of the Class Vehicles, including the existence of the  
3 Water Pump Defect and associated safety risks, and any reasonable consumer would  
4 have relied on Defendants' misrepresentations and omissions as Plaintiff Proven and  
5 members of the Colorado Sub-Class did.

6 301. Defendants intentionally and knowingly misrepresented and omitted  
7 facts regarding the Water Pump Defect and associated safety hazard with the intent to  
8 mislead Plaintiff Proven and Colorado Sub-Class members. Defendants knew, or  
9 should have known, of the existence of the Water Pump Defect and its associated  
10 safety hazard, including the sudden loss of power or ability to steer while driving.

11 302. Defendants owed a duty to disclose the Water Pump Defect and its  
12 corresponding safety hazard to the Plaintiff Proven and Colorado Sub-Class members  
13 because Defendants possessed superior and exclusive knowledge regarding the defect  
14 and the hazard associated with it. Further, once Defendants made representations to  
15 the public about safety, quality, functionality, and reliability, Defendants were under  
16 a duty to disclose these omitted facts, because where one does speak one must speak  
17 the whole truth and not conceal any facts which materially qualify those facts stated.  
18 Rather than disclose the defect, Defendants engaged in unfair and deceptive trade  
19 practices in order to sell additional Class Vehicles and avoid the cost of repair or  
20 replacement of the defective water pumps and/or the engines in Class Vehicles.

21 303. Defendants' unfair and deceptive acts or practices, affirmative  
22 misrepresentations and/or material omissions regarding the Water Pump Defect were  
23 intended to mislead consumers and misled Plaintiff Proven and the members of the  
24 Colorado Sub-Class.

25 304. At all relevant times, Defendants' unfair and deceptive acts or practices,  
26 affirmative misrepresentations and/or omissions regarding the Water Pump Defect  
27 and its corresponding safety hazard were material to Plaintiff Proven and the  
28 members of the Colorado Sub-Class. When Plaintiff Proven and the members of the

1 Colorado Sub-Class purchased or leased their Class Vehicles, they reasonably relied  
2 on the reasonable expectation that the Class Vehicles' would be free from material  
3 defects and/or pose an unavoidable safety hazard. Had Defendants disclosed that the  
4 engines in Class Vehicles had a Water Pump Defect and would be subject to  
5 premature catastrophic engine failure and/or pose an unavoidable safety hazard,  
6 Plaintiff Proven and the members of the Colorado Sub-Class would not have  
7 purchased or leased the Class Vehicles, or would have paid less for their vehicles.

8 305. Defendants had a continuous duty to Plaintiff Proven and members of  
9 the Colorado Sub-Class to refrain from unfair and deceptive practices under the  
10 CCPA and to disclose the Water Pump Defect and associated safety hazard.  
11 Defendants' unfair and deceptive acts or practices, affirmative misrepresentations  
12 and/or material omissions regarding the Water Pump Defect and corresponding safety  
13 hazard are substantially injurious to consumers. As a result of Defendants' knowing,  
14 intentional concealment and/or omission of the Water Pump Defect and associated  
15 safety hazard in violation of the CCPA, Plaintiff Proven and members of the  
16 Colorado Sub-Class have suffered harm and/or continue to suffer harm by the threat  
17 of being exposed to an unavoidable safety hazard, loss of the use of their vehicles,  
18 and damages to be determined at trial. Owners and lessees of Class Vehicles also  
19 suffered an ascertainable loss in the form of, *inter alia*, out-of-pocket costs for  
20 diagnosis and repair or replacement of the Water Pump Defect, and the diminished  
21 value of their vehicles as a result of Defendants' deceptive and unfair acts and  
22 practices in the course of its business.

23 306. Defendants have knowingly and willfully engaged in the unfair and  
24 deceptive trade practices alleged herein. Further, Defendants unconscionably  
25 marketed the Class Vehicles to uninformed consumers in order to maximize profits  
26 by selling additional Class Vehicles containing the undisclosed defect and  
27 corresponding safety hazard.

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1 307. Defendants' unlawful acts and practices affect the public interest and  
2 trade and commerce in the State of Colorado, were in bad faith, and present a  
3 continuing safety hazard to the Plaintiff Proven and members of the Colorado Sub-  
4 Class.

5 308. As a direct and proximate result of Defendants' violations of the CCPA,  
6 Plaintiff Proven and members of the Colorado Sub-Class have suffered actual  
7 damages and/or injury in fact, including, *inter alia*: (1) out-of-pocket monies for  
8 diagnosis, repair and/or replacement of the Water Pump Defect and other related  
9 costs; (2) the difference in value between the Class Vehicles promised and warranted,  
10 and the Class Vehicles containing the Water Pump Defect; and/or (3) the diminished  
11 resale value of the Class Vehicles containing the Water Pump Defect.

12 309. Plaintiff Proven and members of the Colorado Sub-Class seek actual  
13 damages against Defendants in an amount to be determined at trial and statutory,  
14 treble, and/or punitive damages under the CCPA.

15 310. Plaintiff Proven and members of the Colorado Sub-Class also seek an  
16 order enjoining Defendants' unfair, unlawful, and/or deceptive practices and  
17 awarding costs, attorneys' fees and restitution, disgorgement of funds, and any other  
18 just and proper relief available under the CCPA.

19 **C. Florida Counts**

20 **COUNT XIV**

21 **Breach of Express Warranty**

22 **(On behalf of the Florida Sub-Class against MNAO)**

23 311. Plaintiff Michael Bibbo incorporates and re-alleges each preceding  
24 paragraph as though fully set forth herein.

25 312. Plaintiff Bibbo brings this count on behalf of himself and the Florida  
26 Sub-Class.

27 313. Defendant MNAO represented in the maintenance schedules and  
28 warranty guides for the Class Vehicles that there would be no need to replace or  
service the water pumps. Such representations formed the basis of the bargain in

1 Plaintiff Bibbo and members of the Florida Sub-Class's decisions to purchase or  
2 lease the Class Vehicles.

3 314. Defendant MNAO also marketed the Class Vehicles as safe, built to last  
4 and reliable vehicles. These statements helped conceal the existence of the Water  
5 Pump Defect and its corresponding safety risk from Plaintiff Bibbo and members of  
6 the Florida Sub-Class.

7 315. Defendant MNAO is and was at all relevant times a merchant and seller  
8 of motor vehicles (i.e., the Class Vehicles) within the meaning of the Uniform  
9 Commercial Code.

10 316. With respect to leases, Defendant MNAO is and was at all relevant times  
11 a lessor of motor vehicles (i.e., the Class Vehicles) within the meaning of the  
12 Uniform Commercial Code.

13 317. The Class Vehicles are and were at all relevant times goods within the  
14 meaning of the Uniform Commercial Code.

15 318. In connection with the purchase or lease of each of the Class Vehicles,  
16 Defendant MNAO provides maintenance schedules and warranty guides which omit  
17 any mention of the water pumps as a component requiring routine inspection, service,  
18 or replacement.

19 319. In connection with the purchase or lease of each of the Class Vehicles,  
20 Defendant MNAO also provides warranty coverage for the Class Vehicles under one  
21 or more manufacturer's warranties. For illustrative purposes, Defendant MNAO  
22 currently offers New Vehicle Limited Warranty coverage for Class Vehicles sold  
23 under the Mazda brand for 3 years or 36,000 miles and extended warranty coverage  
24 for Powertrain components for 5 years or 60,000 miles.<sup>19</sup> Under the warranties  
25 provided to Plaintiff Bibbo and members of the Florida Sub-Class, Defendant MNAO  
26 promised to repair or replace covered components arising out of defects in materials

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27 <sup>19</sup> See, e.g., Exhibit A (2012 Mazda CX-9 Warranty Booklet). See also  
28 <https://www.mazdausa.com/owners/warranty>.

1 and/or workmanship, including the Water Pump Defect, at no cost to owners and  
2 lessees of the Class Vehicles and within a reasonable time. As alleged herein,  
3 Defendant MNAO breached these warranties.

4 320. Defendant MNAO's warranties formed a basis of the bargain that was  
5 reached when Plaintiff Bibbo and members of the Florida Sub-Class purchased or  
6 leased their Class Vehicles. Given the latent nature of the Water Pump Defect,  
7 Defendants knew or should have known that the majority of the water pump failures  
8 (and corresponding engine damage) occur outside of the warranty periods.

9 321. Plaintiff Bibbo and members of the Florida Sub-Class experienced the  
10 existence of the Water Pump Defect within the warranty periods but had no  
11 knowledge of the existence of the defect and associated safety risk, which were  
12 known and concealed by Defendant MNAO. Despite the existence of the warranties,  
13 Defendant MNAO failed to adequately inform Plaintiff Bibbo and members of the  
14 Florida Sub-Class that the Class Vehicles contained the Water Pump Defect and  
15 failed to provide a suitable repair or replacement of the Water Pump Defect free of  
16 charge within a reasonable time.

17 322. Defendant MNAO breached the express warranty promising to repair  
18 and correct a manufacturing defect or defect in materials or workmanship of any parts  
19 it supplied.

20 323. On information and belief, Defendant MNAO has not suitably repaired  
21 or replaced the Water Pump Defect free of charge for Plaintiff Bibbo and members of  
22 the Florida Sub-Class despite the existence of the defect in the Class Vehicles at the  
23 time of sale or lease.

24 324. Defendant MNAO further breached its express warranties by selling  
25 Class Vehicles that were defective with respect to engine materials, workmanship,  
26 design and manufacture, and were accompanied by an owner's manual and/or  
27 maintenance schedule that incorporated no inspection and service intervals for the  
28

1 water pump although Defendant MNAO knew of the Water Pump Defect and that the  
2 water pump required periodic inspection and service.

3 325. Class Vehicles were not of merchantable quality and were unfit for the  
4 ordinary purposes for which passenger vehicles are used because of engine materials,  
5 workmanship, design and/or manufacturing defects which cause engine failure and/or  
6 failure to perform as warranted.

7 326. Defendant MNAO was provided notice of the Water Pump Defect by  
8 numerous consumer complaints made to its authorized dealers nationwide,  
9 complaints to NHTSA and through its own testing. Affording Defendant MNAO a  
10 reasonable opportunity to cure its breach of written warranties would be unnecessary  
11 and futile here because Defendant MNAO has known of and concealed the Water  
12 Pump Defect and has failed to provide a suitable repair or replacement of the Water  
13 Pump Defect free of charge within a reasonable time.

14 327. Defendant MNAO was further provided notice by Plaintiff Bibbo of its  
15 breach of express warranties by presenting his Mazda CX-9 for repair to McDonald  
16 Mazda in Littleton, Colorado on March 30, 2019. Upon information and belief,  
17 McDonald Mazda is an authorized dealer of Defendant MNAO and its duly  
18 authorized agent to perform warranty repairs. Despite this notice, Defendant MNAO  
19 did not cure its breach of written warranties and failed to provide a suitable repair or  
20 replacement of the Water Pump Defect free of charge within a reasonable time.

21 328. Any attempt by Defendant MNAO to disclaim or limit recovery to the  
22 terms of the express warranties is unconscionable and unenforceable here.  
23 Specifically, Defendant MNAO's warranty limitation is unenforceable because it  
24 knowingly sold or leased a defective product without informing consumers about the  
25 defect. The time limits contained in Defendant MNAO's warranty periods were also  
26 unconscionable and inadequate to protect Plaintiff Bibbo and members of the Florida  
27 Sub-Class. Among other things, Plaintiff Bibbo and members of the Florida Sub-  
28 Class did not determine these time limitations, the terms of which unreasonably

1 favored Defendants. A gross disparity in bargaining power existed between  
2 Defendant MNAO and members of the Classes, and Defendant MNAO knew or  
3 should have known that the Class Vehicles were defective at the time of sale or lease  
4 and that the Water Pump Defect posed a safety risk.

5 329. Further, the limited warranty promising to repair and/or correct a  
6 manufacturing defect fails in its essential purpose because the contractual remedy is  
7 insufficient to make Plaintiff Bibbo and members of the Florida Sub-Class whole  
8 because, on information and belief, Defendant MNAO has failed and/or has refused  
9 to adequately provide the promised remedies within a reasonable time.

10 330. Defendant MNAO knew that the Class Vehicles were inherently  
11 defective and did not conform to their warranties, and Plaintiff Bibbo and members  
12 of the Florida Sub-Class were induced to purchase or lease the Class Vehicles under  
13 false and/or fraudulent pretenses.

14 331. Defendant MNAO's warranties formed a basis of the bargain that was  
15 reached when Plaintiff Bibbo and members of the Florida Sub-Class purchased or  
16 leased their Class Vehicles.

17 332. Plaintiff Bibbo and members of the Florida Sub-Class experienced the  
18 existence of the Water Pump Defect within the warranty periods but had no  
19 knowledge of the existence of the defect, which was known and concealed by  
20 Defendants. Despite the existence of the warranties, Defendant MNAO failed to  
21 inform Plaintiff Bibbo and members of the Florida Sub-Class that the Class Vehicles  
22 contained the Water Pump Defect during the warranty periods, and, thus, wrongfully  
23 transferred the costs of repair or replacement of the water pump and damaged engine  
24 parts to Plaintiff Bibbo and members of the Florida Sub-Class.

25 333. Because of the Water Pump Defect, the Class Vehicles are not reliable  
26 and owners of these vehicles have lost confidence in the ability of Class Vehicles to  
27 perform the function of safe reliable transportation.

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1           340. With respect to leases, Defendants are and were at all relevant times a  
2 lessor of motor vehicles (i.e., the Class Vehicles) within the meaning of the Uniform  
3 Commercial Code.

4           341. The Class Vehicles are and were at all relevant times goods within the  
5 meaning of the Uniform Commercial Code.

6           342. Defendants impliedly warranted that the Class Vehicles were in  
7 merchantable condition and fit for the ordinary purpose for which vehicles are used.

8           343. The Class Vehicles, when sold or leased and at all times thereafter, were  
9 not in merchantable condition and were and are not fit for the ordinary purpose of  
10 providing safe and reliable transportation. The Class Vehicles contain an inherent  
11 defect – the Water Pump Defect – (at the time of sale or lease and thereafter) and  
12 present an undisclosed safety risk to drivers and occupants. Thus, Defendants  
13 breached the implied warranty of merchantability.

14           344. Through its maintenance schedules, MNAO further represented that the  
15 water pump would not need repair or replacement and/or fraudulently concealed the  
16 need for repair or replacement of the water pump by omitting the water pump from  
17 the maintenance schedules. MNAO cannot disclaim its implied warranty as it  
18 knowingly sold or leased a defective product.

19           345. Defendants were provided notice of the Water Pump Defect by  
20 numerous consumer complaints made to MNAO's authorized dealers nationwide,  
21 complaints to NHTSA and through their own testing. Affording Defendants a  
22 reasonable opportunity to cure their breach of implied warranties would be  
23 unnecessary and futile here because Defendants have known of and concealed the  
24 Water Pump Defect and, on information and belief, have refused to repair or replace  
25 the Water Pump Defect free of charge within a reasonable time.

26           346. Defendants was further provided notice by Plaintiff Bibbo of their  
27 breach of implied warranties by presenting his Mazda CX-9 for repair to McDonald  
28 Mazda in Littleton, Colorado on March 30, 2019. Upon information and belief,

1 McDonald Mazda is an authorized dealer of MNAO and its duly authorized agent to  
2 perform warranty repairs. Despite this notice, Defendants did not cure the breach of  
3 implied warranties and failed to provide a suitable repair or replacement of the Water  
4 Pump Defect free of charge within a reasonable time.

5 347. As a direct and proximate result of Defendants' breach of the implied  
6 warranty of merchantability, Plaintiff Bibbo and members of the Florida Sub-Class  
7 have been damaged in an amount to be proven at trial.

8 348. Any attempt by MNAO to disclaim or limit the implied warranty of  
9 merchantability vis-à-vis consumers is unconscionable and unenforceable here.  
10 Specifically, MNAO's warranty limitation is unenforceable because it knowingly  
11 sold or leased a defective product without informing consumers about the defect.  
12 The time limits contained in MNAO's warranty periods were also unconscionable  
13 and inadequate to protect Plaintiff Bibbo and members of the Florida Sub-Class.  
14 Among other things, Plaintiff Bibbo and members of the Florida Sub-Class did not  
15 determine these time limitations, the terms of which unreasonably favored MNAO.  
16 A gross disparity in bargaining power existed between MNAO and members of the  
17 Classes, and MNAO knew or should have known that the Class Vehicles were  
18 defective at the time of sale or lease and that the Water Pump Defect posed a safety  
19 risk.

20 349. Plaintiff Bibbo and members of the Florida Sub-Class have been  
21 excused from performance of any warranty obligations as a result of Defendants'  
22 conduct described herein.

23 350. The applicable statute of limitations for the implied warranty claim has  
24 been tolled by the discovery rule and/or fraudulent concealment.

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**COUNT XVI**

**Violation of the Magnuson-Moss Warranty Act (“MMWA”),  
15 U.S.C. § 2301, et seq.**

**(On behalf of the Nationwide Class or, alternatively,  
on behalf of the Florida Sub-Class against MNAO and MMC)**

351. Plaintiff Bibbo incorporates and re-alleges each preceding paragraph as though fully set forth herein.

352. Plaintiff Bibbo brings this count on behalf of himself and the members of the Nationwide Class or, alternatively, on behalf of the Florida Sub-Class.

353. Plaintiff Bibbo satisfies the MMWA jurisdictional requirement because she alleges diversity jurisdiction under CAFA, 28 U.S.C. § 1332(d)(2).

354. Plaintiff Bibbo and members of the Classes are “consumers” within the meaning of the Magnuson-Moss Warranty Act, 15 U.S.C. § 2301(3).

355. Defendants are “suppliers” and “warrantors” within the meaning of the Magnuson-Moss Warranty Act, 15 U.S.C. § 2301(4)-(5).

356. The Class Vehicles are “consumer products” within the meaning of the Magnuson-Moss Warranty Act, 15 U.S.C. § 2301(1).

357. The MMWA provides a cause of action for any consumer who is damaged by the failure of a warrantor to comply with a written or implied warranty. *See* 15 U.S.C. § 2310(d)(1).

358. Defendant MNAO provided Plaintiff Bibbo and members of the Classes with one or more express warranties, which are covered under 15 U.S.C. § 2301(6). For illustrative purposes, MNAO currently offers New Vehicle Limited Warranty coverage for Class Vehicles sold under the Mazda brand for 3 years or 36,000 miles and extended warranty coverage for Powertrain components for 5 years or 60,000 miles.<sup>20</sup> Under warranties provided to members of the Classes, MNAO promised to repair or replace covered defective components arising out of defects in materials

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<sup>20</sup> *See, e.g.,* Exhibit A (2012 Mazda CX-9 Warranty Booklet). *See also* <https://www.mazdausa.com/owners/warranty>.

1 and/or workmanship, including the Water Pump Defect, at no cost to owners and  
2 lessees of the Class Vehicles. As alleged herein, MNAO breached these warranties.

3 359. Plaintiff Bibbo and members of the Classes experienced the Water Pump  
4 Defect within the warranty periods but Defendants failed to inform Plaintiff Bibbo  
5 and members of the Classes of the existence of the Water Pump Defect and  
6 associated safety risk, and failed to provide a suitable remedy or repair of the Water  
7 Pump Defect free of charge within a reasonable time.

8 360. Defendants were provided notice by letter dated May 13, 2019 directed  
9 to MNAO that Plaintiffs would pursue a claim under the MMWA on behalf of a  
10 class.

11 361. Any attempt by MNAO to disclaim or limit its express or implied  
12 warranties is unconscionable and unenforceable here. Specifically, MNAO's  
13 warranty limitations are unenforceable because it knowingly sold or leased a  
14 defective product without informing consumers about the defect. The time limits  
15 contained in MNAO's warranty periods are also unconscionable and inadequate to  
16 protect Plaintiff Bibbo and members of the Classes. Among other things, Plaintiff  
17 Bibbo and members of the Classes did not determine these time limitations, the terms  
18 of which unreasonably favored MNAO. A gross disparity in bargaining power  
19 existed between MNAO and members of the Classes, and MNAO knew or should  
20 have known that the Class Vehicles were defective at the time of sale or lease and  
21 that they posed a safety risk.

22 362. The Class Vehicles' implied warranties are covered under 15 U.S.C. §  
23 2301(7).

24 363. Defendants breached these warranties by failing to disclose and  
25 fraudulently concealing information regarding the standard, quality or grade of the  
26 Class Vehicles and/or the presence of the Water Pump Defect and corresponding  
27 safety risk. Without limitation, the Class Vehicles share a common defect in design,  
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1 material, manufacturing and/or workmanship that fails to operate as represented  
2 Defendants and presents a safety risk.

3 364. Affording Defendants a reasonable opportunity to cure its breach of  
4 warranties would be unnecessary and futile. At the time of sale or lease of each Class  
5 Vehicle and all relevant times thereafter, Defendants knew, or were reckless in not  
6 knowing, of the material omissions concerning the standard, quality or grade of the  
7 Class Vehicles and the presence of the Water Pump Defect and corresponding safety  
8 risk, but failed to repair or replace the Water Pump Defect and/or disclose the defect.  
9 Under the circumstances, the remedies available under any informal settlement  
10 procedure would be inadequate and any requirement that Plaintiff Bibbo resort to an  
11 informal dispute resolution procedure and/or afford Defendants a reasonable  
12 opportunity to cure their breach of warranties is excused and thereby deemed  
13 satisfied.

14 365. Plaintiff Bibbo and members of the Classes would suffer economic  
15 hardship if they returned their Class Vehicles, but did not receive the return of all  
16 payments made by them to Defendants. Thus, Plaintiff Bibbo and members of the  
17 Classes have not re-accepted their Class Vehicles by retaining them.

18 366. The amount in controversy of Plaintiff Bibbo's individual claims meets  
19 or exceeds the sum of \$25. The amount in controversy of this action exceeds the sum  
20 of \$50,000, exclusive of interest and costs, computed on the basis of all claims to be  
21 determined in this lawsuit.

22 367. Plaintiff Bibbo, individually and on behalf of members of the Classes,  
23 seeks all damages permitted by law, including diminution in the value of the Class  
24 Vehicles, in an amount to be proven at trial.

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**COUNT XVII**

**Fraud by Omission or Fraudulent Concealment  
(On behalf of the Florida Sub-Class against MNAO and MMC)**

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3  
4 368. Plaintiff Bibbo incorporates and re-alleges each preceding paragraph as  
5 though fully set forth herein.

6 369. Plaintiff Bibbo brings this count on behalf of himself and the members  
7 of the Florida Sub-Class.

8 370. Defendants intentionally and knowingly concealed, suppressed and/or  
9 omitted material facts including the standard, quality or grade of the Class Vehicles  
10 and the fact that the Class Vehicles contain a Water Pump Defect and corresponding  
11 safety risk, with the intent that Plaintiff Bibbo and members of the Florida Sub-Class  
12 rely on Defendants' omissions. As a direct result of Defendants' fraudulent conduct,  
13 Plaintiff Bibbo and members of the Florida Sub-Class have suffered actual damages.

14 371. Defendants knew (at the time of sale or lease and thereafter) that the  
15 Class Vehicles contained the Water Pump Defect, concealed the defect and never  
16 intended to repair or replace the Water Pump Defect during the warranty periods. To  
17 date, Defendants have not provided Plaintiff Bibbo and members of the Florida Sub-  
18 Class with a repair or remedy for the Water Pump Defect.

19 372. Defendants owed a duty to disclose the Water Pump Defect and its  
20 corresponding safety risk to Plaintiff Bibbo and members of the Florida Sub-Class  
21 because Defendants possessed superior and exclusive knowledge regarding the  
22 defect. Further, Defendants had a duty to disclose any information relating to the  
23 safety, quality, functionality and reliability of Class Vehicles because they  
24 consistently marketed the Class Vehicles as safe.

25 373. Once Defendants made representations to the public about safety,  
26 quality, functionality, and reliability, Defendants were under a duty to disclose these  
27 omitted facts, because where one does speak one must speak the whole truth and not  
28 conceal any facts which materially qualify those facts stated. One who volunteers

1 information must be truthful, and the telling of a half-truth calculated to deceive is  
2 fraud. Rather than disclose the defect, Defendants intentionally and knowingly  
3 concealed, suppressed and/or omitted material facts including the standard, quality or  
4 grade of the Class Vehicles and the presence of the Water Pump Defect and  
5 corresponding safety risk, to sell additional Class Vehicles and avoid the cost of  
6 repair or replacement.

7 374. The Water Pump Defect is material to Plaintiff Bibbo and members of  
8 the Florida Sub-Class because Plaintiff Bibbo and members of the Florida Sub-Class  
9 had a reasonable expectation that the vehicles would not contain a defect, such as the  
10 Water Pump Defect, that leads to exorbitant repair costs and exposes them and other  
11 vehicle occupants to a safety risk. No reasonable consumer expects a vehicle to  
12 contain a concealed defect in design, manufacture, materials or workmanship, such as  
13 the Water Pump Defect, that can lead to thousands of dollars in repair or replacement  
14 costs, and can cause catastrophic engine failure with little to no warning or time to  
15 take preventative measures or safely remove the vehicle from the road.

16 375. Plaintiff Bibbo and members of the Florida Sub-Class would not have  
17 purchased or leased the Class Vehicles but for Defendant's omissions and  
18 concealment of material facts regarding the nature and quality of the Class Vehicles  
19 and existence of the Water Pump Defect and corresponding safety risk, or would  
20 have paid less for the Class Vehicles.

21 376. Defendants knew their concealment and suppression of material facts  
22 was false and misleading and knew the effect of concealing those material facts.  
23 Defendants knew their concealment and suppression of the Water Pump Defect  
24 would sell more Class Vehicles and would discourage Plaintiff Bibbo and members  
25 of the Florida Sub-Class from seeking replacement or repair of the Water Pump  
26 Defect during the applicable warranty periods. Further, Defendants intended to  
27 induce Plaintiff Bibbo and members of the Florida Sub-Class into purchasing or  
28

1 leasing the Class Vehicles and to discourage them from seeking replacement or repair  
2 of the Water Pump Defect in order to decrease costs and increase profits.

3 377. Defendants acted with malice, oppression and fraud.

4 378. Plaintiff Bibbo and members of the Florida Sub-Class reasonably relied  
5 upon Defendants' knowing concealment and omissions. As a direct and proximate  
6 result of Defendants' omissions and active concealment of material facts regarding  
7 the Water Pump Defect and associated safety risk, Plaintiff Bibbo and members of  
8 the Florida Sub-Class have suffered actual damages in an amount to be determined at  
9 trial.

10 **COUNT XVIII**

11 **Violation of Florida's Deceptive & Unfair Trade Practices Act,**  
12 **Fla. Stat. § 501.201, et seq.**

13 **(On behalf of the Florida Sub-Class against MNAO and MMC)**

14 379. Plaintiff Bibbo incorporates and re-alleges each preceding paragraph as  
15 though fully set forth herein.

16 380. Plaintiff Bibbo bring this count on behalf of himself and the Florida  
17 Sub-Class.

18 381. Plaintiff Bibbo and the members of the Florida Sub-Class are  
19 "consumers" within the meaning of the FDUTPA, Fla. Stat. § 501.203(7).

20 382. Defendants engaged in "trade or commerce" within the meaning of Fla.  
21 Stat. § 501.203(8).

22 383. The FDUTPA prohibits "[u]nfair methods of competition,  
23 unconscionable acts or practices, and unfair or deceptive acts or practices in the  
24 conduct of any trade or commerce." Fla. Stat. § 501.204(1). Defendants engaged in  
25 unfair and deceptive practices that violated the FDUTPA as described above.

26 384. In the course of their businesses, Defendants failed to disclose and  
27 actively concealed the Water Pump Defect contained in the Class Vehicles and the  
28 corresponding dangers and risks posed by the Class Vehicles, as described above and  
otherwise engaged in activities with a tendency or capacity to deceive.



1           385. In violation of the FDUTPA, Defendants employed unfair and deceptive  
2 acts or practices, fraud false pretense, misrepresentation, or concealment, suppression  
3 or omission of a material fact with intent that others rely upon such concealment,  
4 suppression or omission, in connection with the sale and/or lease of Class Vehicles.  
5 Defendants knowingly concealed, suppressed, and omitted material facts regarding  
6 the Water Pump Defect and associated safety hazard and misrepresented the standard,  
7 quality, or grade of the Class Vehicles, which directly caused harm to Plaintiff Bibbo  
8 and the Florida Sub-Class.

9           386. Defendants actively suppressed the fact that the water pump in Class  
10 Vehicles is defective and presents a safety hazard because of materials, workmanship,  
11 design, and/or manufacturing defects. Further, Defendants employed unfair and  
12 deceptive trade practices by denying repairs or replacement of the Water Pump  
13 Defect within a reasonable time in violation of the FDUTPA. Defendants also  
14 breached its warranties as alleged above in violation of the FDUTPA.

15           387. As alleged above, Defendants have known of the Water Pump Defect  
16 contained in the Class Vehicles for well over a decade. Prior to installing the  
17 defective water pumps in the engines in the Class Vehicles, Defendants knew or  
18 should have known the engines in Class Vehicles contained the Water Pump Defect  
19 due to pre-production testing and failure mode analysis. Mazda also should have  
20 known of the Water Pump Defect from discussions with Ford and after receiving  
21 numerous complaints about the Water Pump Defect from consumers and Dealers.  
22 Defendants, nevertheless, failed to disclose and actively concealed the dangers and  
23 risks posed by the Class Vehicles and engines with the Water Pump Defect installed  
24 in them.

25           388. By failing to disclose and by actively concealing the Water Pump Defect  
26 in the Class Vehicles, by marketing them as safe, reliable, and of high quality, and by  
27 presenting themselves as a reputable manufacturer or distributor for a reputable  
28 manufacture that values safety, Defendants engaged in unfair or deceptive business

1 practices in violation of the FDUTPA. Defendants deliberately withheld the  
2 information about the propensity of the Water Pump Defect to cause a pre-mature  
3 failure of the internal water pump, well prior to end of the reasonably foreseeable  
4 useful life of the engine, causing coolant to infiltrate the engine and mix with the oil,  
5 causing catastrophic engine failure as well as the corresponding safety hazard to  
6 vehicle occupants, to ensure that consumers would purchase the Class Vehicles and  
7 spend money on useless remedies and repairs.

8 389. In the course of Defendants' businesses, they willfully failed to disclose  
9 and actively concealed the dangerous risks posed by the Water Pump Defect.  
10 Defendants compounded the deception by repeatedly asserting that the Class  
11 Vehicles and/or the engines installed in them were safe, reliable, and of high quality  
12 despite containing the Water Pump Defect, and by claiming to be a reputable  
13 manufacturer or a reputable distributor for a reputable manufacturer that values  
14 safety.

15 390. Defendants' unfair and deceptive trade practices were likely intended to  
16 deceive a reasonable consumer. Plaintiff Bibbo and members of the Florida Sub-  
17 Class had no reasonable way to know that the Class Vehicles contained the Water  
18 Pump Defect, which were defective in materials, workmanship, design and/or  
19 manufacture and posed a serious and significant health and safety risk. Defendants  
20 possessed superior knowledge as to the quality and characteristics of the Class  
21 Vehicles, including the Water Pump Defect within their engines and its associated  
22 safety risks, and any reasonable consumer would have relied on Defendants'  
23 misrepresentations and omissions, as Plaintiff Bibbo and members of the Florida  
24 Sub-Class did.

25 391. Defendants intentionally and knowingly misrepresented material facts  
26 and omitted material facts regarding the Class Vehicles and the Water Pump Defect  
27 within the engines installed in Class Vehicles with an intent to mislead Plaintiff  
28 Bibbo and the Florida Sub-Class.

1           392. Defendants knew or should have known that its conduct violated the  
2 FDUTPA.

3           393. Defendants made material statements and/or omissions about the safety  
4 and reliability of the Class Vehicles and/or the Water Pump Defect installed in them  
5 that were either false or misleading. Defendants' misrepresentations, omissions,  
6 statements, and commentary have included selling and marketing Class Vehicles as  
7 safe and reliable, despite their knowledge of the Water Pump Defect and its  
8 corresponding safety hazard.

9           394. To protect their profits, avoid remediation costs and public relation  
10 problems, and increase their profits by having consumers pay for component parts  
11 and expensive repairs to remedy the Water Pump Defect, Defendants concealed the  
12 defective nature and safety risk posed by the Class Vehicles and then engines with  
13 the Water Pump Defect installed in them. Defendants allowed unsuspecting new and  
14 used car purchasers and lessees to continue to buy or lease the Class Vehicles and  
15 continue to drive them, despite the safety risk they pose.

16           395. Defendants owed Plaintiff Bibbo and the Florida Sub-Class a duty to  
17 disclose the true safety and reliability of the Class Vehicles and the existence of the  
18 Water Pump Defect because Defendants:

- 19           a. Possessed exclusive knowledge of the Water Pump Defect and its  
20 associated safety hazard;
- 21           b. Intentionally concealed the foregoing from Plaintiff Bibbo and the  
22 Florida Sub-Class; and/or
- 23           c. Made incomplete representations about the safety and reliability of the  
24 foregoing generally, while purposefully withholding material facts from  
25 Plaintiff Bibbo and the Florida Sub-Class that contradicted these  
26 representations.

26           396. Because Defendants fraudulently concealed the Water Pump Defect in  
27 the engines of Class Vehicles, and now that the Defect has been disclosed, the value  
28

1 of the Class Vehicles has greatly diminished, and they are now worth significantly  
2 less than they otherwise would be.

3 397. Defendants' failure to disclose and active concealment of the Water  
4 Pump Defect in the Class Vehicles were material to Plaintiff Bibbo and the Florida  
5 Sub-Class. A vehicle made by an honest and reputable manufacturer of safe vehicles  
6 is worth more than an otherwise comparable vehicle made by a dishonest and  
7 disreputable manufacturer of unsafe vehicles that conceals defects rather than  
8 promptly reports on and remedies them.

9 398. Plaintiff Bibbo and the Florida Sub-Class suffered ascertainable losses  
10 caused by Defendants' misrepresentations and their failure to disclose material  
11 information. Had Plaintiff Bibbo and the Florida Sub-Class members been aware of  
12 the Water Pump Defect that existed in the Class Vehicles and Defendants' complete  
13 disregard for the safety of its consumers, Plaintiff Bibbo and the Florida Sub-Class  
14 either would not have paid as much for their vehicles or would not have purchased or  
15 leased them at all. Plaintiff Bibbo and the Florida Sub-Class did not receive the  
16 benefit of their bargain as a result of Defendants' misconduct.

17 399. Plaintiff Bibbo and the Florida Sub-Class risk loss of use of their  
18 vehicles as a result of Defendants' act and omissions in violation of the FDUTPA,  
19 and these violations present a continuing risk to Plaintiff Bibbo, the Florida Class,  
20 and the public in general. Defendants' unlawful acts and practices complained of  
21 above affect the public interest.

22 400. As a direct and proximate result of Defendants' violations of the  
23 FDUTPA, Plaintiff Bibbo and the Florida Sub-Class have suffered injury-in-fact  
24 and/or actual damage.

25 401. Plaintiff Bibbo and the Florida Sub-Class are entitled to recover their  
26 actual damages, under Fla. Stat. § 501.211(2), and attorneys' fees under Fla. Stat §  
27 501.2105(1).

28 ///

1 402. Plaintiff Bibbo and the Florida Sub-Class also seek an order enjoining  
2 Defendants' unfair, unlawful, and deceptive practices, declaratory relief, attorneys'  
3 fees, and any other just and proper relief available under the FDUTPA.

4 **D. Illinois Counts**

5 **COUNT XIX**

6 **Negligent Misrepresentation**

7 **(On behalf of the Illinois Sub-Class against MNAO and MMC)**

8 403. Plaintiff Alan Meshberg incorporates and re-alleges each preceding  
9 paragraph as though fully set forth herein.

10 404. Plaintiff Meshberg brings this count on behalf himself and the members  
11 of the Illinois Sub-Class.

12 405. Defendants owed a duty to disclose the Water Pump Defect and its  
13 corresponding safety risk to Plaintiff Meshberg and members of the Illinois Sub-  
14 Class because Defendants possessed superior and exclusive knowledge regarding the  
15 defect and the associated risks. Defendants also made partial disclosures regarding  
16 the safety of the Class Vehicles while knowing that the Class Vehicles possessed the  
17 Water Pump Defect and failing to disclose the existence of the Water Pump Defect  
18 and its corresponding safety hazard.

19 406. Defendants negligently omitted material facts including the standard,  
20 quality or grade of the Class Vehicles and/or presence of the Water Pump Defect in  
21 the Class Vehicles. As a direct result of Defendants' negligent conduct, Plaintiff  
22 Meshberg and members of the Illinois Sub-Class have suffered actual damages.

23 407. The Water Pump Defect is material to Plaintiff Meshberg and members  
24 of the Illinois Sub-Class because Plaintiff Meshberg and members of the Illinois Sub-  
25 Class had a reasonable expectation that the vehicles would not contain a defect, such  
26 as the Water Pump Defect, that leads to exorbitant repair costs and exposes them and  
27 other vehicle occupants to a safety risk. No reasonable consumer expects a vehicle to  
28 contain a concealed defect in design, manufacture, materials or workmanship, such as  
the Water Pump Defect, that can lead to thousands of dollars in repair or replacement

1 costs, and can cause catastrophic engine failure with little to no warning or time to  
2 take preventative measures or safely remove the vehicle from the road.

3 408. Plaintiff Meshberg and members of the Illinois Sub-Class would not  
4 have purchased the Class Vehicles but for Defendants' negligent omissions of  
5 material facts regarding the nature and quality of the Class Vehicles and/or existence  
6 of the Water Pump Defect and corresponding safety risk, or would have paid less for  
7 the Class Vehicles. Plaintiff Meshberg and members of the Illinois Sub-Class  
8 justifiably relied upon Defendants' negligent omissions of material facts.

9 409. As a direct and proximate result of Defendants' negligent omissions of  
10 material facts regarding the standard, quality or grade of the Class Vehicles and/or  
11 the presence of the Water Pump Defect and corresponding safety risk, Plaintiff  
12 Meshberg and members of the Illinois Sub-Class have suffered an ascertainable loss  
13 and actual damages in an amount to be determined at trial.

14 **COUNT XX**  
15 **Breach of Express Warranty**  
16 **(On behalf of the Illinois Sub-Class against MNAO)**

17 410. Plaintiff Meshberg incorporates and re-alleges each preceding paragraph  
18 as though fully set forth herein.

19 411. Plaintiff Meshberg brings this count on behalf of himself and the Illinois  
20 Sub-Class.

21 412. Defendant MNAO represented in the maintenance schedules and  
22 warranty guides for the Class Vehicles that there would be no need to replace or  
23 service the water pumps. Such representations formed the basis of the bargain in  
24 Plaintiff Meshberg's and members of the Illinois Sub-Class's decisions to purchase  
25 or lease the Class Vehicles.

26 413. Defendant MNAO also marketed the Class Vehicles as safe, built to last  
27 and reliable vehicles. These statements helped conceal the existence of the Water  
28

1 Pump Defect and its corresponding safety risk from Plaintiff Meshberg and members  
2 of the Illinois Sub-Class.

3 414. Defendant MNAO is and was at all relevant times a merchant and seller  
4 of motor vehicles (i.e., the Class Vehicles) within the meaning of the Uniform  
5 Commercial Code.

6 415. With respect to leases, Defendant MNAO is and was at all relevant times  
7 a lessor of motor vehicles (i.e., the Class Vehicles) within the meaning of the  
8 Uniform Commercial Code.

9 416. The Class Vehicles are and were at all relevant times goods within the  
10 meaning of the Uniform Commercial Code.

11 417. In connection with the purchase or lease of each of the Class Vehicles,  
12 Defendant MNAO provides maintenance schedules and warranty guides which omit  
13 any mention of the water pumps as a component requiring routine inspection, service,  
14 or replacement.

15 418. In connection with the purchase or lease of each of the Class Vehicles,  
16 Defendant MNAO also provides warranty coverage for the Class Vehicles under one  
17 or more manufacturer's warranties. For illustrative purposes, Defendant MNAO  
18 currently offers New Vehicle Limited Warranty coverage for Class Vehicles sold  
19 under the Mazda brand for 3 years or 36,000 miles and extended warranty coverage  
20 for Powertrain components for 5 years or 60,000 miles.<sup>21</sup> Under the warranties  
21 provided to Plaintiff Meshberg and members of the Illinois Sub-Class, Defendant  
22 MNAO promised to repair or replace covered components arising out of defects in  
23 materials and/or workmanship, including the Water Pump Defect, at no cost to  
24 owners and lessees of the Class Vehicles and within a reasonable time. As alleged  
25 herein, Defendant MNAO breached these warranties.

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27 \_\_\_\_\_  
28 <sup>21</sup> See, e.g., Exhibit A (2012 Mazda CX-9 Warranty Booklet). See also  
<https://www.mazdausa.com/owners/warranty>.

1           419. Defendant MNAO warranties formed a basis of the bargain that was  
2 reached when Plaintiff Meshberg and members of the Illinois Sub-Class purchased or  
3 leased their Class Vehicles. Given the latent nature of the Water Pump Defect,  
4 Defendants knew or should have known that the majority of the water pump failures  
5 (and corresponding engine damage) occur outside of the warranty periods.

6           420. Plaintiff Meshberg and members of the Illinois Sub-Class experienced  
7 the existence of the Water Pump Defect within the warranty periods but had no  
8 knowledge of the existence of the defect and associated safety risk, which were  
9 known and concealed by Defendant MNAO. Despite the existence of the warranties,  
10 Defendant MNAO failed to adequately inform Plaintiff Meshberg and members of  
11 the Illinois Sub-Class that the Class Vehicles contained the Water Pump Defect and  
12 failed to provide a suitable repair or replacement of the Water Pump Defect free of  
13 charge within a reasonable time.

14           421. Defendant MNAO breached the express warranty promising to repair  
15 and correct a manufacturing defect or defect in materials or workmanship of any parts  
16 it supplied.

17           422. On information and belief, Defendant MNAO has not suitably repaired  
18 or replaced the Water Pump Defect free of charge for Plaintiff Meshberg and  
19 members of the Illinois Sub-Class despite the existence of the defect in the Class  
20 Vehicles at the time of sale or lease.

21           423. Defendant MNAO further breached its express warranties by selling  
22 Class Vehicles that were defective with respect to engine materials, workmanship,  
23 design and manufacture, and were accompanied by an owner's manual and/or  
24 maintenance schedule that incorporated no inspection and service intervals for the  
25 water pump although Defendant MNAO knew of the Water Pump Defect and that the  
26 water pump required periodic inspection and service.

27           424. Class Vehicles were not of merchantable quality and were unfit for the  
28 ordinary purposes for which passenger vehicles are used because of engine materials,



1 workmanship, design and/or manufacturing defects which cause engine failure and/or  
2 failure to perform as warranted.

3 425. Defendant MNAO was provided notice of the Water Pump Defect by  
4 numerous consumer complaints made to its authorized dealers nationwide,  
5 complaints to NHTSA and through its own testing. Affording Defendant MNAO a  
6 reasonable opportunity to cure its breach of written warranties would be unnecessary  
7 and futile here because Defendant MNAO has known of and concealed the Water  
8 Pump Defect and has failed to provide a suitable repair or replacement of the Water  
9 Pump Defect free of charge within a reasonable time.

10 426. Defendant MNAO was further provided notice by Plaintiff Meshberg of  
11 its breach of express warranties by presenting his Mazda CX-9 for repair to Groove  
12 Mazda in Centennial, Colorado on May 17, 2016. Upon information and belief,  
13 Groove Mazda is an authorized dealer of Defendants and its duly authorized agent to  
14 perform warranty repairs. Upon diagnosing the water pump failure in his Mazda CX-  
15 9, Groove Mazda charged him nearly \$2,000 to replace the water pump.  
16 Subsequently, Groove Mazda charged Plaintiff Meshberg an additional \$3,500 to  
17 install a used engine into his Mazda CX-9, on August 8, 2016. Plaintiff Meshberg  
18 further provided notice to Defendant MNAO by letter dated May 20, 2019. Despite  
19 these notices, Defendants did not cure its breach of written warranties and failed to  
20 provide a suitable repair or replacement of the Water Pump Defect free of charge  
21 within a reasonable time.

22 427. Any attempt by Defendants to disclaim or limit recovery to the terms of  
23 the express warranties is unconscionable and unenforceable here. Specifically,  
24 Defendant MNAO's warranty limitation is unenforceable because it knowingly sold  
25 or leased a defective product without informing consumers about the defect. The  
26 time limits contained in Defendant MNAO's warranty periods were also  
27 unconscionable and inadequate to protect Plaintiff Meshberg and members of the  
28 Illinois Sub-Class. Among other things, Plaintiff Meshberg and members of the

1 Illinois Sub-Class did not determine these time limitations, the terms of which  
2 unreasonably favored Defendant MNAO. A gross disparity in bargaining power  
3 existed between Defendant MNAO and members of the Classes, and Defendant  
4 MNAO knew or should have known that the Class Vehicles were defective at the  
5 time of sale or lease and that the Water Pump Defect posed a safety risk.

6 428. Further, the limited warranty promising to repair and/or correct a  
7 manufacturing defect fails in its essential purpose because the contractual remedy is  
8 insufficient to make Plaintiff Meshberg and members of the Illinois Sub-Class whole,  
9 because, on information and belief, Defendant MNAO has failed and/or has refused  
10 to adequately provide the promised remedies within a reasonable time.

11 429. Defendant MNAO knew that the Class Vehicles were inherently  
12 defective and did not conform to their warranties, and Plaintiff Meshberg and  
13 members of the Illinois Sub-Class were induced to purchase or lease the Class  
14 Vehicles under false and/or fraudulent pretenses.

15 430. Defendant MNAO's warranties formed a basis of the bargain that was  
16 reached when Plaintiff Meshberg and members of the Illinois Sub-Class purchased or  
17 leased their Class Vehicles.

18 431. Plaintiff Meshberg and members of the Illinois Sub-Class experienced  
19 the existence of the Water Pump Defect within the warranty periods but had no  
20 knowledge of the existence of the defect, which was known and concealed by  
21 Defendant MNAO. Despite the existence of the warranties, Defendant MNAO failed  
22 to inform Plaintiff Meshberg and members of the Illinois Sub-Class that the Class  
23 Vehicles contained the Water Pump Defect during the warranty periods, and, thus,  
24 wrongfully transferred the costs of repair or replacement of the water pump and  
25 damaged engine parts to Plaintiff Meshberg and members of the Illinois Sub-Class.

26 432. Because of the Water Pump Defect, the Class Vehicles are not reliable  
27 and owners of these vehicles have lost confidence in the ability of Class Vehicles to  
28 perform the function of safe reliable transportation.

1 433. As a direct and proximate result of Defendant MNAO's breach of  
2 express warranties, Plaintiff Meshberg and members of the Illinois Sub-Class have  
3 been damaged in an amount to be determined at trial.

4 434. Finally, because of Defendant MNAO's breach of express warranty as  
5 set forth herein, Plaintiff Meshberg and members of the Illinois Sub-Class assert, as  
6 additional and/or alternative remedies, the revocation of acceptance of the goods and  
7 the return to Plaintiff Meshberg and members of the Illinois Sub-Class of the  
8 purchase or lease price of all Class Vehicles currently owned or leased, and for such  
9 other incidental and consequential damages as allowed.

10 **COUNT XXI**  
11 **Breach of Implied Warranty of Merchantability**  
12 **(On behalf of the Illinois Sub-Class against MNAO and MMC)**

13 435. Plaintiff Meshberg incorporates and re-alleges each preceding paragraph  
14 as though fully set forth herein.

15 436. Plaintiff Meshberg and members of the Illinois Sub-Class bring this  
16 count on behalf of himself and the Illinois Sub-Class.

17 437. Plaintiff Meshberg and members of the Illinois Sub-Class purchased or  
18 leased the Class Vehicles, manufactured by MMC and/or MNAO, from MNAO by  
19 and through its authorized agents for retail sales, or were otherwise expected to be the  
20 eventual purchasers of the Class Vehicles when bought from a third party. At all  
21 relevant times, Defendants were the manufacturer, distributor, warrantor and/or seller  
22 of Class Vehicles. Defendants knew or had reason to know of the specific use for  
23 which the Class Vehicles were purchased or leased.

24 438. Defendants are and were at all relevant times a merchant and seller of  
25 motor vehicles (i.e., the Class Vehicles) within the meaning of the Uniform  
26 Commercial Code.

27 ///

28 ///

1 439. With respect to leases, Defendants are and were at all relevant times a  
2 lessor of motor vehicles (i.e., the Class Vehicles) within the meaning of the Uniform  
3 Commercial Code.

4 440. The Class Vehicles are and were at all relevant times goods within the  
5 meaning of the Uniform Commercial Code.

6 441. Defendants impliedly warranted that the Class Vehicles were in  
7 merchantable condition and fit for the ordinary purpose for which vehicles are used.

8 442. The Class Vehicles, when sold or leased and at all times thereafter, were  
9 not in merchantable condition and were and are not fit for the ordinary purpose of  
10 providing safe and reliable transportation. The Class Vehicles contain an inherent  
11 defect – the Water Pump Defect – (at the time of sale or lease and thereafter) and  
12 present an undisclosed safety risk to drivers and occupants. Thus, Defendants  
13 breached the implied warranty of merchantability.

14 443. Through its maintenance schedules, MNAO further represented that the  
15 water pump would not need repair or replacement and/or fraudulently concealed the  
16 need for repair or replacement of the water pump by omitting the water pump from  
17 the maintenance schedules. MNAO cannot disclaim its implied warranty as it  
18 knowingly sold or leased a defective product.

19 444. Defendants were provided notice of the Water Pump Defect by  
20 numerous consumer complaints made to MNAO's authorized dealers nationwide,  
21 complaints to NHTSA and through their own testing. Affording Defendants a  
22 reasonable opportunity to cure their breach of implied warranties would be  
23 unnecessary and futile here because Defendants have known of and concealed the  
24 Water Pump Defect and, on information and belief, have refused to repair or replace  
25 the Water Pump Defect free of charge within a reasonable time.

26 445. Defendants were further provided notice by Plaintiff Meshberg of its  
27 breach of implied warranties by presenting his Mazda CX-9 for repair to Groove  
28 Mazda in Centennial, Colorado on May 17, 2016. Upon information and belief,

1 Groove Mazda is an authorized dealer of MNAO and its duly authorized agent to  
2 perform warranty repairs. Upon diagnosing the water pump failure in his Mazda CX-  
3 9, Groove Mazda charged him nearly \$2,000 to replace the water pump.  
4 Subsequently, Groove Mazda charged Plaintiff Meshberg an additional \$3,500 to  
5 install a used engine into his Mazda CX-9, on August 8, 2016. Plaintiff Meshberg  
6 further provided notice to Defendants by letter dated May 20, 2019 directed to  
7 MNAO. Despite these notices, Defendants did not cure the breach of implied  
8 warranties and failed to provide a suitable repair or replacement of the Water Pump  
9 Defect free of charge within a reasonable time.

10 446. As a direct and proximate result of Defendants' breach of the implied  
11 warranty of merchantability, Plaintiff Meshberg and members of the Illinois Sub-  
12 Class have been damaged in an amount to be proven at trial.

13 447. Any attempt by MNAO to disclaim or limit the implied warranty of  
14 merchantability vis-à-vis consumers is unconscionable and unenforceable here.  
15 Specifically, MNAO's warranty limitation is unenforceable because it knowingly  
16 sold or leased a defective product without informing consumers about the defect.  
17 The time limits contained in MNAO's warranty periods were also unconscionable  
18 and inadequate to protect Plaintiff Meshberg and members of the Illinois Sub-Class.  
19 Among other things, Plaintiff Meshberg and members of the Illinois Sub-Class did  
20 not determine these time limitations, the terms of which unreasonably favored  
21 MNAO. A gross disparity in bargaining power existed between MNAO and  
22 members of the Classes, and MNAO knew or should have known that the Class  
23 Vehicles were defective at the time of sale or lease and that the Water Pump Defect  
24 posed a safety risk.

25 448. Plaintiff Meshberg and members of the Illinois Sub-Class have been  
26 excused from performance of any warranty obligations as a result of Defendants'  
27 conduct described herein.

28 ///

1 449. The applicable statute of limitations for the implied warranty claim has  
2 been tolled by the discovery rule and/or fraudulent concealment.

3 **COUNT XXII**  
4 **Violation of the Magnuson-Moss Warranty Act (“MMWA”),**  
5 **15 U.S.C. § 2301, et seq.**  
6 **(On behalf of the Nationwide Class or, alternatively,**  
7 **on behalf of the Illinois Sub-Class against MNAO and MMC)**

8 450. Plaintiff Meshberg incorporates and re-alleges each preceding paragraph  
9 as though fully set forth herein.

10 451. Plaintiff Meshberg brings this count on behalf of himself and the  
11 members of the Nationwide Class or, alternatively, on behalf of the Illinois Sub-  
12 Class.

13 452. Plaintiff Meshberg satisfies the MMWA jurisdictional requirement  
14 because he alleges diversity jurisdiction under CAFA, 28 U.S.C. § 1332(d)(2).

15 453. Plaintiff Meshberg and members of the Classes are “consumers” within  
16 the meaning of the Magnuson-Moss Warranty Act, 15 U.S.C. § 2301(3).

17 454. Defendants are “suppliers” and “warrantors” within the meaning of the  
18 Magnuson-Moss Warranty Act, 15 U.S.C. § 2301(4)-(5).

19 455. The Class Vehicles are “consumer products” within the meaning of the  
20 Magnuson-Moss Warranty Act, 15 U.S.C. § 2301(1).

21 456. The MMWA provides a cause of action for any consumer who is  
22 damaged by the failure of a warrantor to comply with a written or implied warranty.  
23 *See* 15 U.S.C. § 2310(d)(1).

24 457. Defendant MNAO provided Plaintiff Meshberg and members of the  
25 Classes with one or more express warranties, which are covered under 15 U.S.C. §  
26 2301(6). For illustrative purposes, MNAO currently offers New Vehicle Limited  
27 Warranty coverage for Class Vehicles sold under the Mazda brand for 3 years or  
28 36,000 miles and extended warranty coverage for Powertrain components for 5 years

1 or 60,000 miles.<sup>22</sup> Under the warranties provided to Plaintiff Meshberg and members  
2 of the Illinois Sub-Class, MNAO promised to repair or replace covered components  
3 arising out of defects in materials and/or workmanship, including the Water Pump  
4 Defect, at no cost to owners and lessees of the Class Vehicles and within a reasonable  
5 time. As alleged herein, MNAO breached these warranties.

6 458. Plaintiff Meshberg and members of the Classes experienced the Water  
7 Pump Defect within the warranty periods but MNAO failed to inform Plaintiff  
8 Meshberg and members of the Classes of the existence of the Water Pump Defect and  
9 associated safety risk, and failed to provide a suitable remedy or repair of the Water  
10 Pump Defect free of charge within a reasonable time.

11 459. Defendants were provided notice by letter dated May 13, 2019 directed  
12 to MNAO that Plaintiffs would pursue a claim under the MMWA on behalf of a  
13 class.

14 460. Any attempt by MNAO to disclaim or limit its express or implied  
15 warranties is unconscionable and unenforceable here. Specifically, MNAO's  
16 warranty limitations are unenforceable because it knowingly sold or leased a  
17 defective product without informing consumers about the defect. The time limits  
18 contained in MNAO's warranty periods are also unconscionable and inadequate to  
19 protect Plaintiff Meshberg and members of the Classes. Among other things,  
20 Plaintiff Meshberg and members of the Classes did not determine these time  
21 limitations, the terms of which unreasonably favored MNAO. A gross disparity in  
22 bargaining power existed between MNAO and members of the Classes, and MNAO  
23 knew or should have known that the Class Vehicles were defective at the time of sale  
24 or lease and that they posed a safety risk.

25 461. The Class Vehicles' implied warranties are covered under 15 U.S.C. §  
26 2301(7).

27 \_\_\_\_\_  
28 <sup>22</sup> See, e.g., Exhibit A (2012 Mazda CX-9 Warranty Booklet). See also  
<https://www.mazdausa.com/owners/warranty>.

1           462. Defendants breached these warranties by failing to disclose and  
2 fraudulently concealing information regarding the standard, quality or grade of the  
3 Class Vehicles and/or the presence of the Water Pump Defect and corresponding  
4 safety risk. Without limitation, the Class Vehicles share a common defect in design,  
5 material, manufacturing and/or workmanship that fails to operate as represented by  
6 Defendants and presents a safety risk.

7           463. Affording Defendants a reasonable opportunity to cure its breach of  
8 warranties would be unnecessary and futile. At the time of sale or lease of each Class  
9 Vehicle and all relevant times thereafter, Defendants knew, or were reckless in not  
10 knowing, of the material omissions concerning the standard, quality or grade of the  
11 Class Vehicles and the presence of the Water Pump Defect and corresponding safety  
12 risk, but failed to repair or replace the Water Pump Defect and/or disclose the defect.  
13 Under the circumstances, the remedies available under any informal settlement  
14 procedure would be inadequate and any requirement that Plaintiff Meshberg resort to  
15 an informal dispute resolution procedure and/or afford Defendants a reasonable  
16 opportunity to cure their breach of warranties is excused and thereby deemed  
17 satisfied.

18           464. Plaintiff Meshberg and members of the Classes would suffer economic  
19 hardship if they returned their Class Vehicles, but did not receive the return of all  
20 payments made by them to Defendants. Thus, Plaintiff Meshberg and members of  
21 the Classes have not re-accepted their Class Vehicles by retaining them.

22           465. The amount in controversy of Plaintiff Meshberg's individual claims  
23 meets or exceeds the sum of \$25. The amount in controversy of this action exceeds  
24 the sum of \$50,000, exclusive of interest and costs, computed on the basis of all  
25 claims to be determined in this lawsuit.

26           466. Plaintiff Meshberg, individually and on behalf of members of the  
27 Classes, seek all damages permitted by law, including diminution in the value of the  
28 Class Vehicles, in an amount to be proven at trial.



**COUNT XXIII**

**Fraud by Omission or Fraudulent Concealment  
(On behalf of the Illinois Sub-Class against MNAO and MMC)**

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2  
3  
4 467. Plaintiff Meshberg incorporates and re-alleges each preceding paragraph  
5 as though fully set forth herein.

6 468. Plaintiff Meshberg brings this count on behalf of himself and the  
7 members of the Illinois Sub-Class.

8 469. Defendants intentionally and knowingly concealed, suppressed and/or  
9 omitted material facts including the standard, quality or grade of the Class Vehicles  
10 and the fact that the Class Vehicles contain a Water Pump Defect and corresponding  
11 safety risk, with the intent that Plaintiff Meshberg and members of the Illinois Sub-  
12 Class rely on Defendants' omissions. As a direct result of Defendants' fraudulent  
13 conduct, Plaintiff Meshberg and members of the Illinois Sub-Class have suffered  
14 actual damages.

15 470. Defendants knew (at the time of sale or lease and thereafter) that the  
16 Class Vehicles contained the Water Pump Defect, concealed the defect and never  
17 intended to repair or replace the Water Pump Defect during the warranty periods. To  
18 date, Defendants have not provided Plaintiff Meshberg and members of the Illinois  
19 Sub-Class with a repair or remedy for the Water Pump Defect.

20 471. Defendants owed a duty to disclose the Water Pump Defect and its  
21 corresponding safety risk to Plaintiff Meshberg and members of the Illinois Sub-  
22 Class because Defendants possessed superior and exclusive knowledge regarding the  
23 defect and made a partial disclosure regarding the safety of the Class Vehicles.  
24 Rather than disclose the defect, Defendants intentionally and knowingly concealed,  
25 suppressed and/or omitted material facts including the standard, quality or grade of  
26 the Class Vehicles and the presence of the Water Pump Defect and corresponding  
27 safety risk, to sell additional Class Vehicles and avoid the cost of repair or  
28 replacement.

1           472. The Water Pump Defect is material to Plaintiff Meshberg and members  
2 of the Illinois Sub-Class because Plaintiff Meshberg and members of the Illinois Sub-  
3 Class had a reasonable expectation that the vehicles would not contain a defect, such  
4 as the Water Pump Defect, that leads to exorbitant repair costs and exposes them and  
5 other vehicle occupants to a safety risk. No reasonable consumer expects a vehicle to  
6 contain a concealed defect in design, manufacture, materials or workmanship, such as  
7 the Water Pump Defect, that can lead to thousands of dollars in repair or replacement  
8 costs, and can cause catastrophic engine failure with little to no warning or time to  
9 take preventative measures or safely remove the vehicle from the road.

10           473. Plaintiff Meshberg and members of the Illinois Sub-Class would not  
11 have purchased or leased the Class Vehicles but for Defendants' omissions and  
12 concealment of material facts regarding the nature and quality of the Class Vehicles  
13 and existence of the Water Pump Defect and corresponding safety risk, or would  
14 have paid less for the Class Vehicles.

15           474. Defendants knew their concealment and suppression of material facts  
16 was false and misleading and knew the effect of concealing those material facts.  
17 Defendants knew their concealment and suppression of the Water Pump Defect  
18 would sell more Class Vehicles and would discourage Plaintiff Meshberg and  
19 members of the Illinois Sub-Class from seeking replacement or repair of the Water  
20 Pump Defect during the applicable warranty periods. Further, Defendants intended to  
21 induce Plaintiff Meshberg and members of the Illinois Sub-Class into purchasing or  
22 leasing the Class Vehicles and to discourage them from seeking replacement or repair  
23 of the Water Pump Defect in order to decrease costs and increase profits.

24           475. Defendants acted with malice, oppression and fraud.

25           476. Plaintiff Meshberg and members of the Illinois Sub-Class reasonably  
26 relied upon Defendants' knowing concealment and omissions. As a direct and  
27 proximate result of Defendants' omissions and active concealment of material facts  
28 regarding the Water Pump Defect and associated safety risk, Plaintiff Meshberg and

1 members of the Illinois Sub-Class have suffered actual damages in an amount to be  
2 determined at trial.

3 **COUNT XXIV**  
4 **Violation of the Illinois Consumer Fraud and Deceptive Business**  
5 **Practices Act (“ICFA”),**  
6 **815 ILCS 505/1, et seq.**  
7 **(On behalf of the Illinois Sub-Class against MNAO and MMC)**

7 477. Plaintiff Meshberg incorporates and re-alleges each preceding paragraph  
8 as though fully set forth herein.

9 478. Plaintiff Meshberg brings this count on behalf of himself and the  
10 members of the Illinois Sub-Class.

11 479. Defendants are each a “person” as that term is defined in 815 ILCS  
12 505/1(c).

13 480. Plaintiffs and the Illinois Subclass are “consumers” as that term is  
14 defined in 815 ILCS 505/1(e).

15 481. The ICFA prohibits “unfair or deceptive acts or practices, including but  
16 not limited to the use or employment of any deception, fraud, false pretense, false  
17 promise, misrepresentation or the concealment, suppression or omission of any  
18 material fact, with intent that others rely upon the concealment, suppression or  
19 omission of such material fact . . . in the conduct of trade or commerce . . . whether  
20 any person has in fact been misled, deceived or damaged thereby.” 815 ILCS 505/2.

21 482. Defendants participated in misleading, false, or deceptive practices that  
22 violated the ICFA. By failing to disclose and actively concealing that the Class  
23 Vehicles possessed the Water Pump Defect, failing to include the water pump as a  
24 component that required inspection, servicing, or routine maintenance, by marketing  
25 their Class Vehicles as safe and of high quality, and by presenting themselves as a  
26 reputable manufacturer that value safety and stood behind its vehicles after they were  
27 sold, Defendants engaged in deceptive business practices prohibited by the ICFA.

28 ///

1           483. In the course of its business, Defendants willfully failed to disclose and  
2 actively concealed the Water Pump Defect discussed herein and otherwise engaged in  
3 activities with a tendency or capacity to deceive. Defendants also engaged in  
4 unlawful trade practices by employing deception, deceptive acts or practices, fraud,  
5 misrepresentations, or concealment, suppression, or omission of any material fact  
6 with intent that others rely upon such concealment, suppression, or omission, in  
7 connection with the sale of the Class Vehicles.

8           484. Defendants have known, or should have known, for years about the  
9 Water Pump Defect in the Class Vehicles, but failed to disclose that the Class  
10 Vehicles possessed the Water Pump Defect. Defendants also knew they were  
11 manufacturing, selling, and distributing Class Vehicles that did not perform as  
12 advertised and jeopardized the safety of the vehicle's occupants but failed to disclose  
13 this information to Plaintiff Meshberg and members of the Illinois Sub-Class.

14           485. Defendants committed unconscionable, deceptive and unfair trade  
15 practices, including, but not limited to, deception, fraud, false pretense, false promise,  
16 misrepresentation and the knowing concealment, suppression and omission of  
17 materials facts concerning the Class Vehicles' Water Pump Defect and corresponding  
18 safety risk in connection with the sale and/or advertisement of Class Vehicles.

19           486. Defendants fraudulently, intentionally, negligently and/or recklessly  
20 misrepresented to Plaintiff Meshberg and members of the Illinois Sub-Class that the  
21 water pump in the Class Vehicles would not require maintenance, repair or  
22 replacement and fraudulently omitted the water pump from its maintenance  
23 schedules.

24           487. Defendants fraudulently, intentionally, negligently and/or recklessly  
25 misrepresented to Plaintiff Meshberg and members of the Illinois Sub-Class the  
26 characteristics of Class Vehicle engines with respect to materials, manufacture,  
27 durability, design, longevity, maintenance and operating costs.

28       ///

1           488. Defendants intended that Plaintiff Meshberg and members of the Illinois  
2 Sub-Class would, in the course of their decision to expend money in purchasing,  
3 leasing and/or repairing Class Vehicles, reasonably rely upon misrepresentations,  
4 misleading characterizations and material omissions concerning the quality of Class  
5 Vehicle engines with respect to materials, workmanship, design, manufacture and  
6 information in the owner's manuals.

7           489. Information regarding the Water Pump Defect as described in this  
8 Complaint is material to consumers in that the defect results in exorbitant repair or  
9 replacement costs, can cause catastrophic engine failure and poses a safety risk.

10           490. If Defendants had not concealed the defect from Plaintiff Meshberg and  
11 members of the Illinois Sub-Class within the express warranty period, the Water  
12 Pump Defect would have been repaired without cost to purchasers as promised under  
13 the original warranty.

14           491. Defendants violated the ICFA by failing to inform Class Vehicle owners  
15 prior to purchase and/or during the warranty period that Class Vehicle engines were  
16 defectively designed and/or manufactured and were accompanied by incorrect  
17 maintenance recommendations and maintenance intervals.

18           492. Defendants violated the ICFA by failing to inform Class Vehicle owners  
19 prior to purchase and/or during the warranty period that Class Vehicle engines  
20 contained defects and would require replacement of expensive internal engine  
21 components.

22           493. As a proximate and direct result of Defendants' unfair and deceptive  
23 trade practices, Plaintiff Meshberg and members of the Illinois Sub-Class purchased  
24 or leased Class Vehicles and suffered an ascertainable loss and financial harm.

25           494. Plaintiff Meshberg and members of the Illinois Sub-Class experienced  
26 ascertainable losses in the form of premature failure of the water pump and/or engine  
27 failure, diminution of Class Vehicle resale value, increased repair and maintenance  
28 costs and other substantial monetary damages and inconvenience.

1 495. The conduct of Defendants offends public policy as established by  
2 statutes and common law, is immoral, unethical, oppressive and/or unscrupulous and  
3 caused unavoidable and substantial injury to Class Vehicle owners and lessees (who  
4 were unable to have reasonably avoided the injury due to no fault of their own)  
5 without any countervailing benefits to consumers.

6 496. Pursuant to 815 ILCS 505/10a(a), Plaintiff Meshberg and the Illinois  
7 Sub-Class seek monetary relief against Defendants in the amount of actual damages,  
8 as well as punitive damages because Defendants acted with fraud and/or malice  
9 and/or was grossly negligent.

10 497. Plaintiff Meshberg and the Illinois Sub-Class also seek an order  
11 enjoining Defendants' unfair and/or deceptive acts or practices, attorneys' fees, and  
12 any other just and proper relief available under the 815 ILCS 505/1 *et seq.*

13 **E. Louisiana Counts**

14 **COUNT XXV**

15 **Breach of Warranty Against Redhibitory Defects,  
16 La. Civ. Code Ann. Art. 2520, 2524**

17 **(On behalf of the Louisiana Sub-Class against MNAO and MMC)**

18 498. Plaintiff Brian Hume incorporates and re-alleges each preceding  
19 paragraph as through fully set forth herein.

20 499. Plaintiff Brian Hume brings this count on behalf of himself and the  
21 members of the Louisiana Sub-Class.

22 500. Defendants are and were at all times relevant "sellers" with respect to  
23 motor vehicle under La. Civ. Code Ann. art. 2520, 2524.

24 501. A warranty that the Class Vehicles were in merchantable condition and  
25 fit for the ordinary purpose for which vehicles are used is implied by law pursuant to  
26 La. Civ. Code Ann. Art. 2520, 2524.

27 502. The Class Vehicles, when sold or leased and at all times thereafter, were  
28 not in merchantable condition and are not fit for the ordinary purpose of providing  
safe and reliable transportation. The Class Vehicles contain an inherent defect, the

1 Water Pump Defect, in their engines (at the time of sale or lease and thereafter) and  
2 present an undisclosed safety risk to drivers, passengers, and other motorists. Thus,  
3 Defendants breached the implied warranty of merchantability.

4 503. Defendants were provided notice of the Water Pump Defect by  
5 numerous consumer complaints made to MNAO's authorized dealers nationwide,  
6 complaints to NHTSA and through their own testing. Affording Defendants a  
7 reasonable opportunity to cure their breach of implied warranties would be  
8 unnecessary and futile here because Defendants have known of and concealed the  
9 Water Pump Defect and, on information and belief, have refused to repair or replace  
10 the Water Pump Defect free of charge within a reasonable time.

11 504. Defendants were further provided notice by Plaintiff Hume of its breach  
12 of warranties when he took his vehicle to Paretto Mazda in Metairie, Louisiana on or  
13 around May 14, 2019. Upon information and belief, Paretto Mazda is an authorized  
14 dealer of MNAO and its duly authorized agent to perform warranty repairs. Despite  
15 this notice, Defendants did not fully cure the breach of warranties and failed to  
16 provide a suitable repair or replacement of the defective water pump free of charge  
17 within a reasonable time. Instead, Paretto Mazda charged Plaintiff Hume nearly  
18 \$2,500 to replace the water pump in his Class Vehicle.

19 505. Defendant MNAO cannot disclaim its implied warranties as it  
20 knowingly sold or leased a defective product.

21 506. As a direct and proximate result of Defendants' breach of the implied  
22 warranty of merchantability, Plaintiff Hume and members of the Louisiana Sub-Class  
23 have been damaged in an amount to be proven at trial.

24 507. Any attempt by MNAO to disclaim or limit recovery to the terms of the  
25 express warranties is unconscionable and unenforceable here. Specifically, MNAO's  
26 warranty limitation is unenforceable because it knowingly sold or leased a defective  
27 product without informing consumers about the defect. The time limits contained in  
28 MNAO's warranty periods were also unconscionable and inadequate to protect

1 Plaintiff Hume and members of the Louisiana Sub-Class. Among other things,  
2 Plaintiff Hume and members of the Louisiana Sub-Class did not determine these time  
3 limitations, the terms of which unreasonably favored MNAO. A gross disparity in  
4 bargaining power existed between MNAO and members of the Louisiana Sub-Class,  
5 and MNAO knew or should have known that the Class Vehicles were defective at the  
6 time of sale or lease and that the Water Pump Defect posed a safety risk.

7 508. Further, as sellers of consumer goods, Defendants are precluded from  
8 excluding or modifying an implied warranty of merchantability or limited consumer  
9 remedies for breach of this warranty.

10 509. Plaintiff Hume and members of the Louisiana Sub-Class have complied  
11 with all obligations under the warranty, or otherwise have been excused from  
12 performance of said obligations as a result of Defendants' conduct described herein.

13 510. The Class Vehicles are not safe and reliable and owners and lessees of  
14 these vehicles have lost confidence in the ability of Class Vehicles to perform the  
15 function of safe reliable transportation without the likelihood of the Water Pump  
16 Defect rendering their vehicles inoperable without warning. Defendants are estopped  
17 by their conduct, as alleged herein, from disclaiming any and all implied warranties  
18 with respect to the defective water pumps in Class Vehicles.

19 511. The Water Pump Defect in the Class Vehicles renders their use so  
20 inconvenient that Plaintiff Hume and members of the Louisiana Sub-Class would not  
21 have purchased or leased the Class Vehicles had they known of the defect.  
22 Accordingly, Plaintiff Hume and the Louisiana Sub-Class are entitled to obtain a  
23 rescission of the sale of their Class Vehicles.

24 512. Alternatively, the Water Pump Defect diminishes the usefulness of the  
25 Class Vehicles or their value so that Plaintiff Hume and members of the Louisiana  
26 Sub-Class would still have bought their Class Vehicles but for a lesser price.  
27 Accordingly, Plaintiff Hume and the Louisiana Sub-Class are entitled to obtain a  
28 reduction of the price.



1 513. The applicable period of prescription for the implied warranty claim has  
2 been tolled by the discovery rule and Defendants’ fraudulent concealment of the  
3 Water Pump Defect, as well as the terms of the express warranty.

4 514. Pursuant to La. Civ. Code Ann. Arts. 2531 and 2545, Plaintiff Hume and  
5 the Louisiana Sub-Class seek to recover the purchase price with interest from the  
6 time it was paid; or else the difference in value of the defective Class Vehicles at the  
7 time of sale compared to their value warranted by Defendants; reasonable expenses  
8 occasioned by the sales; reasonable attorneys’ fees; and any other just and proper  
9 relief available.

10 **COUNT XXVI**  
11 **Violation of the Magnuson-Moss Warranty Act (“MMWA”),**  
12 **15 U.S.C. § 2301, et seq.**  
13 **(On behalf of the Nationwide Class and the Louisiana**  
14 **Sub-Class against MNAO and MMC)**

15 515. Plaintiff Hume incorporates and re-alleges each preceding paragraph as  
16 though fully set forth herein.

17 516. Plaintiff Hume brings this count on behalf of himself and the members  
18 of the Nationwide Class or, alternatively, on behalf of the Louisiana Sub-Class.

19 517. Plaintiff Hume satisfies the MMWA jurisdictional requirement because  
20 he alleges diversity jurisdiction under CAFA, 28 U.S.C. § 1332(d)(2).

21 518. Plaintiff Hume and members of the Classes are “consumers” within the  
22 meaning of the Magnuson-Moss Warranty Act, 15 U.S.C. § 2301(3).

23 519. Defendants are “suppliers” and “warrantors” within the meaning of the  
24 Magnuson-Moss Warranty Act, 15 U.S.C. § 2301(4)-(5).

25 520. The Class Vehicles are “consumer products” within the meaning of the  
26 Magnuson-Moss Warranty Act, 15 U.S.C. § 2301(1).

27 521. The MMWA provides a cause of action for any consumer who is  
28 damaged by the failure of a warrantor to comply with a written or implied warranty.  
*See* 15 U.S.C. § 2310(d)(1).

1           522. Defendant MNAO provided Plaintiff Hume and members of the Classes  
2 with one or more express warranties, which are covered under 15 U.S.C. § 2301(6).  
3 For illustrative purposes, MNAO currently offers New Vehicle Limited Warranty  
4 coverage for Class Vehicles sold under the Mazda brand for 3 years or 36,000 miles  
5 and extended warranty coverage for Powertrain components for 5 years or 60,000  
6 miles.<sup>23</sup> Under the warranties provided to Plaintiff Hume and members of the  
7 Louisiana Sub-Class, MNAO promised to repair or replace covered components  
8 arising out of defects in materials and/or workmanship, including the Water Pump  
9 Defect, at no cost to owners and lessees of the Class Vehicles and within a reasonable  
10 time. As alleged herein, MNAO breached these warranties.

11           523. Plaintiff Hume and members of the Classes experienced the Water Pump  
12 Defect within the warranty periods but MNAO failed to inform Plaintiff Hume and  
13 members of the Classes of the existence of the Water Pump Defect and associated  
14 safety risk, and failed to provide a suitable remedy or repair of the Water Pump  
15 Defect free of charge within a reasonable time.

16           524. Defendants were provided notice by letter dated May 13, 2019 directed  
17 to MNAO that Plaintiffs would pursue a claim under the MMWA on behalf of a  
18 class.

19           525. Any attempt by MNAO to disclaim or limit its express or implied  
20 warranties is unconscionable and unenforceable here. Specifically, MNAO's  
21 warranty limitations are unenforceable because it knowingly sold or leased a  
22 defective product without informing consumers about the defect. The time limits  
23 contained in MNAO's warranty periods are also unconscionable and inadequate to  
24 protect Plaintiff Hume and members of the Classes. Among other things, Plaintiff  
25 Hume and members of the Classes did not determine these time limitations, the terms  
26 of which unreasonably favored MNAO. A gross disparity in bargaining power

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27 <sup>23</sup> See, e.g., Exhibit A (2012 Mazda CX-9 Warranty Booklet). See also  
28 <https://www.mazdausa.com/owners/warranty>.

1 existed between MNAO and members of the Classes, and MNAO knew or should  
2 have known that the Class Vehicles were defective at the time of sale or lease and  
3 that they posed a safety risk.

4 526. The Class Vehicles' implied warranties are covered under 15 U.S.C. §  
5 2301(7).

6 527. Defendants breached these warranties by failing to disclose and  
7 fraudulently concealing information regarding the standard, quality or grade of the  
8 Class Vehicles and/or the presence of the Water Pump Defect and corresponding  
9 safety risk. Without limitation, the Class Vehicles share a common defect in design,  
10 material, manufacturing and/or workmanship that fails to operate as represented by  
11 Defendants and presents a safety risk.

12 528. Affording Defendants a reasonable opportunity to cure its breach of  
13 warranties would be unnecessary and futile. At the time of sale or lease of each Class  
14 Vehicle and all relevant times thereafter, Defendants knew, or were reckless in not  
15 knowing, of the material omissions concerning the standard, quality or grade of the  
16 Class Vehicles and the presence of the Water Pump Defect and corresponding safety  
17 risk, but failed to repair or replace the Water Pump Defect and/or disclose the defect.  
18 Under the circumstances, the remedies available under any informal settlement  
19 procedure would be inadequate and any requirement that Plaintiff Hume resort to an  
20 informal dispute resolution procedure and/or afford Defendants a reasonable  
21 opportunity to cure its breach of warranties is excused and thereby deemed satisfied.

22 529. Plaintiff Hume and members of the Classes would suffer economic  
23 hardship if they returned their Class Vehicles, but did not receive the return of all  
24 payments made by them to Defendants. Thus, Plaintiff Hume and members of the  
25 Classes have not re-accepted their Class Vehicles by retaining them.

26 530. The amount in controversy of Plaintiff Hume's individual claims meets  
27 or exceeds the sum of \$25. The amount in controversy of this action exceeds the sum  
28

1 of \$50,000, exclusive of interest and costs, computed on the basis of all claims to be  
2 determined in this lawsuit.

3 531. Plaintiff Hume, individually and on behalf of members of the Classes,  
4 seek all damages permitted by law, including diminution in the value of the Class  
5 Vehicles, in an amount to be proven at trial.

6 **COUNT XXVII**  
7 **Violation of the Louisiana Product Liability Act (“LPLA”),**  
8 **L.A. R.S. 9:2800.51, et seq.**  
9 **(On behalf of the Louisiana Sub-Class against MNAO and MMC)**

10 532. Plaintiff Hume incorporates and re-alleges each preceding paragraph as  
11 though fully set forth herein.

12 533. Plaintiff Hume brings this count on behalf of himself and the members  
13 of the Louisiana Sub-Class.

14 534. Defendants are “manufacturers” within the meaning of La. R.S.  
15 9:2800.53(1).

16 535. Plaintiff Hume and the Louisiana Sub-Class are “claimants” within the  
17 meaning of La. R.S. 9:2800.53(4).

18 536. Defendants placed the Class Vehicles into trade or commerce, which are  
19 “products” within the meaning of La. R.S. 9:2800.53(3).

20 537. The LPLA makes manufacturers liable for the damages caused by their  
21 products which are “unreasonably dangerous” in one of four ways: 1) in construction  
22 or composition; 2) design; 3) inadequate warning; and 4) nonconformity to express  
23 warranty. La. R.S. 9:2800.55-58.

24 538. Defendants manufactured, sold and distributed the Class Vehicles  
25 including the Water Pump Defect, which render the Class Vehicles unreasonably  
26 dangers the Water Pump Defect has an associated safety risk which can lead Class  
27 Vehicles to lose power, the ability to steer or brake, and becoming inoperable while  
28 driving, putting vehicle operators, passengers, and other motorists at risk for injury.

1 Plaintiff Hume and the Louisiana Sub-Class used the Class Vehicles in a reasonably  
2 foreseeable manner by using the vehicles to transport themselves and others.

3 539. The water pumps within the Cyclone Engines in Class Vehicles are  
4 unreasonably dangerous in construction or composition because the sudden loss of  
5 power, or the ability to steer or brake does not meet performance standards for  
6 engines in any vehicle and deviates in a material way from the manufacturer's  
7 specifications. Furthermore, the Water Pump Defect and its associated safety risk put  
8 vehicle operators, passengers, and other motorist at risk for injury due to accidents.  
9 The performance standards for engines do not include the risk that their internal water  
10 pump will suddenly fail without warning and Defendants' specifications for the Class  
11 Vehicles do not include such a risk.

12 540. The Cyclone Engines, with their Water Pump Defect, are unreasonably  
13 dangerous in design because they fail to perform safely when used as intended by  
14 ordinary customers in a reasonably foreseeable manner. When driving the Class  
15 Vehicles, Plaintiff Hume and members of the Louisiana Sub-Class are exposed to the  
16 risk that their Class Vehicles may suddenly lose power, and become unable to steer  
17 or brake the vehicles. The risk of serious injury and/or exorbitant repair costs from  
18 the Water Pump Defect greatly exceeds any benefit from having an internal water  
19 pump in their engines and there exist safer alternative methods and designs for the  
20 engines in Class Vehicles, such as the engines which are currently being placed into  
21 current model year versions of the Class Vehicles.

22 541. The Class Vehicles are unreasonably dangerous due to the Water Pump  
23 Defect and Defendants' failure to give adequate warnings to Plaintiff Hume and the  
24 Louisiana Sub-Class about the defect. At the time Plaintiff Hume and members of  
25 the Louisiana Sub-Class purchased their Class Vehicles, Defendants knew, or should  
26 have known, the Water Pump Defect in the Class Vehicles could cause the engine to  
27 lose power and make it impossible to steer or brake. Further, Defendants knew, or  
28 should have known, that this associated safety risk could cause the Class Vehicles to

1 become involved in accidents, putting vehicle operators, passengers, and other  
2 motorists at risk for injury.

3 542. Defendants knowingly concealed, suppressed and/or omitted the  
4 existence of the Water Pump Defect and its associated safety risk in the Class  
5 Vehicles at the time of their sale or lease and at all relevant times thereafter.  
6 Defendants failed to inform Plaintiff Hume and the members of the Louisiana Sub-  
7 Class of the Water Pump Defect in their Class Vehicles at the time of purchase or  
8 lease and all times thereafter and Plaintiff Hume and the members of the Louisiana  
9 Sub-Class had no independent knowledge that Class Vehicles incorporate the Water  
10 Pump Defect.

11 543. Had Defendants disclosed that the Class Vehicles had the Water Pump  
12 Defect and associated safety risk, Plaintiff Hume and the members of the Louisiana  
13 Sub-Class would not have purchased or leased the Class Vehicles, would have paid  
14 less for their vehicles, or would have had the defective water pumps replaced free of  
15 charge within the applicable warranty periods.

16 544. The Class Vehicles are also unreasonably dangerous because they do not  
17 conform to Defendant MNAO's express warranties that no routine maintenance or  
18 inspection is required for the water pump, and that its product is safe and that they  
19 will stand behind their vehicles, covering any defects with their New Vehicle Limited  
20 Warranty. These express warranties induced Plaintiff Hume and the members of the  
21 Louisiana Sub-Class to purchase their Class Vehicles, exposing them to the Water  
22 Pump Defect and associated safety risk. These express warranties were false because  
23 the Class Vehicles do require periodic service and/or inspection, the Water Pump  
24 Defect exposes Plaintiff Hume and the members of the Louisiana Sub-Class to an  
25 associated safety risk, and because Defendant MNAO refuses to replace defective  
26 water pumps and further concealed the existence of the Water Pump Defect so that  
27 Plaintiff Hume and members of the Louisiana Sub-Class did not have the defective  
28 water pump replaced free of charge within the applicable warranty periods.



1           550. Plaintiffs Amie and Jean Levasseur bring this count on behalf of  
2 themselves and the members of the Massachusetts Sub-Class.

3           551. Defendant MNAO represented in the maintenance schedules and  
4 warranty guides for the Class Vehicles that there would be no need to provide  
5 maintenance, service, inspection, or repair for the water pumps during the useful life  
6 of the engine. Such representations formed the basis of the bargain in Plaintiffs Amie  
7 and Jean Levasseur's and members of the Massachusetts Sub-Class's decisions to  
8 purchase or lease the Class Vehicles.

9           552. Defendant MNAO also marketed the Class Vehicles as safe, built to last  
10 and reliable vehicles. These statements helped conceal the existence of the Water  
11 Pump Defect and its corresponding safety risk from Plaintiffs Amie and Jean  
12 Levasseur, and members of the Massachusetts Sub-Class.

13           553. Defendant MNAO is and was at all relevant times a merchant and seller  
14 of motor vehicles (i.e., the Class Vehicles) within the meaning of the Uniform  
15 Commercial Code.

16           554. With respect to leases, Defendant MNAO is and was at all relevant times  
17 a lessor of motor vehicles (i.e., the Class Vehicles) within the meaning of the  
18 Uniform Commercial Code.

19           555. The Class Vehicles are and were at all relevant times goods within the  
20 meaning of the Uniform Commercial Code.

21           556. In connection with the purchase or lease of each of the Class Vehicles,  
22 Defendant MNAO provides maintenance schedules and warranty guides which omit  
23 any mention of the water pumps as a component requiring routine inspection, service,  
24 or replacement.

25           557. In connection with the purchase or lease of each of the Class Vehicles,  
26 Defendant MNAO also provides warranty coverage for the Class Vehicles under one  
27 or more manufacturer's warranties. For illustrative purposes, Defendant MNAO  
28 currently offers New Vehicle Limited Warranty coverage for Class Vehicles sold



1 under the Mazda brand for 3 years or 36,000 miles and extended warranty coverage  
2 for Powertrain components for 5 years or 60,000 miles.<sup>24</sup> Under the warranties  
3 provided to Plaintiffs Amie and Jean Levasseur, and members of the Massachusetts  
4 Sub-Class, Defendant MNAO promised to repair or replace covered components  
5 arising out of defects in materials and/or workmanship, including the Water Pump  
6 Defect, at no cost to owners and lessees of the Class Vehicles and within a reasonable  
7 time. As alleged herein, Defendant MNAO breached these warranties.

8 558. Defendant MNAO's warranties formed a basis of the bargain that was  
9 reached when Plaintiffs Amie and Jean Levasseur, and members of the Massachusetts  
10 Sub-Class purchased or leased their Class Vehicles. Given the latent nature of the  
11 Water Pump Defect, Defendant MNAO knew or should have known that the majority  
12 of the water pump failures (and corresponding engine damage) occur outside of the  
13 warranty periods.

14 559. Plaintiffs Amie and Jean Levasseur, and members of the Massachusetts  
15 Sub-Class experienced the existence of the Water Pump Defect within the warranty  
16 periods but had no knowledge of the existence of the defect and associated safety  
17 risk, which were known and concealed by Defendant MNAO. Despite the existence  
18 of the warranties, Defendant MNAO failed to adequately inform Plaintiffs Amie and  
19 Jean Levasseur, and members of the Massachusetts Sub-Class that the Class Vehicles  
20 contained the Water Pump Defect and failed to provide a suitable repair or  
21 replacement of the Water Pump Defect free of charge within a reasonable time.

22 560. Defendant MNAO breached the express warranty promising to repair  
23 and correct a manufacturing defect or defect in materials or workmanship of any parts  
24 it supplied.

25 561. On information and belief, Defendant MNAO has not suitably repaired  
26 or replaced the Water Pump Defect free of charge for Plaintiffs Amie and Jean

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27 <sup>24</sup> See, e.g., Exhibit A (2012 Mazda CX-9 Warranty Booklet). See also  
28 <https://www.mazdausa.com/owners/warranty>.

1 Levasseur, and members of the Massachusetts Sub-Class Class despite the existence  
2 of the defect in the Class Vehicles at the time of sale or lease.

3 562. Defendant MNAO further breached its express warranties by selling  
4 Class Vehicles that were defective with respect to engine materials, workmanship,  
5 design and manufacture, and were accompanied by an owner's manual and/or  
6 maintenance schedule that incorporated no inspection and service intervals for the  
7 water pump although Defendant MNAO knew of the Water Pump Defect and that the  
8 water pump required periodic inspection and service.

9 563. Class Vehicles were not of merchantable quality and were unfit for the  
10 ordinary purposes for which passenger vehicles are used because of engine materials,  
11 workmanship, design and/or manufacturing defects which cause engine failure and/or  
12 failure to perform as warranted.

13 564. Defendant MNAO was provided notice of the Water Pump Defect by  
14 numerous consumer complaints made to its authorized dealers nationwide,  
15 complaints to NHTSA and through its own testing. Affording Defendant MNAO a  
16 reasonable opportunity to cure its breach of written warranties would be unnecessary  
17 and futile here because Defendant MNAO has known of and concealed the Water  
18 Pump Defect and has failed to provide a suitable repair or replacement of the Water  
19 Pump Defect free of charge within a reasonable time.

20 565. Defendant MNAO was further provided notice by Plaintiffs Amie and  
21 Jean Levasseur of its breach of express warranties they contacted Liberty Mazda in  
22 Wakefield, Massachusetts via email on or around May 31, 2019. Upon information  
23 and belief, Liberty Mazda is an authorized dealer of Defendant MNAO and its duly  
24 authorized agent to perform warranty repairs. Despite this notice, Defendant MNAO  
25 did not fully cure its breach of written warranties and failed to provide a suitable  
26 repair or replacement of the defective water pump free of charge within a reasonable  
27 time. Instead, Liberty Mazda provided them with a rough estimate of \$9,500 to  
28 replace the engine.

1           566. Any attempt by Defendant MNAO to disclaim or limit recovery to the  
2 terms of the express warranties is unconscionable and unenforceable here.  
3 Specifically, Defendant MNAO's warranty limitation is unenforceable because it  
4 knowingly sold or leased a defective product without informing consumers about the  
5 defect. The time limits contained in Defendant MNAO's warranty periods were also  
6 unconscionable and inadequate to protect Plaintiffs Amie and Jean Levasseur, and  
7 members of the Massachusetts Sub-Class. Among other things, Plaintiffs Amie and  
8 Jean Levasseur, and members of the Massachusetts Sub-Class did not determine  
9 these time limitations, the terms of which unreasonably favored Defendant MNAO.  
10 A gross disparity in bargaining power existed between Defendant MNAO and  
11 members of the Massachusetts Sub-Class, and Defendant MNAO knew or should  
12 have known that the Class Vehicles were defective at the time of sale or lease and  
13 that the Water Pump Defect posed a safety risk.

14           567. Further, the limited warranty promising to repair and/or correct a  
15 manufacturing defect fails in its essential purpose because the contractual remedy is  
16 insufficient to make Plaintiffs Amie and Jean Levasseur, and members of the  
17 Massachusetts Sub-Class whole because, on information and belief, Defendant  
18 MNAO has failed and/or has refused to adequately provide the promised remedies  
19 within a reasonable time.

20           568. Defendant MNAO knew that the Class Vehicles were inherently  
21 defective and did not conform to their warranties, and Plaintiffs Amie and Jean  
22 Levasseur, and members of the Massachusetts Sub-Class were induced to purchase or  
23 lease the Class Vehicles under false and/or fraudulent pretenses.

24           569. Plaintiffs Amie and Jean Levasseur, and members of the Massachusetts  
25 Sub-Class experienced the existence of the Water Pump Defect within the warranty  
26 periods but had no knowledge of the existence of the defect, which was known and  
27 concealed by Defendant MNAO. Despite the existence of the warranties, Defendant  
28 MNAO failed to inform Plaintiffs Amie and Jean Levasseur, and members of the

1 Massachusetts Sub-Class that the Class Vehicles contained the Water Pump Defect  
2 during the warranty periods, and, thus, wrongfully transferred the costs of repair or  
3 replacement of the water pump and damaged engine parts to Plaintiffs Amie and Jean  
4 Levasseur, and members of the Massachusetts Sub-Class.

5 570. Because of the Water Pump Defect, the Class Vehicles are not reliable  
6 and owners of these vehicles have lost confidence in the ability of Class Vehicles to  
7 perform the function of safe reliable transportation.

8 571. As a direct and proximate result of Defendant MNAO's breach of  
9 express warranties, Plaintiffs Amie and Jean Levasseur, and members of the  
10 Massachusetts Sub-Class have been damaged in an amount to be determined at trial.

11 572. Finally, because of Defendant MNAO's breach of express warranty as  
12 set forth herein, Plaintiffs Amie and Jean Levasseur, and members of the  
13 Massachusetts Sub-Class assert, as additional and/or alternative remedies, the  
14 revocation of acceptance of the goods and the return to Plaintiffs Amie and Jean  
15 Levasseur, and members of the Massachusetts Sub-Class of the purchase or lease  
16 price of all Class Vehicles currently owned or leased, and for such other incidental  
17 and consequential damages as allowed.

18 **COUNT XXIX**

19 **Breach of Implied Warranty of Merchantability**  
20 **(On behalf of the Massachusetts Sub-Class against MNAO and MMC)**

21 573. Plaintiffs Amie and Jean Levasseur incorporate and re-allege each  
22 preceding paragraph as though fully set forth herein.

23 574. Plaintiffs Amie and Jean Levasseur bring this count on behalf of  
24 themselves and the members of the Massachusetts Sub-Class.

25 575. Plaintiffs Amie and Jean Levasseur, and members of the Massachusetts  
26 Sub-Class purchased or leased the Class Vehicles, manufactured by MMC and/or  
27 MNAO, from MNAO by and through its authorized agents for retail sales, or were  
28 otherwise expected to be the eventual purchasers of the Class Vehicles when bought

1 from a third party. At all relevant times, Defendants were the manufacturer,  
2 distributor, warrantor and/or seller of Class Vehicles. Defendants knew or had reason  
3 to know of the specific use for which the Class Vehicles were purchased or leased.

4 576. Defendants are and were at all relevant times a merchant and seller of  
5 motor vehicles (i.e., the Class Vehicles) within the meaning of the Uniform  
6 Commercial Code.

7 577. With respect to leases, Defendants are and were at all relevant times a  
8 lessor of motor vehicles (i.e., the Class Vehicles) within the meaning of the Uniform  
9 Commercial Code.

10 578. The Class Vehicles are and were at all relevant times goods within the  
11 meaning of the Uniform Commercial Code.

12 579. Defendants impliedly warranted that the Class Vehicles were in  
13 merchantable condition and fit for the ordinary purpose for which vehicles are used.

14 580. The Class Vehicles, when sold or leased and at all times thereafter, were  
15 not in merchantable condition and were and are not fit for the ordinary purpose of  
16 providing safe and reliable transportation. The Class Vehicles contain an inherent  
17 defect – the Water Pump Defect – (at the time of sale or lease and thereafter) and  
18 present an undisclosed safety risk to drivers and occupants. Thus, Defendants  
19 breached the implied warranty of merchantability.

20 581. Through its maintenance schedules, MNAO further represented that the  
21 water pump would not need inspection, service, repair or replacement and/or  
22 fraudulently concealed the need for repair or replacement of the water pump by  
23 omitting the water pump from the maintenance schedules. MNAO cannot disclaim  
24 its implied warranty as it knowingly sold or leased a defective product.

25 582. Defendants were provided notice of the Water Pump Defect by  
26 numerous consumer complaints made to MNAO's authorized dealers nationwide,  
27 complaints to NHTSA and through their own testing. Affording Defendants a  
28 reasonable opportunity to cure their breach of implied warranties would be

1 unnecessary and futile here because Defendants have known of and concealed the  
2 Water Pump Defect and, on information and belief, have refused to repair or replace  
3 the Water Pump Defect free of charge within a reasonable time.

4 583. Defendants were further provided notice by Plaintiffs Amie and Jean  
5 Levasseur of their breach of implied warranties when they contacted Liberty Mazda  
6 in Wakefield, Massachusetts via email on or around May 31, 2019. Upon  
7 information and belief, Liberty Mazda is an authorized dealer of MNAO and its duly  
8 authorized agent to perform warranty repairs. Despite this notice, Defendants did not  
9 fully cure its breach of written warranties and failed to provide a suitable repair or  
10 replacement of the defective water pump free of charge within a reasonable time.  
11 Instead, Liberty Mazda provided them with a rough estimate of \$9,500 to replace the  
12 engine.

13 584. As a direct and proximate result of Defendants' breach of the implied  
14 warranty of merchantability, Amie and Jean Levasseur, and members of the  
15 Massachusetts Sub-Class have been damaged in an amount to be proven at trial.

16 585. Any attempt by MNAO to disclaim or limit the implied warranty of  
17 merchantability vis-à-vis consumers is unconscionable and unenforceable here.  
18 Specifically, MNAO's warranty limitation is unenforceable because it knowingly  
19 sold or leased a defective product without informing consumers about the defect.  
20 The time limits contained in MNAO's warranty periods were also unconscionable  
21 and inadequate to protect Plaintiffs Amie and Jean Levasseur, and members of the  
22 Massachusetts Sub-Class. Among other things, Plaintiffs Amie and Jean Levasseur,  
23 and members of the Massachusetts Sub-Class did not determine these time  
24 limitations, the terms of which unreasonably favored MNAO. A gross disparity in  
25 bargaining power existed between MNAO and members of the Massachusetts Sub-  
26 Class, and MNAO knew or should have known that the Class Vehicles were  
27 defective at the time of sale or lease and that the Water Pump Defect posed a safety  
28 risk.

1 586. Plaintiffs Amie and Jean Levasseur, and members of the Massachusetts  
2 Sub-Class have been excused from performance of any warranty obligations as a  
3 result of Defendants’ conduct described herein.

4 587. The applicable statute of limitations for the implied warranty claim has  
5 been tolled by the discovery rule and/or fraudulent concealment.

6 **COUNT XXX**  
7 **Violation of the Magnuson-Moss Warranty Act (“MMWA”),**  
8 **15 U.S.C. § 2301, et seq.**  
9 **(On behalf of the Nationwide Class and the Massachusetts**  
10 **Sub-Class against MNAO and MMC)**

11 588. Plaintiffs Amie and Jean Levasseur incorporate and re-allege each  
12 preceding paragraph as though fully set forth herein.

13 589. Plaintiffs Amie and Jean Levasseur bring this count on behalf of  
14 themselves and the members of the Nationwide Class or, alternatively, on behalf of  
15 the Massachusetts Sub-Class.

16 590. Plaintiffs Amie and Jean Levasseur satisfy the MMWA jurisdictional  
17 requirement because they allege diversity jurisdiction under CAFA, 28 U.S.C. §  
18 1332(d)(2).

19 591. Plaintiffs Amie and Jean Levasseur, and members of the Classes are  
20 “consumers” within the meaning of the Magnuson-Moss Warranty Act, 15 U.S.C. §  
21 2301(3).

22 592. Defendants are “suppliers” and “warrantors” within the meaning of the  
23 Magnuson-Moss Warranty Act, 15 U.S.C. § 2301(4)-(5).

24 593. The Class Vehicles are “consumer products” within the meaning of the  
25 Magnuson-Moss Warranty Act, 15 U.S.C. § 2301(1).

26 594. The MMWA provides a cause of action for any consumer who is  
27 damaged by the failure of a warrantor to comply with a written or implied warranty.  
28 *See* 15 U.S.C. § 2310(d)(1).

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1           595. Defendant MNAO provided Plaintiffs Amie and Jean Levasseur and  
2 members of the Classes with one or more express warranties, which are covered  
3 under 15 U.S.C. § 2301(6). For illustrative purposes, MNAO currently offers New  
4 Vehicle Limited Warranty coverage for Class Vehicles sold under the Mazda brand  
5 for 3 years or 36,000 miles and extended warranty coverage for Powertrain  
6 components for 5 years or 60,000 miles.<sup>25</sup> Under warranties provided to members of  
7 the Classes, MNAO promised to repair or replace covered defective components  
8 arising out of defects in materials and/or workmanship, including the Water Pump  
9 Defect, at no cost to owners and lessees of the Class Vehicles. As alleged herein,  
10 MNAO breached these warranties.

11           596. Plaintiffs Amie and Jean Levasseur, and members of the Classes  
12 experienced the Water Pump Defect within the warranty periods but MNAO failed to  
13 inform Plaintiffs and members of the Classes of the existence of the Water Pump  
14 Defect and associated safety risk, and failed to provide a suitable remedy or repair of  
15 the Water Pump Defect free of charge within a reasonable time.

16           597. Defendants were provided notice by letter dated May 13, 2019 directed  
17 to MNAO that Plaintiffs would pursue a claim under the MMWA on behalf of a  
18 class.

19           598. Any attempt by MNAO to disclaim or limit its express or implied  
20 warranties is unconscionable and unenforceable here. Specifically, MNAO's  
21 warranty limitations are unenforceable because it knowingly sold or leased a  
22 defective product without informing consumers about the defect. The time limits  
23 contained in MNAO's warranty periods are also unconscionable and inadequate to  
24 protect Plaintiffs Amie and Jean Levasseur, and members of the Classes. Among  
25 other things, Plaintiffs Amie and Jean Levasseur, and members of the Classes did not  
26 determine these time limitations, the terms of which unreasonably favored MNAO.

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27 <sup>25</sup> See, e.g., Exhibit A (2012 Mazda CX-9 Warranty Booklet). See also  
28 <https://www.mazdausa.com/owners/warranty>.



1 A gross disparity in bargaining power existed between MNAO and members of the  
2 Classes, and Defendants knew or should have known that the Class Vehicles were  
3 defective at the time of sale or lease and that they posed a safety risk.

4 599. The Class Vehicles' implied warranties are covered under 15 U.S.C. §  
5 2301(7).

6 600. Defendants breached these warranties by failing to disclose and  
7 fraudulently concealing information regarding the standard, quality or grade of the  
8 Class Vehicles and/or the presence of the Water Pump Defect and corresponding  
9 safety risk. Without limitation, the Class Vehicles share a common defect in design,  
10 material, manufacturing and/or workmanship that fails to operate as represented by  
11 Defendant MNAO and presents a safety risk.

12 601. Affording Defendants a reasonable opportunity to cure its breach of  
13 warranties would be unnecessary and futile. At the time of sale or lease of each Class  
14 Vehicle and all relevant times thereafter, Defendants knew, or were reckless in not  
15 knowing, of the material omissions concerning the standard, quality or grade of the  
16 Class Vehicles and the presence of the Water Pump Defect and corresponding safety  
17 risk, but failed to repair or replace the Water Pump Defect and/or disclose the defect.  
18 Under the circumstances, the remedies available under any informal settlement  
19 procedure would be inadequate and any requirement that Plaintiffs resort to an  
20 informal dispute resolution procedure and/or afford Defendants a reasonable  
21 opportunity to cure its breach of warranties is excused and thereby deemed satisfied.

22 602. Plaintiffs Amie and Jean Levasseur, and members of the Classes would  
23 suffer economic hardship if they returned their Class Vehicles, but did not receive the  
24 return of all payments made by them to Defendants. Thus, Plaintiffs Amie and Jean  
25 Levasseur, and members of the Classes have not re-accepted their Class Vehicles by  
26 retaining them.

27 603. The amount in controversy of Plaintiffs Amie and Jean Levasseur's  
28 individual claim meets or exceeds the sum of \$25. The amount in controversy of this

1 action exceeds the sum of \$50,000, exclusive of interest and costs, computed on the  
2 basis of all claims to be determined in this lawsuit.

3 604. Plaintiffs Amie and Jean Levasseur, individually and on behalf of  
4 members of the Classes, seek all damages permitted by law, including diminution in  
5 the value of the Class Vehicles, in an amount to be proven at trial.

6 **COUNT XXXI**  
7 **Fraud by Omission or Fraudulent Concealment**  
8 **(On behalf of the Massachusetts Sub-Class against MNAO and MMC)**

9 605. Plaintiffs Amie and Jean Levasseur incorporate and re-allege each  
10 preceding paragraph as though fully set forth herein.

11 606. Plaintiffs Amie and Jean Levasseur bring this count on behalf of  
12 themselves and the members of the Massachusetts Sub-Class.

13 607. Defendants intentionally and knowingly concealed, suppressed and/or  
14 omitted material facts including the standard, quality or grade of the Class Vehicles  
15 and the fact that the Class Vehicles contain a Water Pump Defect and corresponding  
16 safety risk, with the intent that Plaintiffs Amie and Jean Levasseur, and members of  
17 the Massachusetts rely on Defendants' omissions. As a direct result of Defendants'  
18 fraudulent conduct, Plaintiffs Amie and Jean Levasseur, and members of the  
19 Massachusetts Sub-Class have suffered actual damages.

20 608. Defendants knew (at the time of sale or lease and thereafter) that the  
21 Class Vehicles contained the Water Pump Defect, concealed the defect and never  
22 intended to repair or replace the Water Pump Defect during the warranty periods. To  
23 date, Defendants have not provided Plaintiffs Amie and Jean Levasseur, and  
24 members of the Massachusetts Sub-Class with a repair or remedy for the Water Pump  
25 Defect.

26 609. Defendants owed a duty to disclose the Water Pump Defect and its  
27 corresponding safety risk to Plaintiffs Amie and Jean Levasseur, and members of the  
28 Massachusetts Sub-Class because Defendants possessed superior and exclusive

1 knowledge regarding the defect and made a partial disclosure regarding the safety of  
2 the Class Vehicles. Rather than disclose the defect, Defendants intentionally and  
3 knowingly concealed, suppressed and/or omitted material facts including the  
4 standard, quality or grade of the Class Vehicles and the presence of the Water Pump  
5 Defect and corresponding safety risk, to sell additional Class Vehicles and avoid the  
6 cost of repair or replacement.

7 610. The Water Pump Defect is material to Plaintiffs Amie and Jean  
8 Levasseur, and members of the Massachusetts Sub-Class because Plaintiffs Amie and  
9 Jean Levasseur, and members of the Massachusetts Sub-Class had a reasonable  
10 expectation that the vehicles would not contain a defect, such as the Water Pump  
11 Defect, that leads to exorbitant repair costs and exposes them and other vehicle  
12 occupants to a safety risk. No reasonable consumer expects a vehicle to contain a  
13 concealed defect in design, manufacture, materials or workmanship, such as the  
14 Water Pump Defect, that can lead to thousands of dollars in repair or replacement  
15 costs, and can cause catastrophic engine failure with little to no warning or time to  
16 take preventative measures or safely remove the vehicle from the road.

17 611. Plaintiffs Amie and Jean Levasseur, and members of the Massachusetts  
18 Sub-Class would not have purchased or leased the Class Vehicles but for Defendants'  
19 omissions and concealment of material facts regarding the nature and quality of the  
20 Class Vehicles and existence of the Water Pump Defect and corresponding safety  
21 risk, or would have paid less for the Class Vehicles.

22 612. Defendants knew their concealment and suppression of material facts  
23 was false and misleading and knew the effect of concealing those material facts.  
24 Defendants knew their concealment and suppression of the Water Pump Defect  
25 would sell more Class Vehicles and would discourage Plaintiffs Amie and Jean  
26 Levasseur, and members of the Massachusetts Sub-Class from seeking replacement  
27 or repair of the Water Pump Defect during the applicable warranty periods. Further,  
28 Defendants intended to induce Plaintiffs Amie and Jean Levasseur, and members of

1 the Massachusetts Sub-Class into purchasing or leasing the Class Vehicles and to  
2 discourage them from seeking replacement or repair of the Water Pump Defect in  
3 order to decrease costs and increase profits.

4 613. Defendants acted with malice, oppression and fraud.

5 614. Plaintiffs Amie and Jean Levasseur, and members of the Massachusetts  
6 Sub-Class reasonably relied upon Defendants' knowing concealment and omissions.  
7 As a direct and proximate result of Defendants' omissions and active concealment of  
8 material facts regarding the Water Pump Defect and associated safety risk, Plaintiffs  
9 Amie and Jean Levasseur, and members of the Massachusetts Sub-Class have  
10 suffered actual damages in an amount to be determined at trial.

11 **COUNT XXXII**

12 **Violation of the Massachusetts Consumer Protection Act ("MCPA")**

13 **Mass. Gen. Laws 93A, § 1, et seq.**

14 **(On behalf of the Massachusetts Sub-Class against MNAO and MMC)**

15 615. Plaintiff Amie and Jean Levasseur incorporate and re-allege each  
16 preceding paragraph as though fully set forth herein.

17 616. Plaintiffs Amie and Jean Levasseur bring this count on behalf of  
18 themselves and the Massachusetts Sub-Class.

19 617. Defendants, Plaintiffs Amie and Jean Levasseur, and members of the  
20 Massachusetts Sub-Class are "persons" within the meaning of Mass. Gen. Laws 93A,  
21 § 1(a).

22 618. Defendants engaged in "trade" or "commerce" within the meaning of  
23 Mass. Gen. Laws 93A, § 1(b).

24 619. The MCPA prohibits "unfair or deceptive acts or practices in the  
25 conduct of any trade or commerce." Mass. Gen. Laws 93A, § 2(a).

26 620. In the course of their businesses, Defendants violated the MCPA by  
27 misrepresenting to Plaintiffs Amie and Jean Levasseur, and members of the  
28 Massachusetts Sub-Class that the water pump in the Class Vehicles would not require  
maintenance, repair or replacement and fraudulently omitted the water pump from its

1 maintenance schedules. Defendants fraudulently, intentionally, negligently and/or  
2 recklessly misrepresented to Plaintiffs Amie and Jean Levasseur, and members of the  
3 Massachusetts Sub-Class the characteristics of Class Vehicle engines with respect to  
4 materials, manufacture, durability, design, longevity, maintenance and operating  
5 costs.

6 621. Defendants committed unconscionable, deceptive and unfair trade  
7 practices, including, but not limited to, deception, fraud, false pretense, false promise,  
8 misrepresentation and the knowing concealment, suppression and omission of  
9 materials facts concerning the Class Vehicles' Water Pump Defect and corresponding  
10 safety risk with the intent that Amie and Jean Levasseur, and members of the  
11 Massachusetts Sub-Class would rely upon their omissions in connection with the sale  
12 and/or advertisement of Class Vehicles.

13 622. As such, Defendants violated the Massachusetts Act by:

- 14 (a) representing that the Class Vehicles have characteristics, uses,  
15 benefits, or qualities that they do not have;  
16 (b) representing that the Class Vehicles are of a particular standard,  
17 quality, and grade when they are not; and/or  
18 (c) advertising the Class Vehicles with the intent not to sell them as  
19 advertised.

20 623. Defendants intended that Plaintiffs Amie and Jean Levasseur, and  
21 members of the Massachusetts Sub-Class would, in the course of their decision to  
22 expend money in purchasing, leasing and/or repairing Class Vehicles, reasonably rely  
23 upon misrepresentations, misleading characterizations and material omissions  
24 concerning the quality of Class Vehicle engines with respect to materials,  
25 workmanship, design, manufacture and information in the owner's manuals.

26 624. Information regarding the Water Pump Defect as described in this  
27 Complaint is material to consumers in that the defect results in exorbitant repair or  
28 replacement costs, can cause catastrophic engine failure and poses a safety risk.

1           625. If Defendants had not concealed the defect from Plaintiffs Amie and  
2 Jean Levasseur, and members of the Massachusetts Sub-Class within the express  
3 warranty period, the Water Pump Defect would have been repaired without cost to  
4 purchasers as promised under the original warranty.

5           626. Defendants failed to disclose and omitted the existence of the Water  
6 Pump Defect in the Class Vehicles. Defendants' omissions caused Plaintiffs Amie  
7 and Jean Levasseur, and members of the Massachusetts Sub-Class to be unaware at  
8 the time of their purchase of their Class Vehicles that the Water Pump Defect and its  
9 accompanying safety hazard existed.

10           627. Defendants owed a duty to disclose the material fact that the Class  
11 Vehicles contained the Water Pump Defect to Plaintiffs Amie and Jean Levasseur,  
12 and members of the Massachusetts Sub-Class, but failed to do so. Defendants had a  
13 duty to disclose that the water pumps were defective because, having volunteered to  
14 provide information to Plaintiffs Amie and Jean Levasseur, and members of the  
15 Massachusetts Sub-Class regarding the safety and reliability of the Class Vehicles,  
16 Defendants had a duty to disclose not just the partial truth, but the entire truth: that  
17 contrary to Defendants' representations, the Class Vehicles contained a Water Pump  
18 Defect and associated safety hazard, the repair of which would likely cost thousands  
19 of dollars. Further, knowledge of the existence of the Water Pump Defect was in the  
20 superior control of Defendants.

21           628. Plaintiffs Amie and Jean Levasseur, and members of the Massachusetts  
22 Sub-Class used Defendants' products and had business dealings with Defendants  
23 either directly or indirectly through Defendants' authorized dealers and other third  
24 parties, and were the intended recipients of the Class Vehicles designed,  
25 manufactured and distributed by Defendants.

26           629. Defendants intentionally and knowingly failed to disclose and  
27 misrepresented material facts regarding the Class Vehicles with intent to mislead  
28 Plaintiff and members of the Massachusetts Class.

1           630. Defendants’ deceptive conduct was likely to deceive a reasonable  
2 consumer, and did in fact deceive reasonable consumers including Plaintiffs Amie  
3 and Jean Levasseur, and members of the Massachusetts Sub-Class.

4           631. Plaintiff Amie and Jean Levasseur, and members of the Massachusetts  
5 Sub-Class reasonably relied upon Defendants’ material omissions and  
6 misrepresentations. They had no way of knowing that Defendants’ representations  
7 were false and misleading. Plaintiffs Amie and Jean Levasseur, and members of the  
8 Massachusetts and members of the Massachusetts Class did not (and could not)  
9 unravel Defendants’ deception on their own.

10           632. The facts concealed and omitted by Defendants from Plaintiff Amie and  
11 Jean Levasseur, and members of the Massachusetts Sub-Class are material in that a  
12 reasonable consumer would have considered them to be important in deciding  
13 whether to purchase or lease. Had Plaintiff Amie and Jean Levasseur, and members  
14 of the Massachusetts Sub-Class known the Water Pump Defect in the Class Vehicles,  
15 they would not have purchased or leased their Class Vehicles, or would have paid  
16 less for their Class Vehicles.

17           633. As Defendants do not maintain a place of business or any assets in the  
18 Commonwealth of Massachusetts, Plaintiffs Amie and Jean Levasseur, and members  
19 of the Massachusetts Sub-Class are excused from providing a pre-suit demand to  
20 Defendants.

21           634. Plaintiffs Amie and Jean Levasseur, and members of the Massachusetts  
22 Sub-Class suffered ascertainable loss and actual damages as a direct and proximate  
23 result of Defendants’ conduct. Pursuant to Mass. Gen. Laws 93A, § 9, Plaintiffs  
24 Amie and Jean Levasseur, and members of the Massachusetts Sub-Class seek  
25 monetary relief against Defendants measures as the greater of (a) actual damages in  
26 an amount to be determined at trial and (b) statutory damages in the amount of \$25  
27 for Plaintiffs Amie and Jean Levasseur, and each member of the Massachusetts Sub-  
28 Class. Because Defendants’ conduct was committed willfully and knowingly,

1 Plaintiffs Amie and Jean Levasseur, and members of the Massachusetts Sub-Class are  
2 entitled to recover, for Plaintiffs Amie and Jean Levasseur and each member of the  
3 Massachusetts Sub-Class, up to three times actual damages, but no less than two  
4 times actual damages.

5 **G. Michigan Counts**

6 **COUNT XXXIII**

7 **Breach of Implied Warranty**

8 **(On behalf of the Michigan Sub-Class against MNAO and MMC)**

9 635. Plaintiff Terry Sonneveldt incorporates and re-alleges each preceding  
10 paragraph as though fully set forth herein.

11 636. Plaintiff Sonneveldt brings this count on behalf of himself and the  
12 Michigan Sub-Class.

13 637. Plaintiff Sonneveldt and members of the Michigan Sub-Class purchased  
14 or leased the Class Vehicles, manufactured by MMC and/or MNAO, from MNAO by  
15 and through its authorized agents for retail sales, or were otherwise expected to be the  
16 eventual purchasers of the Class Vehicles when bought from a third party. At all  
17 relevant times, Defendants were the manufacturer, distributor, warrantor and/or seller  
18 of Class Vehicles. Defendants knew or had reason to know of the specific use for  
19 which the Class Vehicles were purchased or leased.

20 638. Defendants are and were at all relevant times a merchant and seller of  
21 motor vehicles (i.e., the Class Vehicles) within the meaning of the Uniform  
22 Commercial Code.

23 639. With respect to leases, Defendants are and were at all relevant times a  
24 lessor of motor vehicles (i.e., the Class Vehicles) within the meaning of the Uniform  
25 Commercial Code.

26 640. The Class Vehicles are and were at all relevant times goods within the  
27 meaning of the Uniform Commercial Code.

28 641. Defendants impliedly warranted that the Class Vehicles were in  
merchantable condition and fit for the ordinary purpose for which vehicles are used.



1           642. The Class Vehicles, when sold or leased and at all times thereafter, were  
2 not in merchantable condition and were and are not fit for the ordinary purpose of  
3 providing safe and reliable transportation. The Class Vehicles contain an inherent  
4 defect – the Water Pump Defect – (at the time of sale or lease and thereafter) and  
5 present an undisclosed safety risk to drivers and occupants. Thus, Defendants  
6 breached the implied warranty of merchantability.

7           643. Through its maintenance schedules, MNAO further represented that the  
8 water pump would not need repair or replacement and/or fraudulently concealed the  
9 need for repair or replacement of the water pump by omitting the water pump from  
10 the maintenance schedules. MNAO cannot disclaim its implied warranty as it  
11 knowingly sold or leased a defective product.

12           644. Defendants were provided notice of the Water Pump Defect by  
13 numerous consumer complaints made to MNAO's authorized dealers nationwide,  
14 complaints to NHTSA and through their own testing. Affording Defendants a  
15 reasonable opportunity to cure their breach of implied warranties would be  
16 unnecessary and futile here because Defendants have known of and concealed the  
17 Water Pump Defect and, on information and belief, have refused to repair or replace  
18 the Water Pump Defect free of charge within a reasonable time.

19           645. Defendants were further provided notice by Plaintiff Sonneveldt of its  
20 breach of implied warranties by letter dated May 13, 2019 directed to MNAO.  
21 Despite this notice, Defendants did not cure their breach of implied warranties and  
22 failed to provide a suitable repair or replacement of the Water Pump Defect free of  
23 charge within a reasonable time.

24           646. As a direct and proximate result of Defendants' breach of the implied  
25 warranty of merchantability, Plaintiff Sonneveldt and members of the Michigan Sub-  
26 Class have been damaged in an amount to be proven at trial.

27           647. Any attempt by MNAO to disclaim or limit the implied warranty of  
28 merchantability vis-à-vis consumers is unconscionable and unenforceable here.

1 Specifically, MNAO’s warranty limitation is unenforceable because it knowingly  
2 sold or leased a defective product without informing consumers about the defect.  
3 The time limits contained in MNAO’s warranty periods were also unconscionable  
4 and inadequate to protect Plaintiff Sonneveldt and members of the Michigan Sub-  
5 Class. Among other things, Plaintiff Sonneveldt and members of the Michigan Sub-  
6 Class did not determine these time limitations, the terms of which unreasonably  
7 favored MNAO. A gross disparity in bargaining power existed between MNAO and  
8 members of the Classes, and MNAO knew or should have known that the Class  
9 Vehicles were defective at the time of sale or lease and that the Water Pump Defect  
10 posed a safety risk.

11 648. Plaintiff Sonneveldt and members of the Michigan Sub-Class have been  
12 excused from performance of any warranty obligations as a result of Defendants’  
13 conduct described herein.

14 649. The applicable statute of limitations for the implied warranty claim has  
15 been tolled by the discovery rule and/or fraudulent concealment.

16 **COUNT XXXIV**  
17 **Violation of the Magnuson-Moss Warranty Act (“MMWA”),**  
18 **15 U.S.C. § 2301, et seq.**  
19 **(On behalf of the Nationwide Class and the Michigan Sub-Class against MNAO**  
20 **and MMC)**

21 650. Plaintiff Sonneveldt incorporates and re-alleges each preceding  
22 paragraph as though fully set forth herein.

23 651. Plaintiff Sonneveldt brings this count on behalf of himself and the  
24 members of the Nationwide Class or, alternatively, on behalf of the Michigan Sub-  
25 Class.

26 652. Plaintiff Sonneveldt satisfies the MMWA jurisdictional requirement  
27 because he alleges diversity jurisdiction under CAFA, 28 U.S.C. § 1332(d)(2).

28 653. Plaintiff Sonneveldt and members of the Classes are “consumers” within  
the meaning of the Magnuson-Moss Warranty Act, 15 U.S.C. § 2301(3).

1           654. Defendants are “suppliers” and “warrantors” within the meaning of the  
2 Magnuson-Moss Warranty Act, 15 U.S.C. § 2301(4)-(5).

3           655. The Class Vehicles are “consumer products” within the meaning of the  
4 Magnuson-Moss Warranty Act, 15 U.S.C. § 2301(1).

5           656. The MMWA provides a cause of action for any consumer who is  
6 damaged by the failure of a warrantor to comply with a written or implied warranty.  
7 *See* 15 U.S.C. § 2310(d)(1).

8           657. Defendant MNAO provided members of the Classes with one or more  
9 express warranties, which are covered under 15 U.S.C. § 2301(6). For illustrative  
10 purposes, MNAO currently offers New Vehicle Limited Warranty coverage for Class  
11 Vehicles sold under the Mazda brand for 3 years or 36,000 miles and extended  
12 warranty coverage for Powertrain components for 5 years or 60,000 miles.<sup>26</sup> Under  
13 warranties provided to members of the Classes, MNAO promised to repair or replace  
14 covered defective components arising out of defects in materials and/or  
15 workmanship, including the Water Pump Defect, at no cost to owners and lessees of  
16 the Class Vehicles. As alleged herein, MNAO breached these warranties.

17           658. Members of the Classes experienced the Water Pump Defect within the  
18 warranty periods but MNAO failed to inform Plaintiffs and members of the Classes  
19 of the existence of the Water Pump Defect and associated safety risk, and failed to  
20 provide a suitable remedy or repair of the Water Pump Defect free of charge within a  
21 reasonable time.

22           659. Defendants were provided notice by letter dated May 13, 2019 directed  
23 to MNAO that Plaintiffs would pursue a claim under the MMWA on behalf of a  
24 class.

25           660. Any attempt by MNAO to disclaim or limit its express or implied  
26 warranties is unconscionable and unenforceable here. Specifically, MNAO’s

27 \_\_\_\_\_  
28 <sup>26</sup> *See, e.g.,* Exhibit A (2012 Mazda CX-9 Warranty Booklet). *See also*  
<https://www.mazdausa.com/owners/warranty>.

1 warranty limitations are unenforceable because it knowingly sold or leased a  
2 defective product without informing consumers about the defect. The time limits  
3 contained in MNAO's warranty periods are also unconscionable and inadequate to  
4 protect members of the Classes. Among other things, members of the Classes did not  
5 determine these time limitations, the terms of which unreasonably favored MNAO.  
6 A gross disparity in bargaining power existed between MNAO and members of the  
7 Classes, and MNAO knew or should have known that the Class Vehicles were  
8 defective at the time of sale or lease and that they posed a safety risk.

9 661. The Class Vehicles' implied warranties are covered under 15 U.S.C. §  
10 2301(7).

11 662. Defendants breached these warranties by failing to disclose and  
12 fraudulently concealing information regarding the standard, quality or grade of the  
13 Class Vehicles and/or the presence of the Water Pump Defect and corresponding  
14 safety risk. Without limitation, the Class Vehicles share a common defect in design,  
15 material, manufacturing and/or workmanship that fails to operate as represented by  
16 Defendants and presents a safety risk.

17 663. Affording Defendants a reasonable opportunity to cure its breach of  
18 warranties would be unnecessary and futile. At the time of sale or lease of each Class  
19 Vehicle and all relevant times thereafter, Defendants knew, or were reckless in not  
20 knowing, of the material omissions concerning the standard, quality or grade of the  
21 Class Vehicles and the presence of the Water Pump Defect and corresponding safety  
22 risk, but failed to repair or replace the Water Pump Defect and/or disclose the defect.  
23 Under the circumstances, the remedies available under any informal settlement  
24 procedure would be inadequate and any requirement that Plaintiffs resort to an  
25 informal dispute resolution procedure and/or afford Defendants a reasonable  
26 opportunity to cure its breach of warranties is excused and thereby deemed satisfied.

27 664. Plaintiff Sonneveldt and members of the Classes would suffer economic  
28 hardship if they returned their Class Vehicles, but did not receive the return of all

1 payments made by them to Defendants. Thus, Plaintiff Sonneveldt and members of  
2 the Classes have not re-accepted their Class Vehicles by retaining them.

3 665. The amount in controversy of Plaintiff Sonneveldt individual claim  
4 meets or exceeds the sum of \$25. The amount in controversy of this action exceeds  
5 the sum of \$50,000, exclusive of interest and costs, computed on the basis of all  
6 claims to be determined in this lawsuit.

7 666. Plaintiff Sonneveldt, individually and on behalf of members of the  
8 Classes, seek all damages permitted by law, including diminution in the value of the  
9 Class Vehicles, in an amount to be proven at trial.

10 **COUNT XXXV**

11 **Fraud by Omission or Fraudulent Concealment**  
12 **(On behalf of the Michigan Sub-Class against MNAO and MMC)**

13 667. Plaintiff Sonneveldt incorporates and re-alleges each preceding  
14 paragraph as though fully set forth herein.

15 668. Plaintiff Sonneveldt brings this count on behalf of himself and the  
16 members of the Michigan Sub-Class.

17 669. Defendants intentionally and knowingly concealed, suppressed and/or  
18 omitted material facts including the standard, quality or grade of the Class Vehicles  
19 and the fact that the Class Vehicles contain a Water Pump Defect and corresponding  
20 safety risk, with the intent that Plaintiff Sonneveldt and members of the Michigan  
21 Sub-Class rely on Defendants' omissions. As a direct result of Defendants'  
22 fraudulent conduct, Plaintiff Sonneveldt and members of the Michigan Sub-Class  
23 have suffered actual damages.

24 670. Defendants knew (at the time of sale or lease and thereafter) that the  
25 Class Vehicles contained the Water Pump Defect, concealed the defect and never  
26 intended to repair or replace the Water Pump Defect during the warranty periods. To  
27 date, Defendants have not provided Plaintiff Sonneveldt and members of the  
28 Michigan Sub-Class with a repair or remedy for the Water Pump Defect.

1           671. Defendants owed a duty to disclose the Water Pump Defect and its  
2 corresponding safety risk to Plaintiff Sonneveldt and members of the Michigan Sub-  
3 Class because Defendants possessed superior and exclusive knowledge regarding the  
4 defect. Further, Defendants had a duty to disclose any information relating to the  
5 safety, quality, functionality and reliability of Class Vehicles because it consistently  
6 marketed the Class Vehicles as safe.

7           672. Once Defendants made representations to the public about safety,  
8 quality, functionality, and reliability, Defendants were under a duty to disclose these  
9 omitted facts, because where one does speak one must speak the whole truth and not  
10 conceal any facts which materially qualify those facts stated. One who volunteers  
11 information must be truthful, and the telling of a half-truth calculated to deceive is  
12 fraud. Rather than disclose the defect, Defendants intentionally and knowingly  
13 concealed, suppressed and/or omitted material facts including the standard, quality or  
14 grade of the Class Vehicles and the presence of the Water Pump Defect and  
15 corresponding safety risk, to sell additional Class Vehicles and avoid the cost of  
16 repair or replacement.

17           673. The Water Pump Defect is material to Plaintiff Sonneveldt and members  
18 of the Michigan Sub-Class because Plaintiff Sonneveldt and members of the  
19 Michigan Sub-Class had a reasonable expectation that the vehicles would not contain  
20 a defect, such as the Water Pump Defect, that leads to exorbitant repair costs and  
21 exposes them and other vehicle occupants to a safety risk. No reasonable consumer  
22 expects a vehicle to contain a concealed defect in design, manufacture, materials or  
23 workmanship, such as the Water Pump Defect, that can lead to thousands of dollars  
24 in repair or replacement costs, and can cause catastrophic engine failure with little to  
25 no warning or time to take preventative measures or safely remove the vehicle from  
26 the road.

27           674. Plaintiff Sonneveldt and members of the Michigan Sub-Class would not  
28 have purchased or leased the Class Vehicles but for Defendants' omissions and

1 concealment of material facts regarding the nature and quality of the Class Vehicles  
2 and existence of the Water Pump Defect and corresponding safety risk, or would  
3 have paid less for the Class Vehicles.

4 675. Defendants knew their concealment and suppression of material facts  
5 was false and misleading and knew the effect of concealing those material facts.  
6 Defendants knew their concealment and suppression of the Water Pump Defect  
7 would sell more Class Vehicles and would discourage Plaintiff Sonneveldt and  
8 members of the Michigan Sub-Class from seeking replacement or repair of the Water  
9 Pump Defect during the applicable warranty periods. Further, Defendants intended to  
10 induce Plaintiff Sonneveldt and members of the Michigan Sub-Class into purchasing  
11 or leasing the Class Vehicles and to discourage them from seeking replacement or  
12 repair of the Water Pump Defect in order to decrease costs and increase profits.

13 676. Defendants acted with malice, oppression and fraud.

14 677. Plaintiff Sonneveldt and members of the Michigan Sub-Class reasonably  
15 relied upon Defendants' knowing concealment and omissions. As a direct and  
16 proximate result of Defendants' omissions and active concealment of material facts  
17 regarding the Water Pump Defect and associated safety risk, Plaintiff Sonneveldt and  
18 members of the Michigan Sub-Class have suffered actual damages in an amount to be  
19 determined at trial.

20 **COUNT XXXVI**

21 **Violation of the Michigan Consumer Protection Act ("Michigan CPA"),**  
22 **Mich. Comp. Laws § 445.903, et seq.**  
23 **(On behalf of the Michigan Sub-Class against MNAO and MMC)**

24 678. Plaintiff Sonneveldt incorporates and re-alleges each preceding  
25 paragraph as though fully set forth herein.

26 679. Plaintiff Sonneveldt brings this count on behalf of himself and the  
27 members of the Michigan Sub-Class.

28 680. Plaintiffs Sonneveldt and the members of the Michigan Sub-Class are  
"persons" within the meaning of Mich. Comp. Laws § 445.902(1)(d).

1           681. Defendants engaged in the conduct of “trade or commerce” in Michigan  
2 within the meaning of Mich. Comp. Laws § 445.902(1)(g).

3           682. The Michigan CPA prohibits “[u]nfair, unconscionable, or deceptive  
4 methods, acts, or practices in the conduct of trade or commerce.” Mich. Comp.  
5 Laws. § 445.903(1). Prohibited acts include: “[r]epresenting that goods services have  
6 ... characteristics ... that they do not have;” “[r]epresenting that goods or services are  
7 of a particular standard ... if they are of another;” “[f]ailing to reveal a material fact,  
8 the omission of which tends to mislead or deceive the consumer, and which fact  
9 could not reasonably be known by the consumer;” “[m]aking a representation of fact  
10 or statement of fact material to the transaction such that a personal reasonably  
11 believes the represented or suggested state of affairs to be other than it actually is;”  
12 and “[f]ailing to reveal facts that are material to the transaction in light of  
13 representations of fact made in a positive manner.” Mich. Comp. Laws. §  
14 445.903(1)(c), (e), (s), (bb), and (cc).

15           683. In violation of the Michigan CPA, Defendants employed deceptive  
16 and/or unconscionable acts or practices, fraud, false pretense, misrepresentations, or  
17 concealment, suppression or omission of material fact with intent that others rely  
18 upon such concealment, suppression or omission, in connection with the sale and/or  
19 lease of Class Vehicles in Michigan. Defendants knowingly concealed, suppressed  
20 and/or omitted material facts regarding the Water Pump Defect and corresponding  
21 safety risk, and misrepresented the standard, quality or grade of the Class Vehicles,  
22 which directly caused harm to Plaintiff Sonneveldt and members of the Michigan  
23 Sub-Class.

24           684. Defendants intentionally and knowingly misrepresented and omitted  
25 facts regarding the Water Pump Defect with the intent to mislead Plaintiff Sonneveldt  
26 and members of the Michigan Sub-Class. Defendants knew, or should have known,  
27 that the Water Pump Defect was a latent defect and that the Water Pump Defect was  
28 likely to fail outside of the periods of the manufacturer’s warranties. Defendants also



1 knew, or should have known, that the Water Pump Defect in the Class Vehicles could  
2 cause catastrophic engine failure leading to a loss of engine power while the vehicle  
3 was operating. Further, Defendants knew, or should have known, that such loss of  
4 power could cause the Class Vehicles to become involved in rear-end collisions or  
5 other accidents, putting vehicle operators, passengers and other motorists at risk for  
6 injury.

7 685. Defendants owed a duty to disclose the Water Pump Defect and its  
8 corresponding safety risk to Plaintiff Sonneveldt and members of the Michigan Sub-  
9 Class because it possessed superior and exclusive knowledge regarding the defect and  
10 the risks associated with the Water Pump Defect's failure. Further, Defendants had a  
11 duty to disclose any information relating to the safety, quality, functionality and  
12 reliability of Class Vehicles because it consistently marketed the Class Vehicles as  
13 safe.

14 686. Once Defendants made representations to the public about safety,  
15 quality, functionality, and reliability, Defendants was under a duty to disclose these  
16 omitted facts, because where one does speak one must speak the whole truth and not  
17 conceal any facts which materially qualify those facts stated. One who volunteers  
18 information must be truthful, and the telling of a half-truth calculated to deceive is  
19 fraud. Rather than disclose the defect, Defendants intentionally and knowingly  
20 concealed, suppressed and/or omitted material facts including the standard, quality or  
21 grade of the Class Vehicles and the presence of the Water Pump Defect and  
22 corresponding safety risk, to sell additional Class Vehicles and avoid the cost of  
23 repair or replacement.

24 687. The Water Pump Defect is material to Plaintiff Sonneveldt and members  
25 of the Michigan Sub-Class because Plaintiff Sonneveldt and members of the  
26 Michigan Sub-Class had a reasonable expectation that the vehicles would not contain  
27 a defect, such as the Water Pump Defect, that leads to exorbitant repair costs and  
28 exposes them and other vehicle occupants to a safety risk. No reasonable consumer

1 expects a vehicle to contain a concealed defect in design, manufacture, materials or  
2 workmanship, such as the Water Pump Defect, that can lead to thousands of dollars  
3 in repair or replacement costs, and can cause catastrophic engine failure with little to  
4 no warning or time to take preventative measures or safely remove the vehicle from  
5 the road.

6 688. Rather than disclose the defect, Defendants engaged in deceptive trade  
7 practices in order to sell additional Class Vehicles and wrongfully transfer the cost of  
8 repair or replacement of the Water Pump Defect, damaged engine parts and/or the  
9 entire engine to Plaintiff Sonneveldt and members of the Michigan Sub-Class.

10 689. Defendants' unconscionable or deceptive acts or practices, affirmative  
11 misrepresentations and/or material omissions regarding the Water Pump Defect were  
12 intended to mislead consumers and misled Plaintiff Sonneveldt and members of the  
13 Michigan Sub-Class.

14 690. At all relevant times, Defendants' unconscionable or deceptive acts or  
15 practices, affirmative misrepresentations and/or omissions regarding the Water Pump  
16 Defect and its corresponding safety risk were material to Plaintiff Sonneveldt and  
17 members of the Michigan Sub-Class. When Plaintiff Sonneveldt and members of the  
18 Michigan Sub-Class purchased or leased their Class Vehicles, they reasonably relied  
19 on the reasonable expectation that the Class Vehicles would not contain the Water  
20 Pump Defect and would not pose an unavoidable safety risk. Had Defendants  
21 disclosed that the Water Pump Defect existed in the Class Vehicle and/or presented  
22 an unavoidable safety risk, Plaintiff Sonneveldt and members of the Michigan Sub-  
23 Class would not have purchased or leased the Class Vehicles or would have paid less  
24 for their vehicles. Further, had Defendants disclosed that the Water Pump Defect  
25 existed in the Class Vehicles and/or presented an unavoidable safety risk, Plaintiff  
26 Sonneveldt and members of the Michigan Sub-Class would have demanded repair or  
27 replacement during the warranty periods at no cost—as provided for in Defendant  
28 MNAO's warranties.

1           691. Defendants had a continuous duty to Plaintiff Sonneveldt and members  
2 of the Michigan Sub-Class to refrain from unfair and deceptive practices under the  
3 MCPA and to disclose the Water Pump Defect. Defendants' unconscionable or  
4 deceptive acts or practices, affirmative misrepresentations and/or material omissions  
5 regarding the Water Pump Defect and its corresponding safety risk are substantially  
6 injurious to consumers. As a result of Defendants' knowing, intentional concealment  
7 and/or omission of the Water Pump Defect and corresponding safety risk in violation  
8 of the MCPA, Plaintiff Sonneveldt and members of the Michigan Sub-Class have  
9 suffered harm and/or continue to suffer harm by the threat of sudden and unexpected  
10 failure of the water pump and/or actual damages in the amount of the cost to replace  
11 the Water Pump Defect, essential engine parts or the entire engine, and damages to be  
12 determined at trial. Owners and lessees of Class Vehicles also suffered an  
13 ascertainable loss in the form of the diminished value of their vehicles as a result of  
14 Defendants' deceptive and unfair acts and practices in the course of their business.

15           692. Defendants' unlawful acts and practices occurred in the conduct of  
16 business activities and commerce.

17           693. Defendants has knowingly and willfully engaged in the unfair and  
18 deceptive trade practices alleged herein. Further, Defendants unconscionably  
19 marketed the Class Vehicles to uninformed consumers in order to maximize profits  
20 by selling additional Class Vehicles containing the undisclosed latent defect and  
21 corresponding safety risk.

22           694. Defendants' unlawful acts and practices affect the public interest and  
23 present a continuing safety risk to Plaintiff Sonneveldt and members of the Michigan  
24 Sub-Class, as well as the public.

25           695. As a direct and proximate result of Defendants' violations of the  
26 Michigan CPA, Plaintiff Sonneveldt and members of the Michigan Sub-Class have  
27 suffered actual financial loss, actual damages and/or injury-in-fact.

28



1           702. Defendant MNAO is and was at all relevant times a merchant and seller  
2 of motor vehicles (i.e., the Class Vehicles) within the meaning of the Uniform  
3 Commercial Code.

4           703. With respect to leases, Defendant MNAO is and was at all relevant times  
5 a lessor of motor vehicles (i.e., the Class Vehicles) within the meaning of the  
6 Uniform Commercial Code.

7           704. The Class Vehicles are and were at all relevant times goods within the  
8 meaning of the Uniform Commercial Code.

9           705. In connection with the purchase or lease of each of the Class Vehicles,  
10 Defendant MNAO provides maintenance schedules and warranty guides which omit  
11 any mention of the water pumps as a component requiring routine inspection, service,  
12 or replacement.

13           706. In connection with the purchase or lease of each of the Class Vehicles,  
14 Defendant MNAO also provides warranty coverage for the Class Vehicles under one  
15 or more manufacturer's warranties. For illustrative purposes, Defendant MNAO  
16 currently offers New Vehicle Limited Warranty coverage for Class Vehicles sold  
17 under the Mazda brand for 3 years or 36,000 miles and extended warranty coverage  
18 for Powertrain components for 5 years or 60,000 miles.<sup>27</sup> Under the warranties  
19 provided to Plaintiff Lacasse and members of the North Carolina Sub-Class,  
20 Defendant MNAO promised to repair or replace covered components arising out of  
21 defects in materials and/or workmanship, including the Water Pump Defect, at no  
22 cost to owners and lessees of the Class Vehicles and within a reasonable time. As  
23 alleged herein, Defendant MNAO breached these warranties.

24           707. Defendant MNAO's warranties formed a basis of the bargain that was  
25 reached when Plaintiff Lacasse and members of the North Carolina Sub-Class  
26 purchased or leased their Class Vehicles. Given the latent nature of the Water Pump

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27 <sup>27</sup> See, e.g., Exhibit A (2012 Mazda CX-9 Warranty Booklet). See also  
28 <https://www.mazdausa.com/owners/warranty>.

1 Defect, Defendant MNAO knew or should have known that the majority of the water  
2 pump failures (and corresponding engine damage) occur outside of the warranty  
3 periods.

4 708. Plaintiff Lacasse and members of the North Carolina Sub-Class  
5 experienced the existence of the Water Pump Defect within the warranty periods but  
6 had no knowledge of the existence of the defect and associated safety risk, which  
7 were known and concealed by Defendant MNAO. Despite the existence of the  
8 warranties, Defendant MNAO failed to adequately inform Plaintiff Lacasse and  
9 members of the North Carolina Sub-Class that the Class Vehicles contained the  
10 Water Pump Defect and failed to provide a suitable repair or replacement of the  
11 Water Pump Defect free of charge within a reasonable time.

12 709. Defendant MNAO breached the express warranty promising to repair  
13 and correct a manufacturing defect or defect in materials or workmanship of any parts  
14 it supplied.

15 710. On information and belief, Defendant MNAO has not suitably repaired  
16 or replaced the Water Pump Defect free of charge for Plaintiff Lacasse and members  
17 of the North Carolina Sub-Class Class despite the existence of the defect in the Class  
18 Vehicles at the time of sale or lease.

19 711. Defendant MNAO further breached its express warranties by selling  
20 Class Vehicles that were defective with respect to engine materials, workmanship,  
21 design and manufacture, and were accompanied by an owner's manual and/or  
22 maintenance schedule that incorporated no inspection and service intervals for the  
23 water pump although Defendant MNAO knew of the Water Pump Defect and that the  
24 water pump required periodic inspection and service.

25 712. Class Vehicles were not of merchantable quality and were unfit for the  
26 ordinary purposes for which passenger vehicles are used because of engine materials,  
27 workmanship, design and/or manufacturing defects which cause engine failure and/or  
28 failure to perform as warranted.

1           713. Defendant MNAO was provided notice of the Water Pump Defect by  
2 numerous consumer complaints made to its authorized dealers nationwide,  
3 complaints to NHTSA and through its own testing. Affording Defendant MNAO a  
4 reasonable opportunity to cure its breach of written warranties would be unnecessary  
5 and futile here because Defendant MNAO has known of and concealed the Water  
6 Pump Defect and has failed to provide a suitable repair or replacement of the Water  
7 Pump Defect free of charge within a reasonable time.

8           714. Defendant MNAO was further provided notice by Plaintiff Lacasse of its  
9 breach of express warranties by letter dated February 4, 2019. Despite this notice,  
10 Defendant MNAO did not cure its breach of written warranties and failed to provide  
11 a suitable repair or replacement of the Water Pump Defect free of charge within a  
12 reasonable time.

13           715. Any attempt by Defendants to disclaim or limit recovery to the terms of  
14 the express warranties is unconscionable and unenforceable here. Specifically,  
15 Defendant MNAO's warranty limitation is unenforceable because it knowingly sold  
16 or leased a defective product without informing consumers about the defect. The  
17 time limits contained in Defendant MNAO's warranty periods were also  
18 unconscionable and inadequate to protect Plaintiff Lacasse and members of the North  
19 Carolina Sub-Class. Among other things, Plaintiff Lacasse and the members of the  
20 North Carolina Sub-Class did not determine these time limitations, the terms of  
21 which unreasonably favored Defendant MNAO. A gross disparity in bargaining  
22 power existed between Defendant MNAO and members of the North Carolina Sub-  
23 Class, and Defendants knew or should have known that the Class Vehicles were  
24 defective at the time of sale or lease and that the Water Pump Defect posed a safety  
25 risk.

26           716. Further, the limited warranty promising to repair and/or correct a  
27 manufacturing defect fails in its essential purpose because the contractual remedy is  
28 insufficient to make Plaintiff Lacasse and members of the North Carolina Sub-Class

1 whole because, on information and belief, Defendant MNAO has failed and/or has  
2 refused to adequately provide the promised remedies within a reasonable time.

3 717. Defendant MNAO knew that the Class Vehicles were inherently  
4 defective and did not conform to their warranties, and Plaintiff Lacasse and members  
5 of the North Carolina Sub-Class were induced to purchase or lease the Class Vehicles  
6 under false and/or fraudulent pretenses.

7 718. Plaintiff Lacasse and the members of the North Carolina Sub-Class  
8 experienced the existence of the Water Pump Defect within the warranty periods but  
9 had no knowledge of the existence of the defect, which was known and concealed by  
10 Defendant MNAO. Despite the existence of the warranties, Defendant MNAO failed  
11 to inform Plaintiff Lacasse and members of the North Carolina Sub-Class that the  
12 Class Vehicles contained the Water Pump Defect during the warranty periods, and,  
13 thus, wrongfully transferred the costs of repair or replacement of the water pump and  
14 damaged engine parts to Plaintiff Lacasse and members of the North Carolina Sub-  
15 Class.

16 719. Because of the Water Pump Defect, the Class Vehicles are not reliable  
17 and owners of these vehicles have lost confidence in the ability of Class Vehicles to  
18 perform the function of safe reliable transportation.

19 720. As a direct and proximate result of Defendant MNAO's breach of  
20 express warranties, Plaintiff Lacasse and members of the North Carolina Sub-Class  
21 have been damaged in an amount to be determined at trial.

22 721. Finally, because of Defendant MNAO's breach of express warranty as  
23 set forth herein, Plaintiff Lacasse and members of the North Carolina Sub-Class  
24 assert, as additional and/or alternative remedies, the revocation of acceptance of the  
25 goods and the return to Plaintiff Lacasse and members of the North Carolina Sub-  
26 Class of the purchase or lease price of all Class Vehicles currently owned or leased,  
27 and for such other incidental and consequential damages as allowed.

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**COUNT XXXVIII**  
**Breach of Implied Warranty of Merchantability**  
**(On behalf of the North Carolina Sub-Class against MNAO and MMC)**

722. Plaintiff Lacasse incorporates and re-alleges each preceding paragraph as though fully set forth herein.

723. Plaintiff Lacasse brings this count on behalf of himself and the members of the North Carolina Sub-Class.

724. Plaintiff Lacasse and members of the North Carolina Sub-Class purchased or leased the Class Vehicles, manufactured by MMC and/or MNAO, from MNAO by and through its authorized agents for retail sales, or were otherwise expected to be the eventual purchasers of the Class Vehicles when bought from a third party. At all relevant times, Defendants were the manufacturer, distributor, warrantor and/or seller of Class Vehicles. Defendants knew or had reason to know of the specific use for which the Class Vehicles were purchased or leased.

725. Defendants are and were at all relevant times a merchant and seller of motor vehicles (i.e., the Class Vehicles) within the meaning of the Uniform Commercial Code.

726. With respect to leases, Defendants are and were at all relevant times a lessor of motor vehicles (i.e., the Class Vehicles) within the meaning of the Uniform Commercial Code.

727. The Class Vehicles are and were at all relevant times goods within the meaning of the Uniform Commercial Code.

728. Defendants impliedly warranted that the Class Vehicles were in merchantable condition and fit for the ordinary purpose for which vehicles are used.

729. The Class Vehicles, when sold or leased and at all times thereafter, were not in merchantable condition and were and are not fit for the ordinary purpose of providing safe and reliable transportation. The Class Vehicles contain an inherent defect – the Water Pump Defect – (at the time of sale or lease and thereafter) and

1 present an undisclosed safety risk to drivers and occupants. Thus, Defendants  
2 breached the implied warranty of merchantability.

3 730. Through its maintenance schedules, MNAO further represented that the  
4 water pump would not need service, inspection, or repair and/or fraudulently  
5 concealed the need for repair or replacement of the water pump by omitting the water  
6 pump from the maintenance schedules. MNAO cannot disclaim its implied warranty  
7 as it knowingly sold or leased a defective product.

8 731. Defendants were provided notice of the Water Pump Defect by  
9 numerous consumer complaints made to MNAO's authorized dealers nationwide,  
10 complaints to NHTSA and through their own testing. Affording Defendants a  
11 reasonable opportunity to cure their breach of implied warranties would be  
12 unnecessary and futile here because Defendants have known of and concealed the  
13 Water Pump Defect and, on information and belief, have refused to repair or replace  
14 the Water Pump Defect free of charge within a reasonable time.

15 732. Defendants were further provided notice by Plaintiff Lacasse of its  
16 breach of implied warranties by letter dated February 4, 2019 directed to MNAO.  
17 Despite this notice, Defendants did not cure their breach of implied warranties and  
18 failed to provide a suitable repair or replacement of the Water Pump Defect free of  
19 charge within a reasonable time.

20 733. As a direct and proximate result of Defendants' breach of the implied  
21 warranty of merchantability, Plaintiff Lacasse and members of the North Carolina  
22 Class have been damaged in an amount to be proven at trial.

23 734. Any attempt by MNAO to disclaim or limit the implied warranty of  
24 merchantability vis-à-vis consumers is unconscionable and unenforceable here.  
25 Specifically, MNAO's warranty limitation is unenforceable because it knowingly  
26 sold or leased a defective product without informing consumers about the defect.  
27 The time limits contained in MNAO's warranty periods were also unconscionable  
28 and inadequate to protect Plaintiff Lacasse and members of the North Carolina Sub-

1 Class. Among other things, Plaintiff Lacasse and members of the North Carolina  
2 Sub-Class did not determine these time limitations, the terms of which unreasonably  
3 favored MNAO. A gross disparity in bargaining power existed between MNAO and  
4 members of the North Carolina Sub-Class, and MNAO knew or should have known  
5 that the Class Vehicles were defective at the time of sale or lease and that the Water  
6 Pump Defect posed a safety risk.

7 735. Plaintiff Lacasse and members of the North Carolina Sub-Class have  
8 been excused from performance of any warranty obligations as a result of  
9 Defendants' conduct described herein.

10 736. The applicable statute of limitations for the implied warranty claim has  
11 been tolled by the discovery rule and/or fraudulent concealment.

12 **COUNT XXXIX**  
13 **Violation of the Magnuson-Moss Warranty Act ("MMWA"),**  
14 **15 U.S.C. § 2301, et seq.**  
15 **(On behalf of the Nationwide Class and the North Carolina Sub-Class against**  
16 **MNAO and MMC)**

17 737. Plaintiff Lacasse incorporates and re-alleges each preceding paragraph  
18 as though fully set forth herein.

19 738. Plaintiff Lacasse brings this count on behalf of himself and the members  
20 of the Nationwide Class or, alternatively, on behalf of the North Carolina Sub-Class.

21 739. Plaintiff Lacasse satisfies the MMWA jurisdictional requirement  
22 because he alleges diversity jurisdiction under CAFA, 28 U.S.C. § 1332(d)(2).

23 740. Plaintiff Lacasse and members of the Classes are "consumers" within  
24 the meaning of the Magnuson-Moss Warranty Act, 15 U.S.C. § 2301(3).

25 741. Defendants are "suppliers" and "warrantors" within the meaning of the  
26 Magnuson-Moss Warranty Act, 15 U.S.C. § 2301(4)-(5).

27 742. The Class Vehicles are "consumer products" within the meaning of the  
28 Magnuson-Moss Warranty Act, 15 U.S.C. § 2301(1).

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1           743. The MMWA provides a cause of action for any consumer who is  
2 damaged by the failure of a warrantor to comply with a written or implied warranty.  
3 *See* 15 U.S.C. § 2310(d)(1).

4           744. Defendant MNAO provided Plaintiff Lacasse and members of the  
5 Classes with one or more express warranties, which are covered under 15 U.S.C. §  
6 2301(6). For illustrative purposes, MNAO currently offers New Vehicle Limited  
7 Warranty coverage for Class Vehicles sold under the Mazda brand for 3 years or  
8 36,000 miles and extended warranty coverage for Powertrain components for 5 years  
9 or 60,000 miles.<sup>28</sup> Under warranties provided to members of the Classes, MNAO  
10 promised to repair or replace covered defective components arising out of defects in  
11 materials and/or workmanship, including the Water Pump Defect, at no cost to  
12 owners and lessees of the Class Vehicles. As alleged herein, MNAO breached these  
13 warranties.

14           745. Plaintiff Lacasse and members of the Classes experienced the Water  
15 Pump Defect within the warranty periods but MNAO failed to inform Plaintiffs and  
16 members of the Classes of the existence of the Water Pump Defect and associated  
17 safety risk, and failed to provide a suitable remedy or repair of the Water Pump  
18 Defect free of charge within a reasonable time.

19           746. Defendants were provided notice by letter dated May 13, 2019 directed  
20 to MNAO that Plaintiffs would pursue a claim under the MMWA on behalf of a  
21 class.

22           747. Any attempt by MNAO to disclaim or limit its express or implied  
23 warranties is unconscionable and unenforceable here. Specifically, MNAO's  
24 warranty limitations are unenforceable because it knowingly sold or leased a  
25 defective product without informing consumers about the defect. The time limits  
26 contained in MNAO's warranty periods are also unconscionable and inadequate to

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27 <sup>28</sup> *See, e.g.*, Exhibit A (2012 Mazda CX-9 Warranty Booklet). *See also*  
28 <https://www.mazdausa.com/owners/warranty>.

1 protect Plaintiff Lacasse and members of the Classes. Among other things, Plaintiff  
2 Lacasse and members of the Classes did not determine these time limitations, the  
3 terms of which unreasonably favored MNAO. A gross disparity in bargaining power  
4 existed between MNAO and members of the Classes, and MNAO knew or should  
5 have known that the Class Vehicles were defective at the time of sale or lease and  
6 that they posed a safety risk.

7 748. The Class Vehicles' implied warranties are covered under 15 U.S.C. §  
8 2301(7).

9 749. Defendants breached these warranties by failing to disclose and  
10 fraudulently concealing information regarding the standard, quality, or grade of the  
11 Class Vehicles, and/or the presence of the Water Pump Defect and corresponding  
12 safety risk. Without limitation, the Class Vehicles share a common defect in design,  
13 material, manufacturing and/or workmanship that fails to operate as represented by  
14 Defendants and presents a safety risk.

15 750. Affording Defendants a reasonable opportunity to cure its breach of  
16 warranties would be unnecessary and futile. At the time of sale or lease of each Class  
17 Vehicle and all relevant times thereafter, Defendants knew, or were reckless in not  
18 knowing, of the material omissions concerning the standard, quality or grade of the  
19 Class Vehicles and the presence of the Water Pump Defect and corresponding safety  
20 risk, but failed to repair or replace the Water Pump Defect and/or disclose the defect.  
21 Under the circumstances, the remedies available under any informal settlement  
22 procedure would be inadequate and any requirement that Plaintiffs resort to an  
23 informal dispute resolution procedure and/or afford Defendants a reasonable  
24 opportunity to cure its breach of warranties is excused and thereby deemed satisfied.

25 751. Plaintiff Lacasse and members of the Classes would suffer economic  
26 hardship if they returned their Class Vehicles, but did not receive the return of all  
27 payments made by them to Defendants. Thus, Plaintiff Lacasse and members of the  
28 Classes have not re-accepted their Class Vehicles by retaining them.



1           759. Defendants intentionally and knowingly misrepresented and omitted  
2 facts regarding the Water Pump Defect with the intent to mislead Plaintiff Lacasse  
3 and members of the North Carolina Sub-Class. Defendants knew, or should have  
4 known, that the Water Pump Defect was a latent defect and that the Water Pump  
5 Defect was likely to fail outside of the periods of the manufacturer's warranties.  
6 Defendants also knew, or should have known, that the Water Pump Defect in the  
7 Class Vehicles could cause catastrophic engine failure leading to a loss of engine  
8 power while the vehicle was operating. Further, Defendants knew, or should have  
9 known, that such loss of power could cause the Class Vehicles to become involved in  
10 rear-end collisions or other accidents, putting vehicle operators, passengers and other  
11 motorists at risk for injury.

12           760. Defendants owed a duty to disclose the Water Pump Defect and its  
13 corresponding safety risk to Plaintiff Lacasse and members of the North Carolina  
14 Sub-Class because it possessed superior and exclusive knowledge regarding the  
15 defect and the risks associated with the Water Pump Defect's failure. Rather than  
16 disclose the defect, Defendants engaged in deceptive trade practices in order to sell  
17 additional Class Vehicles and wrongfully transfer the cost of repair or replacement of  
18 the Water Pump Defect, damaged engine parts and/or the entire engine to Plaintiff  
19 Lacasse and members of the North Carolina Sub-Class.

20           761. Defendants' unconscionable or deceptive acts or practices, affirmative  
21 misrepresentations and/or material omissions regarding the Water Pump Defect were  
22 intended to mislead consumers and misled Plaintiff Lacasse and members of the  
23 North Carolina Sub-Class.

24           762. At all relevant times, Defendants' unconscionable or deceptive acts or  
25 practices, affirmative misrepresentations and/or omissions regarding the Water Pump  
26 Defect and its corresponding safety risk were material to Plaintiff Lacasse and  
27 members of the North Carolina Sub-Class. When Plaintiff Lacasse and members of  
28 the North Carolina Sub-Class purchased or leased their Class Vehicles, they

1 reasonably relied on the reasonable expectation that the Class Vehicles would not  
2 contain the Water Pump Defect and would not pose an unavoidable safety risk. Had  
3 Defendants disclosed that the Water Pump Defect existed in the Class Vehicle and/or  
4 presented an unavoidable safety risk, Plaintiff Lacasse and members of the North  
5 Carolina Sub-Class would not have purchased or leased the Class Vehicles or would  
6 have paid less for their vehicles. Further had Defendants disclosed that the Water  
7 Pump Defect existed in the Class Vehicles and/or presented an unavoidable safety  
8 risk, Plaintiff Lacasse and members of the North Carolina Sub-Class would have  
9 demanded repair or replacement during the warranty periods at no cost—as provided  
10 for in Defendant MNAO’s warranties.

11         763. Defendants had a continuous duty to Plaintiff Lacasse and members of  
12 the North Carolina Sub-Class to refrain from unfair and deceptive practices under the  
13 NCDTPA and to disclose the Water Pump Defect. Defendants’ unconscionable or  
14 deceptive acts or practices, affirmative misrepresentations and/or material omissions  
15 regarding the Water Pump Defect and its corresponding safety risk are substantially  
16 injurious to consumers. As a result of Defendants’ knowing, intentional concealment  
17 and/or omission of the Water Pump Defect and corresponding safety risk in violation  
18 of the NCDTPA, Plaintiff Lacasse and members of the North Carolina Sub-Class  
19 have suffered harm and/or continue to suffer harm by the threat of sudden and  
20 unexpected failure of the water pump and/or actual damages in the amount of the cost  
21 to replace the Water Pump Defect, essential engine parts or the entire engine, and  
22 damages to be determined at trial. Owners and lessees of Class Vehicles also  
23 suffered an ascertainable loss in the form of the diminished value of their vehicles as  
24 a result of Defendants’ deceptive and unfair acts and practices in the course of their  
25 business.

26         764. Defendants’ unlawful acts and practices occurred in the conduct of  
27 business activities and commerce.

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1 765. Defendants has knowingly and willfully engaged in the unfair and  
2 deceptive trade practices alleged herein. Further, Defendants unconscionably  
3 marketed the Class Vehicles to uninformed consumers in order to maximize profits  
4 by selling additional Class Vehicles containing the undisclosed latent defect and  
5 corresponding safety risk.

6 766. Defendants' unlawful acts and practices affect the public interest and  
7 present a continuing safety risk to Plaintiff Lacasse and members of the North  
8 Carolina Sub-Class, as well as the public.

9 767. As a direct and proximate result of Defendants' violations of the  
10 NCDTPA, Plaintiff Lacasse and members of the North Carolina Sub-Class have  
11 suffered actual financial loss, actual damages and/or injury-in-fact.

12 768. Plaintiff Lacasse and members of the North Carolina Sub-Class seek  
13 actual damages and treble damages against Defendants in an amount to be  
14 determined at trial because Defendants acted wantonly or with such conscious  
15 indifference to the consequences that malice may be inferred.

16 769. Plaintiff Lacasse and members of the North Carolina Sub-Class also  
17 seek an order enjoining Defendants' unfair, unlawful and/or deceptive practices,  
18 awarding costs and attorneys' fees and any other just and proper relief available  
19 under the NCDTPA.

20 **I. Pennsylvania Counts**

21 **COUNT XLI**

22 **Breach of Express Warranty**

23 **(On behalf of the Pennsylvania Sub-Class against MNAO)**

24 770. Plaintiffs Beth and Dan Pickerd incorporate and re-allege each preceding  
25 paragraph as though fully set forth herein.

26 771. Plaintiffs Beth and Dan Pickerd bring this count on behalf of themselves  
27 and the members of the Pennsylvania Sub-Class.

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1           772. Defendant MNAO represented in the maintenance schedules and  
2 warranty guides for the Class Vehicles that there would be no need to provide  
3 maintenance, service, inspection, or repair for the water pumps during the useful life  
4 of the engine. Such representations formed the basis of the bargain in Plaintiffs Beth  
5 and Dan Pickerd's and members of the Pennsylvania Sub-Class's decisions to  
6 purchase or lease the Class Vehicles.

7           773. Defendant MNAO also marketed the Class Vehicles as safe, built to last  
8 and reliable vehicles. These statements helped conceal the existence of the Water  
9 Pump Defect and its corresponding safety risk from Plaintiffs Beth and Dan Pickerd,  
10 and members of the Pennsylvania Sub-Class.

11           774. Defendant MNAO is and was at all relevant times a merchant and seller  
12 of motor vehicles (i.e., the Class Vehicles) within the meaning of the Uniform  
13 Commercial Code.

14           775. With respect to leases, Defendant MNAO is and was at all relevant times  
15 a lessor of motor vehicles (i.e., the Class Vehicles) within the meaning of the  
16 Uniform Commercial Code.

17           776. The Class Vehicles are and were at all relevant times goods within the  
18 meaning of the Uniform Commercial Code.

19           777. In connection with the purchase or lease of each of the Class Vehicles,  
20 Defendant MNAO provides maintenance schedules and warranty guides which omit  
21 any mention of the water pumps as a component requiring routine inspection, service,  
22 or replacement.

23           778. In connection with the purchase or lease of each of the Class Vehicles,  
24 Defendant MNAO also provides warranty coverage for the Class Vehicles under one  
25 or more manufacturer's warranties. For illustrative purposes, Defendant MNAO  
26 currently offers New Vehicle Limited Warranty coverage for Class Vehicles sold  
27 under the Mazda brand for 3 years or 36,000 miles and extended warranty coverage  
28

1 for Powertrain components for 5 years or 60,000 miles.<sup>29</sup> Under the warranties  
2 provided to Plaintiffs Beth and Dan Pickerd, and members of the Pennsylvania Sub-  
3 Class, Defendant MNAO promised to repair or replace covered components arising  
4 out of defects in materials and/or workmanship, including the Water Pump Defect, at  
5 no cost to owners and lessees of the Class Vehicles and within a reasonable time. As  
6 alleged herein, Defendant MNAO breached these warranties.

7 779. Defendant MNAO's warranties formed a basis of the bargain that was  
8 reached when Plaintiffs Beth and Dan Pickerd, and members of the Pennsylvania  
9 Sub-Class purchased or leased their Class Vehicles. Given the latent nature of the  
10 Water Pump Defect, Defendant MNAO knew or should have known that the majority  
11 of the water pump failures (and corresponding engine damage) occur outside of the  
12 warranty periods.

13 780. Plaintiffs Beth and Dan Pickerd, and members of the Pennsylvania Sub-  
14 Class experienced the existence of the Water Pump Defect within the warranty  
15 periods but had no knowledge of the existence of the defect and associated safety  
16 risk, which were known and concealed by Defendant MNAO. Despite the existence  
17 of the warranties, Defendant MNAO failed to adequately inform Plaintiffs Beth and  
18 Dan Pickerd, and members of the Pennsylvania Sub-Class that the Class Vehicles  
19 contained the Water Pump Defect and failed to provide a suitable repair or  
20 replacement of the Water Pump Defect free of charge within a reasonable time.

21 781. Defendant MNAO breached the express warranty promising to repair  
22 and correct a manufacturing defect or defect in materials or workmanship of any parts  
23 it supplied.

24 782. On information and belief, Defendant MNAO has not suitably repaired  
25 or replaced the Water Pump Defect free of charge for Plaintiffs Beth and Dan  
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27 <sup>29</sup> See, e.g., Exhibit A (2012 Mazda CX-9 Warranty Booklet). See also  
28 <https://www.mazdausa.com/owners/warranty>.

1 Pickerd, and members of the Pennsylvania Sub-Class Class despite the existence of  
2 the defect in the Class Vehicles at the time of sale or lease.

3 783. Defendant MNAO further breached its express warranties by selling  
4 Class Vehicles that were defective with respect to engine materials, workmanship,  
5 design and manufacture, and were accompanied by an owner's manual and/or  
6 maintenance schedule that incorporated no inspection and service intervals for the  
7 water pump although Defendant MNAO knew of the Water Pump Defect and that the  
8 water pump required periodic inspection and service.

9 784. Class Vehicles were not of merchantable quality and were unfit for the  
10 ordinary purposes for which passenger vehicles are used because of engine materials,  
11 workmanship, design and/or manufacturing defects which cause engine failure and/or  
12 failure to perform as warranted.

13 785. Defendant MNAO was provided notice of the Water Pump Defect by  
14 numerous consumer complaints made to its authorized dealers nationwide,  
15 complaints to NHTSA and through its own testing. Affording Defendant MNAO a  
16 reasonable opportunity to cure its breach of written warranties would be unnecessary  
17 and futile here because Defendant MNAO has known of and concealed the Water  
18 Pump Defect and has failed to provide a suitable repair or replacement of the Water  
19 Pump Defect free of charge within a reasonable time.

20 786. Defendant MNAO was further provided notice by Plaintiffs Beth and  
21 Dan Pickerd of its breach of express warranties they took their vehicle in for repair to  
22 Piazza Mazda in West Chester, Pennsylvania on or around January 24, 2019. Upon  
23 information and belief, Piazza Mazda is an authorized dealer of Defendant MNAO  
24 and its duly authorized agent to perform warranty repairs. Despite this notice,  
25 Defendant MNAO did not fully cure its breach of written warranties and failed to  
26 provide a suitable repair or replacement of the defective water pump free of charge  
27 within a reasonable time.

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1           787. Any attempt by Defendant MNAO to disclaim or limit recovery to the  
2 terms of the express warranties is unconscionable and unenforceable here.  
3 Specifically, Defendant MNAO's warranty limitation is unenforceable because it  
4 knowingly sold or leased a defective product without informing consumers about the  
5 defect. The time limits contained in Defendant MNAO's warranty periods were also  
6 unconscionable and inadequate to protect Plaintiffs Beth and Dan Pickerd, and  
7 members of the Pennsylvania Sub-Class. Among other things, Plaintiffs Beth and  
8 Dan Pickerd, and the members of the Pennsylvania Sub-Class did not determine these  
9 time limitations, the terms of which unreasonably favored Defendants. A gross  
10 disparity in bargaining power existed between Defendant MNAO and members of the  
11 Pennsylvania Sub-Class, and Defendant MNAO knew or should have known that the  
12 Class Vehicles were defective at the time of sale or lease and that the Water Pump  
13 Defect posed a safety risk.

14           788. Further, the limited warranty promising to repair and/or correct a  
15 manufacturing defect fails in its essential purpose because the contractual remedy is  
16 insufficient to make Plaintiffs Beth and Dan Pickerd, and members of the  
17 Pennsylvania Sub-Class whole because, on information and belief, Defendant  
18 MNAO has failed and/or has refused to adequately provide the promised remedies  
19 within a reasonable time.

20           789. Defendant MNAO knew that the Class Vehicles were inherently  
21 defective and did not conform to their warranties, and Plaintiffs Beth and Dan  
22 Pickerd, and members of the Pennsylvania Sub-Class were induced to purchase or  
23 lease the Class Vehicles under false and/or fraudulent pretenses.

24           790. Plaintiffs Beth and Dan Pickard, and the members of the Pennsylvania  
25 Sub-Class experienced the existence of the Water Pump Defect within the warranty  
26 periods but had no knowledge of the existence of the defect, which was known and  
27 concealed by Defendant MNAO. Despite the existence of the warranties, Defendant  
28 MNAO failed to inform Plaintiffs Beth and Dan Pickerd, and members of the

1 Pennsylvania Sub-Class that the Class Vehicles contained the Water Pump Defect  
2 during the warranty periods, and, thus, wrongfully transferred the costs of repair or  
3 replacement of the water pump and damaged engine parts to Plaintiffs Beth and Dan  
4 Pickerd, and members of the Pennsylvania Sub-Class.

5 791. Because of the Water Pump Defect, the Class Vehicles are not reliable  
6 and owners of these vehicles have lost confidence in the ability of Class Vehicles to  
7 perform the function of safe reliable transportation.

8 792. As a direct and proximate result of Defendant MNAO's breach of  
9 express warranties, Plaintiffs Beth and Dan Pickerd, and members of the  
10 Pennsylvania Sub-Class have been damaged in an amount to be determined at trial.

11 793. Finally, because of Defendant MNAO's breach of express warranty as  
12 set forth herein, Plaintiffs Beth and Dan Pickerd, and members of the Pennsylvania  
13 Sub-Class assert, as additional and/or alternative remedies, the revocation of  
14 acceptance of the goods and the return to Plaintiffs Beth and Dan Pickerd, and  
15 members of the Pennsylvania Sub-Class of the purchase or lease price of all Class  
16 Vehicles currently owned or leased, and for such other incidental and consequential  
17 damages as allowed.

18 **COUNT XLII**

19 **Breach of Implied Warranty of Merchantability**  
20 **(On behalf of the Pennsylvania Sub-Class against MNAO and MMC)**

21 794. Plaintiffs Beth and Dan Pickerd incorporate and re-allege each preceding  
22 paragraph as though fully set forth herein.

23 795. Plaintiffs Beth and Dan Pickerd bring this count on behalf of themselves  
24 and the members of the Pennsylvania Sub-Class.

25 796. Plaintiffs Beth and Dan Pickerd, and members of the Pennsylvania Sub-  
26 Class purchased or leased the Class Vehicles, manufactured by MMC and/or MNAO,  
27 from MNAO by and through its authorized agents for retail sales, or were otherwise  
28 expected to be the eventual purchasers of the Class Vehicles when bought from a

1 third party. At all relevant times, Defendants were the manufacturer, distributor,  
2 warrantor and/or seller of Class Vehicles. Defendants knew or had reason to know of  
3 the specific use for which the Class Vehicles were purchased or leased.

4 797. Defendants are and were at all relevant times a merchant and seller of  
5 motor vehicles (i.e., the Class Vehicles) within the meaning of the Uniform  
6 Commercial Code.

7 798. With respect to leases, Defendants are and were at all relevant times a  
8 lessor of motor vehicles (i.e., the Class Vehicles) within the meaning of the Uniform  
9 Commercial Code.

10 799. The Class Vehicles are and were at all relevant times goods within the  
11 meaning of the Uniform Commercial Code.

12 800. Defendants impliedly warranted that the Class Vehicles were in  
13 merchantable condition and fit for the ordinary purpose for which vehicles are used.

14 801. The Class Vehicles, when sold or leased and at all times thereafter, were  
15 not in merchantable condition and were and are not fit for the ordinary purpose of  
16 providing safe and reliable transportation. The Class Vehicles contain an inherent  
17 defect – the Water Pump Defect – (at the time of sale or lease and thereafter) and  
18 present an undisclosed safety risk to drivers and occupants. Thus, Defendants  
19 breached the implied warranty of merchantability.

20 802. Through its maintenance schedules, MNAO further represented that the  
21 water pump would not need inspection, service, repair or replacement and/or  
22 fraudulently concealed the need for repair or replacement of the water pump by  
23 omitting the water pump from the maintenance schedules. MNAO cannot disclaim  
24 its implied warranty as it knowingly sold or leased a defective product.

25 803. Defendants were provided notice of the Water Pump Defect by  
26 numerous consumer complaints made to MNAO's authorized dealers nationwide,  
27 complaints to NHTSA and through their own testing. Affording Defendants a  
28 reasonable opportunity to cure their breach of implied warranties would be

1 unnecessary and futile here because Defendants have known of and concealed the  
2 Water Pump Defect and, on information and belief, have refused to repair or replace  
3 the Water Pump Defect free of charge within a reasonable time.

4 804. Defendants were further provided notice by Plaintiffs Beth and Dan  
5 Pickerd of their breach of implied warranties when they took their vehicle in for  
6 repair to Piazza Mazda in West Chester, Pennsylvania on or around January 24, 2019.  
7 Upon information and belief, Piazza Mazda is an authorized dealer of MNAO and its  
8 duly authorized agent to perform warranty repairs. Despite this notice, Defendants  
9 did not fully cure their breach of implied warranties and failed to provide a suitable  
10 repair or replacement of the defective water pump free of charge within a reasonable  
11 time.

12 805. As a direct and proximate result of Defendants' breach of the implied  
13 warranty of merchantability, Plaintiffs Beth and Dan Pickerd, and members of the  
14 Pennsylvania Sub-Class have been damaged in an amount to be proven at trial.

15 806. Any attempt by MNAO to disclaim or limit the implied warranty of  
16 merchantability vis-à-vis consumers is unconscionable and unenforceable here.  
17 Specifically, MNAO's warranty limitation is unenforceable because it knowingly  
18 sold or leased a defective product without informing consumers about the defect.  
19 The time limits contained in MNAO's warranty periods were also unconscionable  
20 and inadequate to protect Plaintiffs Beth and Dan Pickerd, and members of the  
21 Pennsylvania Sub-Class. Among other things, Plaintiffs Beth and Dan Pickerd, and  
22 members of the Pennsylvania Sub-Class did not determine these time limitations, the  
23 terms of which unreasonably favored MNAO. A gross disparity in bargaining power  
24 existed between MNAO and members of the Pennsylvania Sub-Class, and MNAO  
25 knew or should have known that the Class Vehicles were defective at the time of sale  
26 or lease and that the Water Pump Defect posed a safety risk.

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1 807. Plaintiffs Beth and Dan Pickerd, and members of the Pennsylvania Sub-  
2 Class have been excused from performance of any warranty obligations as a result of  
3 Defendants' conduct described herein.

4 808. The applicable statute of limitations for the implied warranty claim has  
5 been tolled by the discovery rule and/or fraudulent concealment.

6 **COUNT XLIII**  
7 **Violation of the Magnuson-Moss Warranty Act ("MMWA"),**  
8 **15 U.S.C. § 2301, et seq.**  
9 **(On behalf of the Nationwide Class and the Pennsylvania Sub-Class against**  
10 **MNAO and MMC)**

11 809. Plaintiffs Beth and Dan Pickerd incorporate and re-allege each preceding  
12 paragraph as though fully set forth herein.

13 810. Plaintiffs Beth and Dan Pickerd bring this count on behalf of themselves  
14 and the members of the Nationwide Class or, alternatively, on behalf of the  
15 Pennsylvania Sub-Class.

16 811. Plaintiffs Beth and Dan Pickerd satisfy the MMWA jurisdictional  
17 requirement because they allege diversity jurisdiction under CAFA, 28 U.S.C. §  
18 1332(d)(2).

19 812. Plaintiffs Beth and Dan Pickerd, and members of the Classes are  
20 "consumers" within the meaning of the Magnuson-Moss Warranty Act, 15 U.S.C. §  
21 2301(3).

22 813. Defendants are "suppliers" and "warrantors" within the meaning of the  
23 Magnuson-Moss Warranty Act, 15 U.S.C. § 2301(4)-(5).

24 814. The Class Vehicles are "consumer products" within the meaning of the  
25 Magnuson-Moss Warranty Act, 15 U.S.C. § 2301(1).

26 815. The MMWA provides a cause of action for any consumer who is  
27 damaged by the failure of a warrantor to comply with a written or implied warranty.  
28 *See* 15 U.S.C. § 2310(d)(1).

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1           816. Defendant MNAO provided Plaintiffs Beth and Dan Pickerd and  
2 members of the Classes with one or more express warranties, which are covered  
3 under 15 U.S.C. § 2301(6). For illustrative purposes, MNAO currently offers New  
4 Vehicle Limited Warranty coverage for Class Vehicles sold under the Mazda brand  
5 for 3 years or 36,000 miles and extended warranty coverage for Powertrain  
6 components for 5 years or 60,000 miles.<sup>30</sup> Under warranties provided to members of  
7 the Classes, MNAO promised to repair or replace covered defective components  
8 arising out of defects in materials and/or workmanship, including the Water Pump  
9 Defect, at no cost to owners and lessees of the Class Vehicles. As alleged herein,  
10 MNAO breached these warranties.

11           817. Plaintiffs Beth and Dan Pickerd, and members of the Classes  
12 experienced the Water Pump Defect within the warranty periods but MNAO failed to  
13 inform Plaintiffs and members of the Classes of the existence of the Water Pump  
14 Defect and associated safety risk, and failed to provide a suitable remedy or repair of  
15 the Water Pump Defect free of charge within a reasonable time.

16           818. Defendants were provided notice by letter dated May 13, 2019 directed  
17 to MNAO that Plaintiffs would pursue a claim under the MMWA on behalf of a  
18 class.

19           819. Any attempt by MNAO to disclaim or limit its express or implied  
20 warranties is unconscionable and unenforceable here. Specifically, MNAO's  
21 warranty limitations are unenforceable because it knowingly sold or leased a  
22 defective product without informing consumers about the defect. The time limits  
23 contained in MNAO's warranty periods are also unconscionable and inadequate to  
24 protect Plaintiffs Beth and Dan Pickerd, and members of the Classes. Among other  
25 things, Plaintiffs Beth and Dan Pickerd, and members of the Classes did not  
26 determine these time limitations, the terms of which unreasonably favored MNAO.

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27 <sup>30</sup> See, e.g., Exhibit A (2012 Mazda CX-9 Warranty Booklet). See also  
28 <https://www.mazdausa.com/owners/warranty>.

1 A gross disparity in bargaining power existed between MNAO and members of the  
2 Classes, and MNAO knew or should have known that the Class Vehicles were  
3 defective at the time of sale or lease and that they posed a safety risk.

4 820. The Class Vehicles' implied warranties are covered under 15 U.S.C. §  
5 2301(7).

6 821. Defendants breached these warranties by failing to disclose and  
7 fraudulently concealing information regarding the standard, quality or grade of the  
8 Class Vehicles and/or the presence of the Water Pump Defect and corresponding  
9 safety risk. Without limitation, the Class Vehicles share a common defect in design,  
10 material, manufacturing and/or workmanship that fails to operate as represented by  
11 Defendants and presents a safety risk.

12 822. Affording Defendants a reasonable opportunity to cure its breach of  
13 warranties would be unnecessary and futile. At the time of sale or lease of each Class  
14 Vehicle and all relevant times thereafter, Defendants knew, or were reckless in not  
15 knowing, of the material omissions concerning the standard, quality or grade of the  
16 Class Vehicles and the presence of the Water Pump Defect and corresponding safety  
17 risk, but failed to repair or replace the Water Pump Defect and/or disclose the defect.  
18 Under the circumstances, the remedies available under any informal settlement  
19 procedure would be inadequate and any requirement that Plaintiffs resort to an  
20 informal dispute resolution procedure and/or afford Defendants a reasonable  
21 opportunity to cure its breach of warranties is excused and thereby deemed satisfied.

22 823. Plaintiffs Beth and Dan Pickerd, and members of the Classes would  
23 suffer economic hardship if they returned their Class Vehicles, but did not receive the  
24 return of all payments made by them to Defendants. Thus, Plaintiffs Beth and Dan  
25 Pickerd, and members of the Classes have not re-accepted their Class Vehicles by  
26 retaining them.

27 824. The amount in controversy of Plaintiffs Beth and Dan Pickerd's  
28 individual claim meets or exceeds the sum of \$25. The amount in controversy of this

1 action exceeds the sum of \$50,000, exclusive of interest and costs, computed on the  
2 basis of all claims to be determined in this lawsuit.

3 825. Plaintiffs Beth and Dan Pickerd, individually and on behalf of members  
4 of the Classes, seek all damages permitted by law, including diminution in the value  
5 of the Class Vehicles, in an amount to be proven at trial.

6 **COUNT XLIV**  
7 **Fraud by Omission or Fraudulent Concealment**  
8 **(On behalf of the Pennsylvania Sub-Class against MNAO and MMC)**

9 826. Plaintiffs Beth and Dan Pickerd incorporate and re-allege each preceding  
10 paragraph as though fully set forth herein.

11 827. Plaintiffs Beth and Dan Pickerd bring this count on behalf of themselves  
12 and the members of the Pennsylvania Sub-Class.

13 828. Defendants intentionally and knowingly concealed, suppressed and/or  
14 omitted material facts including the standard, quality or grade of the Class Vehicles  
15 and the fact that the Class Vehicles contain a Water Pump Defect and corresponding  
16 safety risk, with the intent that Plaintiffs Beth and Dan Pickerd, and members of the  
17 Pennsylvania Sub-Class rely on Defendants' omissions. As a direct result of  
18 Defendants' fraudulent conduct, Plaintiffs Beth and Dan Pickerd, and members of the  
19 Pennsylvania Sub-Class have suffered actual damages.

20 829. Defendants knew (at the time of sale or lease and thereafter) that the  
21 Class Vehicles contained the Water Pump Defect, concealed the defect and never  
22 intended to repair or replace the Water Pump Defect during the warranty periods. To  
23 date, Defendants have not provided Plaintiffs Beth and Dan Pickerd, and members of  
24 the Pennsylvania Sub-Class with a repair or remedy for the Water Pump Defect.

25 830. Defendants owed a duty to disclose the Water Pump Defect and its  
26 corresponding safety risk to Plaintiffs Beth and Dan Pickerd, and members of the  
27 Pennsylvania Sub-Class because Defendants possessed superior and exclusive  
28 knowledge regarding the defect and made a partial disclosure regarding the safety of

1 the Class Vehicles. Rather than disclose the defect, Defendants intentionally and  
2 knowingly concealed, suppressed and/or omitted material facts including the  
3 standard, quality or grade of the Class Vehicles and the presence of the Water Pump  
4 Defect and corresponding safety risk, to sell additional Class Vehicles and avoid the  
5 cost of repair or replacement.

6 831. The Water Pump Defect is material to Plaintiffs Beth and Dan Pickerd,  
7 and members of the Pennsylvania Sub-Class because Plaintiffs Beth and Dan  
8 Pickerd, and members of the Pennsylvania Sub-Class had a reasonable expectation  
9 that the vehicles would not contain a defect, such as the Water Pump Defect, that  
10 leads to exorbitant repair costs and exposes them and other vehicle occupants to a  
11 safety risk. No reasonable consumer expects a vehicle to contain a concealed defect  
12 in design, manufacture, materials or workmanship, such as the Water Pump Defect,  
13 that can lead to thousands of dollars in repair or replacement costs, and can cause  
14 catastrophic engine failure with little to no warning or time to take preventative  
15 measures or safely remove the vehicle from the road.

16 832. Plaintiffs Beth and Dan Pickerd, and members of the Pennsylvania Sub-  
17 Class would not have purchased or leased the Class Vehicles but for Defendants'  
18 omissions and concealment of material facts regarding the nature and quality of the  
19 Class Vehicles and existence of the Water Pump Defect and corresponding safety  
20 risk, or would have paid less for the Class Vehicles.

21 833. Defendants knew their concealment and suppression of material facts  
22 was false and misleading and knew the effect of concealing those material facts.  
23 Defendants knew their concealment and suppression of the Water Pump Defect  
24 would sell more Class Vehicles and would discourage Plaintiffs Beth and Dan  
25 Pickerd, and members of the Pennsylvania Sub-Class from seeking replacement or  
26 repair of the Water Pump Defect during the applicable warranty periods. Further,  
27 Defendants intended to induce Plaintiffs Beth and Dan Pickerd, and members of the  
28 Pennsylvania Sub-Class into purchasing or leasing the Class Vehicles and to

1 discourage them from seeking replacement or repair of the Water Pump Defect in  
2 order to decrease costs and increase profits.

3 834. Defendants acted with malice, oppression and fraud.

4 835. Plaintiffs Beth and Dan Pickerd, and members of the Pennsylvania Sub-  
5 Class reasonably relied upon Defendants' knowing concealment and omissions. As a  
6 direct and proximate result of Defendants' omissions and active concealment of  
7 material facts regarding the Water Pump Defect and associated safety risk, Plaintiffs  
8 Beth and Dan Pickerd, and members of the Pennsylvania Sub-Class have suffered  
9 actual damages in an amount to be determined at trial.

10 **COUNT XLV**

11 **Violation of the Pennsylvania Unfair Trade Practices and**  
12 **Consumer Protection Law ("PUTPCPL"),**  
13 **73 P.S. §§ 201-1, et seq.**

14 **(On behalf of the Pennsylvania Sub-Class against MNAO and MMC)**

15 836. Plaintiffs Beth and Dan Pickerd incorporate and re-allege each preceding  
16 paragraph as though fully set forth herein.

17 837. Plaintiffs Beth and Dan Pickerd bring this count on behalf of themselves  
18 and the members of the Pennsylvania Sub-Class.

19 838. Plaintiffs Beth and Dan Pickerd, and members of the Pennsylvania Sub-  
20 Class are persons within the context of the PUTPCPL, *see* 73 P.S. § 201-1, who  
21 purchased and/or leased class vehicles for personal, family, or household use.

22 839. Defendants are "persons" within the context of the PUTPCPL. *See* 73  
23 P.S. § 201(2).

24 840. Defendants engaged in trade and commerce within the context of  
25 PUTPCPL, 73 P.S. § 201-2(3).

26 841. Defendants violated 73 P.S. § 201-2(4)(v) by representing that Class  
27 Vehicles have characteristics, uses, benefits and/or qualities that they do not possess.

28 842. Defendants violated 73 P.S. § 201-2(4)(vii) by representing that Class  
Vehicles are of a particular standard, quality or grade, when they are of another.

1           843. Defendants violated 73 P.S. § 201-2(4)(iv) by advertising Class Vehicles  
2 without intent to sell or lease as advertised.

3           844. Defendants violated 73 P.S. § 201-2(4)(xxi) by deception, fraud, false  
4 pretense, false promise, misrepresentation, knowing concealment, suppression and/or  
5 omission of material facts concerning Class Vehicles with the intent to deceive  
6 Plaintiffs Beth and Dan Pickerd, and members of the Pennsylvania Sub-Class.

7           845. Defendants committed unconscionable, deceptive and unfair trade  
8 practices, including, but not limited to, deception, fraud, false pretense, false promise,  
9 misrepresentation and the knowing concealment, suppression and omission of  
10 materials facts concerning the Class Vehicles' Water Pump Defect and corresponding  
11 safety risk with the intent that Plaintiffs Beth and Dan Pickerd and members of the  
12 Pennsylvania Sub-Class would rely upon their omissions in connection with the sale  
13 and/or advertisement of Class Vehicles.

14           846. Defendants fraudulently, intentionally, negligently and/or recklessly  
15 misrepresented to Plaintiffs Beth and Dan Pickerd and members of the Pennsylvania  
16 Sub-Class that the water pump in the Class Vehicles would not require maintenance,  
17 repair or replacement and fraudulently omitted the water pump from its maintenance  
18 schedules.

19           847. Defendants fraudulently, intentionally, negligently and/or recklessly  
20 misrepresented to Plaintiffs Beth and Dan Pickerd, and members of the Pennsylvania  
21 Sub-Class the characteristics of Class Vehicle engines with respect to materials,  
22 manufacture, durability, design, longevity, maintenance and operating costs.

23           848. Defendants intended that Plaintiffs Beth and Dan Pickerd, and members  
24 of the Pennsylvania Sub-Class would, in the course of their decision to expend  
25 money in purchasing, leasing and/or repairing Class Vehicles, reasonably rely upon  
26 misrepresentations, misleading characterizations and material omissions concerning  
27 the quality of Class Vehicle engines with respect to materials, workmanship, design,  
28 manufacture and information in the owner's manuals.

1 849. Information regarding the Water Pump Defect as described in this  
2 Complaint is material to consumers in that the defect results in exorbitant repair or  
3 replacement costs, can cause catastrophic engine failure and poses a safety risk.

4 850. If Defendants had not concealed the defect from Plaintiffs Beth and Dan  
5 Pickerd, and members of the Pennsylvania Sub-Class within the express warranty  
6 period, the Water Pump Defect would have been repaired without cost to purchasers  
7 as promised under the original warranty.

8 851. Defendants violated the PUTPCPL by failing to inform Class Vehicle  
9 owners prior to purchase and/or during the warranty period that Class Vehicle  
10 engines were defectively designed and/or manufactured and were accompanied by  
11 incorrect maintenance recommendations and maintenance intervals.

12 852. Defendants violated the PUTPCPL by failing to inform Class Vehicle  
13 owners prior to purchase and/or during the warranty period that Class Vehicle  
14 engines contained defects and would require replacement of expensive internal  
15 engine components.

16 853. As a proximate and direct result of Defendants' unfair and deceptive  
17 trade practices, Plaintiffs Beth and Dan Pickerd, and members of the Pennsylvania  
18 Sub-Class purchased or leased Class Vehicles and suffered an ascertainable loss and  
19 financial harm.

20 854. Plaintiffs Beth and Dan Pickerd, and members of the Pennsylvania Sub-  
21 Class experienced premature failure of the water pump and/or engine failure,  
22 diminution of Class Vehicle resale value, increased repair and maintenance costs and  
23 other substantial monetary damages and inconvenience.

24 855. The conduct of Defendants offends public policy as established by  
25 statutes and common law, is immoral, unethical, oppressive and/or unscrupulous and  
26 caused unavoidable and substantial injury to Class Vehicle owners and lessees (who  
27 were unable to have reasonably avoided the injury due to no fault of their own)  
28 without any countervailing benefits to consumers.



1 856. Plaintiffs Beth and Dan Pickerd, and members of the Pennsylvania Sub-  
2 Class demand judgment against Defendants for restitution, disgorgement, statutory  
3 and actual monetary damages, including multiple damages, interest, costs, and  
4 attorneys' fees and injunctive relief, including a declaratory judgment and an  
5 appropriate court order prohibiting Defendants from further deceptive acts and  
6 practices as described in the Complaint.

7 **J. Texas Counts**

8 **COUNT XLVI**  
9 **Breach of Express Warranty**  
10 **(On behalf of the Texas Sub-Class against MNAO)**

11 857. Plaintiffs Erin Matheny and Tim Halwas incorporate and re-allege each  
12 preceding paragraph as though fully set forth herein.

13 858. Plaintiffs Matheny and Halwas bring this count on behalf of themselves  
14 and the members of the Texas Sub-Class.

15 859. Defendant MNAO represented in the maintenance schedules and  
16 warranty guides for the Class Vehicles that there would be no need to provide  
17 maintenance, service, inspection, or repair for the water pumps during the useful life  
18 of the engine. Such representations formed the basis of the bargain in Plaintiffs  
19 Matheny and Halwas' and members of the Texas Sub-Class's decisions to purchase  
20 or lease the Class Vehicles.

21 860. Defendant MNAO also marketed the Class Vehicles as safe, built to last  
22 and reliable vehicles. These statements helped conceal the existence of the Water  
23 Pump Defect and its corresponding safety risk from Plaintiffs Matheny, Halwas, and  
24 members of the Texas Sub-Class.

25 861. Defendant MNAO is and was at all relevant times a merchant and seller  
26 of motor vehicles (i.e., the Class Vehicles) within the meaning of the Uniform  
27 Commercial Code.

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1           862. With respect to leases, Defendant MNAO is and was at all relevant times  
2 a lessor of motor vehicles (i.e., the Class Vehicles) within the meaning of the  
3 Uniform Commercial Code.

4           863. The Class Vehicles are and were at all relevant times goods within the  
5 meaning of the Uniform Commercial Code.

6           864. In connection with the purchase or lease of each of the Class Vehicles,  
7 Defendant MNAO provides maintenance schedules and warranty guides which omit  
8 any mention of the water pumps as a component requiring routine inspection, service,  
9 or replacement.

10           865. In connection with the purchase or lease of each of the Class Vehicles,  
11 Defendant MNAO also provides warranty coverage for the Class Vehicles under one  
12 or more manufacturer's warranties. For illustrative purposes, Defendant MNAO  
13 currently offers New Vehicle Limited Warranty coverage for Class Vehicles sold  
14 under the Mazda brand for 3 years or 36,000 miles and extended warranty coverage  
15 for Powertrain components for 5 years or 60,000 miles.<sup>31</sup> Under the warranties  
16 provided to Plaintiffs Matheny, Halwas, and members of the Texas Sub-Class,  
17 Defendant MNAO promised to repair or replace covered components arising out of  
18 defects in materials and/or workmanship, including the Water Pump Defect, at no  
19 cost to owners and lessees of the Class Vehicles and within a reasonable time. As  
20 alleged herein, Defendant MNAO breached these warranties.

21           866. Defendant's warranties formed a basis of the bargain that was reached  
22 when Plaintiffs Matheny, Halwas, and members of the Texas Sub-Class purchased or  
23 leased their Class Vehicles. Given the latent nature of the Water Pump Defect,  
24 Defendant MNAO knew or should have known that the majority of the water pump  
25 failures (and corresponding engine damage) occur outside of the warranty periods.

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28 <sup>31</sup> See, e.g., Exhibit A (2012 Mazda CX-9 Warranty Booklet). See also  
<https://www.mazdausa.com/owners/warranty>.

1           867. Plaintiffs Matheny, Halwas, and members of the Texas Sub-Class  
2 experienced the existence of the Water Pump Defect within the warranty periods but  
3 had no knowledge of the existence of the defect and associated safety risk, which  
4 were known and concealed by Defendant MNAO. Despite the existence of the  
5 warranties, Defendant MNAO failed to adequately inform Plaintiffs Matheny,  
6 Halwas, and members of the Texas Sub-Class that the Class Vehicles contained the  
7 Water Pump Defect and failed to provide a suitable repair or replacement of the  
8 Water Pump Defect free of charge within a reasonable time.

9           868. Defendant MNAO breached the express warranty promising to repair  
10 and correct a manufacturing defect or defect in materials or workmanship of any parts  
11 it supplied.

12           869. On information and belief, Defendant MNAO has not suitably repaired  
13 or replaced the Water Pump Defect free of charge for Plaintiffs Matheny, Halwas,  
14 and members of the Texas Sub-Class Class despite the existence of the defect in the  
15 Class Vehicles at the time of sale or lease.

16           870. Defendant MNAO further breached its express warranties by selling  
17 Class Vehicles that were defective with respect to engine materials, workmanship,  
18 design and manufacture, and were accompanied by an owner's manual and/or  
19 maintenance schedule that incorporated no inspection and service intervals for the  
20 water pump although Defendant MNAO knew of the Water Pump Defect and that the  
21 water pump required periodic inspection and service.

22           871. Class Vehicles were not of merchantable quality and were unfit for the  
23 ordinary purposes for which passenger vehicles are used because of engine materials,  
24 workmanship, design and/or manufacturing defects which cause engine failure and/or  
25 failure to perform as warranted.

26           872. Defendant MNAO was provided notice of the Water Pump Defect by  
27 numerous consumer complaints made to its authorized dealers nationwide,  
28 complaints to NHTSA and through its own testing. Affording Defendant MNAO a

1 reasonable opportunity to cure its breach of written warranties would be unnecessary  
2 and futile here because Defendant MNAO has known of and concealed the Water  
3 Pump Defect and has failed to provide a suitable repair or replacement of the Water  
4 Pump Defect free of charge within a reasonable time.

5 873. Defendant MNAO was further provided notice by Plaintiff Matheny of  
6 its breach of express warranties by phone call in July 2018 as well as when she took  
7 her vehicle in for repair to Classic Chrysler Jeep Dodge Mazda (“Classic Mazda”) in  
8 Denton, Texas on or around June 21, 2018. Upon information and belief, Classic  
9 Mazda is an authorized dealer of Defendant MNAO and its duly authorized agent to  
10 perform warranty repairs. Despite these notices, Defendant MNAO did not fully cure  
11 its breach of written warranties and failed to provide a suitable repair or replacement  
12 of the defective water pump free of charge within a reasonable time. Instead, MNAO  
13 instructed its authorized dealership to only charge Plaintiff Matheny half the cost to  
14 repair her Class Vehicle.

15 874. Defendant MNAO was further provided notice by Plaintiff Halwas of its  
16 breach of express warranties when he took his vehicle in for repair to Town North  
17 Mazda in Richardson, Texas on or around May 21, 2019. Upon information and  
18 belief, Town North Mazda is an authorized dealer of Defendant MNAO and its duly  
19 authorized agent to perform warranty repairs. Despite this notice, Defendant MNAO  
20 did cure its breach of written warranties and failed to provide a suitable repair or  
21 replacement of the defective water pump free of charge within a reasonable time.  
22 Instead submitting this as a warranty repair, Town North Mazda quoted Plaintiff  
23 Halwas an engine replacement cost of over \$11,400.

24 875. Defendant MNAO was also provided further written notice by Plaintiffs  
25 Matheny and Halwas on June 28, 2019.

26 876. Any attempt by Defendant MNAO to disclaim or limit recovery to the  
27 terms of the express warranties is unconscionable and unenforceable here.  
28 Specifically, Defendant MNAO’s warranty limitation is unenforceable because it

1 knowingly sold or leased a defective product without informing consumers about the  
2 defect. The time limits contained in Defendant MNAO's warranty periods were also  
3 unconscionable and inadequate to protect Plaintiffs Matheny, Halwas, and members  
4 of the Texas Sub-Class. Among other things, Plaintiffs Matheny, Halwas, and the  
5 members of the Texas Sub-Class did not determine these time limitations, the terms  
6 of which unreasonably favored Defendant MNAO. A gross disparity in bargaining  
7 power existed between Defendant MNAO and members of the Texas Sub-Class, and  
8 Defendants knew or should have known that the Class Vehicles were defective at the  
9 time of sale or lease and that the Water Pump Defect posed a safety risk.

10 877. Further, the limited warranty promising to repair and/or correct a  
11 manufacturing defect fails in its essential purpose because the contractual remedy is  
12 insufficient to make Plaintiffs Matheny, Halwas, and members of the Texas Sub-  
13 Class whole because, on information and belief, Defendant MNAO has failed and/or  
14 has refused to adequately provide the promised remedies within a reasonable time.

15 878. Defendant MNAO knew that the Class Vehicles were inherently  
16 defective and did not conform to their warranties, and Plaintiffs Matheny, Halwas,  
17 and members of the Texas Sub-Class were induced to purchase or lease the Class  
18 Vehicles under false and/or fraudulent pretenses.

19 879. Plaintiffs Matheny, Halwas, and the members of the Texas Sub-Class  
20 experienced the existence of the Water Pump Defect within the warranty periods but  
21 had no knowledge of the existence of the defect, which was known and concealed by  
22 Defendant MNAO. Despite the existence of the warranties, Defendant MNAO failed  
23 to inform Plaintiffs Matheny, Halwas, and members of the Texas Sub-Class that the  
24 Class Vehicles contained the Water Pump Defect during the warranty periods, and,  
25 thus, wrongfully transferred the costs of repair or replacement of the water pump and  
26 damaged engine parts to Plaintiffs Matheny, Halwas, and members of the Texas Sub-  
27 Class.

28 ///

1 880. Because of the Water Pump Defect, the Class Vehicles are not reliable  
2 and owners of these vehicles have lost confidence in the ability of Class Vehicles to  
3 perform the function of safe reliable transportation.

4 881. As a direct and proximate result of Defendant MNAO's breach of  
5 express warranties, Plaintiffs Matheny, Halwas, and members of the Texas Sub-Class  
6 have been damaged in an amount to be determined at trial.

7 882. Finally, because of Defendant MNAO's breach of express warranty as  
8 set forth herein, Plaintiffs Matheny, Halwas, and members of the Texas Sub-Class  
9 assert, as additional and/or alternative remedies, the revocation of acceptance of the  
10 goods and the return to Plaintiff Matheny, Halwas, and members of the Texas Sub-  
11 Class of the purchase or lease price of all Class Vehicles currently owned or leased,  
12 and for such other incidental and consequential damages as allowed.

13 **COUNT XLVII**  
14 **Breach of Implied Warranty of Merchantability**  
15 **(On behalf of the Texas Sub-Class against MNAO and MMC)**

16 883. Plaintiffs Matheny and Halwas incorporate and re-allege each preceding  
17 paragraph as though fully set forth herein.

18 884. Plaintiffs Matheny and Halwas bring this count on behalf of themselves  
19 and the members of the Texas Sub-Class.

20 885. Plaintiffs Matheny, Halwas, and members of the Texas Sub-Class  
21 purchased or leased the Class Vehicles, manufactured by MMC and/or MNAO, from  
22 MNAO by and through its authorized agents for retail sales, or were otherwise  
23 expected to be the eventual purchasers of the Class Vehicles when bought from a  
24 third party. At all relevant times, Defendants were the manufacturer, distributor,  
25 warrantor and/or seller of Class Vehicles. Defendants knew or had reason to know of  
26 the specific use for which the Class Vehicles were purchased or leased.

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1 886. Defendants are and were at all relevant times a merchant and seller of  
2 motor vehicles (i.e., the Class Vehicles) within the meaning of the Uniform  
3 Commercial Code.

4 887. With respect to leases, Defendants are and were at all relevant times a  
5 lessor of motor vehicles (i.e., the Class Vehicles) within the meaning of the Uniform  
6 Commercial Code.

7 888. The Class Vehicles are and were at all relevant times goods within the  
8 meaning of the Uniform Commercial Code.

9 889. Defendants impliedly warranted that the Class Vehicles were in  
10 merchantable condition and fit for the ordinary purpose for which vehicles are used.

11 890. The Class Vehicles, when sold or leased and at all times thereafter, were  
12 not in merchantable condition and were and are not fit for the ordinary purpose of  
13 providing safe and reliable transportation. The Class Vehicles contain an inherent  
14 defect – the Water Pump Defect – (at the time of sale or lease and thereafter) and  
15 present an undisclosed safety risk to drivers and occupants. Thus, Defendants  
16 breached the implied warranty of merchantability.

17 891. Through its maintenance schedules, MNAO further represented that the  
18 water pump would not need inspection, service, repair or replacement and/or  
19 fraudulently concealed the need for repair or replacement of the water pump by  
20 omitting the water pump from the maintenance schedules. MNAO cannot disclaim  
21 its implied warranty as it knowingly sold or leased a defective product.

22 892. Defendants were provided notice of the Water Pump Defect by  
23 numerous consumer complaints made to MNAO's authorized dealers nationwide,  
24 complaints to NHTSA and through their own testing. Affording Defendants a  
25 reasonable opportunity to cure their breach of implied warranties would be  
26 unnecessary and futile here because Defendants have known of and concealed the  
27 Water Pump Defect and, on information and belief, have refused to repair or replace  
28 the Water Pump Defect free of charge within a reasonable time.

1 893. Defendants were further provided notice by Plaintiff Matheny of their  
2 breach of implied warranties by phone call to MNAO in July 2018 and as well as  
3 when she took her vehicle in for repair to Classic Mazda in Denton, Texas on or  
4 about June 21, 2018. Upon information and belief, Classic Mazda is an authorized  
5 dealer of MNAO and its duly authorized agent to perform warranty repairs. Despite  
6 these notices, Defendants did not fully cure their breach of implied warranties and  
7 failed to provide a suitable repair or replacement of the Water Pump Defect free of  
8 charge within a reasonable time. Instead, MNAO instructed its authorized dealership  
9 to only charge Plaintiff Matheny half the cost to repair her Class Vehicle.

10 894. Defendants were further provided notice by Plaintiff Halwas of their  
11 breach of implied warranties when he took his vehicle in for repair to Town North  
12 Mazda in Richardson, Texas on or around May 21, 2019. Upon information and  
13 belief, Town North Mazda is an authorized dealer of MNAO and its duly authorized  
14 agent to perform warranty repairs. Despite this notice, Defendants did not cure their  
15 breach of implied warranties and failed to provide a suitable repair or replacement of  
16 the defective water pump free of charge within a reasonable time. Instead, Town  
17 North Mazda quoted Plaintiff Halwas an engine replacement cost of over \$11,400.

18 895. Defendants were also provided further written notice by Plaintiffs  
19 Matheny and Halwas on June 28, 2019 directed to MNAO.

20 896. As a direct and proximate result of Defendants' breach of the implied  
21 warranty of merchantability, Plaintiffs Matheny, Halwas, and members of the Texas  
22 Sub-Class have been damaged in an amount to be proven at trial.

23 897. Any attempt by MNAO to disclaim or limit the implied warranty of  
24 merchantability vis-à-vis consumers is unconscionable and unenforceable here.  
25 Specifically, MNAO's warranty limitation is unenforceable because it knowingly  
26 sold or leased a defective product without informing consumers about the defect.  
27 The time limits contained in MNAO's warranty periods were also unconscionable  
28 and inadequate to protect Plaintiffs Matheny, Halwas, and members of the Texas



1 Sub-Class. Among other things, Plaintiffs Matheny, Halwas, and members of the  
2 Texas Sub-Class did not determine these time limitations, the terms of which  
3 unreasonably favored MNAO. A gross disparity in bargaining power existed  
4 between MNAO and members of the Texas Sub-Class, and MNAO knew or should  
5 have known that the Class Vehicles were defective at the time of sale or lease and  
6 that the Water Pump Defect posed a safety risk.

7 898. Plaintiffs Matheny, Halwas, and members of the Texas Sub-Class have  
8 been excused from performance of any warranty obligations as a result of  
9 Defendants' conduct described herein.

10 899. The applicable statute of limitations for the implied warranty claim has  
11 been tolled by the discovery rule and/or fraudulent concealment.

12 **COUNT XLVIII**  
13 **Violation of the Magnuson-Moss Warranty Act (“MMWA”),**  
14 **15 U.S.C. § 2301, et seq.**  
15 **(On behalf of the Nationwide Class and the Texas Sub-Class against MNAO and**  
16 **MMC)**

17 900. Plaintiffs Matheny and Halwas incorporate and re-allege each preceding  
18 paragraph as though fully set forth herein.

19 901. Plaintiffs Matheny and Halwas bring this count on behalf of themselves  
20 and the members of the Nationwide Class or, alternatively, on behalf of the Texas  
21 Sub-Class.

22 902. Plaintiffs Matheny and Halwas satisfy the MMWA jurisdictional  
23 requirement because they allege diversity jurisdiction under CAFA, 28 U.S.C. §  
24 1332(d)(2).

25 903. Plaintiffs Matheny, Halwas, and members of the Classes are  
26 “consumers” within the meaning of the Magnuson-Moss Warranty Act, 15 U.S.C. §  
27 2301(3).

28 904. Defendants are “suppliers” and “warrantors” within the meaning of the  
Magnuson-Moss Warranty Act, 15 U.S.C. § 2301(4)-(5).

1           905. The Class Vehicles are “consumer products” within the meaning of the  
2 Magnuson-Moss Warranty Act, 15 U.S.C. § 2301(1).

3           906. The MMWA provides a cause of action for any consumer who is  
4 damaged by the failure of a warrantor to comply with a written or implied warranty.  
5 *See* 15 U.S.C. § 2310(d)(1).

6           907. Defendant MNAO provided Plaintiffs Matheny, Halwas, and members  
7 of the Classes with one or more express warranties, which are covered under 15  
8 U.S.C. § 2301(6). For illustrative purposes, MNAO currently offers New Vehicle  
9 Limited Warranty coverage for Class Vehicles sold under the Mazda brand for 3  
10 years or 36,000 miles and extended warranty coverage for Powertrain components for  
11 5 years or 60,000 miles.<sup>32</sup> Under warranties provided to members of the Classes,  
12 MNAO promised to repair or replace covered defective components arising out of  
13 defects in materials and/or workmanship, including the Water Pump Defect, at no  
14 cost to owners and lessees of the Class Vehicles. As alleged herein, MNAO breached  
15 these warranties.

16           908. Plaintiffs Matheny, Halwas, and members of the Classes experienced the  
17 Water Pump Defect within the warranty periods but MNAO failed to inform  
18 Plaintiffs and members of the Classes of the existence of the Water Pump Defect and  
19 associated safety risk, and failed to provide a suitable remedy or repair of the Water  
20 Pump Defect free of charge within a reasonable time.

21           909. Defendants were provided notice by letter dated May 13, 2019, directed  
22 to MNAO that Plaintiffs would pursue a claim under the MMWA on behalf of a  
23 class.

24           910. Any attempt by MNAO to disclaim or limit its express or implied  
25 warranties is unconscionable and unenforceable here. Specifically, MNAO’s  
26 warranty limitations are unenforceable because it knowingly sold or leased a

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27 <sup>32</sup> *See, e.g.,* Exhibit A (2012 Mazda CX-9 Warranty Booklet). *See also*  
28 <https://www.mazdausa.com/owners/warranty>.

1 defective product without informing consumers about the defect. The time limits  
2 contained in MNAO's warranty periods are also unconscionable and inadequate to  
3 protect Plaintiffs Matheny, Halwas, and members of the Classes. Among other  
4 things, Plaintiffs Matheny, Halwas, and members of the Classes did not determine  
5 these time limitations, the terms of which unreasonably favored MNAO. A gross  
6 disparity in bargaining power existed between MNAO and members of the Classes,  
7 and MNAO knew or should have known that the Class Vehicles were defective at the  
8 time of sale or lease and that they posed a safety risk.

9 911. The Class Vehicles' implied warranties are covered under 15 U.S.C. §  
10 2301(7).

11 912. Defendants these warranties by failing to disclose and fraudulently  
12 concealing information regarding the standard, quality or grade of the Class Vehicles  
13 and/or the presence of the Water Pump Defect and corresponding safety risk.  
14 Without limitation, the Class Vehicles share a common defect in design, material,  
15 manufacturing and/or workmanship that fails to operate as represented by Defendants  
16 and presents a safety risk.

17 913. Affording Defendants a reasonable opportunity to cure their breach of  
18 warranties would be unnecessary and futile. At the time of sale or lease of each Class  
19 Vehicle and all relevant times thereafter, Defendants knew, or were reckless in not  
20 knowing, of the material omissions concerning the standard, quality or grade of the  
21 Class Vehicles and the presence of the Water Pump Defect and corresponding safety  
22 risk, but failed to repair or replace the Water Pump Defect and/or disclose the defect.  
23 Under the circumstances, the remedies available under any informal settlement  
24 procedure would be inadequate and any requirement that Plaintiff resort to an  
25 informal dispute resolution procedure and/or afford Defendants a reasonable  
26 opportunity to cure its breach of warranties is excused and thereby deemed satisfied.

27 914. Plaintiffs Matheny, Halwas, and members of the Classes would suffer  
28 economic hardship if they returned their Class Vehicles, but did not receive the return

1 of all payments made by them to Defendants. Thus, Plaintiffs Matheny, Halwas, and  
2 members of the Classes have not re-accepted their Class Vehicles by retaining them.

3 915. The amount in controversy of Plaintiffs Matheny’s and Halwas’  
4 individual claim meets or exceeds the sum of \$25. The amount in controversy of this  
5 action exceeds the sum of \$50,000, exclusive of interest and costs, computed on the  
6 basis of all claims to be determined in this lawsuit.

7 916. Plaintiffs Matheny and Halwas, individually and on behalf of members  
8 of the Classes, seek all damages permitted by law, including diminution in the value  
9 of the Class Vehicles, in an amount to be proven at trial.

10 **COUNT XLIX**  
11 **Violation of the Texas Deceptive Trade Practices-Consumer**  
12 **Protection Act (“TDTPCPA”),**  
13 **Tex. Bus. & Com. Code § 17.41, et seq.**  
14 **(On behalf of the Texas Sub-Class against MNAO and MMC)**

15 917. Plaintiffs Matheny and Halwas incorporate and re-allege each preceding  
16 paragraph as though fully set forth herein.

17 918. Plaintiffs Matheny and Halwas bring this count on behalf of themselves  
18 and the members of the Texas Sub-Class.

19 919. Plaintiffs Matheny, Halwas, and members of the Texas Sub-Class are  
20 “consumers” within the meaning of the TDTPCPA. *See* Tex. Bus. & Com. Code §  
21 17.45(4).

22 920. Defendants are “persons” within the meaning of the TDTPCPA. *See*  
23 Tex. Bus. & Com. Code § 17.45(3).

24 921. The Class Vehicles are “goods” within the meaning of the TDTPCPA.  
25 *See* Tex. Bus. & Com. Code § 17.45(1).

26 922. Defendants engaged in “commerce” in Texas within the meaning of the  
27 TDTPCPA. *See* Tex. Bus. & Com. Code § 17.45(6).

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1 923. The TDTPCPA prohibits “[f]alse, misleading, or deceptive acts or  
2 practices in the conduct of any trade or commerce.” Tex. Bus. & Com. Code §  
3 17.46(a).

4 924. Defendants violated Tex. Bus. & Com. Code § 17.46(a) and 17.46(b)(5)  
5 by representing that Class Vehicles have characteristics, uses, benefits and/or  
6 qualities that they do not possess.

7 925. Defendants violated Tex. Bus. & Com. Code § 17.46(a) and 17.46(b)(7)  
8 by representing that Class Vehicles are of a particular standard, quality or grade,  
9 when they are not.

10 926. Defendants violated Tex. Bus. & Com. Code § 17.46(a) and 17.46(b)(9)  
11 by advertising Class Vehicles without intent to sell or lease as advertised.

12 927. Defendants violated Tex. Bus. & Com. Code § 17.46(a) and  
13 17.46(b)(11) by selling Class Vehicles knowing that a service, replacement or repair  
14 was needed and failing to disclose that fact.

15 928. Defendants violated Tex. Bus. & Com. Code § 17.46(a) and  
16 17.46(b)(24) by failing to disclose the existence of the Water Pump Defect with the  
17 intent to deceive Plaintiff Matheny and members of the Texas Sub-Class and to  
18 induce them into purchasing the Class Vehicles.

19 929. Defendants committed unfair and deceptive acts in the course of trade  
20 and commerce within the context of the TDTPCPA as described in this Complaint in  
21 violation of Tex. Bus. & Com. Code § 17.46(a) and (b).

22 930. Defendant MNAO also violated the TDTPCPA by breaching express  
23 and implied warranties as described in this Complaint. *See* Tex. Bus. & Com. Code §  
24 17.50(a)(2).

25 931. In violation of the TDTPCPA, Defendants employed deceptive and/or  
26 unconscionable acts or practices, fraud, false pretense, misrepresentations, or  
27 concealment, suppression or omission of any material fact with intent that others rely  
28 upon such concealment, suppression or omission, in connection with the sale and/or

1 lease of Class Vehicles in Texas. Defendants knowingly concealed, suppressed  
2 and/or omitted material facts regarding the Water Pump Defect and corresponding  
3 safety risk, and misrepresented the standard, quality or grade of the Class Vehicles,  
4 which directly caused harm to Plaintiffs Matheny, Halwas, and members of the Texas  
5 Sub-Class who relied upon those representations and/or omissions.

6 932. Defendants intentionally and knowingly misrepresented and omitted  
7 facts regarding the Water Pump Defect with the intent to mislead Plaintiffs Matheny,  
8 Halwas, and members of the Texas Sub-Class. Defendants knew, or should have  
9 known, that the Water Pump Defect was a latent defect and that the Water Pump  
10 Defect was likely to fail outside of the periods of the manufacturer's warranties.  
11 Defendants also knew, or should have known, that the Water Pump Defect in the  
12 Class Vehicles could cause catastrophic engine failure leading to a loss of engine  
13 power while the vehicle was operating. Further, Defendants knew, or should have  
14 known, that such loss of power could cause the Class Vehicles to become involved in  
15 rear-end collisions or other accidents, putting vehicle operators, passengers and other  
16 motorists at risk for injury.

17 933. Defendants owed a duty to disclose the Water Pump Defect and its  
18 corresponding safety risk to Plaintiffs Matheny, Halwas, and members of the Texas  
19 Sub-Class because it possessed superior and exclusive knowledge regarding the  
20 defect and the risks associated with the Water Pump Defect's failure. Rather than  
21 disclose the defect, Defendants engaged in deceptive trade practices in order to sell  
22 additional Class Vehicles and wrongfully transfer the cost of repair or replacement of  
23 the Water Pump Defect, damaged engine parts and/or the entire engine to Plaintiffs  
24 Matheny, Halwas, and members of the Texas Sub-Class.

25 934. Defendants' unconscionable or deceptive acts or practices, affirmative  
26 misrepresentations and/or material omissions regarding the Water Pump Defect were  
27 intended to mislead consumers and misled Plaintiffs Matheny, Halwas, and members  
28 of the Texas Sub-Class.

1           935. At all relevant times, Defendants’ unconscionable or deceptive acts or  
2 practices, affirmative misrepresentations and/or omissions regarding the Water Pump  
3 Defect and its corresponding safety risk were material to Plaintiffs Matheny, Halwas,  
4 and members of the Texas Sub-Class. When Plaintiff Matheny, Halwas, and  
5 members of the Texas Sub-Class purchased or leased their Class Vehicles, they  
6 reasonably relied on the reasonable expectation that the Class Vehicles would not  
7 contain the Water Pump Defect and would not pose an unavoidable safety risk. Had  
8 Defendants disclosed that the Water Pump Defect existed in the Class Vehicle and/or  
9 presented an unavoidable safety risk, Plaintiffs Matheny, Halwas, and members of  
10 the Texas Sub-Class would not have purchased or leased the Class Vehicles or would  
11 have paid less for their vehicles. Further, had Defendants disclosed that the Water  
12 Pump Defect existed in the Class Vehicles and/or presented an unavoidable safety  
13 risk, Plaintiffs Matheny, Halwas, and members of the Texas Sub-Class would have  
14 demanded repair or replacement during the warranty periods at no cost—as provided  
15 for in Defendant MNAO’s warranties.

16           936. Defendants had a continuous duty to Plaintiffs Matheny, Halwas, and  
17 members of the Texas Sub-Class to refrain from unfair and deceptive practices under  
18 the TDTPCPA and to disclose the Water Pump Defect. Defendants’ unconscionable  
19 or deceptive acts or practices, affirmative misrepresentations and/or material  
20 omissions regarding the Water Pump Defect and its corresponding safety risk are  
21 substantially injurious to consumers. As a result of Defendants’ knowing, intentional  
22 concealment and/or omission of the Water Pump Defect and corresponding safety  
23 risk in violation of the TDTPCPA, Plaintiffs Matheny, Halwas, and members of the  
24 Texas Sub-Class have suffered harm and/or continue to suffer harm by the threat of  
25 sudden and unexpected failure of the water pump and/or actual damages in the  
26 amount of the cost to replace the Water Pump Defect, essential engine parts or the  
27 entire engine, and damages to be determined at trial. Owners and lessees of Class  
28 Vehicles also suffered an ascertainable loss in the form of the diminished value of

1 their vehicles as a result of Defendants’ deceptive and unfair acts and practices in the  
2 course of their business.

3 937. Defendants’ unlawful acts and practices occurred in the conduct of  
4 business activities and commerce.

5 938. Defendants have knowingly and willfully engaged in the unfair and  
6 deceptive trade practices alleged herein. Further, Defendants unconscionably  
7 marketed the Class Vehicles to uninformed consumers in order to maximize profits  
8 by selling additional Class Vehicles containing the undisclosed latent defect and  
9 corresponding safety risk.

10 939. Defendants’ unlawful acts and practices affect the public interest and  
11 present a continuing safety risk to Plaintiffs Matheny, Halwas, and members of the  
12 Texas Sub-Class, as well as the public.

13 940. Defendants were provided written notice of the claims of Plaintiffs  
14 Matheny, Halwas, and members of the Texas Sub-Class on June 28, 2019, directed to  
15 MNAO.

16 941. As a direct and proximate result of Defendants’ violations of the  
17 TDTPCPA, Plaintiffs Matheny, Halwas, and members of the Texas Sub-Class have  
18 suffered actual financial loss, actual damages and/or injury-in-fact.

19 942. Plaintiffs Matheny, Halwas, and members of the Texas Sub-Class seek  
20 actual damages and treble damages against Defendants in an amount to be  
21 determined at trial because Defendants acted wantonly or with such conscious  
22 indifference to the consequences that malice may be inferred.

23 943. Plaintiffs Matheny, Halwas, and members of the Texas Sub-Class also  
24 seek an order enjoining Defendants’ unfair, unlawful and/or deceptive practices,  
25 awarding costs and attorneys’ fees and any other just and proper relief available  
26 under the TDTPCPA.

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1 any mention of the water pumps as a component requiring routine inspection, service,  
2 or replacement.

3 952. In connection with the purchase or lease of each of the Class Vehicles,  
4 Defendant MNAO also provides warranty coverage for the Class Vehicles under one  
5 or more manufacturer's warranties. For illustrative purposes, Defendant MNAO  
6 currently offers New Vehicle Limited Warranty coverage for Class Vehicles sold  
7 under the Mazda brand for 3 years or 36,000 miles and extended warranty coverage  
8 for Powertrain components for 5 years or 60,000 miles.<sup>33</sup> Under the warranties  
9 provided to Plaintiff Delvecchio, Sowards, and members of the Virginia Sub-Class,  
10 Defendant MNAO promised to repair or replace covered components arising out of  
11 defects in materials and/or workmanship, including the Water Pump Defect, at no  
12 cost to owners and lessees of the Class Vehicles and within a reasonable time. As  
13 alleged herein, Defendant MNAO breached these warranties.

14 953. Defendant MNAO's warranties formed a basis of the bargain that was  
15 reached when Plaintiffs Delvecchio, Sowards, and members of the Virginia Sub-  
16 Class purchased or leased their Class Vehicles. Given the latent nature of the Water  
17 Pump Defect, Defendant MNAO knew or should have known that the majority of the  
18 water pump failures (and corresponding engine damage) occur outside of the  
19 warranty periods.

20 954. Plaintiffs Delvecchio, Sowards, and members of the Virginia Sub-Class  
21 experienced the existence of the Water Pump Defect within the warranty periods but  
22 had no knowledge of the existence of the defect and associated safety risk, which  
23 were known and concealed by Defendant MNAO. Despite the existence of the  
24 warranties, Defendant MNAO failed to adequately inform Plaintiffs Delvecchio,  
25 Sowards, and members of the Virginia Sub-Class that the Class Vehicles contained  
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27 <sup>33</sup> See, e.g., Exhibit A (2012 Mazda CX-9 Warranty Booklet). See also  
28 <https://www.mazdausa.com/owners/warranty>.

1 the Water Pump Defect and failed to provide a suitable repair or replacement of the  
2 Water Pump Defect free of charge within a reasonable time.

3 955. Defendant MNAO breached the express warranty promising to repair  
4 and correct a manufacturing defect or defect in materials or workmanship of any parts  
5 it supplied.

6 956. On information and belief, Defendant MNAO has not suitably repaired  
7 or replaced the Water Pump Defect free of charge for Plaintiffs Delvecchio, Sowards,  
8 and members of the Virginia Sub-Class Class despite the existence of the defect in  
9 the Class Vehicles at the time of sale or lease.

10 957. Defendant MNAO further breached its express warranties by selling  
11 Class Vehicles that were defective with respect to engine materials, workmanship,  
12 design and manufacture, and were accompanied by an owner's manual and/or  
13 maintenance schedule that incorporated no inspection and service intervals for the  
14 water pump although Defendant MNAO knew of the Water Pump Defect and that the  
15 water pump required periodic inspection and service.

16 958. Class Vehicles were not of merchantable quality and were unfit for the  
17 ordinary purposes for which passenger vehicles are used because of engine materials,  
18 workmanship, design and/or manufacturing defects which cause engine failure and/or  
19 failure to perform as warranted.

20 959. Defendant MNAO was provided notice of the Water Pump Defect by  
21 numerous consumer complaints made to its authorized dealers nationwide,  
22 complaints to NHTSA and through its own testing. Affording Defendant MNAO a  
23 reasonable opportunity to cure its breach of written warranties would be unnecessary  
24 and futile here because Defendant MNAO has known of and concealed the Water  
25 Pump Defect and has failed to provide a suitable repair or replacement of the Water  
26 Pump Defect free of charge within a reasonable time.

27 960. Defendant MNAO was further provided notice by Plaintiff Delvecchio  
28 when he presented his vehicle for repair at Whitten Brothers Mazda in Richmond,

1 Virginia on November 20, 2017. Upon information and belief, Whitten Brothers  
2 Mazda is an authorized dealer of Defendant MNAO and its duly authorized agent to  
3 perform warranty repairs. Upon diagnosing the water pump failure in his Class  
4 Vehicle, Whitten Brothers Mazda charged Plaintiff Delvecchio over \$1,700 to  
5 replace the water pump as well as perform the associated repairs. Despite this notice,  
6 Defendant MNAO did not cure its breach of written warranties and failed to provide  
7 a suitable repair or replacement of the Water Pump Defect free of charge within a  
8 reasonable time.

9 961. Defendant MNAO was further provided notice by Plaintiff Sowards  
10 when he presented his vehicle for repair at Nelson Mazda in Murfreesboro,  
11 Tennessee on January 15, 2019. Upon information and belief, Nelson Mazda is an  
12 authorized dealer of Defendant MNAO and its duly authorized agent to perform  
13 warranty repairs. Upon diagnosing the water pump failure in his Class Vehicle,  
14 Nelson Mazda charged Plaintiff Sowards over \$8,600 to replace the engine with a  
15 rebuilt engine. Plaintiff Sowards subsequently provided written notice directly to  
16 Defendant MNAO via first class mail on January 29, 2019. Despite these notices,  
17 Defendant MNAO did not cure its breach of written warranties and failed to provide  
18 a suitable repair or replacement of the Water Pump Defect free of charge within a  
19 reasonable time.

20 962. Any attempt by Defendant MNAO to disclaim or limit recovery to the  
21 terms of the express warranties is unconscionable and unenforceable here.  
22 Specifically, Defendant MNAO's warranty limitation is unenforceable because it  
23 knowingly sold or leased a defective product without informing consumers about the  
24 defect. The time limits contained in Defendant MNAO's warranty periods were also  
25 unconscionable and inadequate to protect Plaintiffs Delvecchio, Sowards, and  
26 members of the Virginia Sub-Class. Among other things, Plaintiffs Delvecchio,  
27 Sowards, and the members of the Virginia Sub-Class did not determine these time  
28 limitations, the terms of which unreasonably favored Defendant MNAO. A gross

1 disparity in bargaining power existed between Defendant MNAO and members of the  
2 Virginia Sub-Class, and Defendant MNAO knew or should have known that the  
3 Class Vehicles were defective at the time of sale or lease and that the Water Pump  
4 Defect posed a safety risk.

5 963. Further, the limited warranty promising to repair and/or correct a  
6 manufacturing defect fails in its essential purpose because the contractual remedy is  
7 insufficient to make Plaintiffs Delvecchio, Sowards and members of the Virginia  
8 Sub-Class whole because, on information and belief, Defendant MNAO has failed  
9 and/or has refused to adequately provide the promised remedies within a reasonable  
10 time.

11 964. Defendant MNAO knew that the Class Vehicles were inherently  
12 defective and did not conform to their warranties, and Plaintiffs Delvecchio,  
13 Sowards, and members of the Virginia Sub-Class were induced to purchase or lease  
14 the Class Vehicles under false and/or fraudulent pretenses.

15 965. Plaintiffs Delvecchio, Sowards, and the members of the Virginia Sub-  
16 Class experienced the existence of the Water Pump Defect within the warranty  
17 periods but had no knowledge of the existence of the defect, which was known and  
18 concealed by Defendant MNAO. Despite the existence of the warranties, Defendant  
19 MNAO failed to inform Plaintiffs Delvecchio, Sowards, and members of the Virginia  
20 Sub-Class that the Class Vehicles contained the Water Pump Defect during the  
21 warranty periods, and, thus, wrongfully transferred the costs of repair or replacement  
22 of the water pump and damaged engine parts to Plaintiffs Delvecchio, Sowards, and  
23 members of the Virginia Sub-Class.

24 966. Because of the Water Pump Defect, the Class Vehicles are not reliable  
25 and owners of these vehicles have lost confidence in the ability of Class Vehicles to  
26 perform the function of safe reliable transportation.

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1 967. As a direct and proximate result of Defendant MNAO's breach of  
2 express warranties, Plaintiffs Delvecchio, Sowards, and members of the Virginia  
3 Sub-Class have been damaged in an amount to be determined at trial.

4 968. Finally, because of Defendant MNAO's breach of express warranty as  
5 set forth herein, Plaintiffs Delvecchio, Sowards, and members of the Virginia Sub-  
6 Class assert, as additional and/or alternative remedies, the revocation of acceptance of  
7 the goods and the return to Plaintiffs Delvecchio, Sowards, and members of the  
8 Virginia Sub-Class of the purchase or lease price of all Class Vehicles currently  
9 owned or leased, and for such other incidental and consequential damages as allowed.

10 **COUNT LI**  
11 **Breach of Implied Warranty of Merchantability**  
12 **(On behalf of the Virginia Sub-Class against MNAO and MMC)**

13 969. Plaintiffs Delvecchio and Sowards incorporate and re-allege each  
14 preceding paragraph as though fully set forth herein.

15 970. Plaintiffs Delvecchio and Sowards bring this count on behalf of  
16 themselves and the members of the Virginia Sub-Class.

17 971. Plaintiffs Delvecchio, Sowards, and members of the Virginia Sub-Class  
18 purchased or leased the Class Vehicles, manufactured by MMC and/or MNAO, from  
19 MNAO by and through its authorized agents for retail sales, or were otherwise  
20 expected to be the eventual purchasers of the Class Vehicles when bought from a  
21 third party. At all relevant times, Defendants were the manufacturer, distributor,  
22 warrantor and/or seller of Class Vehicles. Defendants knew or had reason to know of  
23 the specific use for which the Class Vehicles were purchased or leased.

24 972. Defendants are and were at all relevant times a merchant and seller of  
25 motor vehicles (i.e., the Class Vehicles) within the meaning of the Uniform  
26 Commercial Code.

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1           973. With respect to leases, Defendants are and were at all relevant times a  
2 lessor of motor vehicles (i.e., the Class Vehicles) within the meaning of the Uniform  
3 Commercial Code.

4           974. The Class Vehicles are and were at all relevant times goods within the  
5 meaning of the Uniform Commercial Code.

6           975. Defendants impliedly warranted that the Class Vehicles were in  
7 merchantable condition and fit for the ordinary purpose for which vehicles are used.

8           976. The Class Vehicles, when sold or leased and at all times thereafter, were  
9 not in merchantable condition and were and are not fit for the ordinary purpose of  
10 providing safe and reliable transportation. The Class Vehicles contain an inherent  
11 defect – the Water Pump Defect – (at the time of sale or lease and thereafter) and  
12 present an undisclosed safety risk to drivers and occupants. Thus, Defendants  
13 breached the implied warranty of merchantability.

14           977. Through its maintenance schedules, MNAO further represented that the  
15 water pump would not need service, inspection, or repair and/or fraudulently  
16 concealed the need for repair or replacement of the water pump by omitting the water  
17 pump from the maintenance schedules. MNAO cannot disclaim its implied warranty  
18 as it knowingly sold or leased a defective product.

19           978. Defendants were provided notice of the Water Pump Defect by  
20 numerous consumer complaints made to MNAO's authorized dealers nationwide,  
21 complaints to NHTSA and through their own testing. Affording Defendants a  
22 reasonable opportunity to cure their breach of implied warranties would be  
23 unnecessary and futile here because Defendants have known of and concealed the  
24 Water Pump Defect and, on information and belief, have refused to repair or replace  
25 the Water Pump Defect free of charge within a reasonable time.

26           979. Defendants were further provided notice by Plaintiff Delvecchio when  
27 he presented his vehicle for repair at Whitten Brothers Mazda in Richmond, Virginia  
28 on November 20, 2017. Upon information and belief, Whitten Brothers Mazda is an

1 authorized dealer of Defendant MNAO and its duly authorized agent to perform  
2 warranty repairs. Upon diagnosing the water pump failure in his Class Vehicle,  
3 Whitten Brothers Mazda charged Plaintiff Delvecchio over \$1,700 to replace the  
4 water pump as well as perform the associated repairs. Despite this notice, Defendants  
5 did not cure their breach of implied warranties and failed to provide a suitable repair  
6 or replacement of the Water Pump Defect free of charge within a reasonable time.

7 980. Defendants were further provided notice by Plaintiff Sowards when he  
8 presented his vehicle for repair at Nelson Mazda in Murfreesboro, Tennessee on  
9 January 15, 2019. Upon information and belief, Nelson Mazda is an authorized  
10 dealer of Defendant MNAO and its duly authorized agent to perform warranty  
11 repairs. Upon diagnosing the water pump failure in his Class Vehicle, Nelson Mazda  
12 charged Plaintiff Sowards over \$8,600 to replace the engine with a rebuilt engine.  
13 Plaintiff Sowards subsequently provided written notice directly to MNAO via first  
14 class mail on January 29, 2019. Despite these notices, Defendants did not cure their  
15 breach of implied warranties and failed to provide a suitable repair or replacement of  
16 the Water Pump Defect free of charge within a reasonable time.

17 981. As a direct and proximate result of Defendants' breach of the implied  
18 warranty of merchantability, Plaintiffs Delvecchio, Sowards, and members of the  
19 Virginia Class have been damaged in an amount to be proven at trial.

20 982. Any attempt by MNAO to disclaim or limit the implied warranty of  
21 merchantability vis-à-vis consumers is unconscionable and unenforceable here.  
22 Specifically, MNAO's warranty limitation is unenforceable because it knowingly  
23 sold or leased a defective product without informing consumers about the defect.  
24 The time limits contained in MNAO's warranty periods were also unconscionable  
25 and inadequate to protect Plaintiffs Delvecchio, Sowards, and members of the  
26 Virginia Sub-Class. Among other things, Plaintiffs Delvecchio, Sowards, and  
27 members of the Virginia Sub-Class did not determine these time limitations, the  
28 terms of which unreasonably favored MNAO. A gross disparity in bargaining power



1 existed between MNAO and members of the Virginia Sub-Class, and MNAO knew  
2 or should have known that the Class Vehicles were defective at the time of sale or  
3 lease and that the Water Pump Defect posed a safety risk.

4 983. Plaintiffs Delvecchio, Sowards, and members of the Virginia Sub-Class  
5 have been excused from performance of any warranty obligations as a result of  
6 Defendants' conduct described herein.

7 984. The applicable statute of limitations for the implied warranty claim has  
8 been tolled by the discovery rule and/or fraudulent concealment.

9  
10 **COUNT LII**  
11 **Violation of the Magnuson-Moss Warranty Act ("MMWA"),**  
12 **15 U.S.C. § 2301, et seq.**  
13 **(On behalf of the Nationwide Class and the Virginia Sub-Class against MNAO**  
14 **and MMC)**

15 985. Plaintiffs Delvecchio and Sowards incorporate and re-allege each  
16 preceding paragraph as though fully set forth herein.

17 986. Plaintiffs Delvecchio and Sowards bring this count on behalf of  
18 themselves and the members of the Nationwide Class or, alternatively, on behalf of  
19 the Virginia Sub-Class.

20 987. Plaintiffs Delvecchio and Sowards satisfy the MMWA jurisdictional  
21 requirement because they allege diversity jurisdiction under CAFA, 28 U.S.C. §  
22 1332(d)(2).

23 988. Plaintiffs Delvecchio, Sowards, and members of the Classes are  
24 "consumers" within the meaning of the Magnuson-Moss Warranty Act, 15 U.S.C. §  
25 2301(3).

26 989. Defendants are "suppliers" and "warrantors" within the meaning of the  
27 Magnuson-Moss Warranty Act, 15 U.S.C. § 2301(4)-(5).

28 990. The Class Vehicles are "consumer products" within the meaning of the  
Magnuson-Moss Warranty Act, 15 U.S.C. § 2301(1).

///

1 991. The MMWA provides a cause of action for any consumer who is  
2 damaged by the failure of a warrantor to comply with a written or implied warranty.  
3 *See* 15 U.S.C. § 2310(d)(1).

4 992. Defendant MNAO provided Plaintiffs Delvecchio, Sowards, and  
5 members of the Classes with one or more express warranties, which are covered  
6 under 15 U.S.C. § 2301(6). For illustrative purposes, MNAO currently offers New  
7 Vehicle Limited Warranty coverage for Class Vehicles sold under the Mazda brand  
8 for 3 years or 36,000 miles and extended warranty coverage for Powertrain  
9 components for 5 years or 60,000 miles.<sup>34</sup> Under warranties provided to members of  
10 the Classes, MNAO promised to repair or replace covered defective components  
11 arising out of defects in materials and/or workmanship, including the Water Pump  
12 Defect, at no cost to owners and lessees of the Class Vehicles. As alleged herein,  
13 MNAO breached these warranties.

14 993. Plaintiffs Delvecchio, Sowards, and members of the Classes experienced  
15 the Water Pump Defect within the warranty periods but MNAO failed to inform  
16 Plaintiffs and members of the Classes of the existence of the Water Pump Defect and  
17 associated safety risk, and failed to provide a suitable remedy or repair of the Water  
18 Pump Defect free of charge within a reasonable time.

19 994. Defendants were provided notice by letter dated May 13, 2019 directed  
20 to MNAO that Plaintiffs would pursue a claim under the MMWA on behalf of a  
21 class.

22 995. Any attempt by MNAO to disclaim or limit its express or implied  
23 warranties is unconscionable and unenforceable here. Specifically, MNAO's  
24 warranty limitations are unenforceable because it knowingly sold or leased a  
25 defective product without informing consumers about the defect. The time limits  
26 contained in MNAO's warranty periods are also unconscionable and inadequate to

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27 <sup>34</sup> *See, e.g.*, Exhibit A (2012 Mazda CX-9 Warranty Booklet). *See also*  
28 <https://www.mazdausa.com/owners/warranty>.

1 protect Plaintiffs Delvecchio, Sowards, and members of the Classes. Among other  
2 things, Plaintiffs Delvecchio, Sowards, and members of the Classes did not determine  
3 these time limitations, the terms of which unreasonably favored MNAO. A gross  
4 disparity in bargaining power existed between MNAO and members of the Classes,  
5 and MNAO knew or should have known that the Class Vehicles were defective at the  
6 time of sale or lease and that they posed a safety risk.

7 996. The Class Vehicles' implied warranties are covered under 15 U.S.C. §  
8 2301(7).

9 997. Defendants breached these warranties by failing to disclose and  
10 fraudulently concealing information regarding the standard, quality or grade of the  
11 Class Vehicles and/or the presence of the Water Pump Defect and corresponding  
12 safety risk. Without limitation, the Class Vehicles share a common defect in design,  
13 material, manufacturing and/or workmanship that fails to operate as represented by  
14 Defendants and presents a safety risk.

15 998. Affording Defendants a reasonable opportunity to cure their breach of  
16 warranties would be unnecessary and futile. At the time of sale or lease of each Class  
17 Vehicle and all relevant times thereafter, Defendants knew, or were reckless in not  
18 knowing, of the material omissions concerning the standard, quality or grade of the  
19 Class Vehicles and the presence of the Water Pump Defect and corresponding safety  
20 risk, but failed to repair or replace the Water Pump Defect and/or disclose the defect.  
21 Under the circumstances, the remedies available under any informal settlement  
22 procedure would be inadequate and any requirement that Plaintiffs resort to an  
23 informal dispute resolution procedure and/or afford Defendants a reasonable  
24 opportunity to cure its breach of warranties is excused and thereby deemed satisfied.

25 999. Plaintiffs Delvecchio, Sowards, and members of the Classes would  
26 suffer economic hardship if they returned their Class Vehicles, but did not receive the  
27 return of all payments made by them to Defendants. Thus, Plaintiffs Delvecchio,  
28

1 Sowards, and members of the Classes have not re-accepted their Class Vehicles by  
2 retaining them.

3 1000. The amount in controversy of Plaintiffs Delvecchio’s and Sowards’  
4 individual claims meets or exceeds the sum of \$25. The amount in controversy of  
5 this action exceeds the sum of \$50,000, exclusive of interest and costs, computed on  
6 the basis of all claims to be determined in this lawsuit.

7 1001. Plaintiffs Delvecchio and Sowards, individually and on behalf of  
8 members of the Classes, seek all damages permitted by law, including diminution in  
9 the value of the Class Vehicles, in an amount to be proven at trial.

10 **COUNT LIII**  
11 **Violation of the Virginia Consumer Protection Act (“VCPA”),**  
12 **(On behalf of the Virginia Sub-Class against MNAO and MMC)**

13 1002. Plaintiffs Delvecchio and Sowards incorporate and re-allege each  
14 preceding paragraph as though fully set forth herein.

15 1003. Plaintiffs Delvecchio and Sowards bring this count on behalf of  
16 themselves and the members of the Virginia Sub-Class.

17 1004. Plaintiffs Delvecchio, Sowards, members of the Virginia Sub-Class, and  
18 Defendants are “persons” as defined by Va. Code Ann. § 59.1-198.

19 1005. The sale or lease of the Class Vehicles by Plaintiffs Delvecchio,  
20 Sowards, and members of the Virginia Sub-Class were for personal, family or  
21 household purposes and are “consumer transaction[s]” as defined by Va. Code Ann.  
22 § 59.1-198.

23 1006. The Class Vehicles are “goods” as defined by Va. Code Ann. § 59.1-  
24 198.

25 1007. Defendants are “suppliers” as defined by Va. Code Ann. § 59.1-198.

26 1008. Defendants violated the Virginia Consumer Protection Act (“VCPA”),  
27 Va. Code Ann. § 59.1-200(A), by *inter alia*: (1) “[m]isrepresenting that the Class  
28 Vehicles have certain quantities, characteristics, ingredients, uses, or benefits;” (2)

1 “[m]isrepresenting that the goods or services are of a particular standard, quality,  
2 grade, style, or model;” (3) “[a]dvertising goods or services with the intent not to sell  
3 them as advertised;” and (4) “[u]sing any other deception, fraud, false pretense, false  
4 promise, or misrepresentation in connection with a consumer transaction.”

5 1009. In the course of its business, Defendants willfully failed to disclose and  
6 actively concealed the Water Pump Defect and otherwise engaged in activities with a  
7 tendency or capacity to deceive as discussed herein. Defendants also engaged in  
8 unlawful trade practices by employing deception, deceptive acts or practices, fraud,  
9 misrepresentations, or concealment, suppression, or omission of any material fact  
10 with intent that other rely upon such concealment, suppression, or omission, in  
11 connection with the sale of the Class Vehicles.

12 1010. In violation of the VCPA, Defendants employed unfair and deceptive  
13 acts or practices, fraud, false pretense, misrepresentations, or concealment,  
14 suppression or omission of a material fact with intent that others rely upon such  
15 concealment, suppression or omission, in connection with the sale and/or lease of  
16 Class Vehicles. Defendants knowingly concealed, suppressed and/or omitted  
17 material facts regarding the Water Pump Defect and associated safety hazard and  
18 misrepresented the standard, quality or grade of the Class Vehicles, which directly  
19 caused harm to Plaintiffs Delvecchio, Sowards, and the Virginia Sub-Class.

20 1011. Defendants actively suppressed the fact that the water pump in Class  
21 Vehicles is defective and presents a safety hazard because of materials, workmanship,  
22 design and/or manufacturing defects. Further, Defendants employed unfair and  
23 deceptive trade practices to deny repair or replacement of the Water Pump Defect  
24 within a reasonable time in violation of the VCPA. Defendant MNAO also breached  
25 its warranties as alleged herein in violation of the VCPA.

26 1012. Defendants’ unfair and deceptive trade practices were likely to deceive a  
27 reasonable consumer. Plaintiffs Delvecchio, Sowards, and members of the Virginia  
28 Sub-Class had no reasonable way to know that Class Vehicles contained water pumps

1 which were defective in materials, workmanship, design and/or manufacture and  
2 posed a safety risk. Defendants possessed superior knowledge as to the quality and  
3 characteristics of the Class Vehicles, including the Water Pump Defect and  
4 associated safety risks, and any reasonable consumer would have relied on  
5 Defendants' misrepresentations and omissions as the Plaintiffs Delvecchio, Sowards,  
6 and members of the Virginia Sub-Class did.

7 1013. Defendants intentionally and knowingly misrepresented and omitted  
8 facts regarding the Water Pump Defect and associated safety hazard with the intent to  
9 mislead Plaintiffs Delvecchio, Sowards, and Virginia Sub-Class members.  
10 Defendants knew, or should have known, that the water pump is defective and its  
11 failure could and would cause catastrophic engine failure, leading to the Class  
12 Vehicles suddenly losing all power while in operation and/or other associated safety  
13 hazards.

14 1014. Defendants owed a duty to disclose the Defective HVAC System and its  
15 corresponding safety hazard to Plaintiffs Delvecchio, Sowards, and Virginia Sub-  
16 Class members because Defendants possessed superior and exclusive knowledge  
17 regarding the defect and the hazard associated with the Water Pump Defect. Rather  
18 than disclose the defect, Defendants engaged in unfair and deceptive trade practices  
19 in order to sell additional Class Vehicles and avoid the cost of repair or replacement  
20 of the Water Pump Defect.

21 1015. Defendants' unfair and deceptive acts or practices, affirmative  
22 misrepresentations and/or material omissions regarding the Water Pump Defect were  
23 intended to mislead consumers and misled Plaintiffs Delvecchio, Sowards, and  
24 Virginia Sub-Class members.

25 1016. At all relevant times, Defendants' unfair and deceptive acts or practices,  
26 affirmative misrepresentations and/or omissions regarding the Water Pump Defect  
27 and its corresponding safety hazard were material to Plaintiffs Delvecchio, Sowards,  
28 and Virginia Sub-Class members. When Plaintiffs Delvecchio, Sowards, and

1 Virginia Sub-Class members purchased or leased their Class Vehicles, they  
2 reasonably relied on the reasonable expectation that the Class Vehicles would be free  
3 from safety defects and/or pose an unavoidable safety hazard. Had Defendants  
4 disclosed that the water pump was defective and would fail, causing the coolant to  
5 mix with the engine oil and irreparably damage the engine, and/or pose an  
6 unavoidable safety hazard, Plaintiffs Delvecchio, Sowards, and Virginia Sub-Class  
7 members would not have purchased or leased the Class Vehicles, or would have paid  
8 less for their vehicles.

9 1017. Defendants had a continuous duty to Plaintiffs Delvecchio, Sowards, and  
10 members of the Virginia Sub-Class to refrain from unfair and deceptive practices  
11 under the VCPA and to disclose the defect and associated safety hazard. Defendants'  
12 unfair and deceptive acts or practices, affirmative misrepresentations and/or material  
13 omissions regarding the Water Pump Defect and corresponding safety hazard are  
14 substantially injurious to consumers. As a result of Defendants' knowing, intentional  
15 concealment and/or omission of the Water Pump Defect and associated safety hazard  
16 in violation of the VCPA, Plaintiffs Delvecchio, Sowards, and members of the  
17 Virginia Sub-Class have suffered harm and/or continue to suffer harm by the threat of  
18 their engines being damaged by a water pump failure and/or an unavoidable safety  
19 hazard, and damages to be determined at trial. Owners and lessees of Class Vehicles  
20 also suffered an ascertainable loss in the form of, *inter alia*, out-of-pocket costs for  
21 diagnosis and repair or replacement of the Water Pump Defect, and the diminished  
22 value of their vehicles as a result of Defendants' deceptive and unfair acts and  
23 practices in the course of its business.

24 1018. Defendants have knowingly and willfully engaged in the unfair and  
25 deceptive trade practices alleged herein. Further, Defendants unconscionably  
26 marketed the Class Vehicles to uninformed consumers in order to maximize profits  
27 by selling additional Class Vehicles containing the undisclosed defect and  
28 corresponding safety hazard.

1 1019. Defendants' deceptive acts or practices occurred in the conduct of trade  
2 or commerce. Defendants knew or should have known that its unlawful conduct  
3 violated the VCPA.

4 1020. Defendants' unlawful acts and practices affect the public interest, and  
5 trade and commerce in the State of Virginia, and present a continuing safety hazard to  
6 Plaintiffs Delvecchio, Sowards, and members of the Virginia Sub-Class.

7 1021. As a direct and proximate result of Defendants' violations of the VCPA,  
8 Plaintiffs Delvecchio, Sowards, and members of the Virginia Sub-Class have suffered  
9 actual damages and/or injury in fact, including, *inter alia*: (1) out-of-pocket monies  
10 for diagnosis, repair and/or replacement of the defective water pump; (2) the  
11 difference in value between the Class Vehicles promised and warranted, and the  
12 Class Vehicles containing the Water Pump Defect; and/or (3) the diminished resale  
13 value of the Class Vehicles containing the Water Pump Defect.

14 1022. Plaintiffs Delvecchio, Sowards, and members of the Virginia Sub-Class  
15 seek actual damages against Defendants in an amount to be determined at trial and/or  
16 statutory damages pursuant to the VCPA based on Defendants' wanton and willful  
17 conduct, costs, attorneys' fees, restitution, disgorgement of funds, and any other just  
18 and proper relief available under the VCPA. *See* Va. Code § 59.1-204.

19 **COUNT LIV**

20 **Fraud By Omission or Fraudulent Concealment**  
21 **(On behalf of the Virginia Sub-Class against MNAO and MMC)**

22 1023. Plaintiffs Delvecchio and Sowards incorporate and re-allege each  
23 preceding paragraph as though fully set forth herein.

24 1024. Plaintiff Delvecchio and Sowards bring this count on behalf of  
25 themselves and the members of the Virginia Sub-Class.

26 1025. Defendants intentionally and knowingly concealed, suppressed and/or  
27 omitted material facts including the standard, quality or grade of the Class Vehicles  
28 and the fact that the Class Vehicles contain a Water Pump Defect and corresponding



1 safety risk, with the intent that Plaintiffs Delvecchio, Sowards, and members of the  
2 Virginia Sub-Class rely on Defendants' omissions. As a direct result of Defendants'  
3 fraudulent conduct, Plaintiffs Delvecchio, Sowards, and members of the Virginia  
4 Sub-Class have suffered actual damages.

5 1026. Defendants knew (at the time of sale or lease and thereafter) that the  
6 Class Vehicles contained the Water Pump Defect, concealed the defect and never  
7 intended to repair or replace the Water Pump Defect during the warranty periods. To  
8 date, Defendants have not provided Plaintiffs Delvecchio, Sowards, and members of  
9 the Virginia Sub-Class with a repair or remedy for the Water Pump Defect.

10 1027. Defendants owed a duty to disclose the Water Pump Defect and its  
11 corresponding safety risk to Plaintiffs Delvecchio, Sowards, and members of the  
12 Virginia Sub-Class because Defendants possessed superior and exclusive knowledge  
13 regarding the defect. Further, Defendants had a duty to disclose any information  
14 relating to the safety, quality, functionality and reliability of Class Vehicles because  
15 they consistently marketed the Class Vehicles as safe. Once Defendants made  
16 representations to the public about safety, quality, functionality, and reliability,  
17 Defendants was under a duty to disclose these omitted facts, because where one does  
18 speak one must speak the whole truth and not conceal any facts which materially  
19 qualify those facts stated. One who volunteers information must be truthful, and the  
20 telling of a half-truth calculated to deceive is fraud. Rather than disclose the defect,  
21 Defendants intentionally and knowingly concealed, suppressed and/or omitted  
22 material facts including the standard, quality or grade of the Class Vehicles and the  
23 presence of the Water Pump Defect and corresponding safety risk, to sell additional  
24 Class Vehicles and avoid the cost of repair or replacement.

25 1028. The Water Pump Defect is material to Plaintiffs Delvecchio, Sowards,  
26 and members of the Virginia Sub-Class because Plaintiffs Delvecchio, Sowards, and  
27 members of the Virginia Sub-Class had a reasonable expectation that the vehicles  
28 would not contain a defect, such as the Water Pump Defect, that leads to exorbitant

1 repair costs and exposes them and other vehicle occupants to a safety risk. No  
2 reasonable consumer expects a vehicle to contain a concealed defect in design,  
3 manufacture, materials or workmanship, such as the Water Pump Defect, that can  
4 lead to thousands of dollars in repair or replacement costs, and can cause catastrophic  
5 engine failure with little to no warning or time to take preventative measures or safely  
6 remove the vehicle from the road.

7 1029. Plaintiffs Delvecchio, Sowards, and members of the Virginia Sub-Class  
8 would not have purchased or leased the Class Vehicles but for Defendants' omissions  
9 and concealment of material facts regarding the nature and quality of the Class  
10 Vehicles and existence of the Water Pump Defect and corresponding safety risk, or  
11 would have paid less for the Class Vehicles.

12 1030. Defendants knew their concealment and suppression of material facts  
13 was false and misleading and knew the effect of concealing those material facts.  
14 Defendants knew their concealment and suppression of the Water Pump Defect  
15 would sell more Class Vehicles and would discourage Plaintiffs Delvecchio,  
16 Sowards, and members of the Virginia Sub-Class from seeking replacement or repair  
17 of the Water Pump Defect during the applicable warranty periods. Further,  
18 Defendants intended to induce Plaintiffs Delvecchio, Sowards, and members of the  
19 Virginia Sub-Class into purchasing or leasing the Class Vehicles and to discourage  
20 them from seeking replacement or repair of the Water Pump Defect in order to  
21 decrease costs and increase profits.

22 1031. Defendants acted with malice, oppression, and fraud.

23 1032. Plaintiffs Delvecchio, Sowards, and members of the Virginia Sub-Class  
24 reasonably relied upon Defendants' knowing concealment and omissions. As a direct  
25 and proximate result of Defendants' omissions and active concealment of material  
26 facts regarding the Water Pump Defect and associated safety risk, Plaintiffs  
27 Delvecchio, Sowards, and members of the Virginia Sub-Class have suffered actual  
28 damages in an amount to be determined at trial.

1 **VIII. PRAYER FOR RELIEF**

2 WHEREFORE, Plaintiffs, on behalf of themselves and all others similarly  
3 situated, respectfully request that this Court enter judgment against Defendants and in  
4 favor of Plaintiffs and the Classes, and award the following relief:

- 5 • An order certifying this action as a class action pursuant to Rule 23 of  
6 the Federal Rules of Civil Procedure, declaring Plaintiffs as the  
7 representatives of the Classes, and Plaintiffs' counsel as counsel for  
8 the Classes;
- 9 • An order awarding declaratory relief and enjoining Defendants from  
10 continuing the unlawful, deceptive, fraudulent, harmful and unfair  
11 business conduct and practices alleged herein;
- 12 • Appropriate injunctive and equitable relief;
- 13 • A declaration that Defendants are financially responsible for all Class  
14 notice and the administration of Class relief;
- 15 • An order awarding costs, restitution, disgorgement, punitive damages,  
16 statutory damages, treble damages and exemplary damages under  
17 applicable law, and compensatory damages for economic loss,  
18 diminished value, loss of benefit-of-the-bargain, and out-of-pocket  
19 costs in an amount to be determined at trial;
- 20 • An order awarding any applicable statutory and civil penalties;
- 21 • An order requiring Defendants to pay both pre- and post-judgment  
22 interest on any amounts awarded;
- 23 • An award of costs, expenses, and attorneys' fees as permitted by law;
- 24 and

25 ///

26 ///

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- Such other or further relief as the Court may deem appropriate, just, and equitable.

DATED: June 28, 2019

Respectfully submitted,

/s/ Jeffrey A. Koncius

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*Attorneys for Plaintiffs and the Proposed Classes*

1 **IX. DEMAND FOR JURY TRIAL**

2 Pursuant to Federal Rule of Civil Procedure 38(b), Plaintiffs demand a trial by  
3 jury of any and all issues in this action so triable of right.

4 DATED: June 28, 2019

Respectfully submitted,

5  
6 /s/ Jeffrey A. Koncius

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711 West Third Street  
Little Rock, AR 72201  
Tel.: (501) 372-1329

*Attorneys for Plaintiffs and the Proposed Classes*

# EXHIBIT A



We thank you very much for choosing Mazda. We at Mazda design and build vehicles with complete customer satisfaction in mind. From the moment you get behind the wheel of your new Mazda, you'll notice how good it feels. A feeling you'll appreciate for as long as you own your Mazda.

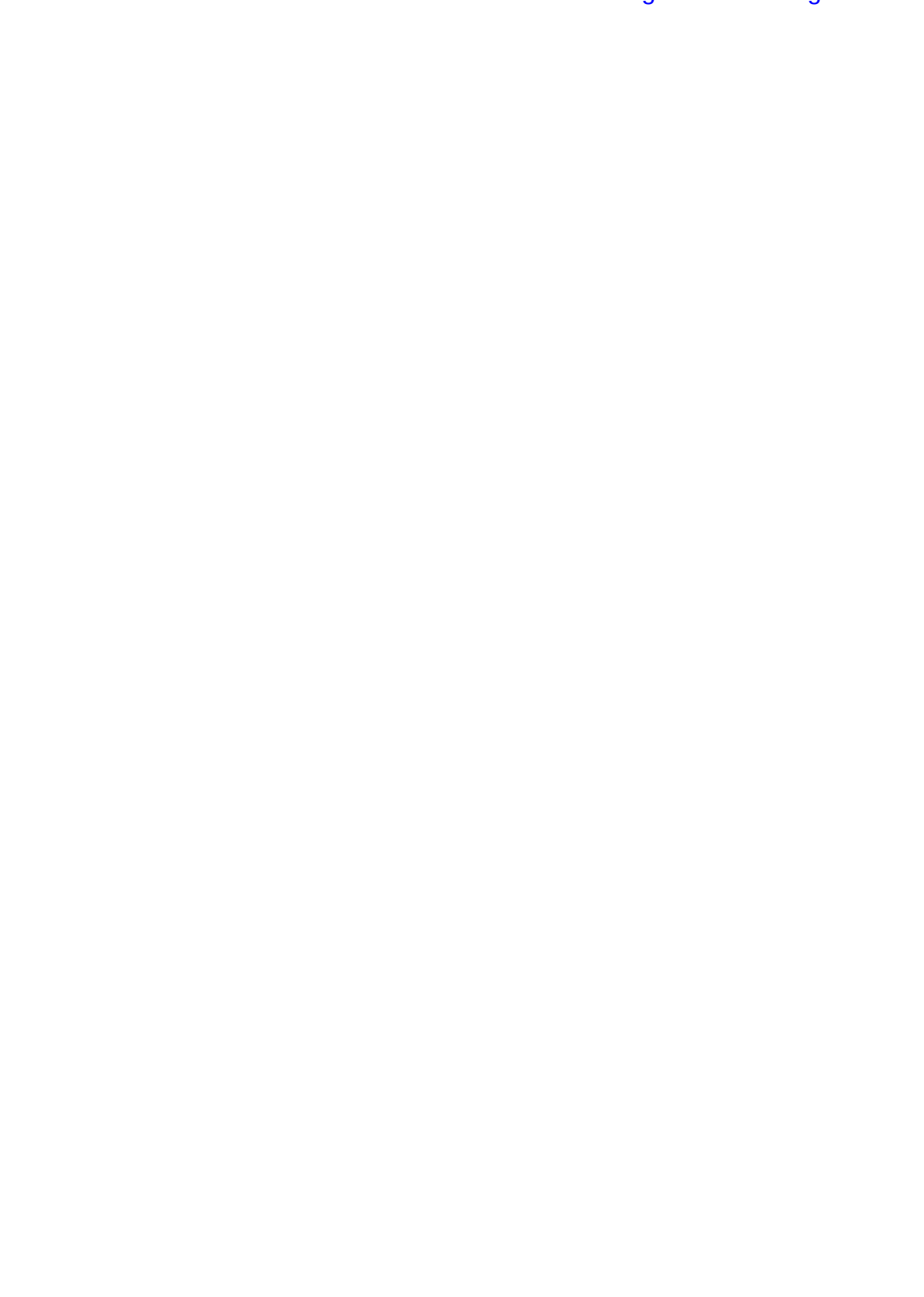
You'll also be pleased to know how strongly we stand behind every Mazda vehicle. The New Vehicle Limited Warranty and the Powertrain Limited Warranty described in this booklet is one of the finest available.

Together with your Owner's Manual, this warranty booklet details the operating procedures and intervals between maintenance that we recommend you follow to maximize the performance of your Mazda.

In addition, your authorized Mazda Dealer will take care of all your service needs using Genuine Mazda Parts. They'll do all they can to ensure that your Mazda vehicle continues to exceed all your expectations.

At Mazda, it's not enough to sell vehicles that look impressive in the showroom. We're committed to making sure you enjoy your Mazda for years to come.

**Mazda Motor Corporation  
and  
Mazda North American Operations**



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**Note:**

All information is based on the latest data available at the time of publication and, with the exception of the emissions warranty, is subject to change without notice.

# WARRANTY COVERAGE AT A GLANCE

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		Warranty Term (Whichever comes first)		
		Months in Service	Miles in Service	
			10,000 20,000 30,000 40,000 50,000 60,000 70,000 80,000 90,000 (( 150,000	
<b>LIMITED WARRANTY</b>	<b>Service Adjustment</b>	12	12,000	
	<b>Basic</b>	36	36,000	
	<b>Original Equipment Battery</b>	36	100% for 12 months * (Unlimited Miles)	
	<b>Powertrain</b>	60	60,000	
	<b>Safety Restraint</b>	60	60,000	
	<b>Perforation</b>	60	(Unlimited Miles)	
<b>EMISSION WARRANTY</b>	<b>Federal</b>	<b>Emission Defects</b> • Any Related Parts	36	36,000
		• Specific Parts	96	80,000
	<b>California</b>	<b>Emission Performance</b> • Any Related Parts**	24	24,000
		• Specific Parts	96	80,000
		<b>Emission Defects</b> • Any Related Parts	36	50,000
		• Specific Parts***	84	70,000
	<b>Emission Performance</b>	36	50,000	
	<b>Partial Zero Emission Vehicle (PZEV)</b> • All Emission Related Parts	180	150,000	
<b>Replacement Parts &amp; Accessories</b>		12	12,000 From Installation Date or Purchase Date	

This chart illustrates warranty coverage by months and miles.

Please read the applicable pages for detailed information on what is covered and what is not covered under each of these warranties.

**Note:** Tires are warranted by the Tire Manufacturers.

\* : Prorate through 36th month

\*\* : Mazda will provide coverage under the terms of the New Vehicle Warranty.

\*\*\* : Except those specified parts covered by the Federal Emission Warranty.

**Please keep this booklet with your Mazda Vehicle.**

**This booklet should be presented to a Mazda Dealer if warranty service is needed.**

**This booklet should remain with your Mazda Vehicle, so if you sell it future owners will have this information.**

#### **DEFINITIONS**

As used in this booklet (unless otherwise specifically stated),

“Mazda” means Mazda Motor Corporation, 3-1 Shinchi, Fuchu-cho, Aki-gun, Hiroshima, Japan 7308670, and Mazda North American Operations 7755 Irvine Center Drive, Irvine, CA 92618-2922, U.S.A.

“Mazda Vehicle” means a 2012 model year Mazda motor vehicle manufactured by or for Mazda.

“Mazda Importer/Distributor” means any of the companies identified as a Mazda Importer/Distributor on page 42 of this booklet.

“Mazda Dealer” means a person authorized by a Mazda Importer/Distributor to service Mazda Vehicles or perform repairs under the warranties in this booklet.

“Mazda Accessory” means a Mazda genuine accessory or Mazda genuine optional equipment supplied by a Mazda Importer/Distributor.

# VEHICLE AND OWNER IDENTIFICATION

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Owner's Name		Date of Retail Delivery or First Use		
_____		_____		
Address		Month	Day	Year
_____		Mileage at Delivery		
_____		_____ Miles		
City	State	Zip Code		
Vehicle Identification Number				
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Name of Selling Dealership				
_____				
TEL (      )		-	Dealer Code	

## SPEEDOMETER REPLACEMENT RECORD

Speedometer replaced on \_\_\_\_\_ with \_\_\_\_\_ Miles  
date

Dealer Name

Dealer Signature

After the speedometer is replaced, total mileage should be determined by adding the mileage listed here to the current mileage shown on the speedometer installed.

### To Our Customer

Your complete and permanent satisfaction is our business. We are here to serve you. All Authorized Mazda Dealers have the knowledge and the tools to keep your Mazda Vehicle in top condition.

If you have any questions or recommendations for improvement regarding the service of your Mazda Vehicle or servicing by Mazda Dealer personnel, we recommend that you take the following steps:

#### **Step 1: Contact Your Mazda Dealer**

Discuss the matter with an Authorized Mazda Dealer. This is the quickest and best way to address the issue.

If your concern has not been resolved by the CUSTOMER RELATIONS, SALES, SERVICE or PARTS MANAGER, then please contact the GENERAL MANAGER or the OWNER of the dealership.



## WHEN YOU NEED TO TALK TO MAZDA

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### Step 2: Contact Mazda North American Operations

If for any reason you feel the need for further assistance after contacting your dealership management, you can reach Mazda North American Operations by one of the following ways:

Log on at: **[www.mazdausa.com](http://www.mazdausa.com)**

Answers to many questions, including how to locate or contact a local Mazda Dealership in the U.S., can be found here.

You can also contact Mazda:

By e-mail: **[CustomerAssistance@Mazdausa.com](mailto:CustomerAssistance@Mazdausa.com)**

By Phone at: **(800) 222-5500**

By letter at: **Attn: Customer Assistance  
Mazda North American Operations  
7755 Irvine Center Drive  
Irvine, CA 92618-2922  
P.O. Box 19734  
Irvine, CA 92623-9734**

Whatever way you contact us, please help us to serve you more efficiently and effectively by providing the following information:

1. Your name, address, and telephone number
2. Year and model of vehicle
3. Vehicle Identification Number (17 digits, noted on your registration or title or located on the upper driver's side corner of the dash)
4. Purchase date and current mileage
5. Your dealer's name and city location
6. Your question(s)

If you live outside the U.S.A., please contact your nearest Mazda Distributor (Please see page 42.)



### **Step 3: Contact Better Business Bureau (BBB)**

Mazda North American Operations realizes that mutual agreement on some issues may not be possible. As a final step to ensure that your concerns are being fairly considered, Mazda North American Operations has agreed to participate in a dispute settlement program administered by the Better Business Bureau (BBB) system, at no cost to you the consumer.

BBB AUTO LINE works with consumers and the manufacturer in an attempt to reach a mutually acceptable resolution of any warranty related concerns. If the BBB is not able to facilitate a settlement they will provide an informal hearing before an arbitrator.

You are required to resort to BBB AUTO LINE before exercising rights or seeking remedies under the Federal Magnuson-Moss Warranty Act, 15 U.S.C. § 2301 et seq. To the extent permitted by the applicable state "Lemon Law", you are also required to resort to BBB AUTO LINE before exercising any rights or seeking remedies under the "Lemon Law". If you choose to seek remedies that are not created by the Magnuson-Moss Warranty Act or the applicable state "Lemon Law", you are not required to first use BBB AUTO LINE.

The whole process normally takes 40 days or less. The arbitration decision is not binding on you or Mazda else you accept the decision. For more information about BBB AUTO LINE, including current eligibility standards, please call 1-800-955-5100 or visit the BBB website at [www.lemonlaw.bbb.org](http://www.lemonlaw.bbb.org).

Being truly committed to customer satisfaction is more than a phrase with Mazda. We hope to satisfy every customer directly, but if there is ever a question about our decision, Mazda believes in providing a fast, fair and free method such as the BBB AUTO LINE to ensure Mazda delivers on our commitment to do the right thing for our customers!

### **For Vehicles in CALIFORNIA**

1. MAZDA NORTH AMERICAN OPERATIONS ("MAZDA") participates in BBB AUTO LINE, a mediation/arbitration program administered by the Council of Better Business Bureaus [4200 Wilson Boulevard, Arlington, Virginia 22203] through local Better Business Bureaus. BBB AUTO LINE and MAZDA have been certified by the Arbitration Certification Program of the California Department of Consumer Affairs.
2. If you have a problem arising under a MAZDA written warranty, we encourage you to bring it to our attention. If we are unable to resolve it, you may file a claim with BBB AUTO LINE. Claims must be filed with BBB AUTO LINE within six (6) months after the expiration of the warranty.

## WHEN YOU NEED TO TALK TO MAZDA

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### **Step 3: Contact Better Business Bureau (BBB) (continued)**

3. To file a claim with BBB AUTO LINE, call 1-800-955-5100. There is no charge for the call.
4. In order to file a claim with BBB AUTO LINE, you will have to provide your name and address, the brand name and vehicle identification number (VIN) of your vehicle, and a statement of the nature of your problem or complaint. You will also be asked to provide: the approximate date of your acquisition of the vehicle, the vehicle's current mileage, the approximate date and mileage at the time any problem(s) were first brought to the attention of MAZDA or one of our dealers, and a statement of the relief you are seeking.
5. BBB AUTO LINE staff may try to help resolve your dispute through mediation. If mediation is not successful, or if you do not wish to participate in mediation, claims within the program's jurisdiction may be presented to an arbitrator at an informal hearing. The arbitrator's decision should ordinarily be issued within 40 days from the time your complaint is filed; there may be a delay of 7 days if you did not first contact MAZDA about your problem, or a delay of up to 30 days if the arbitrator requests an inspection/report by an impartial technical expert or further investigation and report by BBB AUTO LINE.
6. You are required to use BBB AUTO LINE before asserting in court any rights or remedies conferred by California Civil Code Section 1793.22. You are also required to use BBB AUTO LINE before exercising rights or seeking remedies created by Title I of the Magnuson-Moss Warranty Act, 15 U.S.C. sec. 2301 et seq. If you choose to seek redress by pursuing rights and remedies not created by California Civil Code Section 1793.22 or Title I of the Magnuson-Moss Warranty Act, resort to BBB AUTO LINE is not required by those statutes.
7. California Civil Code Section 1793.2(d) requires that, if MAZDA or its representative is unable to repair a new motor vehicle to conform to the vehicle's applicable express warranty after a reasonable number of attempts, MAZDA may be required to replace or repurchase the vehicle. California Civil Code Section 1793.22(b) creates a presumption that MAZDA has had a reasonable number of attempts to conform the vehicle to its applicable express warranties if, within 18 months from delivery to the buyer or 18,000 miles on the vehicle's odometer, whichever occurs first, one or more of the following occurs:

### Step 3: Contact Better Business Bureau (BBB) (continued)

- \* The same nonconformity [a failure to conform to the written warranty that substantially impairs the use, value or safety of the vehicle] results in a condition that is likely to cause death or serious bodily injury if the vehicle is driven AND the nonconformity has been subject to repair two or more times by MAZDA or its agents AND the buyer or lessee has directly notified MAZDA of the need for the repair of the nonconformity; OR
- \* The same nonconformity has been subject to repair 4 or more times by MAZDA or its agents AND the buyer has notified MAZDA of the need for the repair of the nonconformity; OR
- \* The vehicle is out of service by reason of repair of nonconformities by MAZDA or its agents for a cumulative total of more than 30 calendar days after delivery of the vehicle to the buyer.

NOTICE TO MAZDA AS REQUIRED ABOVE SHALL BE SENT TO THE FOLLOWING ADDRESS:

Mazda North American Operations  
7755 Irvine Center Drive  
Irvine, CA 92618  
ATTN: Customer Mediation

8. The following remedies may be sought in BBB AUTO LINE: repairs, reimbursement for money paid to repair a vehicle or other expenses incurred as result of a vehicle nonconformity, repurchase or replacement of your vehicle, and compensation for damages and remedies available under MAZDA'S written warranty or applicable law.
9. The following remedies may not be sought in BBB AUTO LINE: punitive or multiple damages, attorneys' fees, or consequential damages other than as provided in California Civil Code Section 1794(a) and (b).
10. You may reject the decision issued by a BBB AUTO LINE arbitrator. If you reject the decision, you will be free to pursue further legal action. The arbitrator's decision and any findings will be admissible in a court action.
11. If you accept the arbitrator's decision, MAZDA will be bound by the decision, and will comply with the decision within a reasonable time not to exceed 30 days after we receive notice of your acceptance of the decision.
12. Please call BBB AUTO LINE at 1-800-955-5100 for further details about the program.

# NEW VEHICLE LIMITED WARRANTY

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## What Is Covered

Mazda warrants that your new Mazda Vehicle is free from defects in material or workmanship, subject to the following terms and conditions.

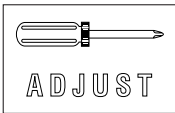
A Mazda Dealer will make necessary repairs, using new or remanufactured parts, to correct any problem covered by this warranty without charge to you.

## Basic Coverage Period

Any component of your new Mazda Vehicle is covered for **36 months** or **36,000 miles**, whichever comes first, from the earlier date of either retail delivery or first use of the Mazda Vehicle.

## Exceptions

The items specified below are covered for specific periods which are different from the basic coverage.



### ■ Adjustments

Service adjustment is covered for the first **12 months** or **12,000 miles**, whichever comes first.

Service adjustment means minor repairs not usually associated with the replacement of parts, such as wheel balance and alignment, tension adjustment of automatic transmission throttle cable and V-belt, fitting of engine hood, trunk lid, or rear hatch, etc.

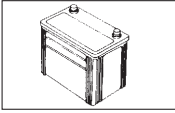
#### **Note:**

Adjustments required to conform to an EPA approved emission short test, are subject to the applicable emission warranty coverage.



### ■ Air Conditioner Refrigerant Charge

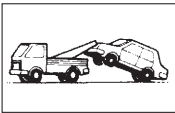
Air conditioner refrigerant charge is covered for the first **12 months** of the warranty period regardless of mileage. Over the balance of the warranty period, refrigerant charge is covered only when replenished as part of a warranty repair.



### ■ Original Equipment Battery

The originally equipped battery is fully covered for the first **12 months** of the warranty period regardless of mileage. After **12 months** but within **24 months**, 50% of the replacement battery's suggested retail price will be your responsibility. After **24 months** but within **36 months**, 75% of the replacement battery's suggested retail price will be your responsibility. The rest, including labor charge, is covered by Mazda.

Months in Use	Parts		Labor	
	Customer pays	Mazda Pays	Customer Pays	Mazda Pays
0-12	0%	100%	0%	100%
13-24	50	50	0	100
25-36	75	25	0	100



### Towing

If Mazda vehicle is not driveable due to a warranted part failure during the coverage period of the New Vehicle Limited Warranty or Powertrain Limited Warranty, towing service will be covered to the nearest Mazda dealer.



### Warranty Application

This warranty is applicable to Mazda Vehicles originally registered and normally operated in the United States or U.S. territories for which they were produced e.g. United States, Puerto Rico, U.S. Virgin Islands, Guam, Saipan or American Samoa.

During the warranty period, this warranty is transferable to subsequent owners. Mail the "Subsequent Ownership Notification" attached to the end of the booklet to your Mazda Importer/Distributor.

# NEW VEHICLE LIMITED WARRANTY

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## What Is Not Covered

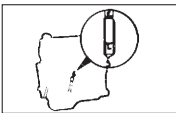


### Factors Beyond the Manufacturer's Control

- Misuse of the Mazda Vehicle such as driving over curbs, overloading, racing, snowplowing, etc. (Proper usage is described in your Owner's Manual.)
- Accidents such as collision, fire, flood, theft, riot etc.
- Alteration, modification, tampering etc.
- If the vehicle has been classified a total loss and/or sold for salvage purposes or branded for any other reasons.



- Damage or surface corrosion from the environment such as:  
Acid rain, airborne fallout (chemicals, tree sap, etc), salt, road hazards, hail, wind storm, lightning, floods and other natural disasters.
- Cosmetic conditions or surface corrosion from stone chips or scratches in the paint.
- Removal of the vehicle from the warranty-applicable market for which it was produced.



### Damage due to Lack of Maintenance or the Use of Wrong Fuel, Oil or Lubricants

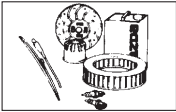
- Lack of proper maintenance as described in your Owner's Manual.  
(Failure to properly maintain your vehicle can result in your warranty being voided either in whole or in part.)
- Improper maintenance, the use of other than specified fuel, oil or lubricants recommended in your Owner's Manual.



### Normal Deterioration

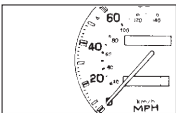
- Normal wear, tear or deterioration such as discoloration, fading, deformation, blur etc.
- Surface corrosion on any part other than the body sheet metal panels forming the exterior appearance of a Mazda Vehicle.

## What Is Not Covered (Cont'd)



### Maintenance is at Owner's Expense

- Normal maintenance services such as cleaning and polishing, lubrication, and replenishment or replacement of oil, fluid, coolant, worn wiper blades, filters, worn brake and clutch linings, spark plugs, fuses, keyless transmitter batteries etc.
- Maintenance services described as “Scheduled Maintenance Services”, “Owner Maintenance Services” or “Appearance Care” in your Owner’s Manual.



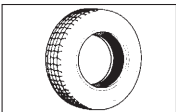
### Altered Mileage

- Any repair of a Mazda Vehicle on which the odometer has been altered or on which the actual mileage cannot be readily determined.  
(When replacing the speedometer, the “Speedometer Replacement Record” on page 6 must be filled in by a Mazda Dealer.)



### Extra Expenses and Damages

- Any financial loss, for example: due to loss of use of the Mazda Vehicle, lodging, transportation, travel costs, loss of pay and any other expenses or damages.



### Tires

- Tires are warranted by the tire manufacturers. Refer to the “Tire Limited Warranty” on page 39 for a brief explanation or the tire warranty pamphlets provided with your Mazda Vehicle for details.

# **NEW VEHICLE LIMITED WARRANTY**

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## **Your Responsibilities**

### **Maintenance**

You are responsible for properly operating and maintaining your Mazda Vehicle in accordance with the instructions described in your Owner's Manual. If your vehicle is used under severe driving conditions, you should follow Schedule 2 of the maintenance requirements described in your Owner's Manual.

### **Maintenance Records**

You should retain maintenance records since it may be necessary in some instances for you to show that the required maintenance has been performed.

The "Scheduled Maintenance Record" on page 43 should be filled in when scheduled maintenance is performed. Keep all receipts and make them available in case questions about maintenance arise.

### **To Get Warranty Service**

You must take your Mazda Vehicle, along with this booklet, to a Mazda Dealer in the United States, Puerto Rico, U.S. Virgin Islands, Guam, Saipan, American Samoa, Canada or Mexico during its normal service hours. While any Mazda Dealer will perform warranty service, Mazda recommends that you return to the dealership where you purchased your Mazda Vehicle because you have already established a relationship with them.

If you have any question or need assistance regarding this warranty, refer to "When You Need to Talk to Mazda" on page 7.

### **Limited Liability**

The liability of Mazda under this warranty is limited solely to the repair or replacement of parts defective in Mazda-supplied material, or workmanship by a Mazda Dealer at its place of business. Specifically, it does not include any expense of, or payment for loss of use of the Mazda Vehicle during warranty repairs.



### Other Terms

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

**All Implied Warranties, including but not limited to any regarding marketability or fitness for a particular purpose, are limited respectively to the duration of this warranty.**

**This warranty is given in lieu of all other Express Warranties (except those set forth separately in this booklet) on the part of Mazda, Mazda Importer/Distributor, or the Mazda Dealer selling the Mazda Vehicle. No dealer, or any agent or employee thereof, is authorized to extend or expand this warranty. Mazda or a Mazda Importer/Distributor shall not be liable for any incidental, special, consequential, or exemplary damages, or any service not expressly provided for herein.**

Some states do not allow limitations on how long an implied warranty lasts or the exclusion or limitation of incidental or consequential damages, so the above limitations or exclusions may not apply to you.

# POWERTRAIN LIMITED WARRANTY

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Mazda warrants that the Powertrain Components of your new Mazda Vehicle is free from defects in Mazda-supplied material or workmanship which result in improper function, subject to the following terms and conditions.

A Mazda Dealer will make necessary repairs, using new or remanufactured genuine Mazda parts, to correct any problem covered by this warranty without charge to you.

## 1. Warranty Period

The warranty period is for the first **60 months** or **60,000 miles**, whichever comes first, from the earlier date of either retail delivery or first use of the Mazda Vehicle.

During the warranty period, this warranty is transferable to subsequent owners.

Mail the “Subsequent Ownership Notification” attached to the end of the booklet to your Mazda Importer/Distributor.

## 2. What Is Covered

The following is a general list of components covered by this warranty.

(See page 20 for specific components covered.)

- Engine
- Transmission and Transaxle
- Front /Rear Drive System

### Towing

If your Mazda is not driveable due to the failure of a warranted powertrain component, then towing service will be covered to the nearest Mazda dealer during the coverage period of the Powertrain Limited Warranty.

## 3. Warranty Application

The “Warranty Application” is the same as stated for New Vehicle Limited Warranty section of this booklet.

## 4. What Is Not Covered

The “What is Not Covered” is the same as stated for New Vehicle Limited Warranty section of this booklet.

## 5. Your Responsibilities

### Maintenance:

You are responsible for properly operating and maintaining your Mazda Vehicle in accordance with the instructions described in your Owner’s Manual. If your vehicle is used under severe driving conditions, you should follow Schedule 2 of the maintenance requirements described in your Owner’s Manual.

### Maintenance Records:

You should retain maintenance records since it may be necessary in some instances for you to show that required maintenance has been performed. The “Scheduled Maintenance Record” on page 43 should be filled in when scheduled maintenance is performed. Keep all receipts and make them available in case questions about maintenance arise.

### **6. To Get Warranty Service**

You must take your Mazda Vehicle, along with this booklet, to any Mazda Dealer in the United States, Puerto Rico, U.S. Virgin Islands, Guam, Saipan, American Samoa, Canada or Mexico during their normal service hours.

If you have any questions or need assistance regarding this warranty, refer to the “When You Need to Talk to Mazda” on Page 7.

### **7. Limited Liability**

The liability of Mazda under this warranty is limited solely to the repair or replacement of parts defective in Mazda-supplied material, or workmanship by a Mazda Dealer at its place of business. Specifically, it does not include any expense of, or related to, transportation to such a dealer or payment for loss of use of the Mazda Vehicle during warranty repairs.

### **8. Other Terms**

The “Other Terms” stated on page 17 in the New Vehicle Limited Warranty also apply to this warranty.

# POWERTRAIN LIMITED WARRANTY

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## **Powertrain Warranty Parts List**

Below are the powertrain components covered under the Powertrain Limited Warranty:

### **■ Engine**

- Cylinder Block, Cylinder Head, and All Internal Lubricated Parts (Piston engines)
- Timing gears
- Timing chain/belt and tensioner
- Timing chain/belt front cover and gaskets
- Flywheel
- Valve Covers and Gaskets
- Oil Pan
- Oil Pump
- Intake Manifold and Gaskets
- Exhaust Manifold and Gaskets
- Engine Mounts
- Turbocharger Housing and All Internal Parts
- Supercharger Housing and All Internal Parts
- Water Pump and Gaskets
- Thermostat and Gaskets
- Fuel Pump
- Seals and Gaskets

### **■ Transmission and transaxle**

- Transmission Case and All Internal Parts
- Torque converter
- Clutch Pressure Plate
- Transmission Mounts
- Transfer Case and All Internal Parts
- Transmission/Transaxle Control Module

### **■ Front/Rear Drive System**

- Final Drive Housing and all Internally Lubricated Parts
- Rear Axle Housing (Differential) and all Internally Lubricated Parts
- Manual and Automatic Hub (4×4)
- Front Wheel Hubs and Bearing (FWD or AWD only)
- Rear Axle/Hub Bearings (RWD or AWD only)
- Axle/Drive Shafts
- Universal Joints
- Constant Velocity Joints
- Propeller shaft (RWD or AWD only)
- Seals and Gaskets

To help decrease the possibility or severity of injury during accidents or emergency stops, Mazda strongly recommends that the driver and all vehicle occupants be properly restrained at all times by using the seat belts provided. (Proper use is outlined in your Owner's Manual.)

In addition to the seat belts, Mazda Vehicles are equipped with supplemental restraint systems (air bags). Air bags are designed to supplement the seat belts by providing additional protection by restraining the forward motion in a serious frontal accident or sideward motion in seats equipped with side airbags and/or side air curtains. The air bags alone may not prevent severe injury in an accident. The driver and all vehicle occupants should always wear seat belts.

Mazda warrants that the safety restraint system of your new Mazda Vehicle is free from defects in Mazda-supplied material or workmanship which result in improper function, subject to the following terms and conditions.

A Mazda Dealer will make necessary repairs, using new parts, to correct any problem covered by this warranty without charge to you.

## **1. Warranty Period**

The warranty period is for the first **60 months** or **60,000 miles**, whichever comes first, from the earlier date of either retail delivery or first use of the Mazda Vehicle.

During the warranty period, this warranty is transferable to subsequent owners. Mail the "Subsequent Ownership Notification" attached to the end of the booklet to your Mazda Importer/Distributor.

## **2. What Is Covered**

Seat Belts and Related Components  
Air Bag System

## **3. Warranty Application**

The "Warranty Application" is the same as stated for New Vehicle Limited Warranty section of this booklet.

## **4. What Is Not Covered**

- Repair or replacement required due to misuse, negligence, improper repair/adjustment, alteration, or accident/collision damage.
- Replacement of proper functioning part for comfort or appearance.
- Incidental or consequential damages such as loss of use of your Mazda Vehicle, inconvenience or commercial loss.
- If the vehicle has been classified a total loss and/or sold for salvage purposes or branded for any other reasons.
- Removal of the vehicle from the warranty-applicable market for which it was produced.

## **SAFETY RESTRAINT SYSTEM LIMITED WARRANTY**

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### **5. To Get Warranty Service**

If a safety problem exists, immediately take your Mazda Vehicle, along with this booklet, to any Mazda Dealer in the United States, Puerto Rico, U.S. Virgin Islands, Guam, Saipan, American Samoa, Canada or Mexico during their normal service hours. If you have any questions or need assistance regarding this warranty, refer to the “When You Need to Talk to Mazda” on Page 7.

### **6. Limited Liability**

The liability of Mazda under this warranty is limited solely to the repair or replacement of parts defective in Mazda-supplied material, or workmanship by a Mazda Dealer at its place of business. Specifically, it does not include any expense of, or related to, transportation to such a dealer or payment for loss of use of the Mazda Vehicle during warranty repairs.

### **7. Other Terms**

The “Other Terms” stated on page 17 in the New Vehicle Limited Warranty also apply to this warranty.

Mazda warrants that the body sheet metal panels of your new Mazda Vehicle are free from defects in material or workmanship which result in perforation (hole through the body panel) due to corrosion, subject to the following terms and conditions. Corrosion other than perforation (hole through the body panel), due to defects in material or workmanship, is covered under the New Vehicle Limited Warranty.

A Mazda Dealer will either repair or replace any body sheet metal panel perforated due to defects in material or workmanship, under normal use, without charge to you.

## 1. Warranty Period

The warranty period is for the first **60 months** (regardless of mileage) from the earlier date of either retail delivery or first use of the Mazda Vehicle. During the warranty period, this warranty is transferable to subsequent owners. Mail the “Subsequent Ownership Notification” attached to the end of the booklet to your Mazda Importer/Distributor.

## 2. Warranty Application

The “Warranty Application” is the same as stated for New Vehicle Limited Warranty section of this booklet.

## 3. What Is Not Covered

- Any perforation due to corrosion of the Mazda Vehicle which is caused by industrial fallout, accident, damage, abuse, vehicle modifications or damaging or corrosive cargo in the Mazda Vehicle.
- Any surface corrosion of the Mazda Vehicle which does not result in perforation, such as that typically caused by sand, salt, saltpeter/nitre, hail, or stones.
- Any perforation due to corrosion of the Mazda Vehicle which results, not from a defect in material or workmanship, but from failure to maintain the Mazda Vehicle in accordance with the procedures specified in Section 4. (page 24) of this warranty and the Owner’s Manual provided with your Mazda Vehicle.
- Any perforation due to corrosion of a part of the Mazda Vehicle which is not a body sheet metal panel. As used herein, “body sheet metal panel” specifically excludes all parts which are components of the exhaust system of the Mazda Vehicle.
- If the vehicle has been classified a total loss and/or sold for salvage purposes or branded for any other reasons.
- Removal of the vehicle from the warranty-applicable market for which it was produced.
- Any perforation to panels previously repaired to correct collision damage, fire, theft, natural disaster, etc.

## **ANTI-PERFORATION LIMITED WARRANTY**

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### **4. Your Responsibilities**

Inspect the body sheet metal panels of your Mazda Vehicle frequently and if you detect any stone chips or scratches in the paint or protective coating, touch them up immediately.

In addition, under certain conditions, special care should be taken to protect your Mazda Vehicle from corrosion.

- 1) If you drive on salted roads, or if you drive near the ocean, flush the underbody at least once a month with clean water.
- 2) It is important to keep the drain holes in the lower edges of the body clear.
- 3) If your Mazda Vehicle is damaged due to an accident or any event which may cause damage to the paint, have your Mazda Vehicle repaired as soon as possible.
- 4) If you carry special cargo, such as chemicals, fertilizers, de-icing salt, or other corrosive substances, be sure that such materials are well packaged and sealed.
- 5) If you drive frequently on gravel roads, we recommend that you install stone guards behind each wheel.

### **5. To Get Warranty Service**

You must take your Mazda Vehicle, along with this booklet, to any Mazda Dealer in the United States, Puerto Rico, U.S. Virgin Islands, Guam, Saipan, American Samoa, Canada or Mexico during their normal service hours. If you have any questions or need assistance regarding this warranty, refer to “When You Need to Talk to Mazda” on page 7.

### **6. Limited Liability**

The liability of Mazda under this warranty is limited solely to the repair or replacement of parts defective in material or workmanship by a Mazda Dealer at its place of business. Specifically, it does not include any expense of, or related to, transportation to such a dealer or payment for loss of use of the Mazda Vehicle during warranty repairs.

### **7. Other Terms**

The “Other Terms” stated on page 17 in the New Vehicle Limited Warranty also apply to this warranty.



## 1. Introduction

The Federal Clean Air Act requires vehicle manufacturers to provide two emissions-related warranties:

- The Federal Emissions Defect Warranty, which covers certain parts of each vehicle's emissions control systems against defects in materials and workmanship, and
- The Federal Emissions Performance Warranty, which covers repairs to certain parts of each vehicle's emission control system *if certain conditions are met* (see Section 5., for those conditions).

These two emission warranties apply to all Mazda Vehicles (including those registered in states requiring California-certified vehicles). They are given in lieu of all other express or implied warranties (except those set forth separately in this booklet) on the part of Mazda, Mazda Importer/Distributor or the Mazda Dealer selling this Mazda Vehicle. No dealer, or any agent or employee thereof, is authorized to extend or expand these warranties.

## 2. Definitions

- (a) "EPA" means the U.S. Environmental Protection Agency.
- (b) "Owner" means the original and any subsequent owner of a Mazda Vehicle.
- (c) "Mazda Part" means a part sold by a Mazda Dealer, whether new or remanufactured, which is supplied by Mazda.
- (d) "Emission Warranty Part" means a part installed on or in a Mazda Vehicle by or at the direction of Mazda for the sole or primary purpose of reducing the Mazda Vehicle's emissions and that was not in general use prior to model year 1968. The Emission Warranty Parts are listed in Sections 6. and 7.
- (e) "Certified Part" means a replacement part for a Mazda Vehicle certified in accordance with aftermarket part certification regulations issued by the EPA.
- (f) "Written Maintenance Instructions" means those maintenance and operation instructions, together with the time and/or mileage interval at which such maintenance is to be performed, specified in the Owner's Manual for the Mazda Vehicle as being necessary to assure compliance of the Mazda Vehicle with applicable emission standards during the term of this warranty, as specified by law.

# FEDERAL EMISSION CONTROL WARRANTY

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## 3. Exclusions from the Emission Warranties

The following are NOT covered by these Emission Warranties:

- (1) Any incidental, consequential, or exemplary damages (whether in contract or tort), including loss of time, inconvenience, loss of use of the vehicle, cost of transporting it for repair or service, and commercial loss.
- (2) Damage resulting from accidents, misuse, natural disasters, or events beyond the control of Mazda.
- (3) If the vehicle has been classified a total loss and/or sold for salvage purposes or branded for any other reasons.
- (4) Lack of proper maintenance, including repair improperly performed or replacements improperly installed by any person other than a Mazda Dealer, or a replacement part or accessory not conforming to Mazda's specifications.
- (5) Any repair of the vehicle on which the odometer mileage has been altered or on which the actual mileage cannot be readily determined. (When replacing the speedometer, the "Speedometer Replacement Record" on page 6 must be filled in by a Mazda Dealer.)
- (6) Removal of the vehicle from the warranty-applicable market for which it was produced.

## 4. Emission Defect Warranty

Mazda warrants to the ultimate purchaser and each subsequent purchaser that this Mazda Vehicle is (A) designed, built, and equipped so as to conform at the time of sale with applicable regulations under Section 202 of the Federal Clean Air Act, and (B) free from defects in materials and workmanship which would cause it to fail to conform with applicable regulations during the warranty periods mentioned herein after. The applicable regulations require that the warranty period is for the first 24 months\* or 24,000 miles, whichever comes first. However, Mazda will provide you a coverage of **36 months\* or 36,000 miles**, whichever comes first, under the terms of the New Vehicle Limited Warranty. The applicable regulations also require that the warranty period for specific major Emission Warranty Parts listed in Section 7. is for the first **96 months\* or 80,000 miles**, whichever comes first.

\* The months during which the vehicle has been in operation are counted from the date of first use of the vehicle or the date of its retail delivery, whichever came first.

Any defects in warranted parts that are identified within those warranty periods will be repaired or replaced by Mazda, at its option, with new or remanufactured parts at no cost to the Mazda Vehicle owner by a Mazda Dealer in the U.S.A. The liability of Mazda under this Emission Defect Warranty is solely limited to such repair or replacement.

## 5. Emission Performance Warranty

### Important Notice:

This warranty has been prepared in accordance with certain regulations promulgated by the EPA which provide that a remedy will be available under this warranty only when a vehicle fails an EPA approved emission short test; usually this means when an Owner could be subject to a penalty under state or federal law because of such failure. At the date of the printing of this warranty, some states did not have vehicle inspection programs for testing vehicles for conformity with such short tests and had not enacted laws subjecting vehicle Owners to such penalties. Therefore, it is possible that in some states or local areas no remedy will be available under this warranty as a matter of law.

### ■ Warranty

Pursuant to Section 207 (b) of the U.S. Clean Air Act, Mazda warrants to each Owner that if:

- (a) The Mazda Vehicle is maintained and operated in compliance with the Written Maintenance Instructions; and
- (b) The Mazda Vehicle fails to conform at any time during the term of this warranty to the applicable emission standards as judged by an emission test approved by the EPA; and
- (c) Such nonconformity results or will result in the Owner having to bear any penalty or other sanction (including the denial of the right to use the Mazda Vehicle) under local, state or Federal law; and
- (d) If such nonconformity results from the failure of an Emission Warranty Part.

Mazda shall remedy the nonconformity at no cost to the Owner in accordance with the following:

- During a period of vehicle operation that does not exceed **24 months\* or 24,000 miles**, whichever comes first, if the failed Emission Warranty Part is listed in the 24 months/24,000 miles Emission Warranty Parts List in Section 6.
- During a period of vehicle operation that does not exceed **96 months\* or 80,000 miles**, whichever comes first, if the failed Emission Warranty Part is listed in the 96 months/80,000 miles Emission Warranty Parts List in Section 7.

\* The months during which the vehicle has been in operation are counted from the date of first use of the vehicle or the date of its retail delivery, whichever came first.

## FEDERAL EMISSION CONTROL WARRANTY

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### ■ Compliance with Written Maintenance Instructions

Each Owner is required to comply with the Written Maintenance Instructions and a claim under this warranty may be denied on the basis of noncompliance by the Owner with such instructions. **If and when it is considered that the vehicle's non-conformity with the applicable emission standards has resulted from the Owner's non-compliance with those Written Maintenance Instructions which the manufacturer considers necessary for the vehicle to meet the standards, the Owner may be required to submit evidence of such compliance. Receipts and other documents covering the performance of Scheduled Maintenance and proper use in accordance with the Written Maintenance Instructions, including but not limited to the validated Scheduled Maintenance Record in this booklet, should, therefore, be retained by the Owner and should be transferred to each subsequent Owner of the Mazda Vehicle.**

### ■ Use of Mazda Parts

The Mazda Vehicle is designed, built and tested using Mazda Parts so that the Mazda Vehicle is able to perform in conformity with EPA regulations as provided by this warranty. Accordingly, it is recommended that any replacement parts used for maintenance, repair or replacement of the Mazda Vehicle be Mazda Parts, or parts equivalent to those with which the Mazda Vehicle or its engine was originally equipped.

### ■ Use of Non-Mazda Parts

Owners may elect to use parts other than Mazda Parts in the performance of any maintenance or repairs and such use in itself will not invalidate this warranty. However, use of parts other than Mazda, may cause Mazda to deny an emission performance warranty claim on the basis of uncertified replacement parts used in the maintenance or repair of a Mazda Vehicle if the uncertified replacement parts are either defective in material or workmanship or not equivalent, from an emission standpoint, to Mazda Parts.

### ■ Repair or Replacement by Mazda Dealer

Mazda's obligation to remedy nonconformities under this warranty shall be performed by a Mazda Dealer, which shall make all adjustments, repairs or replacements necessary to assure that the Mazda Vehicle complies with applicable emission standards of the EPA and that the Mazda Vehicle will continue to comply during the remainder of the term of this warranty (if proper maintenance and operation are continued).

### ■ **Maintenance by An Establishment or Individual Other Than Mazda**

**Maintenance, replacement, or repair of the emission control devices and systems covered by this warranty may be performed by any automotive repair establishment or individual using Certified Parts.** However, the Owner should note that service by a person other than a Mazda Dealer may cause Mazda to deny a claim under this warranty, if it is shown that the improper installation or adjustment of any part has caused the Mazda Vehicle to fail the emission test, either directly or by causing another warranted part to fail.

### ■ **Warranty Claim Procedures**

A warranty claim may be submitted by bringing the Mazda Vehicle to any Mazda Dealer during the Dealer's regular business hours, together with a copy of a failed emissions test. Upon presentation of a claim, Mazda shall notify the Owner within 30 days, or a shorter period of time within which repair is required by local, State or Federal law, that the claim will be honored or shall provide the Owner in writing with an explanation of the basis upon which the claim is being denied. Failure to notify the Owner within such a time period, shall cause Mazda to be responsible for repairing the Mazda Vehicle free of charge to the Owner, unless such failure is attributable to the Owner or to events beyond the control of Mazda or the Mazda Dealer.

### ■ **Further Information**

Owners may obtain further information concerning this warranty and may report violations of this warranty by contacting the Environmental Protection Agency Ariel Rios Building (6405J) 1200 Pennsylvania Ave., N.W. Washington, D.C. 20460.

# FEDERAL EMISSION CONTROL WARRANTY

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## 6. 24 months/24,000 miles Emission Warranty Parts List

### **Air/Fuel Metering System**

- Closed loop system
  - Oxygen sensor
  - Air flow sensor (Air flow meter)
  - Fuel injectors
- Cold start enrichment system
  - Cold start injector
- Electronic idle speed control system
  - Idle air control valve (Idle speed control valve)
  - Air valve
- Deceleration controls
- Variable Valve Timing System
  - Variable valve timing actuator
  - Oil control valve

### **Ignition Spark Advance/Retard System**

- Certain spark advance/retard control components
  - High energy electronic ignition
  - Spark plugs\*

### **Fuel Evaporative System**

- Canister and associated control valve
  - Purge valve
  - Purge solenoid
  - Fuel filler cap

### **Positive Crankcase Ventilation (PCV) System**

- PCV valve

### **Exhaust Gas Recirculation (EGR) System**

- EGR function control valve (EGR control valve) and associated parts
  - EGR valve
  - EGR valve control solenoid

### **Secondary Air Injection System**

- Air pump
- Air control valves and distribution pipes

### **Miscellaneous Items Used in Above Systems**

- Hoses, clamps, fittings, gaskets, sealing materials, tubing, brackets and belts
- Exhaust pipe (between exhaust manifold and catalyst)
- Sensors, switches and valves

\* Spark plugs are warranted under the basic warranty or until the first required maintenance, whichever comes first.

## 7. 96 months/80,000 miles Emission Warranty Parts List

- Catalytic Converter
- Electronic Emission Control Unit
- Onboard Emission Diagnostic Device (Incorporated into Electronic Emission Control Unit)

The California Air Resources Board and Mazda are pleased to explain the emission control system warranty on your Mazda Vehicle. In California, new motor vehicles must be designed, built and equipped to meet the State's stringent anti-smog standards.

Mazda must warrant the emission control system on your Mazda Vehicle for the periods of time listed below, provided there has been no abuse, neglect or improper maintenance of your Mazda Vehicle.

Your emission control system may include parts such as the fuel-injection system, ignition system, catalytic converter, and powertrain control module. Also included may be hoses, belts, connectors, and other emission-related assemblies.

Where a warrantable condition exists, Mazda will repair your Mazda Vehicle at no cost to you including diagnosis, parts, and labor.

Under the authority of Section 177 of the Federal Clean Air Act, some states require that new vehicles registered in their jurisdictions comply with California's emission control system warranty requirements. If your vehicle was initially registered in such a state, or in California, the warranty provisions set forth in this section apply to it.

## 1. Mazda's Warranty Coverage

- (a) For **3 years** or **50,000 miles** whichever first occurs:(\*1)
  - 1) If your Mazda Vehicle fails a California Smog Check inspection, all necessary repairs and adjustments will be made by Mazda to ensure that your Mazda Vehicle passes the inspection. This is your emission control system **PERFORMANCE WARRANTY**.
  - 2) If any emission-related part on your Mazda Vehicle is defective, the part will be repaired or replaced by Mazda. This is your short-term emission control system **DEFECTS WARRANTY**.
- (b) For **7 years** or **70,000 miles** whichever first occurs:(\*1)
  - 1) If an emission-related part listed in this warranty booklet specially noted with coverage for 7 years or 70,000 miles is defective, the part will be repaired or replaced by Mazda. This is your long-term emission control system **DEFECTS WARRANTY**.
- (c) For **15 years** or **150,000 miles** whichever first occurs:(\*2)
  - 1) **PERFORMANCE WARRANTY** and **DEFECTS WARRANTY** are extended to 15 years or 150,000 miles, whichever comes first, for **Partial Zero Emission Vehicle (PZEV) Emission Warranty**.

(\*1) This warranty applies to all California emission equipped Mazda vehicles sold, registered and operated in Arizona, California, Connecticut, Maine, Maryland, Massachusetts, New Jersey, New Mexico, Oregon, Pennsylvania, Rhode Island, Vermont or Washington.

(\*2) This warranty applies to all Partial Zero Emission Vehicles (PZEVs) sold, registered and operated in California, Connecticut, Maine, Maryland, Massachusetts, New Jersey, New Mexico, New York, Rhode Island or Vermont.

# CALIFORNIA EMISSION CONTROL WARRANTY

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## **2. Owner's Warranty Responsibilities:**

As the Mazda Vehicle owner, you are responsible for the performance of the required maintenance listed in your Owner's Manual. Mazda recommends that you retain all receipts covering maintenance on your Mazda Vehicle, but Mazda cannot deny warranty solely for the lack of receipts or for your failure to ensure the performance of all scheduled maintenance.

You are responsible for presenting your Mazda Vehicle to a Mazda Dealer as soon as a problem exists. The warranty repairs should be completed in a reasonable amount of time, not to exceed 30 days.

As the Mazda Vehicle owner, you should also be aware that Mazda may deny warranty coverage if your Mazda Vehicle or a part has failed due to abuse, neglect, improper maintenance, or unapproved modifications.

## **3. Customer Assistance**

If you have any questions regarding your warranty rights and responsibilities, you should contact

**Mazda North American Operations' CUSTOMER ASSISTANCE CENTER  
toll free at: (800) 222-5500**

or the California Air Resources Board at 9480 Telstar Avenue Suite 4, El Monte California 91731.

## **4. Start of Warranty Period**

This warranty begins on the date the vehicle is delivered to the ultimate purchaser or on the date the vehicle is first placed in service as a demonstrator, lease or company car, whichever comes first.

## **5. Repair or Replacement by Mazda Dealer**

A Mazda Dealer will repair or replace, at its option, all Warranted Parts which fail during the term of this warranty, and all other components which are damaged during the term of this warranty as a result of such failure, without charge to Owner, using Mazda Parts at its place of business.

The Mazda Dealer shall determine if the repair or replacement is covered by warranty. Repair or replacement shall include diagnosis.

When a Warranted Part is replaced, the newly installed part is warranted for the remaining period of the applicable California Emission Control Warranty.

## **6. Repair or Replacement by Dealers Other Than Mazda**

If, under this warranty a part requires repair or replacement, Owners may choose to have this work performed by any automotive service establishment or individual, rather than at a Mazda Dealer. They may also perform the work themselves using any replacement parts. Such service in and of itself will not invalidate this warranty.



**However, Owners should note the following:**

- (a) The cost of such service by dealers other than Mazda will not be covered under this warranty except in an “emergency” as set forth below.
- (b) An “emergency” exists when Warranted Parts are not available within 30 days from a Mazda Dealer, when a repair is not completed within 30 days, or when a Mazda Dealer is not reasonably available to perform service under this warranty.
- (c) The cost of such service by dealers other than Mazda in an “emergency” shall be reimbursed to the Owner as follows: as to all Warranted Parts which require repair or replacement under this warranty, the Owner shall be reimbursed for all such replacement parts in an amount not to exceed the retail price suggested for such parts by Mazda North American Operations. As to labor, including diagnostic charge related to the emergency repair, the Owner shall be reimbursed in an amount not to exceed Mazda’s recommended time allowance and geographically appropriate hourly labor rate for the repair or replacement performed under this warranty. **All failed parts and paid invoices must be presented to a Mazda Dealer after repair as a condition of reimbursement for emergency repairs not performed by a Mazda Dealer.**

## 7. Use of Mazda Parts

The emission control system of the Mazda Vehicle is designed, built and tested using Mazda Parts so that the Mazda Vehicle is certified as being in conformity with the California emission control regulations. **Accordingly, it is recommended that any replacement part used for maintenance, repair, or replacement of emission control systems be Mazda designated parts.**

## 8. Use of Non-Mazda Parts

Owners may elect to use parts other than Mazda Parts in the performance of any maintenance or repairs and such use in and of itself will not invalidate this warranty.

**However, Owners should note the following:**

- (a) The cost of non-Mazda designated parts will not be covered under this warranty except in emergency cases.
- (b) Use of replacement parts which are not of equivalent quality to Mazda Parts may impair the effectiveness of emission control systems.  
If non-Mazda designated parts are used, the Owner should obtain assurance that such parts are warranted by their manufacturer to be equivalent to Mazda Parts in performance and durability.
- (c) Mazda assumes no liability under this warranty with respect to non-Mazda designated parts except for damage to non-Mazda designated parts by a Mazda Part.
- (d) Use of non-Mazda designated parts resulting in damage to Warranted Parts will invalidate the warranty for these parts.

# CALIFORNIA EMISSION CONTROL WARRANTY

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## 9. What Is Not Covered by This Warranty:

- (a) Items described as not covered in paragraph 6 (a), 8 (a), 8 (c), and 8 (d).
- (b) Malfunctions in any part caused by misuse, abuse, neglect, modification, alteration, tampering, disconnection, improper or inadequate maintenance, or use of leaded gasoline.
- (c) Damage resulting from accident, acts of nature or other events beyond the control of Mazda.
- (d) If the vehicle has been classified a total loss and/or sold for salvage purposes or branded for any other reasons.
- (e) The repair or replacement of Warranted Parts which are scheduled for replacement within the warranty term provided in Section 1, such as spark plugs and filters. These parts shall be warranted only until the first scheduled time or mileage for replacement.
- (f) Any incidental or consequential damages, such as loss of time, inconvenience, loss of use of the Mazda Vehicle, cost of transporting the Mazda Vehicle to a Mazda Dealer for service, and commercial loss.
- (g) Any repair of a Mazda Vehicle on which the odometer mileage has been altered or on which the actual mileage cannot be readily determined.  
(When the Owner replaces the speedometer or has it replaced by a repair facility, then the "Speedometer Replacement Record" on page 6 must be filled in by a Mazda Dealer.)

## 10. Other Terms

**This warranty is given in lieu of all other Express and Implied Warranties (except those set forth separately in this booklet) on the Warranted Parts by Mazda and all other authorized Mazda representatives. Any warranty of merchantability or fitness is hereby disclaimed. No Mazda Dealer, or any agent or employee thereof, is authorized to extend or expand this warranty.**

### **(1) 7 YEARS/70,000 MILES EMISSION CONTROL WARRANTY AND VEHICLE INSPECTION PROGRAM(\*1)**

If the Mazda Vehicle fails a California Smog Check test, the Owner may take the Mazda Vehicle to a Mazda Dealer for repair.

(\*1) This warranty applies to all California emission equipped Mazda vehicles sold, registered and operated in Arizona, California, Connecticut, Maine, Maryland, Massachusetts, New Jersey, New Mexico, Oregon, Pennsylvania, Rhode Island, Vermont or Washington.

## CALIFORNIA EMISSION CONTROL WARRANTY

- (A) If the Mazda Dealer determines that the Smog Check failure was caused by the failure or malfunction of a part on the list of “7years/70,000miles Emission Defect Warranty Parts List”, then Mazda shall be liable for the expenses of detecting and correcting the part failure or malfunction, unless the Mazda Dealer demonstrates that the Smog Check failure was caused by one or more conditions as provided under Section 9, the “What Is Not Covered” section of this warranty. This section applies to situations after a period of use of 3 years or 50,000 miles, but before a period of use of 7 years or 70,000 miles.
- (B) If the Mazda Dealer demonstrates that the smog check failure was caused by one or more conditions as provided under Section 9, the “What Is Not Covered” section of this Warranty, the Owner shall be liable for all diagnostic and repair expenses.
- (C) If the Mazda Dealer determines that the smog check failure was caused by one or more defects covered under warranty and in combination with one or more conditions as provided under Section 9, the “What Is Not Covered” section of this warranty, then Mazda shall be liable for the diagnostic and repair costs related to detecting and repairing the warrantable defects.

In the alternative, the Owner of a Mazda Vehicle which fails the smog check may choose to have the Mazda Vehicle repaired at another repair facility other than a Mazda Dealer. If a warrantable defect is found, the Owner may deliver the Mazda Vehicle to a Mazda Dealer and have the defect corrected free of charge. Mazda shall not be liable for any expense incurred at a service establishment not authorized to perform warranty repairs, except when an “emergency” situation exists as specified in Section 6 (b), in this warranty.

Mazda will not reimburse the Owner for any emission-related diagnosis or repair by an automotive service establishment or individual other than a Mazda Dealer except when an “emergency” situation exists.

If Mazda or the Mazda Dealer fails to notify the Owner within 30 days that the repair, replacement, or diagnosis is not covered by this performance warranty, unless so requested by the Owner, or due to events beyond the control of Mazda or the Mazda Dealer, Mazda shall be responsible for repairing the Mazda Vehicle free of charge to the Owner.

Maintenance records and receipts should be retained in the event questions arise concerning maintenance, and should be transferred to each subsequent owner.

# CALIFORNIA EMISSION CONTROL WARRANTY

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## (2) 15 YEARS/150,000 MILES PZEV EMISSION CONTROL WARRANTY(\*2)

If the Mazda Vehicle you own is qualified as PZEV, all emission-related parts are warranted for 15 years/150,000 miles whichever comes first. Please refer to Page 38 for 15 years/150,000 miles PZEV Emission Warranty Parts List, and contact your Mazda Dealer, for more detailed information.

(\*2) This warranty applies to all Partial Zero Emission Vehicles (PZEVs) sold, registered and operated in California, Connecticut, Maine, Maryland, Massachusetts, New Jersey, New Mexico, New York, Rhode Island or Vermont.

## 11. Definitions

- (a) "Mazda Vehicle" means a 2012 model year Mazda motor vehicle manufactured by or for Mazda in accordance with the laws and regulations of the State of California.
- (b) "Partial Zero Emission Vehicle" (PZEV) is a vehicle which is certified for 150,000 miles SULEV exhaust emission standards, zero evaporative emission standards and OBDII requirements.  
Also, all emission-related parts of the PZEV are warranted for 15 years or 150,000 miles, whichever comes first.
- (c) "Owner" means each owner of a Mazda Vehicle as defined above Section 11. (a), registered for use in the States that comply with California's emission control system warranty requirements.
- (d) "Mazda Part" means a part sold by a Mazda Dealer, whether new or remanufactured, which is supplied by Mazda.
- (e) "Warranted Part" means any part installed on a Mazda Vehicle by or at the direction of Mazda, which affects any regulated emission from the Mazda Vehicle or its engine.

# CALIFORNIA EMISSION CONTROL WARRANTY

## 7 years/70,000 miles Emission Defect Warranty Parts List

	Mazda3			Mazdaspeed3	Mazda5	Mazda6		MX-5	CX-7	CX-9
	Mazda2	2.0L/2.5L MZR	2.0L SKYACTIV-G			2.5L	3.7L			
ABS Unit	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Accelerator Pedal				✓						
AT Shift Solenoid Valve			✓			✓	✓	✓	✓(*5)	✓
Catalytic Converter	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Charge Air Cooler				✓					✓(*5)	
Dynamic Chamber								✓		
Dynamic Chamber Gasket								✓(*1)		
EGR Pipe								✓(*1)		
EGR Valve				✓				✓(*2)	✓(*5)	
Emission Harness	✓	✓	✓	✓			✓	✓	✓	✓
Engine Harness					✓			✓		
Evaporative Hose								✓		
Evaporative Pipe	✓				✓			✓		
Exhaust Manifold				✓			✓		✓	✓
Exhaust Manifold Gasket				✓					✓(*5)	
Front Harness	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Fuel and Brake Piping Assembly									✓	
Fuel Distributor				✓					✓(*5)	✓
Fuel Filler Pipe										✓
Fuel Injector				✓					✓(*5)	
Fuel Pipe									✓	
Fuel Pipe (Between Fuel Tank and Charcoal Canister)									✓	
Fuel Pump Unit		✓	✓							
Fuel Tank	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Input/Turbine Speed Sensor							✓		✓(*5)	
Instrument Panel Harness	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Intake Manifold	✓	✓	✓	✓	✓	✓		✓	✓	
Intake Manifold Gasket								✓(*1)		
Main Fuel Pipe	✓				✓	✓	✓	✓		✓(*4)
Manifold Absolute Pressure (MAP) Sensor								✓		
Oil Separator								✓		
Oil Separator Gasket								✓(*1)		
PCV Valve								✓(*1)		
PCV Hose								✓(*1)		
Powertrain Control Module	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Rear Harness	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Speedometer (In Case of Check Engine Light LED failure.)	✓	✓(*3)	✓(*3)	✓(*3)	✓	✓	✓	✓	✓	✓
Throttle Body	✓	✓		✓	✓	✓		✓	✓	
Transaxle Fluid Temperature Sensor						✓	✓		✓(*5)	✓
Transmission (Transaxle) Control Module		✓	✓		✓	✓	✓	✓	✓	✓
Turbocharger				✓					✓(*5)	
Turbocharger Gasket				✓					✓(*5)	
Variable Valve Timing Actuator		✓	✓	✓	✓	✓	✓	✓	✓	✓
Vehicle Speed Sensor							✓		✓(*5)	✓

The parts marked with check mark [✓] are applicable to this warranty.

(\*1) MT only

(\*2) With resonance chamber

(\*3) With tire pressure monitoring system

(\*4) 4WD only

(\*5) 2.3L engine with Turbocharger only

**For details, please contact your Mazda Dealer.**

# CALIFORNIA EMISSION CONTROL WARRANTY

38

## 15 years/150,000 miles PZEV Emission Warranty Parts

### Mazda3 [2.5L (\*1), 2.0L (SKYACTIV-G only)]

### Mazda6 [2.5L (AT)]

#### Air/Fuel Metering System

- Closed Loop System
  - Oxygen Sensor
  - Air Flow Sensor (Air Flow Meter)
  - Fuel Injectors
- Cold Start Enrichment System
  - Cold Start Injector
- Electronic Idle Speed Control System
  - Idle Air Control Valve (Idle Speed Control Valve)
  - Air Valve
- Deceleration Controls
- Variable Valve Timing System
  - Variable valve timing actuator
  - Oil control valve

#### Ignition Spark Advance/Retard System

- Certain Spark Advance/Retard Control Components
  - High Energy Electronic Ignition
  - Spark Plugs\*2

#### Fuel Evaporative System

- Canister and Associated Control Valve
  - Purge Valve
  - Purge Solenoid
  - Fuel Filler Cap
- Catalytic Converter
- Electronic Emission Control Unit
- Onboard Emission Diagnostic Device (Incorporated into Electronic Emission Control Unit)

#### Positive Crankcase Ventilation (PCV) System

- PCV Valve

#### Exhaust Gas Recirculation (EGR) System

- EGR Function Control Valve (EGR Control Valve) and Associated Parts
  - EGR Valve
  - EGR Valve Control Solenoid

#### Secondary Air Injection System

- Air Pump
- Air Control Valves and Distribution Pipes

#### Miscellaneous Items Used in Above Systems

- Hoses, Clamps, Fittings, Gaskets, Sealing Materials, Tubing, Brackets and Belts
- Exhaust Pipe (between Exhaust Manifold and Catalyst)
- Sensors, Switches and Valves

\*1 For 2.5L, the vehicle is considered PZEV only if the 8th digit of the VIN is the number "6". If the 8th digit of the VIN is anything other than the number "6", the vehicle is considered NON-PZEV.

\*2 Spark plugs are warranted under the basic warranty or until the first required maintenance, whichever comes first.

The originally equipped tires are warranted by the tire manufacturer. Refer to the separate tire warranty pamphlet in the glove box for details.

## 1. To Get Warranty Service

To obtain warranty service, you are responsible for presenting the unserviceable tire to any authorized dealer of the tire manufacturer in the United States, Puerto Rico, U.S. Virgin Islands, Guam, Saipan, American Samoa, Canada or Mexico. For the location of authorized tire dealers, refer to your local telephone directory. Your Mazda Dealer may also assist you in obtaining warranty service from the tire manufacturer.

## 2. Tire Warrantor

To obtain detailed tire warranty information or for customer service, contact the appropriate tire warrantor listed below.

### The Respective Tire Warrantors are:

#### **Bridgestone Americas, Inc.**

535 Marriott Drive  
PO Box 140990  
Nashville, TN 37214-0990  
1-800-367-3872  
[www.bridgestoneamericas.com](http://www.bridgestoneamericas.com)

#### **Firestone Complete Auto Care**

Consumer Affairs  
PO Box 6397  
Bloomington, IL 60108  
1-800-367-3872  
[www.firestonecompleteautocare.com](http://www.firestonecompleteautocare.com)

#### **Dunlop Tire Corporation**

1144 East Market Street  
Akron, OH 44316-0001  
1-800-321-2136  
[www.dunloptire.com](http://www.dunloptire.com)

#### **Yokohama Tire Corporation**

601 South Acacia Avenue  
Fullerton, CA 92831  
1-800-722-9888  
[www.yokohamatire.com](http://www.yokohamatire.com)

#### **Toyo Tire (USA) Corporation**

6261 Katella Ave. Suite 2B  
Cypress, CA 90630  
1-800-442-8696 West Coast  
1-888-444-8696 East Coast  
[www.toyo.com](http://www.toyo.com)

#### **Michelin North America, Inc.**

Consumer Care Department  
P.O. Box 19001  
Greenville, SC 29602-9001  
1-866-866-6605  
[www.michelin-us.com](http://www.michelin-us.com)

#### **Goodyear Tire and Rubber Company**

1144 East Market Street  
Akron, OH 44316-0001  
1-800-321-2136  
[www.goodyear tires.com](http://www.goodyear tires.com)

#### **Uniroyal Goodrich Tire Company**

Customer Care Department  
P.O. Box 19001  
Greenville, SC 29602-9001  
1-877-458-5878  
[www.uniroyaltires.com](http://www.uniroyaltires.com)

# REPLACEMENT PARTS AND ACCESSORIES LIMITED WARRANTY

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40

The Mazda Importer/Distributor warrants that Mazda genuine replacement parts and Mazda Accessories are free from defects in material or workmanship, subject to the following terms and conditions.

This warranty covers Mazda genuine new or remanufactured replacement parts and Mazda Accessories sold by a Mazda Dealer. This includes Mazda Accessories installed by a Mazda Dealer or a Mazda Importer/Distributor prior to the retail delivery of a new Mazda Vehicle.

## 1. Warranty Period

Mazda genuine replacement parts (other than the battery) and Accessories purchased by a customer from a Mazda importer/Distributor or a Mazda dealer and installed by a Mazda importer/Distributor or a Mazda dealer are covered for the first **12 months/12,000 miles** from the installation date or the remainder of the warranty coverage applied to the component by Mazda.

Mazda genuine replacement parts (other than the battery) and Accessories purchased by a customer from a Mazda dealer and not installed by a Mazda Dealer are covered for the first **12 months/12,000 miles** from the purchase date for the amount of the part purchase cost only excluding installation labor charges.

Mazdaspeed Performance Accessories are not covered by the Replacement Parts and Accessories Limited Warranty. The Mazdaspeed Performance Accessories are covered by the Mazdaspeed Performance Accessories Warranty.

- Mazdaspeed BLUE Performance Accessories are covered on terms much like this general warranty.
- Mazdaspeed Green Performance Accessories are warranted for 12 months or 12,000 miles from date of purchase.
- Mazdaspeed Orange Performance Accessories are sold “as is” without any warranty and are designed for Off Road Use ONLY.

Please see your Mazdaspeed Dealer for complete Mazdaspeed Performance Accessories Warranty Information.

Mazda genuine replacement battery sold by a Mazda Importer/Distributor or a Mazda Dealer is covered by the separate replacement battery warranty. See your Mazda dealer for details.



# REPLACEMENT PARTS AND ACCESSORIES LIMITED WARRANTY

## 2. What Is Not Covered

- Damage or corrosion due to accidents, misuse, or alterations.
- Damage or surface corrosion from the environment such as acid rain, airborne fallout (chemicals, tree sap), stones, salt, road hazards, hail, wind storm, lightning, floods, and other natural disasters.
- Normal wear, tear, or deterioration, such as discoloration, fading, deformation, blurring, etc.
- Air conditioner refrigerant charge after the first 12 months, unless replenished as part of a warranty repair.
- Replacement batteries (consult with your Mazda Dealer for the separate battery warranties.)
- Replacement parts or accessories installed on any Mazda Vehicle originally registered or normally operated outside of the United States, U.S. Virgin Islands, Guam, Saipan or American Samoa.
- Replacement parts or accessories installed on a Mazda Vehicle in which the odometer has been altered, or on which the actual mileage cannot be readily determined.
- Replacement parts or accessories used in applications for which they are not designed.
- Replacement parts or accessories installed improperly by dealers, Importer/Distributor other than Mazda.
- Any replacement part or accessory without proof of purchase or replacement date.
- Non-Mazda replacement parts or accessories which Mazda Dealers may sell or install on your Mazda Vehicle.
- If the vehicle has been classified for a total loss and/or sold for salvage purposes or branded for any other reasons.
- Removal of the vehicle from the warranty covered market for which it was produced.

## 3. To Get Warranty Service

You must take your Mazda Vehicle, along with this booklet and proof of purchase or replacement date, to a Mazda Dealer in the United States, Puerto Rico, U.S. Virgin Islands, Guam, Saipan, American Samoa, Canada or Mexico during their normal service hours.

If you have any questions or need assistance regarding this warranty, refer to “When You Need to Talk to Mazda” on page 7.

## 4. Limited Liability

The liability of a Mazda Importer/Distributor under this warranty is limited solely to the repair or replacement of parts defective in material or workmanship by a Mazda Dealer at their place of business, and specifically does not include any expense of, or related to, transportation to such a dealer or payment for loss of use of the Mazda Vehicle during warranty repairs.

## 5. Other Terms

The “Other Terms” stated on page 17 in the New Vehicle Limited Warranty also apply to this warranty.

## MAZDA IMPORTER/DISTRIBUTORS

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### U.S.A. (Importer/Distributor)

#### **Mazda North American Operations**

7755 Irvine Center Drive

Irvine, CA 92618-2922

P.O. Box 19734

Irvine, CA 92623-9734

TEL: 1 (800) 222-5500

(In the U.S.A.)

(949) 727-1990

(Outside of the U.S.A.)

### Distributors outside of the U.S.A

#### **CANADA**

##### **Mazda Canada, Inc.**

55 Vogell Road, Richmond Hill,

Ontario, L4B 3K5, Canada

TEL: 1 (800) 263-4680 (In Canada)

(905) 787-7000 (Outside of Canada)

#### **MEXICO**

##### **Mazda Motor de Mexico**

Mario Pani No. 150 P. B.

Col. Lomas de Santa Fe

Mexico, D. F. 05300

TEL: (800) 222-5500 (In the U.S.A.)

01-866-315-0220 (Outside of the

U.S.A.)

#### **PUERTO RICO**

##### **Plaza Motors Corp.**

(Mazda de Puerto Rico)

P.O. Box 362722, San Juan, Puerto Rico

00936-2722

TEL: (787) 641-9300

#### **GUAM**

##### **Triple J Enterprises, Inc.**

(d.b.a. Triple J Motors)

P.O. Box 6066

Tamuning, Guam 96931

TEL: (671) 646-9126

#### **SAIPAN**

##### **Pacific International Marianas, Inc.**

(d.b.a. Midway Motors)

P.O. Box 887

Beach Road Saipan, MP 96950

TEL: (670) 234-7524

##### **Triple J Saipan, Inc.**

(d.b.a. Triple J Motors)

P.O. Box 487,

Saipan MP 96950-0487

TEL: (670) 235-4868

#### **AMERICAN SAMOA**

##### **Polynesia Motors, Inc.**

P.O. Box 1120,

Pago Pago, American Samoa

96799

TEL: (684) 699-1854

## SCHEDULED MAINTENANCE RECORD

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The service record below has been designed to include the signature of your Mazda Dealer representative or other repair establishment representative. This signed form is evidence of completion of scheduled maintenance services and should be kept with the receipts, repair orders, and invoices in the glove box. All records should be given to any subsequent owner of the Mazda Vehicle. **Failure to properly maintain your vehicle can result in your warranty being voided either in whole or in part.**

### Scheduled Maintenance Intervals

For your information, refer to the owner's manual for your vehicle's recommended maintenance schedule.

Pre-Delivery Inspection	<b>3</b>	Mileage/Month Service
Mileage		Mileage
R.O. No./Date:		R.O. No./Date:
Authorized Signature:		Authorized Signature:
Dealership:		Dealership:

<b>1</b>	Mileage/Month Service	<b>4</b>	Mileage/Month Service
	Mileage		Mileage
	R.O. No./Date:		R.O. No./Date:
	Authorized Signature:		Authorized Signature:
	Dealership:		Dealership:

<b>2</b>	Mileage/Month Service	<b>5</b>	Mileage/Month Service
	Mileage		Mileage
	R.O. No./Date:		R.O. No./Date:
	Authorized Signature:		Authorized Signature:
	Dealership:		Dealership:

# SCHEDULED MAINTENANCE RECORD

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44

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**6** Mileage/Month Service

Mileage

R.O. No./Date:

Authorized Signature:

Dealership:

---

---

**10** Mileage/Month Service

Mileage

R.O. No./Date:

Authorized Signature:

Dealership:

---

---

**7** Mileage/Month Service

Mileage

R.O. No./Date:

Authorized Signature:

Dealership:

---

---

**11** Mileage/Month Service

Mileage

R.O. No./Date:

Authorized Signature:

Dealership:

---

---

**8** Mileage/Month Service

Mileage

R.O. No./Date:

Authorized Signature:

Dealership:

---

---

**12** Mileage/Month Service

Mileage

R.O. No./Date:

Authorized Signature:

Dealership:

---

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**9** Mileage/Month Service

Mileage

R.O. No./Date:

Authorized Signature:

Dealership:

---

---

**13** Mileage/Month Service

Mileage

R.O. No./Date:

Authorized Signature:

Dealership:

---

# SCHEDULED MAINTENANCE RECORD

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**14** Mileage/Month Service

---

Mileage

---

R.O. No./Date:

---

Authorized Signature:

---

Dealership:

---

---

**18** Mileage/Month Service

---

Mileage

---

R.O. No./Date:

---

Authorized Signature:

---

Dealership:

---

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**15** Mileage/Month Service

---

Mileage

---

R.O. No./Date:

---

Authorized Signature:

---

Dealership:

---

---

**19** Mileage/Month Service

---

Mileage

---

R.O. No./Date:

---

Authorized Signature:

---

Dealership:

---

---

**16** Mileage/Month Service

---

Mileage

---

R.O. No./Date:

---

Authorized Signature:

---

Dealership:

---

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**20** Mileage/Month Service

---

Mileage

---

R.O. No./Date:

---

Authorized Signature:

---

Dealership:

---

---

**17** Mileage/Month Service

---

Mileage

---

R.O. No./Date:

---

Authorized Signature:

---

Dealership:

---

---

**21** Mileage/Month Service

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Mileage

---

R.O. No./Date:

---

Authorized Signature:

---

Dealership:

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# SCHEDULED MAINTENANCE RECORD

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46

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**22** Mileage/Month Service

Mileage

R.O. No./Date:

Authorized Signature:

Dealership:

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**26** Mileage/Month Service

Mileage

R.O. No./Date:

Authorized Signature:

Dealership:

---

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**23** Mileage/Month Service

Mileage

R.O. No./Date:

Authorized Signature:

Dealership:

---

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**27** Mileage/Month Service

Mileage

R.O. No./Date:

Authorized Signature:

Dealership:

---

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**24** Mileage/Month Service

Mileage

R.O. No./Date:

Authorized Signature:

Dealership:

---

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**28** Mileage/Month Service

Mileage

R.O. No./Date:

Authorized Signature:

Dealership:

---

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**25** Mileage/Month Service

Mileage

R.O. No./Date:

Authorized Signature:

Dealership:

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---

**29** Mileage/Month Service

Mileage

R.O. No./Date:

Authorized Signature:

Dealership:

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The undersigned Dealer wants you to know that at the time your new Mazda Vehicle is being delivered:

1. Based upon written notification furnished by the manufacturer, we have knowledge that this Mazda Vehicle is covered by an Environmental Protection Agency (EPA) Certificate of Conformity.
2. We have made a visual inspection. This inspection is limited to those emission control devices or portions thereof which are visible without removal or adjustment of any vehicle component or system of the Mazda Vehicle, whether emissions related or otherwise. Based upon such visual inspection, there are no apparent deficiencies in the installation of emission control devices by the manufacturer. (“Emission control device” is limited to all devices installed on a Mazda Vehicle for the sole or primary purpose of controlling Mazda Vehicle’s emissions which were not in general use prior to 1968.)
3. We have performed all emission control system preparations required by the manufacturer prior to the sale of the Mazda Vehicle, as set forth in the current pre-delivery service manual provided by the manufacturer.
4. Except as may be provided in Paragraph 5 below, the Mazda Vehicle warrantor shall remedy problems free of charge to the customer, under terms of the warrantor’s emission performance warranty, if this Mazda Vehicle fails to pass an EPA-approved emission test under BOTH of the following conditions:
  - a. If such test is prior to the expiration of three months or 4,000 miles (whichever comes first) from date or mileage at time of delivery to the ultimate buyer.
  - b. If the Mazda Vehicle has been maintained and used in accordance with the manufacturer’s written instructions for proper maintenance and use.
5.  Check if the Mazda Vehicle is a company car or demonstrator and complete the following:

The Mazda Vehicle with which this statement is delivered was placed in service as a demonstrator or company car prior to delivery. The manufacturer’s emission performance warranty period commenced on the date the vehicle was first placed in service, namely on

\_\_\_\_\_

Month                      Day                      Year

**NOTE**

The dealer makes no representation or warranty that the emission control system or any part thereof is without defect nor that the system will properly perform. The warrantor’s emission performance warranty referred to above furnished with this Mazda Vehicle is solely that of the warrantor.

This statement is required by Section 207 of the Clean Air Act (42 U.S.C. 7541) and the EPA regulations issued thereunder.

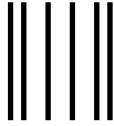
Dealership Name

\_\_\_\_\_







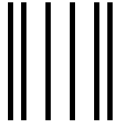
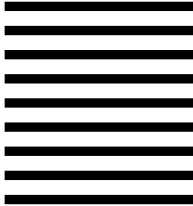


NO POSTAGE  
NECESSARY  
IF MAILED  
IN THE  
UNITED STATES

**BUSINESS REPLY MAIL**  
FIRST CLASS PERMIT NO. 9250 IRVINE, CA

POSTAGE WILL BE PAID BY ADDRESSEE

**Mazda North American Operations  
Attn: Customer Assistance Center  
P.O. Box 19734  
Irvine, CA 92623-9458**

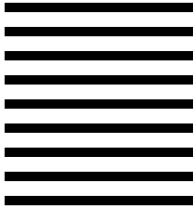


NO POSTAGE  
NECESSARY  
IF MAILED  
IN THE  
UNITED STATES

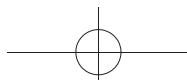
**BUSINESS REPLY MAIL**  
FIRST CLASS PERMIT NO. 9250 IRVINE, CA

POSTAGE WILL BE PAID BY ADDRESSEE

**Mazda North American Operations  
Attn: Customer Assistance Center  
P.O. Box 19734  
Irvine, CA 92623-9458**



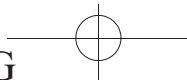
# EXHIBIT B

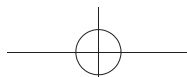


# 8 Maintenance and Care

How to keep your Mazda in top condition.

<b>Introduction .....</b>	<b>8-2</b>
Introduction .....	8-2
<b>Scheduled Maintenance .....</b>	<b>8-3</b>
Scheduled Maintenance (USA, Canada, and Puerto Rico) .....	8-3
Scheduled Maintenance (Mexico) .....	8-9
<b>Owner Maintenance .....</b>	<b>8-16</b>
Owner Maintenance Schedule .....	8-16
Owner Maintenance Precautions .....	8-17
Engine Compartment Overview .....	8-18
Engine Oil .....	8-19
Engine Coolant .....	8-21
Brake Fluid .....	8-23
Power Steering Fluid .....	8-24
Washer Fluid .....	8-24
Body Lubrication .....	8-25
Wiper Blades .....	8-26
Battery .....	8-30
Tires .....	8-32
Light Bulbs .....	8-38
Fuses .....	8-47
<b>Appearance Care .....</b>	<b>8-54</b>
How to Minimize Environmental Paint Damage .....	8-54
Exterior Care .....	8-56
Interior Care .....	8-60





Maintenance and Care

## Introduction

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### Introduction

Be extremely careful and prevent injury to yourself and others or damage to your vehicle when using this manual for inspection and maintenance.

If you are unsure about any procedure it describes, we strongly urge you to have a reliable and qualified service shop perform the work, preferably an Authorized Mazda Dealer.

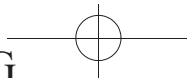
Factory-trained Mazda technicians and genuine Mazda parts are best for your vehicle. Without this expertise and the parts that have been designed and made especially for your Mazda, inadequate, incomplete, and insufficient servicing may result in problems. This could lead to vehicle damage or an accident and injuries.

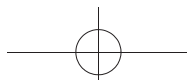
For expert advice and quality service, consult an Authorized Mazda Dealer.

The owner should retain evidence that proper maintenance has been performed as prescribed.

Claims against the warranty resulting from lack of maintenance, as opposed to defective materials or authorized Mazda workmanship, will not be honored.

Any auto repair shop using parts equivalent to your Mazda's original equipment may perform maintenance. **But we recommend that it always be done by an Authorized Mazda Dealer using genuine Mazda parts.**





Maintenance and Care

## Scheduled Maintenance

### Scheduled Maintenance (USA, Canada, and Puerto Rico)

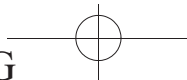
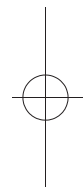
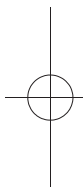
Follow Schedule 1 if the vehicle is operated mainly where none of the following conditions apply.

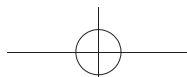
- Repeated short-distance driving
- Driving in dusty conditions
- Driving with extended use of brakes
- Driving in areas where salt or other corrosive materials are used
- Driving on rough or muddy roads
- Extended periods of idling or low-speed operation
- Driving for long periods in cold temperatures or extremely humid climates
- Driving in extremely hot conditions
- Driving in mountainous conditions continually

If any do apply, follow Schedule 2 (Canada and Puerto Rico residents follow Schedule 2).

**NOTE**

*After the prescribed period, continue to follow the described maintenance at the recommended intervals.*



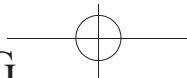


Maintenance and Care

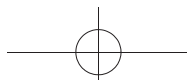
**Scheduled Maintenance**

▼ **Schedule 1**

Maintenance Interval	Number of months or kilometers (miles), whichever comes first								
	Months	6	12	18	24	30	36	42	48
	×1000 km	12	24	36	48	60	72	84	96
×1000 miles	7.5	15	22.5	30	37.5	45	52.5	60	
<b>ENGINE</b>									
Drive belts	Inspect every 168,000 km (105,000 miles) Replace every 240,000 km (150,000 miles)								
Engine oil	R	R	R	R	R	R	R	R	R
Engine oil filter	R	R	R	R	R	R	R	R	R
<b>COOLING SYSTEM</b>									
Engine coolant	FL22 type*1	Replace at first 192,000 km (120,000 miles) or 10 years; after that, every 96,000 km (60,000 miles) or 5 years							
	Others	Replace at first 96,000 km (60,000 miles) or 4 years; after that, every 2 years							
<b>FUEL SYSTEM</b>									
Air filter			C		R				C
Fuel lines and hoses*2					I				I
Hoses and tubes for emission*2									I
<b>IGNITION SYSTEM</b>									
Spark plugs	Replace every 160,000 km (100,000 miles)								
<b>CHASSIS and BODY</b>									
Brake lines, hoses and connections				I					I
Disc brakes		I		I		I			I
Tire (Rotation)	Rotate every 12,000 km (7,500 miles)								
Steering operation and linkages				I					I
Front and rear suspension, ball joints and wheel bearing axial play				I					I
Rear differential oil (AWD)	*3*4								
Driveshaft dust boots				I					I
Bolts and nuts on chassis and body				T					T
Exhaust system and heat shields	Inspect every 72,000 km (45,000 miles) or 5 years								
All locks and hinges	L	L	L	L	L	L	L	L	L



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Black plate (483,1)

Maintenance and Care  
**Scheduled Maintenance**

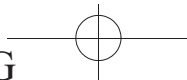
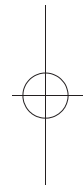
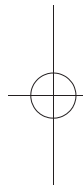
Maintenance Interval	Number of months or kilometers (miles), whichever comes first								
	Months	6	12	18	24	30	36	42	48
	×1000 km	12	24	36	48	60	72	84	96
	×1000 miles	7.5	15	22.5	30	37.5	45	52.5	60
<b>AIR CONDITIONER SYSTEM</b>									
Cabin air filter	Replace every 40,000 km (25,000 miles) or 2 years								

**Chart symbols:**

- I:** Inspect: Inspect and clean, repair, adjust, fill up, or replace if necessary.
- R:** Replace
- C:** Clean
- T:** Tighten
- L:** Lubricate

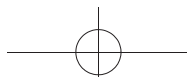
**Remarks:**

- \*1 Use FL22 type coolant in vehicles with the inscription "FL22" on the radiator cap itself or the surrounding area. Use FL22 when replacing the coolant.
- \*2 According to state/provincial and federal regulations, failure to perform maintenance on these items will not void your emissions warranties. However, Mazda recommends that all maintenance services be performed at the recommended time or mileage/kilometer period to ensure long-term reliability.
- \*3 If the vehicle is operated primarily under any of the following conditions, replace the rear differential oil at every 45,000 km (28,100 miles).
  - a) Towing a trailer or using a car-top carrier
  - b) Driving in dusty, sandy or wet conditions
  - c) Extended periods of idling or low speed operation
  - d) Repeated short trips of less than 16 km (10 miles)
- \*4 If this component has been submerged in water, the oil should be replaced.





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Black plate (484,1)

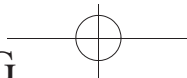
Maintenance and Care

**Scheduled Maintenance**

▼ **Schedule 2**

Maintenance Interval	Number of months or kilometers (miles), whichever comes first												
	Months	4	8	12	16	20	24	28	32	36	40	44	48
	×1000 km	8	16	24	32	40	48	56	64	72	80	88	96
×1000 miles	5	10	15	20	25	30	35	40	45	50	55	60	
<b>ENGINE</b>													
Drive belts	Inspect every 160,000 km (100,000 miles)												
	Replace every 240,000 km (150,000 miles)												
Engine oil	Puerto Rico	Replace every 5,000 km (3,000 miles) or 3 months											
	Others	R	R	R	R	R	R	R	R	R	R	R	R
Engine oil filter		R	R	R	R	R	R	R	R	R	R	R	R
<b>COOLING SYSTEM</b>													
Engine coolant	FL22 type*1	Replace at first 192,000 km (120,000 miles) or 10 years; after that, every 96,000 km (60,000 miles) or 5 years											
	Others	Replace at first 96,000 km (60,000 miles) or 4 years; after that, every 2 years											
Engine coolant level		I	I	I	I	I	I	I	I	I	I	I	I
<b>FUEL SYSTEM</b>													
Air filter	Puerto Rico			C			R			C			R
	Others				C			R				C	
Fuel lines and hoses*2							I						I
Hoses and tubes for emission*2													I
<b>IGNITION SYSTEM</b>													
Spark plugs	USA	Replace every 96,000 km (60,000 miles)											
	Others*3	Replace every 160,000 km (100,000 miles)											
<b>ELECTRICAL SYSTEM</b>													
Function of all lights		I	I	I	I	I	I	I	I	I	I	I	I

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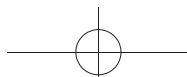


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Black plate (485,1)

Maintenance and Care  
**Scheduled Maintenance**

Maintenance Interval	Number of months or kilometers (miles), whichever comes first												
	Months	4	8	12	16	20	24	28	32	36	40	44	48
	×1000 km	8	16	24	32	40	48	56	64	72	80	88	96
	×1000 miles	5	10	15	20	25	30	35	40	45	50	55	60
<b>CHASSIS and BODY</b>													
Brake lines, hoses and connections							I						I
Brake fluid level	I	I	I	I	I	I	I	I	I	I	I	I	I
Disc brakes			I				I			I			I
Tire (Rotation)	Rotate every 8,000 km (5,000 miles)												
Tire inflation pressure and tire wear	I	I	I	I	I	I	I	I	I	I	I	I	I
Steering operation and linkages							I						I
Power steering fluid level	I	I	I	I	I	I	I	I	I	I	I	I	I
Front and rear suspension, ball joints and wheel bearing axial play							I						I
Rear differential oil (AWD)	*4*5												
Driveshaft dust boots							I						I
Bolts and nuts on chassis and body							T						T
Exhaust system and heat shields	Inspect every 72,000 km (45,000 miles) or 5 years												
All locks and hinges	L	L	L	L	L	L	L	L	L	L	L	L	L
Washer fluid level	I	I	I	I	I	I	I	I	I	I	I	I	I



Maintenance and Care

## Scheduled Maintenance

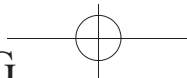
Maintenance Interval	Number of months or kilometers (miles), whichever comes first												
	Months	4	8	12	16	20	24	28	32	36	40	44	48
	×1000 km	8	16	24	32	40	48	56	64	72	80	88	96
	×1000 miles	5	10	15	20	25	30	35	40	45	50	55	60
<b>AIR CONDITIONER SYSTEM</b>													
Cabin air filter	Replace every 40,000 km (25,000 miles) or 2 years												

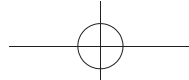
**Chart symbols:**

- I:** Inspect: Inspect and clean, repair, adjust, fill up, or replace if necessary.
- R:** Replace
- C:** Clean
- T:** Tighten
- L:** Lubricate

**Remarks:**

- \*1 Use FL22 type coolant in vehicles with the inscription "FL22" on the radiator cap itself or the surrounding area. Use FL22 when replacing the coolant.
- \*2 According to state/provincial and federal regulations, failure to perform maintenance on these items will not void your emissions warranties. However, Mazda recommends that all maintenance services be performed at the recommended time or mileage/kilometer period to ensure long-term reliability.
- \*3 If the vehicle is operated primarily under any of the following conditions, replace the spark plugs at every 96,000 km (60,000 miles) or shorter.
  - a) Repeated short-distance driving
  - b) Extended periods of idling or low-speed operation
  - c) Driving for long periods in cold temperatures or extremely humid climates
- \*4 If the vehicle is operated primarily under any of the following conditions, replace the rear differential oil at every 45,000 km (28,100 miles).
  - a) Towing a trailer or using a car-top carrier
  - b) Driving in dusty, sandy or wet conditions
  - c) Extended periods of idling or low speed operation
  - d) Repeated short trips of less than 16 km (10 miles)
- \*5 If this component has been submerged in water, the oil should be replaced.





Maintenance and Care

**Scheduled Maintenance**

**Scheduled Maintenance (Mexico)**

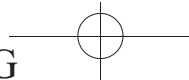
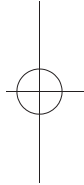
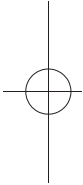
Follow Schedule 1 if the vehicle is operated mainly where none of the following conditions apply.

- Repeated short-distance driving
- Driving in dusty conditions
- Driving with extended use of brakes
- Driving in areas where salt or other corrosive materials are used
- Driving on rough or muddy roads
- Extended periods of idling or low-speed operation
- Driving for long periods in cold temperatures or extremely humid climates
- Driving in extremely hot conditions
- Driving in mountainous conditions continually

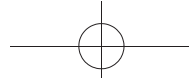
If any do apply, follow Schedule 2.

**NOTE**

*After the prescribed period, continue to follow the described maintenance at the recommended intervals.*



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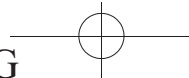
Black plate (488,1)

Maintenance and Care  
**Scheduled Maintenance**

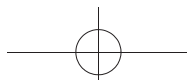
▼ **Schedule 1**

Maintenance Interval	Number of months or kilometers, whichever comes first												
	Months	6	12	18	24	30	36	42	48	54	60	66	72
	×1000 km	10	20	30	40	50	60	70	80	90	100	110	120
<b>ENGINE</b>													
Drive belts	Inspect every 40,000 km or 2 years Replace every 240,000 km												
Engine oil	R	R	R	R	R	R	R	R	R	R	R	R	R
Engine oil filter	R	R	R	R	R	R	R	R	R	R	R	R	R
<b>COOLING SYSTEM</b>													
Cooling system				I					I				I
Engine coolant	FL22 type*1	Replace at first 190,000 km or 10 years; after that, every 60,000 km or 3 years											
	Others				R				R				R
<b>FUEL SYSTEM</b>													
Air filter		R		R		R		R		R		R	
Fuel lines and hoses				I*2				I*2					I
Hoses and tubes for emission				I*2				I*2					I
Fuel filter				R				R					R
<b>IGNITION SYSTEM</b>													
Spark plugs	Replace every 60,000 km												
<b>CHASSIS and BODY</b>													
Brake lines, hoses and connections		I		I		I		I		I		I	
Brake fluid level	I	I	I		I	I	I		I	I	I		
Brake fluid				R				R					R
Disc brakes	I	I	I	I	I	I	I	I	I	I	I	I	I
Tire (Rotation)	Rotate every 10,000 km												
Tire inflation pressure and tire wear	I	I	I	I	I	I	I	I	I	I	I	I	I
Steering operation and linkages	I	I	I	I	I	I	I	I	I	I	I	I	I
Power steering fluid level	I	I	I	I	I	I	I	I	I	I	I	I	I
Front and rear suspension, ball joints and wheel bearing axial play		I		I		I		I		I		I	
Rear differential oil (AWD)	*3*4												
Driveshaft dust boots		I		I		I		I		I		I	
Bolts and nuts on chassis and body		T		T		T		T		T		T	
Exhaust system and heat shields		I		I		I		I		I		I	
All locks and hinges	L	L	L	L	L	L	L	L	L	L	L	L	L
Washer fluid level	I	I	I	I	I	I	I	I	I	I	I	I	I

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Black plate (489,1)

Maintenance and Care  
**Scheduled Maintenance**

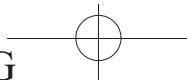
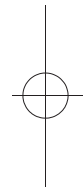
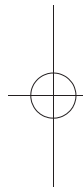
Maintenance Interval	Number of months or kilometers, whichever comes first												
	Months	6	12	18	24	30	36	42	48	54	60	66	72
	×1000 km	10	20	30	40	50	60	70	80	90	100	110	120
<b>AIR CONDITIONER SYSTEM</b>													
Cabin air filter					R				R				R

**Chart symbols:**

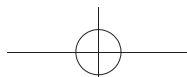
- I:** Inspect: Inspect and clean, repair, adjust, fill up, or replace if necessary.
- R:** Replace
- T:** Tighten
- L:** Lubricate

**Remarks:**

- \*1 Use FL22 type coolant in vehicles with the inscription "FL22" on the radiator cap itself or the surrounding area. Use FL22 when replacing the coolant.
- \*2 According to state/provincial and federal regulations, failure to perform maintenance on these items will not void your emissions warranties. However, Mazda recommends that all maintenance services be performed at the recommended time or kilometer period to ensure long-term reliability.
- \*3 If the vehicle is operated primarily under any of the following conditions, replace the rear differential oil at every 40,000 km.
  - a) Towing a trailer or using a car-top carrier
  - b) Driving in dusty, sandy or wet conditions
  - c) Extended periods of idling or low speed operation
  - d) Repeated short trips of less than 16 km
- \*4 If this component has been submerged in water, the oil should be replaced.



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Black plate (490,1)

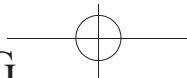
Maintenance and Care

**Scheduled Maintenance**

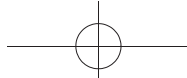
▼ **Schedule 2**

Maintenance Interval	Number of months or kilometers, whichever comes first												
	Months	3	6	9	12	15	18	21	24	27	30	33	36
	×1000 km	5	10	15	20	25	30	35	40	45	50	55	60
<b>ENGINE</b>													
Drive belts	Inspect every 40,000 km or 2 years Replace every 240,000 km												
Engine oil	R	R	R	R	R	R	R	R	R	R	R	R	R
Engine oil filter	R	R	R	R	R	R	R	R	R	R	R	R	R
<b>COOLING SYSTEM</b>													
Cooling system									I				
Engine coolant	FL22 type*1	Replace at first 190,000 km or 10 years; after that, every 60,000 km or 3 years											
	Others								R				
Engine coolant level	I	I	I	I	I	I	I	I	I	I	I	I	I
<b>FUEL SYSTEM</b>													
Air filter		C		R		C		R		C		R	
Fuel lines and hoses								I <sup>*2</sup>					
Hoses and tubes for emission								I <sup>*2</sup>					
Fuel filter								R					
<b>IGNITION SYSTEM</b>													
Spark plugs	Replace every 60,000 km												
<b>ELECTRICAL SYSTEM</b>													
Function of all lights	I	I	I	I	I	I	I	I	I	I	I	I	I
<b>CHASSIS and BODY</b>													
Brake lines, hoses and connections				I					I				I
Brake fluid level		I		I		I				I			I
Brake fluid								R					
Disc brakes		I		I		I		I		I			I
Tire (Rotation)	Rotate every 10,000 km												
Tire inflation pressure and tire wear		I		I		I		I		I			I
Steering operation and linkages		I		I		I		I		I			I
Power steering fluid level		I		I		I		I		I			I
Front and rear suspension, ball joints and wheel bearing axial play				I					I				I
Rear differential oil (AWD)	<sup>*3*4</sup>												
Driveshaft dust boots				I					I				I
Bolts and nuts on chassis and body				T					T				T
Exhaust system and heat shields				I					I				I
All locks and hinges		L		L		L		L		L			L
Washer fluid level		I		I		I		I		I			I

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Black plate (491,1)

Maintenance and Care  
**Scheduled Maintenance**

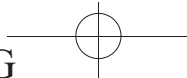
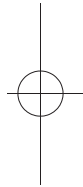
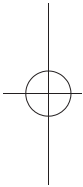
Maintenance Interval	Number of months or kilometers, whichever comes first												
	Months	3	6	9	12	15	18	21	24	27	30	33	36
	×1000 km	5	10	15	20	25	30	35	40	45	50	55	60
<b>AIR CONDITIONER SYSTEM</b>													
Cabin air filter					R				R				R

**Chart symbols:**

- I:** Inspect: Inspect and clean, repair, adjust, fill up, or replace if necessary.
- R:** Replace
- C:** Clean
- T:** Tighten
- L:** Lubricate

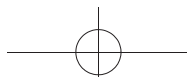
**Remarks:**

- \*1 Use FL22 type coolant in vehicles with the inscription "FL22" on the radiator cap itself or the surrounding area. Use FL22 when replacing the coolant.
- \*2 According to state/provincial and federal regulations, failure to perform maintenance on these items will not void your emissions warranties. However, Mazda recommends that all maintenance services be performed at the recommended time or kilometer period to ensure long-term reliability.
- \*3 If the vehicle is operated primarily under any of the following conditions, replace the rear differential oil at every 40,000 km.
  - a) Towing a trailer or using a car-top carrier
  - b) Driving in dusty, sandy or wet conditions
  - c) Extended periods of idling or low speed operation
  - d) Repeated short trips of less than 16 km
- \*4 If this component has been submerged in water, the oil should be replaced.





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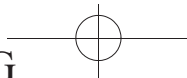
Black plate (492,1)

Maintenance and Care  
**Scheduled Maintenance**

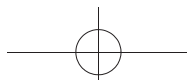
(Cont.)

Maintenance Interval	Number of months or kilometers, whichever comes first												
	Months	39	42	45	48	51	54	57	60	63	66	69	72
	×1000 km	65	70	75	80	85	90	95	100	105	110	115	120
<b>ENGINE</b>													
Drive belts	Inspect every 40,000 km or 2 years Replace every 240,000 km												
Engine oil	R	R	R	R	R	R	R	R	R	R	R	R	R
Engine oil filter	R	R	R	R	R	R	R	R	R	R	R	R	R
<b>COOLING SYSTEM</b>													
Cooling system				I									I
Engine coolant	FL22 type*1	Replace at first 190,000 km or 10 years; after that, every 60,000 km or 3 years											
	Others				R								R
Engine coolant level		I	I	I	I	I	I	I	I	I	I	I	I
<b>FUEL SYSTEM</b>													
Air filter		C			R		C		R		C		R
Fuel lines and hoses					I*2								I
Hoses and tubes for emission					I*2								I
Fuel filter					R								R
<b>IGNITION SYSTEM</b>													
Spark plugs	Replace every 60,000 km												
<b>ELECTRICAL SYSTEM</b>													
Function of all lights		I	I	I	I	I	I	I	I	I	I	I	I
<b>CHASSIS and BODY</b>													
Brake lines, hoses and connections					I				I				I
Brake fluid level		I					I		I		I		
Brake fluid					R								R
Disc brakes		I			I		I		I		I		I
Tire (Rotation)	Rotate every 10,000 km												
Tire inflation pressure and tire wear		I			I		I		I		I		I
Steering operation and linkages		I			I		I		I		I		I
Power steering fluid level		I			I		I		I		I		I
Front and rear suspension, ball joints and wheel bearing axial play					I				I				I
Rear differential oil (AWD)	*3*4												
Driveshaft dust boots					I				I				I
Bolts and nuts on chassis and body					T				T				T
Exhaust system and heat shields					I				I				I
All locks and hinges		L			L		L		L		L		L
Washer fluid level		I			I		I		I		I		I

8-14



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 Thursday, June 23 2011 11:6 AM



Black plate (493,1)

Maintenance and Care  
**Scheduled Maintenance**

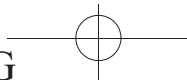
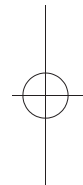
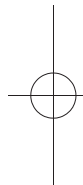
Maintenance Interval	Number of months or kilometers, whichever comes first												
	Months	39	42	45	48	51	54	57	60	63	66	69	72
	×1000 km	65	70	75	80	85	90	95	100	105	110	115	120
<b>AIR CONDITIONER SYSTEM</b>													
Cabin air filter					R				R				R

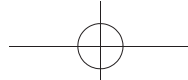
**Chart symbols:**

- I:** Inspect: Inspect and clean, repair, adjust, fill up, or replace if necessary.
- R:** Replace
- C:** Clean
- T:** Tighten
- L:** Lubricate

**Remarks:**

- \*1 Use FL22 type coolant in vehicles with the inscription "FL22" on the radiator cap itself or the surrounding area. Use FL22 when replacing the coolant.
- \*2 According to state/provincial and federal regulations, failure to perform maintenance on these items will not void your emissions warranties. However, Mazda recommends that all maintenance services be performed at the recommended time or kilometer period to ensure long-term reliability.
- \*3 If the vehicle is operated primarily under any of the following conditions, replace the rear differential oil at every 40,000 km.
  - a) Towing a trailer or using a car-top carrier
  - b) Driving in dusty, sandy or wet conditions
  - c) Extended periods of idling or low speed operation
  - d) Repeated short trips of less than 16 km
- \*4 If this component has been submerged in water, the oil should be replaced.





Maintenance and Care

## Owner Maintenance

---

### Owner Maintenance Schedule

The owner or a qualified service technician should make these vehicle inspections at the indicated intervals to ensure safe and dependable operation.

Bring any problem to the attention of an Authorized Mazda Dealer or qualified service technician as soon as possible.

#### ▼ When Refueling

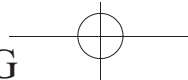
- Brake fluid level (page 8-23)
- Engine coolant level (page 8-21)
- Engine oil level (page 8-20)
- Washer fluid level (page 8-24)

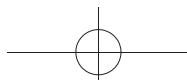
#### ▼ At Least Monthly

Tire inflation pressures (page 8-32)

#### ▼ At Least Twice a Year (For Example, Every Spring and Fall)

- Power steering fluid level (page 8-24)
- You can do the following scheduled maintenance items if you have some mechanical ability and a few basic tools and if you closely follow the directions in this manual.
- Engine coolant (page 8-21)
  - Engine oil (page 8-19)



**Owner Maintenance****Owner Maintenance Precautions**

Improper or incomplete service may result in problems. This section gives instructions only for items that are easy to perform.

As explained in the Introduction (page 8-2), several procedures can be done only by a qualified service technician with special tools.

Improper owner maintenance during the warranty period may affect warranty coverage. For details, read the separate Mazda Warranty statement provided with the vehicle. If you're unsure about any servicing or maintenance procedure, have it done by an Authorized Mazda Dealer.

There are strict environmental laws regarding the disposal of waste oil and fluids. Please dispose of your waste properly and with due regard to the environment.

We recommend that you entrust the oil and fluid changes of your vehicle to an Authorized Mazda Dealer.

**⚠ WARNING**

***Do not perform maintenance work if you lack sufficient knowledge and experience or the proper tools and equipment to do the work. Have maintenance work done by a qualified technician:***

*Performing maintenance work on a vehicle is dangerous if not done properly. You can be seriously injured while performing some maintenance procedures.*

***If you must run the engine while working under the hood, make certain that you remove all jewelry (especially rings, bracelets, watches, and necklaces) and all neckties, scarves, and similar loose clothing before getting near the engine or cooling fan which may turn on unexpectedly:***

*Working under the hood with the engine running is dangerous. It becomes even more dangerous when you wear jewelry or loose clothing.*

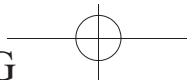
*Either can become entangled in moving parts and result in injury.*

***Switch the ignition to off and make sure the fan is not running before attempting to work near the cooling fan:***

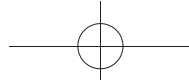
*Working near the cooling fan when it is running is dangerous. The fan could continue running indefinitely even if the engine has stopped and the engine compartment temperature is high. You could be hit by the fan and seriously injured.*

***Do not leave items in the engine compartment:***

*After you have finished checking or doing servicing in the engine compartment, do not forget and leave items such as tools or rags in the engine compartment. Tools or other items left in the engine compartment could cause engine damage or a fire leading to an unexpected accident.*



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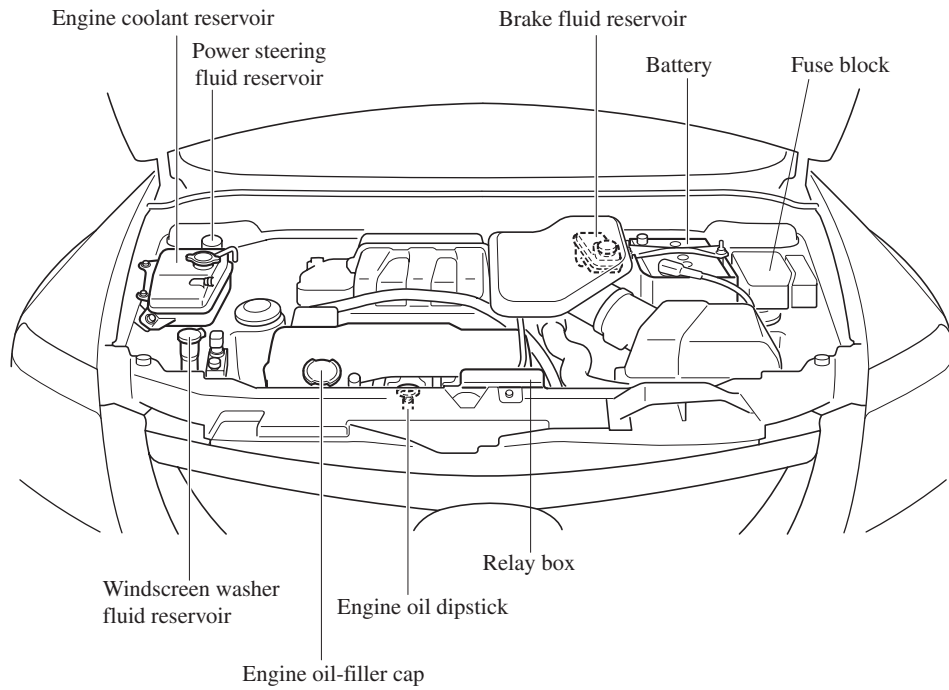


Black plate (496,1)

Maintenance and Care

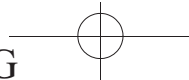
## Owner Maintenance

### Engine Compartment Overview



8-18

Form No.8CA8-EA-11G



Maintenance and Care  
**Owner Maintenance**

**Engine Oil**

**NOTE**

*Changing the engine oil should be done by an Authorized Mazda Dealer.*

Mazda recommends Mazda Genuine Parts and Castrol (U.S.A and Mexico). For optimal engine performance, there are certain types of engine oils and filters suitable for your vehicle. Please consult an Authorized Mazda Dealer.

**▼ Recommended Oil**

**Use SAE 5W-20 engine oil.**

Oil container labels provide important information.

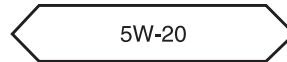
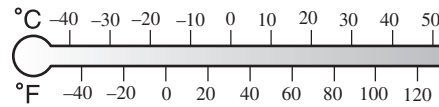
A chief contribution this type of oil makes to fuel economy is reducing the amount of fuel necessary to overcome engine friction.

**U.S.A. and CANADA**



(ILSAC)

Only use oils “Certified For Gasoline Engines” by the American Petroleum Institute (API). An oil with this trademark symbol conforms to the current engine and emission system protection standards and fuel economy requirements of the International Lubricant Standardization and Approval Committee (ILSAC), comprised of U.S. and Japanese automobile manufacturers.



**Except U.S.A. and CANADA**

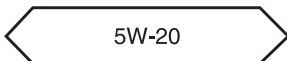
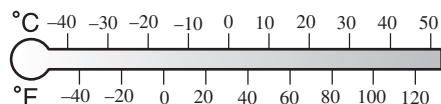


(ILSAC)

Maintenance and Care

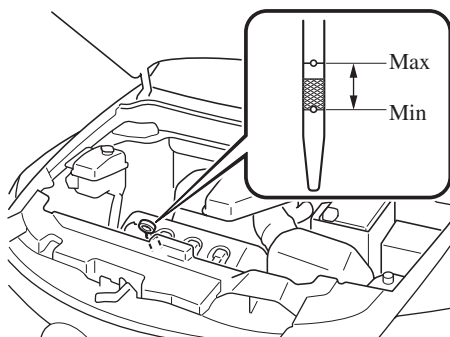
**Owner Maintenance**

The quality designation SM, or ILSAC must be on the label.



**▼ Inspecting Engine Oil Level**

1. Be sure the vehicle is on a level surface.
2. Warm up the engine to normal operating temperature.
3. Turn it off and wait at least 5 minutes for the oil to return to the oil pan.
4. Pull out the dipstick, wipe it clean, and reinsert it fully.



5. Pull it out again and examine the level. The level is normal if it is between MIN and MAX. If it is below MIN, add oil to raise the level within the hatching zone.

**⚠ CAUTION**

*Do not add engine oil over MAX. This may cause engine damage.*

6. Make sure the O-ring on the dipstick is positioned properly before reinserting the dipstick.

Maintenance and Care  
**Owner Maintenance**

**Engine Coolant**

**▼ Inspecting Coolant Level**

**⚠ WARNING**

**Do not use a match or live flame in the engine compartment. DO NOT ADD COOLANT WHEN THE ENGINE IS HOT:**

*A hot engine is dangerous. If the engine has been running, parts of the engine compartment can become very hot. You could be burned. Carefully inspect the engine coolant in the coolant reservoir, but do not open it.*



**Switch the ignition to off and make sure the fan is not running before attempting to work near the cooling fan:**

*Working near the cooling fan when it is running is dangerous. The fan could continue running indefinitely even if the engine has stopped and the engine compartment temperature is high. You could be hit by the fan and seriously injured.*



**Do not remove either cooling system cap when the engine and radiator are hot:**

*When the engine and radiator are hot, scalding coolant and steam may shoot out under pressure and cause serious injury.*

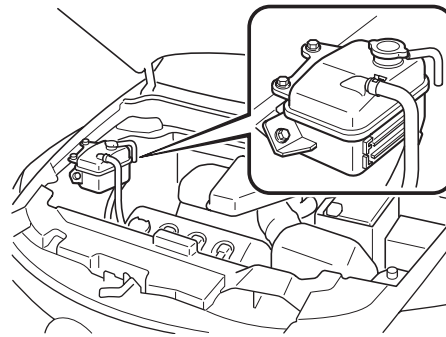
**NOTE**

*Changing the coolant should be done by an Authorized Mazda Dealer.*

Inspect the antifreeze protection and coolant level in the coolant reservoir at least once a year—at the beginning of the winter season—and before traveling where temperatures may drop below freezing.

Inspect the condition and connections of all cooling system and heater hoses. Replace any that are swollen or deteriorated.

The coolant should be at full in the radiator and between the F and L marks on the coolant reservoir when the engine is cool.



If it is at or near L, add enough coolant to the coolant reservoir to provide freezing and corrosion protection and to bring the level to F.

Securely tighten the coolant reservoir tank cap after adding coolant.



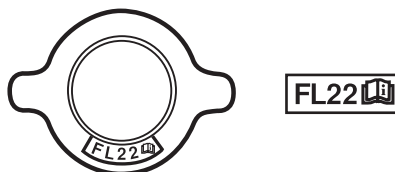
## Maintenance and Care

**Owner Maintenance****CAUTION**

- Radiator coolant will damage paint.  
*Rinse it off quickly if spilled.*
- Use only soft (demineralized) water in the coolant mixture. Water that contains minerals will cut down on the coolant's effectiveness.
- Do not add only water. Always add a proper coolant mixture.
- The engine has aluminum parts and must be protected by an ethylene-glycol-based coolant to prevent corrosion and freezing.
- DO NOT USE coolants Containing Alcohol, methanol, Borate or Silicate.  
*These coolants could damage the cooling system.*
- DO NOT MIX alcohol or methanol with the coolant. This could damage the cooling system.
- Do not use a solution that contains more than 60% antifreeze.  
*This would reduce effectiveness.*

**NOTE**

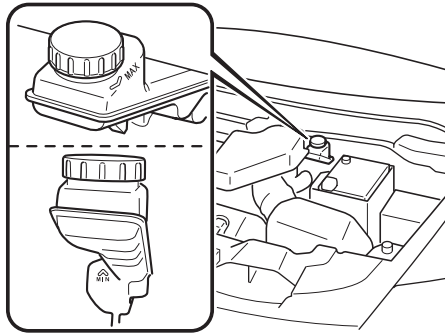
If the "FL22" mark is shown on or near the cooling system cap, it is recommended to use Mazda Genuine FL22 engine coolant (page 8-3).



If the coolant reservoir is empty or new coolant is required frequently, consult an Authorized Mazda Dealer.

Maintenance and Care  
**Owner Maintenance****Brake Fluid****▼ Inspecting Brake Fluid Level**

Inspect the fluid level in the reservoir regularly. It should be kept at MAX. The level normally drops with accumulated distance, a condition associated with wear of brake linings. If it is excessively low, have the brake system inspected by an Authorized Mazda Dealer.

**▼ Adding Brake Fluid****⚠ WARNING**

**Be careful not to spill brake fluid on yourself or on the engine:**

*Spilled brake fluid is dangerous. If it gets in your eyes, they could be seriously injured. If this happens, immediately flush your eyes with water and get medical attention. Brake fluid spilled on a hot engine could cause a fire.*

**If the brake fluid level is low, have the brakes inspected:**

*Low brake fluid levels are dangerous. Low levels could signal brake lining wear or a brake system leak. Your brakes could fail and cause an accident.*

If the fluid level is low, add fluid until it reaches MAX. Before adding fluid, thoroughly clean the area around the cap.

**⚠ CAUTION**

- *Brake fluid will damage painted surfaces. If brake fluid does get on a painted surface, wash it off with water immediately.*
- *Using nonspecified brake fluids (page 10-4) will damage the system. Mixing different fluids will also damage it. If the brake system frequently requires new fluid, consult an Authorized Mazda Dealer.*

Maintenance and Care

## Owner Maintenance

### Power Steering Fluid

#### ▼ Inspecting Power Steering Fluid Level

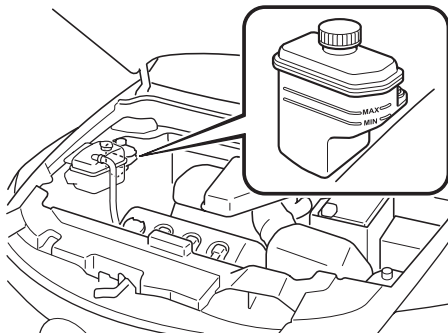
#### ⚠ CAUTION

To avoid damage to the power steering pump, don't operate the vehicle for long periods when the power steering fluid level is low.

#### NOTE

Use specified power steering fluid (page 10-4).

Inspect the fluid level in the reservoir at each engine oil change with the engine off and cold. Add fluid if necessary; it does not require periodic changing.



The level must be kept between MAX and MIN.

Visually examine the lines and hoses for leaks and damage.

If new fluid is required frequently, consult an Authorized Mazda Dealer.

### Washer Fluid

#### ▼ Inspecting Washer Fluid Level

#### ⚠ WARNING

Use only windshield washer fluid or plain water in the reservoir:

Using radiator antifreeze as washer fluid is dangerous. If sprayed on the windshield, it will dirty the windshield, affect your visibility, and could result in an accident.

#### Using Washer Fluid Without Anti-freeze Protection in Cold Weather:

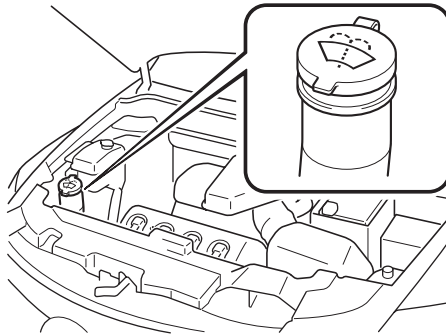
Operating your vehicle in temperatures below 4 degrees C (40 degrees F) using washer fluid without anti-freeze protection is dangerous as it could cause impaired windshield vision and result in an accident. In cold weather, always use washer fluid with anti-freeze protection.

#### NOTE

State or local regulations may restrict the use of volatile organic compounds (VOCs), which are commonly used as anti-freeze agents in washer fluid. A washer fluid with limited VOC content should be used only if it provides adequate freeze resistance for all regions and climates in which the vehicle will be operated.

Maintenance and Care  
**Owner Maintenance**

Inspect fluid level in the washer fluid reservoir; add fluid if necessary.



Use plain water if washer fluid is unavailable.  
But use only washer fluid in cold weather to prevent it from freezing.

**NOTE**

*Front and rear washer fluid is supplied from the same reservoir.*

**Body Lubrication**

All moving points of the body, such as door and hood hinges and locks, should be lubricated each time the engine oil is changed. Use a nonfreezing lubricant on locks during cold weather.

Make sure the hood's secondary latch keeps the hood from opening when the primary latch is released.

## Maintenance and Care

**Owner Maintenance****Wiper Blades****CAUTION**

- *Hot waxes applied by automatic car washers have been known to affect the wiper's ability to clean windows.*
- *To prevent damage to the wiper blades, do not use gasoline, kerosene, paint thinner, or other solvents on or near them.*
- *When the wiper lever is in the AUTO position and the ignition is switched ON, the wipers may move automatically in the following cases:*
  - *If the windshield above the rain sensor is touched.*
  - *If the windshield above the rain sensor is wiped with a cloth.*
  - *If the windshield is struck with a hand or other object.*
  - *If the rain sensor is struck with a hand or other object from inside the vehicle.*

*Be careful not to pinch hands or fingers as it may cause injury, or damage the wipers. When washing or servicing your Mazda, make sure the wiper lever is in the OFF position.*

Contamination of either the windshield or the blades with foreign matter can reduce wiper effectiveness. Common sources are insects, tree sap, and hot wax treatments used by some commercial car washes.

If the blades are not wiping properly, clean the window and blades with a good cleaner or mild detergent; then rinse thoroughly with clean water. Repeat if necessary.

**8-26****▼ Replacing Windshield Wiper Blades**

When the wipers no longer clean well, the blades are probably worn or cracked. Replace them.

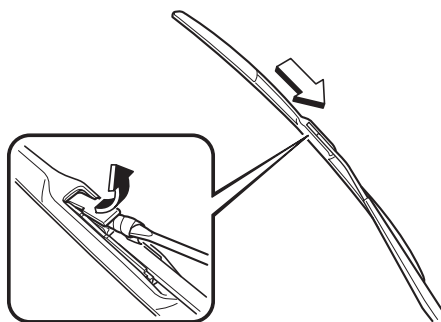
**CAUTION**

*To prevent damage to the wiper arms and other components, don't try to sweep the wiper arm by hand.*

**NOTE**

*To prevent damage to the wiper arm blades when raising both the driver and passenger side wiper arms, raise the driver side wiper arm first. Conversely, when setting down the wiper arms, set the passenger side wiper arm down first.*

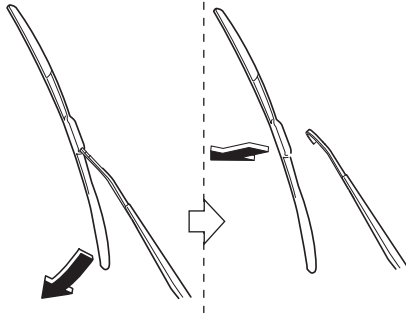
1. Raise the wiper arm.
2. Open the clip and slide the blade assembly in the direction of the arrow.
3. Wrap a flathead screwdriver or similar tool with a soft cloth to prevent damage to the clip.

**NOTE**

*Using a soft cloth-wrapped flathead screwdriver.*

Maintenance and Care  
**Owner Maintenance**

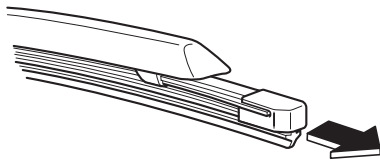
4. Tilt the blade assembly and remove it from the arm.



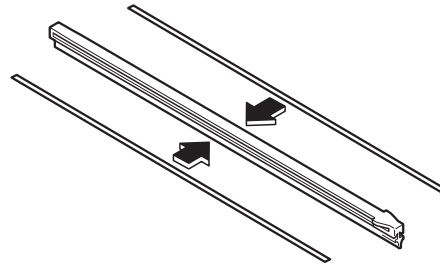
**CAUTION**

*To prevent damage to the windshield let the wiper arm down easily, don't let it slap down on the windshield.*

5. Pull down the blade rubber and slide it out of blade holder.



6. Remove the metal stiffeners from each blade rubber and install them in the new blade.



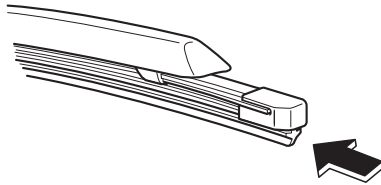
**CAUTION**

- Don't bend or discard the stiffeners. You need to use them again.
- If the metal stiffeners are switched, the blade's wiping efficiency could be reduced. So don't use the driver's side metal stiffeners on the passenger's side, or vice versa.
- Be sure to reinstall the metal stiffeners in the new blade rubber so that the curve is the same as it was in the old blade rubber.

Maintenance and Care

**Owner Maintenance**

- 7. Carefully insert the new blade rubber. Then install the blade assembly in the reverse order of removal.



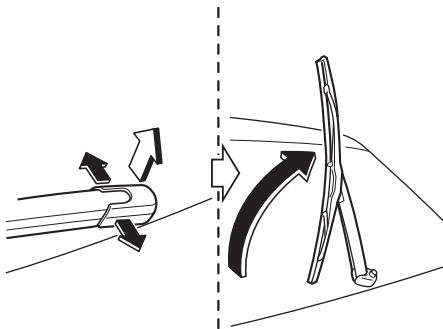
**▼ Replacing Rear Window Wiper Blade**

When the wiper no longer cleans well, the blade is probably worn or cracked. Replace it.

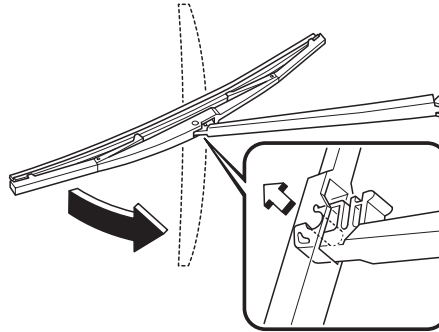
**⚠ CAUTION**

*To prevent damage to the wiper arm and other components, don't try to sweep the wiper arm by hand.*

- 1. Remove the cover and raise the wiper arm.



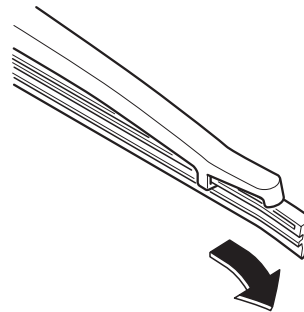
- 2. Firmly rotate the wiper blade to the right until it unlocks, then remove the blade.

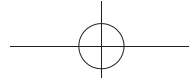


**⚠ CAUTION**

*To prevent damage to the rear window let the wiper arm down easily, don't let it slap down on the rear window.*

- 3. Pull down the blade rubber and slide it out of the blade holder.

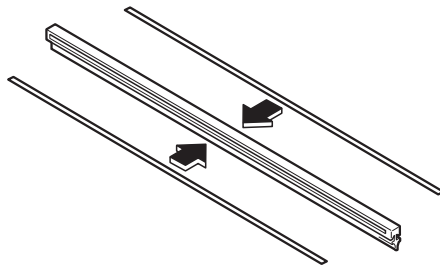




Maintenance and Care  
**Owner Maintenance**

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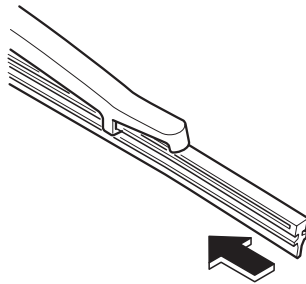
4. Remove the metal stiffeners from each blade rubber and install them in the new blade.



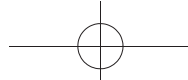
**CAUTION**

*Don't bend or discard the stiffeners.  
You need to use them again.*

5. Carefully insert the new blade rubber. Then install the blade assembly in the reverse order of removal.







## Maintenance and Care

**Owner Maintenance****Battery****⚠ WARNING**

**Wash hands after handling the battery and related accessories:**

*Battery posts, terminals and related accessories contain lead and lead compounds, chemicals known to the State of California to cause cancer and reproductive harm.*



**Read the following precautions carefully before using the battery or inspecting to ensure safe and correct handling:**



**Always wear eye protection when working near the battery:**

*Working without eye protection is dangerous. Battery fluid contains SULFURIC ACID which could cause blindness if splashed into your eyes. Also, hydrogen gas produced during normal battery operation, could ignite and cause the battery to explode.*



**Wear eye protection and protective gloves to prevent contact with battery fluid:**

*Spilled battery fluid is dangerous.*

*Battery fluid contains SULFURIC ACID which could cause serious injuries if it gets in eyes, or on the skin or clothing. If this happens, immediately flush your eyes with water for 15 minutes or wash your skin thoroughly and get medical attention.*



**Always keep batteries out of the reach of children:**

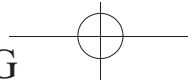
*Allowing children to play near batteries is dangerous. Battery fluid could cause serious injuries if it gets in the eyes or on the skin.*

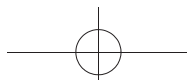


**Keep flames and sparks away from open battery cells and do not allow metal tools to contact the positive (+) or negative (-) terminal of the battery when working near a battery. Do not allow the positive (+) terminal to contact the vehicle body:**

*Flames and sparks near open battery cells are dangerous. Hydrogen gas, produced during normal battery operation, could ignite and cause the battery to explode. An exploding battery can cause serious burns and injuries. Keep all flames including cigarettes and sparks away from open battery cells.*

8-30



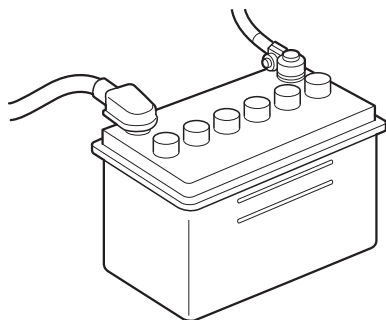


Maintenance and Care  
**Owner Maintenance**



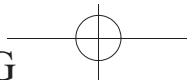
**Keep all flames, including cigarettes, and sparks away from open battery cells:**  
*Flames and sparks near open battery cells are dangerous. Hydrogen gas, produced during normal battery operation, could ignite and cause the battery to explode. An exploding battery can cause serious burns and injuries.*

**▼ Battery Maintenance**



To get the best service from a battery:

- Keep it securely mounted.
- Keep the top clean and dry.
- Keep terminals and connections clean, tight, and coated with petroleum jelly or terminal grease.
- Rinse off spilled electrolyte immediately with a solution of water and baking soda.
- If the vehicle will not be used for an extended time, disconnect the battery cables.



## Maintenance and Care

**Owner Maintenance****Tires**

For reasons of proper performance, safety, and better fuel economy, always maintain recommended tire inflation pressures and stay within the recommended load limits and weight distribution.

**⚠ WARNING****Using Different Tire Types:**

*Driving your vehicle with different types of tires is dangerous. It could cause poor handling and poor braking; leading to loss of control. Except for the limited use of the temporary spare tire, use only the same type tires (radial, bias-belted, bias-type) on all four wheels.*

**Using Wrong-Sized Tires:**

*Using any other tire size than what is specified for your Mazda (page 10-6) is dangerous. It could seriously affect ride, handling, ground clearance, tire clearance, and speedometer calibration. This could cause you to have an accident. Use only tires that are the correct size specified for your Mazda.*

**▼ Tire Inflation Pressure****⚠ WARNING**

***Always inflate the tires to the correct pressure:***

*Overinflation or underinflation of tires is dangerous. Adverse handling or unexpected tire failure could result in a serious accident.*

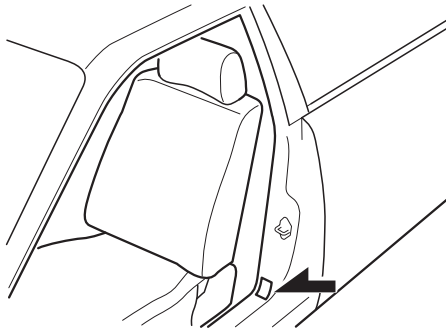
*Refer to Tires on page 10-6.*

***Use only a Mazda-genuine tire valve cap:***

*Use of a non-genuine part is dangerous as the correct tire air pressure cannot be maintained if the tire valve becomes damaged. If the vehicle is driven under this condition, the tire air pressure will decrease which could result in a serious accident. Do not use any part for the tire valve cap that is not a Mazda-genuine part.*

Maintenance and Care  
**Owner Maintenance**

The Tire Pressure Monitoring System\* does not alleviate the need to check the tire condition every day, including whether the tires all look inflated properly. Inspect all tire pressure monthly (including the spare) when the tires are cold. Maintain recommended pressures for the best ride, handling, and minimum tire wear. When checking the tire pressures, use of a digital tire pressure gauge is recommended.



Refer to the specification charts (page 10-6).

**NOTE**

- Always check tire pressure when tires are cold.
  - Warm tires normally exceed recommended pressures. Don't release air from warm tires to adjust the pressure.
  - Underinflation can cause reduced fuel economy, uneven and accelerated tire wear, and poor sealing of the tire bead, which will deform the wheel and cause separation of tire from rim.
  - Overinflation can produce a harsh ride, uneven and accelerated tire wear, and a greater possibility of damage from road hazards.
- Keep your tire pressure at the correct levels. If one frequently needs inflating, have it inspected.

▼ **Tire Rotation**

**⚠ WARNING**

**Rotate tires periodically:**

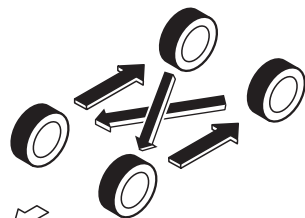
Irregular tire wear is dangerous. To equalize tread wear for maintaining good performance in handling and braking, rotate the tires according to the scheduled maintenance charts. Refer to Scheduled Maintenance on page 8-3.

\*Some models. **8-33**

## Maintenance and Care

**Owner Maintenance**

During rotation, inspect them for correct balance.



Do not include (TEMPORARY USE ONLY) spare tire in rotation.

Also, inspect them for uneven wear and damage. Abnormal wear is usually caused by one or a combination of the following:

- Incorrect tire pressure
- Improper wheel alignment
- Out-of-balance wheel
- Severe braking

After rotation, inflate all tire pressures to specification (page 10-6) and inspect the lug nuts for tightness.

**CAUTION**

*Rotate unidirectional tires and radial tires that have an asymmetrical tread pattern or studs only from front to rear, not from side to side. Tire performance will be reduced if rotated from side to side.*

**▼ Replacing a Tire****WARNING**

**Always use tires that are in good condition:**

*Driving with worn tires is dangerous. Reduced braking, steering, and traction could result in an accident.*

**Replace all four tires at the same time:**

*Replacing just one tire is dangerous. It could cause poor handling and poor braking resulting in loss of vehicle control. Mazda strongly recommends that you replace all four tires at the same time.*

**CAUTION**

**(With Tire Pressure Monitoring System)**

*When replacing/repairing the tires or wheels or both, have the work done by an Authorized Mazda Dealer, or the tire pressure sensors may be damaged.*

**NOTE**

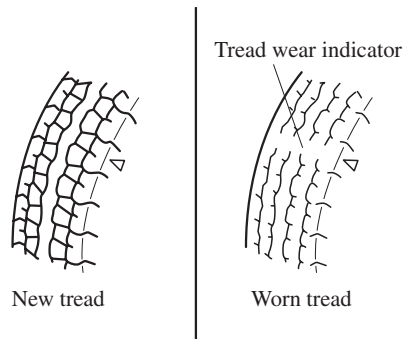
**(With Tire Pressure Monitoring System)**

- *When tires with steel wire reinforcement in the sidewalls are used, the system may not function correctly even with a genuine wheel. Refer to System Error Activation on page 5-32.*
- *Be sure to install the tire pressure sensors whenever tires or wheels are replaced. Refer to Tires and Wheels on page 5-32.*

**Owner Maintenance**

If a tire wears evenly, a wear indicator will appear as a solid band across the tread.

Replace the tire when this happens.



You should replace the tire before the band crosses the entire tread.

**NOTE**

*Tires degrade over time, even when they are not being used on the road. It is recommended that tires generally be replaced when they are 6 years or older. Heat caused by hot climates or frequent high loading conditions can accelerate the aging process. You should replace the spare tire when you replace the other road tires due to the aging of the spare tire. The period in which the tire was manufactured (both week and year) is indicated by a 4-digit number. Refer to Tire Labeling on page 9-25.*

**▼ Temporary Spare Tire**

Inspect the temporary spare tire at least monthly to make sure it's properly inflated and stored.

**NOTE**

*The temporary spare tire condition gradually deteriorates even if it has not been used.*

The temporary spare tire is easier to handle because of its construction which is lighter and smaller than a conventional tire. This tire should be used only for an emergency and only for a short distance.

Use the temporary spare tire only until the conventional tire is repaired, which should be as soon as possible.

**(Except Mexico)**

Maintain its pressure at 420 kPa (4.2 kgf/cm<sup>2</sup> or bar, 60 psi).

**(Mexico)**

Maintain its pressure at 250 kPa (2.5 kgf/cm<sup>2</sup> or bar, 36 psi).

**⚠ CAUTION**

- *Do not use your temporary spare tire rim with a snow tire or a conventional tire. Neither will properly fit and could damage both tire and rim.*
- *The temporary spare tire has a tread life of less than 5,000 km. The tread life may be shorter depending on driving conditions.*
- *The temporary spare tire is for limited use, however, if the tread wear solid-band indicator appears, replace the tire with the same type of temporary spare (page 8-34).*

## Maintenance and Care

**Owner Maintenance****NOTE**

Tires degrade over time, even when they are not being used on the road. It is recommended that tires generally be replaced when they are 6 years or older. Heat caused by hot climates or frequent high loading conditions can accelerate the aging process. You should replace the spare tire when you replace the other road tires due to the aging of the spare tire. The period in which the tire was manufactured (both week and year) is indicated by a 4-digit number. Refer to Tire Labeling on page 9-25.

**▼ Replacing a Wheel****! WARNING**

**Always use wheels of the correct size on your vehicle:**

Using a wrong-sized wheel is dangerous. Braking and handling could be affected, leading to loss of control and an accident.

**! CAUTION**

- A wrong-sized wheel may adversely affect:
  - Tire fit
  - Wheel and bearing life
  - Ground clearance
  - Snow-chain clearance
  - Speedometer calibration
  - Headlight aim
  - Bumper height
  - Tire Pressure Monitoring System
- **(With Tire Pressure Monitoring System)**
  - When replacing/repairing the tires or wheels or both, have the work done by an Authorized Mazda Dealer, or the tire pressure sensors may be damaged.
  - The wheels equipped on your Mazda are specially designed for installation of the tire pressure sensors. Do not use non-genuine wheels, otherwise it may not be possible to install the tire pressure sensors.

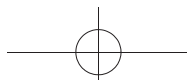
**NOTE**

Be sure to install the tire pressure sensors whenever tires or wheels are replaced. Refer to Tires and Wheels on page 5-32.

When replacing a wheel, make sure the new one is the same as the original factory wheel in diameter, rim width, and offset (inset/outset).

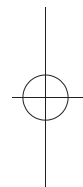
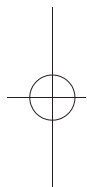
Proper tire balancing provides the best riding comfort and helps reduce tread wear. Out-of-balance tires can cause vibration and uneven wear, such as cupping and flat spots.

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Thursday, June 23 2011 11:6 AM



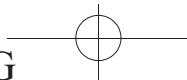
Black plate (515,1)

# MEMO

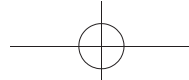


8-37

Form No.8CA8-EA-11G



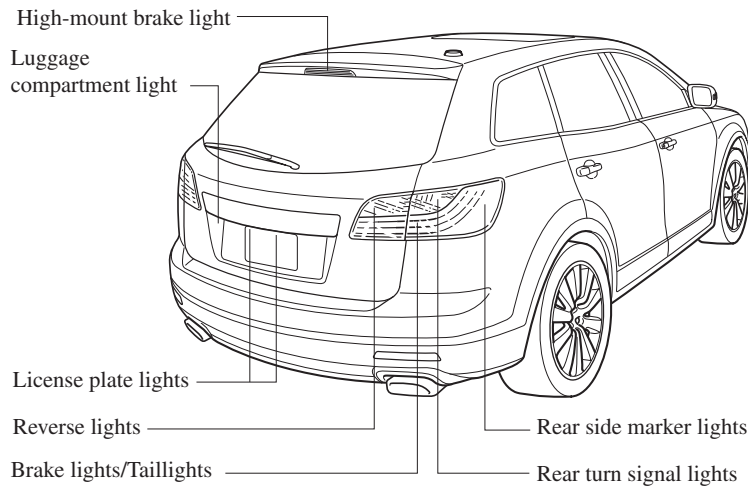
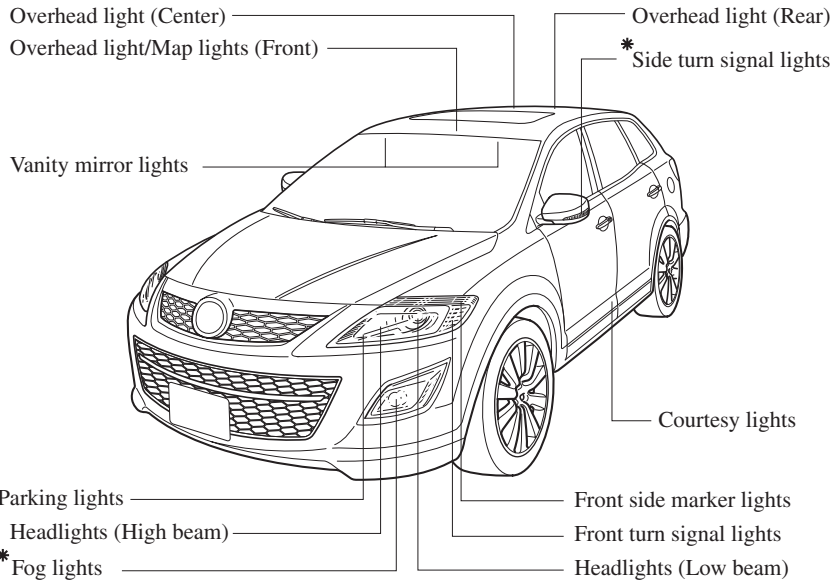




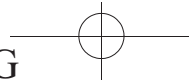
Maintenance and Care

**Owner Maintenance**

**Light Bulbs**



\*Some models.



Maintenance and Care  
**Owner Maintenance****⚠ WARNING**

**Do not replace the xenon fusion bulbs yourself:**

*Replacing the xenon fusion bulbs yourself is dangerous. Because the xenon fusion bulbs require high voltage, you could receive an electric shock if the bulbs are handled incorrectly. Consult an Authorized Mazda Dealer when the replacement is necessary.*

**Never touch the glass portion of a halogen bulb with your bare hands and always wear eye protection when handling or working around the bulbs:**

*When a halogen bulb breaks, it is dangerous. These bulbs contain pressurized gas. If one is broken, it will explode and serious injuries could be caused by the flying glass. If the glass portion is touched with bare hands, body oil could cause the bulb to overheat and explode when lit.*

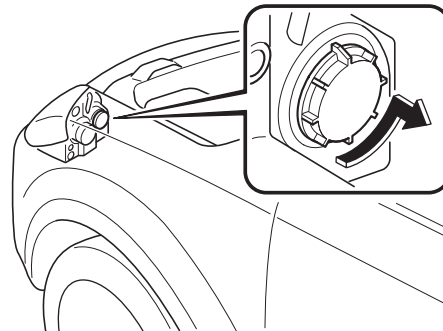
**Always keep halogen bulbs out of the reach of children:**

*Playing with a halogen bulb is dangerous. Serious injuries could be caused by dropping a halogen bulb or breaking it some other way.*

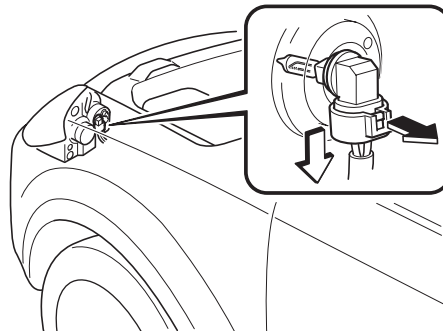
**▼ Replacing Exterior Light Bulbs****Headlight bulb****High-beam bulb**

1. Make sure the ignition is switched off, and the headlight switch is off.
2. Lift the hood.

3. Turn the cover counterclockwise and remove it.



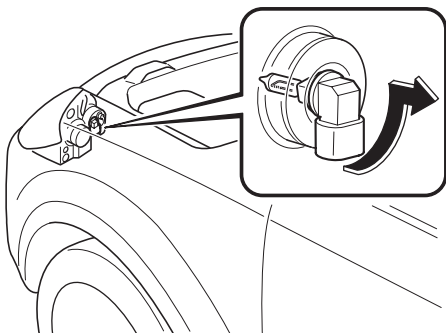
4. Disconnect the electrical connector from the bulb by pulling the tab on the connector with your finger and pulling the connector downward.



## Maintenance and Care

**Owner Maintenance**

5. Turn the socket and bulb assembly to remove it. Carefully remove the bulb from its socket in the reflector by gently pulling it straight backward out of the socket.



6. Install the new bulb in the reverse order of removal.

**NOTE**

- To replace the bulb, contact an Authorized Mazda Dealer
- If the halogen bulb is accidentally touched, it should be cleaned with rubbing alcohol before being used.
- Use the protective cover and carton of the replacement bulb to dispose of the old bulb promptly out of the reach of children.

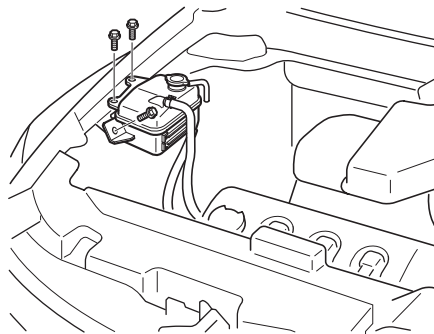
**Low-beam bulb****(Xenon fusion bulb)**

You cannot replace the low beam bulbs by yourself. The bulbs must be replaced at an Authorized Mazda Dealer.

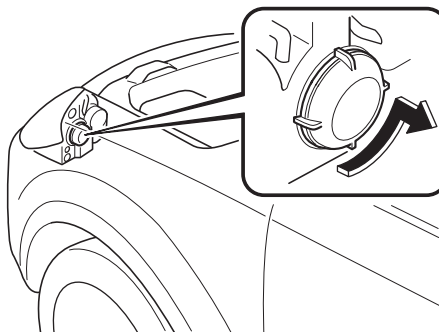
**(Halogen bulbs)**

1. Make sure the headlight switch is off.
2. Lift the hood.

3. Remove the attachment bolts and the coolant reservoir before replacing the light bulb.

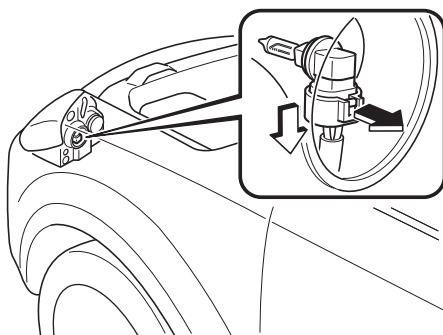


4. Turn the cover counterclockwise and remove it.

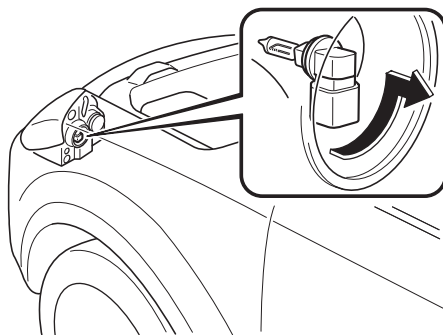


Maintenance and Care  
**Owner Maintenance**

5. Disconnect the electrical connector from the bulb by pulling the tab on the connector with your finger and pulling the connector downward.



6. Turn the socket and bulb assembly to remove it. Carefully remove the bulb from its socket in the reflector by gently pulling it straight backward out of the socket.



7. Install the new bulb in the reverse order of removal.
8. Install the coolant reservoir. If you are unsure of how tight the bolts should be, have them inspected at an Authorized Mazda Dealer.

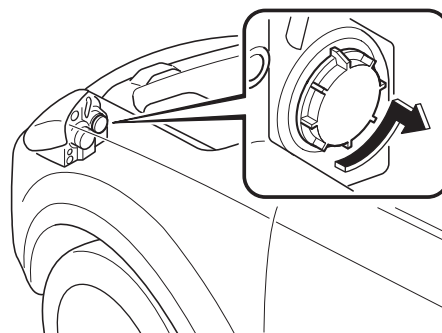
Bolt tightening torque	
N·m (kgf·m, ft·lbf)	6.9—11.8 (0.7—1.2, 5.1—8.7)

**NOTE**

- To replace the bulb, contact an Authorized Mazda Dealer
- If the halogen bulb is accidentally touched, it should be cleaned with rubbing alcohol before being used.
- Use the protective cover and carton of the replacement bulb to dispose of the old bulb promptly out of the reach of children.

**Parking lights**

1. Make sure the ignition is switched off, and the headlight switch is off.
2. Lift the hood.
3. Turn the cover counterclockwise and remove it.

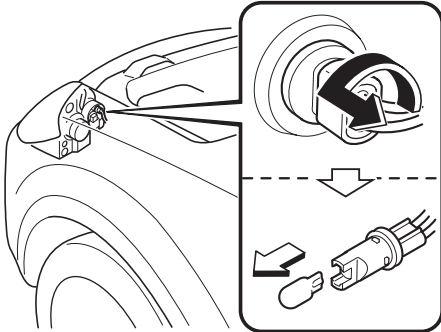


4. Turn the socket and bulb assembly counterclockwise and remove it.

Maintenance and Care

**Owner Maintenance**

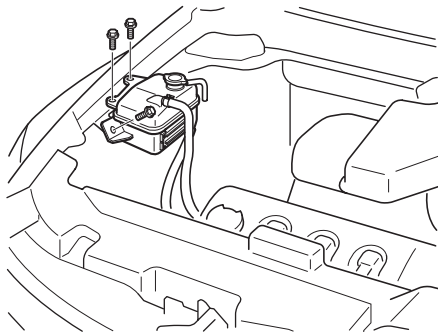
5. Remove the bulb by pushing it in slightly and turning it counterclockwise.



6. Install the new bulb in the reverse order of removal.

**Front side marker lights, Front turn signal lights**

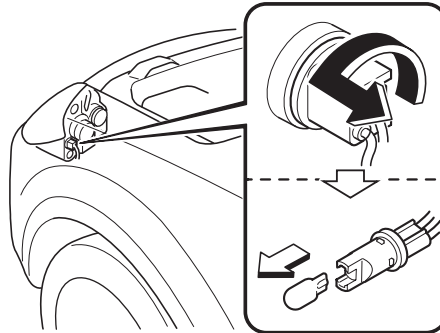
1. Make sure the headlight switch is off.
2. Lift the hood.
3. Remove the attachment bolts and the coolant reservoir before replacing the light bulb.



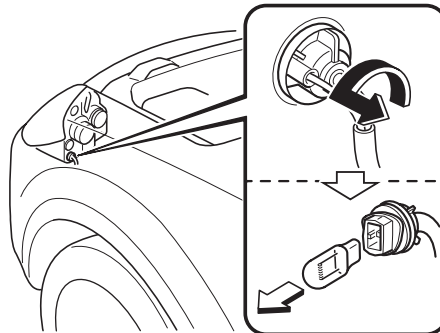
4. Turn the socket and bulb assembly counterclockwise and remove it.

5. Remove the bulb by pushing it in slightly and turning it counterclockwise.

**Front side marker lights**



**Front turn signal lights**



6. Install the new bulb in the reverse order of removal.

7. Install the coolant reservoir. If you are unsure of how tight the bolts should be, have them inspected at an Authorized Mazda Dealer.

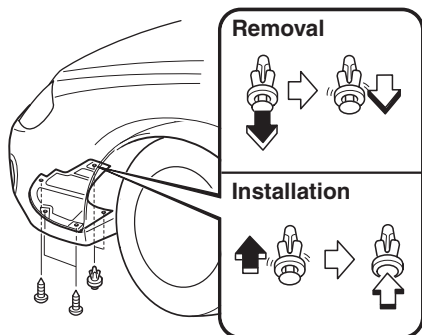
Bolt tightening torque	
N·m (kgf·m, ft·lbf)	6.9—11.8 (0.7—1.2, 5.1—8.7)

**Fog lights**\*

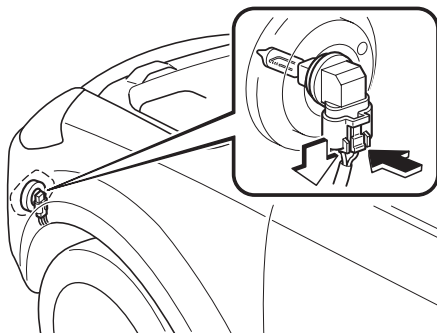
1. Make sure the headlight switch is off.

Maintenance and Care  
**Owner Maintenance**

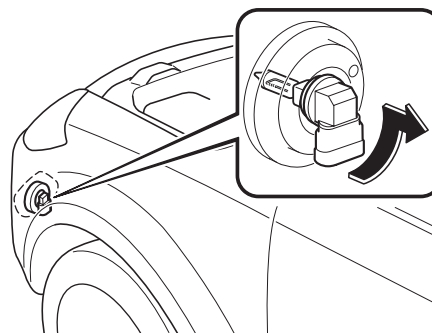
2. Turn the screws counterclockwise and remove them.
3. Turn the screws and the center section of the plastic retainers counterclockwise and remove them, then remove the mudguard.



4. Disconnect the electrical connector from the bulb by pressing the tab on the connector with your finger and pulling the connector downward.



5. Turn the socket and bulb assembly counterclockwise and remove it. Carefully remove the bulb from its socket in the reflector by gently pulling it straight backward out of the socket.



6. Install the new bulb in the reverse order of removal.

**NOTE**

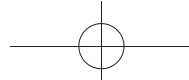
- To replace the bulb, contact an Authorized Mazda Dealer
- If the halogen bulb is accidentally touched, it should be cleaned with rubbing alcohol before being used.
- Use the protective cover and carton of the replacement bulb to dispose of the old bulb promptly out of the reach of children.

**Side turn signal lights \*, Brake lights, Taillights, High-mount brake light**

Due to the complexity and difficulty of the procedure, the LED bulbs must be replaced by an Authorized Mazda Dealer.

**NOTE**

LED bulb replacement is not possible because it is built into the unit. Replace the unit.

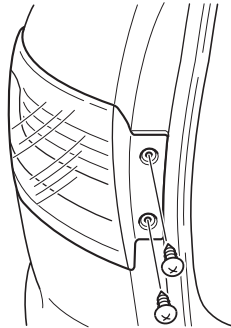


Maintenance and Care

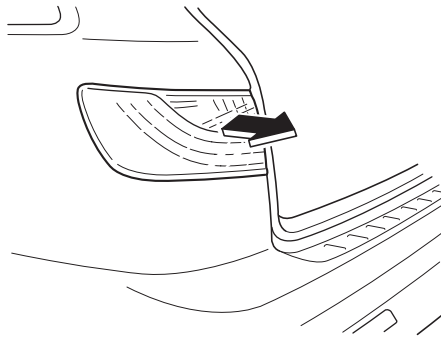
## Owner Maintenance

### Rear turn signal lights, Rear side-marker light

1. Turn the bolts counterclockwise and remove them.

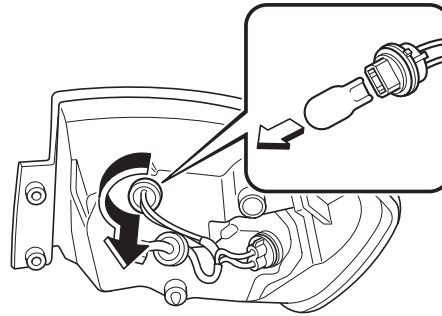


2. Pull the unit rearward to remove it.

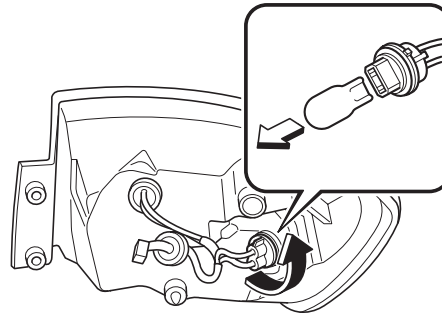


3. Turn the socket and bulb assembly counterclockwise and remove it.

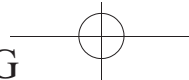
### Rear turn signal lights



### Rear side-marker light



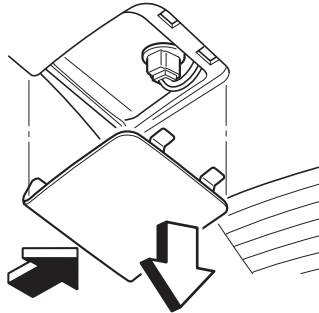
4. Disconnect the bulb from the socket.
5. Install the new bulb in the reverse order of removal.



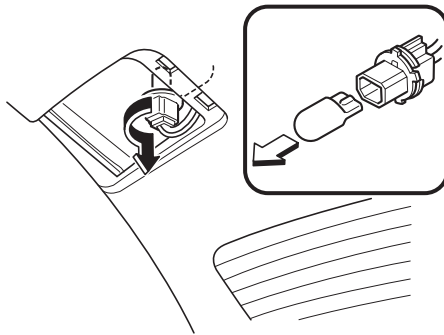
Maintenance and Care  
**Owner Maintenance**

**Reverse lights**

1. Remove the cover.



2. Turn the socket and bulb assembly counterclockwise and remove it.
3. Disconnect the bulb from the socket.



4. Install the new bulb in the reverse order of removal.

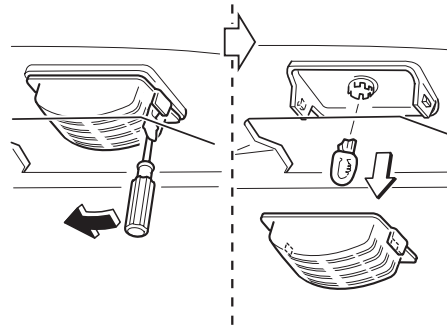
**NOTE**

To replace the bulb, contact an Authorized Mazda Dealer.

**License plate lights**

1. Wrap a flathead screwdriver with a soft cloth to prevent damage to the lens and remove the lens by carefully prying on the edge of the lens with a flathead screwdriver.

2. Disconnect the bulb by pulling it out.



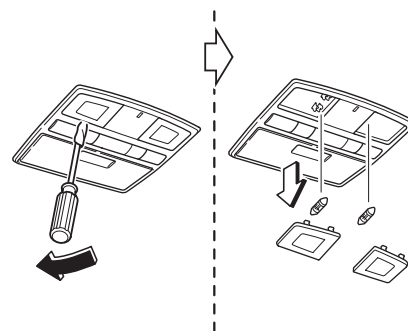
3. Install the new bulb in the reverse order of removal.

**▼ Replacing Interior Light Bulbs**

**Overhead light/Map lights (Front),  
 Overhead light (Center, Rear), Luggage  
 compartment light, Courtesy lights,  
 Vanity mirror lights**

1. Wrap a small flathead screwdriver with a soft cloth to prevent damage to the lens and remove the lens by carefully prying on the edge of the lens with the flathead screwdriver.
2. Disconnect the bulb by pulling it out.

**Overhead light/Map lights (Front)**

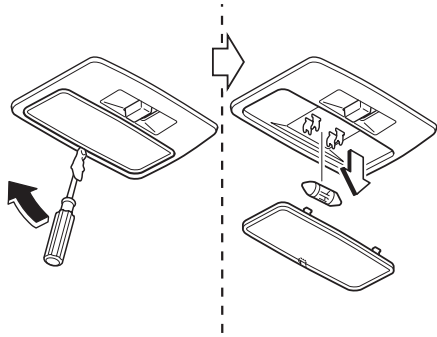




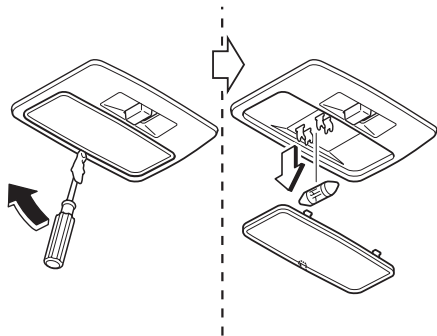
Maintenance and Care

**Owner Maintenance**

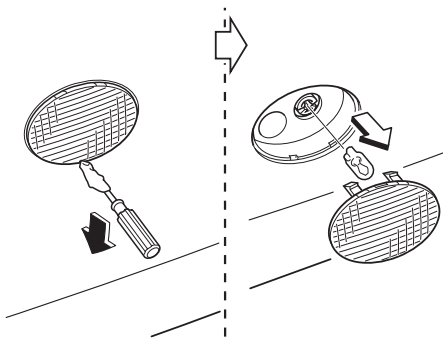
**Overhead light (Center, Rear)**



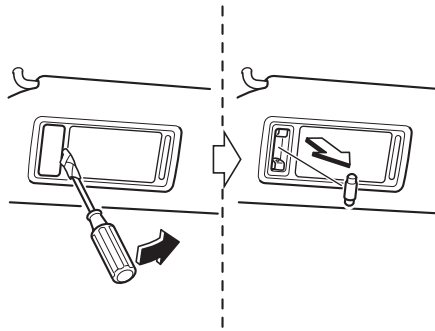
**Luggage compartment light**



**Courtesy lights**



**Vanity mirror lights**



3. Install the new bulb in the reverse order of removal.

Maintenance and Care  
**Owner Maintenance**

**Fuses**

Your vehicle's electrical system is protected by fuses.

If any lights, accessories, or controls don't work, inspect the appropriate circuit protector. If a fuse has blown, the inside element will be melted.

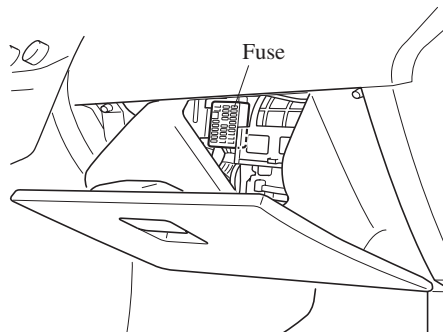
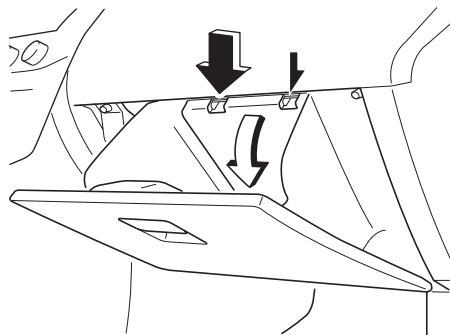
If the same fuse blows again, avoid using that system and consult an Authorized Mazda Dealer as soon as possible.

**▼ Fuse Replacement**

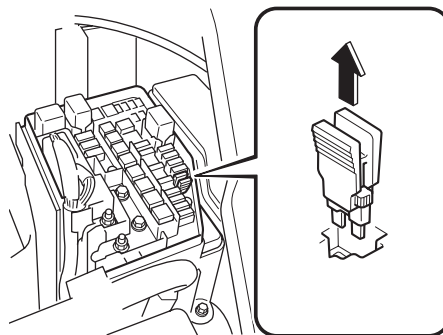
**Replacing fuses located behind the glove compartment**

If an electrical system is inoperative, inspect the fuses located behind the glove compartment.

1. Make sure the ignition is switched off, and other switches are off.
2. Open the glove compartment.
3. Remove the cover.



4. Pull the fuse straight out with the fuse puller provided on the fuse block located in the engine compartment.



5. Inspect the fuse and replace it if it's blown.



Normal



Blown

Maintenance and Care

**Owner Maintenance**

6. Insert a new fuse of the same amperage rating, and make sure it fits tightly. If it does not fit tightly, have an expert install it. We recommend an Authorized Mazda Dealer. If you have no spare fuses, borrow one of the same rating from a circuit not essential to vehicle operation, such as the ROOM circuit.

**CAUTION**

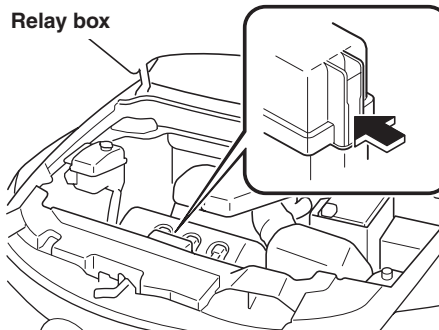
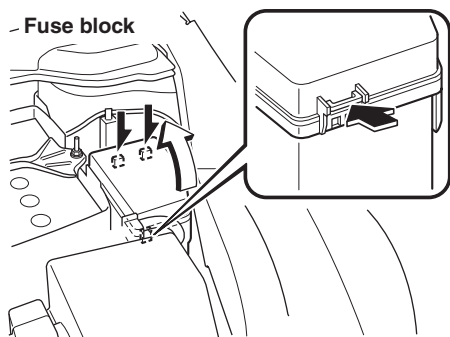
*Always replace a fuse with one of the same rating. Otherwise you may damage the electric system.*

7. Reinstall the cover and make sure that it is securely installed.

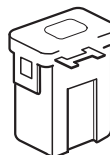
**Replacing the fuses under the hood**

If the headlights or other electrical components do not work and the fuses in the cabin are normal, inspect the fuse block under the hood. If a fuse is blown, it must be replaced. Follow these steps:

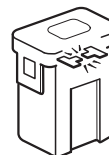
1. Make sure the ignition is switched off, and other switches are off.
2. Remove the fuse block cover or the relay box cover.



3. If any fuse but the MAIN fuse is blown, replace it with a new one of the same amperage rating.



Normal



Blown

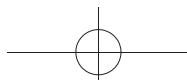
**WARNING**

**Do not replace the main fuse by yourself. Have an Authorized Mazda Dealer perform the replacement:**

*Replacing the fuse by yourself is dangerous because the MAIN fuse is a high current fuse. Incorrect replacement could cause an electrical shock or a short circuit resulting in a fire.*

4. Reinstall the cover and make sure that it is securely installed.

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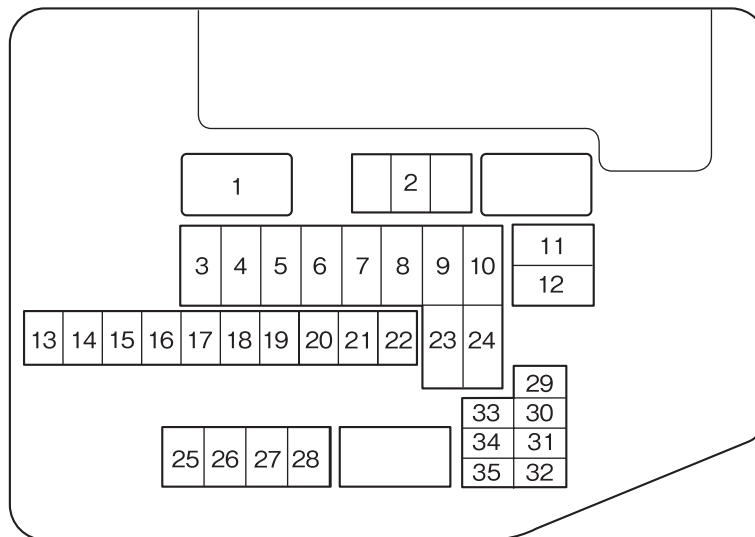


Black plate (527,1)

Maintenance and Care  
**Owner Maintenance**

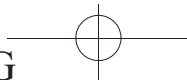
▼ **Fuse Panel Description**

**Fuse block (Engine compartment)**

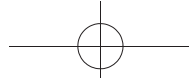


DESCRIPTION	FUSE RATING	PROTECTED COMPONENT	
1	MAIN	150 A	For protection of all circuits
2	ENGINE	20 A	Engine control system
3	R HEATER	40 A	Heater
4	P.SEAT R	30 A	Power seat (RH) *
5	HEATER	50 A	Heater
6	IGKEY2	40 A	For protection of various circuits
7	FAN1	30 A *	Cooling fan
		40 A *	
8	P.SEAT L	40 A	Power seat (LH) *
9	DEFOG	30 A	Rear window defroster
10	BTN	50 A	For protection of various circuits
11	FUEL PUMP	30 A	Fuel pump
12	IGKEY1	30 A	For protection of various circuits
13	FOG	15 A	Fog lights *
14	ABS (SOL)	30 A	ABS
15	D/L	25 A	Power door locks
16	ROOM	15 A	Overhead light

\*Some models. **8-49**



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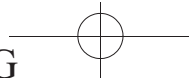
Black plate (528,1)

Maintenance and Care

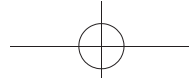
## Owner Maintenance

DESCRIPTION	FUSE RATING	PROTECTED COMPONENT	
17	OUTLET CTR	15 A	Accessory socket (Center)
18	OUTLET RR	15 A	Accessory socket (Rear)
19	AC PWR	15 A	Moonroof*, DC/AC inverter*
20	S.WARM	15 A	Seat warmer*
21	A/C MAG	10 A	Air conditioner
22	BOSE	25 A	Audio system (Bose® Sound System-equipped model)*
23	FAN2	30 A*	Cooling fan
		40 A*	
24	ABS	50 A	ABS
25	IG COIL	25 A	Engine control system
26	H/L LOW L	15 A	Headlight-left (Low beam)
27	H/L LOW R	15 A	Headlight-right (Low beam)
28	H/L HIGH	20 A	Headlight-high (High beam)
29	HAZARD	15 A	Hazard warning flashers
30	ENG+B	10 A	PCM
31	HORN	15 A	Horn
32	STOP	7.5 A	Brake lights
33	EGI INJ	10 A	Engine control system
34	ENG BAR	20 A	Engine control system
35	ENG BAR 2	7.5 A	PCM

**8-50** \*Some models.



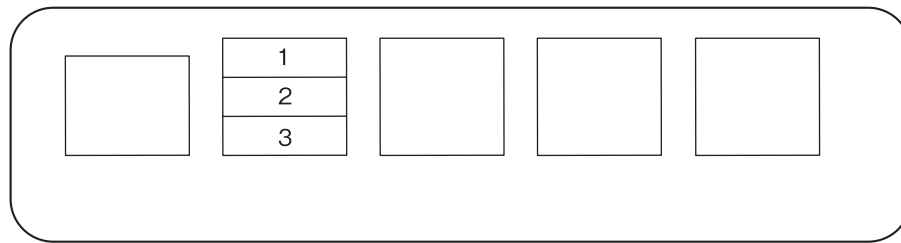
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Black plate (529,1)

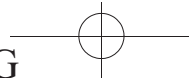
Maintenance and Care  
**Owner Maintenance**

**Relay box (Engine compartment)\***

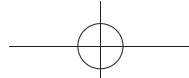


DESCRIPTION		FUSE RATING	PROTECTED COMPONENT
1	INJ	7.5 A	Engine control system
2	—	—	—
3	—	—	—

\*Some models. **8-51**



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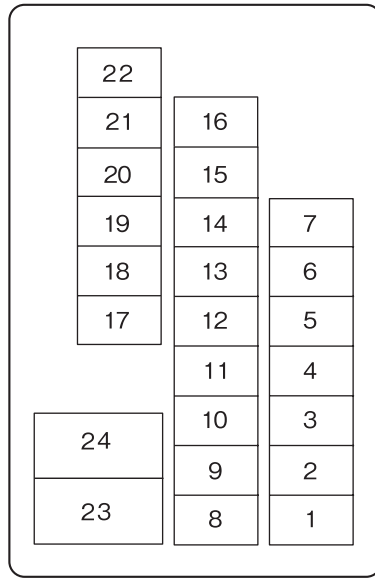


Black plate (530,1)

Maintenance and Care

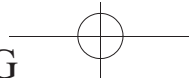
**Owner Maintenance**

**Fuse block (Glove box)**

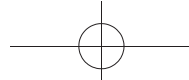


	DESCRIPTION	FUSE RATING	PROTECTED COMPONENT
1	OUTLET FR	15 A	Accessory socket (Front)
2	MIRROR	7.5 A	Power control mirror
3	—	—	—
4	METER	10 A	Instrument cluster
5	SAS	7.5 A	ABS, Air bag
6	ENG.IGA	7.5 A	Engine control system
7	STA	7.5 A	Ignition system
8	—	—	—
9	A/C	7.5 A	Air conditioner
10	R.WIPER	15 A	Rear window wiper and washer
11	TRAILER	—	—
12	P.LIFT GATE	20 A	Power lift gate *
13	SUNROOF	15 A	Moonroof*
14	AUDIO	10 A	Audio system *
15	M.DEF	10 A	Mirror defroster *
16	P/W	25 A	Power windows (Passenger-side)
17	TAIL	10 A	Taillight
18	ILLUMI	10 A	Dashboard illumination
19	INJ	7.5 A	Engine control system

**8-52** \*Some models.



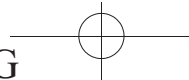
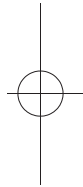
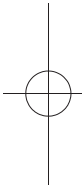
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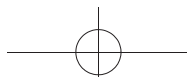
Black plate (531,1)

Maintenance and Care  
**Owner Maintenance**

	DESCRIPTION	FUSE RATING	PROTECTED COMPONENT
20	—	—	—
21	OUTLET CTR	—	—
22	OUTLET RR	—	—
23	WIPER	30 A	Windshield wiper and washer
24	P.WIND	30 A	Power windows (Driver-side)







Maintenance and Care

## Appearance Care

### How to Minimize Environmental Paint Damage

The paintwork on your Mazda represents the latest technical developments in composition and methods of application.

Environmental hazards, however, can harm the paint's protective properties, if proper care is not taken.

Here are some examples of possible damage, with tips on how to prevent them.

#### ▼ Etching Caused by Acid Rain or Industrial Fallout

##### Occurrence

Industrial pollutants and vehicle emissions drift into the air and mix with rain or dew to form acids. These acids can settle on a vehicle's finish. As the water evaporates, the acid becomes concentrated and can damage the finish.

And the longer the acid remains on the surface, the greater the chance is for damage.

##### Prevention

It is necessary to wash and wax your vehicle to preserve its finish according to the instructions in this section. These steps should be taken immediately after you suspect that acid rain has settled on your vehicle's finish.

#### ▼ Damage Caused by Bird Dropping, Insects, or Tree Sap

##### Occurrence

Bird droppings contain acids. If these aren't removed they can eat away the clear and color base coat of the vehicle's paintwork.

When insects stick to the paint surface and decompose, corrosive compounds form. These can erode the clear and color base coat of the vehicle's paintwork if they are not removed.

Tree sap will harden and adhere permanently to the paint finish. If you scratch the sap off while it is hard, some vehicle paint could come off with it.

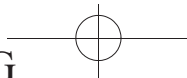
##### Prevention

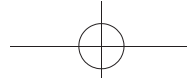
It is necessary to have your Mazda washed and waxed to preserve its finish according to the instructions in this section. This should be done as soon as possible.

Bird droppings can be removed with a soft sponge and water. If you are traveling and these are not available, a moistened tissue may also take care of the problem. The cleaned area should be waxed according to the instructions in this section.

Insects and tree sap are best removed with a soft sponge and water or a commercially available chemical cleaner.

Another method is to cover the affected area with dampened newspaper for one to two hours. After removing the newspaper, rinse off the loosened debris with water.





Maintenance and Care  
**Appearance Care**

**▼ Water Marks**

**Occurrence**

Rain, fog, dew, and even tap water can contain harmful minerals such as salt and lime. If moisture containing these minerals settles on the vehicle and evaporates, the minerals will concentrate and harden to form white rings. The rings can damage your vehicle's finish.

**Prevention**

It is necessary to wash and wax your vehicle to preserve its finish according to the instructions in this section. These steps should be taken immediately after you find water marks on your vehicle's finish.

**▼ Paint Chipping**

**Occurrence**

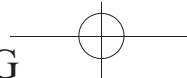
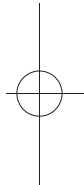
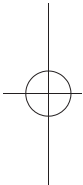
Paint chipping occurs when gravel thrown in the air by another vehicle's tires hits your vehicle.

**How to avoid paint chipping**

Keeping a safe distance between you and the vehicle ahead reduces the chances of having your paint chipped by flying gravel.

**NOTE**

- *The paint chipping zone varies with the speed of the vehicle. For example, when traveling at 90 km/h (56 mph), the paint chipping zone is 50 m (164 ft).*
- *In low temperatures a vehicle's finish hardens. This increases the chance of paint chipping.*
- *Chipped paint can lead to rust forming on your Mazda. Before this happens, repair the damage by using Mazda touch-up paint according to the instructions in this section. Failure to repair the affected area could lead to serious rusting and expensive repairs.*



## Maintenance and Care

**Appearance Care****Exterior Care**

Follow **all** label and container directions when using a chemical cleaner or polish. Read all warnings and cautions.

**▼ Maintaining the Finish****Washing****⚠ CAUTION**

- *When the wiper lever is in the AUTO position and the ignition is switched ON, the wipers may move automatically in the following cases:*
  - *If the windshield above the rain sensor is touched or wiped with a cloth.*
  - *If the windshield is struck with a hand or other object from either outside or inside the vehicle.*

*Keep hands and scrapers clear of the windshield when the wiper lever is in the AUTO position and the ignition is switched ON as fingers could be pinched or the wipers and wiper blades damaged when the wipers activate automatically.*

*If you are going to clean the windshield, be sure the wipers are turned off completely—this is particularly important when clearing ice and snow—when it is most likely that the engine is left running.*

- *Do not spray water in the engine compartment. Otherwise, it could result in engine-starting problems or damage to electrical parts.*

To help protect the finish from rust and deterioration, wash your Mazda thoroughly and frequently, at least once a month, with lukewarm or cold water.

If the vehicle is washed improperly, the paint surface could be scratched. Here are some examples of how scratching could occur.

Scratches occur on the paint surface when:

- The vehicle is washed without first rinsing off dirt and other foreign matter.
- The vehicle is washed with a rough, dry, or dirty cloth.
- The vehicle is washed at a car wash that uses brushes that are dirty or too stiff.
- Cleansers or wax containing abrasives are used.

**NOTE**

- *Mazda is not responsible for scratches caused by automatic car washes or improper washing.*
- *Scratches are more noticeable on vehicles with darker paint finishes.*

To minimize scratches on the vehicle's paint finish:

- Rinse off any dirt or other foreign matter using lukewarm or cold water before washing.
- Use plenty of lukewarm or cold water and a soft cloth when washing the vehicle. Do not use a nylon cloth.
- Rub gently when washing or drying the vehicle.
- Take your vehicle only to a car wash that keeps its brushes well maintained.
- Do not use abrasive cleansers or wax that contain abrasives.

**Appearance Care****CAUTION**

- Do not use steel wool, abrasive cleaners, or strong detergents containing highly alkaline or caustic agents on chrome-plated or anodized aluminum parts. This may damage the protective coating; also, cleaners and detergents may discolor or deteriorate the paint.
- To prevent damaging the antenna, remove it before entering a car wash facility or passing beneath a low overhead clearance.

Pay special attention to removing salt, dirt, mud, and other foreign material from the underside of the fenders, and make sure the drain holes in the lower edges of the doors and rocker panels are clean.

Insects, tar, tree sap, bird droppings, industrial fallout, and similar deposits can damage the finish if not removed immediately. When prompt washing with plain water is ineffective, use a mild soap made for use on vehicles.

Thoroughly rinse off all soap with lukewarm or cold water. Do not allow soap to dry on the finish.

After washing the vehicle, dry it with a clean chamois to prevent water spots from forming.

**WARNING**

**Dry off brakes that have become wet by driving slowly, releasing the accelerator pedal and lightly applying the brakes several times until the brake performance returns to normal:**

*Driving with wet brakes is dangerous. Increased stopping distance or the vehicle pulling to one side when braking could result in a serious accident. Light braking will indicate whether the brakes have been affected.*

**When using a high water pressure car wash**

High water temperature and high water pressure car washers are available depending on the type of car wash machine. If the car washer nozzle is put too close to the vehicle, the force of the spray could damage or deform the molding, affect the sealability of parts, and allow water to penetrate the interior. Keep a sufficient space (30 cm or more) between the nozzle and the vehicle. In addition, do not spend too much time spraying the same area of the vehicle, and be very careful when spraying between gaps in doors and around windows.

**Waxing**

Your vehicle needs to be waxed when water no longer beads on the finish. Always wash and dry the vehicle before waxing it. In addition to the vehicle body, wax the metal trim to maintain its luster.

1. Use wax which contains no abrasives. Waxes containing abrasive will remove paint and could damage bright metal parts.

## Maintenance and Care

**Appearance Care**

2. Use a good grade of natural wax for metallic, mica, and solid colors.
3. When waxing, coat evenly with the sponge supplied or a soft cloth.
4. Wipe off the wax with a soft cloth.

**NOTE**

*A spot remover to remove oil, tar, and similar materials will usually also take off the wax. Rewax these areas even if the rest of the vehicle does not need it.*

**▼ Repairing Damage to the Finish**

Deep scratches or chips on the finish should be repaired promptly. Exposed metal quickly rusts and can lead to major repairs.

**⚠ CAUTION**

*If your Mazda is damaged and needs metal parts repaired or replaced, make sure the body shop applies anti-corrosion materials to all parts, both repaired and new. This will prevent them from rusting.*

**▼ Bright-Metal Maintenance**

- Use tar remover to remove road tar and insects. Never do this with a knife or similar tool.
- To prevent corrosion on bright-metal surfaces, apply wax or chrome preservative and rub it to a high luster.
- During cold weather or in coastal areas, cover bright-metal parts with a coating of wax or preservative heavier than usual. It would also help to coat them with noncorrosive petroleum jelly or some other protective compound.

**⚠ CAUTION**

*Don't use steel wool, abrasive cleaners, or strong detergents containing highly alkaline or caustic agents on chrome-plated or anodized aluminum parts. This may result in damage to the protective coating and cause discoloration or paint deterioration.*

**▼ Underbody Maintenance**

Road chemicals and salt used for ice and snow removal and solvents used for dust control may collect on the underbody. If not removed, they will speed up rusting and deterioration of such underbody parts as fuel lines, frame, floor pan, and exhaust system, even though these parts may be coated with anti-corrosive material.

Thoroughly flush the underbody and wheel housings with lukewarm or cold water at the end of each winter. Try also to do this every month.

Pay special attention to these areas because they easily hide mud and dirt. **It will do more harm than good to wet down the road grime without removing it.**

The lower edges of doors, rocker panels, and frame members have drain holes that should not be clogged. Water trapped there will cause rusting.

**Appearance Care****⚠ WARNING**

**Dry wet brakes by driving very slowly and applying the brakes lightly until brake performance is normal:**

*Driving with wet brakes is dangerous. Increased stopping distance or the vehicle pulling to one side when braking could result in a serious accident. Light braking will indicate whether the brakes have been affected.*

**▼ Aluminum Wheel Maintenance**

A protective coating is provided over the aluminum wheels. Special care is needed to protect this coating.

**⚠ CAUTION**

*Do not use any detergent other than mild detergent. Before using any detergent, verify the ingredients. Otherwise, the product could discolor or stain the aluminum wheels.*

**NOTE**

- *Do not use a wire brush or any abrasive cleaner, polishing compound, or solvent on aluminum wheels. They may damage the coating.*
- *Always use a sponge or soft cloth to clean the wheels.*  
*Rinse the wheels thoroughly with lukewarm or cold water. Also, be sure to clean the wheels after driving on dusty or salted roads to help prevent corrosion.*
- *Avoid washing your vehicle in an automatic car wash that uses high-speed or hard brushes.*
- *If your aluminum wheels lose luster, wax the wheels.*

**(With Tire Pressure Monitoring System)**

*Check special requirements for Tire Pressure Monitoring System.*

*Refer to Tires and Wheels on page 5-32.*

**▼ Plastic Part Maintenance**

- *When cleaning the plastic lenses of the lights, do not use gasoline, kerosene, rectified spirit, paint, thinner, highly acidic detergents, or strongly alkaline detergents. Otherwise, these chemical agents can discolor or damage the surfaces resulting in a significant loss in functionality. If plastic parts become inadvertently exposed to any of these chemical agents, flush with water immediately.*
- *If plastic parts such as the bumpers become inadvertently exposed to chemical agents or fluids such as gasoline, oil, engine coolant, or battery fluid, it could cause discoloration, staining, or paint peeling. Wipe off any such chemical agents or fluids using a soft cloth immediately.*

## Maintenance and Care

**Appearance Care**

- High water temperature and high water pressure car washers are available depending on the type of high pressure car washer device. If the car washer nozzle is put too close to the vehicle or aimed at one area for an extended period of time, it could deform plastic parts or damage the paint.
- Do not use wax containing compounds (polish). Otherwise, it could result in paint damage.
- In addition, do not use an electrical or air tool to apply wax. Otherwise, the frictional heat generated could result in deformation of plastic parts or paint damage.

**Interior Care****▼ Dashboard Precautions**

Prevent caustic solutions such as perfume and cosmetic oils from contacting the dashboard. They'll damage and discolor the dashboard. If these solutions get on the dashboard, wipe them off immediately.

**⚠ CAUTION**

*Do not use glazing agents. Glazing agents contain ingredients which may cause discoloration, wrinkling, cracks and peeling.*

**▼ Cleaning the Upholstery and Interior Trim****Vinyl**

Remove dust and loose dirt from vinyl with a whisk broom or vacuum cleaner. Clean vinyl with a leather-and-vinyl cleaner.

**Leather**

Remove dust and sand first using a vacuum cleaner or other means, then wipe dirt off using a soft cloth with a leather cleaner or a soft cloth soaked in mild soap.

Wipe off the remaining cleaner or soap using a cloth soaked in clean water and wrung out well.

Remove moisture with a dry, soft cloth and allow the leather to further dry in a well-ventilated, shaded area. If the leather gets wet such as from rain, also remove moisture and dry it as soon as possible.

**Appearance Care****NOTE**

- *Because genuine leather is a natural material, its surface is not uniform and it may have natural scars, scratches, and wrinkles.*
- *To maintain the quality for as long as possible, periodical maintenance, about twice a year, is recommended.*
- *Sand and dust on the seat surface may damage the overcoat of the genuine leather surfaces and accelerate wear.*
- *Greasy soiling on genuine leather may cause molding and stains.*
- *Rubbing hard with a stiff brush or cloth may cause damage.*
- *Do not wipe the leather using alcohol, chlorine bleach, or organic solvents such as thinner, benzene, or gasoline. Otherwise, it may cause discoloration or stains.*
- *If the seats get wet, promptly remove moisture with a dry cloth. Remaining moisture on the surface may cause deterioration such as hardening and shrinkage.*
- *Exposure to direct sunlight for long periods may cause deterioration and shrinkage. When parking the car under direct sunlight for long periods, shade the interior using sunshades.*
- *Do not leave vinyl products on the seats for long periods as they may affect the leather quality and coloring. If the cabin temperature becomes hot, the vinyl may deteriorate and adhere to the genuine leather.*

**Fabric**

Remove dust and loose dirt from fabric with a whisk broom or vacuum cleaner. Clean it with a mild soap solution good for upholstery and carpets. Remove fresh spots immediately with a fabric spot cleaner.

To keep the fabric looking clean and fresh, take care of it. Otherwise its color will be affected, it can be stained easily, and its fire-resistance may be reduced.

**⚠ CAUTION**

*Use only recommended cleaners and procedures. Others may affect appearance and fire-resistance.*

**Piano black panel\***

The following parts are fitted with panels that have been treated with a special coating that resists scratching.

- Center panel
- Steering wheel (partial)
- Door trim panel

When the panel needs to be cleaned, use a soft cloth to wipe off dirt from the surface.

**NOTE**

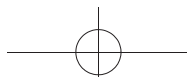
*Scratches or nicks on the panels resulting from the use of a hard brush or cloth may not be repairable.*

**▼ Cleaning the Lap/Shoulder Belt Webbing**

Clean the webbing with a mild soap solution recommended for upholstery or carpets. Follow instructions. Don't bleach or dye the webbing; this may weaken it.

After cleaning the belts, thoroughly dry the belt webbing and make sure there is no remaining moisture before retracting them.





Maintenance and Care

## Appearance Care

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### **WARNING**

**Have an Authorized Mazda Dealer replace damaged seat belts immediately:**

*Using damaged seat belts is dangerous. In a collision, damaged belts cannot provide adequate protection.*

### **Cleaning the Window Interiors**

If the windows become covered with an oily, greasy, or waxy film, clean them with glass cleaner. Follow the directions on the container.

### **CAUTION**

- *Do not scrape or scratch the inside of the window glass. It could damage the thermal filaments and the antenna lines.*
- *When washing the inside of the window glass, use a soft cloth dampened in lukewarm water, gently wiping the thermal filaments and the antenna lines. Use of glass cleaning products could damage the thermal filaments and the antenna lines.*

### **Cleaning the Floor Mats**

Rubber floor mats should be cleaned with mild soap and water only.

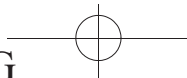
### **WARNING**

**Do not use rubber cleaners, such as tire cleaner or tire shine, when cleaning rubber floor mats:**

*Cleaning the rubber floor mats with rubber cleaning products makes the floor mats slippery.*

*This may cause an accident when depressing the accelerator or brake pedal or when getting in or out of the vehicle.*

After removing the floor mats for cleaning, always reinstall them securely. Refer to Floor Mat on page 4-9.



# EXHIBIT C

## Scheduled Maintenance

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### Scheduled Maintenance (USA, Canada, and Puerto Rico)

Follow Schedule 1 if the vehicle is operated mainly where none of the following conditions apply.

- Repeated short-distance driving
- Driving in dusty conditions
- Driving with extended use of brakes
- Driving in areas where salt or other corrosive materials are used
- Driving on rough or muddy roads
- Extended periods of idling or low-speed operation
- Driving for long periods in cold temperatures or extremely humid climates
- Driving in extremely hot conditions
- Driving in mountainous conditions continually

If any do apply, follow Schedule 2 (Canada and Puerto Rico residents follow Schedule 2).

#### **NOTE**

*After the prescribed period, continue to follow the described maintenance at the recommended intervals.*

Maintenance and Care

**Scheduled Maintenance**

▼ **Schedule 1**

Maintenance Interval	Number of months or kilometers (miles), whichever comes first								
	Months	6	12	18	24	30	36	42	48
	×1000 km	12	24	36	48	60	72	84	96
	×1000 miles	7.5	15	22.5	30	37.5	45	52.5	60
<b>ENGINE</b>									
Engine valve clearance (for 2.5-liter engine)	Audibly inspect every 120,000 km (75,000 miles), if noisy, adjust								
Drive belts	2.5-liter engine					I			
	3.7-liter engine	Inspect every 168,000 km (105,000 miles)							
Replace every 240,000 km (150,000 miles)									
Engine oil	R	R	R	R	R	R	R	R	R
Engine oil filter	R	R	R	R	R	R	R	R	R
<b>COOLING SYSTEM</b>									
Engine coolant	FL22 type*1	Replace at first 192,000 km (120,000 miles) or 10 years; after that, every 96,000 km (60,000 miles) or 5 years							
	Others	Replace at first 96,000 km (60,000 miles) or 4 years; after that, every 2 years							
<b>FUEL SYSTEM</b>									
Air filter	2.5-liter engine					R			
	3.7-liter engine			C		R			C
Fuel lines and hoses*2					I				I
Hoses and tubes for emission*2									I
<b>IGNITION SYSTEM</b>									
Spark plugs	2.5-liter engine	Replace every 120,000 km (75,000 miles)							
	3.7-liter engine	Replace every 160,000 km (100,000 miles)							
<b>CHASSIS and BODY</b>									
Brake lines, hoses and connections					I				I
Disc brakes			I		I		I		I
Tire (Rotation)	Rotate every 12,000 km (7,500 miles)								
Steering operation and linkages					I				I
Front and rear suspension, ball joints and wheel bearing axial play					I				I
Driveshaft dust boots					I				I
Bolts and nuts on chassis and body					T				T
Exhaust system and heat shields	Inspect every 72,000 km (45,000 miles) or 5 years								
All locks and hinges	L	L	L	L	L	L	L	L	L

Maintenance and Care  
**Scheduled Maintenance**

Maintenance Interval	Number of months or kilometers (miles), whichever comes first								
	Months	6	12	18	24	30	36	42	48
	×1000 km	12	24	36	48	60	72	84	96
	×1000 miles	7.5	15	22.5	30	37.5	45	52.5	60
<b>AIR CONDITIONER SYSTEM</b>									
Cabin air filter					Replace every 40,000 km (25,000 miles) or 2 years				

**Chart symbols:**

- I:** Inspect: Inspect and clean, repair, adjust, fill up, or replace if necessary.
- R:** Replace
- C:** Clean
- L:** Lubricate
- T:** Tighten

**Remarks:**

- \*1 Use FL22 type coolant in vehicles with the inscription "FL22" on the radiator cap itself or the surrounding area. Use FL22 when replacing the coolant.
- \*2 According to state/provincial and federal regulations, failure to perform maintenance on these items will not void your emissions warranties. However, Mazda recommends that all maintenance services be performed at the recommended time or mileage/kilometer period to ensure long-term reliability.

Maintenance and Care

**Scheduled Maintenance**

▼ **Schedule 2**

Maintenance Interval	Number of months or kilometers (miles), whichever comes first													
	Months	4	8	12	16	20	24	28	32	36	40	44	48	
	×1000 km	8	16	24	32	40	48	56	64	72	80	88	96	
	×1000 miles	5	10	15	20	25	30	35	40	45	50	55	60	
<b>ENGINE</b>														
Engine valve clearance (for 2.5-liter engine)	Audibly inspect every 120,000 km (75,000 miles), if noisy, adjust													
Drive belts	2.5-liter engine							I						
	3.7-liter engine	Inspect every 160,000 km (100,000 miles)												
		Replace every 240,000 km (150,000 miles)												
Engine oil	Puerto Rico	Replace every 5,000 km (3,000 miles) or 3 months												
	Others	R	R	R	R	R	R	R	R	R	R	R	R	R
Engine oil filter		R	R	R	R	R	R	R	R	R	R	R	R	R
<b>COOLING SYSTEM</b>														
Engine coolant	FL22 type*1	Replace at first 192,000 km (120,000 miles) or 10 years; after that, every 96,000 km (60,000 miles) or 5 years												
	Others	Replace at first 96,000 km (60,000 miles) or 4 years; after that, every 2 years												
Engine coolant level		I	I	I	I	I	I	I	I	I	I	I	I	I
<b>FUEL SYSTEM</b>														
Air filter (for 2.5-liter engine)	Puerto Rico						R							R
	Others							R						
Air filter (for 3.7-liter engine)	Puerto Rico			C			R			C				R
	Others				C			R				C		
Fuel lines and hoses*2							I							I
Hoses and tubes for emission*2														I
<b>IGNITION SYSTEM</b>														
Spark plugs (for 2.5-liter engine)	USA	Replace every 96,000 km (60,000 miles)												
	Others*3	Replace every 120,000 km (75,000 miles)												
Spark plugs (for 3.7-liter engine)	USA	Replace every 96,000 km (60,000 miles)												
	Others*3	Replace every 160,000 km (100,000 miles)												
<b>ELECTRICAL SYSTEM</b>														
Function of all lights		I	I	I	I	I	I	I	I	I	I	I	I	I

Maintenance and Care

**Scheduled Maintenance**

Maintenance Interval	Number of months or kilometers (miles), whichever comes first												
	Months	4	8	12	16	20	24	28	32	36	40	44	48
	×1000 km	8	16	24	32	40	48	56	64	72	80	88	96
	×1000 miles	5	10	15	20	25	30	35	40	45	50	55	60
<b>CHASSIS and BODY</b>													
Brake lines, hoses and connections							I						I
Brake fluid level	I	I	I	I	I	I	I	I	I	I	I	I	I
Disc brakes			I							I			
Tire (Rotation)	Rotate every 8,000 km (5,000 miles)												
Tire inflation pressure and tire wear	I	I	I	I	I	I	I	I	I	I	I	I	I
Steering operation and linkages							I						I
Power steering fluid level	I	I	I	I	I	I	I	I	I	I	I	I	I
Front and rear suspension, ball joints and wheel bearing axial play							I						I
Driveshaft dust boots							I						I
Bolts and nuts on chassis and body							T						T
Exhaust system and heat shields	Inspect every 72,000 km (45,000 miles) or 5 years												
All locks and hinges	L	L	L	L	L	L	L	L	L	L	L	L	L
Washer fluid level	I	I	I	I	I	I	I	I	I	I	I	I	I
<b>AIR CONDITIONER SYSTEM</b>													
Cabin air filter	Replace every 40,000 km (25,000 miles) or 2 years												

**Chart symbols:**

- I: Inspect: Inspect and clean, repair, adjust, fill up, or replace if necessary.
- R: Replace
- C: Clean
- L: Lubricate
- T: Tighten

**Remarks:**

- \*1 Use FL22 type coolant in vehicles with the inscription "FL22" on the radiator cap itself or the surrounding area. Use FL22 when replacing the coolant.
- \*2 According to state/provincial and federal regulations, failure to perform maintenance on these items will not void your emissions warranties. However, Mazda recommends that all maintenance services be performed at the recommended time or mileage/kilometer period to ensure long-term reliability.
- \*3 If the vehicle is operated primarily under any of the following conditions, replace the spark plugs at every 96,000 km (60,000 miles) or shorter.
  - a) Repeated short-distance driving
  - b) Extended periods of idling or low-speed operation
  - c) Driving for long periods in cold temperatures or extremely humid climates

# EXHIBIT D



## **Zoom-Zoom**

**All children instinctively know it.**

**A few adults still remember it.**

**One unique car company refuses to outgrow it.**

**In grown-up language, it means the exhilaration and liberation that come from experiencing sheer motion.**

**But as usual, children put it much better and simply call it " Go Zoom-Zoom."**

**We practice it every day.**

**It's why we build the kind of cars we do.**

**Zoom-Zoom.**

**Can we re-awaken it in you today?**



# A Word to Mazda Owners

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Thank you for choosing a Mazda. We at Mazda design and build vehicles with complete customer satisfaction in mind.

To help ensure enjoyable and trouble-free operation of your Mazda, read this manual carefully and follow its recommendations.

An Authorized Mazda Dealer knows your vehicle best. So when maintenance or service is necessary, that's the place to go.

Our nationwide network of Mazda professionals is dedicated to providing you with the best possible service.

We assure you that all of us at Mazda have an ongoing interest in your motoring pleasure and in your full satisfaction with your Mazda product.

**Mazda Motor Corporation**  
HIROSHIMA, JAPAN

## **Important Notes About This Manual**

Keep this manual in the glove box as a handy reference for the safe and enjoyable use of your Mazda. Should you resell the vehicle, leave this manual with it for the next owner.

All specifications and descriptions are accurate at the time of printing. Because improvement is a constant goal at Mazda, we reserve the right to make changes in specifications at any time without notice and without obligation.

## **Air Conditioning and the Environment**

Your Mazda's genuine air conditioner is filled with HFC134a (R134a), a refrigerant that has been found not to damage the earth's ozone layer. If the air conditioner does not operate properly, consult an Authorized Mazda Dealer.

## **Perchlorate**

Certain components of this vehicle such as [air bag modules, seat belt pretensioners, lithium batteries, ...] may contain Perchlorate Material— Special handling may apply for service or vehicle end of life disposal. See [www.dtsc.ca.gov/hazardouswaste/perchlorate](http://www.dtsc.ca.gov/hazardouswaste/perchlorate).

**Please be aware that this manual applies to all models, equipment and options. As a result, you may find some explanations for equipment not installed on your vehicle.**

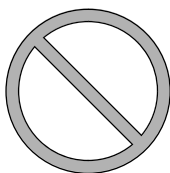
# How to Use This Manual

---

We want to help you get the most driving pleasure from your vehicle. Your owner's manual, when read from cover to cover, can do that in many ways.

Illustrations complement the words of the manual to best explain how to enjoy your Mazda. By reading your manual, you can find out about the features, important safety information, and driving under various road conditions.

The symbol below in this manual means “Do not do this” or “Do not let this happen”.



**Index:** A good place to start is the Index, an alphabetical listing of all information in your manual.

You'll find several WARNINGS, CAUTIONS, and NOTES in the manual.

## **WARNING**

*A WARNING indicates a situation in which serious injury or death could result if the warning is ignored.*

## **CAUTION**

*A CAUTION indicates a situation in which bodily injury or damage to your vehicle, or both, could result if the caution is ignored.*

## **NOTE**

*A NOTE provides information and sometimes suggests how to make better use of your vehicle.*

The symbol below, located on some parts of the vehicle, indicates that this manual contains information related to the part. Please refer to the manual for a detailed explanation.



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# 1

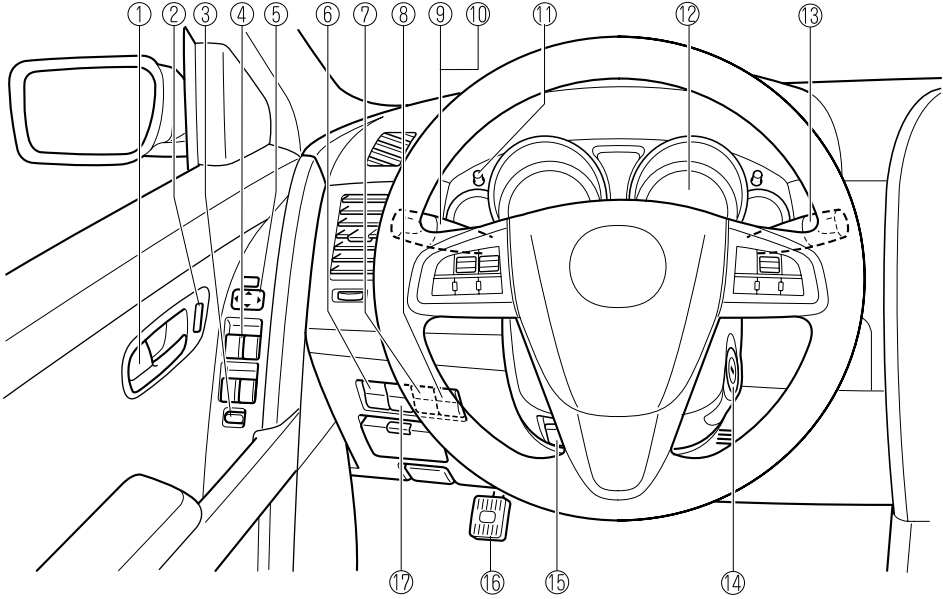
## Your Vehicle at a Glance

Interior, exterior views and part identification of your Mazda.

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# Interior Overview

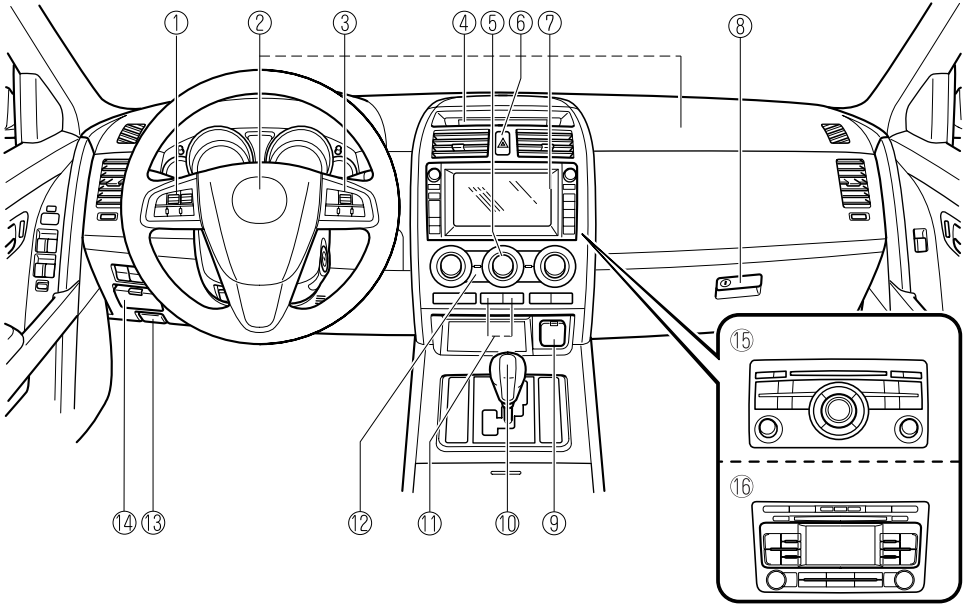
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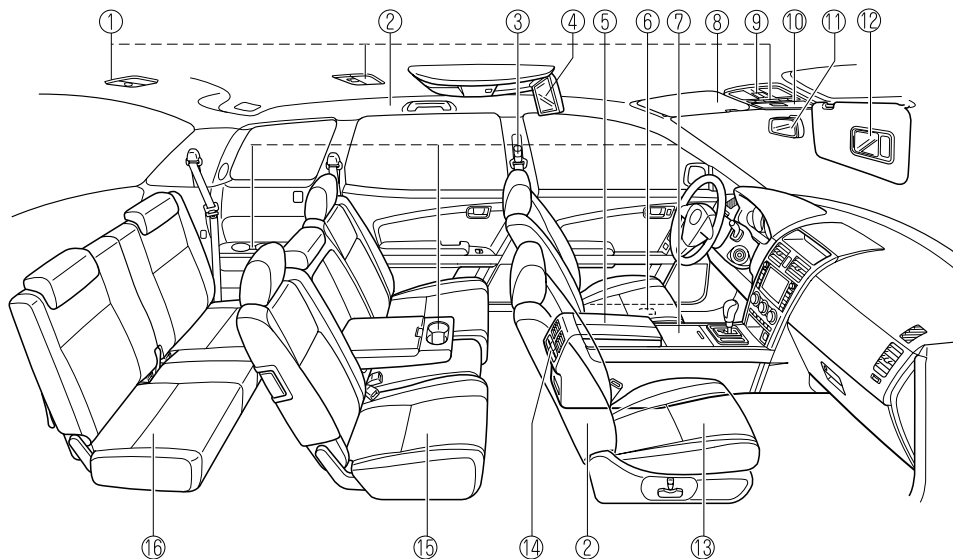
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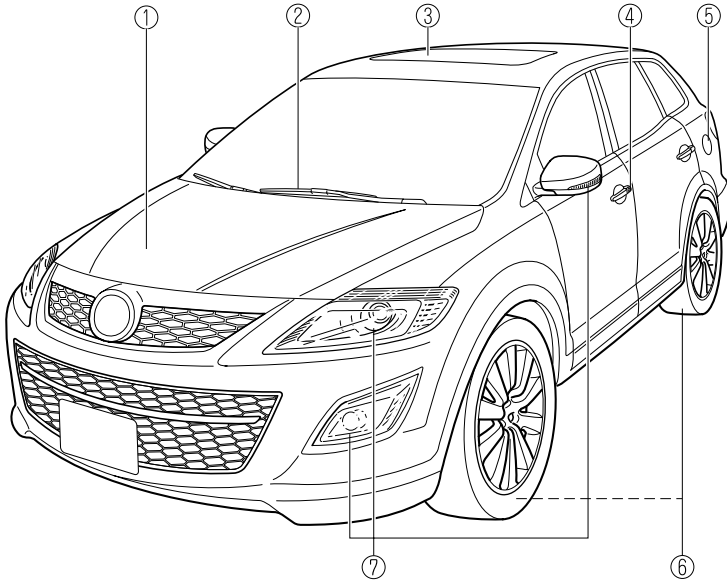
# Interior Overview

## Interior Equipment (View C)



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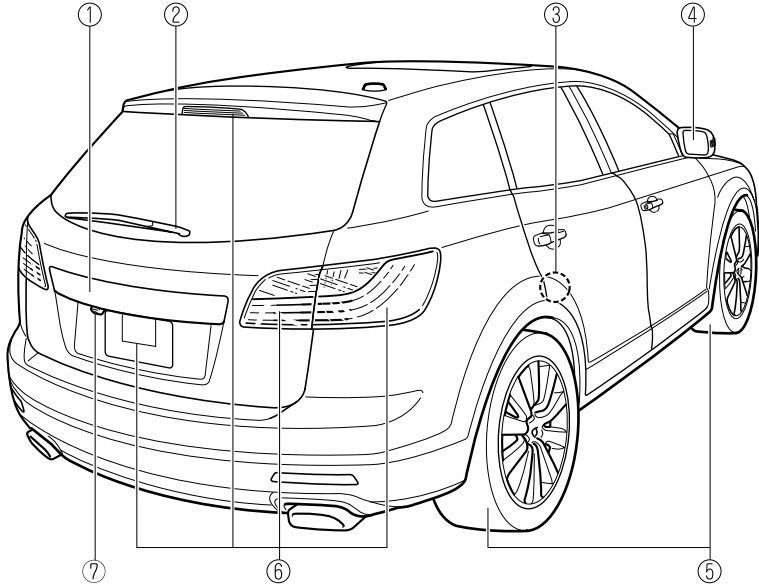
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# Exterior Overview

## Rear



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# 2

## Essential Safety Equipment

Use of safety equipment, including seats, seat belt system, child-restraint systems and SRS air bags.

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## Seats

### Front Seats (Manually Operated Seats)

#### **⚠ WARNING**

**Do not modify or replace the front seats:**

*Modifying or replacing the front seats such as replacing the upholstery or loosening any bolts is dangerous. The front seats contain air bag components essential to the supplemental restraint system. Such modifications could damage the supplemental restraint system and result in serious injury. Consult an Authorized Mazda Dealer if there is any need to remove or reinstall the front seats.*

**Do not drive with damaged front seats:**

*Driving with damaged front seats is dangerous. A collision, even one not strong enough to inflate the air bags, could damage the front seats which contain essential air bag components. If there was a subsequent collision, an air bag may not deploy which could lead to injuries. Always have an Authorized Mazda Dealer inspect the front seats, front seat belt pretensioners and air bags after a collision.*

**Make sure the adjustable components of a seat are locked in place:**

*Adjustable seats and seatbacks that are not securely locked are dangerous. In a sudden stop or collision, the seat or seatback could move, causing injury. Make sure the adjustable components of the seat are locked in place by attempting to slide the seat forward and backward and rocking the seatback.*

**Adjust the driver's seat only when the vehicle is stopped:**

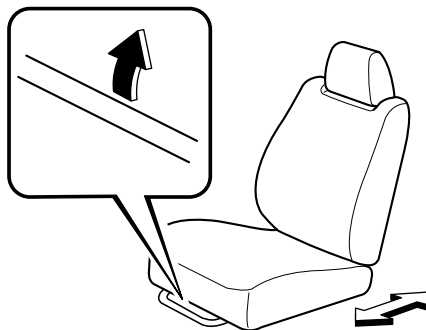
*Adjusting the driver's seat while the vehicle is moving is dangerous. The driver could lose control of the vehicle and have an accident.*

#### **⚠ CAUTION**

*Be careful not to place your hands and fingers around moving parts of the front seat when adjusting the seat positions to prevent injury.*

#### ▼ Seat Slide

To move a seat forward or backward, raise the lever and slide the seat to the desired position and release the lever.



Make sure the lever returns to its original position and the seat is locked in place by attempting to push it forward and backward.

### ▼ Seat Recline

#### **⚠ WARNING**

**Do not drive with either front seat reclined:**

*Sitting in a reclined position while the vehicle is moving is dangerous because you do not get the full protection from seat belts. During sudden braking or a collision, you can slide under the lap belt and suffer serious internal injuries. For maximum protection, sit well back and upright.*

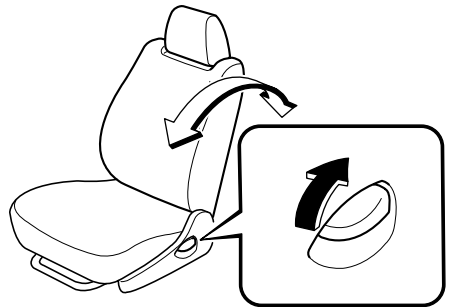
**Always sit in the front passenger seat properly with the seatback upright and feet on the floor (With Driver and Front Passenger Occupant Classification System):**

*Your front passenger seat has weight sensors, sitting in the front passenger seat improperly out of position or with the seatback reclined too far while the vehicle is moving is dangerous as it can take off weight from the seat bottom and affect the weight determination of the front passenger sensing system. As a result the front passenger will not have the supplementary protection of the air bag and seat belt pretensioner, which could result in serious injury. Always sit upright against the seatback with your feet on the floor.*

**Do not drive with the seatback unlocked:**

*All of the seatbacks play an important role in your protection in a vehicle. Leaving the seatback unlocked is dangerous as it can allow passengers to be ejected or thrown around and baggage to strike occupants in a sudden stop or collision, resulting in severe injury. After adjusting the seatback at any time, even when there are no other passengers, rock the seatback to make sure it is locked in place.*

To change the seatback angle, lean forward slightly while raising the lever. Then lean back to the desired position and release the lever.



Make sure the lever returns to its original position and the seatback is locked in place by attempting to push it forward and backward.

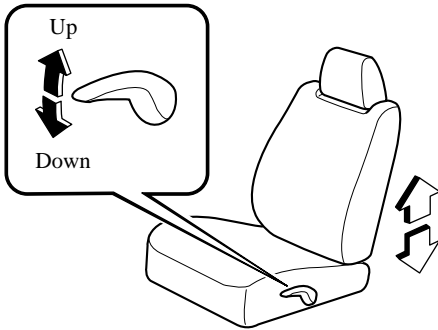
## Seats

### **CAUTION**

*When returning a rear-reclined seatback to its upright position, make sure you hold onto the seatback with your other hand while operating the lever. If the seatback is not supported, it will flip forward suddenly and could cause injury.*

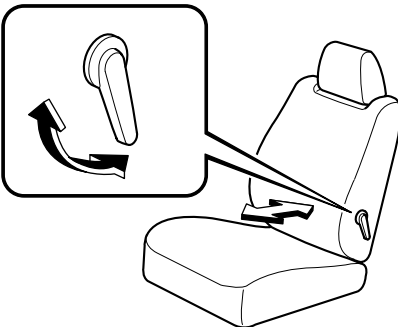
### ▼ **Height Adjustment (Driver's Seat)**

To adjust the seat height, move the lever up or down.



### ▼ **Lumbar Support Adjustment (Driver's Seat)**

To increase the seat firmness, pull the lever forward. Push the lever backward to decrease firmness.



## Front Seats (Electrically Operated Seats)

### **WARNING**

**Do not modify or replace the front seats:**

*Modifying or replacing the front seats such as replacing the upholstery or loosening any bolts is dangerous. The front seats contain air bag components essential to the supplemental restraint system. Such modifications could damage the supplemental restraint system and result in serious injury. Consult an Authorized Mazda Dealer if there is any need to remove or reinstall the front seats.*

**Do not drive with damaged front seats:**

*Driving with damaged front seats is dangerous. A collision, even one not strong enough to inflate the air bags, could damage the front seats which contain essential air bag components. If there was a subsequent collision, an air bag may not deploy which could lead to injuries. Always have an Authorized Mazda Dealer inspect the front seats, front seat belt pretensioners and air bags after a collision.*

**Adjust the driver's seat only when the vehicle is stopped:**

*Adjusting the driver's seat while the vehicle is moving is dangerous. The driver could lose control of the vehicle and have an accident.*

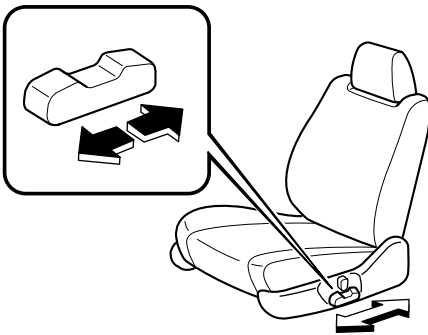


**⚠ CAUTION**

- *The seat-bottom power adjustment is operated by motors. Avoid extended operation because excessive use can damage the motors.*
- *To prevent the battery from running down, avoid using the power adjustment when the engine is stopped. The adjuster uses a large amount of electrical power.*
- *Do not use the switch to make more than one adjustment at a time.*
- *Be careful not to place your hands and fingers around moving parts of the front seat when adjusting the seat positions to prevent injury.*

**▼ Seat Slide**

To slide the seat, move the slide lifter switch on the outside of the seat to the front or back and hold it. Release the switch at the desired position.

**▼ Seat Recline****⚠ WARNING**

**Do not drive with either front seat reclined:**

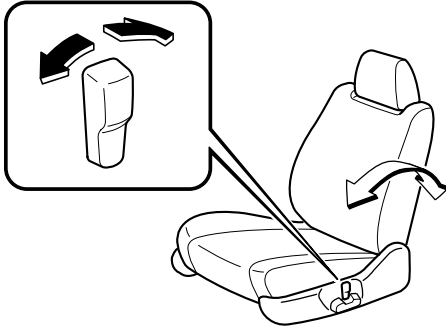
*Sitting in a reclined position while the vehicle is moving is dangerous because you do not get the full protection from seat belts. During sudden braking or a collision, you can slide under the lap belt and suffer serious internal injuries. For maximum protection, sit well back and upright.*

**Always sit in the front passenger seat properly with the seatback upright and feet on the floor (With Driver and Front Passenger Occupant Classification System):**

*Your front passenger seat has weight sensors, sitting in the front passenger seat improperly out of position or with the seatback reclined too far while the vehicle is moving is dangerous as it can take off weight from the seat bottom and affect the weight determination of the front passenger sensing system. As a result the front passenger will not have the supplementary protection of the air bag and seat belt pretensioner, which could result in serious injury. Always sit upright against the seatback with your feet on the floor.*

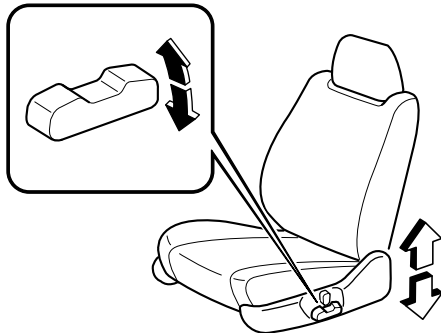
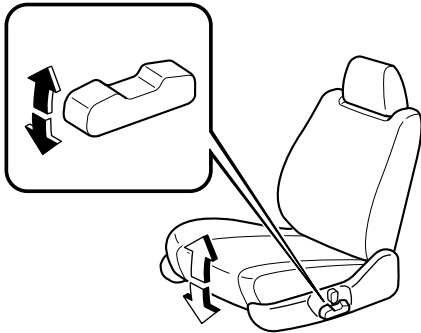
## Seats

To change the seatback angle, press the front or rear side of the reclining switch. Release the switch at the desired position.



### ▼ Height Adjustment (Driver's Seat)

To adjust the seat height, move the switch up or down.



### ▼ Seat Position Memory\*

The driver's seat position memory function allows you to program a desired seat position. The personalized positions can be easily activated with the simple touch of a button. The programmed positions can also be activated when unlocking the doors using a programmed advanced key/retractable type key. Seat positions for up to three people can be programmed into the memory using the three available programming buttons.

#### **CAUTION**

*When activating the seat position, do not place your hands or fingers around the seat bottom. The seat moves to the desired position automatically, and if your hands or fingers are placed around the seat bottom, it could cause injury.*

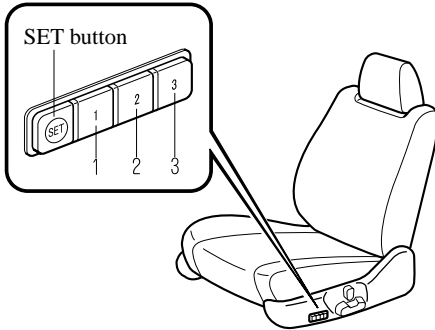
#### **NOTE**

- Only operate the seat memory function while the vehicle is parked.
- Vehicle maintenance or other reasons requiring the vehicle battery to be disconnected will result in the seat position memory being erased. In this case, re-program the seat positions.

#### **Programming**

1. Adjust the seat to the desired position. For each seat position adjustment method refer to the following pages:  
Seat Slide (page 2-5)  
Seat Recline (page 2-5)  
Height Adjustment (page 2-6)

2. Press the SET button followed by one of the programming buttons (1, 2, or 3) within about 5 seconds. A beep sound is heard after the programming is completed.



**NOTE**

*If the programming button (1, 2, or 3) you have selected is already programmed, it will be overwritten with the new setting.*

**Activating the seat to a pre-programmed position**

1. Shift the selector lever to the P position.
2. Press the programming button (1, 2, or 3) that you selected when programming your seat position. A beep sound is heard after the adjustment to the programmed position is completed.

**NOTE**

- *When the ignition is switched to ACC or off, a pre-programmed seat position can be activated regardless of the selector lever position.*
- *If the seat is already adjusted to the position you are activating, the seat does not move, however, a beep sound is heard to confirm that the adjustment operation is completed.*

**Activating the seat position when unlocking with an advanced key/retractable type key**

Your desired seat position can be activated when unlocking the doors. Perform the following procedure using the advanced key/retractable type key.

1. Adjust the seat to the desired position.
2. Switch the ignition off.
3. Press the SET button next to the programming buttons and then the unlock button on the advanced key/retractable type key you want to program within about 5 seconds. A beep sound is heard when the operation is completed.

When the driver's door is unlocked using a programmed advanced key/retractable type key, the seat is activated to a programmed position if the driver's door is opened within about 40 seconds. A beep sound is heard after the adjustment to the programmed position is completed.

## Seats

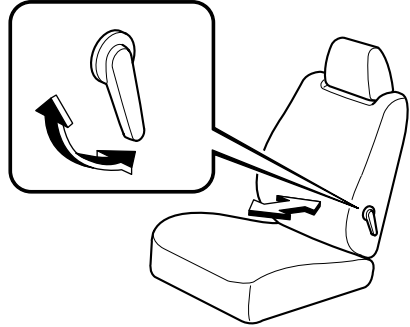
### NOTE

- If the seat is already adjusted to the position you are activating, the seat does not move (a beep sound is not heard).
- The advanced key/retractable key cannot be programmed while the key is inserted in the key cylinder.
- If any of the following operations is performed while activating a seat, the activation will cancel (After pressing a programming button or unlocking the doors with a programmed advanced key/retractable type key, and while the positions are being adjusted).
  - The selector lever is shifted to a position other than P (The ignition is switched ON).
  - Any of the seat adjustment switches other than a lumbar support switch are operated.
  - The SET button is pressed.
  - A programming button (1, 2, or 3) is pressed.
  - Vehicle locking/unlocking is done using the transmitter.
  - The vehicle starts moving.
- **(To cancel the seat activation when using a programmed advanced key/retractable type key to unlock the doors)**  
Perform the following procedure.
  - Switch the ignition off.
  - Press the SET button next to the programming button (1, 2, or 3) and then the lock button on the advanced key/retractable type key within about 5 seconds. A beep sound is heard after the operation is completed.

### ▼ Lumbar Support Adjustment (Driver's Seat)

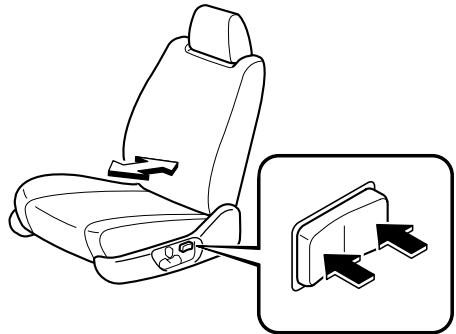
#### Manually operated

To increase the seat firmness, pull the lever forward. Push the lever backward to decrease firmness.



#### Electrically operated

The amount of lumbar support can be adjusted by pressing the switch. To increase the seat firmness, press and hold the front part of the switch to the desired position, then release it. Press the rear part of the switch to decrease firmness.



## Second-Row Seats

### **WARNING**

**Do not stack cargo higher than the seatbacks:**

Stacking luggage or other cargo higher than the seatbacks is dangerous. During a sudden stop or collision, objects can fly around and become projectiles that could hit and injure passengers.

**Make sure luggage and cargo are secured before driving:**

Not securing cargo while driving is dangerous as it could move or be crushed during sudden braking or a collision and cause injury.

**Make sure the adjustable components of a seat are locked in place by attempting to slide the seat forward and backward and rocking the seatback:**

Adjustable seats that are not securely latched are dangerous. In a sudden stop or collision, the seat or seatback could move, causing injury.

**Adjust the seat only when the vehicle is stopped:**

Adjusting the seat while the vehicle is moving is dangerous. Sudden braking or a collision could cause serious injury.

**Do not drive with the seatback unlocked:**

All of the seatbacks play an important role in your protection in a vehicle. Leaving the seatback unlocked is dangerous as it can allow passengers to be ejected or thrown around and baggage to strike occupants in a sudden stop or collision, resulting in severe injury. After adjusting the seatback at any time, even when there are no other passengers, rock the seatback to make sure it is locked in place.

**Never allow a passenger to sit or stand on the folded seatback while the vehicle is moving:**

Driving with a passenger on the folded seatback is dangerous. Allowing a child to sit up on the folded seatback while the vehicle is moving is particularly dangerous. In a sudden stop or even a minor collision, a child not in a proper seat or child-restraint system and seat belt could be thrown forward, back or even out of the vehicle resulting in serious injuries or death. The child in the baggage area could be thrown into other occupants and cause serious injury.

### **CAUTION**

Be careful not to place your hands and fingers around moving parts of the second-row seat when adjusting the seat positions to prevent injury.

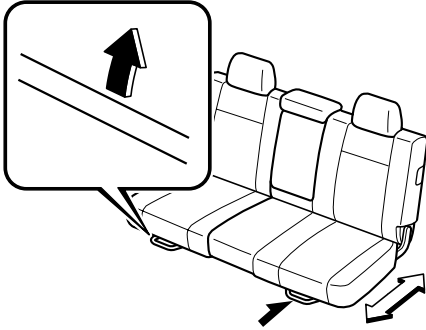
### **NOTE**

The second-row seats cannot be removed.

## Seats

### ▼ Seat Slide

To move the seat forward or backward, raise the bar and slide the seat to the desired position and release the bar.



Make sure the bar returns to its original position and the seat is locked in place by attempting to push it forward and backward.

### ▼ Seat Recline

#### **⚠ WARNING**

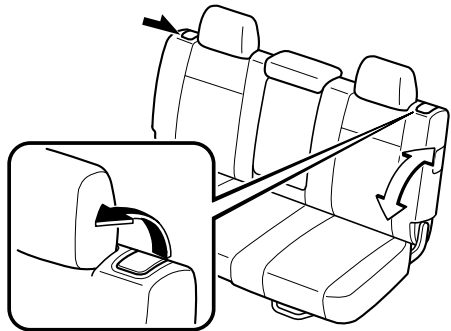
**Do not drive with the seats reclined:**

*Sitting in a reclined position while the vehicle is moving is dangerous because you do not get the full protection from the seat belts. During sudden braking or a collision, you can slide under the lap belt and suffer serious internal injuries. For maximum protection, sit well back and upright.*

**Do not recline a second-row seatback when the third row seat is occupied:**

*Reclining the second-row seatback when the third-row seat is occupied is dangerous. Because the clearance in the third-row seat is limited, occupants in the third-row seat could be hurt seriously on a reclined second-row seatback.*

To change the seatback angle, lean forward slightly while pulling the lever. Then lean back to the desired position and release the lever.



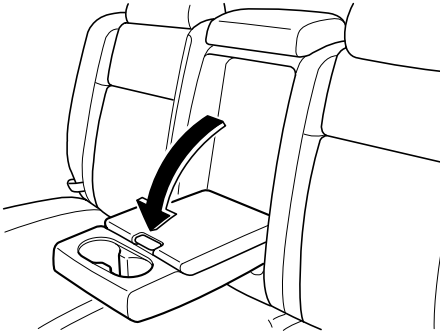
Make sure the lever returns to its original position and the seatback is locked in place by attempting to push it forward and backward.

**⚠ CAUTION**

*When returning a rear-reclined seatback to its upright position, make sure you hold onto the seatback with your other hand while operating the lever. If the seatback is not supported, it will flip forward suddenly and could cause injury.*

**▼ Armrest**

The armrest can be used (no occupant in the center seat) or placed upright.

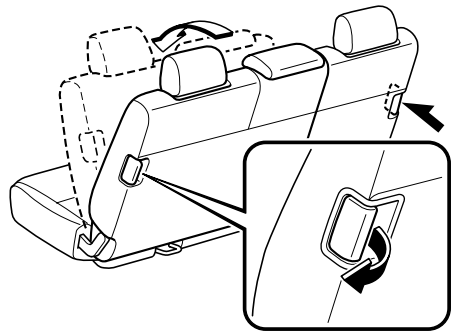


**▼ Third-Row Seat Access**

After folding the second-row seat seatback and sliding the seat forward, you can access the third-row seat easily.

**Entering/exiting the third-row seat area**

Raise the lever on the side of the second-row seat to fold the seatback forward and slide the seat forward.



**After entering/exiting the third-row seat area**

1. Return the second-row seatback to its upright position and lock it after sliding it backward. Make sure it is locked by attempting to lightly move it forward and backward.
2. Make sure that the center-rear seat belt is routed properly (not under the head restraint) and the seat belt guide is snapped to the head restraint.

## Seats

### **⚠ CAUTION**

- *When folding a seatback, always hold onto the seatback with your other hand while operating the lever. If the seatback is not supported, it will flip forward suddenly and could cause injury.*
- *After entering/exiting the third-row seat area, return the seatback to its upright position. Otherwise, it could move unexpectedly and cause injury.*

### **▼ Folding the Second-Row Seats**

To create a flat luggage compartment space, fold the seatbacks forward.

#### **Folding the seatbacks**

1. Unfasten the lap portion of the center-rear seat belt (page 2-31) and stow it into the ceiling recess (page 2-31).

### **⚠ CAUTION**

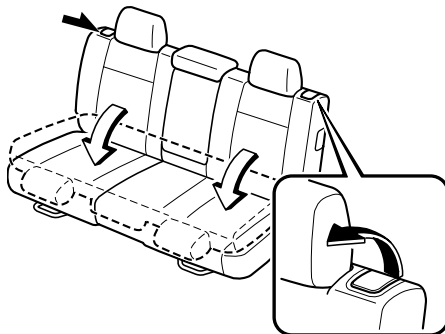
*Always unfasten the lap portion of the belt before folding the rear-left seatback. Leaving the lap portion of the belt fastened could cause damage to the seat belt, buckle and seatback.*

2. Slide the seat all the way back toward the rear of the vehicle.
3. Lower the head restraints all the way down (page 2-15).

#### **NOTE**

*If the second-row seats cannot be folded because the head restraints for the second-row seats contact the front seats, remove the head restraints for the second-row seats.*

4. Pull the lever and fold the seatback forward.

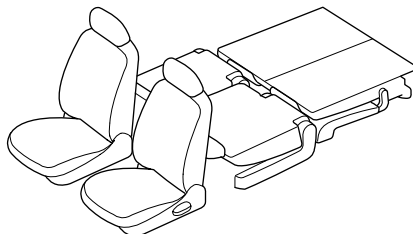


### **⚠ CAUTION**

*When folding a seatback, always hold onto the seatback with your other hand while operating the lever. If the seatback is not supported, it will flip forward suddenly and could cause injury.*

#### **NOTE**

*To create a flat luggage compartment space from the rear of the vehicle to the back of the front seats, fold the second-row and third-row seats (page 2-14).*





**Returning seatbacks to their original positions**

1. Lift the seatback to its original position.  
Make sure the seatback is secured by attempting to lightly move it forward and back.
2. If the head restraints were removed, re-install them.
3. Route the center-rear seat belt through the seat belt guide and fasten it. Check that all seat belts are routed properly for passenger use (page 2-29).

**Third-Row Seat**** WARNING*****Do not stack cargo higher than the seatbacks:***

*Stacking luggage or other cargo higher than the seatbacks is dangerous. During a sudden stop or collision, objects can fly around and become projectiles that could hit and injure passengers.*

***Make sure luggage and cargo are secured before driving:***

*Not securing cargo while driving is dangerous as it could move or be crushed during sudden braking or a collision and cause injury.*

***Make sure the adjustable components of a seat are locked in place by attempting to rock the seatback:***

*Adjustable seats that are not securely latched are dangerous. In a sudden stop or collision, the seat or seatback could move, causing injury.*

***Do not drive with the seatback unlocked:***

*All of the seatbacks play an important role in your protection in a vehicle. Leaving the seatback unlocked is dangerous as it can allow passengers to be ejected or thrown around and baggage to strike occupants in a sudden stop or collision, resulting in severe injury. After returning the seatback at any time, even when there are no other passengers, rock the seatback to make sure it is locked in place.*

## Seats

**Never allow a passenger to sit or stand on the folded seatback while the vehicle is moving:**

*Driving with a passenger on the folded seatback is dangerous. Allowing a child to sit up on the folded seatback while the vehicle is moving is particularly dangerous. In a sudden stop or even a minor collision, a child not in a proper seat or child-restraint system and seat belt could be thrown forward, back or even out of the vehicle resulting in serious injuries or death. The child in the baggage area could be thrown into other occupants and cause serious injury.*

### **NOTE**

*The third-row seat cannot be removed.*

### **▼ Split-Folding the Third-Row Seat**

To create a flat luggage compartment space, fold the seatbacks forward.

#### **To fold third-row seat**

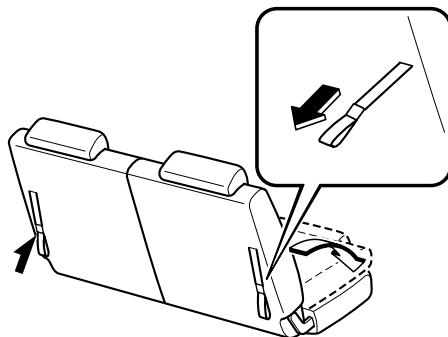
##### **1. (With foldable head restraints)**

Fold the head restraint all the way down. (page 2-15)

##### **(Without foldable head restraints)**

Lower the head restraints all the way down (page 2-15).

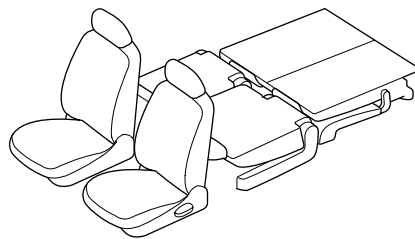
2. Pull the strap and fold the seatback forward.



3. Fasten the strap to its original position.

### **NOTE**

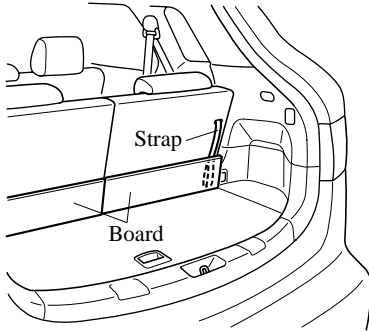
*To create a flat luggage compartment space from the rear of the vehicle to the back of the front seats, fold the second-row and third-row seats (page 2-12).*



#### **To return third-row seat to its original position**

1. Return the seatback to its original position by pulling its strap. Make sure the seatback is secured by attempting to lightly move it forward and back.

2. Fasten the strap to its original position between the seatback and folding board.



3. **(With foldable head restraints)**  
Lift the head restraint upward to its upright position.

## Head Restraints

Your vehicle is equipped with head restraints on all outboard seats and the second-row center seat. The head restraints are intended to help protect you and the passengers from neck injury.

### **⚠ WARNING**

***Always drive with the head restraints installed when seats are being used and make sure they are properly adjusted. In addition, always raise the head restraints mentioned below when they are being used:***

*Driving with the head restraints adjusted too low or removed is dangerous. With no support behind your head, your neck could be seriously injured in a collision.*

*(Head restraints which must be raised for use)*

- *Second-row center head restraint*
- *Third-row outboard head restraints except for foldable head restraints*

## Seats

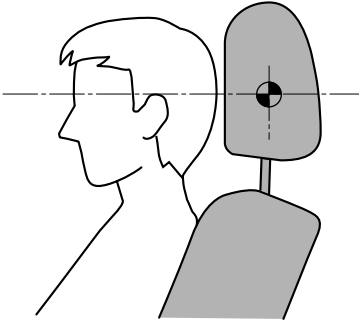
### ▼ Normal Head Restraints

#### Height adjustment

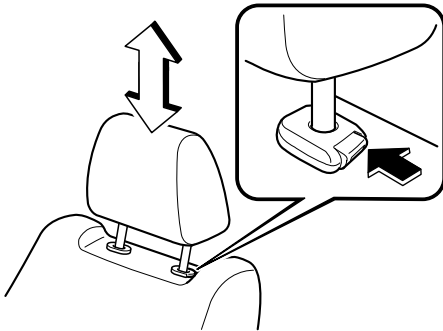
To raise a head restraint, pull it up to the desired position.

To lower the head restraint, press the stop-catch release, then push the head restraint down.

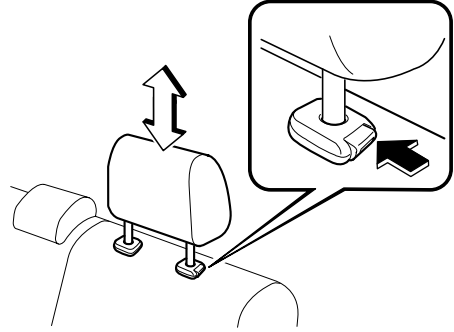
Adjust the head restraint so that the center is even with the top of the passenger's ears.



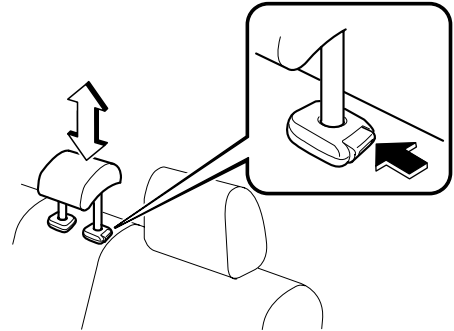
#### Front outboard seat



#### Second-Row outboard seat/Third-Row outboard seat



#### Second-Row center seat



#### Removal/Installation

To remove the head restraint, pull it up while pressing the stop-catch.

To install the head restraint, press the uprights into the holes while pressing the stop-catch.

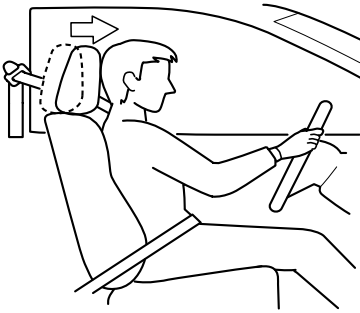
#### **⚠ WARNING**

***Always drive with the head restraints set up when seats are being used and make sure they are properly set up:***

*Driving with the head restraints not set up is dangerous. With no support behind your head, your neck could be seriously injured in a collision.*

### **Active Head Restraints**

The front seats are equipped with active head restraints. In a rear-end collision, the active head restraints use the force applied by the occupant on the seatback to instantaneously move the head restraints in the forward direction, reducing excessive rearward tilting of the head and reducing the load on the neck. The active head restraints are also highly effective at reducing whip-lash injuries which commonly occur in rear-end collisions at low to mid-range vehicle speeds.



### **⚠ WARNING**

- Always adjust the head restraints properly as specified in this section. Failure to do so can reduce the effectiveness of the active head restraint.
- Do not attach any accessories such as a TV screen to a front seatback and/or a front head restraint. Also do not place heavy items or thick items, or both in the seatback pocket. Doing so could reduce the effectiveness of the active head restraint in a rear-end collision.

### **NOTE**

- The active head restraints operate in a rear-end collision. The head restraints return to their original position after the collision.
- The method for adjusting the active head restraints is the same as non-active head restraint.

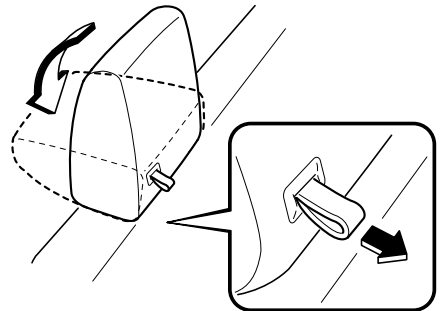
### **▼ Foldable Head Restraints\***

The third-row seats are equipped with foldable head restraints.

### **NOTE**

The foldable head restraints cannot be adjusted or removed.

To fold the head restraint, pull the strap and fold the head restraint downward. To return the head restraint to its upright position, lift it upward.



### **⚠ WARNING**

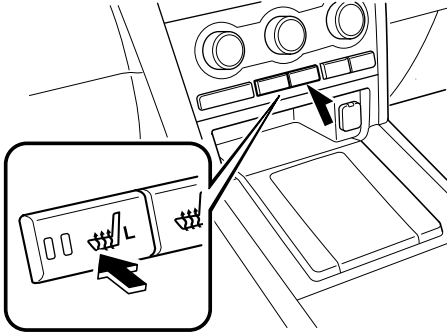
**Always drive with the head restraints in their upright positions when the third-row seats are occupied, and make sure they are securely locked in place:**

Driving with the head restraints folded down is dangerous. With no support behind your head, your neck could be seriously injured in a collision.

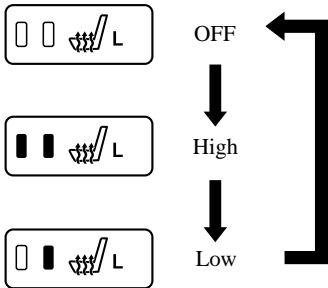
## Seats

### Seat Warmer\*

The front seats are electrically heated. The ignition must be switched ON.



Press the seat warmer switch to illuminate the indicator light while the ignition is switched ON. The mode changes as follow each time the seat warmer switch is pressed.



### ⚠ WARNING

- *Be careful when using the seat warmer. The heat from the seat warmer may be too hot for some people, as indicated below, and could cause a low-temperature burn.*
  - *Infants, small babies, elderly people, and physically challenged people*
  - *People with delicate skin*
  - *People who are excessively fatigued*
  - *People who are intoxicated*
  - *People who have taken sleep-inducing medicine such as sleeping pills or cold medicine*
- *Do not use the seat warmer with anything having high moisture-retention ability such as a blanket or cushion on the seat. The seat may be heated excessively and cause a low-temperature burn.*
- *Do not use the seat warmer even when taking a short nap in the vehicle. The seat may be heated excessively and cause a low-temperature burn.*
- *Do not place heavy objects with sharp projections on the seat, or insert needles or pins into it. This could cause the seat to become excessively heated and result in injury from a minor burn.*

### ⚠ CAUTION

*Do not use organic solvents to clean the seat. It may damage the seat surface and the heater.*

**NOTE**

- *If the ignition is switched off while the seat warmer is operating (High or Low) and then switched ON again, the seat warmer will automatically operate at the temperature set before switching off the ignition.*
- *Use the seat warmer when the engine is running, and do not continue to use it for a long period of time.*
- *The temperature of the seat warmer cannot be adjusted beyond High and Low because the seat warmer is controlled by a thermostat.*

# Seat Belt Systems

## Seat Belt Precautions

Seat belts help to decrease the possibility of severe injury during accidents and sudden stops. Mazda recommends that the driver and all passengers always wear seat belts.

Your vehicle has the following types of seat belts.

Seating Position		Types of seat belt
Front seat	Driver side	3-point type seat belt with emergency locking mode retractor
	Passenger side	
Second-row seat		3-point type seat belt with emergency locking mode retractor/automatic locking mode retractor
Third-row seat		

### 3-point type seat belt with emergency locking mode retractor

This belt has retractors with an inertia lock that keep the belt retracted when not in use. The lock allows the belt to remain comfortable on the user, but it will lock in position during a collision.

Refer to Emergency Locking Mode on page 2-22.

### 3-point type seat belt with emergency locking mode retractor/automatic locking mode retractor

In addition to the emergency locking mode function, this belt has retractors that operate in another mode, the automatic locking mode, for the child-restraint system.

Refer to Automatic Locking Mode on page 2-23.

Refer to Installing Child-Restraint Systems on page 2-42.

We recommend you put all children in the rear seats, if you must use the front passenger seat for a child, slide the front passenger seat as far back as possible and make sure any child-restraint system is secured properly.



**⚠ WARNING**

**Always wear your seat belt and make sure all occupants are properly restrained:**

*Not wearing a seat belt is extremely dangerous. During a collision, occupants not wearing seat belts could hit someone or things inside the vehicle or even be thrown out of the vehicle. They could be seriously injured or even killed. In the same collision, occupants wearing seat belts would be much safer.*

**Do not wear twisted seat belts:**

*Twisted seat belts are dangerous. In a collision, the full width of the belt is not available to absorb the impact. This puts more force on the bones beneath the belt, which could cause serious injury or death. So, if your seat belt is twisted, you must straighten the seat belt to remove any twists and to allow the full width of the belt to be used.*

**Never use one seat belt on more than one person at a time:**

*Using one seat belt for more than one person at a time is dangerous. A seat belt used in this way cannot spread the impact forces properly and the two passengers could be crushed together and seriously injured or even killed. Never use one belt for more than one person at a time and always operate the vehicle with each occupant properly restrained.*

**Do not operate a vehicle with a damaged seat belt:**

*Using a damaged seat belt is dangerous. An accident could damage the belt webbing of the seat belt in use. A damaged seat belt cannot provide adequate protection in a collision. Have an Authorized Mazda Dealer inspect all seat belt systems in use during an accident before they are used again.*

**Have your seat belts changed immediately if the pretensioner or load limiter has been expended:**

*Always have an Authorized Mazda Dealer immediately inspect the front seat belt pretensioners and air bags after any collision. Like the air bags, the front seat belt pretensioners and load limiters will only function once and must be replaced after any collision that caused them to deploy. A seat belt with an expended pretensioner or load limiter is still better than wearing no seat belt at all; however, if the front seat belt pretensioners and load limiters are not replaced, the risk of injury in a collision will increase.*

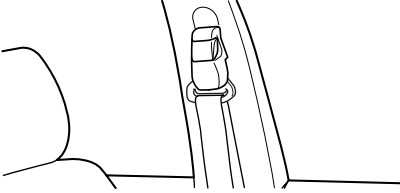
*In a rollover crash, an unbelted person is significantly more likely to die than a person wearing a seat belt.*

## Seat Belt Systems

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### **⚠ CAUTION**

*Belt retraction may become difficult if the belts and rings are soiled, so try to keep them clean. For more details about cleaning the seat belts, refer to “Cleaning the Lap/Shoulder Belt Webbing” (page 8-62).*



### **▼ Pregnant Women and Persons with Serious Medical Conditions**

Pregnant women should always wear seat belts. Ask your doctor for specific recommendations.

The lap belt should be worn **SNUGLY AND AS LOW AS POSSIBLE OVER THE HIPS**. The shoulder belt should be worn across your shoulder properly, but never across the stomach area.

Persons with serious medical conditions also should wear seat belts. Check with your doctor for any special instructions regarding specific medical conditions.



### **▼ Emergency Locking Mode**

In the emergency locking mode, the belt remains comfortable on the occupant and the retractor will lock in position during a collision. When the seat belt is fastened, it will always be in the emergency locking mode until it is switched to automatic locking mode by pulling it all the way out to its full length. If the belt feels tight and hinders comfortable movement while the vehicle is stopped or in motion, it may be in the automatic locking mode because the belt has been pulled too far out. To return the belt to the more comfortable emergency locking mode, wait until the vehicle has stopped in a safe, level area, retract the belt fully to convert it back to emergency locking mode and then extend it around you again.

If the belt is locked and cannot be pulled out, retract the belt once, and then try pulling it out slowly. If this fails, pull the belt strongly one time and loosen, then pull it out again slowly.

### ▼ **Automatic Locking Mode**

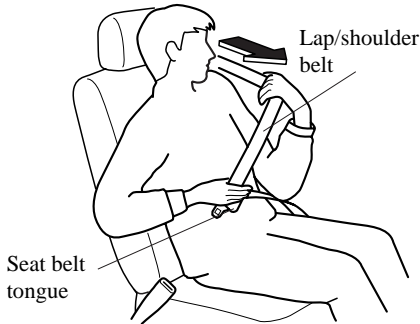
Always use the automatic locking mode to keep the child-restraint system from shifting to an unsafe position in the event of an accident. To enable seat belt automatic locking mode, pull it all the way out and connect it as instructed on the child-restraint system. It will retract down to the child-restraint system and stay locked on it. See the section on child restraint (page 2-36).

## Seat Belt Systems

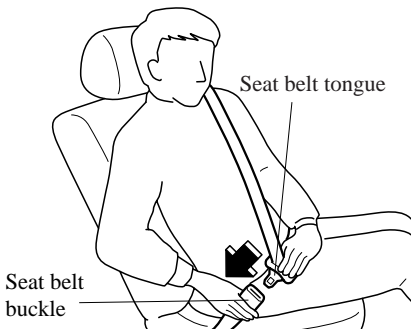
### 3-Point Type Seat Belt

#### ▼ Fastening the Seat Belt

1. Grasp the seat belt tongue.
2. Slowly pull out the lap/shoulder belt.



3. Insert the seat belt tongue into the seat belt buckle until you hear a click sound.

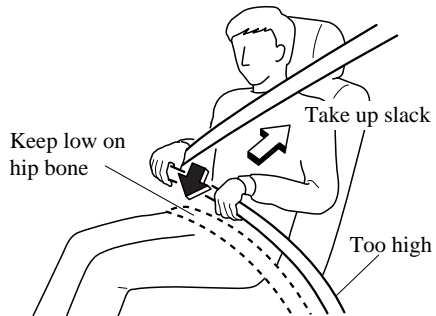


#### ⚠ WARNING

##### Positioning the Shoulder Portion of the Seat Belt:

*Improper positioning of the shoulder portion of the seat belt is dangerous. Always make sure the shoulder portion of the seat belt is positioned across your shoulder and near your neck, but never under your arm, on your neck, or on your upper arm.*

4. Position the lap belt as low as possible, not on the abdominal area, then adjust the shoulder belt so that it fits snugly against your body.



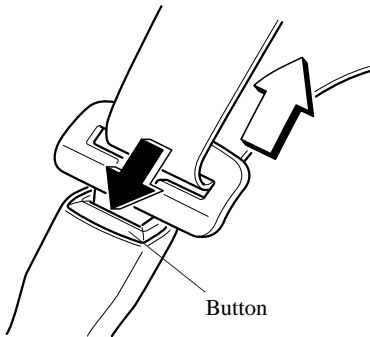
#### ⚠ WARNING

##### Positioning the Lap Portion of the Seat Belt:

*The lap portion of the seat belt worn too high is dangerous. In a collision, this would concentrate the impact force directly on the abdominal area, causing serious injury. Wear the lap portion of the belt snugly and as low as possible.*

### ▼ Unfastening the Seat Belt

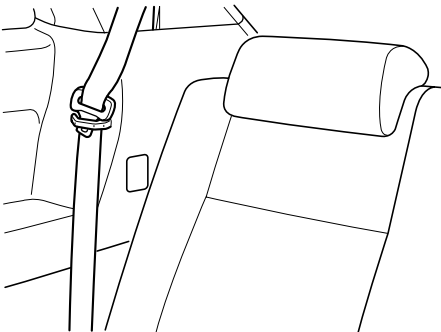
Depress the button on the seat belt buckle. If the belt does not fully retract, pull it out and check for kinks or twists. Then make sure it remains untwisted as it retracts.



#### **NOTE**

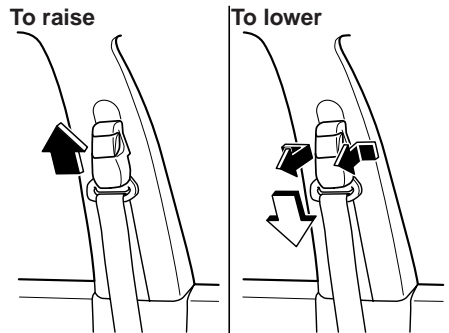
- When using the center-rear seat belt, refer to "Center-Rear Position Seat Belt" (page 2-29).
- If a belt does not fully retract, inspect it for kinks and twists. If it is still not retracting properly, have it inspected at an Authorized Mazda Dealer.

To secure the outboard-third row seat belts when not in use, insert the belts into their seat belt retainers.



### ▼ Front Shoulder Belt Adjuster

Adjust the height of the shoulder belt if the seat belt touches your neck, or if it crosses your arm instead of your shoulder. To raise the shoulder belt adjuster, push the adjuster up. To lower the shoulder belt adjuster, pull the adjuster and slide it down. Make sure the adjuster is locked.



### **⚠ WARNING**

#### **Positioning the Shoulder Portion of the Seat Belt:**

*Improper positioning of the shoulder portion of the seat belt is dangerous. Always make sure the shoulder portion of the seat belt is positioned across your shoulder and near your neck, but never under your arm, on your neck, or on your upper arm.*

## Seat Belt Systems

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### Front Seat Belt Pretensioner and Load Limiting Systems

For optimum protection, the driver and front passenger seat belts are equipped with pretensioner and load limiting systems. For both these systems to work properly you must wear the seat belt properly.

#### **Pretensioners:**

The front seat belt retractors remove slack quickly as the air bags are expanding. Any time the air bags and seat belt pretensioners have deployed they must be replaced.

For deployment details, refer to the SRS Air Bag Deployment Criteria (page 2-66).

#### **(With Driver and Front Passenger Occupant Classification System)**

In addition, the pretensioner system for the front passenger, like the front passenger air bag, is designed to only deploy in accordance with the total seated weight on the front passenger seat. For details, refer to the driver and front passenger occupant classification system (page 2-69).

#### **Load limiter:**

The load limiting system releases belt webbing in a controlled manner to reduce belt force on the occupant's chest. While the most severe load on a seat belt occurs in frontal collisions, the load limiter has an automatic mechanical function and can activate in any accident mode with sufficient occupant movement.

Even if the pretensioners have not deployed, the load limiting function must be checked by an Authorized Mazda Dealer.

### **WARNING**

**Wear seat belts only as recommended in this owner's manual:**

*Incorrect positioning of the driver and front passenger seat belts is dangerous. Without proper positioning, the pretensioner and load limiting systems cannot provide adequate protection in an accident and this could result in serious injury. For more details about wearing seat belts, refer to "Fastening the seat belts" (page 2-24).*

**Have your seat belts changed immediately if the pretensioner or load limiter has been expended:**

*Always have an Authorized Mazda Dealer immediately inspect the front seat belt pretensioners and air bags after any collision. Like the air bags, the front seat belt pretensioners and load limiters will only function once and must be replaced after any collision that caused them to deploy. A seat belt with an expended pretensioner or load limiter is still better than wearing no seat belt at all; however, if the front seat belt pretensioners and load limiters are not replaced, the risk of injury in a collision will increase.*

**Do not modify the components or wiring, or use electronic testing devices on the pretensioner system:**

Modifying the components or wiring of the pretensioner system, including the use of electronic testing devices is dangerous. You could accidentally activate it or make it inoperable which would prevent it from activating in an accident. The occupants or repairers could be seriously injured.

**Properly dispose of the pretensioner system:**

Improper disposal of the pretensioner system or a vehicle with non-deactivated pretensioners is dangerous. Unless all safety procedures are followed, injury could result. Ask an Authorized Mazda Dealer how to safely dispose of the pretensioner system or how to scrap a pretensioner-equipped vehicle.

**NOTE**

- *The pretensioner system will activate in a moderate or severe frontal, near-frontal collision or roll-over accident. It will not activate in most side or rear impacts. (With Driver and Front Passenger Occupant Classification System) The pretensioner system for the front passenger is designed to only deploy in accordance with the total seated weight on the front passenger seat.*
- *Some smoke (non-toxic gas) will be released when the air bags and pretensioners deploy. This does not indicate a fire. This gas normally has no effect on occupants, however, those with sensitive skin may experience light skin irritation. If residue from the deployment of the air bags or the front pretensioner system gets on the skin or in the eyes, wash it off as soon as possible.*

**▼ Air Bag/Front Seat Belt Pretensioner System Warning Light**



If the air bag/front seat belt pretensioner system is working properly, the warning light illuminates when the ignition is switched ON or after the engine is cranked. The warning light turns off after a specified period of time.

## Seat Belt Systems

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A system malfunction is indicated if the warning light constantly flashes, constantly illuminates or does not illuminate at all when the ignition is switched ON. If any of these occur, consult an Authorized Mazda Dealer as soon as possible. The system may not operate in an accident.

### **WARNING**

***Never tamper with the air bag/pretensioner systems and always have an Authorized Mazda Dealer perform all servicing and repairs:***

*Self-servicing or tampering with the systems is dangerous. An air bag/pretensioner could accidentally activate or become disabled causing serious injury or death.*

### **▼ Air Bag/Front Seat Belt Pretensioner System Warning Beep**

If a malfunction is detected in the air bag/front seat belt pretensioner systems and the warning light, a warning beep sound will be heard for about 5 seconds every minute.

The air bag and seat belt pretensioner system warning beep sound will continue to be heard for approximately 35 minutes. Have your vehicle inspected at an Authorized Mazda Dealer as soon as possible.

### **WARNING**

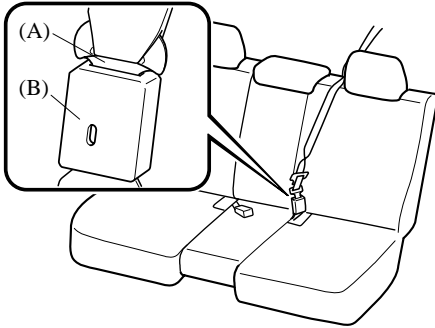
***Do not drive the vehicle with the air bag/front seat belt pretensioner system warning beep sounding:***

*Driving the vehicle with the air bag/front seat belt pretensioner system warning beep sounding is dangerous. In a collision, the air bags and the front seat belt pretensioner system will not deploy and this could result in death or serious injury. Contact an Authorized Mazda Dealer to have the vehicle inspected as soon as possible.*



## Center-Rear Position Seat Belt (Second-Row Seats)

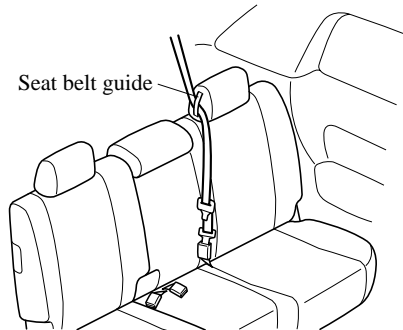
Before using the center-rear lap/shoulder belt make sure tongue (A) and anchor buckle (B) are fastened.



### **⚠ WARNING**

#### **Using the Seat Belt Guide:**

*Not using the seat belt guide is dangerous. If the seat belt guide is not used, the shoulder portion of the center-rear seat belt could be mistakenly positioned under the head restraint; a position that cannot provide adequate protection in a collision and could result in the center-rear passenger being seriously injured or killed. Always make sure the shoulder portion of the center-rear seat belt is on the right side of the left-rear head restraint and guided correctly through the seat belt guide.*

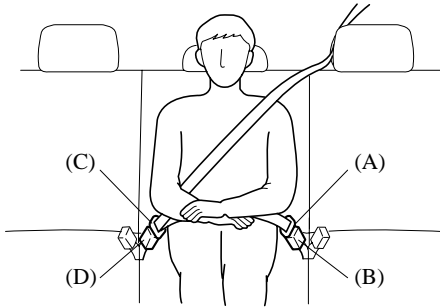


#### **▼ Fastening the Seat Belt**

1. Grasp the seat belt tongue (C).
2. Slowly pull out the lap/shoulder belt.

## Seat Belt Systems

3. Insert the seat belt tongue (C) into the seat belt buckle (D) until you hear a click sound.



### **⚠ WARNING**

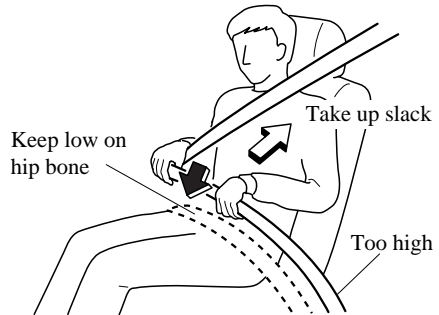
#### **Fastening the Center-Rear Seat Belt with Only One Buckle:**

Fastening the center-rear seat belt with only one buckle is dangerous. If only one pair of seat belt tongues and buckles is fastened (either seat belt tongue (C) and seat belt anchor buckle (D) or seat belt tongue (A) and seat belt buckle (B)), then the seat belt cannot provide full protection. In a sudden stop or collision, the user could slide under the belt and suffer serious injuries. Always make sure that both pairs of seat belt tongues and buckles are fastened properly.

#### **Positioning the Shoulder Portion of the Seat Belt:**

Improper positioning of the shoulder portion of the seat belt is dangerous. Always make sure the shoulder portion of the seat belt is positioned across your shoulder and near your neck, but never under your arm, on your neck, or on your upper arm.

4. Position the lap belt as low as possible, not on the abdominal area, then adjust the shoulder belt so that it fits snugly against your body.



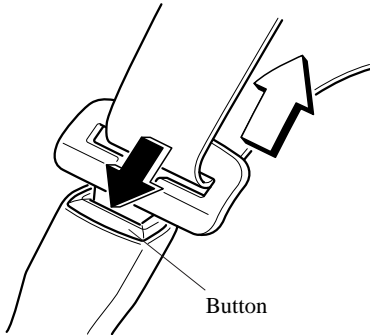
### **⚠ WARNING**

#### **Positioning the Lap Portion of the Seat Belt:**

The lap portion of the seat belt worn too high is dangerous. In a collision, this would concentrate the impact force directly on the abdominal area, causing serious injury. Wear the lap portion of the belt snugly and as low as possible.

### ▼ Unfastening the Seat Belt

Depress the button on the seat belt buckle. If the belt does not fully retract, pull it out and check for kinks or twists. Then make sure it remains untwisted as it retracts.

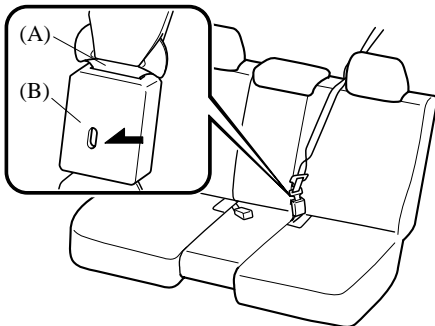


#### **NOTE**

*If a belt does not fully retract, inspect it for kinks and twists. If it is still not retracting properly, have it inspected at an Authorized Mazda Dealer.*

### ▼ Retracting the Center Seat Belt (Middle Row) to Lower the Seatbacks for Carrying Cargo

To retract the center belt and lower the seatbacks for carrying cargo, insert a small object such as a key in the seat belt anchor buckle (B) slot.



### **CAUTION**

*Always unfasten the lap portion of the belt before folding the left-rear seatback. Leaving the lap portion of the belt fastened could cause damage to the seat belt, seat belt buckle and seatback.*

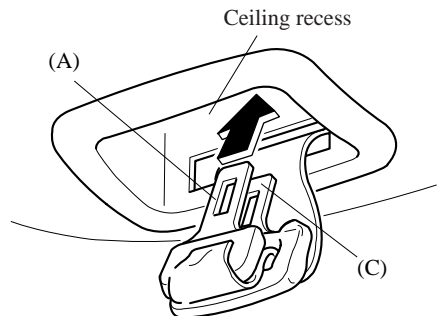
### ▼ Stowing and pulling out the Center-Rear Position Seat Belt

The center-rear position seat belt can be stowed using the following procedure.

### **CAUTION**

*When stowing the seat belt, make sure the belt is locked securely into the recess. If the seat belt is not properly stowed, it might get caught in the seats and be damaged.*

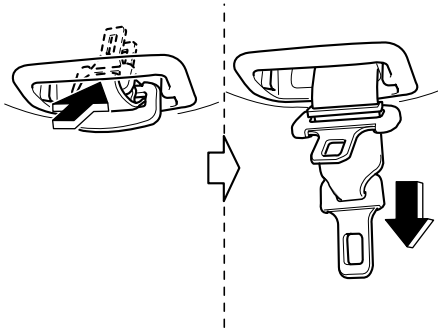
To stow the seat belt, retract the belt, put the seat belt tongues (A) and (C) together and insert each tongue into the respective ceiling recess. Insert the seat belt tongues until you hear a click sound.



## Seat Belt Systems

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To pull out the seat belt, press the area indicated in the figure upward with your finger and slide the belt forward. Then slowly pull out the seat belt from the ceiling recess.



### **NOTE**

- To encourage rear seat passengers to wear their seat belts, we suggest leaving the center-rear lap position of the belt fastened at all times except when folding the rear seat forward.
- Pulling the seat belt all the way out will switch it to automatic locking mode. If automatic locking mode is not needed, retract the seat belt fully to convert it back to emergency locking mode.

### **▼ Re-attaching the Seat Belt after the Middle Row Seatbacks are Returned to their Upright Positions**

To re-attach the center seat belt after the middle row seats are returned to their upright positions, grasp the seat belt tongue (A) and insert it into the seat belt anchor buckle (B) until you hear a click sound. It is now secure for passenger use.

### **NOTE**

*After returning the left-rear seatback to its upright position, guide the shoulder portion of the belt correctly through the seat belt guide and fasten the lap portion of the belt.*

## Seat Belt Extender

If your seat belt is not long enough, even when fully extended, a seat belt extender may be available to you at no charge from your Authorized Mazda Dealer.

This extender will be only for you and for the particular vehicle and seat. Even if it plugs into other seat belts, it may not hold in the critical moment of a crash.

When ordering an extender, only order one that provides the necessary additional length to fasten the seat belt properly.

Please contact your Authorized Mazda Dealer for more information.

### **WARNING**

**Do not use a seat belt extender unless it is necessary:**

*Using a seat belt extender when not necessary is dangerous. The seat belt will be too long and not fit properly. In an accident, the seat belt will not provide adequate protection and you could be seriously injured. Only use the extender when it is required to fasten the seat belt properly.*

**Do not use an improper extender:**

*Using a seat belt extender that is for another person or a different vehicle or seat is dangerous. The seat belt will not provide adequate protection and the user could be seriously injured in an accident. Only use the extender provided for you and for the particular vehicle and seat. NEVER use the extender in a different vehicle or seat. If you sell your Mazda, do not leave your seat belt extender in the vehicle. It could be used accidentally by the new owner of the vehicle. After removing the seat belt extender, discard it. Never use the seat belt extender in any other vehicle you may own in the future.*

**Do not use an extender that is too long:**

*Using an extender that is too long is dangerous. The seat belt will not fit properly. In an accident, the seat belt will not provide adequate protection and you could be seriously injured. Do not use the extender or choose one shorter in length if the distance between the extender's buckle and the center of the user's body is less than 15 cm (6 in).*

## Seat Belt Systems

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**Do not leave a seat belt extender connected to the buckle:**

Leaving a seat belt extender connected to the buckle without using the seat belt is dangerous. When the seat belt extender is connected to the driver's seat belt buckle (or front passenger) seat, the SRS driver's (or front passenger's) air bag system will determine that the driver (or front passenger) is wearing the seat belt even if the driver (or front passenger) is not wearing it. This condition could cause the driver's (or front passenger's) air bag to not activate correctly and result in death or serious injury in the event of collision. Always wear the seat belt with the seat belt extender.

**Do not use the seat belt extender when installing a child-restraint system on the front or rear passenger seat:**

Using a seat belt extender to fasten a child-restraint system on any seat is dangerous. Always follow the child-restraint system manufacturer's installation instructions and never use a seat belt extender.

**NOTE**

When not in use, remove the seat belt extender and store it in the vehicle. If the seat belt extender is left connected, the seat belt extender might get damaged as it will not retract with the rest of the seat belt and can easily fall out of the door when not in use and be damaged. In addition, the seat belt warning light will not illuminate and function properly.

### Seat Belt Warning Light



The seat belt warning light illuminates if the driver's seat is occupied and the seat belt is not fastened with the ignition switched ON.

## Seat Belt Reminder

### **NOTE**

*Consult an Authorized Mazda Dealer to deactivate or restore the belt reminder. Though the belt reminder can be deactivated, doing so will defeat the purpose of the system to warn the driver and the front passenger in the event that their seat belts are not fastened. For the safety of the driver and front passenger, Mazda recommends not deactivating the belt reminder.*

If the vehicle is driven with the driver or front passenger's seat belt unfastened, the seat belt warning light illuminates and a warning chime sounds.

If the driver or front passenger's seat belt is unfastened (only when the front passenger seat is occupied) and the vehicle is driven at a speed faster than about 20 km/h (12 mph), the warning light will flash and a beep sound will be heard. After a short time, the warning light stops flashing, but remains illuminated, and the beep sound stops.

Until a seat belt is fastened or a given period of time has elapsed, the beep sound will not stop even if the vehicle speed falls below 20 km/h (12 mph).

### **NOTE**

- *The warning light flashes and a beep sound will be heard for about 6 seconds if the driver's seat belt is not fastened when the ignition is switched ON.*
- *If a driver or front passenger's seat belt is unfastened after the beep sound turns off, and the vehicle speed exceeds 10 km/h (6 mph), the warning light flashes and beep sound activates again.*
- *Placing heavy items on the front passenger seat may cause the front passenger seat belt warning function to operate depending on the weight of the item.*
- *To allow the front passenger seat weight sensor to function properly, do not place and sit on an additional seat cushion on the front passenger seat. The sensor may not function properly because the additional seat cushion could cause sensor interference.*
- *When a small child sits on the front passenger seat, it is possible that the warning light will not operate.*

### Child Restraint Precautions

Mazda strongly urges the use of child-restraint systems for children small enough to use them.

You are required by law to use a child-restraint system for children in the U.S. and Canada. Check your local and state or provincial laws for specific requirements regarding the safety of children riding in your vehicle.

Whatever child-restraint system you consider, please pick the appropriate one for the age and size of the child, obey the law and follow the instructions that come with the individual child-restraint system.

A child who has outgrown child-restraint systems should sit in the rear and use seat belts, both lap and shoulder. If the shoulder belt crosses the neck or face, move the child closer to the center of the vehicle in the outboard seats, and towards the buckle on the right if the child is seated on the center seat.

Statistics confirm that the rear seats are the best place for all children up to 12 years of age, and more so with a supplemental restraint system (air bags).

A rear-facing child-restraint system should **NEVER** be used on the front seat with the air bag system activated. The front passenger's seat is also the least preferred seat for other child-restraint systems.

#### **(With Driver and Front Passenger Occupant Classification System)**

To reduce the chance of injuries caused by deployment of the front passenger air bag, the front passenger seat weight sensors work as a part of the supplemental restraint system. This system deactivates the front passenger front and side air bags and also the front passenger seat belt pretensioner system when the front passenger air bag deactivation indicator light illuminates.

When an infant or small child sits on the front passenger seat, the system shuts off the front passenger front and side air bags and seat belt pretensioner system, so make sure the front passenger air bag deactivation indicator light illuminates.

Even if the front passenger air bag is shut off, Mazda strongly recommends that children be properly restrained and child-restraint systems of all kinds are properly secured on the rear seats which are the best place for children.

For more details, refer to “Front passenger seat weight sensors” (page 2-69).



**⚠ WARNING**

**Use the correct size child-restraint system:**

*For effective protection in vehicle accidents and sudden stops, a child must be properly restrained using a seat belt or child-restraint system depending on age and size. If not, the child could be seriously injured or even killed in an accident.*

**Follow the manufacturer's instructions and always keep the child-restraint system buckled down:**

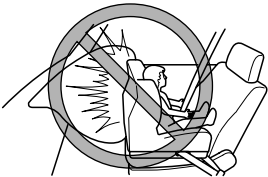
*An unsecured child-restraint system is dangerous. In a sudden stop or a collision it could move causing serious injury or death to the child or other occupants. Make sure any child-restraint system is properly secured in place according to the child-restraint system manufacturer's instructions. When not in use, remove it from the vehicle or fasten it with a seat belt, or latch it down to BOTH LATCH lower anchors for LATCH child-restraint systems and the corresponding tether anchor.*

**Always secure a child in a proper child-restraint system:**

*Holding a child in your arms while the vehicle is moving is extremely dangerous. No matter how strong the person may be, he or she cannot hold onto a child in a sudden stop or collision and it could result in serious injury or death to the child or other occupants. Even in a moderate accident, the child may be exposed to air bag forces that could result in serious injury or death to the child, or the child may be slammed into an adult, causing injury to both child and adult.*

**Never use a rear-facing child-restraint system in the front seat with an air bag that could deploy:**

*Rear-facing child-restraint systems on the front seat are particularly dangerous even though you may feel assured that a front passenger air bag will not deploy based on the fact that the front passenger air bag deactivation indicator light illuminates. The child-restraint system can be hit by a deploying air bag and moved violently backward resulting in serious injury or death to the child.*



## Child Restraint

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Some vehicles with a front passenger air bag have a warning label attached as shown below. The warning label reminds you not to put a rear-facing child-restraint system on the front passenger seat at any time.



**Do not install a front-facing child-restraint system on the front passenger seat unless it is unavoidable:**

*In a collision, the force of a deploying air bag could cause serious injury or death to the child. If installing a front-facing child-restraint system on the front passenger seat is unavoidable, move the front passenger seat as far back as possible.*



**Seating a child in a child-restraint system on the front passenger seat is dangerous under certain conditions (With Driver and Front Passenger Occupant Classification System):**

Your vehicle is equipped with front passenger seat weight sensors. Even with the front passenger seat weight sensors, if you must use the front passenger seat to seat a child, using a child-restraint system on the front passenger seat under the following conditions increases the danger of the front passenger air bag deploying and could result in serious injury or death to the child.

- The front passenger air bag deactivation indicator light does not illuminate when seating a child in the child-restraint system.
- Luggage or other items are placed on the seat with the child in the child-restraint system.
- A rear passenger or luggage pushing or pulling down on the front passenger seatback.
- A rear passenger puts their feet on the front seat rails.
- Luggage or other items are placed on the seatback or hung on the head restraint.
- Heavy items are placed in the seatback map pocket.
- The seat is washed.
- Liquids are spilled on the seat.
- The front passenger seat is moved backward, pushing into luggage or other items placed behind it.
- The front passenger seatback contacts the second-row seat.
- Luggage or other items are placed between the front passenger seat and driver seat.
- Any accessories, which might increase the total seated weight on the front passenger seat, are attached to the front passenger seat.

The designated positions with seat belts on the rear seats are the safest places for children. Always use seat belts and child restraints.

**Do not allow a child or anyone to lean over or against the side window of a vehicle with side and curtain air bags:**

It is dangerous to allow anyone to lean over or against the side window, the area of the front passenger seat, the front and rear window pillars and the roof edge along both sides from which the side and curtain air bags deploy, even if a child-restraint system is used. The impact of inflation from a side or curtain air bag could cause serious injury or death to an out of position child. Furthermore, leaning over or against the front door could block the side and curtain air bags and eliminate the advantages of supplemental protection. With the front air bag and the additional side air bag that comes out of the front seat, the rear seat is always a better location for children. Take special care not to allow a child to lean over or against the side window, even if the child is seated in a child-restraint system.

## Child Restraint

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**Never use one seat belt on more than one person at a time:**

*Using one seat belt for more than one person at a time is dangerous. A seat belt used in this way cannot spread the impact forces properly and the two passengers could be crushed together and seriously injured or even killed. Never use one belt for more than one person at a time and always operate the vehicle with each occupant properly restrained.*

** CAUTION**

*A seat belt or child-restraint system can become very hot in a closed vehicle during warm weather. To avoid burning yourself or a child, check them before you or your child touches them.*

**NOTE**

*Your Mazda is equipped with LATCH lower anchors for attachment of specially designed LATCH child-restraint systems in the rear seats. When using these anchors to secure a child-restraint system, refer to “LATCH Child-Restraint Systems” (page 2-50).*

## Child-Restraint System Installation Position

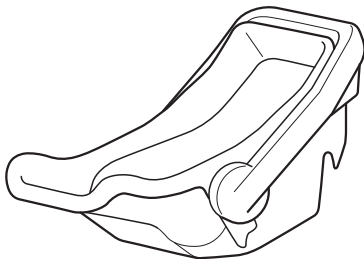
In this owner's manual, explanation of child-restraint systems is provided for the following three types of popular child-restraint systems: infant seat, child seat, booster seat.

### **NOTE**

- *Installation position is determined by the type of child-restraint system. Always read the manufacturer's instructions and this owner's manual carefully.*
- *Due to variations in the design of child-restraint systems, vehicle seats and seat belts, all child-restraint systems may not fit all seating positions. Before purchasing a child-restraint system, it should be tested in the specific vehicle seating position (or positions) where it is intended to be used. If a previously purchased child-restraint system does not fit, you may need to purchase a different one that will.*

### **Infant seat**

An infant seat provides restraint by bracing the infant's head, neck and back against the seating surface.



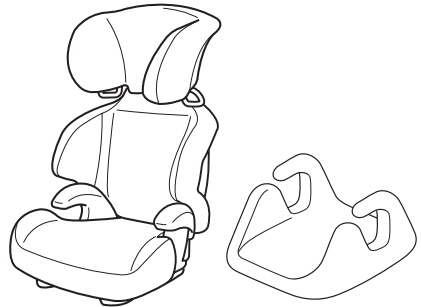
### **Child seat**

A child seat restrains a child's body using the harness.



### **Booster seat**

A booster seat is a child restraint accessory designed to improve the fit of the seat belt system around the child's body.



## Child Restraint

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### Installing Child-Restraint Systems

Accident statistics reveal that a child is safer in the rear seats. The front passenger's seat is clearly the worst choice for any child under 12, and with rear-facing child-restraint systems it is clearly unsafe due to air bags.

#### **NOTE**

*Even if your vehicle is equipped with front passenger seat weight sensors (page 2-69), which automatically deactivates the front passenger air bag, a rear seat is the safest place for a child of any age or size.*

Some child-restraint systems now come with tethers and therefore must be installed on the seats that take tethers to be effective. In your Mazda, tethered child-restraint systems can only be accommodated in the three positions on the second-row seats.

Some child-restraint systems also employ specially designed LATCH attachments; refer to “LATCH Child-Restraint Systems” (page 2-50).

### **WARNING**

#### **Tethered Child-Restraint Systems Work Only on Tether-Equipped Rear Seats:**

*Installation of a tether equipped child-restraint system in the front passenger's seat or the third-row seats defeats the safety design of the system and will result in an increased chance of serious injury if the child-restraint system goes forward without benefit of being tethered. Place tether equipped child-restraint systems where there are tether anchors.*

#### **▼ Second-Row Seats Child-Restraint System Installation**

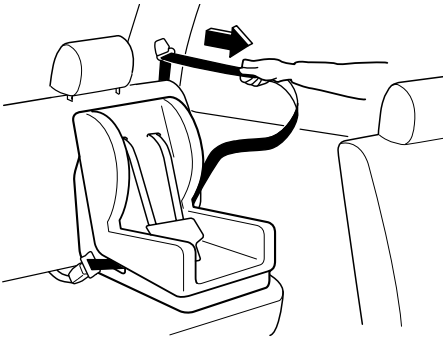
Follow these instructions when using a child-restraint system, unless you are attaching a LATCH-equipped child-restraint system to the rear LATCH lower anchors. Refer to “LATCH Child-Restraint Systems” (page 2-50).

#### **NOTE**

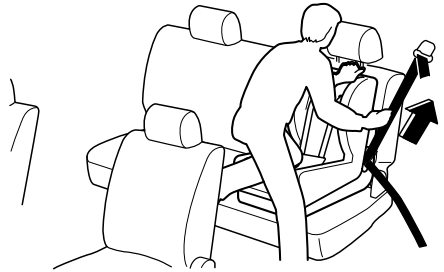
*Follow the child-restraint system manufacturer's instructions carefully. If you are not sure whether you have a LATCH system or tether, check in the child-restraint system manufacturer's instructions and follow them accordingly. Depending on the type of child-restraint system, it may use LATCH system instead of seat belts or if the belt goes across the child's chest, may recommend against using automatic locking mode.*

1. When installing the child-restraint system on the second-row seat, make sure that the center-rear seat belt is routed through the seat belt guide.

2. If the seat in which you install a child-restraint system has a seat slide function, slide the seat as far back as possible.
3. Make sure the seatback is securely latched by pushing it back until it is fully locked.
4. Raise the head restraint to the top locked position.  
Refer to Head Restraints on page 2-15.
5. Secure the child-restraint system with the lap portion of the lap/shoulder belt. See the manufacturer's instructions on the child-restraint system for belt routing instructions.
6. To get the retractor into the automatic locking mode, pull the shoulder belt portion of the seat belt until the entire length of the belt is out of the retractor.



7. Push the child-restraint system firmly into the vehicle seat. Be sure the belt retracts as snugly as possible. A clicking noise from the retractor will be heard during retraction if the system is in the automatic locking mode. If the belt does not lock the seat down tight, repeat this step.



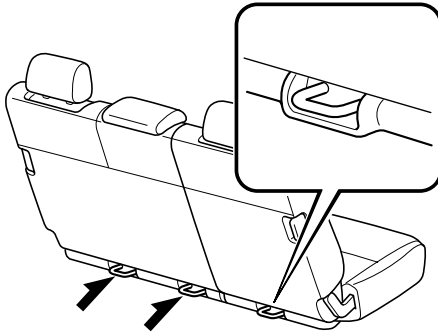
**NOTE**

*Inspect this function before each use of the child-restraint system. You should not be able to pull the shoulder belt out of the retractor while the system is in the automatic locking mode. When you remove the child-restraint system, be sure the belt fully retracts to return the system to emergency locking mode before occupants use the seat belts.*

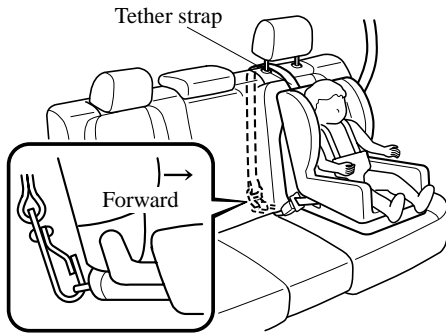
8. If your child-restraint system requires the use of a tether strap, refer to the manufacturer's instructions to hook and tighten the tether strap after raising the head restraint.

## Child Restraint

### Anchor bracket location



### Tether strap position



### **⚠ WARNING**

**Use the tether and tether anchor only for a child-restraint system:**

Using the tether or tether anchor to secure anything but a child-restraint system is dangerous. This could weaken or damage the tether or tether anchor and result in injury.

**Always route the tether strap between the head restraint and the seatback:**

Routing the tether strap on top of the head restraint is dangerous. In a collision the tether strap could slide off the head restraint and loosen the child-restraint system. The child-restraint system could move which may result in death or injury to the child.

**Always attach the tether strap to the correct tether anchor position:**

Attaching the tether strap to the incorrect tether anchor position is dangerous. In a collision, the tether strap could come off and loosen the child-restraint system. If the child-restraint system moves it could result in death or injury to the child.



### ▼ Third-Row Seats Child-Restraint System Installation

The third-row seats cannot accommodate LATCH-type child-restraint systems or tethers, therefore these systems must be installed on the other seat positions such as the second-row seat. If this not possible, LATCH-type child-restraint systems should be installed to a third-row seat using the seat belt depending on whether the child-restraint manufacturer allows their use without LATCH attachments and tether anchors.

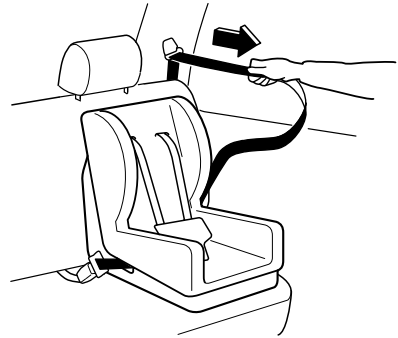
Follow these manufacturer's instructions when using a child-restraint system.

#### **NOTE**

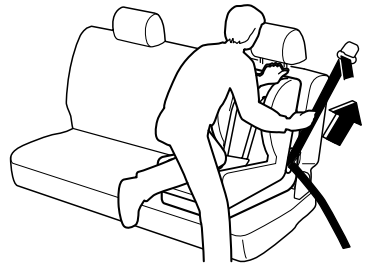
- *Follow the child-restraint system manufacturer's instructions carefully. Depending on the type of child-restraint system, it may not employ seat belts which are in automatic locking mode.*
- **(With foldable head restraints)**  
*The third-row outboard head restraints cannot be adjusted.*

1. **(Without foldable head restraints)**  
Raise the head restraint to the top locked position. Refer to Head Restraints on page 2-15.
2. Secure the child-restraint system with the lap portion of the lap/shoulder belt. See the manufacturer's instructions on the child-restraint system for belt routing instructions.

3. To get the retractor into the automatic locking mode, pull the shoulder belt portion of the seat belt until the entire length of the belt is out of the retractor.



4. Push the child-restraint system firmly into the vehicle seat. Be sure the belt retracts as snugly as possible. Clicking from the retractor will be heard during retraction if the system is in the automatic locking mode. If the belt does not lock the seat down tight, repeat this step.



## Child Restraint

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### **NOTE**

*Inspect this function before each use of the child-restraint system. You should not be able to pull the shoulder belt out of the retractor while the system is in the automatic locking mode. When you remove the child-restraint system, be sure the belt fully retracts to return the system to emergency locking mode before occupants use the seat belts.*

### **▼ If You Must Use the Front Seat for Children**

If you cannot put all children in the rear seats, at least put the smallest children in the rear and be sure the largest child up front uses the shoulder belt over the shoulder.

NEVER put a rear-facing child-restraint system on the front passenger seat whether your vehicle is equipped with a seat weight sensor or not.

This seat is also not set up for tethered child-restraint systems, put them in one of the rear seat positions set up with tether anchors.

Likewise the LATCH child-restraint system cannot be secured in the front passenger's seat and should be used in the second-row seats.

Do not allow anyone to sleep against the side window if you have optional side and curtain air bags, it could cause serious injuries to an out of position occupant. As children more often sleep in cars, it is better to put them in the rear seat. If installing the child-restraint system on the front seat is unavoidable, follow these instructions when using a front-facing child-restraint system in the front passenger's seat.

### **NOTE**

- To check if your front seats have side air bags:  
*Mazda vehicles equipped with side air bag will have a "SRS AIRBAG" tag on the outboard shoulder of the front seats.*
- To check if your vehicle has curtain air bags:  
*Mazda vehicles equipped with curtain air bag will have an "SRS AIRBAG" marking on the window pillars along the roof edge.*

### **⚠ WARNING**

***Always move the front passenger seat as far back as possible if installing a front-facing child-restraint system on it is unavoidable:***

*As your vehicle has front air bags and doubly so because your vehicle has side air bags, a front-facing child-restraint system should be put on the front passenger seat only when it is unavoidable. Even if the front passenger air bag deactivation indicator light illuminates, always move the seat as far back as possible, because the force of a deploying air bag could cause serious injury or death to the child.*

**Never use a rear-facing child-restraint system in the front seat with an air bag that could deploy:**

*Rear-facing child-restraint systems on the front seat are particularly dangerous.*

*Even in a moderate collision, the child-restraint system can be hit by a deploying air bag and moved violently backward resulting in serious injury or death to the child. Even though you may feel assured that the front passenger air bag will not deploy based on the fact that the front passenger air bag deactivation indicator light illuminates, you should not use a rear-facing child-restraint system in the front seat.*

**Do not allow a child or anyone to lean over or against the side window of a vehicle with side and curtain air bags:**

*It is dangerous to allow anyone to lean over or against the side window, the area of the front passenger seat, the front and rear window pillars and the roof edge along both sides from which the side and curtain air bags deploy, even if a child-restraint system is used. The impact of inflation from a side or curtain air bag could cause serious injury or death to an out of position child. Furthermore, leaning over or against the front door could block the side and curtain air bags and eliminate the advantages of supplemental protection. With the front air bag and the additional side air bag that comes out of the front seat, the rear seat is always a better location for children. Take special care not to allow a child to lean over or against the side window, even if the child is seated in a child-restraint system.*

### ▼ Front Passenger's Seat Child-Restraint System Installation

1. Switch the ignition ON.
2. Slide the seat as far back as possible.



## Child Restraint

3. Place the child-restraint system on the seat without putting your weight on the seat and fasten the seat belt. See the manufacturer's instructions on the child-restraint system for belt routing instructions.
4. To get the retractor into the automatic locking mode, pull the shoulder belt portion of the seat belt until the entire length of the belt is out of the retractor.
5. Push the child-restraint system firmly into the vehicle seat. Be sure the belt retracts as snugly as possible. A clicking noise from the retractor will be heard during retraction if the system is in automatic locking mode. If the belt does not lock the seat down tight, repeat the previous step and also this one.

### NOTE

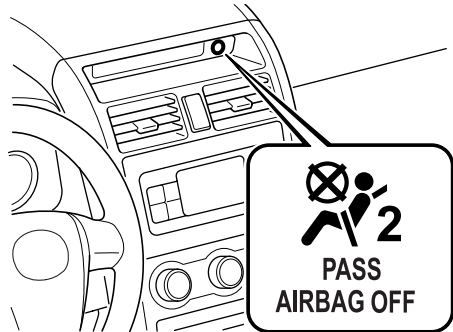
- *Inspect this function before each use of the child-restraint system. You should not be able to pull the shoulder belt out of the retractor while the system is in the automatic locking mode. When you remove the child-restraint system, be sure the belt fully retracts to return the system to emergency locking mode before occupants use the seat belts.*
  - *Follow the child-restraint system manufacturer's instructions carefully. Depending on the type of child-restraint system, it may not employ seat belts which are in automatic locking mode.*
6. Seat your child safely in the child-restraint system and secure the child according to the instructions from the child-restraint system manufacturer.

### 7. (With Driver and Front Passenger Occupant Classification System)

Make sure the front passenger air bag deactivation indicator light illuminates after installing a child-restraint system on the front passenger seat.

If the front passenger air bag deactivation indicator light does not illuminate, remove the child-restraint system, switch the ignition to OFF or ACC, and then re-install the child-restraint system.

Refer to Front Passenger Seat Weight Sensors on page 2-69.



**⚠ WARNING**

***Do not seat a child in a child-restraint system on the front passenger seat if the front passenger air bag deactivation indicator light does not illuminate (With Driver and Front Passenger Occupant Classification System):***

*While it is always better to install any child-restraint system on the rear seat, it is imperative that a child-restraint system **ONLY** be used on the front passenger seat if the deactivation indicator light illuminates when the child is seated in the child-restraint system (page 2-69). Seating a child in a child-restraint system installed on the front passenger seat with the front passenger air bag deactivation indicator light not illuminated is dangerous. If this indicator light does not illuminate, this means that the front passenger front and side air bags, and seat belt pretensioner are ready for deployment. If an accident were to deploy an air bag, a child in a child-restraint system sitting in the front passenger seat could be seriously injured or killed. If the indicator light does not illuminate after seating a child in a child-restraint system on the front passenger seat, seat a child in a child-restraint system on the rear seat and consult an Authorized Mazda Dealer as soon as possible.*

### LATCH Child-Restraint Systems

Your Mazda is equipped with LATCH lower anchors for attachment of specially designed LATCH child-restraint systems the second-row seats. Both anchors must be used, otherwise the seat will bounce around and put the child in danger. Most LATCH child-restraint systems must also be used in conjunction with a tether to be effective. If they have a tether you must use it to better assure your child's safety.

#### **WARNING**

**Follow the manufacturer's instructions for the use of the child-restraint system:**

*An unsecured child-restraint system is dangerous. In a sudden stop or a collision it could move causing serious injury or death to the child or other occupants. Make sure the child-restraint system is properly secured in place according to the child-restraint system manufacturer's instructions.*

**Never attach two child-restraint systems to the same LATCH lower anchor:**

*Attaching two child-restraint systems to the same LATCH lower anchor is dangerous. In a collision, one anchor may not be strong enough to hold two child-restraint system attachments, and it may break, causing serious injury or death. If you use the seat position for another child-restraint system when an outboard LATCH position is occupied, use the center seat belts instead, and the tether if tether-equipped.*

**Make sure the child-restraint system is properly secured:**

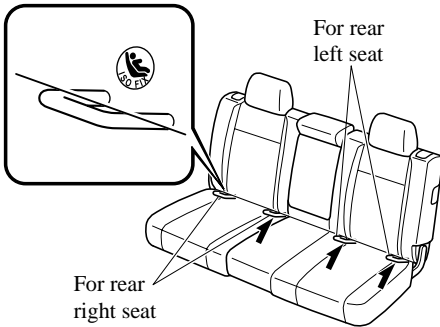
*An unsecured child-restraint system is dangerous. In a sudden stop or a collision it could move causing serious injury or death to the child or other occupants. Follow the child-restraint system manufacturer's instructions on belt routing to secure the seat just as you would with a child in it so that nobody is tempted to put a child in an improperly secured seat later on. When not in use, remove it from the vehicle or fasten it with a seat belt, or latch it down to BOTH LATCH lower anchors for LATCH child-restraint systems.*

**Make sure there are no seat belts or foreign objects near or around the LATCH child-restraint system:**

*Not following the child-restraint system manufacturer's instructions when installing the child-restraint system is dangerous. If seat belts or a foreign object prevent the child-restraint system from being securely attached to the LATCH lower anchors and the child-restraint system is installed improperly, the child-restraint system could move in a sudden stop or collision causing serious injury or death to the child or other occupants. When installing the child-restraint system, make sure there are no seat belts or foreign objects near or around the LATCH lower anchors. Always follow the child-restraint system manufacturer's instructions.*

▼ **LATCH Child-Restraint System Installation Procedure (Second-Row Outboard Seats)**

1. Slide the second-row seat as far back as possible.
2. Make sure the seatback is securely latched by pushing it back until it is fully locked.
3. Expand the area between the seat bottom and the seatback slightly to verify the locations of the LATCH lower anchors.



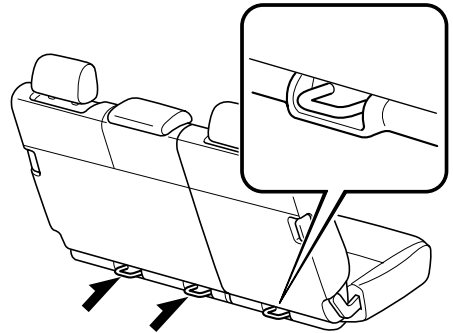
**NOTE**

The markings above the LATCH lower anchors indicate the locations of LATCH lower anchors for the attachment of a child-restraint system.

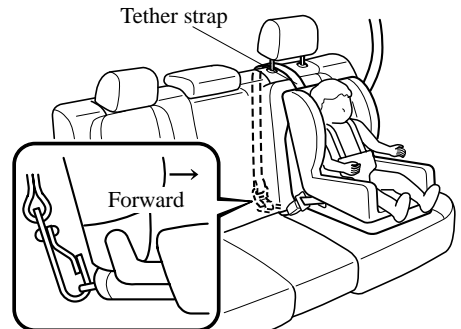
4. Raise the head restraint to the top locked position. Refer to Head Restraints on page 2-15.
5. Secure the child-restraint system using BOTH LATCH lower anchors, following the child-restraint system manufacturer's instruction. Pull on the child-restraint to be sure both anchors are engaged.

6. If your child-restraint system came equipped with a tether, that means it is very important to properly secure the tether for child safety. Please carefully follow the child-restraint system manufacturer's instructions when installing tethers.

**Anchor bracket location**



**Tether strap position**



## Child Restraint

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### **⚠ WARNING**

**Use the tether and tether anchor only for a child-restraint system:**

*Using the tether or tether anchor to secure anything but a child-restraint system is dangerous. This could weaken or damage the tether or tether anchor and result in injury.*

**Always route the tether strap between the head restraint and the seatback:**

*Routing the tether strap on top of the head restraint is dangerous. In a collision the tether strap could slide off the head restraint and loosen the child-restraint system. The child-restraint system could move which may result in death or injury to the child.*

**Always attach the tether strap to the correct tether anchor position:**

*Attaching the tether strap to the incorrect tether anchor position is dangerous. In a collision, the tether strap could come off and loosen the child-restraint system. If the child-restraint system moves it could result in death or injury to the child.*

### **▼ LATCH Child-Restraint System Installation Procedure (Second-Row Center Seat)**

The LATCH lower anchors at the center of the rear seat are much further apart than the sets of LATCH lower anchors for child-restraint system installation at other seating positions. Child-restraint systems with rigid LATCH attachments cannot be installed on the center seating position. Some LATCH equipped child-restraint systems can be placed in the center position and will reach the nearest LATCH lower anchors which are 500 mm (19.7 in) apart. LATCH compatible child-restraint systems (with attachments on belt webbing) can be used at this seating position only if the child-restraint system manufacturer's instructions state that the child-restraint system can be installed to LATCH lower anchors that are 500 mm (19.7 in) apart. Do not attach two child-restraint systems to the same LATCH lower anchor. If your child-restraint system has a tether, it must also be used for your child's optimum safety.



**⚠ WARNING**

**Use the tether and tether anchor only for a child-restraint system:**

*Using the tether or tether anchor to secure anything but a child-restraint system is dangerous. This could weaken or damage the tether or tether anchor and result in injury.*

**Always route the tether strap between the head restraint and the seatback:**

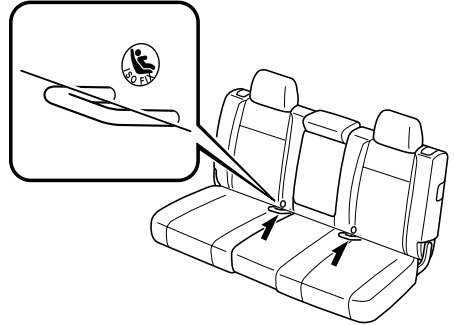
*Routing the tether strap on top of the head restraint is dangerous. In a collision the tether strap could slide off the head restraint and loosen the child-restraint system. The child-restraint system could move which may result in death or injury to the child.*

**Always attach the tether strap to the correct tether anchor position:**

*Attaching the tether strap to the incorrect tether anchor position is dangerous. In a collision, the tether strap could come off and loosen the child-restraint system. If the child-restraint system moves it could result in death or injury to the child.*

1. Slide the second-row seat as far back as possible.
2. Make sure the seatback is securely latched by pushing it back until it is fully locked.

3. Expand the area between the seat bottom and the seatback slightly to verify the locations of the LATCH lower anchors.



**NOTE**

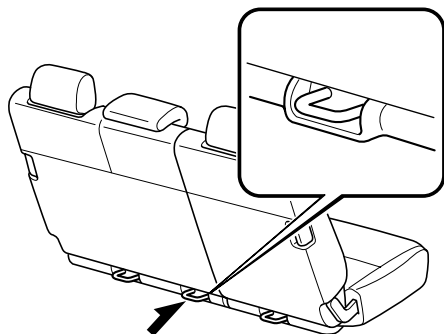
*The markings above the LATCH lower anchors indicate the locations of LATCH lower anchors for the attachment of a child-restraint system.*

4. Raise the head restraint to the top locked position.  
Refer to Head Restraints on page 2-15.
5. Secure the child-restraint system using BOTH LATCH lower anchors, following the child-restraint system manufacturer's instructions. Pull on the child-restraint to be sure both anchors are engaged.
6. If your child-restraint system came equipped with a tether, that means it is very important to properly secure the tether for child safety. Please carefully follow the child-restraint system manufacturer's instructions when installing tethers.

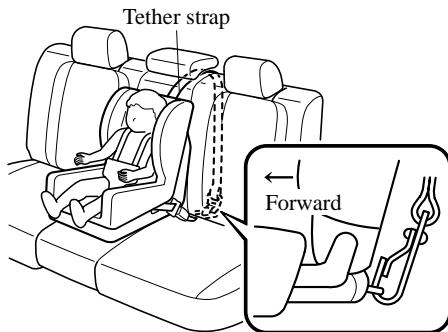
# Child Restraint

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## Anchor bracket position



## Tether strap position



## Supplemental Restraint System (SRS) Precautions

The front and side supplemental restraint systems (SRS) include 6 air bags. **Please verify the air bags equipped on your vehicle by locating the “SRS AIRBAG” location indicators.** These indicators are visible in the area where the air bags are installed.

The air bags are installed in the following locations:

- The steering wheel hub (driver air bag)
- The front passenger dashboard (front passenger air bag)
- The outboard sides of the front seatbacks (side air bags)
- The front and rear window pillars, and the roof edge along both sides (curtain air bags)

The air bag supplemental restraint systems are designed to provide supplemental protection in certain situations, so seat belts are always important in the following ways:

Without seat belt usage, the air bags cannot provide adequate protection during an accident. Seat belt usage is necessary to:

- Keep the occupant from being thrown into an inflating air bag.
- Reduce the possibility of injuries during an accident that is not designed for air bag inflation, such as rear impact.
- Reduce the possibility of injuries in frontal, near frontal, side collisions or roll-over accidents that are not severe enough to activate the air bags.
- Reduce the possibility of being thrown from your vehicle.
- Reduce the possibility of injuries to lower body and legs during an accident because the air bags provide no protection to these parts of the body.
- Hold the driver in a position which allows better control of the vehicle.

## SRS Air Bags

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**If your vehicle is also equipped with a driver and front passenger occupant classification system, refer to the Driver and Front Passenger Occupant Classification System (page 2-69) for details.**

If your vehicle is equipped with a driver and front passenger occupant classification system, the front passenger air bag deactivation indicator light illuminates for a specified time after the ignition is switched ON.



Small children must be protected by a child-restraint system as stipulated by law in every state and province. In certain states and provinces, larger children must use a child-restraint system (page 2-36).

Carefully consider which child-restraint system is necessary for your child and follow the installation directions in this Owner's Manual as well as the child-restraint system manufacturer's instructions.

### **⚠ WARNING**

#### **Seat belts must be worn in air bag equipped vehicles:**

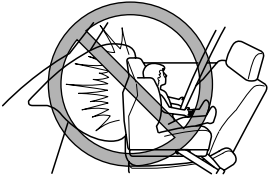
*Depending only on the air bags for protection during an accident is dangerous. Alone, air bags may not prevent serious injuries. The appropriate air bags can be expected to inflate only in the first accident, such as frontal, near frontal, side collisions or roll-over accident that are at least moderate. Vehicle occupants should always wear seat belts.*

#### **Children should not ride in the front passenger seat:**

*Placing a child, 12 years or under, in the front seat is dangerous. The child could be hit by a deploying air bag and be seriously injured or even killed. Even if the front passenger air bag deactivation indicator light illuminates, always move the front passenger seat as far back as possible. A sleeping child is more likely to lean against the door and be hit by the side air bag in a moderate collision to the front-passenger side of the vehicle. Whenever possible, always secure a child 12 years and under on the rear seats with an appropriate child-restraint system for the child's age and size.*

**Never use a rear-facing child-restraint system in the front seat with an air bag that could deploy:**

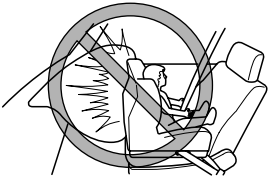
Rear-facing child-restraint systems on the front seat are particularly dangerous even though you may feel assured that a front passenger air bag will not deploy based on the fact that the front passenger air bag deactivation indicator light illuminates. The child-restraint system can be hit by a deploying air bag and moved violently backward resulting in serious injury or death to the child.



**Extreme Hazard! Never use a rear-facing child-restraint system on the front passenger seat with an air bag that could deploy:**

**Extreme Hazard!** Do not use a rearward facing child restraint on a seat protected by an airbag in front of it!

Even in a moderate collision, the child-restraint system can be hit by a deploying air bag and moved violently backward resulting in serious injury or death to the child.



**Do not sit too close to the driver and front passenger air bags:**

Sitting too close to the driver and front passenger air bag modules or placing hands or feet on them is extremely dangerous. The driver and front passenger air bags inflate with great force and speed. Serious injuries could occur if someone is too close. The driver should always hold onto only the rim of the steering wheel. The front seat passenger should keep both feet on the floor. Front seat occupants should adjust their seats as far back as possible and always sit upright against the seatbacks with seat belts worn properly.

## SRS Air Bags

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**Sit in the center of the seat and wear seat belts properly:**

Sitting too close to the side air bag modules or placing hands on them, or sleeping up against the door or hanging out the windows is extremely dangerous. The side and curtain air bags inflate with great force and speed directly expanding along the door on the side the car is hit. Serious injury could occur if someone is sitting too close to the door or leaning against a window, or if rear seat occupants grab the sides of the front seatbacks. Give the side and curtain air bags room to work by sitting in the center of the seat while the vehicle is moving with seat belts worn properly.

**Do not attach objects on or around the area where driver and front passenger air bags deploy:**

Attaching an object to the driver and front passenger air bag modules or placing something in front of them is dangerous. In an accident, an object could interfere with air bag inflation and injure the occupants.

**Do not attach objects on or around the area where a side air bag deploys:**

Attaching objects to the front seat in such a way as to cover the outboard side of the seat in any way is dangerous. In an accident the object could interfere with the side air bag, which inflates from the outboard side of the front seats, impeding the added protection of the side air bag system or redirecting the air bag in a way that is dangerous. Furthermore, the bag could be cut open releasing the gas.

Do not hang net bags, map pouches or backpacks with side straps on the front seats. Never use seat covers on the front seats. Always keep the side air bag modules in your front seats free to deploy in the event of a side collision.

**Do not attach objects on or around the area where a curtain air bag deploys:**

Attaching objects to the areas where the curtain air bag activates such as on the windshield glass, side door glass, front and rear window pillars and along the roof edge and assist grips is dangerous. In an accident the object could interfere with the curtain air bag, which inflates from the front and rear window pillars and along the roof edge, impeding the added protection of the curtain air bag system or redirecting the air bag in a way that is dangerous. Furthermore, the bag could be cut open releasing the gas.

Do not place hangers or any other objects on the assist grips. When hanging clothes, hang them on the coat hook directly. Always keep the curtain air bag modules free to deploy in the event of a side collision or roll-over accident.

**Do not place luggage or other objects under the front seats:**

Placing luggage or other objects under the front seats is dangerous. The components essential to the supplemental restraint system could be damaged, and in the event of a side collision, the appropriate air bags may not deploy, which could result in death or serious injury. To prevent damage to the components essential to the supplemental restraint system, do not place luggage or other objects under the front seats.

**Do not touch the components of the supplemental restraint system after the air bags have inflated:**

*Touching the components of the supplemental restraint system after the air bags have inflated is dangerous. Immediately after inflation, they are very hot. You could get burned.*

**Never install any front-end equipment to your vehicle:**

*Installation of front-end equipment, such as frontal protection bar (kangaroo bar, bull bar, push bar, or other similar devices), snowplow, or winches, is dangerous. The air bag crash sensor system could be affected. This could cause air bags to inflate unexpectedly, or it could prevent the air bags from inflating during an accident. Front occupants could be seriously injured.*

**Do not modify the suspension:**

*Modifying the vehicle suspension is dangerous. If the vehicle's height or the suspension is modified, the vehicle will be unable to accurately detect a collision or roll-over accident resulting in incorrect or unexpected air bag deployment and the possibility of serious injuries.*

**To prevent false detection by the air bag sensor system, heed the following:**

- **Do not use tires or wheels other than those specified for your Mazda:**  
*Use of any tire or wheel other than those specified for your Mazda (page 10-6) is dangerous. Use of such wheels will prevent the vehicle's accident detections system from accurately detecting a collision or roll-over accident resulting in incorrect or unexpected air bag deployment and the possibility of serious injuries.*
- **Do not overload your vehicle:**  
*Overloading your vehicle is dangerous as it could prevent the air bag crash sensor system from accurately detecting a collision or roll-over accident resulting in incorrect or unexpected air bag deployment and the possibility of serious injuries. The gross axle weight rating (GAWR) and the gross vehicle weight rating (GVWR) for your vehicle are on the Motor Vehicle Safety Standard Label on the driver's door frame. Do not exceed these ratings.*
- **Do not drive the vehicle off-road:**  
*Driving your Mazda off-road is dangerous because the vehicle has not been designed to do so. Driving the vehicle off-road could prevent the air bag crash sensor system from accurately detecting a collision or roll-over accident resulting in incorrect or unexpected air bag deployment and the possibility of serious injuries.*

## SRS Air Bags

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### **Do not modify the supplemental restraint system:**

*Modifying the components or wiring of the supplemental restraint system is dangerous. You could accidentally activate it or make it inoperable. Do not make any modifications to the supplemental restraint system. This includes installing trim, badges, or anything else over the air bag modules. It also includes installing extra electrical equipment on or near system components or wiring. An Authorized Mazda Dealer can provide the special care needed in the removal and installation of front seats. It is important to protect the air bag wiring and connections to assure that the bags do not accidentally deploy, the driver seat slide position sensor and front passenger seat weight sensors are not damaged and that the seats retain an undamaged air bag connection.*

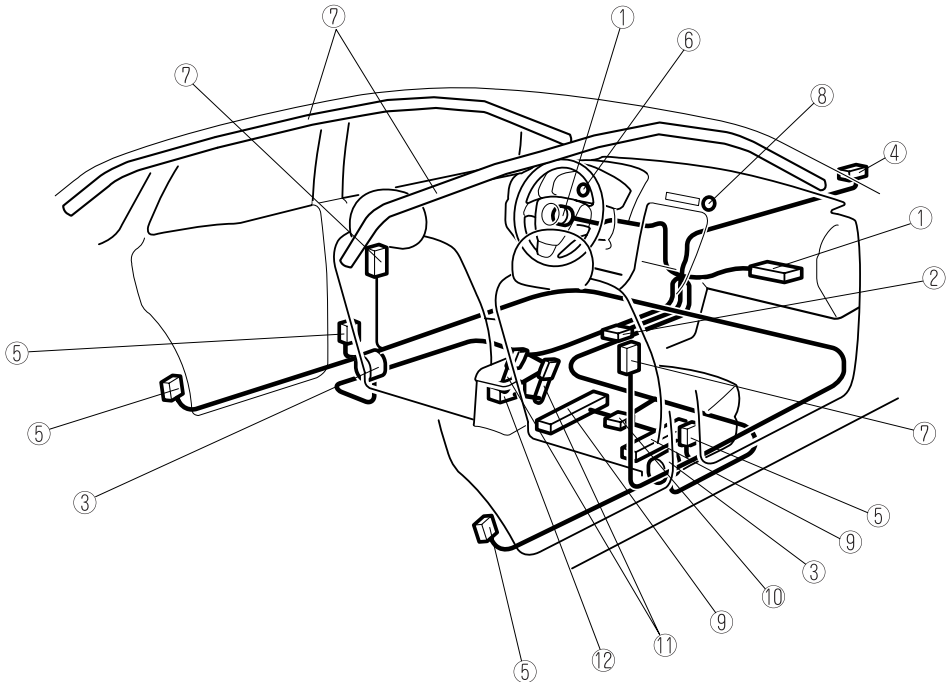
### **NOTE**

- *When an air bag deploys, a loud inflation noise can be heard and some smoke will be released. Neither is likely to cause injury, however, the texture of the air bags may cause light skin injuries on body parts not covered with clothing through friction.*
- *Should you sell your Mazda, we urge you to tell the new owner of its air bag systems and that familiarization with all instructions about them, from the Owner's Manual, is important.*
- *On some models, a highly-visible label is displayed which warns against the use of rear-facing child-restraint systems on the front passenger seat.*





## Supplemental Restraint System Components



- ① Driver/Front passenger inflators and air bags
- ② Crash and roll-over sensor, and diagnostic module (SAS unit)
- ③ Front seat belt pretensioner and load limiting systems (page 2-26)
- ④ Front air bag sensor
- ⑤ Side crash sensors
- ⑥ Air bag/front seat belt pretensioner system warning light (page 2-65)
- ⑦ Side and curtain inflators and air bags
- ⑧ Front passenger air bag deactivation indicator light (page 2-69)
- ⑨ Front passenger seat weight sensors (page 2-69)
- ⑩ Front passenger seat weight sensor control module
- ⑪ Driver and front passenger seat belt buckle switches (page 2-73)
- ⑫ Driver seat slide position sensor (page 2-69)

**NOTE**

⑧ - ⑫ are equipped only on models with the driver and front passenger occupant classification system.

## How the SRS Air Bags Work

Your Mazda is equipped with the following types of SRS air bags. SRS air bags are designed to work together with the seat belts to help to reduce injuries during an accident. The SRS air bags are designed to provide further protection for passengers in addition to the seat belt functions. Be sure to wear seat belts properly.

### ▼ Front Seat Belt Pretensioners

The front seat belt pretensioners are designed to deploy in moderate or severe frontal, near frontal collisions or roll-over accidents.

### ▼ Driver Air Bag

The driver's air bag is mounted in the steering wheel.

When air bag crash sensors detect a frontal impact of greater than moderate force, the driver's air bag inflates quickly helping to reduce injury mainly to the driver's head or chest caused by directly hitting the steering wheel.

For more details about air bag deployment, refer to “SRS Air Bag Deployment Criteria” (page 2-66).

#### **(With Driver and Front Passenger Occupant Classification System)**

The driver's dual-stage air bag controls air bag inflation in two energy stages. During an impact of moderate severity the driver's air bag deploys with lesser energy, whereas during more severe impacts, it deploys with more energy.



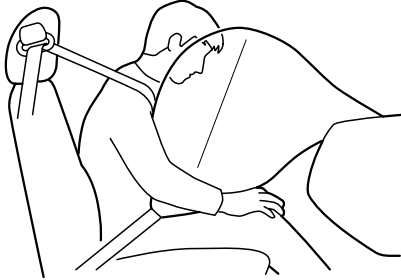
### ▼ Front Passenger Air Bag

The front passenger air bag is mounted in the front passenger dashboard. The inflation mechanism for the front passenger air bag is the same as the driver's air bag, as mentioned above.

For more details about air bag deployment, refer to “SRS Air Bag Deployment Criteria” (page 2-66).

**(With Driver and Front Passenger Occupant Classification System)**

In addition, the front passenger air bag is designed to only deploy in accordance with the total seated weight on the front passenger seat. For details, refer to the driver and front passenger occupant classification system (page 2-69).



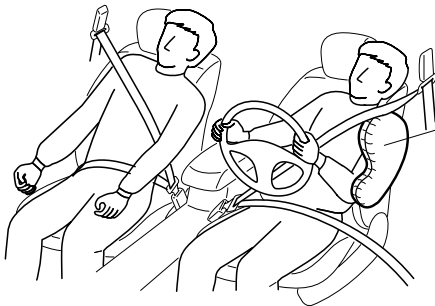
**▼ Side Air Bags**

The side air bags are mounted in the outboard sides of the front seatbacks. When the air bag crash sensors detect a side impact of greater than moderate force, the system inflates the side air bag only on the side in which the vehicle was hit. The side air bag inflates quickly to reduce injury to the driver or front passenger's chest caused by directly hitting interior parts such as a door or window.

For more details about air bag deployment, refer to “SRS Air Bag Deployment Criteria” (page 2-66).

**(With Driver and Front Passenger Occupant Classification System)**

In addition, the front passenger side air bag is designed to only deploy in accordance with the total seated weight on the front passenger seat. For details, refer to the driver and front passenger occupant classification system (page 2-69).



A side air bag will deploy only on the side the vehicle receives the force of the impact.

## SRS Air Bags

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### ▼ Curtain Air Bags

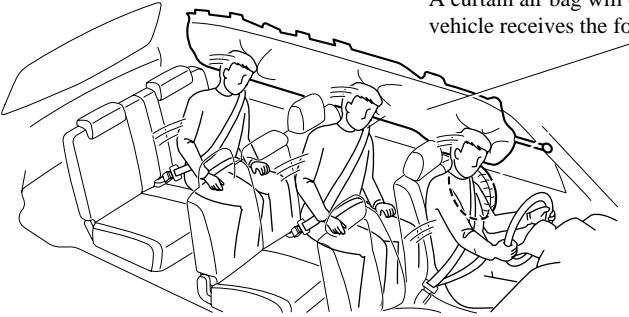
The curtain air bags are mounted in the front and rear window pillars, and the roof edge along both sides.

When the air bag crash sensors detect a side impact of greater than moderate force, the curtain air bag inflates quickly and helps to reduce injury mainly to the rear outboard passenger's head caused by directly hitting interior parts such as a door or window. For more details about air bag deployment, refer to “SRS Air Bag Deployment Criteria” (page 2-66).

#### **In a side impact:**

Greater than moderate impact to one side of the vehicle will cause the curtain air bag on that side only to inflate.

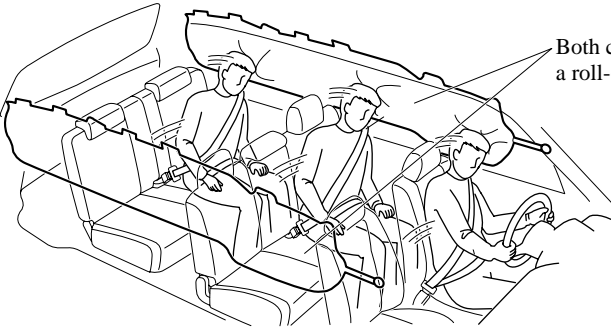
A curtain air bag will deploy only on the side the vehicle receives the force of the impact.



#### **In a roll-over:**

In response to a vehicle roll-over, both curtain air bags inflate.

Both curtain air bags will deploy after a roll-over accident is detected.



### ▼ Air Bag/Front Seat Belt Pretensioner System Warning Light



If the air bag/front seat belt pretensioner system is working properly, the warning light illuminates when the ignition is switched ON or after the engine is cranked. The warning light turns off after a specified period of time.

A system malfunction is indicated if the warning light constantly flashes, constantly illuminates or does not illuminate at all when the ignition is switched ON. If any of these occur, consult an Authorized Mazda Dealer as soon as possible. The system may not operate in an accident.

#### **⚠ WARNING**

***Never tamper with the air bag/pretensioner systems and always have an Authorized Mazda Dealer perform all servicing and repairs:***

*Self-servicing or tampering with the systems is dangerous. An air bag/pretensioner could accidentally activate or become disabled causing serious injury or death.*

### ▼ Air Bag/Front Seat Belt Pretensioner System Warning Beep

If a malfunction is detected in the air bag/front seat belt pretensioner systems and the warning light, a warning beep sound will be heard for about 5 seconds every minute.

The air bag and seat belt pretensioner system warning beep sound will continue to be heard for approximately 35 minutes.

Have your vehicle inspected at an Authorized Mazda Dealer as soon as possible.

#### **⚠ WARNING**

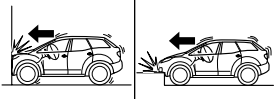

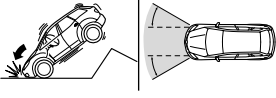
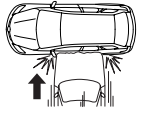



***Do not drive the vehicle with the air bag/front seat belt pretensioner system warning beep sounding:***

*Driving the vehicle with the air bag/front seat belt pretensioner system warning beep sounding is dangerous. In a collision, the air bags and the front seat belt pretensioner system will not deploy and this could result in death or serious injury. Contact an Authorized Mazda Dealer to have the vehicle inspected as soon as possible.*

## SRS Air Bag Deployment Criteria

This chart indicates the applicable SRS equipment that will deploy depending on the type of collision.

(The illustrations are the representative cases of collisions.)

	Types of collision			
	A severe frontal/near frontal collision	A severe side collision	A roll-over/near roll-over	A rear collision
SRS equipment				
				
				
Front seat belt pretensioner	X* <sup>1</sup> (both sides)		X* <sup>1</sup> (both sides)	No air bag and front seat belt pretensioner will be activated in a rear collision.
Driver air bag	X			
Front passenger air bag	X* <sup>1</sup>			
Side air bag		X* <sup>1</sup> (impact side only)		
Curtain air bag		X (impact side only)	X (both sides)	

X: The SRS air bag equipment is designed to deploy in a collision.

\*1: **(With Driver and Front Passenger Occupant Classification System)**

The front passenger front and side air bags and the seat belt pretensioner are designed to deploy depending on the condition of the total seated weight on the front passenger seat.

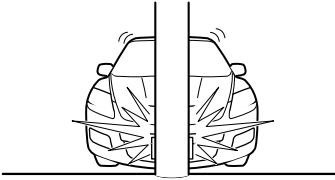
## Limitations to SRS Air Bag

In severe collisions or roll-overs such as those described previously in “SRS Air Bag Deployment Criteria”, the applicable SRS air bag equipment will deploy. However, in some accidents, the equipment may not deploy depending on the type of collision and its severity.

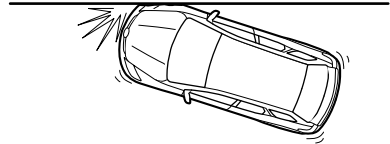
### Limitations to front/near front collision detection:

The following illustrations are examples of front/near front collisions that may not be detected as severe enough to deploy the SRS air bag equipment.

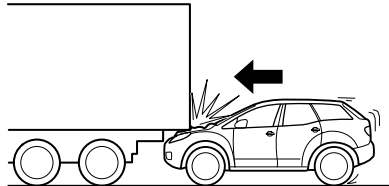
Impacts involving trees or poles



Frontal offset impact to the vehicle



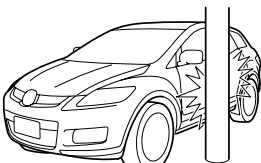
Rear-ending or running under a truck's tail gate



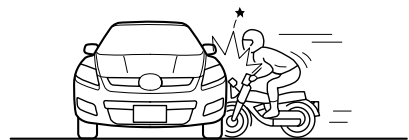
### Limitations to side collision detection:

The following illustrations are examples of side collisions that may not be detected as severe enough to deploy the SRS air bag equipment.

Side impacts involving trees or poles



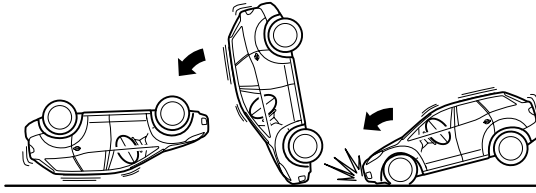
Side impacts with two-wheeled vehicles



**Limitations to roll-over detection:**

The following illustration is an example of an accident that may not be detected as a roll-over accident. Therefore, the front seat belt pretensioners and curtain air bags may not deploy.

Pitch end over end





## **Driver and Front Passenger Occupant Classification System\***

First, please read “Supplemental Restraint System (SRS) Precautions” (page 2-55) carefully.

### **NOTE**

*This system is equipped on models for the U.S., Canadian and Puerto Rican markets.*

### **▼ Driver Seat Slide Position Sensor**

Your vehicle is equipped with a driver seat slide position sensor as a part of the supplemental restraint system. The sensor is located under the driver seat. The sensor determines whether the driver seat is fore or aft of a reference position and sends the seat position to the diagnostic module (SAS unit). The SAS unit is designed to control the deployment of the driver air bag depending on how close the driver seat is to the steering wheel.

The air bag/front seat belt pretensioner system warning light flashes if the sensor has a possible malfunction (page 2-65).

### **▼ Front Passenger Seat Weight Sensors**

Your vehicle is equipped with a front passenger seat weight sensors as a part of the supplemental restraint system. These sensors are located under both of the front passenger seat rails. These sensors determine the total seated weight on the front passenger seat and monitor the seat belt buckle for the front passenger seat. The SAS unit is designed to prevent the front passenger front and side air bags and seat belt pretensioner system from deploying if the front passenger air bag deactivation indicator light illuminates. To reduce the chance of injuries caused by deployment of the front passenger air bag, the system deactivates the front passenger front and side air bags and also the seat belt pretensioner system when the front passenger air bag deactivation indicator light illuminates. Refer to the following table for the front passenger air bag deactivation indicator light illumination conditions.

This system shuts off the front passenger front and side air bags and seat belt pretensioner system, so make sure the front passenger air bag deactivation indicator light illuminates according to the following table.

The air bag/front seat belt pretensioner system warning light flashes and the front passenger air bag deactivation indicator light illuminates if the sensors have a possible malfunction. If this happens, the front passenger front and side air bags and seat belt pretensioner system will not deploy.

**Front passenger air bag deactivation indicator light**

This indicator light illuminates to remind you that the front passenger front and side air bags and seat belt pretensioner will not deploy during a collision.



If the front passenger weight sensors are normal, the indicator light illuminates when the ignition is switched ON. The light turns off after a few seconds.

The front passenger air bag deactivation indicator light illuminates or is off under the following conditions:

Condition detected by the front passenger occupant classification system	Front passenger air bag deactivation indicator light	Front passenger front and side air bags	Front passenger seat belt pretensioner system
Empty (Not occupied)* <sup>1</sup>	Off	Deactivated	Deactivated
Child or child-restraint system* <sup>2</sup>	On	Deactivated	Deactivated
Adult* <sup>3</sup>	Off	Ready	Ready

- \*1 : If the front passenger seat belt is buckled, the front passenger air bag deactivation indicator light illuminates, however this does not indicate a malfunction.
- \*2 : If a larger child sits on the front passenger seat, the sensors might detect the child as being an adult depending on the child's physique.
- \*3 : If a smaller adult sits on the front passenger seat, the sensors might detect the person as being a child depending on the person's physique.

The curtain air bag is ready for inflating despite the chart above.

If the front passenger air bag deactivation indicator light does not illuminate when the ignition is switched ON and does not illuminate as indicated in the above chart, do not allow a child to sit in the front passenger seat and consult an Authorized Mazda Dealer as soon as possible. The system may not work properly in an accident.

**⚠ WARNING**

**Do not decrease the total seated weight on the front passenger seat:**

*When an adult or large child sits on the front passenger seat, decreasing the total seated weight on the front passenger seat required for air bag deployment is dangerous. The front passenger seat weight sensors will detect the reduced total seated weight condition and the front passenger front and side air bags and seat belt pretensioner system will not deploy during an accident. The front passenger will not have the supplementary protection of the air bag, which could result in serious injury. Decreasing the total seated weight on the front passenger seat could result in an air bag not deploying under the following conditions, for example:*

- *A rear passenger pushes up on the front passenger seat with their feet.*
- *Luggage or other items placed under the front passenger seat or between the front passenger seat and driver seat that push up the front passenger seat bottom.*
- *The front passenger seat occupant sits in a manner that does not place the entire weight of the occupant on the seat such as by sitting too close to the door, grasping the assist grip or the rim of the moonroof and sitting with the seatback reclined too far.*
- *Any accessories which might decrease the total seated weight on the front passenger seat are attached to the front passenger seat.*

*The front passenger front and side air bags and seat belt pretensioner systems will deactivate if the front passenger air bag deactivation indicator light illuminates.*

## SRS Air Bags

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### **Do not increase the total seated weight on the front passenger seat:**

When an infant or small child sits on the front passenger seat, increasing the total seated weight on the front passenger seat is dangerous. The front passenger seat weight sensors will detect the increased total seated weight, which could result in the unexpected deployment of the front passenger front and side air bags and seat belt pretensioner system in an accident and may cause serious injury. Increasing the total seated weight on the front passenger seat could result in the front passenger front and side air bags and seat belt pretensioner system deployment in an accident under the following conditions, for example:

- Luggage or other items are placed on the seat with the child in the child-restraint system.
- A rear passenger or luggage push or pull down on the front passenger seatback.
- A rear passenger steps on the front passenger seat rails with their feet.
- Luggage or other items are placed on the seatback or hung on the head restraint.
- Heavy items are placed in the seatback map pocket.
- The seat is washed.
- Liquids are spilled on the seat.
- The front passenger seat is moved backward, pushing into luggage or other items placed behind it.
- The front passenger seatback contacts the second-row seat.
- Luggage or other items are placed between the front passenger seat and driver seat.
- Any accessories which might increase the total seated weight on the front passenger seat are attached to the front passenger seat.

The front passenger front and side air bags and seat belt pretensioner systems will deactivate if the front passenger air bag deactivation indicator light illuminates.

### **⚠ CAUTION**

- To assure proper deployment of the front air bag and to prevent damage to the sensors in the front seat bottoms:
  - Do not place sharp objects on the front seat bottoms or leave heavy luggage on them.
  - Do not spill any liquids on the front seats or under the front seats.
- To allow the sensors to function properly, always perform the following:
  - Adjust the front seats as far back as possible and always sit upright against the seatbacks with seat belts worn properly.
  - If you place your child on the front passenger seat, secure the child-restraint system properly and slide the front passenger seat as far back as possible (page 2-47).

**NOTE**

- *The system requires about 10 seconds to alternate between turning the front passenger front and side air bags and seat belt pretensioner system on or off.*
- *The front passenger air bag deactivation indicator light may illuminate repeatedly if luggage or other items are put on the front passenger seat, or if the temperature of the vehicle's interior changes suddenly.*
- *The front passenger air bag deactivation indicator light may illuminate for 10 seconds if the total seated weight on the front passenger seat changes.*
- *The air bag/front seat belt pretensioner system warning light might illuminate if the front passenger seat receives a severe impact.*
- *If the front passenger air bag deactivation indicator light does not illuminate after installing a child-restraint system on the front passenger seat, first, re-install your child-restraint system according to the procedure in this owner's manual. Then, if the front passenger air bag deactivation indicator light still does not illuminate, install the child-restraint system on the rear seat and consult an Authorized Mazda Dealer as soon as possible.*
- *If the front passenger air bag deactivation indicator light illuminates when an adult is seated in the front passenger seat, have the passenger re-adjust their posture by sitting with their feet on the floor, and then re-fastening the seat belt. If the front passenger air bag deactivation indicator light still illuminates, move the passenger to the rear seat. If sitting in the rear seat is not possible, slide the front passenger seat as far back as possible.*

**▼ Driver and Front Passenger Buckle Switches**

The buckle switches on the front seat belts detect whether or not the front seat belts are securely fastened and further control the deployment of the air bags.

### Monitoring and Maintenance

#### ▼ Constant Monitoring

The following components of the air bag systems are monitored by a diagnostic system:

- Crash sensors, and diagnostic module (SAS unit)
- Front air bag sensor
- Air bag modules
- Side crash sensors
- Air bag/Front seat belt pretensioner system warning light
- Front seat belt pretensioners
- Related wiring

#### **(With Driver and Front Passenger Occupant Classification System)**

- Front passenger air bag deactivation indicator light
- Driver seat slide position sensor
- Front passenger seat weight sensors
- Front passenger seat weight sensor control module

The diagnostic module continuously monitors the system's readiness. This begins when the ignition is switched ON and continues while the vehicle is being driven.

#### ▼ Maintenance

The air bag systems do not require regular maintenance. But if any of the following occurs, take your vehicle to an Authorized Mazda Dealer as soon as possible:

- The air bag system warning light flashes.
- The air bag system warning light remains illuminated.
- The air bag system warning light does not illuminate when the ignition is switched ON.
- The air bag system warning beep sound is heard.
- The air bags have deployed.

#### **(With Driver and Front Passenger Occupant Classification System)**

Front passenger air bag deactivation indicator light does not illuminate when the ignition is switched ON or does not illuminate as indicated in the chart. For more details about this indicator light and this chart, refer to "Front passenger seat weight sensors" (page 2-69).

**⚠ WARNING**

**Do not operate a vehicle with damaged air bag/seat belt pretensioner system components:**

*Expanded or damaged air bag/seat belt pretensioner system components must be replaced after any collision which caused them to deploy or damage them. Only a trained Authorized Mazda Dealer can fully evaluate these systems to see that they will work in any subsequent accident. Driving with an expanded or damaged air bag or pretensioner unit will not afford you the necessary protection in the event of any subsequent accident which could result in serious injury or death.*

**Do not remove interior air bag parts:**

*Removing any components such as the front seats, front dashboard, the steering wheel or parts on the front and rear window pillars and along the roof edge, containing air bag parts or sensors is dangerous. These parts contain essential air bag components. The air bag could accidentally activate and cause serious injuries. Always have an Authorized Mazda Dealer remove these parts.*

**Dispose of the air bag properly:**

*Improper disposal of an air bag or a vehicle with live air bags in it can be extremely dangerous. Unless all safety procedures are followed, injury can result. Ask an Authorized Mazda Dealer how to safely dispose of an air bag or how to scrap an air bag equipped vehicle.*

**NOTE**

*If it becomes necessary to have the components or wiring system for the supplementary restraint system modified to accommodate a person with certain medical conditions in accordance with a certified physician, contact an Authorized Mazda Dealer, refer to “Customer Assistance (U.S.A.)” (page 9-2).*





# 3

## Knowing Your Mazda

Explanation of basic operations and controls; opening/closing and adjustment of various parts.

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## Advanced Keyless Entry and Start System

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### Advanced Keys \*

The advanced keyless functions (advanced keyless entry and start system) enable the following operations while the advanced key is being carried (page 3-7).

- Locking/unlocking the doors and the liftgate without operating the key.
- Starting the engine without operating the key.

Additional functions are available using the buttons on the advanced key.

Refer to Operation Using Advanced Key Functions on page 3-13.

- The following operations are possible using the transmitter of the keyless entry system from a distance (Lock/Unlock/Panic/Liftgate \* button):
  - Locking/unlocking the doors and the liftgate.
  - Opening/closing the power liftgate \*.
  - Opening the power windows and the moonroof \*.
  - Operating the theft-deterrent system \*.
  - Turning on the alarm.
- Locking/unlocking the doors or starting the engine using the auxiliary key.

### WARNING

**Do not leave the key in your vehicle with children and keep them in a place where your children will not find or play with them:**

*Leaving children in a vehicle with the key is dangerous. This could result in someone being badly injured or even killed. Children may find these new kinds of keys to be an interesting toy to play with and could cause the power windows or other controls to operate, or even make the vehicle move.*

**Radio waves from the advanced key may affect medical equipment such as pacemakers:**

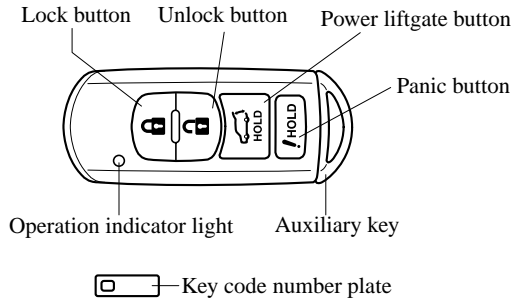
*Before using the advanced key near people who use medical equipment, ask the medical equipment manufacturer or your physician if radio waves from the advanced key will affect the equipment.*

### NOTE

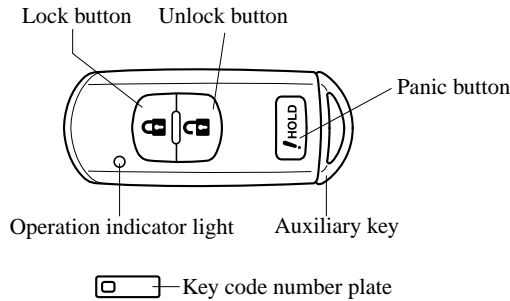
- The driver must carry the advanced key to ensure the system functions properly.
- Refer to Immobilizer System (page 3-54) for information regarding keys and engine starting.
- **(With theft-deterrent system)**  
Refer to Theft-Deterrent System (page 3-62) for information regarding keys and the prevention of vehicle and vehicle contents theft.

# Advanced Keyless Entry and Start System

## With power liftgate button



## Without power liftgate button



A code number is stamped on the plate attached to the key set; detach this plate and store it in a safe place (not in the vehicle) for use if you need to make a replacement key.

Also write down the code number and keep it in another safe and handy place, but not in the vehicle.

If your key is lost, consult your Authorized Mazda Dealer with the code number ready.

## Advanced Keyless Entry and Start System

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### CAUTION

- Because the advanced key uses low-intensity radio waves, it may not function correctly under the following conditions:
  - The advanced key is carried with communication devices such as cellular phones.
  - The advanced key contacts or is covered by a metal object.
  - The advanced key is near electronic devices such as personal computers or cell phones.
  - Non-Mazda genuine electronic equipment is installed in the vehicle.
  - There is equipment which discharges radio waves near the vehicle.
  - If the vehicle is near equipment such as wireless pay devices installed at certain gas stations.
- The advanced key may consume battery power excessively if it receives high-intensity radio waves. Do not place the advanced key near electronic devices such as televisions or personal computers.
- To avoid damage to the advanced key, DO NOT:
  - Drop the advanced key.
  - Get the advanced key wet.
  - Disassemble the advanced key.
  - Expose the advanced key to high temperatures on places such as the dashboard or hood, under direct sunlight.
  - Place heavy objects on the advanced key.
  - Put the advanced key in an ultrasonic cleaner.
  - Put any magnetized objects close to the advanced key.

### NOTE

- Battery life is about one year. Be sure to replace the battery as soon as you see the green KEY indicator light in the instrument cluster begin flashing for 30 seconds after turning off the engine, otherwise, you will not be able to start the engine using the advanced keyless start system once the battery is completely dead. Refer to KEY Warning Light (Red)/KEY Indicator Light (Green) (with Advanced Key) on page 5-53. If this occurs, you will have to use the auxiliary key if you need to start the engine immediately. Refer to Advanced Key Battery Dead Warning on page 3-19.

## KEY

- Additional advanced keys can be obtained at an Authorized Mazda Dealer. Up to 6 advanced keys can be used with the advanced keyless functions per vehicle.

# Advanced Keyless Entry and Start System

## ▼ Advanced Key Maintenance

### ⚠ CAUTION

- *Make sure the battery is installed with the correct pole facing upward. Battery leakage could occur if it is not installed correctly.*
- *When replacing the battery, be careful not to touch any of the internal circuitry and electrical terminals, bend the electrical terminals, or get dirt in the transmitter as the transmitter could be damaged.*
- *There is the danger of explosion if the battery is not correctly replaced.*
- *Replace only with the same type battery (CR2025 or equivalent).*
- *Dispose of used batteries according to the following instructions.*
  - *Insulate the plus and minus terminals of the battery using cellophane or equivalent tape.*
  - *Never disassemble.*
  - *Never throw the battery into fire or water.*
  - *Never deform or crush.*

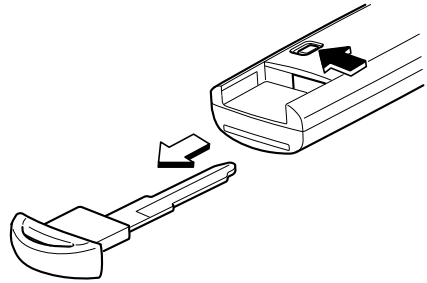
The following conditions indicate that the battery power is low:

- The KEY indicator light (green) flashes in the instrument cluster for about 30 seconds after the engine is turned off.
- The system does not operate and the operation indicator light on the transmitter does not flash when the buttons are pressed.
- The system's operational range is reduced.

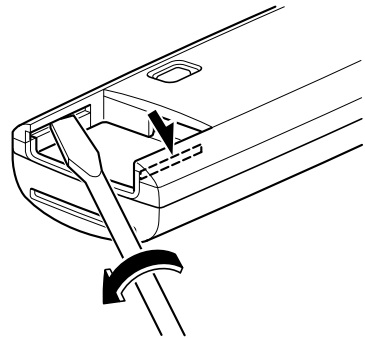
Replacing the battery at an Authorized Mazda Dealer is recommended to prevent damage to the advanced key. If replacing the battery by yourself, follow the instruction below.

### Replacing the advanced key battery

1. Pull out the auxiliary key.



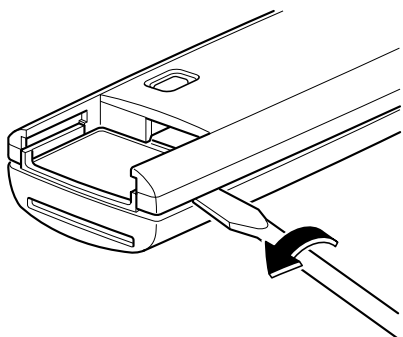
2. Insert a small, flathead screwdriver into the groove shown in the figure and rotate the screwdriver to open the cover slightly.



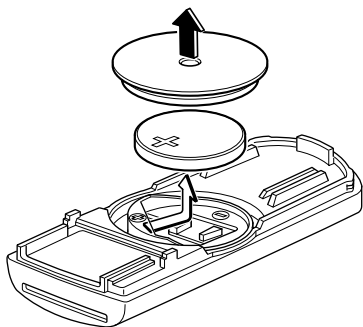
## Advanced Keyless Entry and Start System

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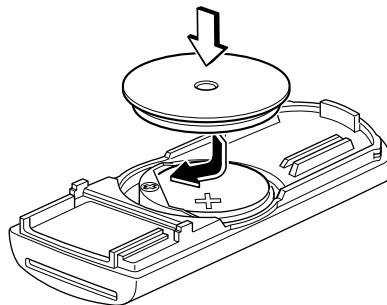
3. Insert the small, flathead screwdriver into the gap between the cover and the transmitter, and then rotate the screwdriver to detach the cover.



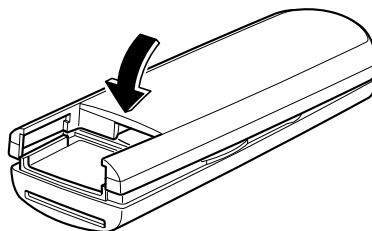
4. Remove the battery cap, then remove the battery.



5. Insert a new battery with the positive pole facing up, and then cover the battery with the battery cap.



6. Close the cover.

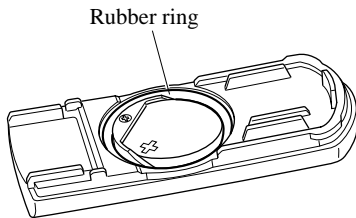


7. Reinsert the auxiliary key.

# Advanced Keyless Entry and Start System

## **CAUTION**

- Be careful not to allow the rubber ring shown in the figure to be scratched or damaged.
- If the rubber ring detaches, reattach it before inserting a new battery.



## ▼ Service

If you have a problem with the advanced keyless functions, consult an Authorized Mazda Dealer.

If your advanced key is lost or stolen, bring all remaining advanced keys to an Authorized Mazda Dealer as soon as possible for a replacement and to make the lost or stolen advanced key inoperative.

## **CAUTION**

Radio equipment like this is governed by laws in the United States. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

## Operation Using Advanced Keyless Functions

### ▼ Operational Range

The system operates only when the driver is in the vehicle or within operational range while the advanced key is being carried.

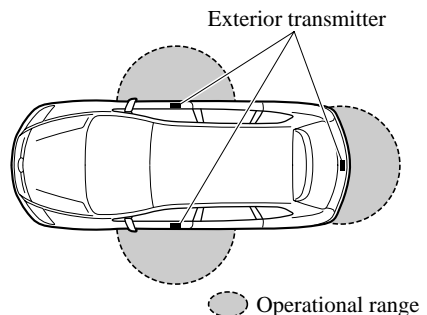
#### **NOTE**

When the battery power is low, or in places where there are high-intensity radio waves or noise, the operational range may become narrower or the system may not operate.

### Locking, unlocking the doors and the liftgate

The operational range for locking/unlocking the doors is an area of up to 80 cm (31 in) from the center of the front door handles.

The operational range for locking/unlocking the liftgate is an area of up to 80 cm (31 in) from the center of the liftgate.



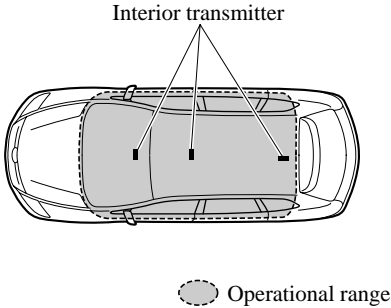
#### **NOTE**

The system may not operate if you are too close to the windows, door handles, or liftgate.

# Advanced Keyless Entry and Start System

## Starting the engine

The operational range for starting the engine includes nearly the entire cabin area except for the luggage compartment.



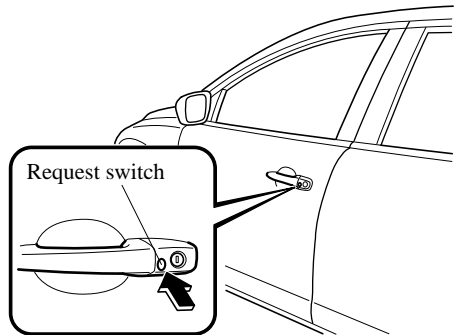
### NOTE

- The luggage compartment is out of the operational range, however, starting the engine may be possible.
- The engine may not start if the advanced key is placed in the following areas:
  - Around the dashboard
  - In the storage compartments such as the glove box
- Starting the engine may be possible even if the advanced key is outside of the vehicle and extremely close to a door and window, however, always start the engine from the driver's seat.  
If the vehicle is started and driven away while the advanced key is not in the vehicle, the vehicle will not restart after it is turned off and the ignition is switched off.
- If the advanced key is detected within operational range, the operation indicator light on the transmitter flashes momentarily.

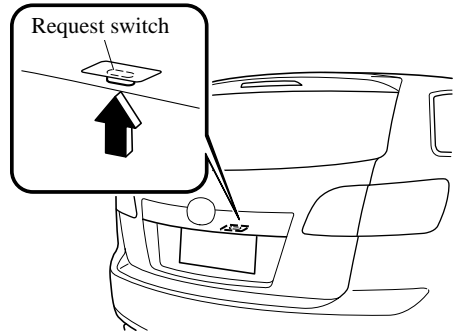
## ▼ Locking, Unlocking with Request Switch

All doors and the liftgate can be locked/unlocked by pressing the request switch on the front doors or the liftgate while the advanced key is being carried.

### Front doors



### Liftgate



### To lock

To lock the doors and the liftgate, press the request switch. A beep sound will be heard once and the hazard warning lights will flash once.



## Advanced Keyless Entry and Start System

---

### **NOTE**

#### **(Without theft-deterrent system)**

The hazard warning lights will flash once to indicate that the doors and the liftgate are locked.

#### **(With theft-deterrent system)**

The hazard warning lights flash when the theft deterrent system is armed.

The hazard warning lights do not flash if all the doors and the liftgate are locked before the theft-deterrent system is properly armed.

When the doors are locked by pressing the request switch on the front doors while the theft-deterrent system is armed, the hazard warning lights will flash once to indicate that the system is armed.

Refer to Theft-Deterrent System on page 3-62.

### **To unlock**

#### **Driver's door request switch**

To unlock the driver's door, press the request switch. A beep sound will be heard twice and the hazard warning lights will flash twice.

To unlock all doors and the liftgate, press the request switch again within 3 seconds and two more beep sounds will be heard.

### **NOTE**

#### **(Without theft-deterrent system)**

The hazard warning lights will flash twice to indicate that the doors and the liftgate are unlocked.

#### **(With theft-deterrent system)**

The hazard warning lights flash when the theft deterrent system is turned off.

The hazard warning lights do not flash unless the theft deterrent system has been properly turned off.

When the doors are unlocked by pressing the request switch on the front doors while the theft-deterrent system is turned off, the hazard warning lights will flash twice to indicate that the system is turned off.

Refer to Theft-Deterrent System on page 3-62.

#### **Front passenger door/liftgate request switch**

To unlock the doors and the liftgate, press the request switch. A beep sound will be heard twice and the hazard warning lights will flash twice.

### **NOTE**

- The request switch on the driver's door can be used to close the power windows and the moonroof from Outside. Refer to Opening/Closing the Power Windows and the Moonroof from Outside on page 3-44. Refer to Opening/Closing the Moonroof from Outside on page 3-52.
- Confirm that all doors and the liftgate are securely locked.
- All doors and the liftgate cannot be locked when any door or the liftgate is open.
- A beep sound is heard for confirmation when the doors and the liftgate are locked/unlocked using the request switch. If you prefer, the beep sound can be turned off. Refer to Personalization Features on page 10-8.

## Advanced Keyless Entry and Start System

- The system can be set to unlock all doors by performing a single operation.  
Refer to Personalization Features on page 10-8.
- The setting can be changed so that the doors and the liftgate are locked automatically without pressing the request switch (page 10-8).

### **(Auto-lock function)**

A beep sound is heard when all doors and the liftgate are closed while the advanced key is being carried. All doors and the liftgate are locked automatically after about 3 seconds when the advanced key is out of the operational range. Also, the hazard warning lights flash once. (Even if the driver is in the operational range, all doors and the liftgate are locked automatically after about 30 seconds.)

If you are out of the operational range before the doors and the liftgate are completely closed or another advanced key is left in the vehicle, the auto-lock function will not work. Always make sure that all doors and the liftgate are closed and locked before leaving the vehicle.

The auto-lock function does not close the power windows and the moonroof.

- **(Auto re-lock function)**

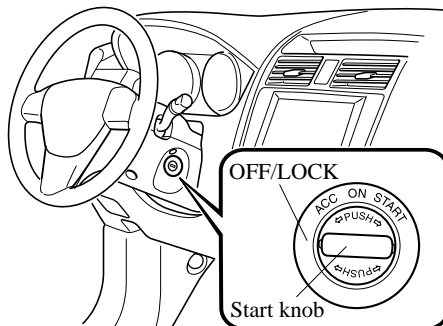
After unlocking doors and the liftgate by pressing the request switch, all doors and the liftgate will automatically lock if any of the following operations are not performed within about 30 seconds. If your vehicle has a theft-deterrent system, the hazard warning lights will flash for confirmation.

- A door or the liftgate is opened.
- The auxiliary key is inserted into the ignition switch.
- The start knob is pushed.

## ▼ Starting the Engine

### **Ignition switch positions**

As there is no traditional key, some of the ignition switch functions are different.



The engraved mark on the actual vehicle may read OFF or LOCK depending on the type of ignition system.

### **OFF/LOCK—Knob Released**

The power supply to electrical devices is turned off.

### **OFF/LOCK—Knob Depressed**

The ignition can be switched to ACC when the KEY indicator light (green) illuminates in the instrument cluster.

# KEY

## Advanced Keyless Entry and Start System

### **⚠ WARNING**

**Before leaving the driver's seat, always switch the ignition to OFF/LOCK, set the parking brake and make sure the shift lever is in P:**

It is important to switch the ignition to OFF/LOCK even if you are not removing the key from the ignition or leaving the vehicle. Leaving the key in other positions will disable some of the vehicle security systems and run the battery down.

Leaving the driver's seat without switching the ignition to OFF/LOCK, setting the parking brake and shifting the shift lever to P is dangerous. Unexpected vehicle movement could occur. This could cause an accident.

### **NOTE**

- If turning the ignition switch is difficult, move the steering wheel left and right.
- The ignition cannot be switched from ACC to OFF/LOCK when the shift lever is not in P.

### **ACC (Accessory)**

In this position, some electrical accessories will operate.

### **NOTE**

The Advanced Keyless Entry System does not function in the ACC position, and the doors will not lock/unlock using the transmitter or request switches even if the advanced key is carried away from the vehicle.

### **ON**

This is the normal running position after the engine is started. The warning lights (except brakes) should be inspected before the engine is started (page 5-44).

### **NOTE**

When the ignition is switched ON, the sound of the fuel pump motor operating near the fuel tank can be heard. This does not indicate an abnormality.

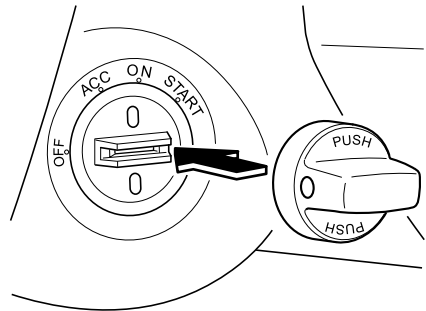
### **START**

The engine is started in this position. It will crank until you release the start knob; then it returns to the ON position. The brake warning light can be checked after the engine is started (page 5-44).

### **Starting the engine**

### **NOTE**

- Engine-starting is controlled by the spark ignition system.  
This system meets all Canadian Interference-Causing Equipment Standard requirements regulating the impulse electrical field strength of radio noise.
- The advanced key must be carried because the advanced key carries an immobilizer chip that must communicate with the engine controls at short range.
- When starting the engine, be sure the start knob is securely attached before trying to operate it. If the knob becomes detached from the ignition switch, re-attach it by pushing it on to the ignition switch.



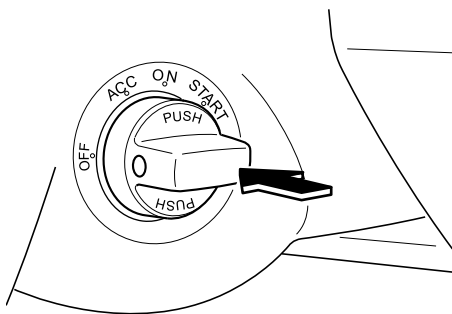
## Advanced Keyless Entry and Start System

1. Make sure the advanced key is being carried.
2. Occupants should fasten their seat belts.
3. Make sure the parking brake is on.
4. Depress the brake pedal.
5. Put the vehicle in park (P). If you must restart the engine while the vehicle is moving, shift into neutral (N).

### NOTE

The starter will not operate if the shift lever is not in P or N.

6. Push the start knob slowly all the way in.



7. Verify that the KEY indicator light (green) illuminates in the instrument cluster. The KEY warning light (red) means you cannot continue to start the engine using the Advanced Keyless System. You may have to use the auxiliary key instead (page 3-20).

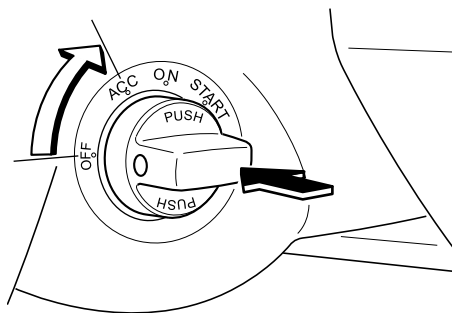
# KEY

### NOTE

In the following cases, the KEY warning light (red) illuminates and the engine will not start.

- The advanced key battery is dead.
- The advanced key is out of operational range.
- The advanced key is placed in areas where it is difficult for the system to detect the signal (page 3-7).
- A key from another manufacturer similar to the advanced key is in the operational range.

8. Switch the ignition to ACC while pushing the start knob in.



9. Switch the ignition from ACC to START and hold (up to 10 seconds at a time) until the engine starts.

### CAUTION

Do not try the starter for more than 10 seconds at a time. If the engine stalls or fails to start, wait 10 seconds before trying again. Otherwise, you may damage the starter and drain the battery.

10. After starting the engine, let it idle for about 10 seconds.

# Advanced Keyless Entry and Start System

## NOTE

- In extremely cold weather or after the vehicle has not been driven in several days, let the engine warm up without operating the accelerator.
- Whether the engine is cold or warm, it should be started without use of the accelerator.

## Turning the engine off

1. Move the shift lever to the P position.
2. Switch the ignition from ON to ACC.

## NOTE

When the engine is turned off and the ignition is switched from ACC to OFF/LOCK, the KEY indicator light (green) flashes in the instrument cluster for about 30 seconds if the battery power of the advanced key is low. Replace the battery with a new one.

Refer to Battery Replacement (page 3-7).

3. Push in the start knob from the ACC position and turn it to the OFF/LOCK.

## CAUTION

When leaving the vehicle, make sure the ignition is switched to OFF/LOCK.

## NOTE

- When switching the ignition to OFF/LOCK, the ignition switch has to be pushed in from the ACC position and turned. Without being pushed in, the ignition switch stops at the ACC position and the vehicle battery may be discharged if the ignition switch is left in the ACC position. When leaving the vehicle, make sure the ignition is switched to OFF/LOCK.
- If the vehicle is left with the ignition not switched to OFF/LOCK, a beep sound is heard and the indicator light flashes to notify the driver.  
Refer to Warning Beep (page 3-18).

## Operation Using Advanced Key Functions

### ▼ Keyless Entry System

This system uses the more traditional keyless entry buttons to remotely lock and unlock the doors and the liftgate, and opens the power windows and the moonroof.

It can also help you signal for attention. Press the buttons slowly and carefully.

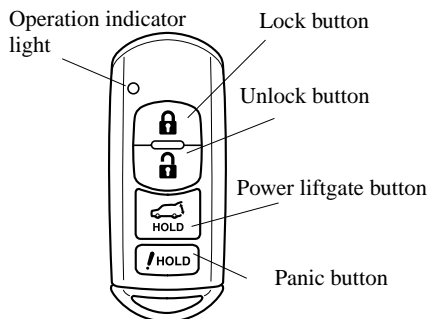
## NOTE

- The keyless entry system is designed to operate up to about 2.5 m (8 ft) from the center of the vehicle, but this may vary due to local conditions.
- The system does not operate when the auxiliary key is in the ignition switch.
- With the start knob installed in the OFF/LOCK position, the system is fully operational. If the ignition is not switched off or the start knob is pushed in, the system does not operate.
- All doors and the liftgate cannot be locked by pressing the lock button while any door or the liftgate is open. The hazard warning lights will also not flash.
- If the transmitter does not operate when pressing a button or the operational range becomes too small, the battery may be dead. To install a new battery, refer to Maintenance (page 3-5).

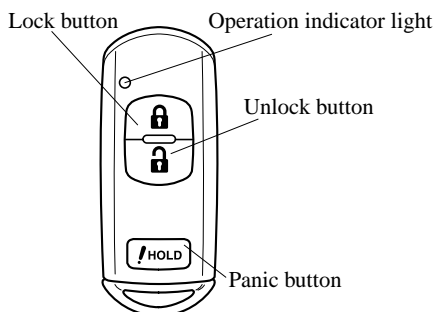
## Advanced Keyless Entry and Start System

### Transmitter

#### with power liftgate



#### without power liftgate



### **NOTE**

The unlock button can be used to open the power windows and the moonroof, but the lock button cannot be used to close the power windows and the moonroof.

Refer to the following pages:

Opening/Closing the Power Windows (page 3-44)

Opening/Closing the moonroof (page 3-52)

The operation indicator light flashes when the buttons are pressed.

### **Lock button**

To lock the doors and the liftgate, press the lock button. A beep sound will be heard once and the hazard warning lights will flash once.

To confirm that all doors and the liftgate have been locked, press the lock button again within 5 seconds. If they are closed and locked, the horn will sound.

### **NOTE**

- A beep sound can be heard for confirmation when the doors are locked using the advanced keyless transmitter. If you prefer, the beep sound can be turned off. Refer to Personalization Features on page 10-8.

### • **(Without theft-deterrent system)**

The hazard warning lights will flash once to indicate that all doors and the liftgate are locked.

### **(With theft-deterrent system)**

The hazard warning lights flash when the theft deterrent system is armed.

The hazard warning lights do not flash if all the doors and the liftgate are locked before the theft-deterrent system is properly armed.

When the doors are locked by pressing the lock button on the transmitter while the theft-deterrent system is armed, the hazard warning lights will flash once to indicate that the system is armed.

Refer to Theft-Deterrent System on page 3-62.

### **NOTE**

- All doors and the liftgate cannot be locked when any door or the liftgate is open.
- Confirm that all doors and the liftgate are locked visually or audibly by use of the double click.

## Advanced Keyless Entry and Start System

### Unlock button

To unlock the driver's door, press the unlock button. A beep will be heard twice and the hazard warning lights will flash twice.

To unlock all doors and the liftgate, press the unlock button again within 3 seconds and two more beep sounds will be heard.

### NOTE

- *A beep sound can be heard for confirmation when the doors are unlocked using the advanced keyless transmitter. If you prefer, the beep sound can be turned off. Refer to Personalization Features on page 10-8.*
- *The system can be set to unlock all doors by performing a single operation. Refer to Personalization Features on page 10-8.*
- **(Without theft-deterrent system)**  
*The hazard warning lights will flash twice to indicate that all doors and the liftgate are unlocked.*  
**(With theft-deterrent system)**  
*The hazard warning lights flash when the theft deterrent system is turned off. The hazard warning lights do not flash unless the theft deterrent system has been properly turned off.*  
*When the doors are unlocked by pressing the unlock button on the transmitter while the theft-deterrent system is turned off, the hazard warning lights will flash twice to indicate that the system is turned off.*  
*Refer to Theft-Deterrent System on page 3-62.*

### NOTE

#### **(Auto re-lock function)**

*After unlocking with the transmitter, all doors and the liftgate will automatically lock if any of the following operations are not performed within about 30 seconds. If your vehicle has a theft-deterrent system, the hazard warning lights will flash for confirmation.*

*The time required for the doors to lock automatically can be changed.*

*Refer to Personalization Features on page 10-8.*

- *A door or the liftgate is opened.*
- *The auxiliary key is inserted into the ignition switch.*
- *The start knob is pressed.*

### Power liftgate button

If your Mazda has a power liftgate (page 3-35), the transmitter can open/close the liftgate.

### Panic button

If you witness from a distance someone attempting to break into or damage your vehicle, pressing the panic button will activate the vehicle's alarm.

### NOTE

*The panic button will work whether any door or the liftgate is open or closed.*

### (Turning on the alarm)

Pressing the panic button for 1 second or more will trigger the alarm for about 2 minutes and 30 seconds, and the following will occur:

- *The horn sounds intermittently.*
- *The hazard warning lights flash.*

### (Turning off the alarm)

The alarm stops by pressing any button on the transmitter.

## Advanced Keyless Entry and Start System

---

### Declaration of Conformity

#### **Keyless entry system**

(U.S.A)

#### **FCC WARNING**

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Note

\*This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

(CANADA)

This device complies with RSS-210 of Industry CANADA. Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

(MEXICO)

Este equipo opera a título secundario, consecuentemente, debe aceptar interferencias perjudiciales incluyendo equipos de la misma clase y puede no causar interferencias a sistemas operando a título primario

Sistema de arranque y de acceso avanzado sin llave

Modelo : SKE11A-04

**Sistema de arranque y de acceso avanzado sin llave con marcado de confirmación por radio**

**COFETEL RLVMASK08-1120**



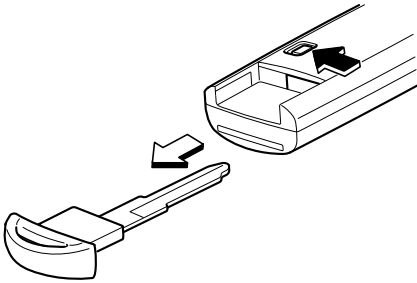
## Advanced Keyless Entry and Start System

### ▼ Auxiliary Key Function

Use the auxiliary key stored in the advanced key in the event of a dead transmitter battery or malfunction.

#### Removing the auxiliary key

Pull out the auxiliary key from the advanced key.



#### Locking, unlocking the doors

The doors can be locked/unlocked using the auxiliary key, refer to Locking, Unlocking with Key (page 3-28).

#### Starting the engine

The engine can be started with the auxiliary key, refer to Ignition Switch (page 5-2).

#### Locking, unlocking the glove box

The glove box can be locked/unlocked using the auxiliary key, refer to Glove Box (page 6-198).

### Advanced Key Suspend Function

If one advanced key is left in the vehicle and a second advanced key is used to lock it, the functions of the advanced key left in the vehicle are temporarily suspended to prevent theft of the vehicle.

The following are inoperable:

- Starting the engine using the start knob.
- Operating the request switches.

To restore these functions, perform any one of the following:

- Press the lock or unlock button on the advanced key which has had its functions temporarily suspended.
- While carrying another advanced key, push in the start knob until the KEY indicator light (green) illuminates.
- Insert the auxiliary key and switch the ignition ON.

## Advanced Keyless Entry and Start System

---

### Warning and Beep Sounds

#### ▼ System Malfunction Warning Beep

If any malfunction occurs in the advanced keyless function, the KEY warning light (red) in the instrument cluster illuminates continuously and beep sounds will be heard.

#### CAUTION

*If the KEY warning light (red) remains illuminated, do not continue to drive the vehicle with the advanced keyless function. Park the vehicle in a safe place and use the auxiliary key to continue driving the vehicle. Have the vehicle inspected at an Authorized Mazda Dealer as soon as possible. Refer to Ignition Switch (page 5-2).*

#### ▼ Start Knob Not in LOCK Warning Beep

If the ignition is switched to ACC and the driver's door is opened, a continuous beep sound will be heard to notify the driver that the ignition has not been switched off. In this case, the keyless entry system does not operate, the car cannot be locked, and the battery will run down.

#### ▼ Advanced Key Removed from Vehicle Warning Beep

Under the following conditions, a beep sound will be heard and the KEY warning light (red) will flash continuously when the ignition has not been switched off to notify the driver that the advanced key has been removed. The KEY warning light (red) will stop flashing when the advanced key is back inside the vehicle:

- The ignition has not been switched off, the driver's door is open, and the advanced key is removed from the vehicle. (A beep sound will be heard 3 times.)

However the beep sound will be heard continuously when the ignition is switched to ACC and the door is open due to the activation of the warning beep sound indicating that the ignition is not switched off.

- The ignition has not been switched off and all the doors are closed after removing the advanced key from the vehicle. (A beep sound will be heard 6 times.)

#### **NOTE**

*Because the advanced key utilizes low-intensity radio waves, the Advanced Key Removed From Vehicle Warning may activate if the advanced key is carried together with a metal object or it is placed in a poor signal reception area within the vehicle.*

## Advanced Keyless Entry and Start System

---

### ▼ Request Switch Inoperable Warning Beep

If the request switch for a front door or the liftgate is pressed under the following conditions while the advanced key is being carried, a beep will be heard 6 times to indicate that the front doors and the liftgate cannot be locked.

- A door or the liftgate is open (door ajar included).
- The ignition has not been switched off.
- The auxiliary key is inserted into the ignition switch.

### ▼ Advanced Key Battery Dead Warning

When the ignition is switched to ACC or switched off from ON, the KEY indicator light (green) flashes for approximately 30 seconds indicating that the remaining battery power is low. Replace with a new battery before the advanced key becomes unusable.

Refer to Advanced Key Maintenance (page 3-5).

#### **NOTE**

*The advanced key can be set so that the KEY indicator light (green) does not flash even if the battery power is low.*

*Refer to Personalization Features on page 10-8.*

### ▼ Engine Start Not Permitted Warning

Under the following conditions, the KEY warning light (red) flashes to inform the driver that the ignition cannot be switched from off.

- The advanced key battery is dead.
- The advanced key is not within operational range.

- The advanced key is placed in areas where it is difficult for the system to detect the signal (page 3-7).
- A key from another manufacturer similar to the advanced key is in the operational range.

### ▼ Advanced Key Left-in-vehicle Warning Beep

If an advanced key is left in the vehicle cabin and all the doors and the liftgate are locked using a separate advanced key, a beep sound is heard for about 10 seconds to remind the driver that the advanced key has been left in the vehicle cabin. If this happens, the doors and the liftgate lock but the functions of the advanced key left in the vehicle cabin may be temporarily suspended. Perform the following procedure to restore the functions of the advanced key (page 3-17).

## Advanced Keyless Entry and Start System

### When Warning Indicator/Beep is Activated

Under the following conditions, warning beeps are heard and a warning/indicator light in the instrument cluster illuminates to notify the driver of improper operation of the advanced key to prevent theft of the vehicle (page 3-18).

Warning	How to check
When a door is open, a continuous beep sound will be heard.	Check whether the ignition has been switched off.
When a door is open, 3 beep sounds are heard, and the KEY warning light (red) in the instrument cluster flashes.	Check whether the advanced key has been removed from the vehicle.
When a door is closed, a beep sound is heard 6 times, and the KEY warning light (red) in the instrument cluster flashes.	Check whether the advanced key has been removed from the vehicle.
When locking the doors , the chime sounds for about ten seconds.	Check whether the advanced key has been left in the vehicle.
When attempting to lock the doors by pressing the request switch on the front doors, and six beep sounds are heard.	Check whether the advanced key has been left in the vehicle.
	Check whether the ignition has been switched off.
When the KEY indicator light (green) flashes in the instrument cluster.	Check whether a door or the liftgate is open.
	The advanced key battery power is low. Replace the battery with a new one. Refer to Advanced Key Maintenance on page 3-5.
When the KEY warning light (red) remains illuminated in the instrument cluster.	The advanced key is malfunctioning. Park the vehicle in a safe place, and use the auxiliary key to continue driving the vehicle. Have the vehicle inspected at an Authorized Mazda Dealer as soon as possible.

## Keys

### **⚠ WARNING**

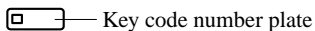
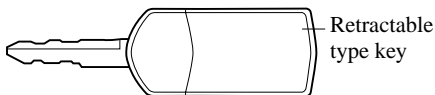
**Do not leave the key in your vehicle with children and keep them in a place where your children will not find or play with them:**

Leaving children in a vehicle with the key is dangerous. This could result in someone being badly injured or even killed. Children may find these new kinds of keys to be an interesting toy to play with and could cause the power windows or other controls to operate, or even make the vehicle move.

### **NOTE**

- Refer to *Immobilizer System* (page 3-58) for information regarding keys and engine starting.
- **(With theft-deterrent system)**  
Refer to *Theft-Deterrent System* (page 3-62) for information regarding keys and the prevention of vehicle and vehicle contents theft.

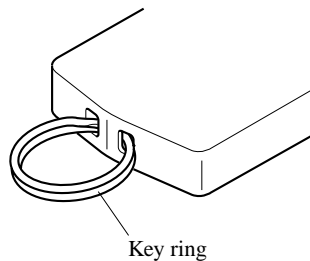
The keys operate all locks.



A code number is stamped on the plate attached to the key set; detach this plate and store it in a safe place (not in the vehicle) for use if you need to make a replacement key.

### **NOTE**

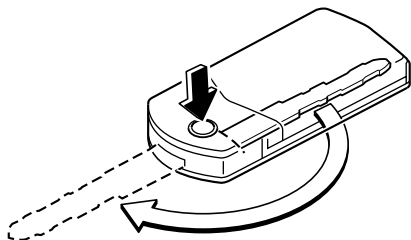
- Write down the code number and keep it in a separate, safe and convenient place, but not in the vehicle.  
*If your key is lost, consult your Authorized Mazda Dealer and have your code number ready.*
- Some types of key chains cannot be attached to the retractable type key. In this case, use the key ring provided with the transmitter which has the key code number plate attached.



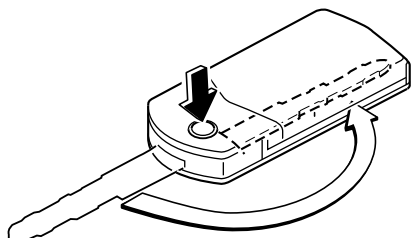
## Doors and Locks

### Key extend/retract method (Retractable type key)

To extend the key, press the release button.



To retract the key, rotate it into the holder while pressing the release button.



### Keyless Entry System \*

This system remotely locks and unlocks the doors and the liftgate, and opens the power windows and the moonroof. It can also help you signal for attention. Press the buttons slowly and carefully.

#### **CAUTION**

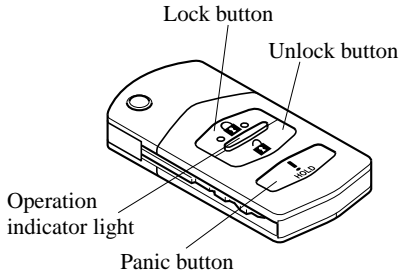
To avoid damage to the transmitter, do not:

- Drop the transmitter.
- Get the transmitter wet.
- Disassemble the transmitter.
- Expose the transmitter to any kind of magnetic field.
- Expose the transmitter to high temperatures on places such as the dashboard or hood, under direct sunlight.

#### **NOTE**

- The keyless entry system is designed to operate up to about 2.5 m (8 ft) from the center of the vehicle, but this may vary due to local conditions.
- The system does not operate when the key is in the ignition switch.
- If the transmitter does not operate when pressing a button or the operation range becomes too small, the battery may be dead. To install a new battery, refer to Maintenance (page 3-25).
- Additional transmitters can be obtained at an Authorized Mazda Dealer. Up to 3 transmitters can be used with the keyless entry system per vehicle. Bring all transmitters to an Authorized Mazda Dealer when additional transmitters are required.

## ▼ Transmitter



### NOTE

The unlock button can be used to open the power windows and the moonroof, but the lock button cannot be used to close the power windows and the moonroof. Refer to *Opening/Closing the Power Windows and the moonroof from Outside* (page 3-44).

The operation indicator light flashes when the buttons are pressed.

### Lock button

To lock the doors and the liftgate, press the lock button and the hazard warning lights will flash once.

To confirm that all doors and the liftgate have been locked, press the lock button again within 5 seconds. If they are closed and locked, the horn will sound and the hazard warning lights will flash once.

### NOTE

- Doors and the liftgate can be locked by pressing the lock button while any other door or the liftgate is open. Also, the hazard warning lights will not flash and the horn will not sound.

- **(Without theft-deterrent system)**

The hazard warning lights will flash once to indicate that all doors and the liftgate are locked.

- **(With theft-deterrent system)**

The hazard warning lights flash when the theft deterrent system is armed.

The hazard warning lights do not flash if all the doors and the liftgate are locked before the theft-deterrent system is properly armed.

When the doors are locked by pressing the lock button on the transmitter while the theft-deterrent system is armed, the hazard warning lights will flash once to indicate that the system is armed.

Refer to *Theft-Deterrent System* on page 3-62.

- All doors and the liftgate cannot be locked when the key is in the ignition switch.
- Confirm that all doors and the liftgate are locked visually or audibly by use of the double click.

### Unlock button

To unlock the driver's door, press the unlock button and the hazard warning lights will flash twice.

To unlock all doors and the liftgate, press the unlock button again within 3 seconds and the hazard warning lights will flash twice.

## Doors and Locks

---

### **NOTE**

#### ***(Without theft-deterrent system)***

*The hazard warning lights will flash twice to indicate that all doors and the liftgate are unlocked.*

#### ***(With theft-deterrent system)***

*The hazard warning lights flash when the theft deterrent system is turned off.*

*The hazard warning lights do not flash unless the theft deterrent system has been properly turned off.*

*When the doors are unlocked by pressing the unlock button on the transmitter while the theft-deterrent system is turned off, the hazard warning lights will flash twice to indicate that the system is turned off.*

*Refer to Theft-Deterrent System on page 3-62.*

### **NOTE**

#### ***Auto re-lock function***

*After unlocking with the transmitter, all doors and the liftgate will automatically lock if one of the doors or the liftgate is not opened within about 30 seconds.*

### **Panic button**

If you witness from a distance someone attempting to break into or damage your vehicle, pressing the panic button will activate the vehicle's alarm.

### **NOTE**

*The panic button will work whether any door or the liftgate is open or closed.*

### **Turning on the alarm**

Pressing the panic button once will trigger the alarm for about 2 minutes and 30 seconds, and the following will occur:

- The horn sounds intermittently.
- The hazard warning lights flash.

### **Turning off the alarm**

Press any button on the transmitter.



▼ **Transmitter Maintenance**

If the buttons on the transmitter are inoperable and the operation indicator light does not flash, the battery may be dead.

Replace with a new battery before the transmitter becomes unusable.

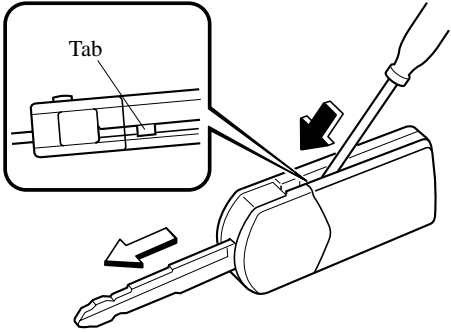
**CAUTION**

- Install the battery with the positive pole (+) facing down. Battery leakage could occur if it is not installed correctly.
- When replacing the battery, be careful not to touch any of the internal circuitry and electrical terminals, bend the electrical terminals, or get dirt in the transmitter as the transmitter could be damaged.
- There is the danger of explosion if the battery is not correctly replaced.
- Replace only with the same type battery (CR1620 or equivalent).
- Dispose of used batteries according to the following instructions.
  - Insulate the plus and minus terminals of the battery using cellophane or equivalent tape.
  - Never disassemble.
  - Never throw the battery into fire and/or water.
  - Never deform or crush.

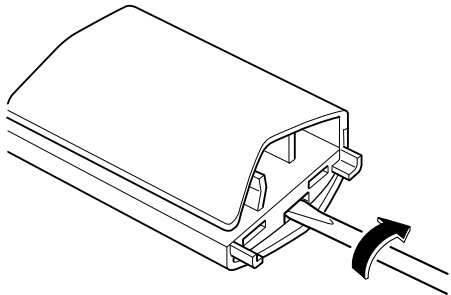
**Replacing the transmitter battery**

1. Unfold the key (page 3-21).

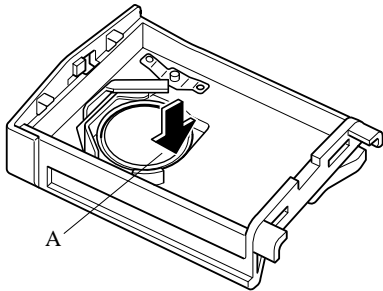
2. Insert a screwdriver into the slot and push the tab to remove the key from the transmitter.



3. Insert a screwdriver into the slot and gently pry open the transmitter.



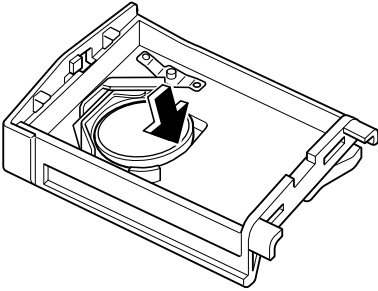
4. Remove the battery.



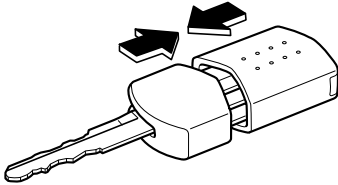
## Doors and Locks

---

5. Put in the new battery (CR1620 or equivalent) with the positive pole (+) facing down.



6. Align the front and back covers and snap the transmitter shut.
7. Align the key with the transmitter as shown in the figure, and insert the key until a click sound is heard.



### **CAUTION**

*Insert the key into the transmitter securely until a click sound is heard. If it is not inserted securely, it could detach from the transmitter.*

### **▼ Service**

If you have a problem with the keyless entry system, consult an Authorized Mazda Dealer.

If your transmitter is lost or stolen, consult an Authorized Mazda Dealer as soon as possible for a replacement and to make the lost or stolen transmitter inoperative.

### **CAUTION**

*Radio equipment like this is governed by laws in the United States. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.*

## ▼ Declaration of Conformity

### Keyless entry system

(U.S.A)

#### FCC WARNING

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Note

\*This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

(CANADA)

This device complies with RSS-210 of Industry CANADA. Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

(MEXICO)

Este equipo opera a título secundario, consecuentemente, debe aceptar interferencias perjudiciales incluyendo equipos de la misma clase y puede no causar interferencias a sistemas operando a título primario

Sistema de acceso normal sin llave

Modelo : SKE125-01

**Sistema de acceso normal sin llave con marcado de confirmación por radio**

**COFETEL RCPMAIM05-615**

## Doors and Locks

### Door Locks

#### **! WARNING**

**Always take all children and pets with you or leave a responsible person with them:**

*Leaving a child or a pet unattended in a parked vehicle is dangerous. In hot weather, temperatures inside a vehicle can become high enough to cause brain damage or even death.*

**Do not leave the key in your vehicle with children and keep them in a place where your children will not find or play with them:**

*Leaving children in a vehicle with the key is dangerous. This could result in someone being badly injured or even killed.*

**Keep all doors locked when driving:**

*Unlocked doors in a moving vehicle are dangerous. Passengers can fall out if a door is accidentally opened and can more easily be thrown out in an accident.*

**Always close all the windows and the moonroof, lock the doors and take the key with you when leaving your vehicle unattended:**

*Leaving your vehicle unlocked is dangerous as children could lock themselves in a hot vehicle, which could result in death. Also, a vehicle left unlocked becomes an easy target for thieves and intruders.*

**After closing the doors, always verify that they are securely closed:**

*Doors not securely closed are dangerous, if the vehicle is driven with a door not securely closed, the door could open unexpectedly resulting in an accident.*

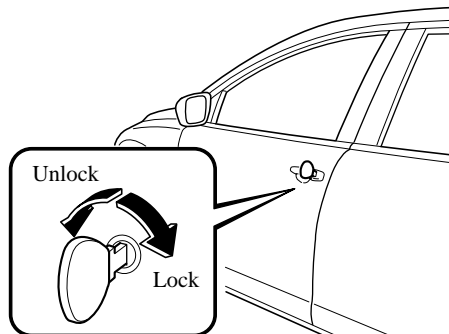
**Always confirm the safety around the vehicle before opening a door:**

*Suddenly opening a door is dangerous. A passing vehicle or a pedestrian could be hit and cause an accident.*

#### ▼ Locking, Unlocking with Key

The driver's door can be locked/unlocked with the key.

Turn the key toward the front to unlock, toward the back to lock.



#### ▼ Locking, Unlocking with Request Switch (with Advanced Key)

The doors can be locked/unlocked by operating the request switch while carrying the advanced key outside the vehicle, refer to Operations Using Advanced Keyless Functions (page 3-7).

### ▼ Locking, Unlocking with Transmitter (with Advanced Key)

The doors can be locked/unlocked by operating the keyless entry system transmitter, refer to Keyless Entry System (page 3-13).

### ▼ Locking, Unlocking with Transmitter (with Retractable Type Key)

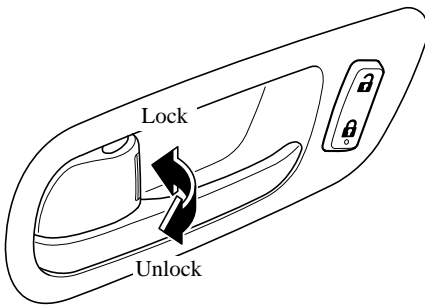
The doors can be locked/unlocked by operating the keyless entry system transmitter, refer to Keyless Entry System (page 3-22).

### ▼ Locking, Unlocking with Door-Lock Knob

To lock any door from the inside, press the door-lock knob.

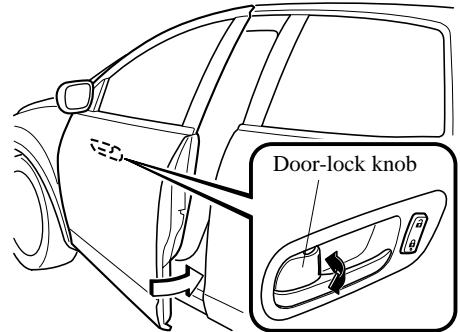
To unlock, pull it outward.

This does not operate the other door locks.



To lock any door with the door-lock knob from the outside, press the door-lock knob to the lock position and close the door.

This does not operate the other door locks.



#### **NOTE**

- *When locking the doors this way, be careful not to leave the key inside the vehicle.*
- **(With advanced key)**  
*The driver's door cannot be locked using the door-lock knob from the outside.*
- **(With retractable type key)**  
*The driver's door cannot be locked using the door-lock knob from the outside if the key is in the ignition switch.*

### ▼ Power Door Locks

#### **Vehicle lock-out prevention**

##### **(With advanced key)**

The vehicle lock-out prevention feature prevents you from locking yourself out of the vehicle. All doors and the liftgate will automatically unlock if they are locked using the power door locks with any door or the liftgate open.

## Doors and Locks

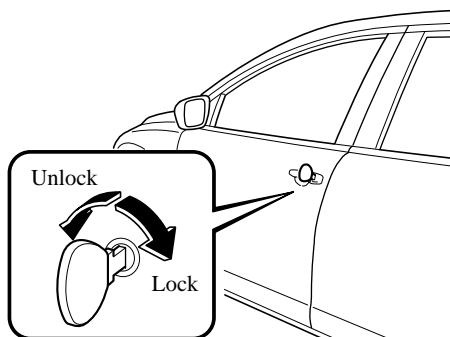
### **(With retractable type key)**

The vehicle lock-out prevention feature prevents you from locking yourself out of the vehicle. With the key in the ignition switch, all doors and the liftgate will automatically unlock if they are locked using the power door locks with any door or the liftgate open.

### **Locking, unlocking with key**

All doors and the liftgate lock automatically when the driver's door is locked with the key.

All doors and the liftgate unlock when the driver's door is unlocked and the key is held in the unlock position for one second or longer.

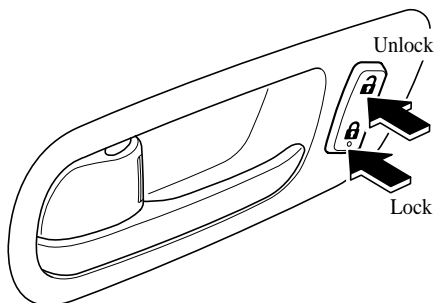


### **NOTE**

*Holding the key in the unlocked position in the driver's door lock for about a second unlocks all doors and the liftgate. To unlock only the driver's door, insert the key into the driver's door lock and turn the key briefly to the unlock position and then immediately return it to the center position.*

### **Locking, unlocking with door-lock switch**

All doors and the liftgate lock automatically when lock side is pressed. They all unlock when unlock side is pressed.



### **Locking, unlocking with request switch (with advanced key)**

All doors and the liftgate can be locked/unlocked by operating the request switch on the front doors and the liftgate while carrying the advanced key outside the vehicle, refer to Operations Using Advanced Keyless Functions (page 3-7).

### **Locking, unlocking with transmitter (with advanced key)**

All doors and the liftgate can be locked/unlocked by operating the keyless entry system transmitter, refer to Keyless Entry System (page 3-13).

### **Locking, unlocking with transmitter (with retractable type key)**

All doors and the liftgate can be locked/unlocked by operating the keyless entry system transmitter, refer to Keyless Entry System (page 3-22).

**Auto lock/unlock function****⚠ WARNING**

**Do not pull the inner handle on a front door:**

*Pulling an inner handle on a front door while the vehicle is moving is dangerous. Passengers can fall out of the vehicle if a front door accidentally opens, which could result in death or serious injury.*

- When the vehicle speed exceeds 20 km/h (12 mph), all doors and the liftgate lock automatically.
- When the ignition is switched off, all doors and the liftgate unlock automatically.

These functions can also be disabled so that they do not operate.

**Auto lock/unlock function setting change using door-lock switch**

The doors and the liftgate can be set to lock or unlock automatically by selecting any one of the functions from the following table and using the driver's door-lock switch on the interior to perform the setting change as indicated in the procedure which follows.

Settings can be changed using the following operation.

Function number	Function
1	The auto door-lock function is disabled.
2	All the doors and the liftgate lock automatically when the vehicle speed is about 20 km/h (12 mph) or more.
3	All the doors and the liftgate lock automatically when the vehicle speed is about 20 km/h (12 mph) or more. All the doors and the liftgate unlock when the ignition is switched from ON to ACC or Off.
4	When the ignition is switched ON and the shift lever is shifted from park (P) to any other gear position, all the doors and the liftgate lock automatically.
5	When the ignition is switched ON and the shift lever is shifted from park (P) to any other gear position, all the doors and the liftgate lock automatically. When the shift lever is shifted to park (P) while the ignition is switched ON, all the doors and the liftgate unlock automatically.

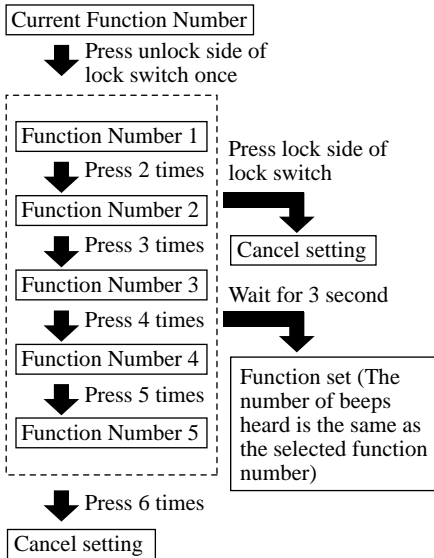
1. Stop the vehicle and close all the doors.
2. Switch the ignition ON.
3. Press and hold the lock side of the driver's door-lock switch within 10 seconds of switching the ignition ON, and make sure a beep sound is heard about eight seconds afterwards.
4. Referring to the auto lock/unlock function setting table, determine the function number for the desired setting and press the unlock side of the driver's door-lock switch only in the amount of the selected function number (Ex. If you select function 2, press the unlock side of the switch only 2 times).

# Doors and Locks

### NOTE

There are only a total of five auto lock/unlock settings available. Be sure to press the unlock side of the driver's door-lock switch the correct number of times according to the selected function number. If the switch is mistakenly pressed six times, the procedure will be invalidated. If this occurs, start the procedure from the beginning.

5. Three seconds after the function setting has been changed, a beep sound will beep in the amount of the selected function number.



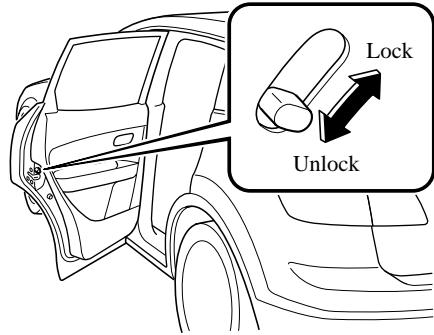
### NOTE

- The doors cannot be locked or unlocked while the setting function is being performed.
- The procedure can be cancelled by pressing the lock side of the driver's door-lock switch.

### ▼ Rear Door Child Safety Locks

These locks are intended to help prevent children from accidentally opening the rear doors. Use them both whenever a child rides in the vehicle.

If you slide the child safety lock to the lock position before closing that door, the door cannot be opened from the inside. The door can be opened only by pulling the outside handle.





## Liftgate

### **⚠ WARNING**

**Never allow a person to ride in the luggage compartment:**

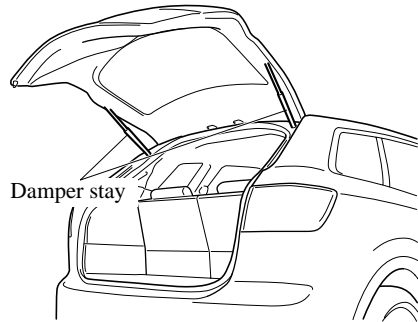
Allowing a person to ride in the luggage compartment is dangerous. The person in the luggage compartment could be seriously injured or killed during sudden braking or a collision.

**Do not drive with the liftgate open:**

Exhaust gas in the cabin of a vehicle is dangerous. An open liftgate in a moving vehicle will cause exhaust gas to be drawn into the cabin. This gas contains CO (carbon monoxide), which is colorless, odorless, and highly poisonous, and it can cause loss of consciousness and death. Moreover, an open liftgate could cause occupants to fall out in an accident.

### **⚠ CAUTION**

Be careful not to apply excessive force to the damper stay on the liftgate such as by putting your hand on the stay. Otherwise, the damper stay may bend and affect the liftgate operation.



### ▼ Locking, Unlocking with Request Switch (with Advanced Key)

The liftgate can be locked/unlocked by operating the request switch while carrying the advanced key outside the vehicle, refer to Operations Using Advanced Keyless Functions (page 3-7).

### ▼ Locking, Unlocking with Transmitter (with Advanced Key)

The liftgate can be locked/unlocked by operating the keyless entry system transmitter, refer to Keyless Entry System (page 3-13).

### ▼ Locking, Unlocking with Transmitter (with Retractable Type Key)

The liftgate can be locked/unlocked by operating the keyless entry system transmitter, refer to Keyless Entry System (page 3-22).

## Doors and Locks

---

### ▼ Locking, Unlocking with Door-Lock Switch

The liftgate can be locked/unlocked by operating the door-lock switch, refer to Power Door Locks (page 3-29).

### ▼ Opening and Closing the Liftgate

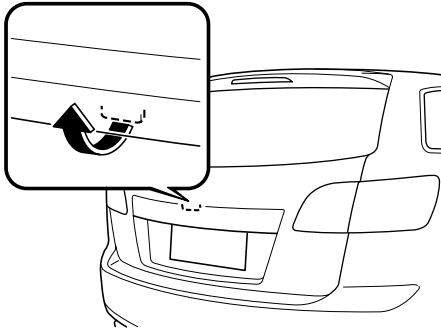
#### Manually opening the liftgate

#### **⚠ WARNING**

**Always fully open the liftgate when opening it:**

*Raising the liftgate only partially is dangerous as it could drop unexpectedly resulting in injury.*

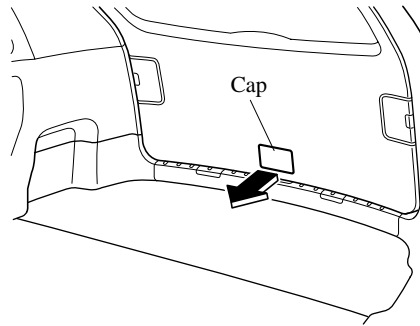
Pull up on the handle.



#### **NOTE**

*If the vehicle battery is dead or there is a malfunction in the electrical system and the liftgate cannot be unlocked, perform the following procedure as an emergency measure to unlock it:*

1. *Remove the cap on the interior surface of the liftgate with a flathead screwdriver.*



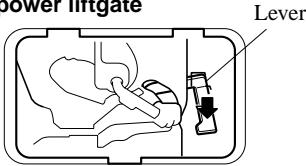
## 2. (With power liftgate)

Push the liftgate while pressing the lever down.

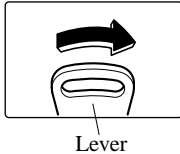
### (Without power liftgate)

Turn the lever to the right to unlock the liftgate

#### With power liftgate



#### Without power liftgate



After performing this emergency measure, have the vehicle inspected at an Authorized Mazda Dealer as soon as possible.

### Manually closing the liftgate

Use both hands to push the liftgate down until the lock snaps shut. Do not slam it. Pull up on the liftgate to make sure it is securely latched.

### ▼ Power Liftgate\*

The power liftgate opens/closes electrically by operating switches in the vehicle or the buttons on the keyless entry system transmitter.

Refer to Keyless Entry System on page 3-13.

## **! WARNING**

**Be sure to watch the power liftgate as it opens or closes, and make sure that it closes completely:**

Opening or closing the power liftgate while not watching it move is dangerous. Because of unseen obstacles and the jam-safe feature, a liftgate may not close completely and, if left unnoticed, could result in serious injury or death if an occupant were to fall out of the vehicle.

Always be sure that the area around the liftgate is clear before activating it.

**Always confirm the safety of the area around the power liftgate before operating it electrically.**

Not checking the area around the liftgate for people before operating it using the power liftgate switch or the button on the keyless entry system is dangerous. A person could become caught between the liftgate and an obstruction while it is opening electrically or between the liftgate and vehicle while it is closing electrically, resulting in an accident and serious injury.

**Always be sure the power liftgate completely closes before shifting into gear and driving the vehicle:**

Shifting out of Park (P) while the liftgate is moving is dangerous. The liftgate will not close completely and this could result in serious injury or death if an occupant were to fall out of the vehicle. Occupants in the vehicle will also not have full protection in a collision.

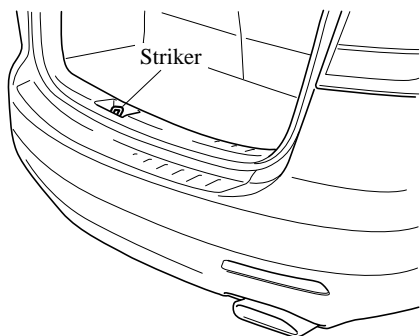
## Doors and Locks

### Never allow children to operate the power liftgate system:

Allowing children to operate the power liftgate switch and the keyless entry system is dangerous. Children are not aware of the dangers of people getting fingers and hands caught in a moving liftgate. If someone's neck, head or hands get caught in a closing door, it could result in death or serious injury.

### **CAUTION**

- When closing the power liftgate, make sure there are no foreign objects around the striker. If foreign objects are obstructing the striker, the liftgate may not close properly.



- Do not install accessories to the power liftgate other than specified accessories. Otherwise, it cannot be opened/closed automatically and could result in a malfunction.
- Be careful when switching the power liftgate from electrical to manual operation. The power liftgate may open/close unexpectedly depending on its position which could result in injury.

### NOTE

- Do not apply unnecessary force to the power liftgate when it is opening/closing electrically. Unnecessary force on the liftgate may cause it to reverse direction of movement automatically. Also, it could result in a malfunction.
- The power liftgate may not open/close electrically if the vehicle is parked on an incline, or there is strong wind, or the liftgate is laden with snow.
- The power liftgate will not operate unless it is unlocked. The power liftgate does not operate unless it is unlocked using the power door lock function. Refer to Locking, Unlocking with Door-Lock Knob on page 3-29.
- If a power liftgate system fuse has blown, the liftgate cannot be opened using the power liftgate switch or the outer handle (liftgate). Use the emergency lever to open the liftgate.
- Fully close the power liftgate before disconnecting the vehicle battery. If the battery is disconnected with the liftgate open, it cannot be opened or closed automatically after the battery is reconnected.
- To restore the power liftgate functions, perform the following:
  - 1 Park on level ground.
  - 2 Fully close the liftgate manually.
  - 3 Unlock the liftgate and all the doors.
  - 4 Press the power liftgate switch or the power liftgate button on the keyless entry system transmitter to fully open the liftgate.
  - 5 Press the power liftgate switch or the power liftgate button on the keyless entry system transmitter again to fully close the liftgate.

**Opening/Closing the power liftgate**

If the vehicle has satisfied all the following operation conditions, the power liftgate can be opened using the power function.

**Operation conditions**

- (1) The power liftgate is unlocked.
- (2) The shift lever is in park (P) when the ignition is switched ON.

**NOTE**

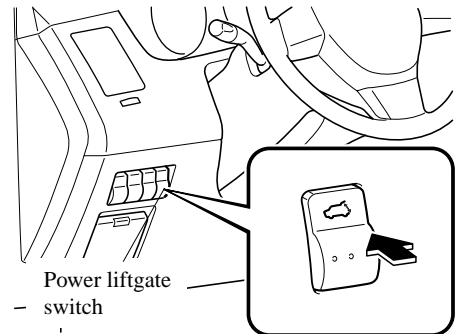
- If condition (2) is not satisfied while the power liftgate is opening electrically, the beep sound will be heard and the liftgate will move in the reverse direction automatically.
- If condition (2) is not satisfied while the power liftgate is closing electrically, the beep sound will be heard and the liftgate continues closing.
- When condition (2) is satisfied, you can resume power liftgate open/close operation with the switches.
- When the ignition is switched ON, the transmitter does not operate.

**Operation using the transmitter**

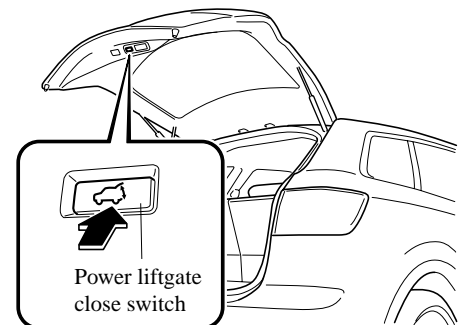
Press the power liftgate button for one second or more with the power liftgate in the fully closed/open position. The hazard warning lights flash twice and the liftgate opens/closes after the beep sounds. Refer to Keyless Entry System on page 3-13.

**Operation from the driver's seat (To open/close)**

Press the power liftgate switch for about one second or more while the liftgate is in the fully closed/open position. The hazard warning lights flash twice and the liftgate opens/closes fully after the beep sound is heard.

**Operation from outside (To close only)**

Press the power liftgate close switch while the liftgate is fully opened. The hazard warning lights flash twice and the liftgate closes automatically after the beep sound is heard.



## Doors and Locks

### NOTE

If the power liftgate switch/power liftgate close switch/power liftgate button on the transmitter is pressed or the outside handle is operated while the liftgate is opening/closing electrically, the beep sound is heard and the liftgate moves in the reverse direction automatically. If this operation is repeated the system switches to manual operation.

### Jam-safe equipment

While the power liftgate is opening/closing electrically and the system detects a person or an object in the liftgate's path, the liftgate will move in the reverse direction automatically.

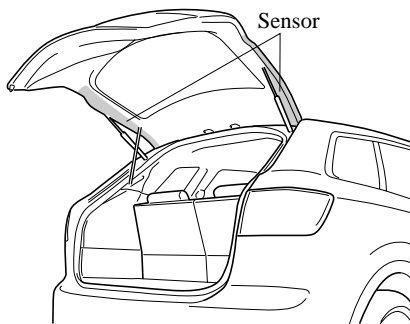
### **⚠ WARNING**

**Always check the area around the power liftgate before opening/closing it:**

*Not checking for occupants and objects around the power liftgate before opening/closing it is dangerous. The jam-safe equipment is designed to prevent jamming in the event an obstruction is in the liftgate's path. The system may not detect certain objects obstructing the liftgate depending on the way they are positioned and their shape. However, if the jam-safe function detects an obstruction and moves the liftgate in the reverse direction, an occupant in the liftgate's path could be seriously injured.*

### **⚠ CAUTION**

*Sensors are installed on both ends of the power liftgate. Be careful not to allow the sensors to be scratched or damaged by sharp objects, otherwise the liftgate may no longer open/close automatically. In addition, if the sensor is damaged while the liftgate is closing automatically, the system changes to manual operation.*



### NOTE

*The jam-safe equipment does not activate during easy closure operation when the power liftgate is between the near-shut position and fully closed position.*

When the power liftgate is moving in the open/close direction and an obstruction is detected, the beep sound will be heard and the liftgate moves in the reverse direction.

### NOTE

*If the system repeatedly detects an object obstructing the power liftgate in the open/close direction several times, the beep sound will be heard and the system changes to manual operation.*

**Power liftgate drop prevention mechanism**

The power liftgate drop prevention mechanism activates if the system detects weight such as that caused by a snow-laden liftgate when it is opened electrically. After the liftgate is fully opened, the beep sound will be heard and the liftgate closes automatically.

**NOTE**

- *If the power liftgate is snow-laden, remove the snow before operating the liftgate.*
- *Trying to force the power liftgate closed manually immediately after it has fully opened automatically may activate the liftgate drop prevention mechanism. However, this does not indicate a malfunction.*

**Liftgate easy closure**

The Easy Closure system automatically closes the liftgate completely from the near-shut position.

This system also operates when the liftgate is closed manually.

** WARNING**

***When closing a liftgate, always keep hands and fingers away from the liftgate:***

*Placing hands or fingers around a liftgate is dangerous because the liftgate closes automatically from the near-shut position, which could cause hands and fingers to be pinched and injured.*

**NOTE**

- *If the liftgate handle is pulled while the easy closure function is operating, the liftgate can be opened.*
- *If the liftgate is opened/closed repeatedly in a short period of time, the easy closure function may not operate. Wait for a while and then try again.*

## Doors and Locks

### Power Windows

The ignition must be switched ON for the power windows to operate.

#### **! WARNING**

**Make sure the opening is clear before closing a window:**

Closing power windows are dangerous. A person's hands, head, or even neck could be caught by the window and result in serious injury or even death.

This warning applies especially to children.

**Never allow children to play with power window switches:**

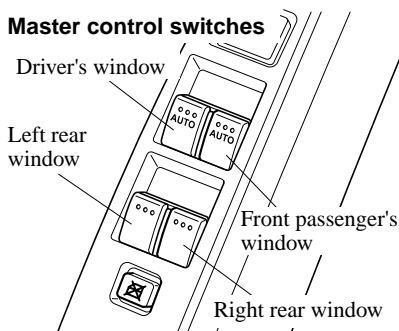
Power window switches that are not locked with the power window lock switch would allow children to operate power windows unintentionally which could result in serious injury if a child's hands, head or neck becomes caught by the window.

### ▼ Operating the Front Power Windows

#### **NOTE**

- Each passenger power window can be operated with each door switch when the power window lock switch on the driver's door is in the unlocked position (page 3-44).
- Each passenger power window can also be operated using the master control switches on the driver's door.

#### **Master control switches**

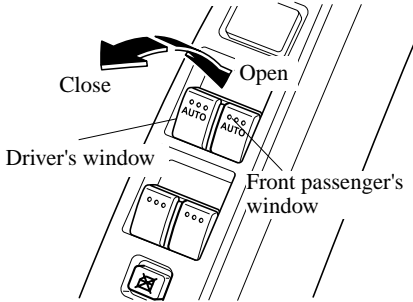
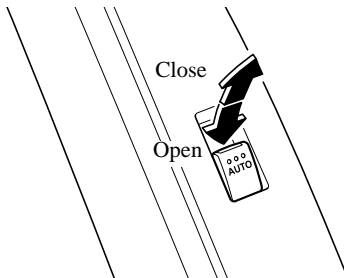


- The following functions can be performed for the front power windows using the power window master control switches on the driver's door or front passenger's door switch.
  - Manual opening/closing
  - Auto-opening/closing
  - Two-step down function



**Normal opening/closing**

To open a power window to the desired position, lightly hold down the switch. To close the power window to the desired position, lightly pull up the switch.

**Master control switches****Front passenger switch****Auto-opening/closing**

To fully open a power window automatically, press the switch completely down.

To fully close the power window automatically, pull the switch completely up.

To stop the power window partway, pull or press the switch in the opposite direction and then release it.

**Power window system initialization procedure**

If the battery was disconnected during vehicle maintenance, or for other reasons (such as a switch continues to be operated after the window is fully open/closed), the power windows will not fully open and close automatically. Resetting of the automatic function can be performed using the master control switches or the front passenger door switch.

The power window auto function reset procedure can be done on one or both door switches. The power window auto function will only resume on the side that has been reset.

1. Switch the ignition ON.
2. Make sure that the power window lock switch located on the driver's door is not depressed.
3. Press the switch and fully open the power window.
4. Pull up the switch to fully close the power window and continue holding the switch for about 2 seconds after the window fully closes.
5. Repeat Steps 3-4 for each front power window.
6. Make sure that the power windows operate correctly using the door switches.

**Two-step down function**

With the power window completely closed, press the switch lightly and it will open and stop about 3 cm (1 in) from the top.

If you continue to press and hold the switch, the window will resume opening all the way.

## Doors and Locks

### NOTE

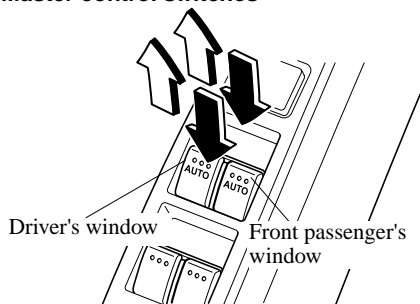
Pressing the power window switch once when the window is fully closed will only open it about 3 cm (1 in) to allow convenient ventilation of the cabin.

### Canceling the two-step down function

To cancel the two-step down function for the front power windows, carry out the following procedure using the master control switches.

1. Switch the ignition ON and complete the following procedure within 5 seconds:  
Press the power window switch 2 times firmly, then pull it 2 times firmly.

#### Master control switches



2. Switch the ignition off.
3. With the ignition off, and within 40 seconds, switch the ignition ON and complete the following procedure within 5 seconds:  
Press the power window switch 2 times firmly, then pull 2 times firmly.

### NOTE

- The two-step down function cannot be canceled if the procedure is not completed within the specified times, or the procedure is changed along the way. To redo the procedure, first switch the ignition off and proceed from the beginning.
- If you are unable to cancel the function despite carrying out the cancellation procedure, consult an Authorized Mazda Dealer.

### Restoring the two-step down function

With the two-step down function in the canceled state, repeat the previous procedure for canceling the function on each door switch and it will be restored.

### NOTE

If you are unable to restore the function despite doing the restore procedure, consult an Authorized Mazda Dealer.

### Jam-safe window

If a person's hands, head or an object blocks the window during the manual closing operation or the auto-closing operation, the window will stop and open halfway.

### ⚠ WARNING

**Make sure nothing blocks the window just before it reaches the fully closed position or while fully holding up the power window switch:**

Blocking the power window just before it reaches the fully closed position or while fully holding up the power window switch is dangerous. In this case, the jam-safe function cannot prevent the window from closing all the way. If fingers are caught, serious injuries could occur.

**NOTE**

- Depending on driving conditions, a closing power window could stop and start opening when the window feels a shock that is similar to something blocking it. In the event the jam-safe function activates and the power window cannot be closed automatically, pull and hold the switch fully and the window will close.
- The jam-safe window function does not operate until the system is re-initialized.

**Engine-off power window operation**

The power window can be operated for about 40 seconds after the ignition is switched from ON to ACC or OFF with all doors closed. If any door is opened, the power window will stop operating.

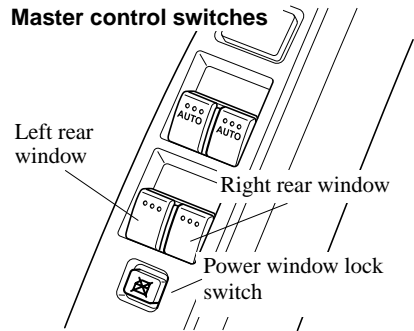
**NOTE**

- For engine-off operation of the power window, the switch must be held up firmly throughout window closure because the auto-closing function will be inoperable.
- The two-step down function is inoperable during engine-off operation.

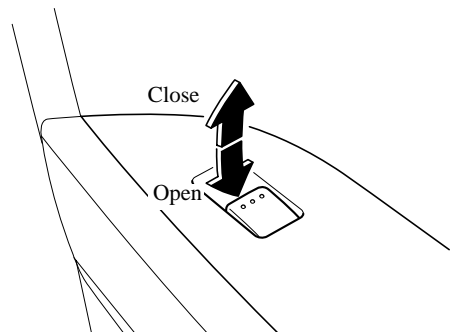
**▼ Operating the Rear Power Windows**

The power windows may be operated when the power window lock switch on the driver's door is in the unlocked position.

The rear power windows may be opened or closed using the master control switches on the driver's door.



To open the power window to the desired position, hold down the switch. To close the power window to the desired position, pull up the switch.



## Doors and Locks

### Engine-off power window operation

The power windows can be operated for about 40 seconds after the ignition is switched from ON to ACC or OFF with all doors closed. If any door is opened, the power windows will stop operating.

### ▼ Power Window Lock Switch

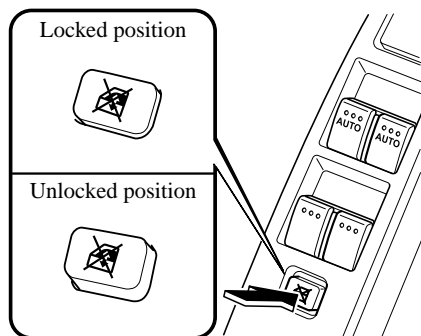
This feature prevents all power windows from operating, except the driver's power window. Keep this switch in the locked position while children are in the vehicle.

#### **Locked position (button not depressed):**

Only the driver's power window can be operated.

#### **Unlocked position (button depressed):**

All power windows on each door can be operated.



### ▼ Opening/Closing the Power Windows and the Moonroof from Outside

The front power windows and the moonroof can be opened or closed from outside the vehicle after the doors and the liftgate are closed.

The front power windows may be operated remotely when the power window lock switch on the driver's door is in the lock or unlocked position.

### **! WARNING**

**Make sure the opening is clear before closing a window and the moonroof:**

*Closing power windows and the moonroof are dangerous. A person's hands, head, or even neck could be caught by the window or the moonroof and result in serious injury or even death.*

*This warning applies especially to children.*

### **NOTE**

- *The power windows and the moonroof cannot be opened or closed from outside the vehicle under the following condition:*
  - *A door or the liftgate is opened.*
  - *The key is inserted into the ignition switch.*
  - *The ignition is in any position except OFF. (With advanced key)*
- *The power windows and the moonroof may not close completely. Make sure all the windows and the moonroof are closed.*

*If the power windows and the moonroof cannot be closed completely, operate each power window switch or the tilt/slide switch from inside the vehicle. After closing the windows and the moonroof from outside the vehicle, verify that they are completely closed.*

### **Opening**

Because nobody likes getting into a very hot car, Mazda has introduced a way to open the two front windows and the moonroof as you approach the vehicle to get the air moving before you get in.

**⚠ WARNING**

Use the remote auto-window and the auto-moonroof function only when you can see the vehicle and it is in a secure area:

Do not let children play with your keys. If they open the window and moonroof without your knowing, the open windows and moonroof are an even bigger invitation to a thief than leaving the doors unlocked.

The windows and moonroof can be opened for ventilating the cabin before getting in the vehicle.

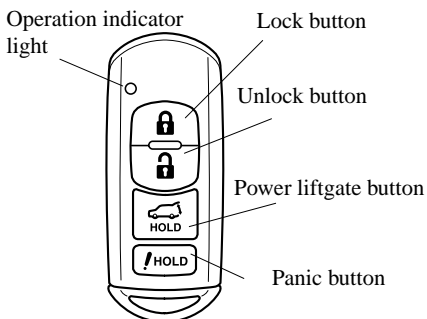
**With unlock button (Keyless entry system)**

Press the unlock button on the transmitter once, then press it again immediately and hold.

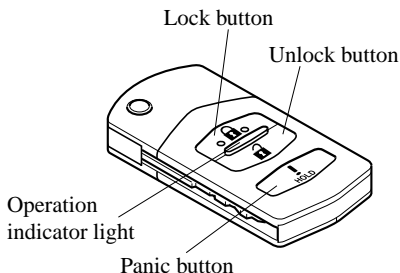
After the doors and the liftgate are unlocked, the two front windows and the moonroof open while the unlock button is pressed.

To stop the windows and the moonroof while opening, release the button. If the operation is performed from the beginning again, the windows and the moonroof open.

**Advanced key**



**Retractable type key**

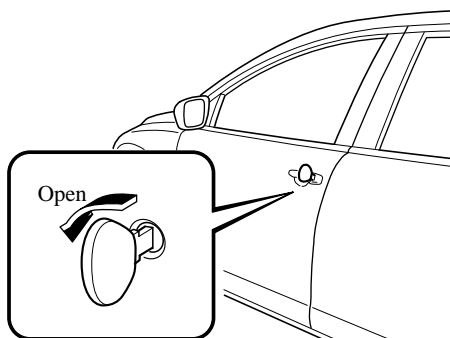


**NOTE**

- The unlock button does not operate unless it is pressed twice sequentially.
- The lock button cannot be used to close the power windows and the moonroof.

**With key**

1. Insert the key in the driver's door key cylinder.
2. Turn the key counterclockwise and hold until the windows and the moonroof are completely open. After the doors and the liftgate are unlocked, the windows and the moonroof fully open automatically.



## Doors and Locks

To stop this operation, turn the key to the center position, then turn it counterclockwise again.

### NOTE

*The window and the moonroof opening operation also can be stopped by turning the key clockwise. However, the doors and the liftgate will lock.*

### Closing

The windows and the moonroof can be closed in case they are left open after getting out of the vehicle.

### NOTE

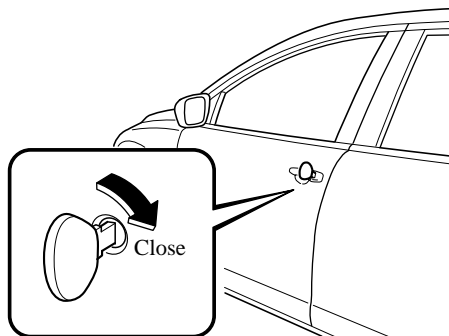
*(With advanced key)*

*If the auto-lock function (page 3-8) has been activated, the doors and the liftgate automatically lock as you walk away from the vehicle, however, the power windows and the moonroof cannot be closed. When leaving the vehicle, close the windows and the moonroof using the power window switch or the tilt or slide switch inside the vehicle, the key, or a request switch on the front door handles.*

### With key

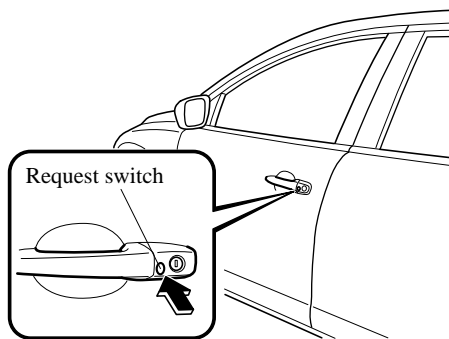
1. Insert the key in the driver's door key cylinder.

2. Turn the key clockwise and hold until the windows and the moonroof are completely closed. After the doors and the liftgate are locked, the windows and the moonroof close as long as the key is turned.



### With request switch on the driver's door (Advanced key)

1. If the doors and the liftgate are locked, unlock them.
2. Press and hold the request switch on the driver's door. After the doors and the liftgate are locked, the windows and the moonroof close as long as the request switch is pressed.



To stop the windows and the moonroof from closing, release the request switch. If the operation is performed from the beginning again, the windows and the moonroof close.

## Fuel-Filler Lid and Cap

### **WARNING**

***When removing the fuel-filler cap, loosen the cap slightly and wait for any hissing to stop. Then remove it:***

*Fuel spray is dangerous. Fuel can burn skin and eyes and cause illness if ingested. Fuel spray is released when there is pressure in the fuel tank and the fuel-filler cap is removed too quickly.*

***Before refueling, stop the engine, and always keep sparks and flames away from the filler neck:***

*Fuel vapor is dangerous. It could be ignited by sparks or flames causing serious burns and injuries.*

*Additionally, use of the incorrect fuel-filler cap or not using a fuel-filler cap may result in fuel leak, which could result in serious burns or death in an accident.*

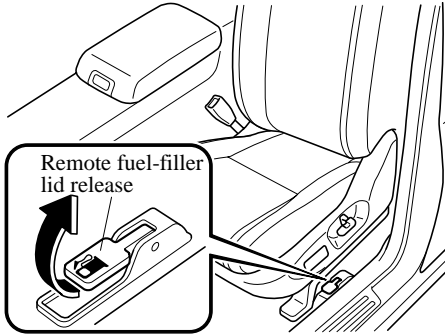
### **CAUTION**

*Always use only a genuine Mazda fuel-filler cap or an approved equivalent, available at an Authorized Mazda Dealer. The wrong cap can result in a serious malfunction of the fuel and emission control systems. It may also cause the check engine light in the instrument cluster to illuminate.*

## Doors and Locks

### ▼ Fuel-Filler Lid

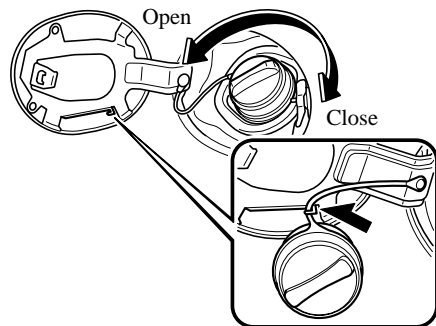
To open, pull the remote fuel-filler lid release.



### ▼ Fuel-Filler Cap

To remove the fuel-filler cap, turn it counterclockwise. Attach the removed cap to the inner side of the fuel lid.

To close the fuel-filler cap, turn it clockwise until two or more clicks are heard.



### ⚠ CAUTION

*If the check fuel cap warning light illuminates, the fuel-filler cap may not be properly installed. If the warning light illuminates, park your vehicle safely off the right-of-way, remove the fuel-filler cap and reinstall it correctly. After the cap has been correctly installed, the fuel cap warning light may continue to illuminate until a number of driving cycles have been completed. A drive cycle consists of starting the engine (after four or more hours with the engine off) and driving the vehicle on city and highway roads.*

*Continuing to drive with the check fuel cap warning light illuminated could cause the check engine light to illuminate as well.*



## Hood

### **⚠ WARNING**

**Always check that the hood is closed and securely locked:**

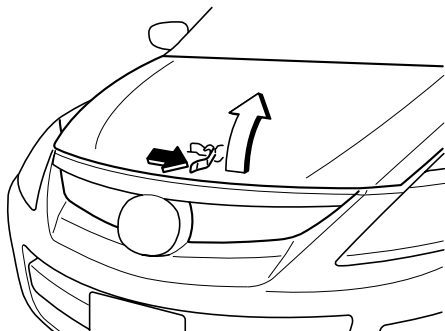
*A hood that is not closed and securely locked is dangerous as it could fly open while the vehicle is moving and block the driver's vision which could result in a serious accident.*

### ▼ Opening the Hood

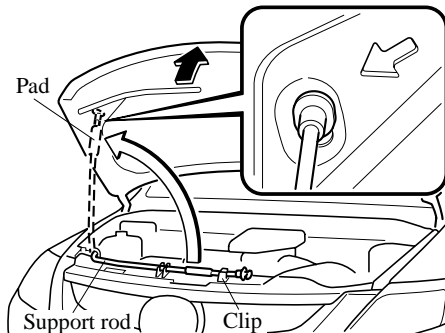
1. With the vehicle parked, pull the release handle to unlock the hood.



2. Insert your hand into the hood opening, slide the hood latch lever to the right, and lift the hood.



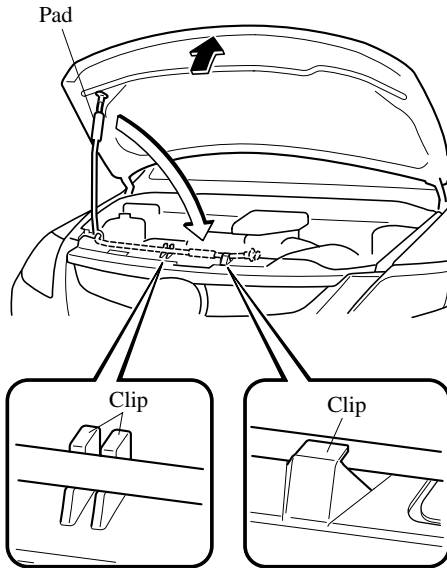
3. Grasp the support rod in the padded area and secure it in the support rod hole indicated by the arrow to hold the hood open.



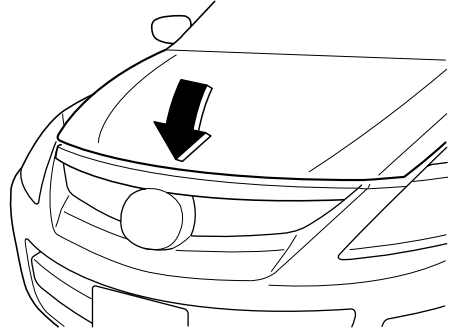
## Doors and Locks

### ▼ Closing the Hood

1. Check under the hood area to make certain all filler caps are in place and all loose items (e.g. tools, oil containers, etc.) have been removed.
2. Lift the hood, grasp the padded area on the support rod, and secure the support rod in the clip. Verify that the support rod is secured in the clip before closing the hood.

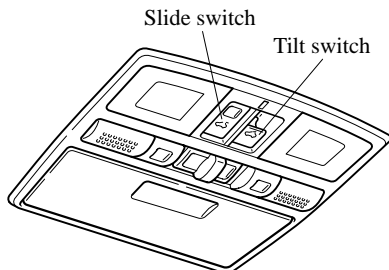


3. Lower the hood slowly until it rests in the unlocked position, and then remove your hands. Push the front center edge of the hood downward until a latching sound is heard, and the hood closes completely.



## Moonroof\*

The moonroof can be opened or closed electrically only when the ignition is switched ON.



### **⚠ WARNING**

**Do not let passengers stand up or extend part of their body through the open moonroof while the vehicle is moving:**

Extending the head, arms, or other parts of the body through the moonroof is dangerous. The head or arms could hit something while the vehicle is moving. This could cause serious injury or death.

**Make sure the opening is clear before closing the moonroof:**

A closing moonroof is dangerous. The hands, head, or even neck of a person—especially a child—could be caught in it as it closes, causing serious injury or even death.

### **NOTE**

Before washing your Mazda, make sure the moonroof is completely closed so that water does not get inside the cabin area. After washing your Mazda or after it rains, wipe the water off the moonroof before operating it to avoid water penetration which could cause rust and water damage to your headliner.

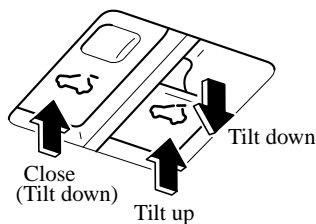
### **▼ Tilt Operation**

The rear of the moonroof can be tilted open to provide more ventilation.

To fully tilt automatically, momentarily press the tilt switch.

To fully close automatically, momentarily pull the tilt switch or press the front of the slide switch.

To stop tilting partway, press any part of the tilt or slide switch.



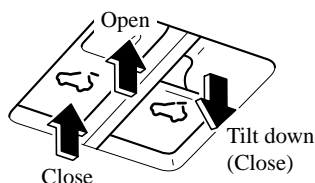
## Doors and Locks

### ▼ Slide Operation

To fully open automatically, momentarily press the rear of the slide switch.

To fully close automatically, momentarily press the front of the slide switch or pull the tilt switch.

To stop sliding partway, press any part of the tilt or slide switch.



### ▼ Power Moonroof Re-set Procedure

If the battery is disconnected, the moonroof will not operate. The moonroof will not operate correctly until it is re-set. Carry out the following procedure to re-set the moonroof and resume operation:

1. Switch the ignition ON.
2. Press the tilt switch, to partially tilt open the rear of the moonroof.
3. Repeat Step 2. The rear of the moonroof tilts open to the fully open position, then closes a little.

#### **NOTE**

*If the re-set procedure is performed while the moonroof is in the slide position (partially open) it closes before the rear tilts opens.*

### ▼ Engine-off Moonroof Operation

The moonroof can be operated for about 40 seconds after the ignition is switched from ON to ACC or switched off with all doors closed. If any door is opened, the moonroof will be inoperable.

### ▼ Opening/Closing the Moonroof from Outside

The moonroof can be opened or closed from outside the vehicle after the doors and the liftgate are closed.

Refer to Opening/Closing the Power Windows and the Moonroof from Outside on page 3-44.

### ▼ Jam-safe Moonroof

If a person's hands, head or an object blocks the moonroof during closing operation, the moonroof will stop and open halfway.

#### **⚠ WARNING**

***Make sure nothing blocks the moonroof just before it reaches the fully closed position:***

*Blocking the moonroof just before it reaches the closed position is dangerous.*

*In this case, the jam-safe function cannot prevent the moonroof from stopping. If fingers are caught, serious injuries could occur.*

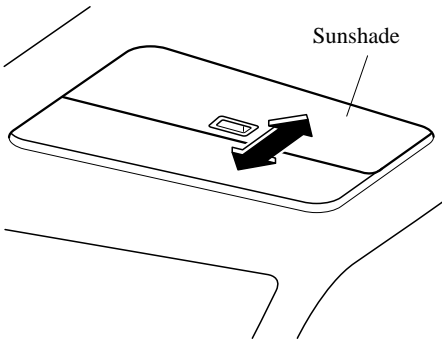
#### **NOTE**

- *Depending on driving conditions, a closing moonroof could stop and start opening when the moonroof feels a shock that is similar to something blocking it.*
- *The moonroof's jam-safe function does not function while the moonroof is initializing.*

### ▼ Sunshade

The sunshade can be opened and closed by hand.

The sunshade opens automatically when the moonroof is opened, but must be closed by hand.



### **⚠ CAUTION**

- *The sunshade does not tilt. To avoid damaging the sunshade, do not push up on it.*
- *Do not close the sunshade while the moonroof is opening. Trying to force the sunshade closed could damage it.*

## Security System

### Immobilizer System (with Advanced Key)

The immobilizer system allows the engine to start only with an advanced key the system recognizes.

If someone attempts to start the engine with an unrecognized advanced key, the engine will not start, thereby helping to prevent the theft of your vehicle.

If you have a problem with the immobilizer system or the advanced key (including auxiliary key), consult an Authorized Mazda Dealer.

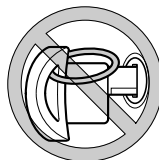
#### CAUTION

- Radio equipment like this is governed by laws in the United States. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
- To avoid damage to the key, do not:
  - Drop the key.
  - Get the key wet.
  - Expose the key to any kind of magnetic field.
  - Expose the key to high temperatures on places such as the dashboard or hood, under direct sunlight.

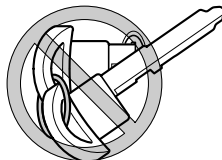
#### CAUTION

Do not allow the following when starting the engine with the auxiliary key due to an advanced key dead battery or other malfunction. Otherwise the signal from the auxiliary key will not be received correctly and the engine may not start.

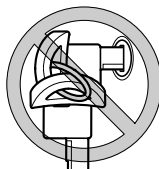
- A key ring rests on the auxiliary key grip.



- Metal parts of other keys or metal objects touch the auxiliary key grip.



- Spare auxiliary keys or keys for other vehicles equipped with an immobilizer system touch or come near the auxiliary key.



- *Devices for electronic purchases, or security passage which touch or come near the auxiliary key.*

**NOTE**

- *The advanced keys (including auxiliary key) carry a unique electronic code. For this reason, and to assure your safety, obtaining a replacement advanced key (including auxiliary key) requires some waiting time. They are only available through an Authorized Mazda Dealer.*
- *Always keep a spare advanced key in case one is lost. If an advanced key is lost, consult an Authorized Mazda Dealer as soon as possible.*
- *If you lose an advanced key (including auxiliary key), an Authorized Mazda Dealer will reset the electronic codes of your remaining advanced keys (including auxiliary keys) and immobilizer system. Bring all the remaining advanced keys (including auxiliary keys) to an Authorized Mazda Dealer to reset. Starting the vehicle with a key that has not been reset is not possible.*

# Security System

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## Declaration of Conformity

### **Immobilizer system**

(U.S.A)

FCC WARNING

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Note

\*This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

(CANADA)

This device complies with RSS-210 of Industry CANADA. Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

(MEXICO)

Este equipo opera a título secundario, consecuentemente, debe aceptar interferencias perjudiciales incluyendo equipos de la misma clase y puede no causar interferencias a sistemas operando a título primario

Sistema inmovilizador

Modelo : IMB111-02

**Sistema inmovilizador con marcado de confirmación por radio**

**COFETEL RCPMAIM05-614**

Sistema inmovilizador

Modelo : IMB111-03

**Sistema inmovilizador con marcado de confirmación por radio**

**COFETEL RCPMAIM05-935**



## ▼ Operation

### **Arming**

The system is armed when the ignition is switched from ON to ACC or OFF. The security indicator light in the instrument cluster flashes every 2 seconds until the system is disarmed.



### **Disarming**

The system is disarmed when the ignition is switched ON with the registered advanced key.

The security indicator light illuminates for about 3 seconds and goes out.

If the engine does not start with the correct advanced key, and the security indicator light keeps illuminating or flashing, the system may have a malfunction. Consult an Authorized Mazda Dealer.

### ***NOTE***

- *The engine may not start and the security indicator light may illuminate or flash if the advanced key is placed in an area where it is difficult for the system to detect the signal, such as on the dashboard, or in the glove box. Move the advanced key to another place, switch the ignition off, and then restart the engine.*
- *Signals from a TV or radio station, or from a transceiver or a mobile telephone could interfere with your immobilizer system. If you are using the proper advanced key and the engine fails to start, check the security indicator light. If the indicator light is flashing, switch the ignition to ACC or switch the ignition off and wait for a while, then restart the engine. If it does not start after 3 or more tries, contact an Authorized Mazda Dealer.*
- *If the security indicator light flashes continuously while you are driving, do not shut off the engine. Go to an Authorized Mazda Dealer and have it checked. If the engine is shut off while the indicator light is flashing, you will not be able to restart it.*
- *Since the electronic codes are reset when repairing the immobilizer system, the advanced key (including auxiliary key) are needed. Bring all the advanced keys (including auxiliary keys) to an Authorized Mazda Dealer.*

## Security System

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### ▼ Modification and Add-On Equipment

Mazda cannot guarantee the immobilizer system's operation if the system has been modified or if any add-on equipment has been installed.

#### CAUTION

*To avoid damage to your vehicle, do not modify the system or install any add-on equipment to the immobilizer system or the vehicle.*

### Immobilizer System (without Advanced Key)

The immobilizer system allows the engine to start only with a key the system recognizes.

If someone attempts to start the engine with an unrecognized key, the engine will not start, thereby helping to prevent the theft of your vehicle.

If you have a problem with the immobilizer system or the key, consult an Authorized Mazda Dealer.

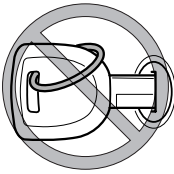
#### CAUTION

- *Radio equipment like this is governed by laws in the United States. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.*
- *To avoid damage to the key, do not:*
  - *Drop the key.*
  - *Get the key wet.*
  - *Expose the key to any kind of magnetic field.*
  - *Expose the key to high temperatures on places such as the dashboard or hood, under direct sunlight.*

**⚠ CAUTION**

When starting the engine do not allow the following, as the engine may not start due to the electronic signal from the ignition key not being transmitted correctly.

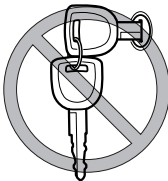
- A key ring rests on the key grip.



- Metal parts of other keys or metal objects touch the key grip.



- Spare keys or keys for other vehicles equipped with an immobilizer system touch or come near the key grip.



- Devices for electronic purchases, or security passage which touch or come near the key.

**NOTE**

- The keys carry a unique electronic code. For this reason, and to assure your safety, obtaining a replacement key requires some waiting time. They are only available through an Authorized Mazda Dealer.
- Always keep a spare key, in case one is lost. If a key is lost, contact an Authorized Mazda Dealer as soon as possible.
- If you lose a key, an Authorized Mazda Dealer will reset the electronic codes of your remaining keys and immobilizer system. Bring all the remaining keys to an Authorized Mazda Dealer to reset. Starting the vehicle with a key that has not been reset is not possible.

# Security System

---

## Declaration of Conformity

### **Immobilizer system**

(U.S.A)

FCC WARNING

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Note

\*This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

(CANADA)

This device complies with RSS-210 of Industry CANADA. Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

(MEXICO)

Este equipo opera a título secundario, consecuentemente, debe aceptar interferencias perjudiciales incluyendo equipos de la misma clase y puede no causar interferencias a sistemas operando a título primario

Sistema inmovilizador

Modelo : IMB111-02

**Sistema inmovilizador con marcado de confirmación por radio**

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Sistema inmovilizador

Modelo : IMB111-03

**Sistema inmovilizador con marcado de confirmación por radio**

**COFETEL RCPMAIM05-935**

## ▼ Operation

### Arming

The system is armed when the ignition is switched from ON to ACC or OFF. The security indicator light in the instrument cluster flashes every two seconds until the system is disarmed.



### Disarming

The system is disarmed when the ignition is switched ON with the correct ignition key. The security indicator light illuminates for about three seconds and goes out.

If the engine does not start with the correct ignition key, and the security indicator light keeps illuminating or flashing, the system may have a malfunction. Consult an Authorized Mazda Dealer.

### **NOTE**

- If the security indicator light illuminates and stays on or flashes when the ignition is switched ON, the engine will not start.
- Signals from a TV or radio station, or from a transceiver or a mobile telephone, could interfere with your immobilizer system. If you are using the proper key and your engine fails to start, check the security indicator light. If it is flashing, remove the ignition key and wait 2 seconds or more, then reinsert it and try starting the engine again. If it does not start after 3 or more tries, contact an Authorized Mazda Dealer.
- If the security indicator light flashes continuously while you are driving, do not shut off the engine. Go to an Authorized Mazda Dealer and have it checked. If you shut off the engine while the light is flashing you will not be able to restart it.
- Since the electronic codes are reset when repairing the immobilizer system, the keys are needed. Bring all the existing keys to an Authorized Mazda Dealer.

## ▼ Modification and Add-On Equipment

Mazda cannot guarantee the immobilizer system's operation if the system has been modified or if any add-on equipment has been installed.

### **⚠ CAUTION**

To avoid damage to your vehicle, do not modify the system or install any add-on equipment to the immobilizer system or the vehicle.

## Security System

### Theft-Deterrent System \*

If the theft deterrent system detects an inappropriate entry into the vehicle, which could result in the vehicle or its contents being stolen, the alarm alerts the surrounding area of an abnormality by sounding the horn and flashing the hazard warning lights.

Refer to Operation on page 3-62.

#### NOTE

- The theft-deterrent system operates with the advanced keyless function, keyless entry system or the auxiliary key.

*The system operates only when the driver is in the vehicle or within operational range while the advanced key is being carried.*

- The system will not function unless it is properly armed. To properly secure the vehicle, always make sure all windows are completely closed and all doors and the liftgate are locked before leaving the vehicle. Remember to take your advanced key.

#### ▼ Operation

##### What turns it on:

- Forcing open a door, the hood or the liftgate.
- Opening a door or the hood by operating an inside door-lock knob or the hood release handle.

##### What it does:

- The horn sounds intermittently and the hazard warning lights flash.
- The alarm continues for about 30 seconds, then stops.

If the system is triggered again, the lights and horn will activate until a door or the liftgate is unlocked with the key or with the transmitter.

#### NOTE

*If the battery goes dead while the theft-deterrent system is armed, the horn will activate and the hazard warning lights will flash when the battery is charged or replaced.*

#### ▼ How to Arm the System

1. Close the windows and the moonroof\* securely.

2. Remove the key from the ignition switch.

##### **(With advanced key)**

Switch the ignition off with the start knob.

3. Make sure all the windows, the moonroof\*, the hood are closed. Close and lock all doors and the liftgate from the outside using the key or press the lock button on your keyless entry system transmitter.


The hazard warning lights will flash once to indicate that the system is armed.

The following method will also arm the theft-deterrent system:

##### **(With advanced key)**

Press a request switch or the lock button on the transmitter.

##### **(Without advanced key)**

Close the hood and the liftgate. Press the area on the door-lock switch marked “” once. Close all doors.

The theft deterrent system can also be armed by activating the auto re-lock function with all the doors, the liftgate and the hood closed.

4. After 20 seconds, the system is fully armed.

## **NOTE**

### • **Auto re-lock function**

*After unlocking with the transmitter or the request switch, all doors and the liftgate will automatically lock and the hazard warning lights will flash if any of the following operations are not performed within about 30 seconds.*

- *A door or the liftgate is opened.*
- *The auxiliary key is inserted into the ignition switch (with advanced key).*
- *The key is inserted in the ignition switch.*
- *The start knob is pushed (with advanced key).*
- *The system will disarm if one of the following operations takes place within 20 seconds after closing the hood and locking all the doors and the liftgate:*
  - *Pressing the unlock button on the transmitter.*
  - *Any door or the liftgate is opened.*
  - *Unlocking a door with the inside door-lock knob.*
  - *Unlocking a door with the door lock switch.*
  - *Unlocking the driver's door with the key.*
  - *The hood is opened.*
  - *The key is inserted in the ignition switch.*
  - *The auxiliary key is inserted into the ignition switch (With advanced key).*
  - *The start knob is pressed into the ignition switch or a request switch is pressed (With advanced key).*
  - *The ignition is switched ON.**To rearm the system, do the arming procedure again.*
- *When the doors are locked by pressing the lock button on the transmitter or request switch on the front doors or using the key while the theft-deterrent system is armed, the hazard warning lights will flash once to indicate that the system is armed.*

## ▼ **To Turn off an Armed System**

An armed system can be turned off by any one of the following methods:

- Unlock a door with the key.
- Press the unlock button on the keyless entry system transmitter.
- Insert the key into the ignition switch and switch the ignition ON.
- **(With advanced key)**
  - Press a request switch or the unlock button on the transmitter.
  - Switch the ignition ON with the start knob.

The hazard warning lights will flash twice to indicate that the system is turned off.

## **NOTE**

*When the doors are unlocked by pressing the unlock button on the transmitter or request switch on the front doors or using the key while the theft-deterrent system is turned off, the hazard warning lights will flash twice to indicate that the system is turned off.*

## ▼ **To Stop an Alarm**

A triggered alarm can be turned off by any one of the following methods:

- Unlock a door or the liftgate with the key.
- Press the unlock button on the keyless entry system transmitter.
- The engine is started with the ignition key.
- **(With advanced key)**
  - Press a request switch.
  - Press the unlock button on the transmitter.
  - The engine is started with the start knob.

## Security System

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**NOTE**

*If you have any problem with the theft-deterrent system, consult an Authorized Mazda Dealer.*

▼ **Theft-Deterrent Labels**



A label indicating that your vehicle is equipped with a Theft-Deterrent System is in the glove compartment.

Mazda recommends that you affix it to the lower rear corner of a front door window.



## Steering Wheel and Mirrors

### Steering Wheel

#### **⚠ WARNING**

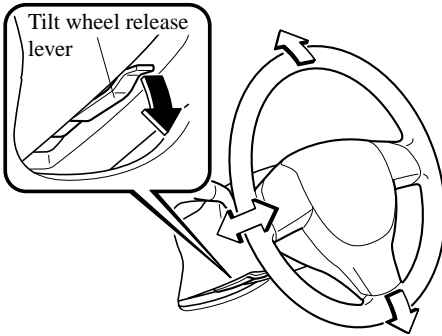
**Never adjust the steering wheel while the vehicle is moving:**

*Adjusting the steering wheel while the vehicle is moving is dangerous. Moving it can very easily cause the driver to abruptly turn to the left or right. This can lead to loss of control or an accident.*

#### ▼ Steering Wheel Adjustment

To change the angle or length of the steering wheel:

1. Stop the vehicle, pull down the lock release lever under the steering column.



2. Tilt the steering wheel and/or adjust the steering column length to the desired positions, push the lever up to lock the column.
3. Push the wheel up and down to be certain it's locked before driving.

### Mirrors

#### ▼ Outside Mirrors

Check the mirror angles before driving.

#### Mirror type

The mirror combination (flat or convex) installed on the driver and front passenger sides varies depending on the vehicle models.

#### **Flat type**

Flat surface mirror.

#### **Convex type**

The mirror has single curvature on its surface.

#### **⚠ WARNING**

**Be sure to look over your shoulder before changing lanes:**

*Changing lanes without taking into account the actual distance of the vehicle in the convex mirror is dangerous. You could have a serious accident. What you see in the convex mirror is closer than it appears.*

#### Power mirror

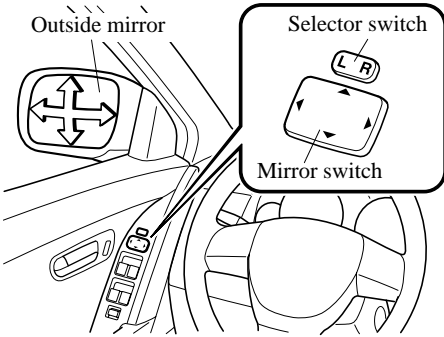
The ignition must be switched to ACC or ON.

To adjust:

1. Press the left or right side of the selector switch to choose the left or right side mirror.

# Steering Wheel and Mirrors

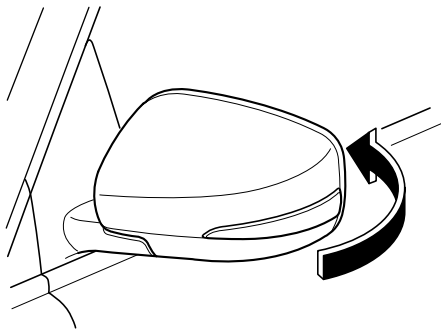
2. Depress the mirror switch in the appropriate direction.



After adjusting the mirror, lock the control by placing the selector switch in the center position.

### **Folding the mirror**

Fold the outside mirror rearward until it is flush with the vehicle.



### **! WARNING**

**Always return the outside mirrors to the driving position before you start driving:**

*Driving with the outside mirrors folded in is dangerous. Your rear view will be restricted, and you could have an accident.*

### **▼ Rearview Mirror**

### **! WARNING**

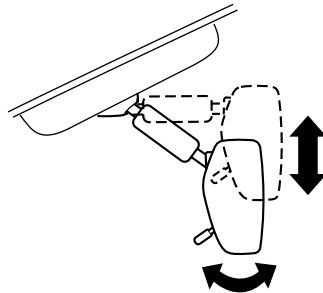
**Do not stack cargo or objects higher than the seatbacks:**

*Cargo stacked higher than the seatbacks is dangerous. It can block your view in the rearview mirror, which might cause you to hit another car when changing lanes.*

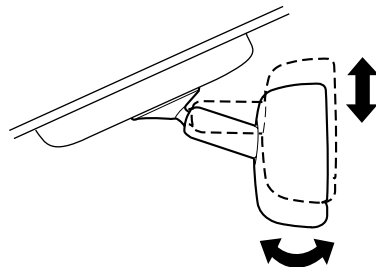
### **Rearview mirror adjustment**

Before driving, adjust the rearview mirror to center on the scene through the rear window.

### **Manual day/night mirror**



### **Auto-dimming mirror**



## Steering Wheel and Mirrors

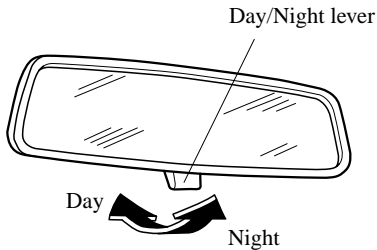
### **NOTE**

For the manual day/night mirror, perform the adjustment with the day/night lever in the day position.

### **Reducing glare from headlights**

#### **Manual day/night mirror**

Push the day/night lever forward for day driving. Pull it back to reduce glare of headlights from cars at the rear.

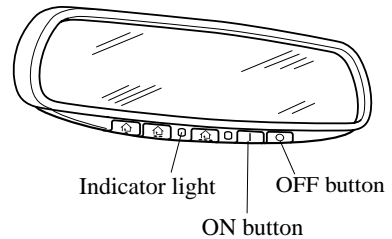


#### **Auto-dimming mirror**

The auto-dimming mirror automatically reduces glare of headlights from cars at the rear when the ignition is switched ON.

Press the OFF button (○) to cancel the automatic dimming function. The indicator light will turn off.

To reactivate the automatic dimming function, press the ON button (⊥). The indicator light will illuminate.

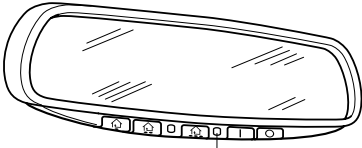


## Steering Wheel and Mirrors

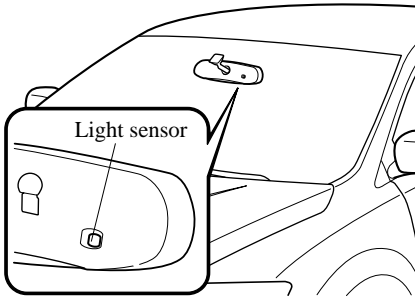
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


### NOTE

- Do not use glass cleaner or suspend objects on or around the light sensor. Otherwise, light sensor sensitivity will be affected and may not operate normally.



Light sensor



- For information regarding the 3 buttons (  ,  ,  ) on the auto-dimming mirror, refer to HomeLink Wireless Control System (page 5-75).
- The auto-dimmer function is canceled when the ignition is switched ON and the shift lever-selector lever is in reverse (R).

# 4

## Before Driving Your Mazda

Important information about driving your Mazda.

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## Fuel and Engine Exhaust Precautions

### Fuel Requirements

Vehicles with catalytic converters or oxygen sensors must use **ONLY UNLEADED FUEL**, which will reduce exhaust emissions and keep spark plug fouling to a minimum.

Fuel with a lower rating could cause the emission control system to lose effectiveness. It could also cause engine knocking and serious engine damage.

Your Mazda will perform best with fuel listed in the table.

Fuel	Octane Rating* (Anti-knock index)
Regular unleaded fuel	87 [(R+M)/2 method] or above (91 RON or above)

\* U.S. federal law requires that octane ratings be posted on gasoline station pumps.

Fuel with a rating lower than 87 octane (91 RON) could cause the emission control system to lose effectiveness. It could also cause engine knocking and serious engine damage.

#### CAUTION

- **USE ONLY UNLEADED FUEL.**  
*Leaded fuel is harmful to the catalytic converter and oxygen sensors and will lead to deterioration of the emission control system and or failures.*
- *Your vehicle can only use oxygenated fuels containing no more than 10 % ethanol by volume. Damage to your vehicle may occur when ethanol exceeds this recommendation, or if the gasoline contains any methanol. Stop using gasohol of any kind if your vehicle engine is performing poorly.*
- *Never add fuel system additives. Otherwise, the emission control system could be damaged. Consult an Authorized Mazda Dealer for details.*

Gasoline blended with oxygenates such as alcohol or ether compounds are generally referred to as oxygenated fuels. The common gasoline blend that can be used with your vehicle is ethanol blended at no more than 10%. Gasoline containing alcohol, such as ethanol or methanol, may be marketed under the name “Gasohol”.

Vehicle damage and drivability problems resulting from the use of the following may not be covered by the Mazda warranty.

- Gasoline containing more than 10% ethanol.
- Gasoline or gasohol containing methanol.
- Leaded fuel or leaded gasohol.

# Fuel and Engine Exhaust Precautions

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## Emission Control System

Your vehicle is equipped with an emission control system (the catalytic converter is part of this system) that enables your vehicle to comply with existing exhaust emissions requirements.

### **WARNING**

**Never park over or near anything flammable:**

*Parking over or near anything flammable, such as dry grass, is dangerous. Even with the engine turned off, the exhaust system remains very hot after normal use and could ignite anything flammable. A resulting fire could cause serious injury or death.*

### **CAUTION**

*Ignoring the following precautions could cause lead to accumulate on the catalyst inside the converter or cause the converter to get very hot. Either condition will damage the converter and cause poor performance.*

- **USE ONLY UNLEADED FUEL.**
- *Do not drive your Mazda with any sign of engine malfunction.*
- *Do not coast with the ignition switched off.*
- *Do not descend steep grades in gear with the ignition switched off.*
- *Do not operate the engine at high idle for more than 5 minutes.*
- *Do not tamper with the emission control system. All inspections and adjustments must be made by a qualified technician.*
- *Do not push-start or pull-start your vehicle.*

### **NOTE**

*Under U.S. federal law, any modification to the original-equipment emission control system before the first sale and registration of a vehicle is subject to penalties. In some states, such modification made on a used vehicle is also subject to penalties.*

## Fuel and Engine Exhaust Precautions

---

### Engine Exhaust (Carbon Monoxide)

#### **WARNING**

**Do not drive your vehicle if you smell exhaust gas inside the vehicle:**

*Engine exhaust gas is dangerous. This gas contains carbon monoxide (CO), which is colorless, odorless, and poisonous. When inhaled, it can cause loss of consciousness and death. If you smell exhaust gas inside your vehicle, keep all windows fully open and contact an Authorized Mazda Dealer immediately.*

**Do not run the engine when inside an enclosed area:**

*Running the engine inside an enclosed area, such as a garage, is dangerous. Exhaust gas, which contains poisonous carbon monoxide, could easily enter the cabin. Loss of consciousness or even death could occur.*

**Open the windows or adjust the heating or cooling system to draw fresh air when idling the engine:**

*Exhaust gas is dangerous. When your vehicle is stopped with the windows closed and the engine running for a long time even in an open area, exhaust gas, which contains poisonous carbon monoxide, could enter the cabin. Loss of consciousness or even death could occur.*

**Clear snow from underneath and around your vehicle, particularly the tail pipe, before starting the engine:**

*Running the engine when a vehicle is stopped in deep snow is dangerous. The exhaust pipe could be blocked by the snow, allowing exhaust gas to enter the cabin. Because exhaust gas contains poisonous carbon monoxide, it could cause loss of consciousness or even death to occupants in the cabin.*



## Before Starting the Engine

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### Before Getting In

- Be sure the windows, outside mirrors, and outside lights are clean.
- Inspect inflation pressures and condition of tires.
- Look under the vehicle for any sign of fluid leaks.
- If you plan to back up, make sure nothing is in your way.

#### **NOTE**

*Engine oil, engine coolant, brake fluid, washer fluid, and other fluid levels should be inspected. See Maintenance, Section 8.*

### After Getting In

- Are all doors closed and locked?
- Is the seat adjusted properly?
- Are the inside and outside mirrors adjusted?
- Is the steering wheel adjusted properly?
- Is everyone's seat belt fastened?
- Check all gauges.
- Check all warning lights when the ignition is switched ON.
- Release the parking brake and make sure the brake warning light goes off.

Always be thoroughly familiar with your Mazda.

## Driving Tips

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### Break-In Period

No special break-in is necessary, but a few precautions in the first 1,000 km (600 miles) may add to the performance, economy, and life of your Mazda.

- Do not race the engine.
- Do not maintain one constant speed, either slow or fast, for a long period of time.
- Do not drive constantly at full-throttle or high engine rpm for extended periods of time.
- Avoid unnecessary hard stops.
- Avoid full-throttle starts.
- Do not tow a trailer.

### Money-Saving Suggestions

How you operate your Mazda determines how far it will travel on a tank of fuel. Use these suggestions to help save money on fuel and repairs.

- Avoid long warm-ups. Once the engine runs smoothly, begin driving.
- Avoid fast starts.
- Keep the engine tuned. Follow the maintenance schedule (page 8-3) and have an Authorized Mazda Dealer perform inspections and servicing.
- Use the air conditioner only when necessary.
- Slow down on rough roads.
- Keep the tires properly inflated.
- Do not carry unnecessary weight.
- Do not rest your foot on the brake pedal while driving.
- Keep the wheels in correct alignment.
- Keep windows closed at high speeds.
- Slow down when driving in crosswinds and headwinds.

### WARNING

***Never stop the engine when going down a hill:***

*Stopping the engine when going down a hill is dangerous. This causes the loss of power steering and power brake control, and may cause damage to the drivetrain. Any loss of steering or braking control could cause an accident.*

## Hazardous Driving

### ▼ Driving on Slippery Surface

#### **⚠ WARNING**

**Be extremely careful if it is necessary to downshift on slippery surfaces:**

*Downshifting into lower gear while driving on slippery surfaces is dangerous. The sudden change in tire speed could cause the tires to skid. This could lead to loss of vehicle control and an accident.*

**Do not rely on ABS or RSC as a substitute for safe driving:**

*The ABS and RSC cannot compensate for unsafe and reckless driving, excessive speed, tailgating (following another vehicle too closely), driving on ice and snow, and hydroplaning (reduced tire friction and road contact because of water on the road surface). You can still have an accident.*

When driving on ice or in water, snow, mud, sand, or similar hazards:

- Be cautious and allow extra distance for braking.
- Avoid sudden braking and sudden maneuvering.
- Do not pump the brakes. Continue to press down on the brake pedal.
- If you get stuck, select a lower gear and accelerate slowly. Do not spin the front wheels.
- Do not perform abrupt maneuvers when the road surface changes (such as from a paved road to gravel) because the reaction of the vehicle against the driving operation changes.

- For more traction in starting on slippery surfaces such as ice or packed snow, use sand, rock salt, chains, carpeting, or other nonslip material under the front wheels.

#### **NOTE**

*Use snow chains only on the front wheels.*

## Driving Tips

---

### ▼ Roll-over

#### **WARNING**

**Avoid sharp turns, excessive speed and abrupt maneuvers when driving this vehicle:**

*Sharp turns, excessive speed and abrupt maneuvering of this vehicle is dangerous as it could result in the increased risk of loss of vehicle control, vehicle roll-over, personal injury or death.*

*This vehicle has a higher center of gravity. Vehicles with a higher center of gravity such as utility and AWD vehicles handle differently than vehicles with a lower center of gravity.*

*Utility and AWD vehicles are not designed for cornering at high speeds any more than low profile sports cars are designed to perform satisfactorily under off-road conditions. In addition, utility vehicles have a significantly higher rollover rate than other types of vehicles.*

*RSC might help if you get into trouble, but then it might not be able to allow you to fully recover, always drive carefully with the vehicle's height in mind.*

**Drive carefully when the vehicle is loaded by lowering vehicle speed and applying the brakes earlier:**

*Abrupt maneuvering and sudden braking when driving a loaded vehicle is dangerous as the driving behavior of a vehicle with a high center of gravity is different when it is loaded compared to when it is not, and could result in the loss of vehicle control and an accident.*

### ▼ Emergency Maneuvering

#### **WARNING**

**Do not perform abrupt maneuvers when driving the vehicle in an emergency situation:**

*Performing abrupt maneuvers even when driving in an emergency situation is dangerous as it could reduce vehicle stability and operability resulting in an accident. Operate the accelerator pedal, brake pedal, and the steering wheel smoothly.*

## Floor Mat

### **⚠ WARNING**

*Make sure the floor mats are hooked on the retention pins to prevent them from bunching up under the foot pedals:*

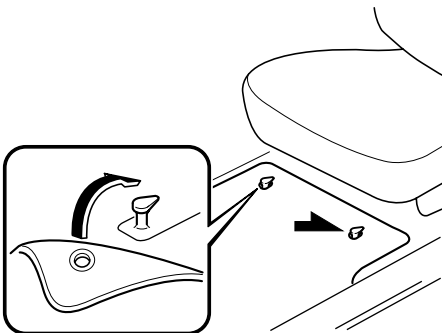
*Using a floor mat that is not secured is dangerous as it will interfere with the accelerator and brake pedal operation, which could result in an accident.*

**Do not install two floor mats, one on top of the other, on the driver's side:**

*Installing two floor mats, one on top of the other, on the driver's side is dangerous as the retention pins can only keep one floor mat from sliding forward.*

*In using a heavy duty floor mat for winter use always remove the original floor mat.*

*Loose floor mat(s) will interfere with the foot pedal and could result in an accident.*



When setting a floor mat, position the floor mat so that its eyelets are inserted over the pointed end of the retention posts.

## Rocking the Vehicle

### **⚠ WARNING**

*Do not spin the wheels at more than 56 km/h (35 mph), and do not allow anyone to stand behind a wheel when pushing the vehicle:*

*When the vehicle is stuck, spinning the wheels at high speed is dangerous. The spinning tire could overheat and explode. This could cause serious injuries.*

### **⚠ CAUTION**

*Too much rocking may cause engine overheating, transaxle failure, and tire damage.*

If you must rock the vehicle to free it from snow, sand or mud, depress the accelerator slightly and slowly move the shift lever from D to R.

## Driving Tips

---

### Winter Driving

- Carry emergency gear, including tire chains, window scraper, a small shovel, jumper cables, and a small bag of sand or salt.

Ask an Authorized Mazda Dealer to perform the following precautions:

- Have the proper ratio of antifreeze in the radiator.  
Refer to Engine Coolant on page 8-21.
- Inspect the battery and its cables. Cold reduces battery capacity.
- Inspect the ignition system for damage and loose connections.
- Use washer fluid made with antifreeze—but do not use engine coolant antifreeze for washer fluid (page 8-24).
- Do not use the parking brake in freezing weather as it may freeze. Instead, shift to P and block the rear wheels.
- Do not apply excessive force to a window scraper when removing ice or frozen snow on the mirror glass and windshield.
- Never use warm or hot water for removing snow or ice from windows and mirrors as it could result in the glass cracking.
- Braking performance can be adversely affected if snow or ice adheres to the brake equipment. If this situation occurs, drive the vehicle slowly, releasing the accelerator pedal and lightly applying the brakes several times until the brake performance returns to normal.

### ▼ Snow Tires

#### **Use snow tires on all four wheels**

Do not go faster than 120 km/h (75 mph) while driving with snow tires. Inflate snow tires 30 kPa (0.3 kgf/cm<sup>2</sup>, 4.3 psi) more than recommended on the tire pressure label (driver's door frame), but never more than the maximum cold-tire pressure shown on the tires.

#### **Except 18-inch tires**

Your vehicle is originally equipped with all season radials designed to be used all year around. In some extreme climates you may find it necessary to replace them with snow tires during the winter months to further improve traction on snow and ice covered roads.

#### **WARNING**

***Use only the same size and type tires (snow, radial, or non-radial) on all four wheels:***

*Using tires different in size or type is dangerous. Your vehicle's handling could be greatly affected and result in an accident.*

#### **CAUTION**

*Check local regulations before using studded tires.*

#### ***NOTE***

*If your vehicle is equipped with the tire pressure monitoring system, the system may not function correctly when using tires with steel wire reinforcement in the sidewalls (page 5-32).*

## ▼ Tire Chains

Check local regulations before using tire chains.

### CAUTION

- Chains may affect handling.
- Do not go faster than 50 km/h (30 mph) or the chain manufacturer's recommended limit, whichever is lower.
- Drive carefully and avoid bumps, holes, and sharp turns.
- Avoid locked-wheel braking.
- Do not use chains on a temporary spare tire; it may result in damage to the vehicle and to the tire.
- Do not use chains on roads that are free of snow or ice. The tires and chains could be damaged.
- Chains may scratch or chip aluminum wheels.

### NOTE

- Use of tire chains on a vehicle equipped with P245/50R20 specification tires could cause interference with the vehicle body and scratching. If tire chains are to be used, replace both front and rear tires with P 245/60R18 tires. Please consult an Authorized Mazda Dealer.
- If your vehicle is equipped with the tire pressure monitoring system, the system may not function correctly when using tire chains.

Install the chains on the front tires.  
Do not use chains on the rear tires.  
Please consult an Authorized Mazda Dealer.

## Installing the chains

1. Secure the chains on the front tires as tightly as possible. Always follow the chain manufacturer's instructions.
2. Retighten the chains after driving 1/2 — 1 km (1/4—1/2 mile).

## Driving Tips

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### Driving In Flooded Area

#### **WARNING**

*Dry wet brakes by driving very slowly and applying the brakes lightly until brake performance returns to normal:*

*Driving with wet brakes is dangerous. Increased stopping distance or the vehicle pulling to one side when braking could result in a serious accident. Light braking will indicate whether the brakes have been affected.*

#### **CAUTION**

*Do not drive the vehicle on flooded roads as it could cause short circuiting of electrical/electronic parts, or engine damage or stalling from water absorption. If the vehicle has been immersed in water, consult an Authorized Mazda Dealer.*

### Overloading

#### **WARNING**

*Be careful not to overload your vehicle:*

*The gross axle weight rating (GAWR) and the gross vehicle weight rating (GVWR) of your vehicle are on the Motor Vehicle Safety Standard Label on the driver's door frame. Exceeding these ratings can cause an accident or vehicle damage. You can estimate the weight of your load by weighing the items (or people) before putting them in the vehicle.*

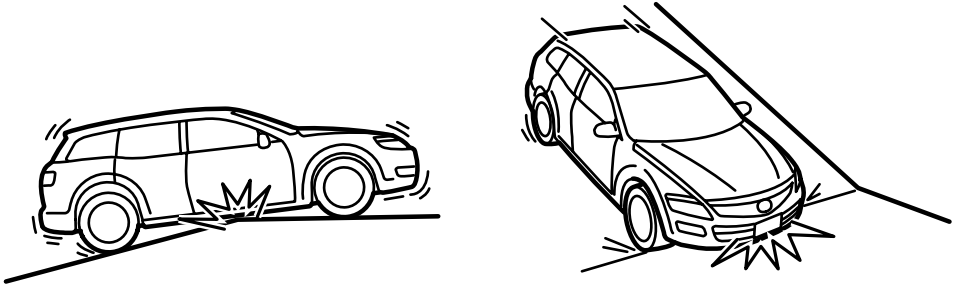


## Driving on Uneven Road

Your vehicle's suspension and underbody can be damaged if driven on rough/uneven roads or over speed bumps at excessive speeds. Use care and reduce speed when traveling on rough/uneven roads or over speed bumps.

Use care not to damage the vehicle's underbody, bumpers or muffler(s) when driving under the following conditions:

- Ascending or descending a slope with a sharp transition angle
- Ascending or descending a driveway or trailer ramp with a sharp transition angle



Your vehicle is equipped with low profile tires allowing class-leading performance and handling. As a result, the sidewall of the tires are very thin and the tires and wheels can be damaged if driven through potholes or on rough/uneven roads at excessive speeds. Use care and reduce speed when traveling on rough/uneven roads or through potholes.

## Towing

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### Trailer Towing (U.S.A. and Canada)

Your Mazda was designed and built primarily to carry passengers and cargo.

If you tow a trailer, follow these instructions because driver and passenger safety depends on proper equipment and safe driving habits. Towing a trailer will affect handling, braking, durability, performance, and economy.

Never overload vehicle or trailer. Consult an Authorized Mazda Dealer if you need further details.

#### CAUTION

*Do not tow a trailer during the first 1,000 km (600 miles) of your new Mazda. If you do, you may damage the engine, transaxle, differential, wheel bearings, and other power train components.*

#### ▼ Weight Limits

##### TTW and GCWR

The total trailer weight (TTW), gross combination weight rating (GCWR), gross axle weight rating (GAWR), trailer load, and trailer tongue load must be within the prescribed limits.

- The total trailer weight (TTW) is the sum of the weights of the trailer load (trailer weight plus cargo), trailer hitch, vehicle passengers, and vehicle load. Never allow the total trailer weight (TTW) to exceed specifications in the Trailer Towing-Load Table.
- The maximum GCWR is the combination weight of the trailer and load plus the towing vehicle (including trailer hitch, vehicle passengers, and load). It must not exceed specifications in the load table.

##### GAWR and GVWR

Do not exceed front and rear GAWR (gross axle weight rating) and GVWR (gross vehicle weight rating). If you do, vehicle handling, braking, and performance will be affected.

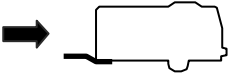


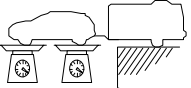

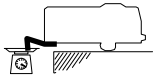
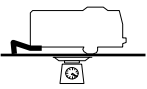
These values are also on the Motor Vehicle Safety Certification Label posted on the driver's door frame.

**High-altitude operation**


In a high-altitude operating environment, a gasoline engine loses power at a rate of 3 % to 4 % per 304 m (1,000 ft) of elevation. In these conditions, a reduction in gross vehicle weight and gross combination weight is recommended.

**TRAILER TOWING-LOAD TABLE**

Because vehicle weights vary, adjustments must be made to meet the requirements in this table.

Item		Model	
		Without Towing Package	With Towing Package
MAX. FRONTAL AREA		2.97 m <sup>2</sup> (32 ft <sup>2</sup> )	4.65 m <sup>2</sup> (50 ft <sup>2</sup> )
MAX. TTW	Add trailer's weight, load and hitch; vehicle passengers and vehicle load* <sup>1</sup> 	907 kg (2,000 lb)	1,588 kg (3,500 lb)
MAX. GCWR		3,105 kg* <sup>2</sup> (6,845 lb)	3,786 kg* <sup>2</sup> (8,347 lb)
		3,202 kg* <sup>3</sup> (7,059 lb)	3,883 kg* <sup>3</sup> (8,560 lb)
MAX. GAWR		Front	1,276 kg* <sup>2</sup> (2,813 lb)
			1,307 kg* <sup>3</sup> (2,881 lb)
		Rear	1,400 kg* <sup>2</sup> (3,086 lb)
			1,458 kg* <sup>3</sup> (3,214 lb)
MAX. GVWR		2,645 kg* <sup>2</sup> (5,831 lb)	
TRAILER-TONGUE LOAD	Tongue load		Tongue load/Trailer load × 100 = 10 % to 15 %
	Trailer load		

# Towing

	Item	Model	
		Without Towing Package	With Towing Package
<b>DISTRIBUTION OF TRAILER LOAD</b>		Front	60 %
		Rear	40 %

GCWR: Gross Combination Weight Rating (sum of TTW, vehicle weights and 2 passengers)

GAWR: Gross Axle Weight Rating

GVWR: Gross Vehicle Weight Rating

\*1 i.e. baggage, food, camp gear

\*2 2WD

\*3 AWD

## **⚠ WARNING**

**Always keep tow loads within specified limits as indicated in the Trailer Towing-Load Table:**

*Attempting to tow loads greater than those specified is dangerous as it may cause serious handling and performance problems that could result in personal injury or vehicle damage, or both.*

**Load your trailer with the weight about 60 % toward the front and 40 % toward the rear:**

*Loading the trailer with more weight in the rear than in the front is dangerous. Doing so could cause you to lose control. The trailer tongue load must be 10 %—15 % of the total trailer load (sum of the weights of the trailer and cargo).*

**Always have the total trailer weight and tongue load determined prior to departure:**

*Attempting to tow loads without determining the total trailer weight and tongue load is dangerous. Trailer sway from crosswinds, rough roads or other causes could result in loss of control and a serious accident.*

## **⚠ CAUTION**

*The total trailer weight and tongue load can be determined by weighing the trailer on platform scales at a highway weight station or a trucking company.*

### ▼ Trailer Hitch

Use only a hitch ball recommended by the trailer manufacturer that conforms to the gross trailer weight requirement.

When not towing a trailer, remove the trailer hitch (if detachable) to reduce the possibility of damage as a result of the vehicle being rear-ended.

**⚠ WARNING**

**Always make sure the trailer hitch is securely attached before departure:**

*An unsecured trailer hitch is dangerous as it causes greater trailer sway from crosswinds, rough roads or other causes, resulting in loss of control and a serious accident.*

*Examine all trailer-hitch mounting bolts regularly and tighten any that are loose. If the hitch is removed, seal any open mounting holes to prevent exhaust, dust, water, dirt and other foreign elements from filtering in, possibly endangering personal safety and damaging your vehicle.*

*Do not install a hitch that stiffens the bumper as it will reduce the bumper's performance.*

**Make sure there are no exhaust gas leaks into the passenger compartment if any mounting bolts are connected to the body:**

*Modifying your vehicle exhaust system is dangerous. Exhaust gas entering the vehicle could cause loss of consciousness or even death.*

*When mounting the trailer hitch, make no modifications to the vehicle exhaust system.*

**⚠ CAUTION**

- *Make all hitch adjustments with actual loads. Do not load and unload vehicle while adjusting hitch. This action will change the vehicle height.*
- *Do not use an axle-mounted hitch. This may damage the axle and related parts.*

**▼ Tires**

When towing a trailer, make sure all tires are inflated to the recommended cold-tire pressure, as indicated on the tire pressure chart on the driver's door frame. Trailer tire size, load rating, and inflation pressures should conform to tire manufacturer specifications.

**⚠ WARNING**

**Never use the temporary spare tire when towing:**

*Using the temporary spare tire on your vehicle when towing a trailer is dangerous as it could result in tire failure, loss of control, and injury to vehicle occupants.*

## Towing

---

### ▼ Safety Chains

Safety chains must be used as a precautionary measure should the trailer become unintentionally unhitched. They should cross under the trailer tongue and attach to the hitch. Leave enough slack to allow full turns. Consult literature published by your trailer or hitch manufacturer for more details.

#### **WARNING**

**Make sure the safety chain is securely attached to both the trailer and the vehicle prior to departure:**

*Towing a trailer without using a safety chain securely attached to both the trailer and the vehicle is dangerous. If damage occurs to the coupling unit or hitch ball, the trailer could wander into another lane and cause a collision.*

### ▼ Trailer Lights

Trailer lights must comply with all federal, state, and local regulations. Equip your trailer as required before towing it day or night.

#### **CAUTION**

*Do not connect a trailer lighting system directly to the lighting system of your Mazda. This may damage your vehicle's electrical system and lighting systems. Have a recreational vehicle dealer or trailer rental agency connect the system, and inspect the brake lights and turn signals yourself before each trip.*

### ▼ Trailer Brakes

If the total trailer weight exceeds 450 kg (1,000 lb), trailer brakes are required. If your trailer has brakes, make sure they comply with all federal, state, and local regulations.

#### **WARNING**

**Do not connect a hydraulic trailer-brake system to your vehicle's brake system:**  
*Connecting a hydraulic trailer-brake system directly to the vehicle brake system is dangerous and will result in inadequate braking and possible injury.*

### ▼ Trailer Towing Tips

- Verify that your Mazda maintains a near-normal attitude when a loaded or unloaded trailer is connected. Do not drive if it has an abnormal front-up or front-down position. Inspect for incorrect tongue load, worn suspension parts, and trailer overloading.
- Make sure the trailer is properly loaded and the cargo is secure to prevent it from shifting.
- Make sure the mirrors conform to all government regulations. If they do not, install required rear view mirrors appropriate for towing purposes.

The three main causes of vehicle-trailer accidents are driver error, excessive speed, and improper trailer loading.

### **Before driving**

- Have your cooling and braking system checked by an Authorized Mazda Dealer.
- Before starting out, inspect the operation of all vehicle and trailer lights and all vehicle-to-trailer connections. Stop and re-inspect all lights and connections after driving a short distance.

### **Driving**

- Your Mazda will handle differently with a trailer in tow, so practice turning, backing, and stopping in a traffic-free area.
- Take time to get accustomed to the extra weight and length.
- Allow more room between your vehicle and the one in front because braking distance increases with a trailer. For each 16 km/h (10 mph) of speed, allow at least one vehicle and trailer length between your Mazda and the vehicle ahead.
- Avoid jerky starts or sudden acceleration.
- Avoid sudden braking. It may cause loss of control and result in jackknifing, especially so on wet or slippery roads.
- Shift the shift lever to the D position when towing a trailer in hilly terrain or when heavily loaded.

The D position will allow operating the vehicle without frequent shifting.

### **Lane changes and turning**

Avoid quick lane changes, sudden turns, and tight turns. Slow down before turning to avoid the need of sudden braking.

A turning trailer will make a tighter arc than the tow vehicle. Compensate with turns that are larger than normal.

### **Passing**

Plan well ahead to pass other vehicles, and provide plenty of room before changing lanes. Crosswinds from passing vehicles, especially larger ones, and the effects of rough roads will affect handling.

If swaying occurs, firmly grip the steering wheel and reduce speed immediately, but gradually.

Steer straight ahead. If no extreme correction of steering or braking is made, the combination of less speed and firm steering will result in stability.

### **Backing up**

Backing a vehicle with a trailer requires practice and patience. Back slowly, and have a helper outside at the rear of the trailer to reduce the risk of an accident.

To turn the trailer, place your hand at the bottom of the steering wheel and turn it in the direction you want the trailer to go. Make only slight movements to prevent sharp or prolonged turning.

## Towing

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### **Ascending a hill**

Shift into a lower gear to reduce the possibility of overloading or overheating the engine, or both.

### **Descending a hill**

Shift into a lower gear and use engine compression as a braking effect.

### **WARNING**

***Always use lower gears to reduce speed:***

*Holding the brake pedal down too long or too frequently is dangerous as it could cause the brakes to overheat and lose power, resulting in loss of control and a serious accident. Use lower gears to help reduce speed. Pull off the road and allow brakes to cool down whenever braking performance feels reduced.*

### **Overheated engine**

The extra weight of the trailer may strain the engine on hot days and on long or steep upgrades.

If the temperature gauge indicates overheating, turn off the air conditioner, drive safely to the side of the road, park off the right-of-way and wait for engine to cool. Refer to Overheating (page 7-16).

### **Parking**

Always make sure the tires of the trailer and the tow vehicle are blocked while parked. Apply the parking brake firmly and put the transaxle in P.

**Avoid parking on an incline, but if you must, follow these instructions:**

1. Depress and hold down the brake pedal.
2. Have a helper put wheel blocks against the downhill side of all vehicle and trailer tires.
3. Then release the brake pedal slowly until the blocks bear the load.
  - If the grade is downhill, turn the steering wheel so that the front of the front tires face the curb.
  - If it is uphill, face the rear of the front tires against the curb.
4. Firmly apply the parking brake.
5. Shift the transaxle into P, and stop the engine.

**To restart after parking on an incline:**

1. With the transaxle in P, start the engine. (Be sure to depress and hold the brake pedal.)
2. Shift into gear.



3. Release the parking brake (also the foot brake) and pull away from the wheel blocks.  
Stop; apply the parking brake and shift into P.
4. Have a helper retrieve the wheel blocks.

### **Fuel consumption**

Trailer towing causes higher fuel consumption.

### **Maintenance**

If you tow a trailer frequently, have your vehicle serviced as shown in Scheduled Maintenance (page 8-3).



Explanation of instruments and controls.

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# Starting and Driving

## Ignition Switch

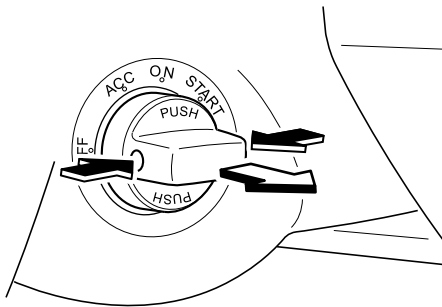
### Auxiliary key (with advanced key)

**NOTE**

When starting the engine using the advanced key, refer to *Starting the Engine* (page 3-10).

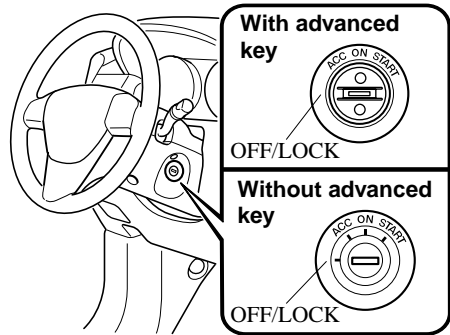
When starting the engine with the auxiliary key, perform the following procedure.

1. Remove the auxiliary key from the advanced key (page 3-17).
2. Make sure the start knob is in OFF/LOCK position.
3. Remove the start knob by pulling it outward while pressing the buttons on both the left and right sides.



4. Insert the auxiliary key in the ignition switch.

### ▼ Ignition Switch Positions



The engraved mark on the actual vehicle may read OFF or LOCK depending on the type of ignition system.

### OFF/LOCK

The power supply to electrical devices is turned off. Only in this position can the key be removed.

**⚠ WARNING**

**Remove the key only when the vehicle is parked (with steering lock mechanism):**

*Removing the key from the ignition switch while the vehicle is moving is dangerous. Removing the key allows the steering wheel to lock. You will lose steering control and a serious accident could occur. (For vehicles equipped with the advanced key, the steering wheel locks when the starter knob is turned to the OFF/LOCK position.)*

**Before leaving the driver's seat, always switch the ignition to OFF/LOCK, set the parking brake and make sure the shift lever is in P:**

*It is important to switch the ignition to OFF/LOCK even if you are not removing the key from the ignition or leaving the vehicle. Leaving the key in other positions will disable some of the vehicle security systems and run the battery down.*

*Leaving the driver's seat without switching the ignition to OFF/LOCK, setting the parking brake and shifting the shift lever to P is dangerous. Unexpected vehicle movement could occur. This could cause an accident.*

**NOTE**

*If turning the key is difficult, move the steering wheel left and right.*

*Leaving the key or start knob in any position but the OFF/LOCK position also disables some of the security features and may run the battery down.*

**ACC (Accessory)**

In this position, some electrical accessories will operate.

**ON**

This is the normal running position after the engine is started. Some indicator lights/warning lights should be inspected before the engine is started (page 5-44).

**NOTE**

*When the ignition is switched ON, the sound of the fuel pump motor operating near the fuel tank can be heard. This does not indicate an abnormality.*

**NOTE**

*Vibration of the brake pedal may be felt when the ignition is switched ON, however, this is a normal operation of the DSC/RSC and does not indicate an abnormality.*

**START**

The engine is started in this position. It will crank until you release the key. It then returns to the ON position.

**▼ Ignition Key Reminder**

If the ignition is switched off or the ignition is switched to ACC with the key inserted, a continuous beep sound will be heard when the driver's door is opened.

## Starting and Driving

---

### Starting the Engine

#### **NOTE**

*Engine-starting is controlled by the spark ignition system.*

*This system meets all Canadian Interference-Causing Equipment Standard requirements regulating the impulse electrical field strength of radio noise.*

1. Occupants should fasten their seat belts.
2. Make sure the parking brake is on.
3. Depress the brake pedal.
4. Put the vehicle in park (P). If you must restart the engine while the vehicle is moving, shift into neutral (N).

#### **NOTE**

*The starter will not operate if the shift lever is **not** in P or N.*

5. Switch the ignition to START and hold (up to 10 seconds at a time) until the engine starts.

#### **CAUTION**

*Do not try the starter for more than 10 seconds at a time. If the engine stalls or fails to start, wait 10 seconds before trying again. Otherwise, you may damage the starter and drain the battery.*

6. After starting the engine, let it idle for about 10 seconds.

#### **NOTE**

- *In extremely cold weather or after the vehicle has not been driven in several days, let the engine warm up without operating the accelerator.*
- *Whether the engine is cold or warm, it should be started without use of the accelerator.*

## Turning the Engine Off

1. Stop the vehicle completely.
2. Shift the shift lever to the P position.
3. Switch the ignition from ON to OFF/LOCK.

### **WARNING**

***Do not stop the engine while the vehicle is moving:***

*Stopping the engine while the vehicle is moving for any reason other than in an emergency is dangerous.*

*Stopping the engine while the vehicle is moving will result in reduced maneuverability and braking ability due to the loss of power steering and power braking, which could cause an accident and serious injury.*

### **CAUTION**

*When leaving the vehicle, make sure the ignition is switched off.*

## Brake System

### ▼ **Foot Brake**

Your Mazda has power-assisted brakes that adjust automatically through normal use.

Should power-assist fail, you can stop by applying greater force than normal to the brake pedal. But the distance required to stop will be greater than usual.

## Starting and Driving

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### **⚠ WARNING**

**Do not coast with the engine stalled or turned off, find a safe place to stop:**

Coasting with the engine stalled or turned off is dangerous. Braking will require more effort, and the brake's power-assist could be depleted if you pump the brake. This will cause longer stopping distances or even an accident.

**Shift to a lower gear when going down steep hills:**

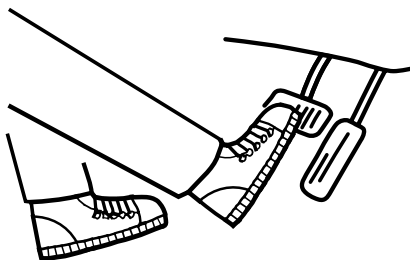
Driving with your foot continuously on the brake pedal or steadily applying the brakes for long distances is dangerous. This causes overheated brakes, resulting in longer stopping distances or even total brake failure. This could cause loss of vehicle control and a serious accident. Avoid continuous application of the brakes.

**Dry off brakes that have become wet by driving slowly, releasing the accelerator pedal and lightly applying the brakes several times until the brake performance returns to normal:**

Driving with wet brakes is dangerous. Increased stopping distance or the vehicle pulling to one side when braking could result in a serious accident. Light braking will indicate whether the brakes have been affected.

### **⚠ CAUTION**

- Do not drive with your foot held on the brake pedal. Doing so could result in the following:
  - The brake parts will wear out more quickly.
  - The brakes can overheat and adversely affect brake performance.
- Always depress the brake pedal with the right foot. Applying the brakes with the unaccustomed left foot could slow your reaction time to an emergency situation resulting in insufficient braking operation.



- Wear shoes appropriate for driving in order to avoid your shoe contacting the brake pedal when depressing the accelerator pedal.



## ▼ Parking Brake

### **⚠ WARNING**

*Before leaving the driver's seat, always switch the ignition to OFF/LOCK, set the parking brake and make sure the shift lever is in P:*

*It is important to switch the ignition to OFF/LOCK even if you are not removing the key from the ignition or leaving the vehicle. Leaving the key in other positions will disable some of the vehicle security systems and run the battery down.*

*Leaving the driver's seat without switching the ignition to OFF/LOCK, setting the parking brake and shifting the shift lever to P is dangerous. Unexpected vehicle movement could occur. This could cause an accident.*

### **⚠ CAUTION**

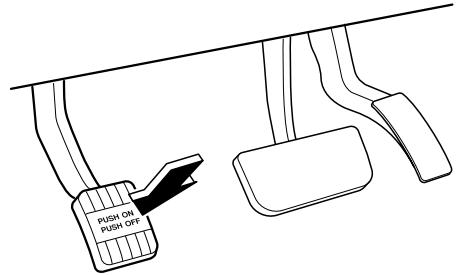
*Driving with the parking brake on will cause excessive wear of the brake linings or pads.*

### **NOTE**

*For parking in snow, refer to Winter Driving (page 4-10) regarding parking brake use.*

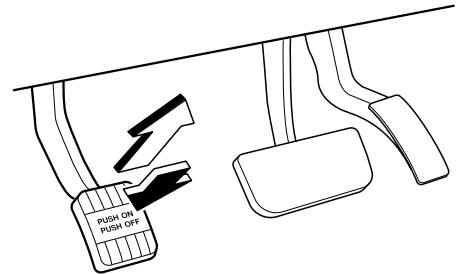
### Setting the parking brake

Depress the brake pedal, then depress the parking brake pedal fully.



### Releasing the parking brake

Depress the brake pedal, then depress the parking brake pedal until it releases. Gradually let up on the parking brake pedal.



### **NOTE**

*Release the parking brake pedal once before trying to reapply it.*

## Starting and Driving

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### ▼ Brake System Warning Light



This warning has the following functions:

#### **Parking brake warning**

The light illuminates when the parking brake is applied with the ignition switched to START or ON. It turns off when the parking brake is fully released.

#### **Low brake fluid level warning**

If the light stays on after the parking brake is fully released, you may have a brake problem.

Drive to the side of the road and park off the right-of-way.

You may notice that the pedal is harder to depress or that it may go closer to the floor. In either case, it will take longer to stop the vehicle.

1. With the engine stopped, open the hood and check the brake fluid level immediately, and then add fluid if required (page 8-23).
2. After adding fluid, check the light again.

If the warning light remains on, or if the brakes do not operate properly, do not drive the vehicle. Have it towed to an Authorized Mazda Dealer.

Even if the light turns off, have your brake system inspected as soon as possible by an Authorized Mazda Dealer.

### **NOTE**

*Having to add brake fluid is sometimes an indicator of leakage. Consult an Authorized Mazda Dealer as soon as possible even if the brake light is no longer illuminated.*

### **▲ WARNING**

***Do not drive with the brake system warning light illuminated. Contact an Authorized Mazda Dealer to have the brakes inspected as soon as possible:***

*Driving with the brake system warning light illuminated is dangerous. It indicates that your brakes may not work at all or that they could completely fail at any time. If this light remains illuminated, after checking that the parking brake is fully released, have the brakes inspected immediately.*

### ▼ Parking Brake Reminder

If the parking brake has not been completely released and the vehicle is driven at about 5 km/h (3 mph) or faster, a continuous beep sound will be heard to notify the driver that the parking brake has not been released.

### ▼ Anti-Lock Brake System (ABS)

The ABS control unit continuously monitors the speed of each wheel. If one wheel is about to lock up, the ABS responds by automatically releasing and reapplying that wheel's brake.

The driver will feel a slight vibration in the brake pedal and may hear a chattering noise from the brake system. This is normal ABS system operation. Continue to depress the brake pedal without pumping the brakes.

**⚠ WARNING**

**Do not rely on ABS or RSC as a substitute for safe driving:**

*The ABS and RSC cannot compensate for unsafe and reckless driving, excessive speed, tailgating (following another vehicle too closely), driving on ice and snow, and hydroplaning (reduced tire friction and road contact because of water on the road surface). You can still have an accident.*

**NOTE**

- *Braking distances may be longer on loose surfaces (snow or gravel, for example) which usually have a hard foundation. A vehicle with a normal braking system may require less distance to stop under these conditions because the tires will build up a wedge of surface layer when the wheels skid.*
- *The sound of the ABS operating may be heard when starting the engine or immediately after starting the vehicle, however, it does not indicate a malfunction.*

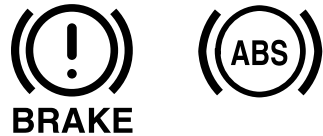
**▼ ABS Warning Light**

The warning light stays on for a few seconds when the ignition is switched ON.

If the ABS warning light stays on while you're driving, the ABS control unit has detected a system malfunction. If this occurs, your brakes will function normally as if the vehicle had no ABS. Should this happen, consult an Authorized Mazda Dealer as soon as possible.

**NOTE**

- *When the engine is jump-started to charge the battery, uneven rpm occurs and the ABS warning light may illuminate. If this occurs, it is the result of the weak battery and does not indicate an ABS malfunction. Recharge the battery.*
- *The brake assist system does not operate while the ABS warning light is illuminated.*

**▼ Electronic Brake Force Distribution System Warning**

If the electronic brake force distribution control unit determines that some components are operating incorrectly, the control unit may illuminate the brake system warning light and the ABS warning light on simultaneously. The problem is likely to be the electronic brake force distribution system.

## Starting and Driving

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### **⚠ WARNING**

**Do not drive with both the ABS warning light and brake warning light illuminated. Have the vehicle towed to an Authorized Mazda Dealer to have the brakes inspected as soon as possible:**

*Driving when the brake system warning light and ABS warning light are illuminated simultaneously is dangerous.*

*When both lights are illuminated, the rear wheels could lock more quickly in an emergency stop than under normal circumstances.*

### ▼ Brake Assist

During emergency braking situations when it is necessary to depress the brake pedal with greater force, the brake assist system provides braking assistance, thus enhancing braking performance.

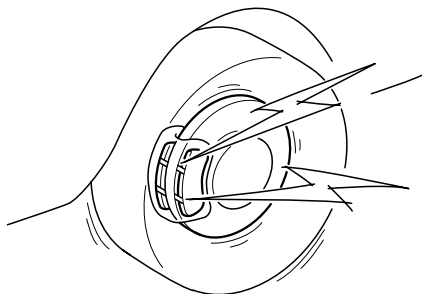
When the brake pedal is depressed hard or depressed more quickly, the brakes apply more firmly.

#### **NOTE**

- *When the brake pedal is depressed hard or depressed more quickly, the pedal will feel softer but the brakes will apply more firmly. This is a normal effect of the brake assist operation and does not indicate a malfunction.*
- *When the brake pedal is depressed hard or depressed more quickly, a motor/pump operation noise may be heard. This is a normal effect of the brake assist and does not indicate a malfunction.*
- *The brake assist equipment does not supersede the functionality of the vehicle's main braking system.*

### ▼ Brake Pad Wear Indicator

When the disc brake pads become worn, the built-in wear indicators contact the disc plates. This causes a loud screeching noise to warn that the pads should be replaced.

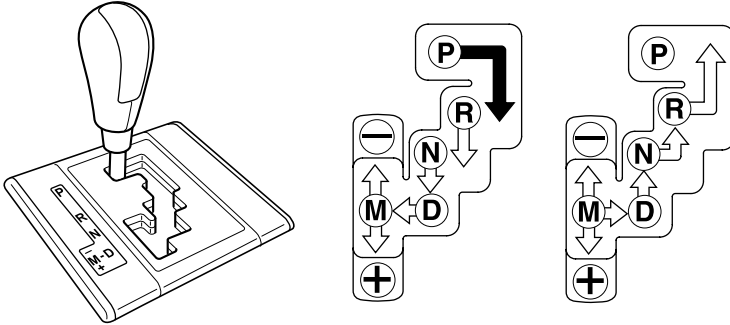


When you hear this noise, consult an Authorized Mazda Dealer as soon as possible.

### **⚠ WARNING**

**Do not drive with worn disc pads:**  
*Driving with worn disc pads is dangerous. The brakes could fail and cause a serious accident. As soon as you hear a screeching noise consult an Authorized Mazda Dealer.*

## Automatic Transaxle Controls



### Various Lockouts:



Indicates that you must depress the brake pedal to shift (The ignition must be switched to ACC or ON).



Indicates the shift lever can be shifted freely into any position.

### **NOTE**

*The Sport AT has an option that is not included in the traditional automatic transaxle giving the driver the option of selecting each gear instead of leaving it to the transaxle to shift gears. Even if you intend to use the automatic transaxle functions as a traditional automatic, you should also be aware that you can inadvertently shift into manual shift mode and an inappropriate gear may be retained as the vehicle speed increases. If you notice the engine speed going higher or hear the engine racing, confirm you have not accidentally slipped into manual shift mode (page 5-13).*

## Starting and Driving

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### ▼ Transaxle Ranges

The shift lever must be in P or N to operate the starter.

#### P (Park)

P locks the transaxle and prevents the front wheels from rotating.

#### **⚠ WARNING**

**Always set the shift lever to P and set the parking brake:**

*Only setting the shift lever to the P position without using the parking brake to hold the vehicle is dangerous. If P fails to hold, the vehicle could move and cause an accident.*

#### **⚠ CAUTION**

- *Shifting into P, N or R while the vehicle is moving can damage your transaxle.*
- *Shifting into a driving gear or reverse when the engine is running faster than idle can damage the transaxle.*

#### R (Reverse)

In position R, the vehicle moves only backward. You must be at a complete stop before shifting to or from R, except under rare circumstances as explained in Rocking the Vehicle (page 4-9).

#### N (Neutral)

In N, the wheels and transaxle are not locked. The vehicle will roll freely even on the slightest incline unless the parking brake or brakes are on.

#### **⚠ WARNING**

***If the engine is running faster than idle, do not shift from N or P into a driving gear:***

*It's dangerous to shift from N or P into a driving gear when the engine is running faster than idle. If this is done, the vehicle could move suddenly, causing an accident or serious injury.*

***Do not shift into N when driving the vehicle:***

*Shifting into N while driving is dangerous. Engine braking cannot be applied when decelerating which could lead to an accident or serious injury.*

#### **⚠ CAUTION**

***Do not shift into N when driving the vehicle. Doing so can cause transaxle damage.***

#### **NOTE**

*Apply the parking brake or depress the brake pedal before moving the shift lever from N to prevent the vehicle from moving unexpectedly.*

#### D (Drive)

D is the normal driving position. From a stop, the transaxle will automatically shift through a 6-gear sequence.

#### M (Manual)

M is the manual shift mode position. Gears can be shifted up or down by operating the shift lever. Refer to Manual Shift Mode (page 5-13).

## ▼ Active Adaptive Shift (AAS)

Active Adaptive Shift (AAS) automatically controls the transaxle shift points to best suit the road conditions and driver input. This improves driving comfort.

If the driver accelerates rapidly, or accelerates and decelerates rapidly by operating the accelerator and brake pedal for a certain period of time while the shift lever is in the D position, AAS mode could activate.

When cornering the vehicle, AAS mode will hold the transaxle in the gear the vehicle was in before entering the curve, allowing the vehicle to be accelerated from the same gear after exiting the curve. AAS mode will maintain the transaxle in the optimum gear and the driver may sense that the transaxle is not shifting, however this does not indicate an abnormality.

## ▼ Shift-Lock System

**The shift-lock system prevents shifting out of P unless the brake pedal is depressed.**

To shift from P:

1. Depress and hold the brake pedal.
2. Start the engine.
3. Move the shift lever.

### NOTE

- When the ignition is switched off, the shift lever cannot be shifted from P.
- To be sure the vehicle is in park, **the ignition key cannot be removed unless the shift lever is in P.**
- **(With Advanced Key)**

*The ignition cannot be switched from ACC to OFF when the shift lever is not in P.*

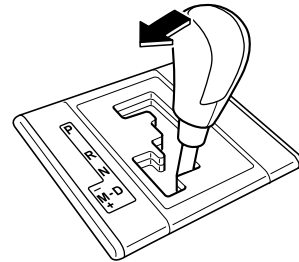
## ▼ Manual Shift Mode

This mode gives you the feel of driving a manual transaxle vehicle by operating the shift lever and allows you to control engine rpm and torque to the drive wheels much like a manual transaxle when more control is desired.

To change to manual shift mode, shift the lever from D to M.

### NOTE

*Changing to manual shift mode while driving will not damage the transaxle.*



To return to automatic shift mode, shift the lever from M to D.

### NOTE

- If you change to manual shift mode when the vehicle is stopped, the gear will shift to M1.
- If you change to manual shift mode without depressing the accelerator pedal when driving in D range, 5th gear, the gear will shift to M4.
- If you change to manual shift mode without depressing the accelerator pedal when driving in D range, 6th gear, the gear will shift to M5.

# Starting and Driving

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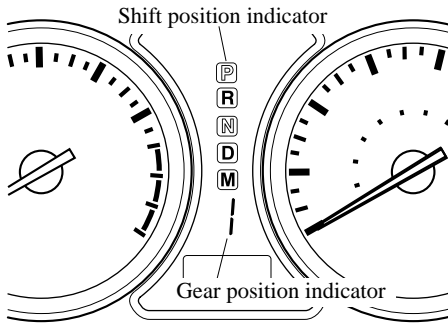
## Indicators

### Manual shift mode indicator

In manual shift mode, the “M” of the shift position indicator in the instrument panel illuminates.

### Gear position indicator

The numeral for the selected gear illuminates.



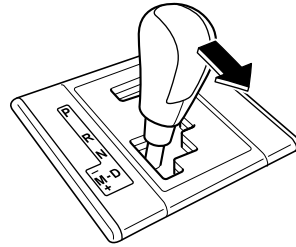
### **NOTE**

*If the gears cannot be shifted down when driving at higher speeds, the gear position indicator will flash twice to signal that the gears cannot be shifted down (to protect the transaxle).*

## Shifting

### Manually Shifting up

**(M1 → M2 → M3 → M4 → M5 → M6)**  
To shift up to a higher gear, tap the shift lever back (+) once.



### **NOTE**

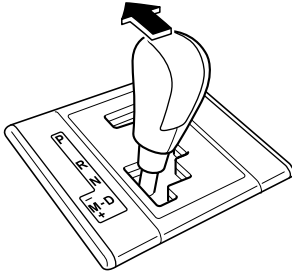
- *When driving slowly, the gears may not shift up.*
- *In manual shift mode, gears do not shift up automatically. Do not run the engine with the tachometer needle in the RED ZONE. If the tachometer needle enters the RED ZONE, you may feel engine-braking because the fuel delivery will be stopped to protect the engine. However, this does not indicate an abnormality.*
- *When depressing the accelerator fully, the transaxle will shift to a lower gear, depending on vehicle speed.*



**Manually Shifting down**

( M6 → M5 → M4 → M3 → M2 → M1 )

To shift down to a lower gear, tap the shift lever forward ( - ) once.

**⚠ WARNING**

**Do not use engine braking on slippery road surfaces or at high speeds:**

*Shifting down while driving on wet, snowy, or frozen roads, or while driving at high speeds causes sudden engine braking, which is dangerous. The sudden change in tire speed could cause the tires to skid. This could lead to loss of vehicle control and an accident.*

**NOTE**

- When driving at high speeds, the gear may not shift down.
- During deceleration, the gear may automatically shift down depending on vehicle speed.
- When depressing the accelerator fully, the transaxle will shift to a lower gear, depending on vehicle speed.

**Second gear fixed mode**

When the shift lever is tapped back ( + ) while the vehicle is stopped or driven at about 15 km/h (9.3 mph) or less, the transaxle is set in the second gear fixed mode. The gear is fixed in second while in this mode for easier starting and driving on slippery roads. If the shift lever is tapped back ( + ) or forward ( - ) while in the second gear fixed mode, the mode will be canceled.

**Shifting specification****Shifting up**

If the vehicle speed is lower than the speed specified for each gear, the gear cannot be shifted up to a higher gear.

Gear	Vehicle speed
M1 → M2	You can shift up to M2 whether the vehicle is stopped or moving.
M2 → M3	15 km/h (10 mph)
M3 → M4	29 km/h (19 mph)
M4 → M5	40 km/h (25 mph)
M5 → M6	50 km/h (32 mph)

**Shifting down**

If the vehicle speed is higher than the speed specified for each gear, the gear cannot be shifted to a lower gear so as to protect the transaxle.

Gear	Vehicle speed
M6 → M5	230 km/h (142 mph)
M5 → M4	201 km/h (124 mph)
M4 → M3	150 km/h (93 mph)
M3 → M2	96 km/h (59 mph)
M2 → M1	49 km/h (30 mph)

**NOTE**

*Regarding the vehicle speed at the highest gear indicated above, achieving this speed may not actually be possible depending on various driving conditions such as the wind, upslope, and road surface.*

## Starting and Driving

During deceleration, the gears shift down automatically when speed is reduced to the following:

Gear	Vehicle speed
M6 → M5	47 km/h (29 mph)
M5 → M4	37 km/h (22 mph)
M4 → M3	26 km/h (16 mph)
M3 or M2 → M1	7 km/h (4 mph)

### NOTE

*The gear does not shift down to M1 automatically while in the second gear fixed mode.*

If the vehicle is kicked down at the following speeds or lower, the gears shift down automatically:

Gear	Vehicle speed
M6 → M5	230 km/h (142 mph)
M5 → M4	90 km/h (55 mph)
M4 → M3	65 km/h (40 mph)
M3 → M2	40 km/h (24 mph)

### Recommendations for shifting

#### Upshifting

For normal acceleration and cruising, we recommend these shift points.

Gear	Vehicle speed
M1 to M2	24 km/h (15 mph)
M2 to M3	40 km/h (25 mph)
M3 to M4	65 km/h (40 mph)
M4 to M5	73 km/h (45 mph)
M5 to M6	80 km/h (50 mph)

#### Downshifting

When you must slow down in heavy traffic or on a steep **upgrade**, downshift before the engine starts to overwork. This gives better acceleration when you need more speed.

On a steep **downgrade**, downshifting helps maintain safe speed and prolongs brake life.

### ▼ Driving Tips

#### WARNING

**Do not allow the vehicle to move in reverse on an up-slope while the selector lever is in a forward gear position, or move forward on a down-slope while the selector lever is in the reverse position.**

*Otherwise, the engine will stop, causing the loss of the power brake and power steering functions, and make it difficult to control the vehicle which could result in an accident.*

#### Passing

For extra power when passing another vehicle or climbing steep grades, depress the accelerator fully. The transaxle will shift to a lower gear, depending on vehicle speed.

#### Climbing steep grades from a stop

To climb a steep grade from a stopped position:

1. Depress the brake pedal.
2. Shift to D or M1, depending on the load weight and grade steepness.
3. Release the brake pedal while gradually accelerating.

#### Descending steep grades

When descending a steep grade, shift to lower gears, depending on load weight and grade steepness. Descend slowly, using the brakes only occasionally to prevent them from overheating.

## Power Steering

Power steering is only operable when the engine is running. If the engine is off or if the power steering system is inoperable, you can still steer, but it requires more physical effort.

If the steering feels stiffer than usual during normal driving, consult an Authorized Mazda Dealer.

### CAUTION

*Never hold the steering wheel to the extreme left or right for more than 5 seconds with the engine running. This could damage the power steering system.*

## All-Wheel Drive (AWD) Operation \*

AWD provides excellent driveability on snow-covered and ice-packed roads, sand and mud, as well as on steep slopes and other slippery surfaces.

## Starting and Driving

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### ▼ AWD Driving

#### **WARNING**

**Avoid sharp turns, excessive speed and abrupt maneuvers when driving this vehicle:**

*Sharp turns, excessive speed and abrupt maneuvering of this vehicle is dangerous as it could result in the increased risk of loss of vehicle control, vehicle roll-over, personal injury or death.*

*This vehicle has a higher center of gravity. Vehicles with a higher center of gravity such as utility and AWD vehicles handle differently than vehicles with a lower center of gravity.*

*Utility and AWD vehicles are not designed for cornering at high speeds any more than low profile sports cars are designed to perform satisfactorily under off-road conditions. In addition, utility vehicles have a significantly higher rollover rate than other types of vehicles.*

*RSC might help if you get into trouble, but then it might not be able to allow you to fully recover, always drive carefully with the vehicle's height in mind.*

**Drive carefully when the vehicle is loaded by lowering vehicle speed and applying the brakes earlier:**

*Abrupt maneuvering and sudden braking when driving a loaded vehicle is dangerous as the driving behavior of a vehicle with a high center of gravity is different when it is loaded compared to when it is not, and could result in the loss of vehicle control and an accident.*

### ▼ AWD Warning Light

# 4WD

This warning light stays on for a few seconds when the ignition is switched ON.

Thereafter, the warning light will illuminate or flash under the following conditions:

- Illuminates when there is an abnormality with the AWD system.
- Flashes when the differential oil temperature is abnormally high.
- Flashes when there are continually large differences between front and rear wheel rotation, such as when trying to pull away from an icy surface, or when trying to extricate the vehicle from mud, sand or similar conditions.

#### **If the AWD warning light illuminates:**

If the AWD warning light illuminates, contact an Authorized Mazda Dealer.

#### **If the AWD warning light flashes:**

Park the vehicle in a safe place. After a few moments, if the warning light stops flashing, you can resume driving. If the light does not stop flashing, contact an Authorized Mazda Dealer.

## **⚠ WARNING**

**Never spin a wheel that is off the ground:**

*Spinning a wheel that is off the ground as a result of the vehicle being stuck or in a ditch is dangerous. The drive assembly could be seriously damaged which could lead to an accident or could even lead to overheating, oil leakage, and a fire.*

### ▼ Tires and Tire Chains

The condition of the tires plays a large role in the performance of the vehicle. Moreover, to prevent adverse effects to the drive assembly, please note the following:

#### **Tires**

- When replacing tires, always replace all front and rear tires at the same time.
- All tires must be of the same size, manufacture, brand and tread pattern. Pay particular attention when equipping snow or other types of winter tires.
- Do not mix tread-worn tires with normal tires.
- Inspect tire inflation pressures at the specified periods and adjust to the specified pressures.

#### ***NOTE***

*Check the tire inflation pressure label attached to driver's door frame for the correct tire inflation pressure.*

- Make sure to equip the vehicle with genuine wheels of the specified size, on all wheels. With AWD, the system is calibrated for all four wheels being of the same dimensions.

#### **Tire chains**

- Install tire chains to the front tires.
- Do not use tire chains on the rear wheels.
- Do not drive the vehicle faster than 30 km/h (19 mph) with the tire chains installed.
- Do not drive the vehicle with tire chains on road conditions other than snow or ice.

#### ▼ Towing

If the vehicle requires towing, have it towed with all four wheels completely off the ground (page 7-21).

## Starting and Driving

### Cruise Control

With cruise control, you can set and automatically maintain any speed of more than about 30 km/h (19 mph).

#### **⚠ WARNING**

**Do not use the cruise control under the following conditions:**

*Using the cruise control under the following conditions is dangerous and could result in loss of vehicle control.*

- Hilly terrain
- Steep inclines
- Heavy or unsteady traffic
- Slippery or winding roads
- Similar restrictions that require inconsistent speed

#### ▼ **Cruise Main Indicator Light (Amber)/Cruise Set Indicator Light (Green)**

# CRUISE

The indicator light has two colors.

#### **Cruise Main Indicator Light (Amber)**

The indicator light illuminates amber when the ON switch is pressed and the cruise control system is activated.

#### **Cruise Set Indicator Light (Green)**

The indicator light illuminates green when a cruising speed has been set.

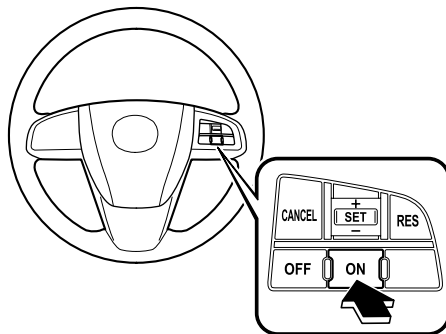
#### ▼ **Activation/Deactivation**

To activate the system, press the ON switch.

The cruise main indicator light illuminates.

To deactivate the system, press the OFF switch.

The cruise main indicator light turns off.



#### **⚠ WARNING**

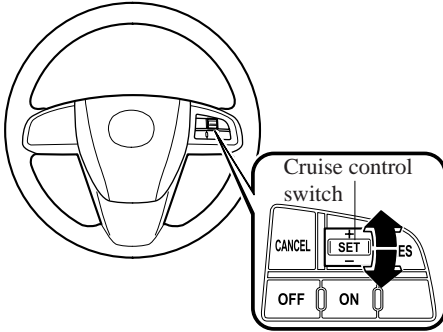
**Always turn off the cruise control system when it is not in use:**

*Leaving the cruise control system in an activation-ready state while the cruise control is not in use is dangerous as the cruise control could unexpectedly activate if the activation button is accidentally pressed, and result in loss of vehicle control and an accident.*

#### ▼ **To Set Speed**

1. Activate the cruise control system by pressing the ON switch.
2. Accelerate to the desired speed, which must be more than 30 km/h (19 mph).

3. Set the cruise control by pressing the cruise control SET + /SET - switch up or down at the desired speed. The cruise control is set at the moment the cruise control SET + /SET - switch is pressed up or down. Release the accelerator pedal simultaneously.



### NOTE

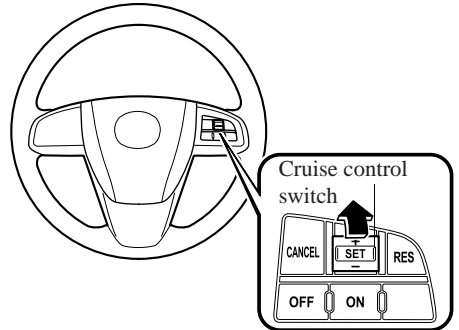
- Release the cruise control switch at the desired speed, otherwise the speed will continue increasing while the switch is pressed up, and continue decreasing while it is pressed down (except when the accelerator pedal is depressed).
- On a steep grade, the vehicle may momentarily slow down while ascending, or speed up while descending.
- Cruise control will turn off if the vehicle speed decreases below 30 km/h (19 mph) when cruise is activated, such as when climbing a steep grade.

### ▼ To Increase Cruising Speed

Follow either of these procedures.

#### To increase speed using cruise control switch

Press up the cruise control SET + switch and hold it. Your vehicle will accelerate. Release the switch at the speed you want.



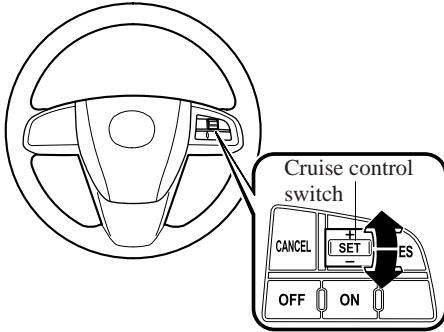
Your vehicle has a tap-up feature that allows you to increase your current speed in increments of 1.6 km/h (1 mph) by a momentary tap of the cruise control SET + switch. Multiple taps will increase your vehicle speed 1.6 km/h (1 mph) for each tap.

## Starting and Driving

### To increase speed using accelerator pedal

Depress the accelerator pedal to accelerate to the desired speed.

Press down or press up on the cruise control SET + /SET - switch and release it immediately.

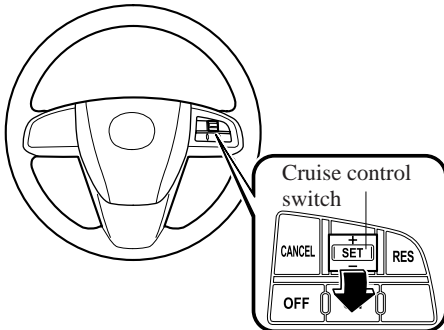


#### **NOTE**

*Accelerate if you want to speed up temporarily when the cruise control is on. Greater speed will not interfere with or change the set speed. Take your foot off the accelerator to return to the set speed.*

### ▼ To Decrease Cruising Speed

Press down the cruise control SET - switch and hold it. The vehicle will gradually slow. Release the switch at the speed you want.

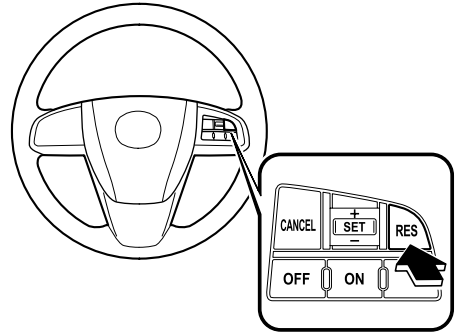


Your vehicle has a tap-down feature that allows you to decrease your current speed in decrements of 1.6 km/h (1 mph) by a momentary tap of the cruise control SET - switch. Multiple taps will decrease your vehicle speed 1.6 km/h (1 mph) for each tap.

### ▼ To Resume Cruising Speed at More Than 30 km/h (19 mph)

If some other method besides the OFF switch was used to cancel cruising speed (such as applying the brake pedal) and the system is still activated, the most recent set speed will automatically resume when the RES switch is pressed.

If vehicle speed is below 30 km/h (19 mph), increase the vehicle speed up to 30 km/h (19 mph) or more and press the RES switch.



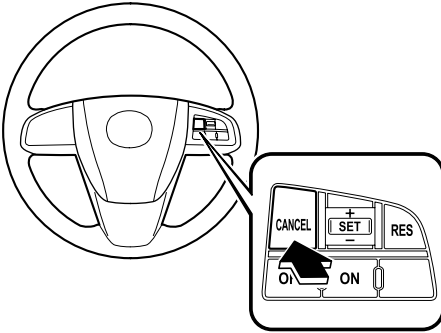
### ▼ To Cancel

To cancel the system, use **one** of these methods:

- Press the OFF switch.
- Slightly depress the brake pedal.



- Press the CANCEL switch.



The system turns off when the ignition is switched off.

#### **NOTE**

*Cruise control will cancel at about 15 km/h (9 mph) below the preset speed (such as may happen when climbing a long, steep grade).*

## Traction Control System (TCS)

The Traction Control System (TCS) enhances traction and safety by controlling engine torque and braking. When the TCS detects driving wheel slippage, it lowers engine torque and operates the brakes to prevent loss of traction.

This means that on a slick surface, the engine adjusts automatically to provide optimum power to the drive wheels, limiting wheel spin and loss of traction.

### **⚠ WARNING**

**Do not rely on the traction control system as a substitute for safe driving:**

*The traction control system (TCS) cannot compensate for unsafe and reckless driving, excessive speed, tailgating (following another vehicle too closely), and hydroplaning (reduced tire friction and road contact because of water on the road surface). You can still have an accident.*

**Use snow tires or tire chains and drive at reduced speeds when roads are covered with ice and/or snow:**

*Driving without proper traction devices on snow and/or ice-covered roads is dangerous. The traction control system (TCS) alone cannot provide adequate traction and you could still have an accident.*

## Starting and Driving

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### **⚠ CAUTION**

Do not rely on the TCS to maintain constant control of the vehicle under severe or maximum handling conditions. If the TCS operates frequently due to severe driving conditions, the TCS may stop operating to protect the brakes from overheating. After the brakes have cooled down, the TCS resumes normal operation.

### ▼ TCS/DSC/RSC Indicator Light



This indicator light stays on for a few seconds when the ignition is switched ON. If the TCS or DSC/RSC is operating, the indicator light flashes.

If the light stays on, the TCS, DSC/RSC or the brake assist system may have a malfunction and they may not operate correctly. Take your vehicle to an Authorized Mazda Dealer.

#### **NOTE**

- In addition to the indicator light flashing, a slight lugging sound will come from the engine. This indicates that the TCS is operating properly.
- On slippery surfaces, such as fresh snow, it will be impossible to achieve high rpm when the TCS is on.

### ▼ TCS OFF Indicator Light

# TCS OFF

This indicator light stays on for a few seconds when the ignition is switched ON.

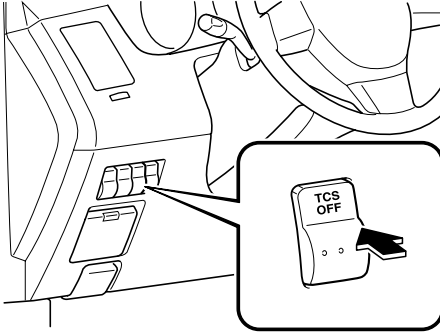
It also illuminates when the TCS OFF switch is pressed and TCS is switched off. Refer to TCS OFF Switch on page 5-25. If the light remains illuminated and the TCS is not switched off, take your vehicle to an Authorized Mazda Dealer. The dynamic stability control may have a malfunction.

#### **NOTE**

*If the TCS/DSC indicator light and the TCS OFF indicator light remain illuminated even after switching the ignition from ON to OFF, and back to ON, attempt the procedure again. If this still does not resolve the issue, consult an Authorized Mazda Dealer.*

### ▼ TCS OFF Switch

If the vehicle speed is less than 15 km/h (9 mph), press the TCS OFF switch to turn off the TCS. The TCS OFF indicator light will illuminate.



Press the switch again to turn the TCS back on. The TCS OFF indicator light will turn off. If the vehicle speed is more than 15 km/h (9 mph), the TCS OFF indicator light will not illuminate even if the switch is pressed.

### NOTE

- When TCS is on and you attempt to free the vehicle when it is stuck, or drive it out of freshly fallen snow, the TCS will activate. Depressing the accelerator will not increase engine power and freeing the vehicle may be difficult. When this happens, turn off the TCS.
- If the TCS is off when the engine is turned off, it automatically activates when the ignition is switched ON.
- Leaving the TCS on will provide the best traction.
- If the TCS is OFF when the vehicle speed is more than 15 km/h (9 mph), it automatically activates and the TCS OFF indicator light will turn off.
- If the TCS OFF switch is pressed and held for 10 seconds or more, the TCS OFF switch malfunction detection function operates and the TCS and DSC/RSC system activates automatically. The TCS OFF indicator light turns off while the TCS system is operative.

## Starting and Driving

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### Dynamic Stability Control (DSC)/Roll Stability Control (RSC)

The Dynamic Stability Control (DSC) automatically controls braking and engine torque in conjunction with systems such as ABS and TCS to help control side slip when driving on slippery surfaces or during sudden or evasive maneuvering, enhancing vehicle safety.

The Roll Stability Control (RSC) automatically controls braking and engine torque in conjunction with systems such as ABS and TCS to help control rolling when cornering at a higher speed or during sudden or evasive maneuvering, enhancing vehicle safety.

Refer to ABS (page 5-8) and TCS (page 5-23).

DSC/RSC operation is possible at speeds greater than 15 km/h (9 mph).

### WARNING

**Do not rely on the dynamic stability control as a substitute for safe driving:**

*The dynamic stability control (DSC)/ Roll Stability Control (RSC) cannot compensate for unsafe and reckless driving, excessive speed, tailgating (following another vehicle too closely), and hydroplaning (reduced tire friction and road contact because of water on the road surface). You can still have an accident.*

**When driving under bad road conditions, lower the vehicle speed and drive carefully:**

*Reckless driving and excessive speed under any road conditions is dangerous as it reduces vehicle stability and operability which could result in an accident.*

**⚠ CAUTION**

- *The DSC/RSC may not operate correctly unless the following are observed:*
  - *Use tires of the correct size specified for your Mazda on all four wheels.*
  - *Use tires of the same manufacturer, brand and tread pattern on all four wheels.*
  - *Do not mix worn tires.*
- *The DSC/RSC may not operate correctly when tire chains are used or a temporary spare tire is installed because the tire diameter changes.*
- *Do not modify the suspension, steering wheel, and tires. It may affect the DSC/RSC.*
- *Do not install non-genuine speakers since their vibration may affect the Dynamic Stability Control (DSC)/Roll Stability Control (RSC) sensors.*

**▼ TCS/DSC/RSC Indicator Light**

This indicator light stays on for a few seconds when the ignition is switched ON. If the TCS or DSC/RSC is operating, the indicator light flashes.

If the light stays on, the TCS, DSC/RSC or the brake assist system may have a malfunction and they may not operate correctly. Take your vehicle to an Authorized Mazda Dealer.

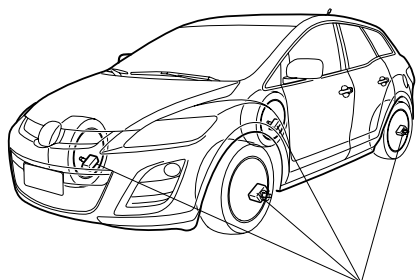
## Starting and Driving

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### Tire Pressure Monitoring System\*

The tire pressure monitoring system (TPMS) monitors the pressure for each tire. If tire pressure is too low in one or more tires, the system will inform the driver via the warning light in the instrument panel and by the warning beep sound.

The tire pressure sensors installed on each wheel send tire pressure data by radio signal to the receiver unit in the vehicle.



Tire pressure sensors

#### **NOTE**

*When the ambient temperature is low due to seasonal changes, tire temperatures are also lower. When the tire temperature decreases, the air pressure decreases as well. The TPMS warning light may illuminate more frequently. Visually inspect the tires daily before driving, and check tire pressures monthly with a tire pressure gauge. When checking tire pressures, use of a digital tire pressure gauge is recommended.*

TPMS does not alleviate your need to check the pressure and condition of all four tires regularly.

**⚠ CAUTION**

- Each tire, including the spare (if provided), should be checked monthly when cold and inflated to the inflation pressure recommended by the vehicle manufacturer on the vehicle placard or tire inflation pressure label. (If your vehicle has tires of a different size than the size indicated on the vehicle placard or tire inflation pressure label, you should determine the proper tire inflation pressure for those tires.)

As an added safety feature, your vehicle has been equipped with a tire pressure monitoring system (TPMS) that illuminates a low tire pressure telltale when one or more of your tires is significantly under-inflated. Accordingly, when the low tire pressure telltale illuminates, you should stop and check your tires as soon as possible, and inflate them to the proper pressure. Driving on a significantly under-inflated tire causes the tire to overheat and can lead to tire failure. Under-inflation also reduces fuel efficiency and tire tread life, and may affect the vehicle's handling and stopping ability.

Please note that the TPMS is not a substitute for proper tire maintenance, and it is the driver's responsibility to maintain correct tire pressure, even if under-inflation has not reached the level to trigger illumination of the TPMS low tire pressure telltale.

- Your vehicle has also been equipped with a TPMS malfunction indicator to indicate when the system is not operating properly. The TPMS malfunction indicator is combined with the low tire pressure telltale. When the system detects a malfunction, the telltale will flash for approximately one minute and then remain continuously illuminated. This sequence will continue upon subsequent vehicle start-ups as long as the malfunction exists. When the malfunction indicator is illuminated, the system may not be able to detect or signal low tire pressure as intended. TPMS malfunctions may occur for a variety of reasons, including the installation of replacement or alternate tires or wheels on the vehicle that prevent the TPMS from functioning properly. Always check the TPMS malfunction telltale after replacing one or more tires or wheels on your vehicle to ensure that the replacement or alternate tires and wheels allow the TPMS to continue to function properly.
- To avoid false readings, the system samples for a little while before indicating a problem. As a result it will not instantaneously register a rapid tire deflation or blow out.

**NOTE**

*This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.*

## Starting and Driving

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### ▼ Tire Pressure Monitoring System Warning Light



This warning light illuminates for a few seconds when the ignition is switched ON.

Thereafter, the warning light illuminates and a beep is heard when tire pressure is too low in one or more tires, and flashes when there is a system malfunction.

### **⚠ WARNING**

*If the tire pressure monitoring system warning light illuminates or flashes, or the tire pressure warning beep sound is heard, decrease vehicle speed immediately and avoid sudden maneuvering and braking:*

*If the tire pressure monitoring system warning light illuminates or flashes, or the tire pressure warning beep sound is heard, it is dangerous to drive the vehicle at high speeds, or perform sudden maneuvering or braking. Vehicle drivability could worsen and result in an accident. To determine if you have a slow leak or a flat, pull over to a safe position where you can check the visual condition of the tire and determine if you have enough air to proceed to a place where air may be added and the system monitored again by an Authorized Mazda Dealer or a tire repair station.*

**Do not ignore the TPMS Warning Light:** Ignoring the TPMS warning light is dangerous, even if you know why it is illuminated. Have the problem taken care of as soon as possible before it develops into a more serious situation that could lead to tire failure and a dangerous accident.

### **Warning light illuminates/Warning beep sounds**

When the warning light illuminates, and the warning beep sound is heard (about 3 seconds), tire pressure is too low in one or more tires.



Adjust the tire pressure to the correct tire pressure. Refer to the specification charts (page 10-6).

**⚠ CAUTION**

*When replacing/repairing the tires or wheels or both, have the work done by an Authorized Mazda Dealer, or the tire pressure sensors may be damaged.*

**NOTE**

- *Perform tire pressure adjustment when the tires are cold. Tire pressure will vary according to the tire temperature, therefore let the vehicle stand for 1 hour or only drive it 1.6 km (1 mile) or less before adjusting the tire pressures. When pressure is adjusted on hot tires to the cold inflation pressure, the TPMS warning light/beep may turn on after the tires cool and pressure drops below specification. Also, an illuminated TPMS warning light, resulting from the tire air pressure dropping due to cold ambient temperature, may turn off if the ambient temperature rises. In this case, it will also be necessary to adjust the tire air pressures. If the TPMS warning light illuminates due to a drop in tire air pressure, make sure to check and adjust the tire air pressures.*
- *After adjusting the tire air pressures, it may require some time for the TPMS warning light to turn off. If the TPMS warning light remains illuminated, drive the vehicle at a speed of at least 25 km/h (16 mph) for 10 minutes, and then verify that it turns off.*
- *Tires lose air naturally over time and the TPMS cannot tell if the tires are getting too soft over time or you have a flat. However, when you find one low tire in a set of four—that is an indication of trouble; you should have someone drive the vehicle slowly forward so you can inspect any low tire for cuts and any metal objects sticking through tread or sidewall. Put a few drops of water in the valve stem to see if it bubbles indicating a bad valve. Leaks need to be addressed by more than simply refilling the trouble tire as leaks are dangerous - take it to an Authorized Mazda Dealer which has all the equipment to fix tires, TPMS systems and order the best replacement tire for your vehicle.*

## Starting and Driving

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If the warning light illuminates again even after the tire pressures are adjusted, there may be a tire puncture. Replace the punctured tire with the temporary spare tire (page 7-8).

### **NOTE**

*A tire pressure sensor is not installed to the temporary spare tire. The warning light will flash continuously while the temporary spare tire is being used.*

### **Warning light flashes**

When the warning light flashes, there may be a system malfunction. Consult an Authorized Mazda Dealer.

### **▼ System Error Activation**

When the TPMS warning light flashes, there may be a system malfunction. Consult an Authorized Mazda Dealer. A system error activation may occur in the following cases:

- When there is equipment or a device near the vehicle using the same radio frequency as that of the tire pressure sensors.
- When using the following devices in the vehicle that may cause radio interference with the receiver unit.
  - A digital device such as a personal computer.
  - A current converter device such as a DC-AC converter.
- When excess snow or ice adheres to the vehicle, especially around the wheels.
- When the tire pressure sensor batteries are exhausted.
- When using a wheel with no tire pressure sensor installed.
- When using tires with steel wire reinforcement in the side walls.
- When using tire chains.

### **▼ Tires and Wheels**

#### **⚠ CAUTION**

*When inspecting or adjusting the tire air pressures, do not apply excessive force to the stem part of the wheel unit. The stem part could be damaged.*

### **Changing tires and wheels**

The following procedure allows the TPMS to recognize a tire pressure sensor's unique ID signal code whenever tires or wheels are changed, such as changing to and from winter tires.

### **NOTE**

*Each tire pressure sensor has a unique ID signal code. The signal code must be registered with the TPMS before it can work. The easiest way to do it is to have an Authorized Mazda Dealer change your tire and complete ID signal code registration.*

### **When having tires changed at an Authorized Mazda Dealer**

When an Authorized Mazda Dealer changes your vehicle's tires, they will complete the tire pressure sensor ID signal code registration.

### **When changing tires yourself**

If you or someone else changes tires, you or someone else can also undertake the steps for the TPMS to complete the ID signal code registration.

1. After tires have been changed, switch the ignition ON, then back to ACC or OFF.
2. Wait for about 15 minutes.

- After about 15 minutes, drive the vehicle at a speed of at least 25 km/h (16 mph) for 10 minutes and the tire pressure sensor ID signal code will be registered automatically.

**NOTE**

*If the vehicle is driven within about 15 minutes of changing tires, the tire pressure monitoring system warning light will flash because the sensor ID signal code would not have been registered. If this happens, park the vehicle for about 15 minutes, after which the sensor ID signal code will register upon driving the vehicle for 10 minutes.*

**Replacing tires and wheels****⚠ CAUTION**

- *When replacing/repairing the tires or wheels or both, have the work done by an Authorized Mazda Dealer, or the tire pressure sensors may be damaged.*
- *The wheels equipped on your Mazda are specially designed for installation of the tire pressure sensors. Do not use non-genuine wheels, otherwise it may not be possible to install the tire pressure sensors.*

Be sure to have the tire pressure sensors installed whenever tires or wheels are replaced.

When having a tire or wheel or both replaced, the following types of tire pressure sensor installations are possible.

- The tire pressure sensor is removed from the old wheel and installed to the new one.
- The same tire pressure sensor is used with the same wheel. Only the tire is replaced.

- A new tire pressure sensor is installed to a new wheel.

**NOTE**

- The tire pressure sensor ID signal code must be registered when a new tire pressure sensor is purchased. For purchase of a tire pressure sensor and registration of the tire pressure sensor ID signal code, consult an Authorized Mazda Dealer.*
- When reinstalling a previously removed tire pressure sensor to a wheel, replace the grommet (seal between valve body/sensor and wheel) for the tire pressure sensor.*

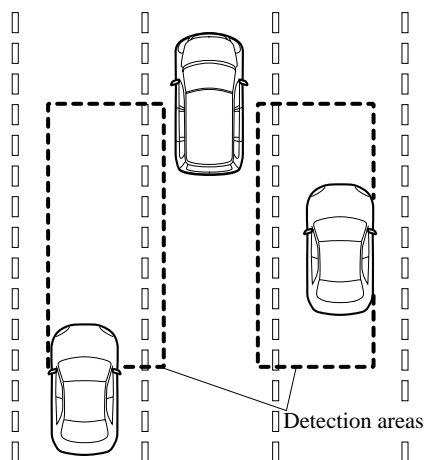
## Starting and Driving

### Blind Spot Monitoring (BSM) System\*

The Blind Spot Monitoring (BSM) system is designed to assist the driver by monitoring blind spots on both sides of the vehicle to the rear in certain situations such as when changing lanes on roads and freeways.

The BSM system monitors the detection areas on both sides of the vehicle to the rear when the vehicle speed is about 32 km/h (20 mph) or more, and notifies the driver of vehicles in the detection area by illuminating the BSM warning light.

If the turn signal lever is operated in the direction the BSM warning light is illuminated, the system warns the driver of the vehicle in the detection area with a beep sound.



#### **⚠ WARNING**

**Do not rely completely on the BSM system and be sure to look over your shoulder before changing lanes:**

*The BSM system can assist the driver in confirming the safety of the surroundings but is not a complete substitute. The driver is responsible for assuring lane changes and other maneuvers. Always pay attention to the direction in which the vehicle is traveling and the vehicle's surroundings.*

#### **NOTE**

- The BSM system does not operate when the vehicle speed is lower than about 32 km/h (20 mph).
- The radar sensors are equipped inside the rear bumper. (page 5-37)
- The system may not operate normally when towing a trailer. Turn off the system by operating the BSM OFF switch when towing a trailer.
- The radar sensors do not detect human, animal, or static objects such as fences. In addition, the system pauses when the selector lever is shifted to the R position. (The system resumes automatically when the selector lever is shifted from the R position.)

- *The detectability of the radar sensors has its limitations. The BSM system may not operate properly under the following conditions:*
  - *Ice, snow, or soil adheres to the rear bumper surface around the radar sensors.*
  - *During adverse weather conditions such as rain or snow, or under conditions where water is sprayed.*
  - *The rear bumper area around the radar sensors is blocked by foreign material (such as stickers or a bicycle carrier).*
- *The radar sensors may not detect all types of vehicles around your vehicle, especially the following types of vehicles:*
  - *Motorcycles*
  - *Vehicles with body shapes that radar may not reflect such as a flatbed trailer with no cargo.*
  - *Vehicles with lower body height such as sports cars.*
- *Have the radar sensors inspected at an Authorized Mazda Dealer if any shock is applied to the rear bumper, even in a minor accident. If the vehicle is driven with a damaged radar sensor, the system may not operate properly resulting in an accident.*
- *For repairs or paintwork around the radar sensors, or replacement of the bumper, consult an Authorized Mazda Dealer.*
- *The radar sensors of the BSM system may be regulated under the radio wave related laws of the country where the vehicle is driven. The sensors in this system are approved for use in the U.S.A. (including territories), Canada, and Mexico. If a vehicle with a BSM system is driven in a country other than the U.S.A., Canada, or Mexico, the system has to be turned off using the BSM OFF switch.*
- *The detection area of the system has been determined based on the lane width of general freeways. Therefore on a road with a narrower lane width, the system may detect vehicles on a lane next to the adjacent lane and operate the warning light/beep. On a road with wider lane width, the system may not detect vehicles on the adjacent lane and may not operate the warning light/beep.*
- *Operation of the warning light/beep may be delayed or the system may not operate the warning light/beep under the following conditions:*
  - *The vehicle accelerates from a standing-start with a vehicle alongside.*
  - *A vehicle moves from a lane two lanes over to the adjacent lane.*
  - *The difference in vehicle speed between your vehicle and another vehicle is larger when passing or being passed, and the vehicle passes the detection area within a short period of time.*
  - *On a steep incline, or when there is a difference in height between lanes.*
  - *Immediately after the system has been activated by pressing the BSM OFF switch again after it has been turned off (BSM OFF indicator light in instrument panel illuminates) by pressing the switch.*
- *Although the system may detect objects on the road side such as parked vehicles or guardrails and operate the warning light/beep, it does not indicate a malfunction.*
- *If the vehicle is driven on a road with less traffic and few vehicles that the radar sensors can detect, the system may pause (The BSM OFF indicator light in the instrument panel flashes). However, it does not indicate a malfunction.*

## Starting and Driving

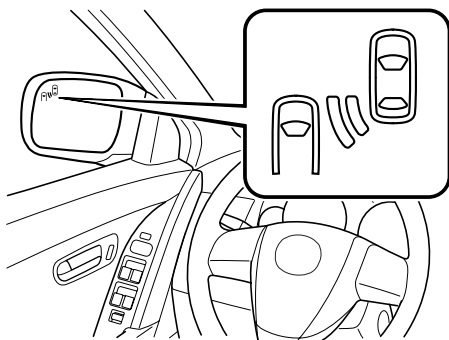
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- The following conditions may affect the visibility of the BSM warning lights on the outside mirror, making it difficult to confirm the illumination of the lights:
  - Ice or snow adheres to the surface of the outside mirrors.
  - The door window glass is tinted.

### ▼ BSM Warning Light/Beep

#### BSM warning light

Equipped on the left and right door mirrors.



This warning light illuminates for a few seconds when the ignition is switched ON.

If the BSM system detects a vehicle in the detection area while the vehicle is driven at a speed of about 32 km/h (20 mph) or more, the BSM warning light illuminates on the side of the vehicle where the rear on-coming vehicle is detected.

#### **NOTE**

- If ice or snow adhere to the outer mirror surface, the BSM warning light may not be visible.
- If the door window glass is tinted, it may affect the visibility of the BSM warning light, making it difficult to confirm the illumination of the light.

### BSM warning beep

The warning beep operates when the turn signal lever is operated to the side where the BSM warning light is illuminated.

#### **NOTE**

The system can be personalized so that the BSM warning beep does not operate. Refer to Personalization Features on page 10-8.

### ▼ BSM OFF Indicator Light

# BSM OFF

This indicator light illuminates for a few seconds when the ignition is switched ON.

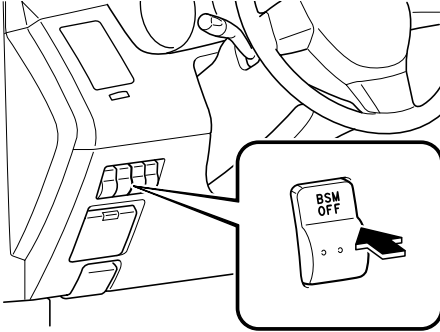
The BSM OFF indicator light illuminates when the BSM system is turned off by pressing the BSM OFF switch. The indicator light flashes if the BSM system has a malfunction. Consult an Authorized Mazda Dealer.

#### **NOTE**

If the vehicle is driven on a road with less traffic and few vehicles that the radar sensors can detect, the system may pause (The BSM OFF indicator light in the instrument panel flashes). However, it does not indicate a malfunction.

### ▼ BSM OFF Switch

When the BSM switch is pressed, the BSM system turns off and the BSM OFF indicator light illuminates.



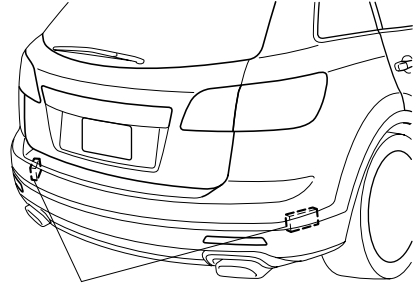
Press the BSM OFF switch again to turn on the BSM system. The BSM OFF indicator light turns off.

#### **NOTE**

- The system may not operate normally when towing a trailer. Turn off the system by operating the BSM OFF switch when towing a trailer.
- If the ignition is switched off with the BSM system turned off, the system becomes operable automatically when the ignition is switched ON.

### ▼ Care of Radar Sensors

The radar sensors are equipped inside the rear bumper.



Radar sensors

Always keep the bumper surface near the radar sensor area clean so that the BSM system operates normally. Refer to the Exterior Care (page 8-56).

#### **NOTE**

- The BSM OFF indicator light flashes if the radar sensors cannot operate normally. If the light remains flashing after cleaning the bumper surface near the radar sensor area, consult an Authorized Mazda Dealer.
- For repairs or paintwork around the radar sensors, or replacement of the bumper, consult an Authorized Mazda Dealer.

## Starting and Driving

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### ▼ Safety Certification

#### Radiation Hazard

This BSM (blind spot monitoring) device emits intentional electromagnetic radiation in the 24 GHz to 25 GHz frequency range. The total radiated average power over the entire bandwidth is below -14 dBm (40  $\mu$ W). The active emitting antenna surface is 72 cm<sup>2</sup>; therefore the radiated power density in front of the BSM device is 0.55  $\mu$ W/cm<sup>2</sup>. This value is far below the legal human exposure protection limit of 1 mW/cm<sup>2</sup> (MPE) in Europe and US.

#### Declaration of compliance for 24 GHz blind spot radar

##### (U.S.A)

#### **FCC ID: OAYBSDTX**

This vehicle is equipped with a 24 GHz blind spot monitoring (BSM) radar system, which complies with part 15 of the FCC rules. Operation is subject to the following conditions:

1. This device may not cause harmful interference, and
2. This device must accept any interference received, including interference that may cause undesired operation.
3. This device may only work when the vehicle is in operation pursuant to §15.252 (a) (4).

##### (CANADA)

#### **IC:4135A-BSDTX**

This vehicle is equipped with a 24 GHz blind spot monitoring (BSM) radar system, which complies with the radio standards specification RSS-220 of Industry Canada. Operation is subject to the following conditions:

1. This device may not cause harmful interference, and
2. This device must accept any interference received, including interference that may cause undesired operation.

#### **NOTE**

*During printing time of this user manual the approvals listed below are granted. Further countries may become available or actual certification identifiers may be subject to change or update.*

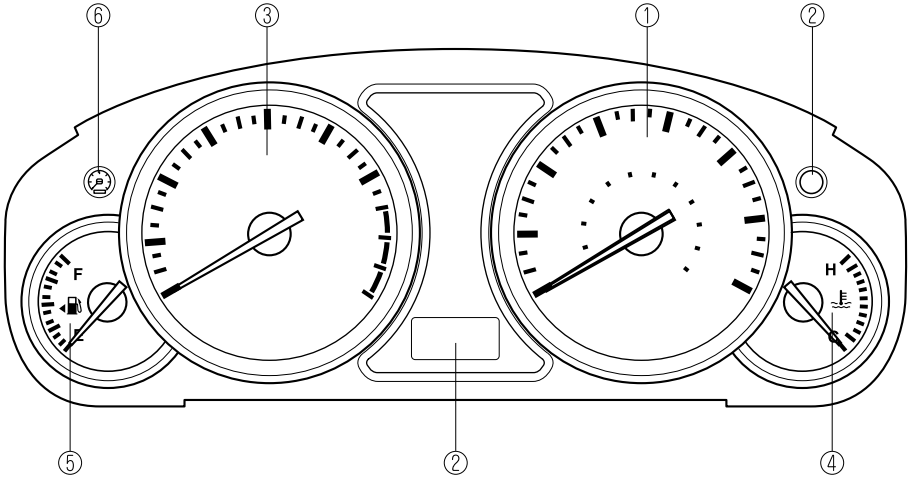
#### **⚠ WARNING**

*Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.*



# Instrument Cluster and Indicators

## Meters and Gauges



① Speedometer .....	page 5-40
② Odometer, Trip Meter and Trip Meter Selector .....	page 5-40
③ Tachometer .....	page 5-41
④ Engine Coolant Temperature Gauge .....	page 5-41
⑤ Fuel Gauge .....	page 5-42
⑥ Dashboard Illumination .....	page 5-42

**NOTE**

*When the ignition is switched ON, the dashboard gauges illuminate.*

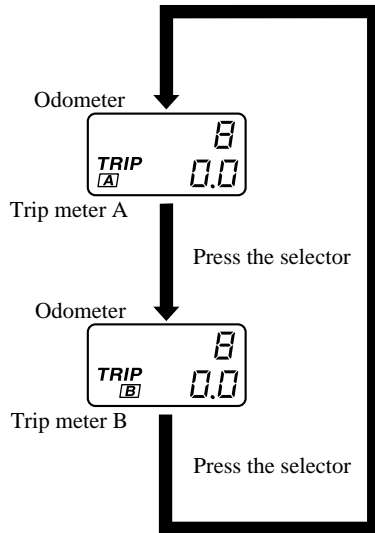
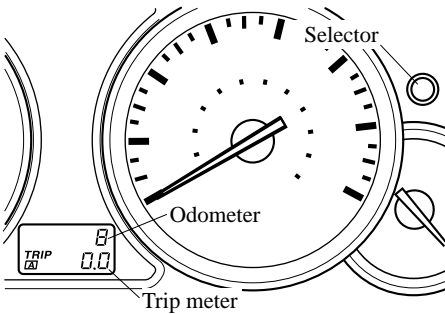
# Instrument Cluster and Indicators

## ▼ Speedometer

The speedometer indicates the speed of the vehicle.

## ▼ Odometer, Trip Meter and Trip Meter Selector

The display mode can be changed between trip meter A and trip meter B by pressing the selector while one of them is displayed. The selected mode will be displayed.



## Odometer

The odometer records the total distance the vehicle has been driven.

## Trip meter

The trip meter can record the total distance of two trips. One is recorded in trip meter A, and the other is recorded in trip meter B.

For instance, trip meter A can record the distance from the point of origin, and trip meter B can record the distance from where the fuel tank is filled.

When trip meter A is selected, pressing the selector again within one second will change to trip meter B mode.

When trip meter A is selected, TRIP A will be displayed. When trip meter B is selected, TRIP B will be displayed.

## Instrument Cluster and Indicators

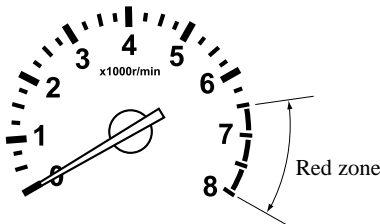
The trip meter records the total distance the vehicle is driven until the meter is again reset. Return it to “0.0” by holding the selector depressed for 1 second or more. Use this meter to measure trip distances and to compute fuel consumption.

### NOTE

- Only the trip meters record tenths of kilometers (miles).
- The trip record will be erased when:
  - The power supply is interrupted (blown fuse or the battery is disconnected).
  - The vehicle is driven over 999.9 km (mile).

### ▼ Tachometer

The tachometer shows engine speed in thousands of revolutions per minute (rpm).

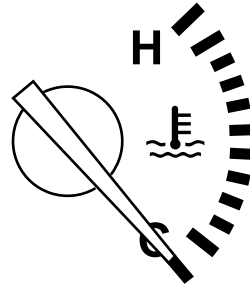


### ⚠ CAUTION

Do not run the engine with the tachometer needle in the RED ZONE. This may cause severe engine damage.

### ▼ Engine Coolant Temperature Gauge

The engine coolant temperature gauge shows the temperature of the engine coolant.



If the needle is near H, it indicates overheating.

### ⚠ CAUTION

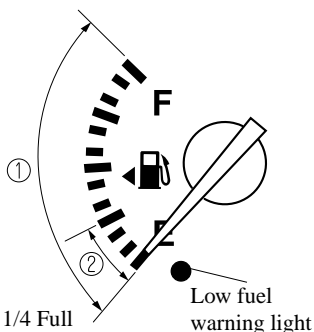
Driving with an overheated engine can cause serious engine damage (page 7-16).

## Instrument Cluster and Indicators

### ▼ Fuel Gauge

The fuel gauge shows approximately how much fuel is remaining in the tank when the ignition is switched ON.

We recommend keeping the tank over 1/4 full. When the low fuel warning light illuminates or when the needle is near E, refuel as soon as possible.



- ① Full
- ② Approx. 1/4 Full

Low fuel warning light

#### NOTE

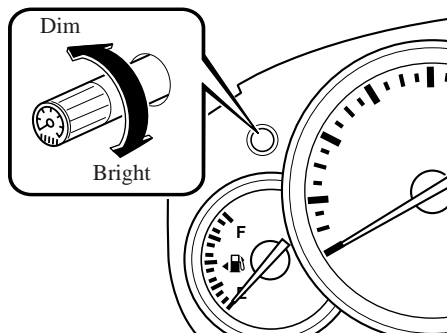
- After refueling, it may require some time for the needle to stabilize. In addition, the needle may deviate while driving on a slope or curve since the fuel moves in the tank.
- The direction of the arrow (🚰) next to the low fuel warning light indicates that the fuel-filler lid is on the left side of the vehicle.

### ▼ Dashboard Illumination

Rotate the knob to adjust the brightness of the instrument cluster and other illuminations in the dashboard.

#### NOTE

- The brightness of dashboard illuminations can be adjusted when the headlight switch is in the  $\text{☞}$  or  $\text{☝}$  position.
- When the dashboard illumination brightness cannot be adjusted any more, a beep sound will be heard.
- **(Black-out meter)**  
The brightness of the instrument cluster illumination can be adjusted when the headlight switch is in any position.



#### **Canceling the illumination dimmer (Black-out meter and dashboard illuminations)**

When the headlight switch is in the  $\text{☞}$  or  $\text{☝}$  position, the illumination of the instrument cluster and the information display dims.



When driving on snowy or foggy roads, or in other situations when the instrument cluster or information display's visibility is reduced due to glare from surrounding brightness, cancel the illumination dimmer and increase the illumination intensity.

## Instrument Cluster and Indicators

---

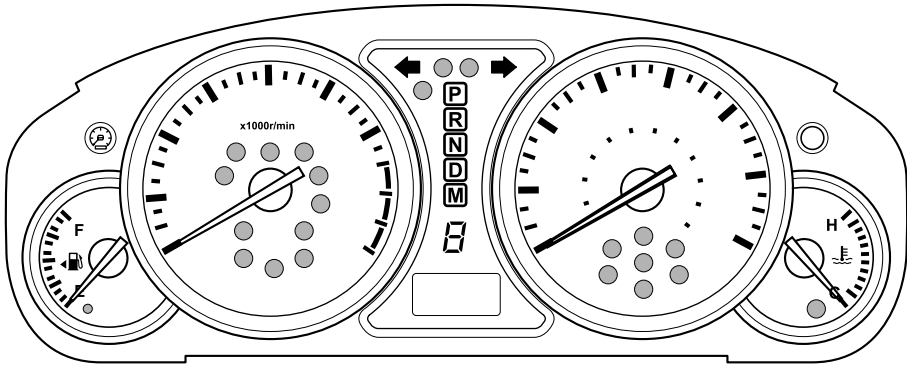
To cancel the illumination dimmer, press the dashboard illumination knob.

### **NOTE**








- This symbol (⊗) indicates the knob to adjust the brightness of the dashboard illumination.
- If the illumination dimmer is cancelled, the instrument cluster and the information display will not dim when the headlight switch is turned to the  or  position again. Press the dashboard illumination knob to activate the illumination dimmer.

# Warning/Indicator Lights and Beep Sounds









## Warning/Indicator Lights





Warning/Indicator lights will appear in any of the highlighted areas

Signal	Warning/Indicator Lights	Page
	Brake System Warning Light	5-46
	Charging System Warning Light	5-48
	Engine Oil Pressure Warning Light	5-48
	Check Engine Light	5-48
	Powertrain Malfunction/Reduced Power Warning Light	5-49
	ABS Warning Light	5-47
	Air Bag/Front Seat Belt Pretensioner System Warning Light	5-49

## Warning/Indicator Lights and Beep Sounds

Signal	Warning/Indicator Lights	Page
●	Low Fuel Warning Light	5-50
	Check Fuel Cap Warning Light	5-50
	Seat Belt Warning Light	5-50
	Door-Ajar Warning Light	5-50
	Low Washer Fluid Level Warning Light	5-50
<b>AT</b>	Automatic Transaxle Warning Light	5-51
<b>4WD</b>	AWD Warning Light	5-51
	Tire Pressure Monitoring System Warning Light	5-51
<b>KEY</b>	KEY Warning Light (Red)/KEY Indicator Light (Green)	5-53
	Security Indicator Light	5-55
	Headlight High-Beam Indicator Light	5-55
<b>PRNDM</b>	Shift Position Indicator Light	5-55
	TCS/DSC/RSC Indicator Light	5-56
<b>TCS OFF</b>	TCS OFF Indicator Light	5-56
<b>CRUISE</b>	Cruise Main Indicator Light (Amber)/Cruise Set Indicator Light (Green)	5-56
<b>BSM OFF</b>	BSM OFF Indicator Light	5-57

# Warning/Indicator Lights and Beep Sounds

Signal	Warning/Indicator Lights	Page
	Lights-On Indicator Light	5-57
	Turn Signal/Hazard Warning Indicator Lights	5-57

## ▼ Brake System Warning Light



This warning has the following functions:

### **Parking brake warning**

The light illuminates when the parking brake is applied with the ignition switched to START or ON. It turns off when the parking brake is fully released.

### **Low brake fluid level warning**

If the light stays on after the parking brake is fully released, you may have a brake problem.

Drive to the side of the road and park off the right-of-way.

You may notice that the pedal is harder to depress or that it may go closer to the floor. In either case, it will take longer to stop the vehicle.

1. With the engine stopped, open the hood and check the brake fluid level immediately, and then add fluid if required (page 8-23).
2. After adding fluid, check the light again.

If the warning light remains on, or if the brakes do not operate properly, do not drive the vehicle. Have it towed to an Authorized Mazda Dealer.

Even if the light turns off, have your brake system inspected as soon as possible by an Authorized Mazda Dealer.

### ***NOTE***

*Having to add brake fluid is sometimes an indicator of leakage. Consult an Authorized Mazda Dealer as soon as possible even if the brake light is no longer illuminated.*

### **WARNING**

***Do not drive with the brake system warning light illuminated. Contact an Authorized Mazda Dealer to have the brakes inspected as soon as possible:***

*Driving with the brake system warning light illuminated is dangerous. It indicates that your brakes may not work at all or that they could completely fail at any time. If this light remains illuminated, after checking that the parking brake is fully released, have the brakes inspected immediately.*



## Warning/Indicator Lights and Beep Sounds

### ▼ ABS Warning Light



The warning light stays on for a few seconds when the ignition is switched ON.

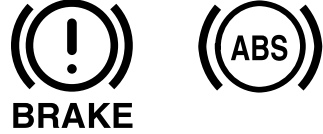
If the ABS warning light stays on while you're driving, the ABS control unit has detected a system malfunction. If this occurs, your brakes will function normally as if the vehicle had no ABS.

Should this happen, consult an Authorized Mazda Dealer as soon as possible.

#### NOTE

- When the engine is jump-started to charge the battery, uneven rpm occurs and the ABS warning light may illuminate. If this occurs, it is the result of the weak battery and does not indicate an ABS malfunction. Recharge the battery.
- The brake assist system does not operate while the ABS warning light is illuminated.

### ▼ Electronic Brake Force Distribution System Warning



If the electronic brake force distribution control unit determines that some components are operating incorrectly, the control unit may illuminate the brake system warning light and the ABS warning light on simultaneously. The problem is likely to be the electronic brake force distribution system.

#### **⚠ WARNING**

**Do not drive with both the ABS warning light and brake warning light illuminated. Have the vehicle towed to an Authorized Mazda Dealer to have the brakes inspected as soon as possible:**

*Driving when the brake system warning light and ABS warning light are illuminated simultaneously is dangerous.*

*When both lights are illuminated, the rear wheels could lock more quickly in an emergency stop than under normal circumstances.*

## Warning/Indicator Lights and Beep Sounds

---

### ▼ Charging System Warning Light



This warning light illuminates when the ignition is switched ON and turns off when the engine is started.

If the warning light illuminates while driving, it indicates a malfunction of the alternator or of the charging system. Drive to the side of the road and park off the right-of-way. Consult an Authorized Mazda Dealer.

#### **CAUTION**

*Do not continue driving when the charging system warning light is illuminated because the engine could stop unexpectedly.*

### ▼ Engine Oil Pressure Warning Light



This warning light illuminates when the ignition is switched ON and turns off when the engine is started.

This warning light indicates low engine oil pressure.

If the light illuminates while driving:

1. Drive to the side of the road and park off the right-of-way on level ground.
2. Turn off the engine and wait 5 minutes for the oil to drain back into the oil pan.
3. Inspect the engine oil level (page 8-20). If it's low, add the appropriate amount of engine oil while being careful not to overfill.
4. Start the engine and check the warning light.

If the light remains illuminated even after you add oil, stop the engine immediately and have your vehicle towed to an Authorized Mazda Dealer.

#### **CAUTION**

*Do not run the engine if the oil pressure is low. It could result in extensive engine damage.*

### ▼ Check Engine Light



This indicator light illuminates when the ignition is switched ON and turns off when the engine is started.

If this light illuminates while driving, the vehicle may have a problem. It is important to note the driving conditions when the light illuminated and consult an Authorized Mazda Dealer.

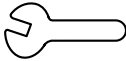
## Warning/Indicator Lights and Beep Sounds

The check engine light may illuminate in the following cases:

- The fuel tank level being very low or approaching empty.
- The engine's electrical system has a problem.
- The emission control system has a problem.
- The fuel-filler cap is missing or not tightened securely.

If the check engine light remains on or flashes continuously, do not drive at high speeds and consult an Authorized Mazda Dealer as soon as possible.

### ▼ Powertrain Malfunction/Reduced Power Warning Light



This warning light illuminates for a few seconds when the ignition is switched ON.

If this light illuminates while driving, the vehicle may have a problem. It is important to note the driving conditions when the light illuminated and consult an Authorized Mazda Dealer.

The powertrain malfunction/reduced power warning light may illuminate in the following cases:

- The engine's electrical system has a problem.
- The emission control system has a problem.
- The brake switch has a problem.

If the powertrain malfunction/reduced power warning light remains on, do not drive at high speeds and consult an Authorized Mazda Dealer as soon as possible.

### ▼ Air Bag/Front Seat Belt Pretensioner System Warning Light



If the air bag/front seat belt pretensioner system is working properly, the warning light illuminates when the ignition is switched ON or after the engine is cranked. The warning light turns off after a specified period of time.

A system malfunction is indicated if the warning light constantly flashes, constantly illuminates or does not illuminate at all when the ignition is switched ON. If any of these occur, consult an Authorized Mazda Dealer as soon as possible. The system may not operate in an accident.

### **⚠ WARNING**

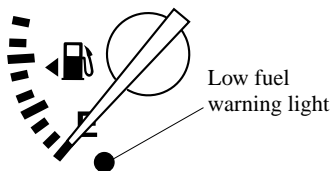
***Never tamper with the air bag/pretensioner systems and always have an Authorized Mazda Dealer perform all servicing and repairs:***

*Self-servicing or tampering with the systems is dangerous. An air bag/pretensioner could accidentally activate or become disabled causing serious injury or death.*

## Warning/Indicator Lights and Beep Sounds

---

### ▼ Low Fuel Warning Light



This warning light in the fuel gauge signals that the fuel tank will soon be empty. Refuel as soon as possible.

### ▼ Check Fuel Cap Warning Light



This warning light illuminates for a few seconds when the ignition is switched ON.

If the check fuel cap warning light illuminates while driving, the fuel-filler cap may not be installed properly. Stop the engine and reinstall the fuel-filler cap. Refer to Fuel-Filler Cap on page 3-48.

### ▼ Seat Belt Warning Light



The seat belt warning light illuminates if the driver's seat is occupied and the seat belt is not fastened with the ignition switched ON.

### ▼ Door-Ajar Warning Light



This warning light illuminates when any door or liftgate is not securely closed. Close the door or liftgate securely before driving the vehicle.

### ▼ Low Washer Fluid Level Warning Light\*



This warning light indicates that little washer fluid remains. Add fluid (page 8-24).

## Warning/Indicator Lights and Beep Sounds

### ▼ Automatic Transaxle Warning Light

# AT

This warning light stays on for a few seconds when the ignition is switched ON.

The light illuminates when the transaxle has a problem.

#### **CAUTION**

*If the automatic transaxle warning light illuminates, the transaxle has an electrical problem. Continuing to drive your Mazda in this condition could cause damage to your transaxle. Consult an Authorized Mazda Dealer as soon as possible.*

### ▼ AWD Warning Light (AWD)

# 4WD

This warning light stays on for a few seconds when the ignition is switched ON.

Thereafter, the warning light will illuminate or flash under the following conditions:

- Illuminates when there is an abnormality with the AWD system.
- Flashes when the differential oil temperature is abnormally high.

- Flashes when there are continually large differences between front and rear wheel rotation, such as when trying to pull away from an icy surface, or when trying to extricate the vehicle from mud, sand or similar conditions.

#### **If the AWD warning light illuminates:**

If the AWD warning light illuminates, contact an Authorized Mazda Dealer.

#### **If the AWD warning light flashes:**

Park the vehicle in a safe place. After a few moments, if the warning light stops flashing, you can resume driving. If the light does not stop flashing, contact an Authorized Mazda Dealer.

#### **WARNING**

**Never spin a wheel that is off the ground:**

*Spinning a wheel that is off the ground as a result of the vehicle being stuck or in a ditch is dangerous. The drive assembly could be seriously damaged which could lead to an accident or could even lead to overheating, oil leakage, and a fire.*

### ▼ Tire Pressure Monitoring System (TPMS) Warning Light \*



This warning light illuminates for a few seconds when the ignition is switched ON.

## Warning/Indicator Lights and Beep Sounds

---

Thereafter, the warning light illuminates and a beep is heard when tire pressure is too low in one or more tires, and flashes when there is a system malfunction.

### **WARNING**

***If the tire pressure monitoring system warning light illuminates or flashes, or the tire pressure warning beep sound is heard, decrease vehicle speed immediately and avoid sudden maneuvering and braking:***

*If the tire pressure monitoring system warning light illuminates or flashes, or the tire pressure warning beep sound is heard, it is dangerous to drive the vehicle at high speeds, or perform sudden maneuvering or braking. Vehicle drivability could worsen and result in an accident. To determine if you have a slow leak or a flat, pull over to a safe position where you can check the visual condition of the tire and determine if you have enough air to proceed to a place where air may be added and the system monitored again by an Authorized Mazda Dealer or a tire repair station.*

**Do not ignore the TPMS Warning Light:** *Ignoring the TPMS warning light is dangerous, even if you know why it is illuminated. Have the problem taken care of as soon as possible before it develops into a more serious situation that could lead to tire failure and a dangerous accident.*

### **Warning light illuminates/Warning beep sounds**

When the warning light illuminates, and the warning beep sound is heard (about 3 seconds), tire pressure is too low in one or more tires.

Adjust the tire pressure to the correct tire pressure. Refer to the specification charts (page 10-6).

### **CAUTION**

*When replacing/repairing the tires or wheels or both, have the work done by an Authorized Mazda Dealer, or the tire pressure sensors may be damaged.*

## Warning/Indicator Lights and Beep Sounds

### NOTE

- *Perform tire pressure adjustment when the tires are cold. Tire pressure will vary according to the tire temperature, therefore let the vehicle stand for 1 hour or only drive it 1.6 km (1 mile) or less before adjusting the tire pressures. When pressure is adjusted on hot tires to the cold inflation pressure, the TPMS warning light/beep may turn on after the tires cool and pressure drops below specification. Also, an illuminated TPMS warning light, resulting from the tire air pressure dropping due to cold ambient temperature, may turn off if the ambient temperature rises. In this case, it will also be necessary to adjust the tire air pressures. If the TPMS warning light illuminates due to a drop in tire air pressure, make sure to check and adjust the tire air pressures.*
- *After adjusting the tire air pressures, it may require some time for the TPMS warning light to turn off. If the TPMS warning light remains illuminated, drive the vehicle at a speed of at least 25 km/h (16 mph) for 10 minutes, and then verify that it turns off.*
- *Tires lose air naturally over time and the TPMS cannot tell if the tires are getting too soft over time or you have a flat. However, when you find one low tire in a set of four—that is an indication of trouble; you should have someone drive the vehicle slowly forward so you can inspect any low tire for cuts and any metal objects sticking through tread or sidewall. Put a few drops of water in the valve stem to see if it bubbles indicating a bad valve. Leaks need to be addressed by more than simply refilling the trouble tire as leaks are dangerous - take it to an Authorized Mazda Dealer which has all the equipment to fix tires, TPMS systems and order the best replacement tire for your vehicle.*

If the warning light illuminates again even after the tire pressures are adjusted, there may be a tire puncture. Replace the punctured tire with the temporary spare tire (page 7-8).

### NOTE

*A tire pressure sensor is not installed to the temporary spare tire. The warning light will flash continuously while the temporary spare tire is being used.*

### Warning light flashes

When the warning light flashes, there may be a system malfunction. Consult an Authorized Mazda Dealer.

### ▼ KEY Warning Light (Red)/KEY Indicator Light (Green) (with Advanced Key)

# KEY

This indicator has two colors.

### KEY Warning Light (Red)

#### When illuminated

- When the ignition is switched ON, it illuminates momentarily and then goes out.
- If any malfunction occurs in the advanced keyless system, it illuminates continuously.

## Warning/Indicator Lights and Beep Sounds

---

### **WARNING**

**Do not drive the vehicle with the KEY warning light illuminated:**

*If the KEY warning light remains illuminated, do not continue to drive using the advanced key system. Park the vehicle in a safe place and use the auxiliary key to continue driving the vehicle. Have the vehicle inspected at an Authorized Mazda Dealer as soon as possible.*

#### **When flashing**

- Under the following conditions, the KEY warning light (red) flashes to inform the driver that the start knob will not rotate to the ACC position even if it is pushed in from the OFF/LOCK position.
  - The advanced key battery is dead.
  - The advanced key is not within operational range.
  - The advanced key is placed in areas where it is difficult for the system to detect the signal (page 3-7).
  - A key from another manufacturer similar to the advanced key is in the operational range.

- Under the following conditions, the KEY warning light (red) will flash continuously when the start knob has not been returned to the OFF/LOCK position to notify the driver that the advanced key has been removed from the vehicle. It will stop flashing when the advanced key is back inside the vehicle.
  - The start knob has not been returned to the OFF/LOCK position, the driver's door is open, and the advanced key is removed from the vehicle.
  - The start knob has not been returned to the OFF/LOCK position and all the doors are closed after removing the advanced key from the vehicle.

#### **NOTE**

*The flashing KEY warning light (red) and the beep sound operate simultaneously (page 3-20).*

### **KEY Indicator Light (Green)**

#### **When illuminated**

When the start knob is pushed in from the OFF/LOCK position, the system confirms that the correct advanced key is inside the vehicle, the KEY indicator light (green) illuminates, and the start knob can be turned to the ACC position (page 3-10).

#### **When flashing**

When the advanced key battery power is low, the KEY indicator light flashes for 30 seconds after the start knob is turned from the ON position to the ACC or OFF/LOCK position. Replace with a new battery before the advanced key becomes unusable (page 3-7).



# Warning/Indicator Lights and Beep Sounds

## NOTE

The advanced key can be set so that the KEY indicator light (green) does not flash even if the battery power is low.

Refer to Personalization Features on page 10-8.

## ▼ Security Indicator Light



This indicator light starts flashing every 2 seconds when the ignition is switched from ON to ACC and the immobilizer system is armed.

The light stops flashing when the ignition is switched ON with the correct ignition key.

At this time, the immobilizer system is disarmed and the light illuminates for about 3 seconds and then turns off.

If the engine does not start with the correct ignition key, and the security indicator light keeps illuminating or flashing, the system may have a malfunction. Consult an Authorized Mazda Dealer.

## ▼ Headlight High-Beam Indicator Light



This light indicates one of two things:

- The high-beam headlights are on.
- The turn signal lever is in the flash-to-pass position.

## ▼ Shift Position Indicator Light

This indicates the selected shift position when the ignition is switched ON.



Gear position indicator

## Warning/Indicator Lights and Beep Sounds

---

### Gear position indicator

When the shift lever is in the D or M position, the numeral for the selected gear displays.

### ▼ TCS/DSC/RSC Indicator Light



This indicator light stays on for a few seconds when the ignition is switched ON. If the TCS or DSC/RSC is operating, the indicator light flashes.

If the light stays on, the TCS, DSC/RSC or the brake assist system may have a malfunction and they may not operate correctly. Take your vehicle to an Authorized Mazda Dealer.

#### **NOTE**

- In addition to the indicator light flashing, a slight lugging sound will come from the engine. This indicates that the TCS is operating properly.
- On slippery surfaces, such as fresh snow, it will be impossible to achieve high rpm when the TCS is on.

### ▼ TCS OFF Indicator Light

# TCS OFF

This indicator light stays on for a few seconds when the ignition is switched ON.

It also illuminates when the TCS OFF switch is pressed and TCS is switched off. Refer to TCS OFF Switch on page 5-25. If the light remains illuminated and the TCS is not switched off, take your vehicle to an Authorized Mazda Dealer. The dynamic stability control may have a malfunction.

#### **NOTE**

*If the TCS/DSC indicator light and the TCS OFF indicator light remain illuminated even after switching the ignition from ON to OFF, and back to ON, attempt the procedure again. If this still does not resolve the issue, consult an Authorized Mazda Dealer.*

### ▼ Cruise Main Indicator Light (Amber)/Cruise Set Indicator Light (Green)

# CRUISE

The indicator light has two colors.

## Warning/Indicator Lights and Beep Sounds

### Cruise Main Indicator Light (Amber)

The indicator light illuminates amber when the ON switch is pressed and the cruise control system is activated.

### Cruise Set Indicator Light (Green)

The indicator light illuminates green when a cruising speed has been set.

### ▼ BSM OFF Indicator Light \*

**BSM  
OFF**

This indicator light illuminates for a few seconds when the ignition is switched ON.

The BSM OFF indicator light illuminates when the BSM system is turned off by pressing the BSM OFF switch. The indicator light flashes if the BSM system has a malfunction. Consult an Authorized Mazda Dealer.

#### **NOTE**

*If the vehicle is driven on a road with less traffic and few vehicles that the radar sensors can detect, the system may pause (The BSM OFF indicator light in the instrument panel flashes). However, it does not indicate a malfunction.*

### ▼ Lights-On Indicator Light



This indicator light illuminates when the exterior lights and dashboard illumination are on.

### ▼ Turn Signal/Hazard Warning Indicator Lights



When operating the turn signal lights, the left or right turn signal indicator light flashes to indicate which turn signal light is operating (page 5-66).

When operating the hazard warning lights, both turn signal indicator lights flash (page 5-75).

#### **NOTE**

*If an indicator light remains illuminated (does not flash) or if it flashes abnormally, one of the turn signal bulbs may be burned out.*

## Warning/Indicator Lights and Beep Sounds

---

### Beep Sounds

#### ▼ Air Bag/Front Seat Belt Pretensioner System Warning Beep

If a malfunction is detected in the air bag/front seat belt pretensioner systems and the warning light, a warning beep sound will be heard for about 5 seconds every minute.

The air bag and seat belt pretensioner system warning beep sound will continue to be heard for approximately 35 minutes. Have your vehicle inspected at an Authorized Mazda Dealer as soon as possible.

#### WARNING

**Do not drive the vehicle with the air bag/front seat belt pretensioner system warning beep sounding:**

*Driving the vehicle with the air bag/front seat belt pretensioner system warning beep sounding is dangerous. In a collision, the air bags and the front seat belt pretensioner system will not deploy and this could result in death or serious injury.*

*Contact an Authorized Mazda Dealer to have the vehicle inspected as soon as possible.*

#### ▼ Seat Belt Warning Beep

If the driver's seat belt is not fastened when the ignition is switched ON, a beep sound will be heard for about 6 seconds. If the driver or the front passenger's seat belt is not fastened and the vehicle is driven at a speed faster than about 20 km/h (12 mph), a beep sound will be heard again for a specified period of time. Refer to Seat Belt Reminder on page 2-35.

#### ▼ Ignition Key Reminder

If the ignition is switched off or the ignition is switched to ACC with the key inserted, a continuous beep sound will be heard when the driver's door is opened.

#### ▼ Lights-On Reminder\*

If lights are on and the ignition is switched to ACC or the ignition is switched off, or the key is removed from the ignition switch, a continuous beep sound will be heard when the driver's door is opened.

#### NOTE

- *(With advanced key)*  
*When the advanced keyless function is used and the ignition is switched to ACC, the "Start Knob Not in Lock Warning Beep" (page 3-18) overrides the lights-on reminder.*
- *When the ignition is switched to ACC or the ignition is switched off, the "Ignition Key Reminder" (page 5-3) overrides the lights-on reminder.*

## Warning/Indicator Lights and Beep Sounds

---

### ▼ Parking Brake Reminder

If the parking brake has not been completely released and the vehicle is driven at about 5 km/h (3 mph) or faster, a continuous beep sound will be heard to notify the driver that the parking brake has not been released.

### ▼ Tire Inflation Pressure Warning Beep\*

The warning beep sound will be heard for about 3 seconds when there is any abnormality in tire inflation pressures (page 5-28).

### ▼ Advanced Keyless Warning (with Advanced Key)

Warning indicators for the advanced key, such as “the advanced key removed from vehicle warning”, use a beep sound and warning/indicator lights in the instrument cluster.

Refer to Warning and Beep Sounds on page 3-18.

### ▼ Blind Spot Monitoring System Warning Beep\*

The warning beep operates when the turn signal lever is operated to the side where the BSM warning light is illuminated.

#### **NOTE**

*The system can be personalized so that the BSM warning beep does not operate. Consult an Authorized Mazda Dealer.*

# Switches and Controls

## Lighting Control

### ▼ Headlights

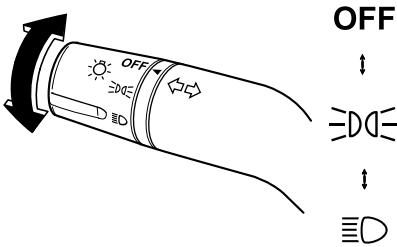
Turn the headlight switch to turn the headlights, other exterior lights and dashboard illumination on or off.

#### NOTE

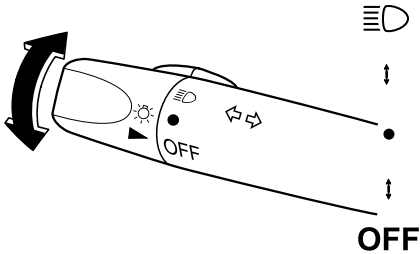
- To prevent discharging the battery, do not leave the lights on while the engine is off unless safety requires them.
- If the light switch is left on, the lights will automatically switch off (if equipped) approximately 30 seconds after switching the ignition to ACC or switching the ignition off. The time setting can be changed. Refer to Personalization Features on page 10-8.

### Without AUTO position

#### Type A



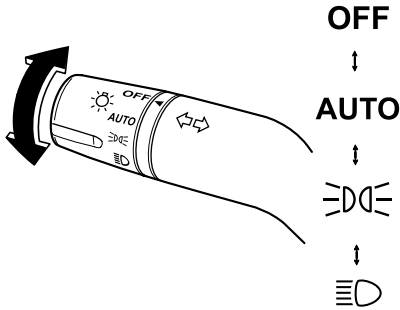
#### Type B



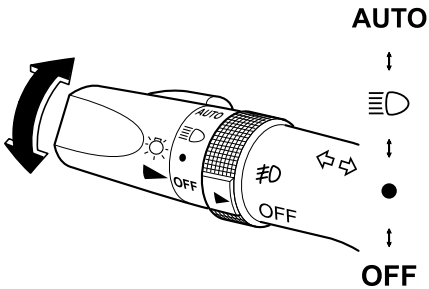
Switch Position	Type A	OFF	☺☹	☹☺
	Type B	OFF	●	☹☺
Headlights		Off	Off	On
Taillights				
Parking lights				
License lights		Off	On	On
Side-marker lights				
Dashboard illumination				

**With AUTO position**

**Type A**



**Type B**



# Switches and Controls

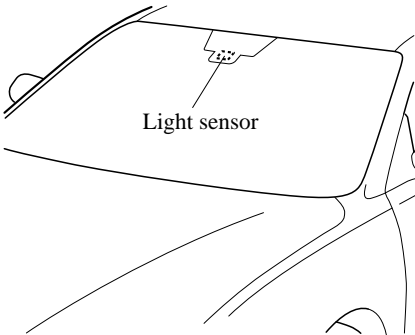
Switch Position	Type A	OFF	AUTO	☰☱☲	☰☱☲	—
	Type B	OFF	—	●		AUTO
Headlights		Off	Auto	Off	On	Auto
Taillights Parking lights License lights Side-marker lights Dashboard illumination		Off		On	On	

### AUTO (Auto-light control)

When the headlight switch is in the AUTO position and the ignition is switched ON, the light sensor senses the surrounding lightness or darkness and automatically turns the headlights, other exterior lights and dashboard illumination on or off (see chart above).

### **⚠ CAUTION**

- Do not shade the light sensor by adhering a sticker or a label on the windshield. Otherwise the light sensor will not operate correctly.



- The light sensor also works as a rain sensor for the auto-wiper control. Keep hands and scrapers clear of the windshield when the wiper lever is in the AUTO position and the ignition is switched ON as fingers could be pinched or the wipers and wiper blades damaged when the wipers activate automatically. If you are going to clean the windshield, be sure the wipers are turned off completely — this is particularly important when clearing ice and snow — when it is particularly tempting to leave the engine running.



**NOTE**

- The headlights, other exterior lights and dashboard illumination may not turn off immediately even if the surrounding area becomes well-lit because the light sensor determines that it is nighttime if the surrounding area is continuously dark for several minutes such as inside long tunnels, traffic jams inside tunnels, or in indoor parking lots.  
In this case, the light turns off if the light switch is turned to the OFF position.
- The dashboard illumination can be adjusted by rotating the knob in the instrument cluster. Also, the day/night mode can be changed by pressing the knob. To adjust the brightness of the dashboard illumination: Refer to Dashboard Illumination on page 5-42.
- The sensitivity of the AUTO lights may be changed by an Authorized Mazda Dealer. Refer to Personalization Features on page 10-8.

**Xenon fusion headlight bulbs\***

The low-beam bulbs of the headlights have xenon fusion bulbs that produce a bright white beam over a wide area.

**! WARNING****Do not replace the xenon fusion bulbs yourself**

Replacing the xenon fusion bulbs yourself is dangerous. Because the xenon fusion bulbs require high voltage, you could receive an electric shock if the bulbs are handled incorrectly. Consult an Authorized Mazda Dealer when the replacement is necessary.

**NOTE**

If the headlights flicker, or the brightness weakens, the bulb-life may be depleted and a replacement is necessary. Consult an Authorized Mazda Dealer.

**▼ Lights-On Reminder\***

If lights are on and the ignition is switched to ACC or the ignition is switched off, or the key is removed from the ignition switch, a continuous beep sound will be heard when the driver's door is opened.

**NOTE**

- (With advanced key)  
When the advanced keyless function is used and the ignition is switched to ACC, the "Start Knob Not in Lock Warning Beep" (page 3-18) overrides the lights-on reminder.

- When the ignition is switched to ACC or the ignition is switched off, the "Ignition Key Reminder" (page 5-3) overrides the lights-on reminder.

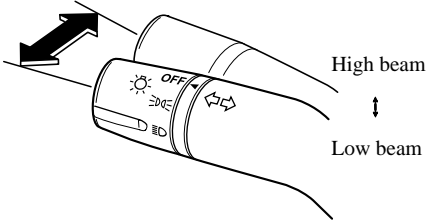
**▼ Headlight High-Low Beam**

Press the lever forward to turn on the high beams.

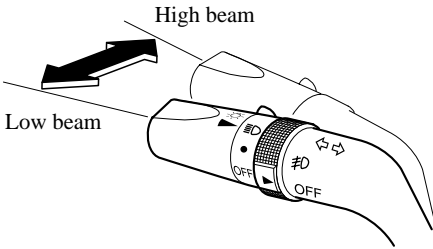
Pull the lever back to its original position for the low beams.

# Switches and Controls

## Type A



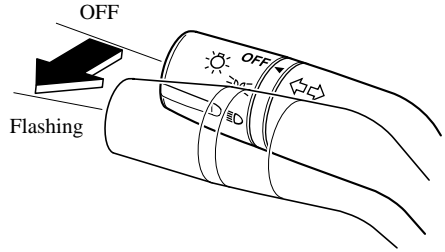
## Type B



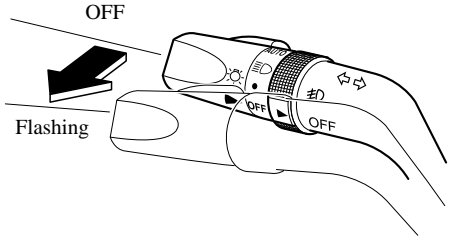
## ▼ Flashing the Headlights

To flash the headlights, pull the lever fully towards you (the headlight switch does not need to be on). The lever will return to the normal position when released.

### Type A

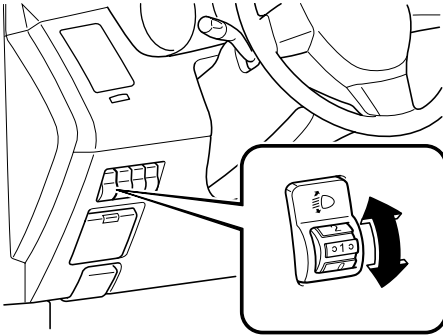


### Type B



▼ **Headlight Leveling\***

The number of passengers and weight of cargo in the luggage compartment change the angle of the headlights. The headlight leveling switch is used to adjust the angle of the headlights manually.



Select the proper headlight angle from the following chart.

Front seat		Rear seat		Load	Switch Position
Driver	Passenger	Second-row	Third-row		
×	—	—	—	—	0
×	×	—	—	—	0
×	×	—	×	—	1
×	×	×	×	—	1
×	×	×	×	×	2
×	—	—	—	×	3

×: Yes  
 —: No

▼ **Daytime Running Lights (Canada)**

In Canada, vehicles must be driven with the headlights on during daytime operation.

For that reason, the daytime running lights automatically turn on when the ignition is switched ON.

**NOTE**

*The Daytime Running Lights turn off when the parking brake is applied.*

# Switches and Controls

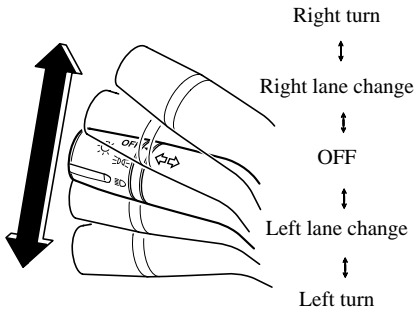
## Turn and Lane-Change Signals

### Turn Signals

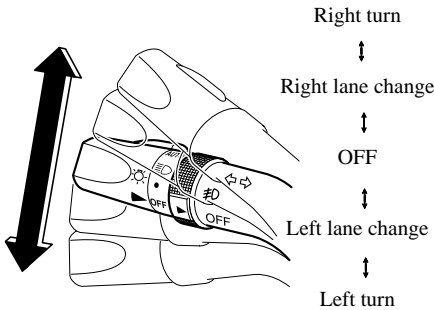
Move the signal lever down (for a left turn) or up (for a right turn) to the stop position. The signal will self-cancel after the turn is completed.

If the indicator light continues to flash after a turn, manually return the lever to its original position.

(Type A)



(Type B)



Green indicators on the dashboard show which signal is working.

### Lane-change signals



Move the lever slightly toward the direction of the change —until the indicator flashes— and hold it there. It will return to the off position when released.

### NOTE

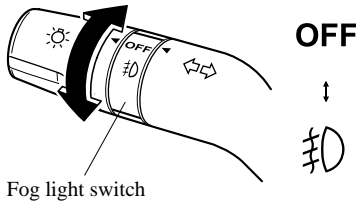
*If an indicator light stays on without flashing or if it flashes abnormally, one of the turn signal bulbs may be burned out.*

## Fog Lights\*

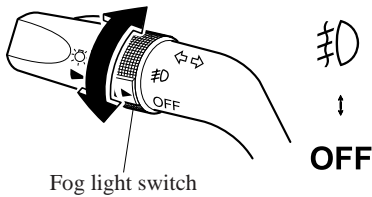
Use this switch to turn on the fog lights. The fog lights will help you to see as well as be seen under foggy conditions or at night.



To turn the fog lights on, rotate the fog light switch to the  position. The headlight switch must be in the  position before turning on the fog lights.

### Type A



### Type B



To turn them off, rotate the fog light switch to the OFF position or turn the headlight switch to the  (Type A)/ (Type B) position.

### NOTE

- The fog lights will turn off when the headlights are set at high beam.
- **(With auto-light control)**  
If the fog light switch is in the ON position and the headlight switch is in the AUTO position, the fog lights will turn on when the headlights, the exterior lights and dashboard illumination turn automatically.

## Switches and Controls

### Windshield Wipers and Washer

The ignition must be switched ON.

#### **⚠ WARNING**

**Use only windshield washer fluid or plain water in the reservoir:**

Using radiator antifreeze as washer fluid is dangerous. If sprayed on the windshield, it will dirty the windshield, affect your visibility, and could result in an accident.

**Only use windshield washer fluid mixed with anti-freeze protection in freezing weather conditions:**

Using windshield washer fluid without anti-freeze protection in freezing weather conditions is dangerous as it could freeze on the windshield and block your vision which could cause an accident. In addition, make sure the windshield is sufficiently warmed using the defroster before spraying the washer fluid.

#### **NOTE**

Because heavy ice and snow can jam the wiper blades, the wiper motor is protected from motor breakdown, overheating and possible fire by a circuit breaker. This mechanism will automatically stop operation of the blades, but only for about 5 minutes.

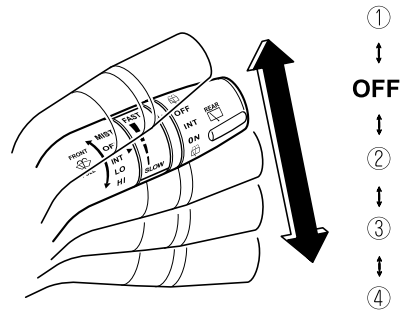
If this happens, turn off the wiper switch and park off the right-of-way, and remove the snow and ice.

After 5 minutes, turn on the switch and the blades should operate normally. If they do not resume functioning, consult an Authorized Mazda Dealer as soon as possible. Drive to the side of the road and park off the right-of-way. Wait until the weather clears before trying to drive with the wipers inoperative.

#### **▼ Windshield Wipers**

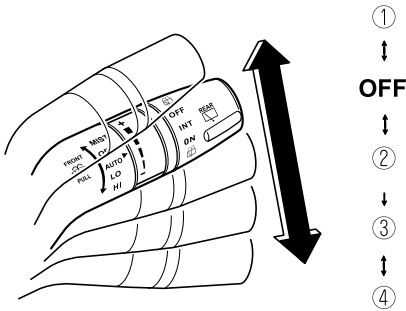
Turn the wipers on by pressing the lever up or down.

**With INT position**



Switch Position			Wiper operation
No.	Type A	Type B	
①	MIST	MIST	Single wipe cycle (mist)
②	INT	INT	Intermittent
③	LO	1	Low speed
④	HI	2	High speed

**With AUTO position**

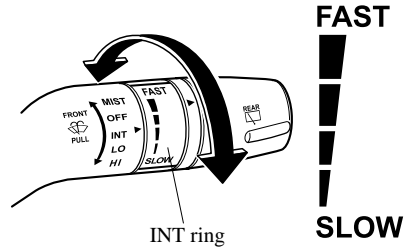


Switch Position			Wiper operation
No.	Type A	Type B	
①	MIST	MIST	Single wipe cycle (mist)
②	AUTO	AUTO	Auto control
③	LO	1	Low speed
④	HI	2	High speed

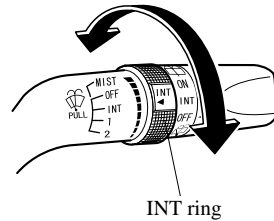
**Variable-speed intermittent wipers**

Set the lever to the intermittent position and choose the interval timing by rotating the ring.

**Type A**



**Type B**



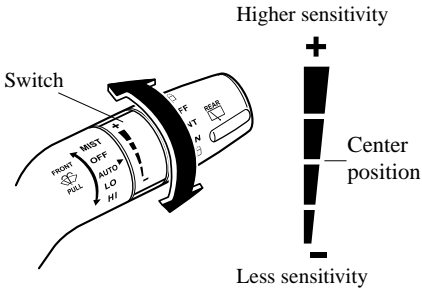
**AUTO (Auto-wiper control)**

When the wiper lever is in the AUTO position, the rain sensor senses the amount of rainfall on the windshield and turns the wipers on or off automatically (off—intermittent—low speed—high speed).

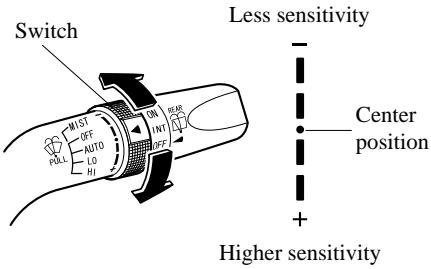
The sensitivity of the rain sensor can be adjusted by turning the switch on the wiper lever. From the center position (normal), rotate the switch downward for higher sensitivity (faster response) or rotate it upward for less sensitivity (slower response).

# Switches and Controls

## Type A

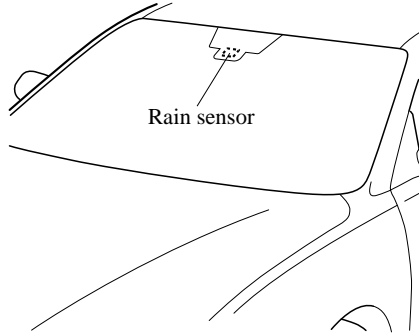


## Type B



### **CAUTION**

➤ Do not shade the rain sensor by adhering a sticker or a label on the windshield. Otherwise the rain sensor will not operate correctly.





- When the wiper lever is in the AUTO position and the ignition is switched ON, the wipers may move automatically in the following cases:
  - If the windshield above the rain sensor is touched or wiped with a cloth.
  - If the windshield is struck with a hand or other object from either outside or inside the vehicle.

Keep hands and scrapers clear of the windshield when the wiper lever is in the AUTO position and the ignition is switched ON as fingers could be pinched or the wipers and wiper blades damaged when the wipers activate automatically.

If you are going to clean the windshield, be sure the wipers are turned off completely—this is particularly important when clearing ice and snow—when it is most likely that the engine is left running.

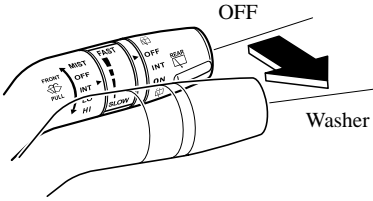
#### NOTE

- Switching the auto-wiper lever from the OFF to the AUTO position while driving at a vehicle speed of 4 km/h (2 mph) or higher (or after driving the vehicle) activates the windshield wipers once, after which they operate according to the rainfall amount.
- The auto-wiper control may not operate when the rain sensor temperature is about  $-10^{\circ}\text{C}$  ( $14^{\circ}\text{F}$ ) or lower, or about  $85^{\circ}\text{C}$  ( $185^{\circ}\text{F}$ ) or higher.
- If the windshield is coated with water repellent, the rain sensor may not be able to sense the amount of rainfall correctly and auto-wiper control may not operate properly.
- If dirt or foreign matter (Such as ice or matter containing salt water) adheres to the windshield above the rain sensor or if the windshield is iced, it could cause the wipers to move automatically. However, if the wipers cannot remove this ice, dirt or foreign matter, the auto-wiper control will stop operation. In this case, set the wiper lever to the low speed position or high speed position for manual operation, or remove the ice, dirt or foreign matter by hand to restore the auto-wiper operation.
- If the auto-wiper lever is left in the AUTO position, the wipers could operate automatically from the effect of strong light sources, electromagnetic waves, or infrared light because the rain sensor uses an optical sensor. It is recommended that the auto-wiper lever be switched to the OFF position other than when driving the vehicle under rainy conditions.

# Switches and Controls

## ▼ Windshield Washer

Pull the lever toward you and hold it to spray washer fluid.



### NOTE

With the wiper lever in the OFF or intermittent position/AUTO position, the wipers will operate continuously until the lever is released.

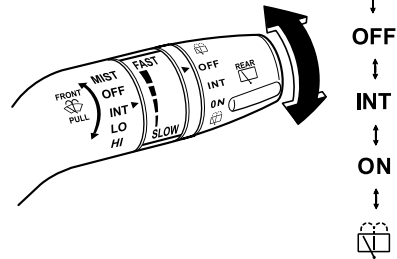
If the washer does not work, inspect the fluid level (page 8-24). If it's normal, consult an Authorized Mazda Dealer.

## Rear Window Wiper and Washer

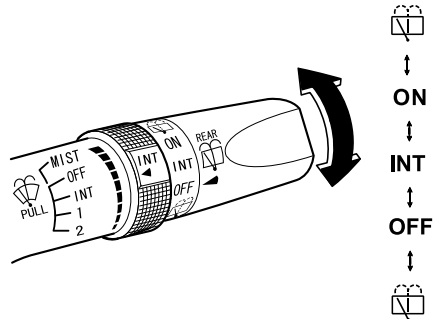
The ignition must be switched ON.

### ▼ Rear Window Wiper

#### Type A



#### Type B




Turn the wiper on by turning the rear wiper/washer switch.

**ON** — Normal

**INT** — Intermittent

### ▼ Rear Window Washer

To spray washer fluid, turn the rear wiper/washer switch to the  position. After the switch is released, the washer will stop.

If the washer does not work, inspect the fluid level (page 8-24). If it's normal and the washer still does not work, consult an Authorized Mazda Dealer.

### Rear Window Defroster

The rear window defroster clears frost, fog, and thin ice from the rear window.

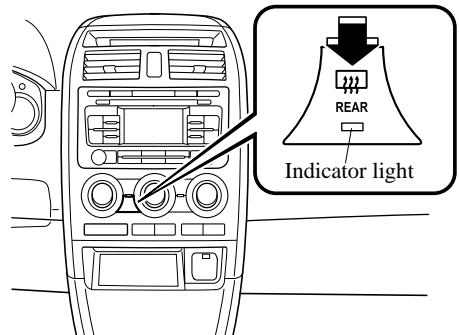
The ignition must be switched ON.

Press the switch to turn on the rear window defroster. The rear window defroster operates for about 15 minutes and turns off automatically.

The indicator light illuminates during operation.

The defroster operation can be confirmed by the indicator in the display.

To turn off the rear window defroster before the 15 minutes has elapsed, press the switch again.



### ⚠ CAUTION

*Do not use sharp instruments or window cleaners with abrasives to clean the inside of the rear window surface. They may damage the defroster grid inside the window.*

### NOTE

*This defroster is not designed for melting snow. If there is an accumulation of snow on the rear window, remove it before using the defroster.*


## Switches and Controls

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### ▼ Mirror Defroster\*

To turn on the mirror defrosters, switch the ignition ON and press the rear window defroster switch (page 5-73).

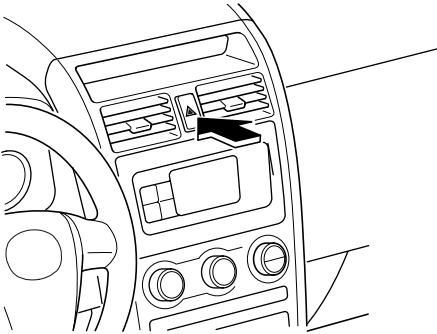
### Horn

To sound the horn, press the  mark on the steering wheel.

## Hazard Warning Flasher

The hazard warning lights should always be used when you stop on or near a roadway in an emergency.

The hazard warning lights warn other drivers that your vehicle is a traffic hazard and that they must take extreme caution when near it.



Depress the hazard warning flasher and all the turn signals will flash.

### NOTE

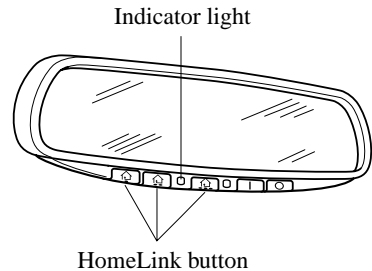
- *The turn signals do not work when the hazard warning lights are on.*
- *Check local regulations about the use of hazard warning lights while the vehicle is being towed to verify that it is not in violation of the law.*

## HomeLink Wireless Control System\*

### NOTE

*HomeLink and HomeLink house are registered trademarks of Johnson Controls.*

The HomeLink system replaces up to 3 hand-held transmitters with a single built-in component in the auto-dimming mirror. Pressing the HomeLink button on the auto-dimming mirror activates garage doors, gates and other devices surrounding your home.



## Switches and Controls

---

### **WARNING**

**Do not use the HomeLink system with any garage door opener that lacks the safety stop and reverse feature:**

Using the HomeLink system with any garage door opener that lacks the safety stop and reverse feature as required by federal safety standards is dangerous. (This includes garage doors manufactured before April 1, 1982.)

Using these garage door openers can increase the risk of serious injury or death. For further information, contact HomeLink at 1-800-355-3515 or [www.homelink.com](http://www.homelink.com) or your Authorized Mazda Dealer.

**Always check the areas surrounding garage doors and gates for people or obstructions before programming or during operation of the HomeLink system:**

Programming or operating the HomeLink system without verifying the safety of areas surrounding garage doors and gates is dangerous and could result in an unexpected accident and serious injury if someone were to be hit.

### **CAUTION**

HomeLink has been tested and complies with FCC and Industry Canada rules. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the device.

### **NOTE**

FCC ID: NZLOBIHL3

CANADA: 4112A-OBIHL3

This device complies with FCC rules part 15. Operation is subject to the following conditions:

- 1- This device may not cause any harmful interference and
- 2- This device must accept any interference that may be received including interference that may cause undesired operation.

### **NOTE**

The programming will not be erased even if the battery is disconnected.

### **▼ Pre-programming the HomeLink System**

#### **NOTE**

It is recommended that a new battery be placed in the hand-held transmitter of the device being programmed to HomeLink for quicker training and accurate transmission of the radio-frequency signal.

- Verify that there is a remote control transmitter available for the device you would like to program.
- Disconnect the power to the device.

### **▼ Programming the HomeLink System**

### **CAUTION**

When programming a garage door opener or a gate, disconnect the power to these devices before performing programming, as continuous operation of the devices could damage the motor.

The HomeLink system provides 3 buttons which can be individually selected and programmed using the transmitters for current, on-market devices as follows:

1. Press and hold the two outer HomeLink buttons (buttons one and three) — releasing only when the indicator light begins to flash (after 20 seconds). **Do not** hold the buttons for longer than 30 seconds and **do not repeat step 1** to program a second and/or third hand-held transmitter to the remaining two HomeLink buttons.
2. Position the end of your hand-held transmitter 2.5—7.5 cm (1—3 inches) away from the HomeLink button you wish to program while keeping the indicator light in view.
3. Simultaneously press and hold both the chosen HomeLink and hand-held transmitter buttons. **Do not release the buttons until step 4 has been completed.**

#### **NOTE**

*Some gate operators and garage door openers may require you to replace this Programming Step 3 with procedures noted in the “Gate Operator/Canadian Programming” section.*

4. After the HomeLink indicator light changes from a slow to a rapidly blinking light, release both the HomeLink and hand-held transmitter buttons.

#### **NOTE**

*If the HomeLink indicator light does not change to a rapidly blinking light, contact HomeLink at [www.homelink.com](http://www.homelink.com) or call 1-800-355-3515 for assistance.*

5. Press and hold the just-trained HomeLink button and observe the indicator light.

If the indicator light **stays on constantly, programming is complete** and your device should activate when the HomeLink button is pressed and released.

#### **NOTE**

*To program the remaining two HomeLink buttons, begin with “Programming” — step 2. Do not repeat step 1.*

If the indicator light blinks **rapidly for two seconds and then turns to a constant light, continue with “Programming” steps 6—8** to complete the programming of a rolling code equipped device (most commonly a garage door opener).

6. At the garage door opener receiver (motor-head unit) in the garage, locate the “learn” or “smart” button. This can usually be found where the hanging antenna wire is attached to the motor-head unit.
7. Firmly press and release the “learn” or “smart” button. (The name and color of the button may vary by manufacturer.)

#### **NOTE**

*There are 30 seconds in which to initiate step 8.*

8. Return to the vehicle and firmly **press, hold for two seconds and release** the programmed HomeLink button. Repeat the “**press/hold/release**” sequence a second time, and, depending on the brand of the garage door opener (or other rolling code equipped device), repeat this sequence a third time to complete the programming process.

## Switches and Controls

---

HomeLink should now activate your rolling code equipped device.

### **NOTE**

*To program the remaining two HomeLink buttons, begin with “Programming” — step 2. Do not repeat step 1.*

For questions or comments, please contact HomeLink at [www.homelink.com](http://www.homelink.com) or 1-800-355-3515.

### ▼ Gate operator/Canadian Programming

Canadian radio-frequency laws require transmitter signals to “time-out” (or quit) after several seconds of transmission — which may not be long enough for HomeLink to pick up the signal during programming. Similar to this Canadian law, some U.S. gate operators are designed to “time-out” in the same manner.

If you live in Canada or you are having difficulties programming a gate operator by using the “Programming” procedures (regardless of where you live), **replace “Programming HomeLink” step 3** with the following:

### **NOTE**

*If programming a garage door opener or gate operator, it is advised to unplug the device during the “cycling” process to prevent possible overheating.*

Continue to press and hold the HomeLink button while you **press and release — every two seconds** (“cycle”) your hand-held transmitter until the frequency signal has successfully been accepted by HomeLink. (The indicator light will flash slowly and then rapidly.) Proceed with “Programming” step 4 to complete.

### ▼ Operating the HomeLink System



Press the programmed HomeLink button to operate a programmed device. The code will continue being transmitted for a maximum of 20 seconds.

### ▼ Reprogramming the HomeLink system

To program a device to HomeLink using a HomeLink button previously trained, follow these steps:

1. Press and hold the desired HomeLink button. **DO NOT** release the button.
2. The indicator light will begin to flash after 20 seconds. Without releasing the HomeLink button, proceed with “Programming” - step 2.

### ▼ Erasing Programmed HomeLink Buttons

To erase the existing programming from all three operating channels, press and hold the two outside buttons (  ,  ) on the auto-dimming mirror until the HomeLink indicator light begins to flash after approximately 20 seconds. Verify that the programming has been erased when you resell the vehicle.



# 6

## Interior Comfort

Use of various features for drive comfort, including air-conditioning and audio system.

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Bluetooth® Audio (Type B) * .....	6-125		

## Climate Control System

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### Operating Tips

#### ▼ Operating the Climate Control System

Operate the climate control system with the engine running.

##### **NOTE**

*To prevent the battery from being discharged, do not leave the fan control dial on for a long period of time with the ignition switched ON when the engine is not running.*

#### ▼ Clearing the Air Inlet

Clear all obstructions such as leaves, snow and ice from the hood and the air inlet in the cowl grille to improve the system efficiency.

#### ▼ Foggy Windows

The windows may fog up easily in humid weather. Use the climate control system to defog the windows.

To help defog the windows, operate the air conditioner to dehumidify the air.

##### **NOTE**

*The air conditioner may be used along with the heater to dehumidify the air.*

#### ▼ Outside/Recirculated Air Position

Use the outside air position in normal conditions. The recirculated air position should be used only when driving on dusty roads or for quick cooling of the interior.

#### ▼ Parking in Direct Sunlight

If the vehicle has been parked in direct sunlight during hot weather, open the windows to let warm air escape, then run the climate control system.

#### ▼ Not Using for a Long Period

Run the air conditioner about 10 minutes at least once a month to keep internal parts lubricated.

#### ▼ Check the Refrigerant before the Weather Gets Hot

Have the air conditioner checked before the weather gets hot. Lack of refrigerant may make the air conditioner less efficient. Consult an Authorized Mazda Dealer for refrigerant inspection.

The air conditioner is filled with HFC134a (R134a), a refrigerant that will not damage the ozone layer. If the air conditioner is low on refrigerant or has a malfunction, consult an Authorized Mazda Dealer.

#### ▼ Replacement of the Cabin Air Filter

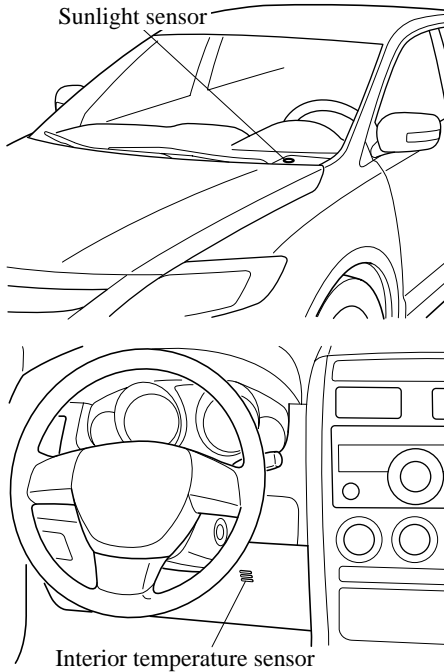
Your vehicle is equipped with an air filter for the air conditioner. It is necessary to change the filter periodically as indicated in scheduled maintenance (page 8-3). Consult an Authorized Mazda Dealer for replacement of the cabin air filter.

### ▼ Sunlight/Temperature Sensor

The fully automatic air conditioner function measures inside and outside temperatures, and the intensity of direct sunlight. It then sets temperatures inside the passenger compartment accordingly.

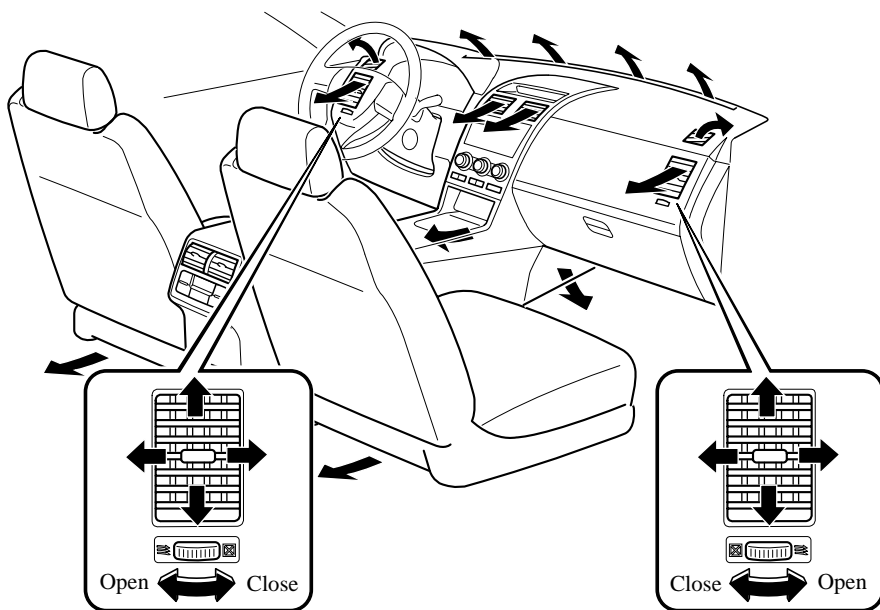
#### **⚠ CAUTION**

*Do not obstruct either sensor, otherwise the automatic air conditioner will not operate properly.*



# Climate Control System

## Vent Operation (Front)



### ▼ Adjusting the Vents

#### Directing airflow

You can direct air flow by moving the adjustment knob.

#### Opening/closing vents

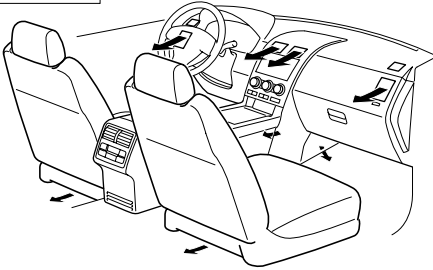
The two outside vents can be opened and closed with wheel.

#### **NOTE**

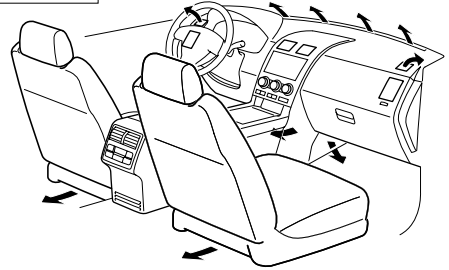
*When using the air conditioner, mist may come out from the vents. This is not a sign of trouble but a result of humid air being suddenly cooled.*

▼ **Selecting the Airflow Mode**

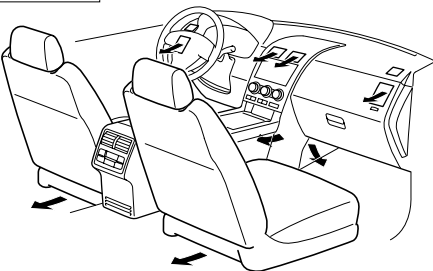
**Dashboard Vents**



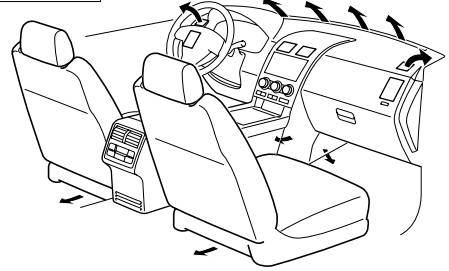
**Defroster and Floor Vents**



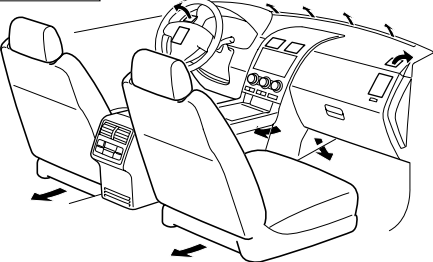
**Dashboard and Floor Vents**



**Defroster Vents**



**Floor Vents**

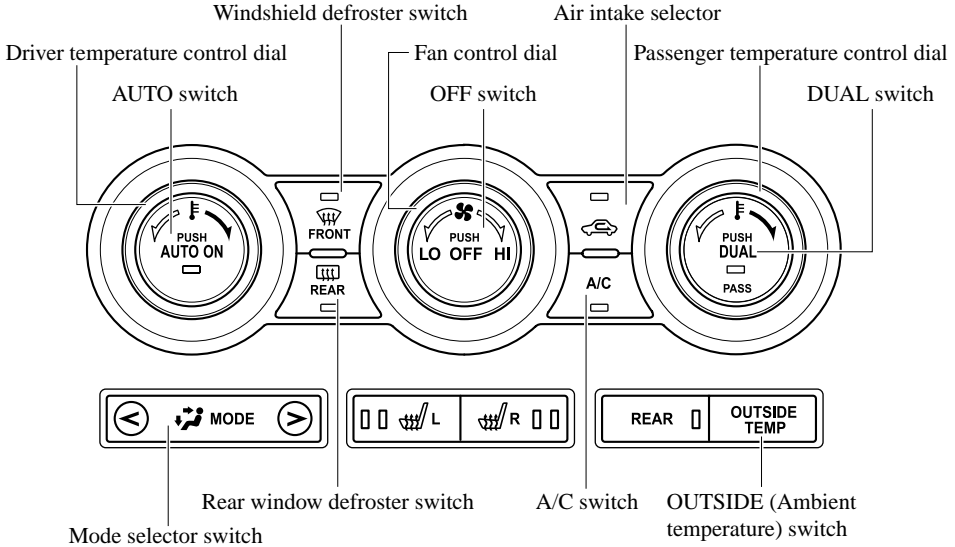
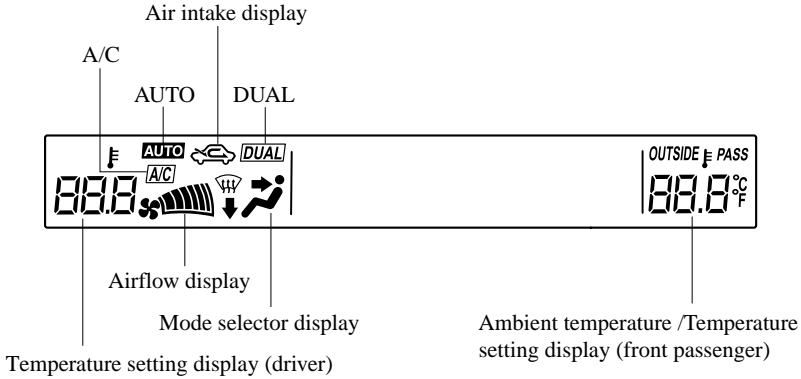


# Climate Control System

## Fully Automatic Type

Climate control information is displayed on the information display.

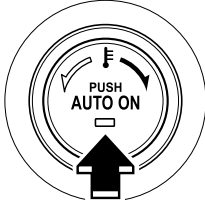
### Information display



# Climate Control System

## ▼ Control Switches

### AUTO switch



By pressing the AUTO switch the following functions will be automatically controlled in accordance with the selected set temperature:

- Airflow temperature
- Amount of airflow
- Selection of airflow mode
- Outside/Recirculated air selection
- Air conditioner operation

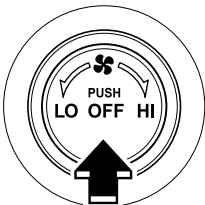
### **NOTE**

#### *AUTO switch indicator light*

- When on, it indicates AUTO operation, and the system will function automatically.
- If any of the following dials or switches are operated while in AUTO control, the AUTO switch indicator turns off.
  - Mode selector switch
  - Fan control dial
  - Windshield defroster switch

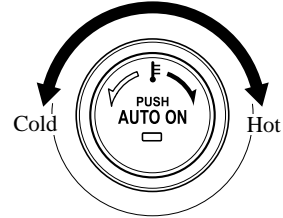
The functions for dials and switches other than those operated in the above continue to operate in AUTO control.

### OFF switch



Pressing the OFF switch shuts off the climate control system.

### Temperature control dial



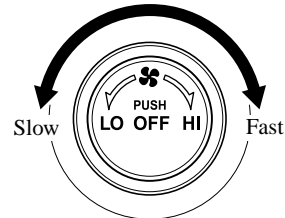
This dial controls temperature. Turn it clockwise for hot and counterclockwise for cold.

- When the DUAL switch is off: Turn the driver temperature control dial to control the temperature.
- When the DUAL switch is on: Turn the driver or front passenger temperature control dial to control the temperature.

### **NOTE**

The system changes to the individual operation mode (DUAL switch indicator light illuminated) by turning the front passenger temperature control dial even when the DUAL switch is off, which allows individual control of the set temperature for the driver and front passenger.

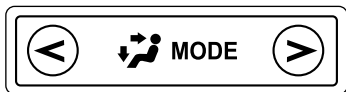
### Fan control dial



The fan has seven speeds. The selected speed will be displayed.








# Climate Control System

## Mode selector switch

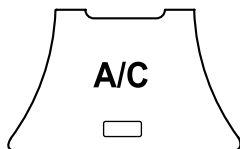


The desired airflow mode can be selected (page 6-5).

### **NOTE**

- With the airflow mode set to the  position and the temperature control dial set at a medium temperature, heated air is directed to the feet and a comparably lower air temperature will flow through the central, left and right vents.
- To set the air vent to , press the windshield defroster switch.
- In the  position, the air conditioner is automatically turned on and the  mode is automatically selected to defrost the windshield. In the  position, the  mode cannot be changed to the  mode.

## A/C switch

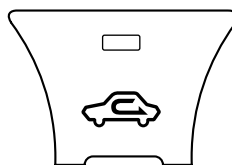


Pressing the A/C switch while the AUTO switch is turned on will turn off the air conditioning (cooling/dehumidifying functions). The air conditioning can be turned on and off by pressing the A/C switch while the fan control dial is on.

### **NOTE**

- The air conditioning operates when the A/C switch is pressed even if the fan is off.
- The air conditioner may not function when the outside temperature approaches 0 °C (32 °F). (Indicator light remains on even when system is off.)

## Air intake selector



Outside or recirculated air positions can be selected. Press the switch to select outside/recirculated air positions.

### **Recirculated air position (indicator light illuminated)**


Use this position when going through tunnels, driving in congested traffic (high engine exhaust areas) or when quick cooling is desired.

### **Outside air position (indicator light turned off)**

Use this position for normal conditions and defogging.

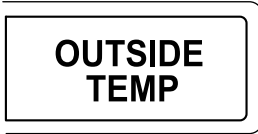
## **⚠ WARNING**

**Do not use the  position in cold or rainy weather:**

*Using the  position in cold or rainy weather is dangerous as it will cause the windows to fog up. Your vision will be hampered, which could lead to a serious accident.*



## OUTSIDE (Ambient Temperature) switch

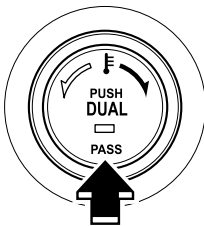


Press the OUTSIDE switch to display the ambient temperature.

### **NOTE**

- The displayed ambient temperature may vary from the actual ambient temperature depending on the surrounding area and vehicle conditions.
- Press the OUTSIDE switch for three seconds or longer to switch the display from Fahrenheit to Centigrade or vice versa.
- Press the OUTSIDE switch again to switch the display from ambient temperature to the temperature set for the air conditioner.

## DUAL switch



Use the DUAL switch to change the mode between the individual operation (driver and passenger) and interconnection (simultaneous) modes.

## **Individual operation mode (indicator light illuminated)**

The set temperature can be controlled individually for the driver and front passenger.

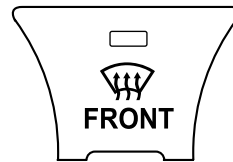
## **Interconnection mode (indicator light turned off)**

The set temperature for the driver and front passenger is controlled simultaneously.

### **NOTE**

- The set temperature for the front passenger changes to that of the driver while in the interconnected mode.
- **DUAL** is displayed on the information display while in the individual operation mode.
- The system changes to the interconnection mode automatically if the windshield defroster switch is pressed. The system will not change to the individual operation mode by pressing the DUAL switch or turning the front passenger temperature control dial.






## Windshield defroster switch



Press the switch to defrost the windshield and front door windows.

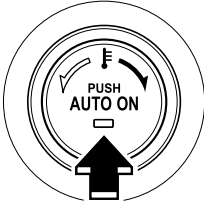
# Climate Control System

## NOTE

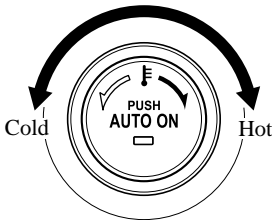
In the  position, the air conditioner is automatically turned on and the  mode is automatically selected to defrost the windshield. In the  position, the  mode cannot be changed to the  mode.

## ▼ Operation of Automatic Air Conditioning

1. Press the AUTO switch. Selection of the airflow mode, air intake selector and amount of airflow will be automatically controlled.



2. Use the temperature control dial to select a desired temperature. Press the DUAL switch or turn the front passenger temperature control dial to control the set temperature individually for the driver and front passenger.

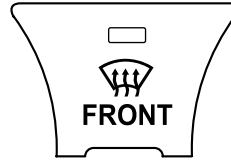



To turn off the system, press the OFF switch.

## NOTE


- Setting the temperature to the maximum high or low will not provide the desired temperature at a faster rate.
- When selecting heat, the system will restrict airflow until it has warmed to prevent cold air from blowing out of the vents.


## ▼ Windshield Defrosting and Defogging



Press the windshield defroster switch. In this position, the  position is automatically selected, and the air conditioner automatically turns on. The air conditioner will directly dehumidify the air to the front windshield and side windows (page 6-5). Airflow amount will be increased.

## ⚠ WARNING

**Set the temperature control to the hot or warm position when defogging ( position):**

Using the  position with the temperature control set to the cold position is dangerous as it will cause the outside of the windshield to fog up. Your vision will be hampered, which could lead to a serious accident.

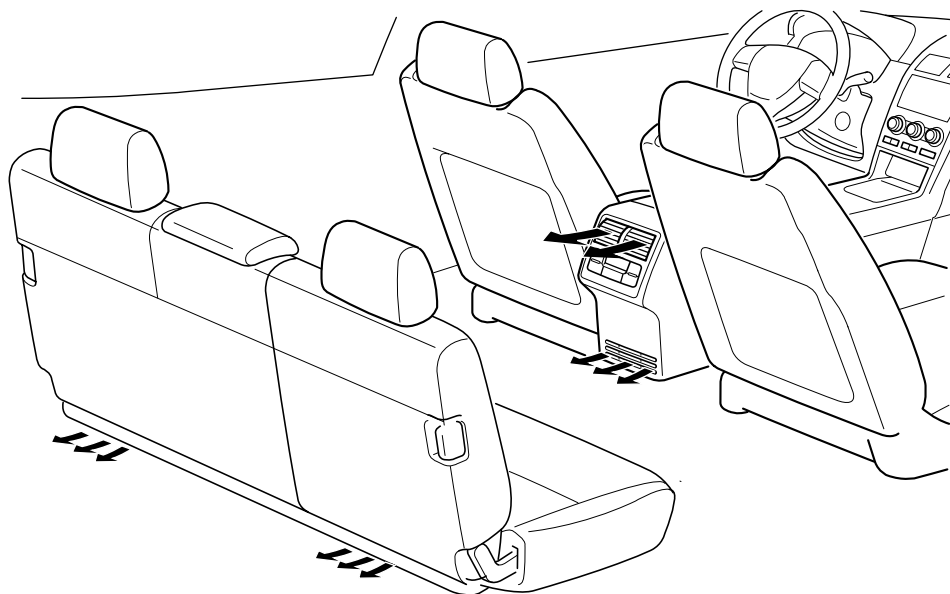
**NOTE**

- *Press the windshield defroster switch to change the mode to the interconnection mode automatically. The system does not change to the individual operation mode by pressing the DUAL switch or turning the front passenger temperature control dial.*
- *Use the temperature control dial to increase the air flow temperature and defog the windshield more quickly.*

## Climate Control System

---

### Vent Operation (Rear)



#### ▼ Adjusting the Vents

##### Directing airflow

You can direct air flow by moving the adjustment knob.

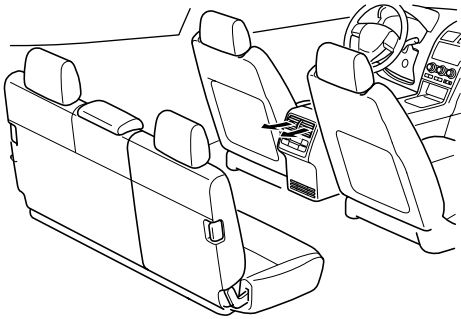
##### **NOTE**

*When using the air conditioner, mist may come out from the vents. This is not a sign of trouble but a result of humid air being suddenly cooled.*

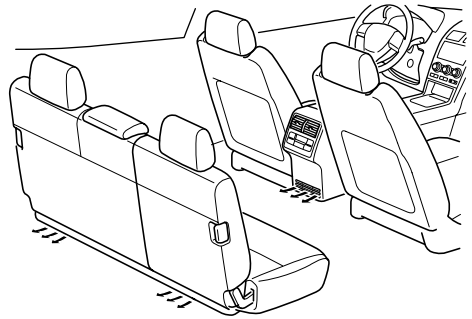
### ▼ Selecting the Airflow Mode

For vehicles with rear full-auto air conditioning, the airflow mode can be selected according to the purpose of use.

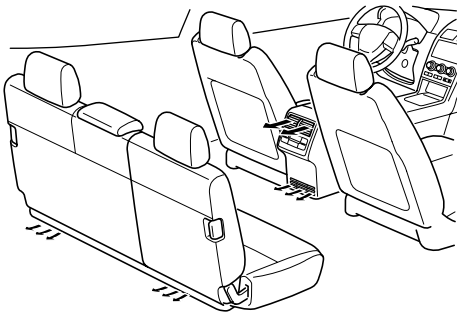
#### Instrument panel Vents



#### Floor Vents



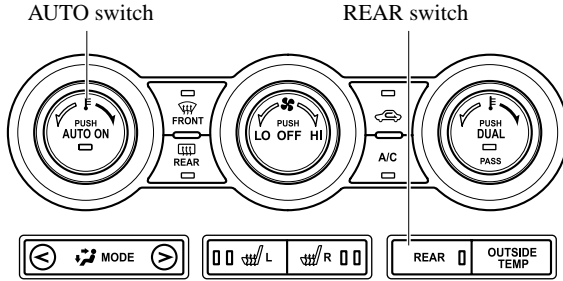
#### Instrument panel and Floor Vents



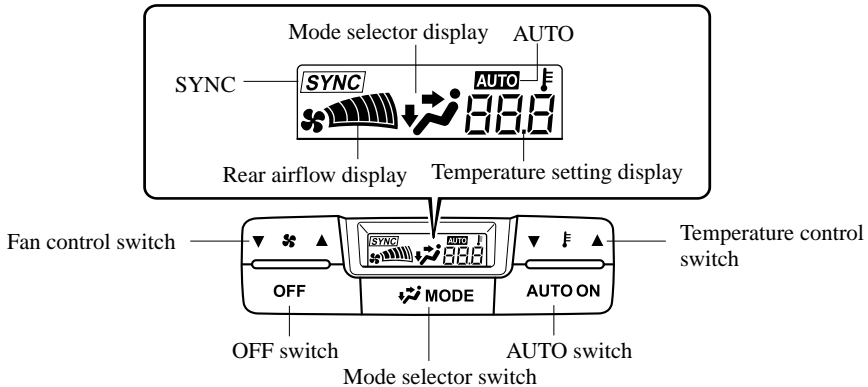
# Climate Control System

## Fully Automatic Type (Rear)

Front



Rear



### ▼ Control Switches

#### Rear switch

Press the rear switch to operate the rear air conditioning.  
The indicator illuminates to indicate that the rear air conditioning is operating.

#### AUTO switch



By pressing the AUTO switch the following functions will be automatically controlled in accordance with the set temperature:

- Airflow temperature

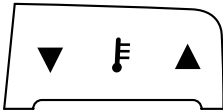
- Amount of airflow
- Selection of airflow mode

### OFF switch



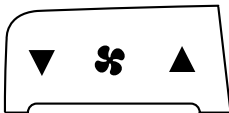
Pressing the OFF switch shuts off the climate control system.

### Temperature control switch



This switch controls temperature. Press ▲ for hot and ▼ for cold.

### Fan control switch



The fan has five speeds.

### Mode selector switch



The desired airflow mode can be selected (page 6-13).

### ▼ Operation of Automatic Air Conditioning

#### Operation from front seats

1. Turn the front air conditioning on.
2. Press the rear switch. The rear air conditioning operates.



3. Selection of the airflow mode, airflow amount and temperature will be automatically controlled to the same temperature setting as the front air conditioner for the driver's side.

# Climate Control System

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## NOTE

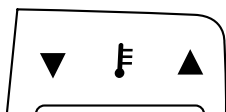
- If the AUTO switch is pressed while the front A/C switch is off, the rear air conditioning operates only to circulate air.
- Setting the temperature to the maximum high or low will not provide the desired temperature at a faster rate.
- When selecting heat, the system will restrict airflow until it has warmed to prevent cold air from blowing out of the vents.
- When the rear air conditioner is controlled to the same temperature setting as the front air conditioner for the driver's side, "SYNC" is displayed on the rear screen.

## Operation from rear seats

1. Turn the front air conditioning on.
2. Press the AUTO switch. The selection of the airflow mode and airflow amount will be automatically controlled.



3. Use the temperature control switch to set the desired temperature.



## NOTE

- If the AUTO switch is pressed while the front A/C switch is off, the rear air conditioning operates only to circulate air.
  - Setting the temperature to the maximum high or low will not provide the desired temperature at a faster rate.
  - When selecting heat, the system will restrict airflow until it has warmed to prevent cold air from blowing out of the vents.
  - When the rear air conditioner is operated automatically, "AUTO" is displayed on the rear screen.
  - When the rear air conditioner is controlled to the same temperature setting as the front air conditioner for the driver's side, "SYNC" is displayed on the rear screen.
4. To turn off the system, press the OFF switch.



## Antenna

### ▼ AM/FM Radio Antenna

The antenna is printed onto the window glass.

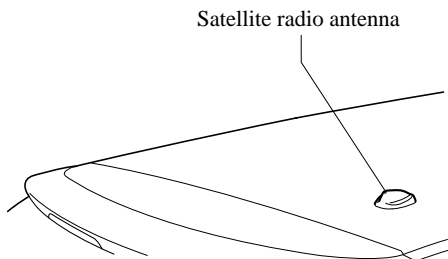
#### **CAUTION**

*When washing the inside of the window which has an antenna, use a soft cloth dampened in lukewarm water, gently wiping the antenna lines.*

*Use of glass cleaning products could damage the antenna.*

### ▼ Satellite Radio Antenna \*

The satellite radio antenna receives SIRIUS signals.



## Operating Tips for Audio System

#### **WARNING**

**Do not adjust the audio control switches while driving the vehicle:**

*Adjusting the audio while driving the vehicle is dangerous as it could distract your attention from the vehicle operation which could lead to a serious accident. Always adjust the audio while the vehicle is stopped.*

*Even if the audio control switches are equipped on the steering wheel, learn to use the switches without looking down at them so that you can keep your maximum attention on the road while driving the vehicle.*

#### **CAUTION**

- *For the purposes of safe driving, adjust the audio volume to a level that allows you to hear sounds outside of the vehicle including car horns and particularly emergency vehicle sirens.*
- *Do not install non-genuine speakers since their vibration may affect the Dynamic Stability Control (DSC)/Roll Stability Control (RSC) sensors.*

#### **NOTE**

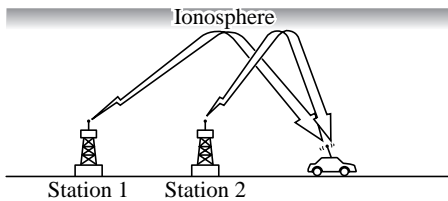
- *To prevent the battery from being discharged, do not leave the audio system on for a long period of time when the engine is not running.*
- *If a cellular phone or CB radio is used in or near the vehicle, it could cause noise to occur from the audio system, however, this does not indicate that the system has been damaged.*

# Audio System

## ▼ Radio Reception

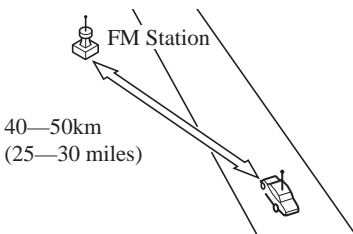
### AM characteristics

AM signals bend around such things as buildings or mountains and bounce off the ionosphere. Therefore, they can reach longer distances than FM signals. Because of this, two stations may sometimes be picked up on the same frequency at the same time.

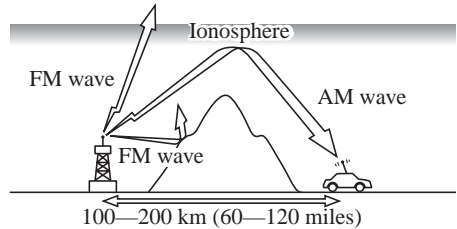


### FM characteristics

An FM broadcast range is usually about 40—50 km (25—30 miles) from the source. Because of extra coding needed to break the sound into two channels, stereo FM has even less range than monaural (non-stereo) FM.



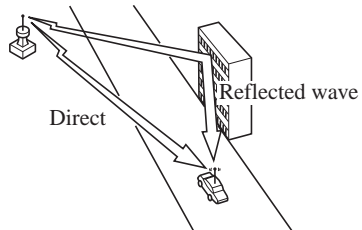
Signals from an FM transmitter are similar to beams of light because they do not bend around corners, but they do reflect. Unlike AM signals, FM signals cannot travel beyond the horizon. Therefore, FM stations cannot be received at the great distances possible with AM reception.



Atmospheric conditions can also affect FM reception. High humidity will cause poor reception. However, cloudy days may provide better reception than clear days.

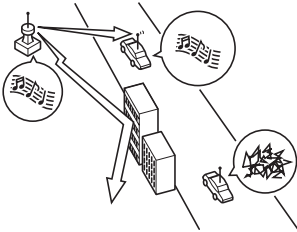
### Multipath noise

Since FM signals can be reflected by obstructions, it is possible to receive both the direct signal and the reflected signal at the same time. This causes a slight delay in reception and may be heard as a broken sound or a distortion. This problem may also be encountered when in close proximity to the transmitter.



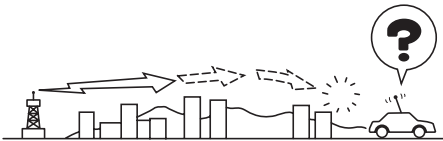
### Flutter/Skip noise

Signals from an FM transmitter move in straight lines and become weak in valleys between tall buildings, mountains, and other obstacles. When a vehicle passes through such an area, the reception conditions may change suddenly, resulting in annoying noise.



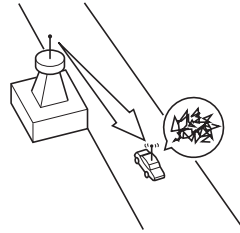
### Weak signal noise

In suburban areas, broadcast signals become weak because of distance from the transmitter. Reception in such fringe areas is characterized by sound breakup.



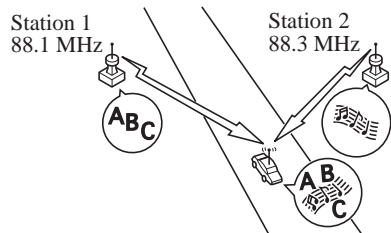
### Strong signal noise

This occurs very close to a transmitter tower. The broadcast signals are extremely strong, so the result is noise and sound breakup at the radio receiver.



### Station drift noise

When a vehicle reaches the area of two strong stations broadcasting at similar frequencies, the original station may be temporarily lost and the second station picked up. At this time there will be some noise from this disturbance.



# Audio System

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## ▼ Operating Tips for CD Player/In-Dash CD Changer

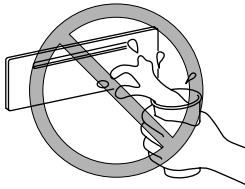
### Condensation phenomenon

Immediately after turning on the heater when the vehicle is cold, the CD or optical components (prism and lens) in the CD player/In-dash CD changer may become clouded with condensation. At this time, the CD will eject immediately when placed in the unit. A clouded CD can be corrected simply by wiping it with a soft cloth. Clouded optical components will clear naturally in about an hour. Wait for normal operation to return before attempting to use the unit.

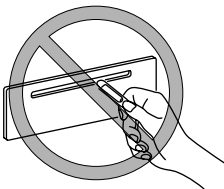
### Handling the CD player/In-dash CD changer

The following precautions should be observed.

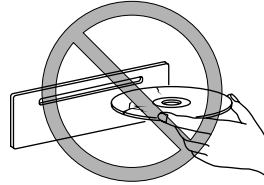
- Do not spill any liquid on the audio system.



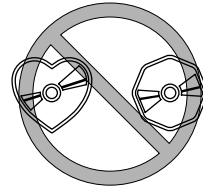
- Do not insert any objects, other than CDs, into the slot.



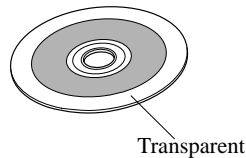
- The CD revolves at high speed within the unit. Defective (cracked or badly bent) CDs should never be used.



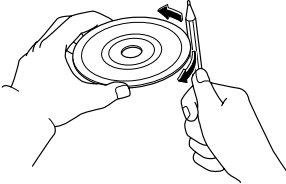
- Do not use non-conventional discs such as heart-shaped, octagonal discs, etc. The disc may not eject resulting in a malfunction.



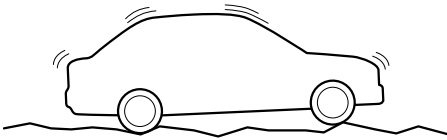
- If the memory portion of the CD is transparent or translucent, do not use the disc.



- A new CD may have rough edges on its inner and outer perimeters. If a disc with rough edges is used, proper setting will not be possible and the CD player/In-dash CD changer will not play the CD. In addition, the disc may not eject resulting in a malfunction. Remove the rough edges in advance by using a ball-point pen or pencil as shown below. To remove the rough edges, rub the side of the pen or pencil against the inner and outer perimeter of the CD.



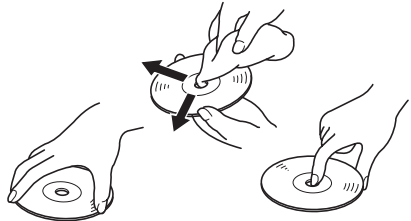
- When driving over uneven surfaces, the sound may jump.



- The CD player/In-dash CD changer has been designed to play CDs bearing the identification logo as shown below. No other discs can be played.



- Use discs that have been legitimately produced. If illegally-copied discs such as pirated discs are used, the system may not operate properly.
- Be sure never to touch the signal surface when handling the CDs. Pick up a CD by grasping the outer edge or the edge of the hole and the outer edge.



- Do not stick paper or tape on the CD. Avoid scratching the reverse side (the side without a label). The disc may not eject resulting in a malfunction.
- Dust, finger smudges, and dirt can decrease the amount of light reflected from the signal surface, thus affecting sound quality. If the CD should become soiled, gently wipe it with a soft cloth from the center of the CD to the edge.

## Audio System

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- Do not use record sprays, antistatic agents, or household spray cleaners. Volatile chemicals such as benzine and thinner can also damage the surface of the CD and must not be used. Anything that can damage, warp, or fog plastic should never be used to clean CDs.
- Insert discs one by one. If two discs are inserted at the same time, the system may not operate properly.
- The CD player/In-dash CD changer ejects the CD if the CD is inserted upside down. Also dirty and/or defective CDs may be ejected.
- Do not insert cleaning discs in the CD player/In-dash CD changer.
- Do not insert any disc with a peel-off seal affixed to it.
- This unit may not be able to play certain CD-R/CD-RWs made using a computer or music CD recorder due to disc characteristics, scratches, smudges, dirt, etc., or due to dust or condensation on the lens inside the unit.
- Storing CDs in the vehicle exposed to direct sunlight or high temperature may damage the CD-R/CD-RWs, and make them unplayable.
- CD-R/CD-RW exceeding 700 MB cannot be played.
- This unit may not be able to play certain discs made using a computer due to the application (writing software) setting used. (For details, consult the store where the application was purchased.)
- It is possible that certain text data, such as titles, recorded on a CD-R/CD-RW may not be displayed when musical data (CD-DA) is playing.
- The period from when a CD-RW is inserted to when it begins playing is longer than a normal CD or CD-R.

- Completely read the instruction manual and cautions for CD-R/CD-RWs.
- Do not use discs with cellophane tape adhering, partially peeled off labels, or adhesive material exuding from the edges of the CD label. Also, do not use discs with a commercially-available CD-R label affixed. The disc may not eject resulting in a malfunction.

### ▼ Operating tips for MP3

#### **NOTE**

*Supply of this product only conveys a license for private, non-commercial use and does not convey a license nor imply any right to use this product in any commercial (i.e. revenue-generating) real time broadcasting (terrestrial, satellite, cable and/or any other media), broadcasting/streaming via the Internet, intranets and/or other networks or in other electronic content distribution systems, such as pay-audio or audio-on-demand applications. An independent license for such use is required. For details, please visit <http://www.mp3licensing.com>.*

- This audio system handles MP3 files that have been recorded on CD-R/CD-RW/CD-ROMs. Discs that have been recorded using the following formats can be played:
  - ISO 9660 level 1
  - ISO 9660 level 2
  - Joliet extended format
  - Romeo extended format
- This unit handles MP3 files conforming to the MP3 format containing both header frames and data frames.
- This unit can play multi-session recorded discs that have up to 40 sessions.

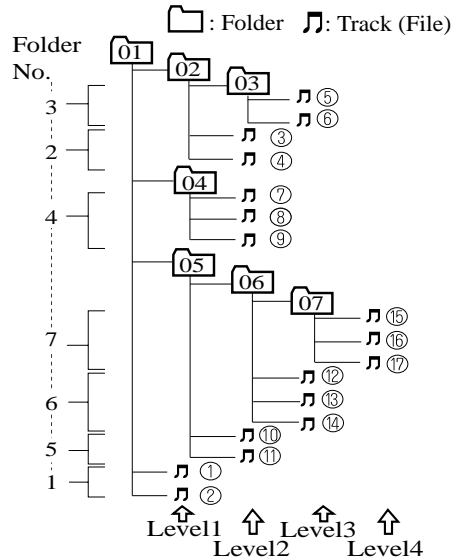
- This unit can play MP3s with sampling frequencies of 16/22.05/24/32/44.1/48 kHz.
- This unit can play MP3 files that have been recorded in bit rates of 8 kbps to 320 kbps. Nonetheless, to insure enjoyment of music with consistent sound quality, it is recommended to use discs that have been recorded at a bit rate of 128 kbps or more.
- If a disc has both music data (CD-DA) and MP3 files, playback of the two file types differs depending on how the disc was recorded.
- Packet written discs cannot be played on this unit.
- This unit does not play CDs recorded using MP3i (MP3 interactive), MP3 PRO and RIFF MP3 formats.

### About folders and files

- The order of hierarchy for MP3 files and folders during playback or other functions is from shallow to deep. The arrangement and playing order of a recorded disc containing MP3 files is as follows:
  - File number  
A numerical file number is assigned to each file in a folder in the order of hierarchy from shallow to deep.
  - Folder number  
A numerical folder number is assigned to each folder in the order of hierarchy from shallow to deep.

### NOTE

*Folders and tracks (files) within the same hierarchy play in the order they were written to the disc depending on the write software.*



Playback may not occur in the above hierarchy depending on the audio unit.

- The folder order is automatically assigned and this order cannot be optionally set.
- Any folder without an MP3 file will be ignored. (It will be skipped and the folder number will not be displayed.)
- MP3 files not conforming to the MP3 format containing both header frames and data frames will be skipped and not played.
- This unit will play MP3 files that have up to eight levels. However, the more levels a disc has, the longer it will take to initially start playing. It is recommended to record discs with two levels or less.
- A single disc with up to 512 files can be played and a single folder with up to 255 files can be played.
- When naming an MP3 file, be sure to add an MP3 file extension (.mp3) after the file name.

# Audio System

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- The maximum number of characters that can be used for file names is as follows. However, this unit will only display up to 32 characters, including the file extension (.mp3).

	Maximum number of characters in a file name (including a separator “.” and the three letters of the file extension)
ISO9660 level 1	12*
ISO9660 level 2	31*
Joliet extended format	64
Romeo extended format	128

\* English one-byte characters (capitalized only) and underbar “\_” are available.

## CAUTION

*This unit can only play MP3 files that have an MP3 file extension (.mp3) attached. Do not attach an MP3 file extension to any other type file as it could cause noise to be emitted or a malfunction in the unit.*

### About ID3 Tag display

- This unit can only display ID3 Tag album, track and artist names that have been input using Ver.1.0/1.1/2.2/2.3 formats. Any other data that may have been input cannot be displayed.
- This unit can only display English (including numerals) one-byte characters. Use only English (including numerals) one-byte characters when inputting ID3 tags. Two-byte characters and some special symbols cannot be displayed.

### Specialized glossary

#### MP3

Abbreviation for “MPEG Audio Layer 3”. A technical standard for audio compression as decided by an ISO (International Organization for Standardization) MPEG working group. Use of MP3 allows for audio data to be compressed to approximately a tenth of the source data size.

#### ISO 9660

An international standard for logical formatting of CD-ROM files and folders. It is divided into three separate levels based on differences in file naming procedures, data configuration and other characteristics.

#### Multi-session

A session is the complete amount of data recorded from the beginning to the end of a single period of CD-ROM, CD-R/CD-RW data recording. Multi-session refers to the existence of data from two or more sessions on a single disc.

#### Sampling

Refers to the process of encoding analog audio data at regular intervals and converting it to digital data. The sampling rate refers to the number of times a sample is taken in one second and is expressed in Hz units. Increasing the sampling rate improves the sound quality but also increases the data size.



**Bit rate**

Refers to the volume of data per second, expressed in bps (bits per second). Generally, the larger the number of the transfer bit rate when compressing an MP3 file, the more information regarding musical reproduction it carries, and therefore the better the sound quality.

**Packet writing**

A general term for the method, similar to that used for floppy discs or hard drives, of recording the required file in a single increment on a CD-R and similar.

**ID3 Tag**

ID3 tag is a method for storing information related to the music in an MP3 file. Information such as track, artist and album name can be stored. This content can be freely edited using ID3 editing function software.

**VBR**

Abbreviation for Variable Bit Rate. While CBR (Constant Bit Rate) is generally used, VBR varies the bit rate for audio compression according to compression conditions and this allows for compression with preference given to sound quality.

**▼ Operating Tips for WMA**

WMA is short for Windows Media Audio and is the audio compression format used by Microsoft.

Audio data can be created and stored at a higher compression ratio than MP3.

\* Microsoft and Windows Media are registered trademarks of Microsoft Corporation U.S. in the United States and other countries.

**Playable WMA file specification**

CD-R and CD-RW including WMA files can be played with this unit. Discs which conform to the following formats can be played.

Playable WMA files are as follows:

Item		Content
Specification		Windows Media Audio Version 7.0, 8.0, 9.0
Sampling frequency	Bit rate	32kHz. . . . . 32, 40, 48 kbps
		44.1kHz. . . . . 32, 48, 64, 80, 96, 128, 160, 192, 256, 320 kbps
		48kHz. . . . . 64, 96, 128, 160, 192 kbps
VBR (Variable Bit Rate)		Supported
Channel mode		Stereo/Monaural
WMA tag		Title, artist name, album name

** CAUTION**

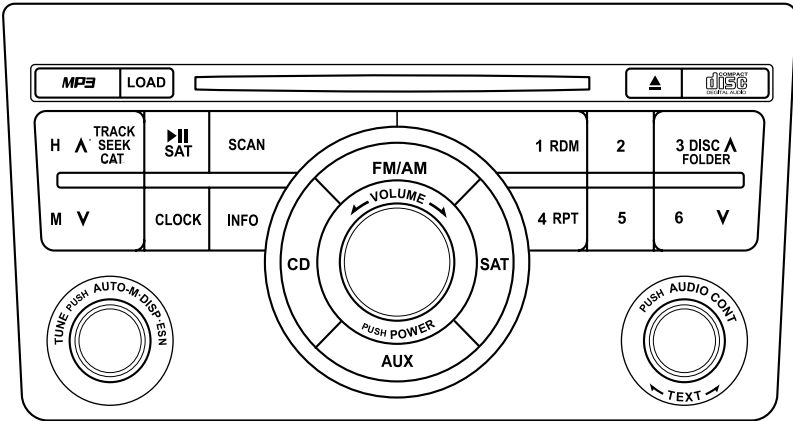
*This unit plays files with the (.wma) file extension as a WMA file. Do not use the WMA file extension for files other than WMA files. It may cause noise or a malfunction.*

- In a WMA file, the track name, artist name and album name are recorded with data called “WMA-Tag”, and the information can be displayed.
- WMA files which do not comply with the specific standard may not be played correctly or its file and folder name may not be displayed correctly.
- The file extension may not be provided depending on the computer operating system, version, software, or settings. In this case, add the file extension “.wma” to the end of the file name, and then write the disc.

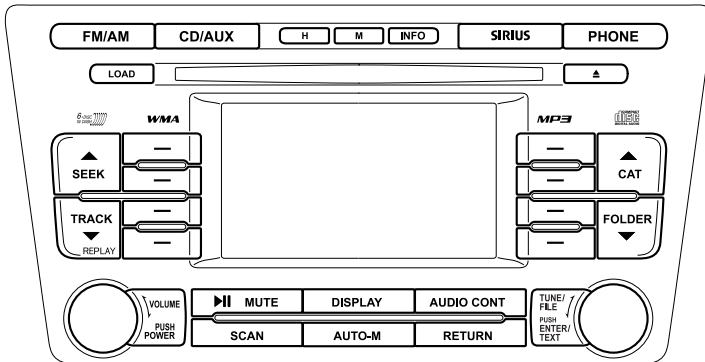
# MEMO

**Types of the Audio Set**

Audio Set (Type A) ..... page 6-29



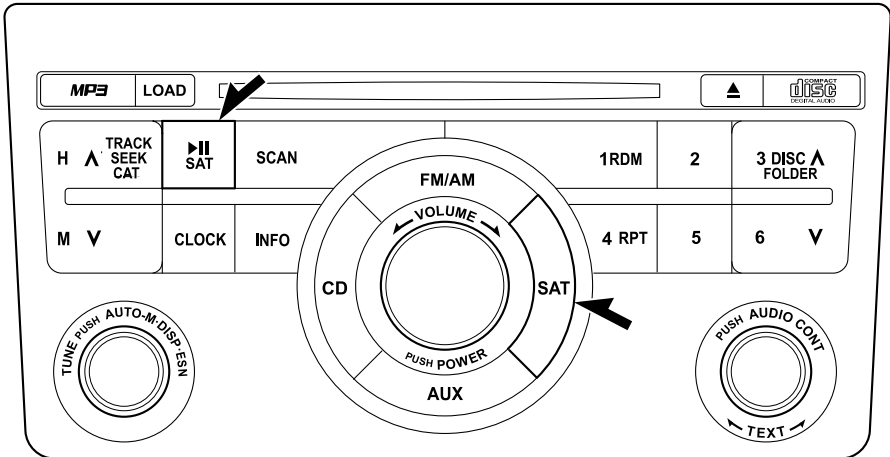
Audio Set (Type B) ..... page 6-39



# MEMO

**Audio Set (Type A)**

Audio information is displayed on the information display.

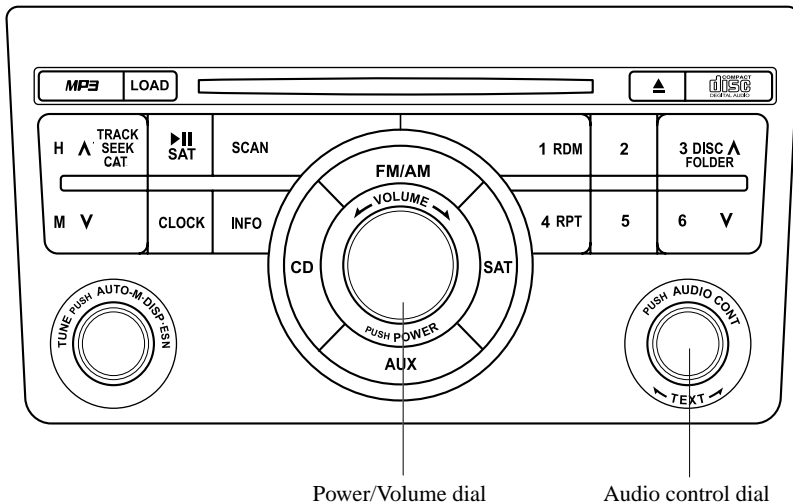


The ►|| / (SAT), SAT buttons are only functional if the vehicle is equipped with the separately purchased SIRIUS digital satellite radio unit (U.S.A. and Canada).

Power/Volume/Sound Controls ..... page 6-30  
 Operating the Radio ..... page 6-32  
 Operating the Compact Disc (CD) Player ..... page 6-34  
 Operating the Auxiliary jack ..... page 6-37  
 Error Indications ..... page 6-38

# Audio System

## ▼ Power/Volume/Sound Controls



Power/Volume dial

Audio control dial

### Power ON/OFF

Switch the ignition to ACC or ON.

Press the power/volume dial to turn the audio system on.

Press the power/volume dial again to turn the audio system off.

### **NOTE**

*To prevent the battery from being discharged, do not leave the audio system on for a long period of time when the engine is not running.*

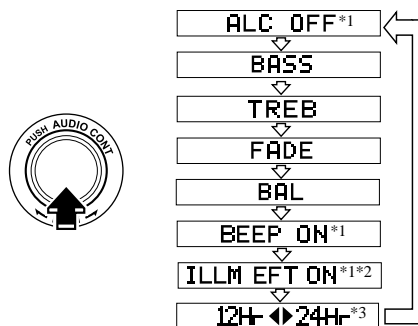
### Volume adjustment

To adjust the volume, turn the power/volume dial.

Turn the power/volume dial to the right to increase volume, to the left to decrease it.

### Audio sound adjustment

1. Press the audio control dial to select the function. The selected function will be indicated.



\*1 Depending on the mode selected, the indication changes.

\*2 Depending on the model, this function may not be available.

- \*3 The function may appear on the display but is only adjustable in the European market models.
2. Turn the audio control dial to adjust the selected functions as follows:

Indication	Turn Left	Turn Right
<b>ALC</b>	Select mode	
<b>BASS</b>	Decrease bass	Increase bass
<b>TREB</b>	Decrease treble	Increase treble
<b>FADE</b>	Shift the sound to the front	Shift the sound to the rear
<b>BAL</b>	Shift the sound to the left	Shift the sound to the right
<b>BEEP</b>	Off	On
<b>ILLM EFT</b>	Off	On
<b>12Hr ◀▶ 24Hr*</b>	12Hr (Flashing)	24Hr (Flashing)

\* The function may appear on the display but is only adjustable in the European market models.

**NOTE**

About 5 seconds after selecting any mode, the volume function will be automatically selected. To reset bass, treble, fade, and balance, press the audio control dial for 2 seconds. The unit will beep and "CLEAR" will be displayed.

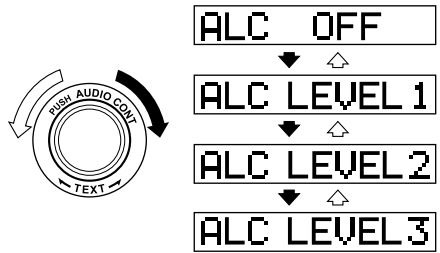
**Automatic Level Control (ALC)**

The automatic level control (ALC) is a feature that automatically adjusts audio volume and sound quality according to the vehicle speed. The volume increases in accordance with the increase in vehicle speed, and decreases as vehicle speed decreases.

Select the desired ALC mode.

Mode	Volume change
<b>ALC OFF</b>	No change
<b>ALC LEVEL 1</b>	Minimum
<b>ALC LEVEL 2</b>	Medium
<b>ALC LEVEL 3</b>	Maximum

Turn the audio control dial to select ALC OFF or ALC LEVEL1—3 modes. The selected mode will be indicated.



**BEEP setting**

The beep-sound when operating the audio system can be set on or off.

**ILLM EFT setting (Action Illumination setting during operation)**

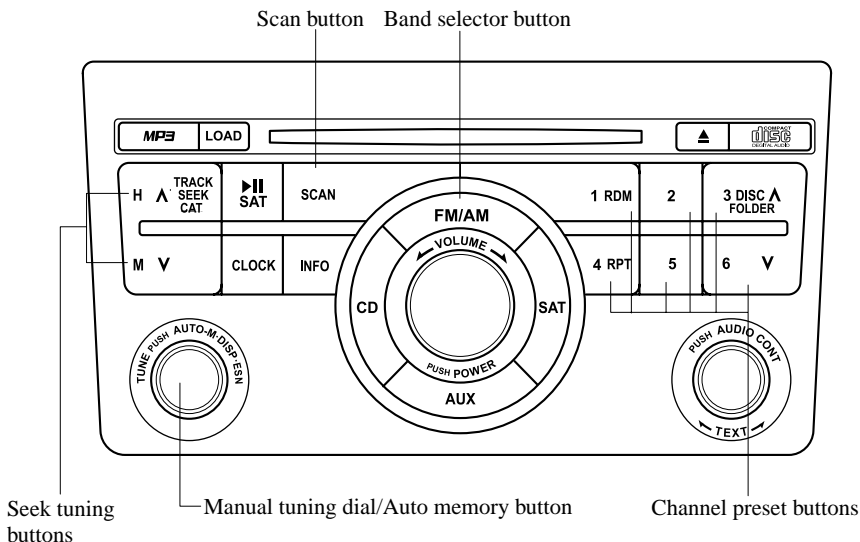
The audio system illumination during operation can be set on or off.

**Time adjustment**

Rotating the audio control dial switches the display between 12 and 24-hour clock time (page 6-191).

# Audio System

## ▼ Operating the Radio



### Radio ON

Press a band selector button (**FM/AM**) to turn the radio on.

### Band selection

Successively pressing the band selector button (**FM/AM**) switches the bands as follows: FM1→FM2→AM.

The selected mode will be indicated. If FM stereo is being received, “ST” will be displayed.

### **NOTE**

*If the FM broadcast signal becomes weak, reception automatically changes from STEREO to MONO for reduced noise, and the “ST” indicator will go out.*

### Tuning

The radio has the following tuning methods: Manual, Seek, Scan, Preset channel, and Auto memory tuning. The easiest way to tune stations is to set them on preset channels.

### **NOTE**

*If the power supply is interrupted (fuse blows or the battery is disconnected), the preset channels will be erased.*

### Manual tuning

Turning the manual tuning dial will change the frequency higher or lower.

### Seek tuning

Pressing the seek tuning button (**^**, **v**) will cause the tuner to seek a higher or lower frequency automatically.



**NOTE**

*If you continue to press and hold the button, the frequency will continue changing without stopping.*

**Scan tuning**

Press the scan button (**SCAN**) to automatically sample strong stations. Scanning stops at each station for about 5 seconds. To hold a station, press the scan button (**SCAN**) again during this interval.

**Preset channel tuning**

The 6 preset channels can be used to store 6 AM and 12 FM stations.

1. To set a channel first select AM, FM1, or FM2. Tune to the desired station.
2. Depress a channel preset button for about 2 seconds until a beep sound is heard. The preset channel number and station frequency will be displayed. The station is now held in the memory.
3. Repeat this operation for the other stations and bands you want to store. To tune one in the memory, select AM, FM1, or FM2 and then press its channel preset button. The station frequency and the channel number will be displayed.

**NOTE**

*If the power supply is interrupted (fuse blows or the battery is disconnected), the preset channels will be erased.*

**Auto memory tuning**

This is especially useful when driving in an area where the local stations are not known. Additional AM/FM stations can be stored without disturbing the previously set channels.

Press and hold the auto memory button (**AUTO-M**) for about 2 seconds until a beep sound is heard; the system will automatically scan and temporarily store up to 6 stations with the strongest frequencies in each selected band in that area.

After scanning is completed, the station with the strongest frequency will be tuned and its frequency displayed.

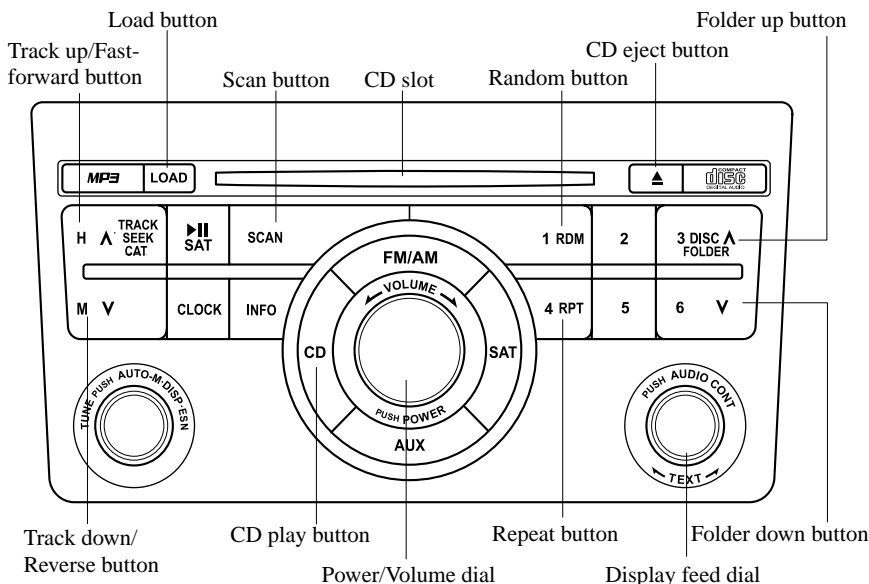
Press and release the auto memory button (**AUTO-M**) to recall stations from the auto-stored stations. One stored station will be selected each time; its frequency and channel number will be displayed.

**NOTE**

*If no stations can be tuned after scanning operations, "A" will be displayed.*

# Audio System

## ▼ Operating the Compact Disc (CD) Player



Type	Playable data
Music/MP3 CD player	<ul style="list-style-type: none"> <li>• Music data (CD-DA)</li> <li>• MP3 file</li> </ul>

### **NOTE**

If a disc has both music data (CD-DA) and MP3 files, playback of the two file types differs depending on how the disc was recorded.

### **Inserting the CD**

Insert the CD into the slot, label-side up. The auto-loading mechanism will set the CD and begin play.

### **NOTE**

There will be a short lapse before play begins while the player reads the digital signals on the CD.

### **Ejecting the CD**

Press the CD eject button (▲) to eject the CD.

### **Playback**

Press the CD play button (CD) to start play when a CD is in the unit. If a CD is not in the unit when the CD play button (CD) is pressed, “NO DISC” will flash on and off.

### **NOTE**

When the load button (LOAD) is pressed, the CD will load and play even if the CD eject button (▲) had been previously pressed.

### **Fast-forward/Reverse**

Press and hold the fast-forward button (  $\wedge$  ) to advance through a track at high speed.

Press and hold the reverse button (  $\vee$  ) to reverse through a track at high speed.

### **Track search**

Press the track up button (  $\wedge$  ) once to skip forward to the beginning of the next track.

Press the track down button (  $\vee$  ) once to skip back to the beginning of the current track.

### **Folder search (during MP3 CD playback)**

To change to the previous folder, press the folder down button (  $\vee$  ), or press the folder up button (  $\wedge$  ) to advance to the next folder.

### **Music scan**

#### **During music CD playback**

This function scans the titles on a CD and plays 10 seconds of each song to aid you in finding a song you want to listen to.

#### **During MP3 CD playback**

This function scans the titles in a folder currently being played and plays 10 seconds of each song to aid you in finding a song you want to listen to.

Press the scan button ( **SCAN** ) during playback to start the scan play operation (the track number will flash).

Press the scan button ( **SCAN** ) again to cancel scan playback.

### ***NOTE***

*If the unit is left in scan, normal playback will resume where scan was selected.*

### **Repeat playback**

#### **During music CD playback**

1. Press the repeat button ( **RPT** ) during playback to play the current track repeatedly. "RPT" is displayed.
2. Press the button again to cancel the repeat playback.

#### **During MP3 CD playback**

##### **(Track repeat)**

1. Press the repeat button ( **RPT** ) during playback to play the current track repeatedly. "TRACK RPT" is displayed.
2. To cancel the repeat playback, press the button again after 3 seconds.

##### **(Folder repeat)**

1. Press the repeat button ( **RPT** ) during playback, and then press the button again within 3 seconds to play the tracks in the current folder repeatedly. "FOLDER RPT" is displayed.
2. Press the button again to cancel the repeat playback.

### **Random playback**

Tracks are randomly selected and played.

#### **During music CD playback**

1. Press the random button ( **RDM** ) during playback to play the tracks on the CD randomly. "RDM" is displayed.
2. Press the button again to cancel the random playback.

# Audio System

## During MP3 CD playback

### (Folder random)

1. Press the random button (**RDM**) during playback to play the tracks in the folder randomly. "FOLDER RDM" is displayed.
2. To cancel the random playback, press the button again after 3 seconds.

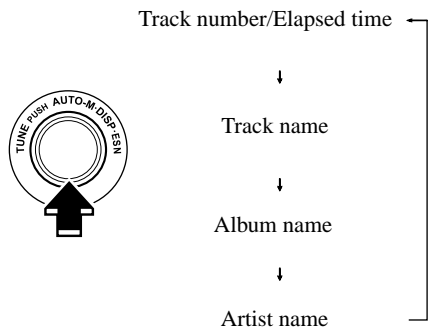
### (CD random)

1. Press the random button (**RDM**) during playback, and then press the button again within 3 seconds to play the tracks on the CD randomly. "DISC RDM" is displayed.
2. Press the button again to cancel the random playback.

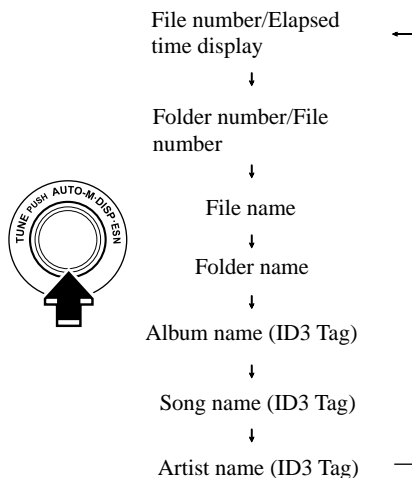
### Switching the display

Each time the display button (**DISP**) is pressed during playback, the display will switch in the following order.

### Music CD



## MP3 CD



### **NOTE**

- The information viewable in the display is only CD information (such as artist name, song title) which has been recorded to the CD.
- The system can only display one-byte alphabetic characters. If two-byte or other types of characters have been recorded to the CD, they may not display correctly.

### Display scroll

Only 8 characters (File name) or 12 characters (Except file name) can be displayed at one time. To display the rest of the characters of a long title, turn the display feed dial (**TEXT**) to the right. Hidden titles can be scrolled into the display one character at a time.

**NOTE**

*The displayable number of characters is limited. If the number of characters, including the file extension (.mp3), exceeds 32 characters, it may not be fully displayed.*

**Message display**

If “CHECK CD” is displayed, it means that there is some CD malfunction. Check the CD for damage, dirt, or smudges, and then properly reinsert. If the message appears again, take the unit to an Authorized Mazda Dealer for service.

**▼ Operating the Auxiliary jack**

You can connect portable audio units, such as an MP3 player or similar products on the market, to the auxiliary jack to listen to music or audio over the vehicle's speakers. Use a commercially-available, non-impedance (3.5 $\phi$ ) stereo mini plug cable. Contact an Authorized Mazda Dealer for details. Refer to Auxiliary Input (page 6-68).

# Audio System

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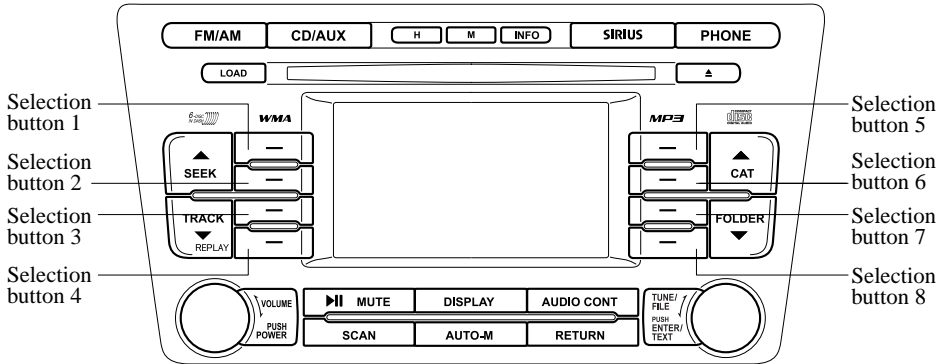
## ▼ Error Indications

If you see an error indication on the display, find the cause in the chart. If you cannot clear the error indication, take the vehicle to an Authorized Mazda Dealer.

Indication	Cause	Solution
CHECK CD	CD is inserted upside down	Insert the CD properly. If the error indication continues to display, consult an Authorized Mazda Dealer.
	CD is defective	Insert another CD properly. If the error indication continues to display, consult an Authorized Mazda Dealer.

## Audio Set (Type B)

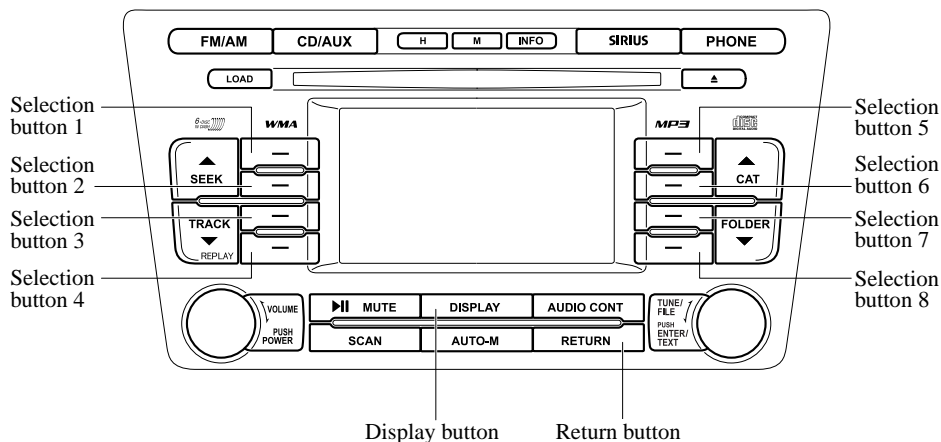
Functions and information available for the selected mode are displayed on the left and right of the audio unit screen. To select and operate a desired function, or select information, press the corresponding selection button 1—8.



Screen Adjustments and Other Settings .....	page 6-40
Power/Volume/Sound Controls .....	page 6-42
Operating the Radio .....	page 6-46
Operating the Satellite Radio .....	page 6-50
Operating the In-Dash CD Changer .....	page 6-60
Operating the Auxiliary Jack .....	page 6-63
Error Indications .....	page 6-64

# Audio System

## ▼ Screen Adjustments and Other Settings



Press the display button (**DISPLAY**) to display the tone adjustment screen.  
 Press the display button (**DISPLAY**) again or the return button (**RETURN**) to return to the previous screen.

### Next page display\*

Press selection button 1.

### Previous page display\*

Press selection button 5.

### Initialization

Returns all the adjusted screen adjustment settings and language settings to their initial setting.

Press selection button 8.

### Brightness adjustment

#### Increase brightness

Press selection button 6.

#### Decrease brightness

Press selection button 2.

### Contrast adjustment

#### Higher contrast

Press selection button 7.

#### Lower contrast

Press selection button 3.

### Tint adjustment\*

#### Green tint enhancement

Press selection button 6.

#### Red tint enhancement

Press selection button 2.



### **Color adjustment\***

#### **To deepen a color**

Press selection button 7.

#### **To fade color**

Press selection button 3.

\* Adjustment is available depending on the display.

#### ***NOTE***

*Continuous adjustment of the brightness, contrast, tint, and color can be done by long-pressing the selection button for the adjustment item.*

### **Daytime/Night screen**

When the headlights are on, daytime mode can also be selected (if a brighter screen is needed at night). This selection can only be done when the headlights are on.

The screen can be returned to the daytime screen while the headlights or running lights are on by pressing the dashboard illumination knob.

### **Language setting**

The displayed language can be changed to one of the three available languages.

Press selection button 5 to display the language setting screen.

#### **English display**

Press selection button 2.

#### **French display**

Press selection button 3.

#### **Spanish display**

Press selection button 4.

#### ***NOTE***

*A language setting is unavailable for the satellite radio. English is constantly displayed.*

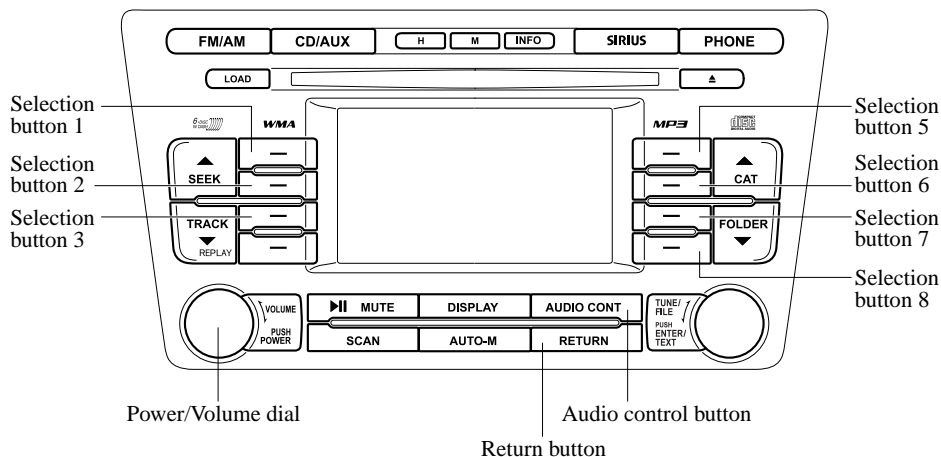
### **Screen display off**

Press selection button 4.

Press the display button (**DISPLAY**) or the return button (**RETURN**) to return to the previously selected mode's screen.

# Audio System

## ▼ Power/Volume/Sound Controls



### **Power ON/OFF**

Switch the ignition to ACC or ON.

Press the power/volume dial to turn the audio system on.  
Press the power/volume dial again to turn the audio system off.

### **NOTE**

*To prevent the battery from being discharged, do not leave the audio system on for a long period of time when the engine is not running.*

### **Volume adjustment**

To adjust the volume, turn the power/volume dial.

Turn the power/volume dial to the right to increase volume, to the left to decrease it.

### **Audio sound adjustment**

When the audio control button (AUDIO CONT) is pressed, the audio settings screen is displayed.  
Press the audio control button (AUDIO CONT) or the return button (RETURN) to return to the previous screen.

### **Next page display**

Press selection button 1.

### **Previous page display**

Press selection button 5.

### **Initialization**

Returns all of the audio setting items to their initial setting.

Press selection button 8.

Setting item	Setting value	
Bass	Down	Up
Treble	Down	Up
Fader	Rear	Front
Balance	Left	Right
Beep	Off	On
AudioPilot® 2	Off	On
Centerpoint®	Off	On
Rear Seat Surround	Off	On
Surround Volume	Down	Up

### **Bass (low pitch sound)**

#### **Low pitch enhancement**

Press selection button 6.

#### **Low pitch attenuation**

Press selection button 2.

### **Treble (treble sound)**

#### **Treble enhancement**

Press selection button 7.

#### **Treble attenuation**

Press selection button 3.

### **Fader (front/back volume balance)**

#### **Rear speaker volume reduction**

Press selection button 6.

#### **Front speaker volume reduction**

Press selection button 2.

### **Balance (left/right volume balance)**

#### **Left side volume reduction**

Press selection button 7.

#### **Right side volume reduction**

Press selection button 3.

### ***NOTE***

*Continuous adjustment of the bass, treble, fader, and balance can be done by long-pressing the selection button for each adjustment item.*

### **Beep setting**

The beep-sound when operating the audio system can be set on or off.

#### **Beep on**

Press selection button 6.

#### **Beep off**

Press selection button 2.

### **\*AudioPilot® 2**

AudioPilot® 2 automatically adjusts audio volume and sound quality in accordance with the level of noise entering the vehicle interior while driving. When AudioPilot® 2 is turned on, the system automatically calculates the conditions for optimum hearing of sound which may be difficult to hear depending on exterior noise. AudioPilot® 2 can be set on or off.

#### **AudioPilot® 2 on**

Press selection button 7.

#### **AudioPilot® 2 off**

Press selection button 3.

\* AudioPilot® 2 is a registered trademark of Bose Corporation.

### **\*Centerpoint®**

Centerpoint® offers you the experience of 5.1-channel surround sound in your vehicle even with your conventional 2-channel stereo DVDs inserted in the Rear Entertainment System main unit or 2-channel stereo CDs.

Centerpoint® can be set on or off.

## Audio System

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### **Centerpoint® on**

Press selection button 6.

### **Centerpoint® off**

Press selection button 2.

#### **NOTE**

- Centerpoint® operates optimally with a 2-channel stereo CD. MP3 audio files can be played, however, MP3 audio files encoded with high compression may result in poor sound quality.
- Centerpoint® is available for 2-channel stereo audio except for AM radio/FM radio/SIRIUS digital satellite radio/AUX/BT audio.

\* Centerpoint® is a registered trademark of Bose Corporation.

### **Rear Seat Surround (Rear Entertainment System-equipped model)**

The rear seat-optimized function allows passengers to optimize the audio output to the rear for a more pleasurable acoustic field when selecting the 5.1-channel sound mode.

Rear Seat Surround can be set on or off.

#### **NOTE**

Rear seat-optimized is only effective if a CD or a DVD inserted in the Rear Entertainment System main unit is 5.1 Dolby Digital/DTS audio.

### **Rear Seat Surround on**

Press selection button 7.

### **Rear Seat Surround off**

Press selection button 3.

### **Surround Volume**

#### **Surround Volume up**

Press selection button 6.

#### **Surround Volume down**

Press selection button 2.

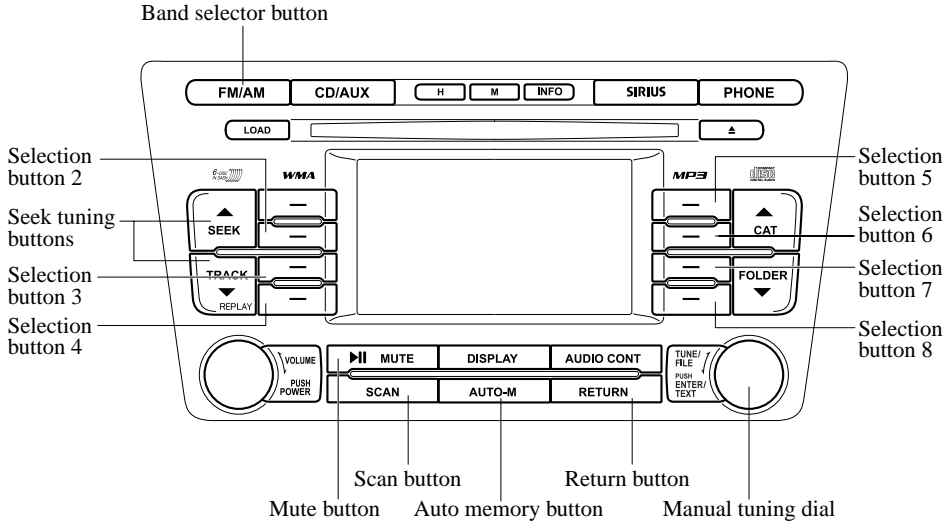
#### **NOTE**

Surround Volume adjustment is available if Centerpoint® or Rear Seat Surround is on.

# MEMO

# Audio System

## ▼ Operating the Radio



### Radio ON

Press a band selector button (**FM/AM**) to turn the radio on.

### Band selection

Successively pressing the band selector button (**FM/AM**) switches the bands as follows: FM1 → FM2 → AM.

The selected mode will be indicated. If FM stereo is being received, “ST” will be displayed.

### **NOTE**

*If the FM broadcast signal becomes weak, reception automatically changes from STEREO to MONO for reduced noise, and the “ST” indicator will no longer display.*

### Tuning

The radio has the following tuning methods: Manual, Seek, Scan, Preset channel, and Auto memory tuning. The easiest way to tune stations is to set them on preset channels.

### **NOTE**

*If the power supply is interrupted (fuse blows or the battery is disconnected), the preset channels will be erased.*

### Manual tuning

Turning the manual tuning dial will change the frequency higher or lower.

### Seek tuning

Pressing the seek tuning button (**▲**, **▼**) will cause the tuner to seek a higher or lower frequency automatically.

**NOTE**

*If you continue to press and hold the seek tuning button (▲ , ▼ ), the frequency will continue changing without stopping.*

**Scan tuning**

Press the scan button (**SCAN**) to automatically sample stations with the strongest frequencies. Scanning stops at each station for about five seconds. To hold a station, press the scan button (**SCAN**) again during this interval.

**Preset channel tuning**

The six preset channels can be used to store six AM and twelve FM stations.

1. To set a channel, first select AM, FM1, or FM2. Tune to the desired station.
2. Press and hold selection button 2, 3, 4, 6, 7, or 8. The station frequency will be displayed. The station is now held in the memory.
3. Repeat this operation for the other stations and bands you want to store. To tune into one stored in the memory, select AM, FM1, or FM2 and then press its selection button. The station frequency will be displayed.

**NOTE**

*If the power supply is interrupted (fuse blows or the battery is disconnected), the preset channels will be erased.*

**Auto memory tuning**

This is especially useful when driving in an area where the local stations are unknown. Additional AM/FM stations can be stored without disturbing the previously set channels.

Press and hold the auto memory button (**AUTO-M**). The system will automatically scan and temporarily store up to six stations with the strongest frequencies in each selected band in that area.

After scanning is completed, the radio tunes into the station with the strongest frequency, and its frequency is displayed. Press the auto memory button (**AUTO-M**) to recall stations from the auto-stored stations. One stored station will be selected each time, and its frequency will be displayed.

**NOTE**

- *If any of the following operations is performed, auto-memory mode is cleared and the normal display appears.*
  - *Band selector button (FM/AM) is pressed*
  - *Manual tuning dial is turned*
  - *Seek tuning button (▲ , ▼) is pressed*
  - *Return button (RETURN) is pressed*
- *If the radio is unable to tune into any station after the scanning operation is completed, "No Channel" will be displayed.*

**Mute**

Press the mute button (**MUTE**) once to mute the audio. Press it again to resume audio output.

**Radio Data System (RDS)**

**Radio text information display**

A maximum of 64 characters of radio text information sent from a broadcasting station is displayed in the audio display.

Press selection button 5.

## Audio System

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### **NOTE**

*If any of the following operations is performed, the radio text information display is cleared and the normal display appears.*

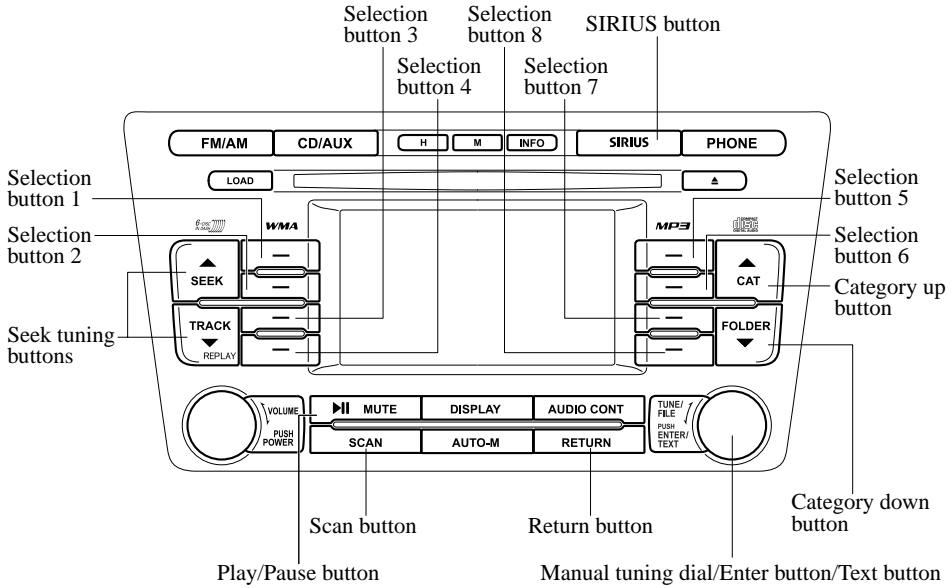
- *Return button (RETURN ) is pressed*
- *Band selector button (FM/AM ) is pressed*
- *Manual tuning dial is turned*
- *Seek tuning button (▲ , ▼ ) is pressed*



# MEMO

# Audio System

## ▼ Operating the Satellite Radio



**NOTE**

*This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:*

- *Increase the separation between the equipment and tuner.*
- *Connect the equipment into an outlet on a circuit different from that to which the tuner is connected.*
- *Consult the dealer or an experienced radio/TV technician for help.*

**What is satellite radio?**

With over 130 channels, SIRIUS Satellite Radio brings you more of what you love. Get 69 channels of 100 % commercial-free music, plus all your favorite sports, news, talk and entertainment. Everything worth listening to is now on SIRIUS.

**100 % Commercial-free Music**—With music from every genre, artist-dedicated channels, live performances and more, SIRIUS is the home of 100 % commercial-free music.

**Live Sports Play-by-Play & Expert Talk**—Hear every NFL game, every NASCAR<sup>®</sup> race and college sports coverage from over 150 schools. Plus 24/7 sports talk with channels like SIRIUS NFL Radio, SIRIUS NASCAR Radio and more.

**Exclusive Entertainment and Talk**—The biggest names, compelling talk, hilarious comedy. Hear Howard Stern, Martha Stewart, Jamie Foxx, Blue Collar Comedy, Playboy Radio, political talk and more.

**World-class News**—Stay informed with FOX, CNN, CNBC, NPR<sup>®</sup>, BBC and more.

Plus local traffic and weather.

**Family & Kids**—Entertain the entire family with Radio Disney, Kids Place Live, Laugh USA and more.

Sign up for SIRIUS Radio today! For more information, visit [www.sirius.com](http://www.sirius.com). Satellite radio can be subscribed to and received in the United States (Except Alaska and Hawaii) and Canada.

**How to Activate Satellite Radio**

You must call SIRIUS to activate your service. Activation is free and takes only a few minutes.

# Audio System

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SIRIUS service uses an ID code to identify your radio. This code is needed to activate SIRIUS service, and report any problems.

To activate you SIRIUS radio tuner, call a SIRIUS customer service specialist at 1-888-539-7474 or you can visit SIRIUS online at [www.sirius.com](http://www.sirius.com).

Please have the following information ready:

- SIRIUS ID (12-digit electronic serial no., or ESN\*)
- Valid credit card information (may not be required at initial sign-up)

Be sure you are parked outside with a clear view of open sky, you will be instructed to turn on your radio (in SIRIUS mode and tuned to channel 184). Activation typically takes only 2—5 minutes.

\* ESN: Electronic Serial Number

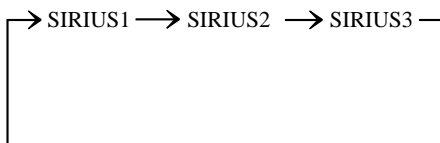
## **SIRIUS operation**

All operations of the satellite radio are conducted by means of the audio unit.

### **SIRIUS radio mode selection**

When the SIRIUS button (**SIRIUS**) is pressed during ACC ON, it will play the last SIRIUS channel in use before the mode was switched over to another mode or the power was turned off.

When the SIRIUS button (**SIRIUS**) is pressed in a mode other than the SIRIUS mode, the last channel in use will be received. Every time the SIRIUS button (**SIRIUS**) is pressed, the bank changes in the order shown below.



### ***NOTE***

*SIRIUS1, SIRIUS2 and SIRIUS3: six stations can be stored in each bank for convenient access to your favorite stations.*

### **Operation in the initial state**

It may take some time to start up the equipment when it is in the initial state, when there is a change in the user's subscription condition, or when the SIRIUS channel map is changed.

“Updating channels XXX% complete” is displayed when the SIRIUS channel map is changed. If the “Updating channels XXX% complete” display is not available, “Updating channels” is displayed. If the unit is initialized or the user contract content is changed, “Updating channels. Subscription Updated.” is displayed. Updating could take as long as a few minutes depending on the geographical area. When the unit is in an initialized state, channel 184 is displayed after the display indicates “Updating channels XXX% complete”. If the SIRIUS channel map or the user contract content is changed, the channel prior to the change is displayed after “Updating channels XXX% complete” is displayed. After the initialization display, it may take as long as ten seconds or more to receive channel 184.

#### **NOTE**

*Do not perform the following operation while “Updating” is displayed. Otherwise, the updating procedure will be canceled.*

- Turning off the audio power
- Switching to other modes
- Switching the ignition off

When the SIRIUS mode is switched to another mode, or when the power is turned off, the present channel which is being received is stored as the last channel.

#### **Channel selection**

Turning the manual tuning dial allows you to select the desired receiving channel.

#### **Channel up**

Turn the manual tuning dial clockwise.

#### **Channel down**

Turn the manual tuning dial counterclockwise.

#### **Unsubscribed channel**

When a selected station has not been subscribed to, the display indicates the following:

“Call 888-539-7474”

“To Subscribe”

#### **NOTE**

*When the subscription contract is canceled, all of the channels including channel 184 appear as unsubscribed.*

#### **Invalid channel**

When a selected channel is not broadcasting, “Invalid” is displayed.

#### **NOTE**

*If the last channel selected has become unavailable because of a channel update the above indication is displayed until any button is pressed.*

#### **Preset channel programming**

1. Turn the manual tuning dial and select the desired channel.
2. Press and hold selection button 2, 3, 4, 6, 7, or 8.

#### **NOTE**

*Six stations can be stored in each bank, SIRIUS1, SIRIUS2 and SIRIUS3 for convenient access to your favorite stations.*

#### **Preset channel call-up**

Press selection button 2, 3, 4, 6, 7, or 8.

#### **NOTE**

*In the initial setting, all channels are preset to 184.*

#### **Category change**

Press the category button (▲ , ▼ ) and select the desired category.

## Audio System

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### Category up

Press the category up button (▲).

### Category down

Press the category down button (▼).

Every time the category up button (▲) is pressed, the category is changed over in the order shown below.

At this time, the lowest (smallest-number) channel within the category indicated is received.

When the highest (or lowest) category is reached, the category is changed over in the order shown below.

Highest category → Lowest category → XXX category

### Category set (Category lock)

Press selection button 1 to lock the category of the channel being received. Press selection button 1 again to clear the lock.

#### **NOTE**

*A category can be set only when a channel which belongs to a category is being received.*

### Channel selection within a category

To select a radio station in a set category, turn the manual tuning dial.

#### **NOTE**

- *The channel number needs to be indicated in the display to use the manual tuning dial for this function.*
- *To select a radio station other than one in a set category, turn the manual tuning dial.*

### Scan tuning

Press the scan button (SCAN) to automatically sample stations. Scanning stops at each station for about five seconds. To hold a station, press the scan button (SCAN) again during this interval.

#### **NOTE**

- *Unsubscribed channels, invalid channels, parental lock channels and channel 0 are not subject to the scan, therefore these channels will skip automatically.*
- *If a category is set, scan channels in the category. If a category is not set, scan all channels.*

### **Channel number, channel name, category name, artist name, song titles and information display**

The information regarding the channel which is currently being received is displayed.

#### **NOTE**

- *If the entire title cannot be displayed, “...” is added at the end to the part of the title which can be displayed.*
- *If a channel other than a parental-locked channel is received, channel name, category name, artist name, song title, and information are displayed.*

### **(Channel number display)**

The channel number for the channel currently being received is displayed.

### **(Channel name display)**

- The channel name for the channel currently being received is displayed.
- A channel name may have a full title and an abbreviated title. In this case, the full title is displayed. If the channel only has an abbreviated title, it is displayed.
- If there is no channel name, “No Ch Name” is displayed.

### **(Category name display)**

- The category name for the channel currently being received is displayed.

- A category name may have a full title and an abbreviated title. In this case, the full title is displayed. If the category only has an abbreviated title, it is displayed.
- If there is no category name, “No Category” is displayed.

#### **(Artist name display)**

- The artist name for the channel currently being received is displayed.
- If there is no artist name, “No Artist” is displayed.

#### **(Song title display)**

- The song title for the channel currently being received is displayed.
- If there is no song title, “No Song” is displayed.

#### **(Information display)**

- The information for the channel currently being received is displayed.
- If there is no information, “No Information” is displayed.

#### **Display scroll**

If each title cannot be fully displayed at one time, press the text button (TEXT) to display the rest of the characters.

If the last character of the title is displayed, press the text button (TEXT) to return the beginning of the title.

#### **Instant replay**

This function allows you to rewind and replay the program that you were previously or are currently listening to. Press the Play/Pause button (▶||). When the seek tuning button (▼) is pressed, playback starts from the beginning of the current program. When the seek tuning button (▼) is pressed twice, playback starts from the beginning of the previous program.

Press and hold the seek tuning button (▼) to reverse the program while the button is being pressed.

When the seek tuning button (▲) is pressed, playback starts from the beginning of the next program.

When the seek tuning button (▲) is pressed while the last program is being played, the instant replay mode is canceled.

Press and hold the seek tuning button (▲) to fast-forward the program while the button is being pressed. When pressing and holding the button until the end of the program, the instant replay mode is canceled.

When the Play/Pause button (▶||) is pressed again, playback is paused, or playback starts if it has been paused.

#### **Instant replay (PAUSE)**

If the Play/Pause button (▶||) is pressed while the instant replay mode is off, instant replay mode is turned on in a paused condition (PAUSE). Press the Play/Pause button (▶||) again to resume playback from the point at which it was paused.

#### **Displaying the SIRIUS ID (ESN)**

##### **Method 1**

Turn the manual tuning dial and select channel 0 to display the twelve-digit Electronic Serial Number (ESN) for the SIRIUS tuner.

##### **Method 2**

1. Press selection button 5 to display the settings screen.
2. Press selection button 5 again to display the twelve-digit Electronic Serial Number (ESN) for the SIRIUS tuner.

## Audio System

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### **(If the SIRIUS ID (ESN) for the tuner does not display)**

If “ESN Fail” is displayed, contact an Authorized Mazda Dealer.

### **Parental lock**

Parental lock, parental unlock, parental lock ID change, and parental lock ID reset can be set.

### ***NOTE***

- *Press the return button (RETURN ) during all the settings to return to the previous display.*
- *Turn the manual tuning dial during the ID code or master code input to select “CLR”, and then press the enter button (ENTER ) to delete an input number.*
- *If there is no input for ten seconds during the ID code or master code input, the system returns to the settings screen.*
- *If only a four-digit ID code or master code is input, “OK” can be selected.*
- *If the registered ID code has been forgotten, reset the code in “Parental-lock ID reset” to [0000].*

### **Parental lock**

If a channel is locked, the channel is muted.

### **(Channel locking)**

1. Turn the manual tuning dial to select the desired channel.

### **(Registered ID code input preparation)**

2. Press selection button 5 to display the settings screen.
3. Press selection button 1 to display the parental lock settings screen.
4. “Enter Pin” and “- - -” are displayed, and input of the registered ID code is possible.

### **(Registered ID code input)**

5. Turn the manual tuning dial to select a number and press the enter button (ENTER ) to input the number.

### **(Registered ID code input confirmation)**

6. After inputting the four digits, turn the manual tuning dial and select “OK”, and then press the enter button (ENTER ) to confirm the four digits.
7. If the four digits match the registered ID code, “Parental lock” appears and mute is turned on.  
If they do not match the registered ID code, “Error” appears and then the display returns to “- - -”.

### **Parental unlock**

Channels locked using the parental lock function can be unlocked.

### **(Channel unlocking)**

1. Select a channel to be unlocked by turning the manual tuning dial.

### **(Registered ID code input preparation)**

2. Press selection button 5 to display the settings screen.
3. Press selection button 2 to display the parental unlock screen.
4. “Enter Pin” and “- - -” are displayed, and input of the registered ID code is possible.

### **(Registered ID code input)**

5. Turn the manual tuning dial to select a number and press the enter button (ENTER ) to input the number.



**(Registered ID code input confirmation)**

6. After inputting the four digits, turn the manual tuning dial and select “OK”, and then press the enter button (ENTER) to confirm the four digits.
7. If the four digits match the registered ID code, “Parental unlock” appears and mute is canceled.  
If they do not match the registered ID code, “Error” appears and then the display returns to “- - - -”.

**Parental-lock ID change**

When changing the ID code, the new ID code is input after the previous one is input first.

**(Registered ID code input preparation)**

1. Press selection button 5 to display the settings screen.
2. Press selection button 3 to display the ID code change screen.
3. “Enter Pin” and “- - - -” are displayed, and input of the registered ID code is possible.

**(Registered ID code input)**

4. Turn the manual tuning dial to select a number and press the enter button (ENTER) to input the number.

**(Registered ID code input confirmation)**

5. After inputting the four digits, turn the manual tuning dial and select “OK”, and then press the enter button (ENTER) to confirm the four digits.

6. If the four digits match the registered ID code, “Enter Pin” and “- - - -” are displayed.  
If they do not match the registered ID code, “Error” appears and then the display returns to “- - - -”.

**(New ID code input)**

7. Turn the manual tuning dial to select a number and press the enter button (ENTER) to input the number.

**(New ID code input confirmation)**

8. After inputting the four digits, turn the manual tuning dial and select “OK”, and then press the enter button (ENTER) to confirm the four digits.
9. “Pin Changed” appears to indicate that the new ID code input has been completed.
10. The display returns to its normal display.

**NOTE**

*Channels locked before changing the ID code remain after changing the ID code. To unlock a channel, input the changed ID code.*

**Parental-lock ID reset**

If the registered ID code has been forgotten, reset the ID code to the default [0000] code.

**(Master code input preparation)**

1. Press selection button 5 to display the settings screen.
2. Press selection button 4 to display the ID code initial screen.
3. “Enter Pin” and “- - - -” are displayed, and input of the registered ID code is possible.

## Audio System

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### (Master code input)

4. Turn the manual tuning dial to select a number and then press the enter button (ENTER) to input the number.

#### **NOTE**

*Master code:*

*The Master Code is used to initialize or re-initialize the ID code in the event that the code is not set to [0000] and/or the personalized ID code is not known. The initialization process resets the ID code to [0000]. The master code can potentially defeat the intent of the security of the parental lock if it is located by persons not authorized by the owner to access certain channels.*

*SIRIUS Satellite Radio Master Code: [0913]*

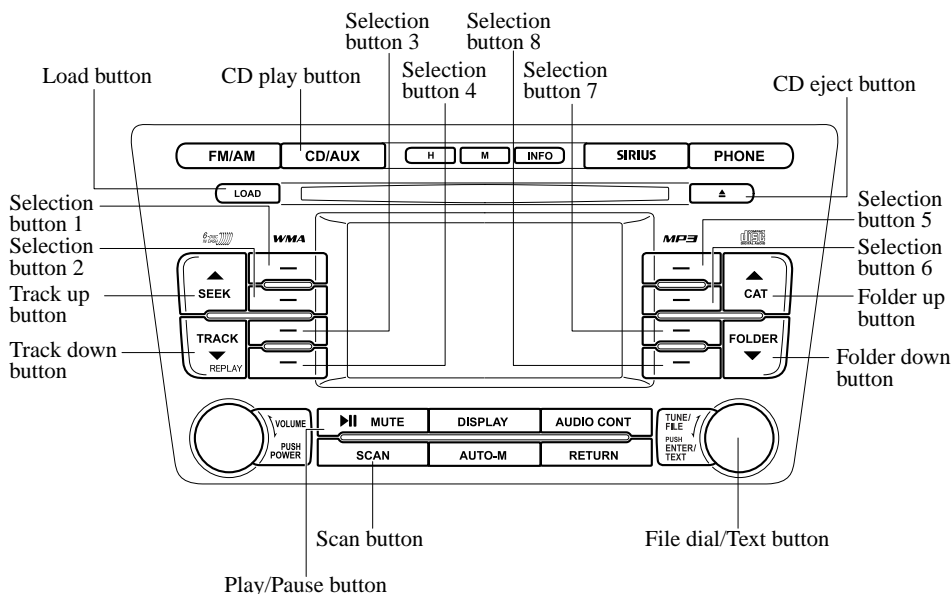
### (Master code input confirmation)

5. After inputting the four digits, turn the manual tuning dial and select “OK”, and then press the enter button (ENTER) to confirm the four digits.
6. If the four digits match the master code, “Pin Cleared” appears. If they do not match the master code, “Error” appears and the display returns to “- - - -”.
7. The ID code returns to the default [0000] code.

# MEMO

# Audio System

## ▼ Operating the In-Dash CD Changer



Type	Playable data
Music/MP3/WMA CD player	<ul style="list-style-type: none"> <li>• Music data (CD-DA)</li> <li>• MP3/WMA file</li> </ul>

### NOTE

If a disc has both music data (CD-DA) and MP3/WMA files, playback of the two or three file types differs depending on how the disc was recorded.

### Inserting the CD

The CD must be label-side up when inserting. The auto-loading mechanism will set the CD and begin play.

### NOTE

The CD will begin playback automatically after insertion. A CD cannot be inserted while the display reads "Please Wait". There will be a short lapse before play begins while the player reads the digital signals on the CD.

### Normal CD insertion

1. Press the load button (LOAD).
2. When "Please Insert a Disc" is displayed, insert the CD.

### Inserting CDs into desired tray number

1. Press and hold the load button (LOAD).
2. Press the selection button for the desired tray number while "Please Wait" is displayed.
3. When "Please Insert a Disc" is displayed, insert the CD.

### NOTE

The CD cannot be inserted to the desired tray number if the number is already occupied.

### **Multiple CD insertion**

1. Press and hold the load button (**LOAD** ).
2. Press the load button (**LOAD** ) again. When “Please Insert a Disc” is displayed, insert the CD.
3. When “Please Insert a Disc” is displayed again, insert the next CD.

#### **NOTE**

*The first-inserted CD will be played automatically when:*

- No other CD is inserted within 15 seconds after “Please Insert a Disc” is displayed.
- The CD trays are full.

### **Ejecting CDs**

#### **Normal ejection**

1. Press the CD eject button (**⬆** ). “Disc Ejecting” will be displayed.
2. Remove the CD.

#### **NOTE**

*When the CD is ejected during play, the next CD will be played automatically.*

#### **Ejecting CDs from desired tray number**

1. Press and hold the CD eject button (**⬆** )
2. Press the selection button for the desired tray number while “Disc Ejecting” is displayed.
3. Remove the CD.

#### **Multiple CD ejection**

1. Press and hold the CD eject button (**⬆** ).
2. Press the CD eject button (**⬆** ) again.

#### **NOTE**

*If the button is not pressed and about five seconds have elapsed while “Disc Ejecting” is displaying, CDs are automatically ejected.*

3. Remove the CD, then the next CD will be ejected.

#### **NOTE**

- CDs will be ejected starting from the one in the tray with the lowest number.
- All CDs in the trays will be ejected continuously.
- CDs can be ejected when the ignition is switched off. Press and hold the CD eject button (**⬆** ) to eject all CDs.

### **Playback**

Press the CD play button (**CD/AUX** ) to start play when a CD is in the unit.

If the CD play button (**CD/AUX** ) is pressed when a CD is not inserted and an external device is not connected, “No Disc” is displayed.

All of the following information is displayed during playback.

#### **Music CD**

The track number, elapsed time, album name, artist name, and song name are displayed.

#### **MP3/WMA CD**

The folder number, track number, elapsed time, folder name, album name, artist name, and song name are displayed.

## Audio System

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### **NOTE**

If the entire title cannot be displayed, "... " is added at the end of the part of the title which can be displayed.

If title information is not available, "NO TITLE" is displayed.

If there are any undisplayable characters in the title, "-----" is displayed.

Some CDs cannot display information.

### **Pause**

Press the Play/Pause button (▶||).

Press the button again to resume playback.

### **Fast-forward/Reverse**

#### **Fast-forward**

Press and hold the track up button (▲).

#### **Reverse**

Press and hold the track down button (▼).

### **Track search**

#### **Track up**

Press the track up button (▲) or turn the file dial clockwise.

#### **Track down**

Press the track down button (▼) or turn the file dial counterclockwise.

### **Disc search**

Press the selection button for the desired tray number.

### **Folder search (during MP3/WMA CD playback)**

#### **Folder up**

Press the folder up button (▲).

#### **Folder down**

Press the folder down button (▼).

### **NOTE**

Press and hold the (▲) or (▼) button to continuously move up or down through the folders.

### **Music scan**

#### **During music CD playback**

This function scans the titles on a CD and plays ten seconds of each song to aid you in finding a song you want to listen to.

#### **During MP3/WMA CD playback**

This function scans the titles in a folder currently being played and plays ten seconds of each song to aid you in finding a song you want to listen to.

Press the scan button (SCAN) during playback to start the scan play operation. Press the scan button (SCAN) again to cancel scan playback.

### **NOTE**

If the unit is left in scan, normal playback will resume where scan was selected.

### **Repeat playback**

#### **During music CD playback**

1. Press selection button 1 during playback to play the current track repeatedly. "Repeat Track" is displayed.
2. Press selection button 1 again to cancel the repeat playback.

#### **During MP3/WMA CD playback**

##### **(Track repeat)**

1. Press selection button 1 during playback to play the current track repeatedly. "Repeat Track" is displayed.

2. Press selection button 1 twice to cancel the repeat playback.

#### **(Folder repeat)**

1. Press selection button 1 twice during playback to play the tracks in the current folder repeatedly. "Repeat Folder" is displayed.
2. Press selection button 1 again to cancel the repeat playback.

#### **Random playback**

Tracks are randomly selected and played.

#### **During music CD playback**

1. Press selection button 5 during playback to play the tracks in the CD randomly. "Random Disc" is displayed.
2. Press selection button 5 again to cancel the random playback.

#### **During MP3/WMA CD playback**

#### **(Folder random)**

1. Press selection button 5 during playback to play the tracks in the folder randomly. "Random Folder" is displayed.
2. Press selection button 5 twice to cancel the random playback.

#### **(All random)**

1. Press selection button 5 twice during playback to play the tracks on the CD randomly. "Random All" is displayed.
2. Press selection button 5 again to cancel the random playback.

#### **Display scroll**

If each title cannot be fully displayed at one time, press the text button (**TEXT**) to display the rest of the characters.

If the last character of the title is displayed, press the text button (**TEXT**) to return the beginning of the title.

#### **Message display**

If "Check Disc" is displayed, it means that there is a CD malfunction. Check the CD for damage, dirt, or smudges, and then properly reinsert. If the message appears again, take the unit to an Authorized Mazda Dealer for service.

#### **▼ Operating the Auxiliary Jack**

You can connect portable audio units, such as an MP3 player or similar products on the market, to the auxiliary jack to listen to music or audio over the vehicle's speakers. Use a commercially-available, non-impedance (3.5 $\phi$ ) stereo mini plug cable. Contact an Authorized Mazda Dealer for details. Refer to Auxiliary Input (page 6-68).

## Audio System

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### ▼ Error Indications

If you see an error indication on the display, find the cause in the chart. If you cannot clear the error indication, take the vehicle to an Authorized Mazda Dealer.

Indication	Cause	Solution
Acquiring Signal	Depending on the surrounding conditions (such as large trees, buildings, or tunnels) and special weather conditions, SIRIUS radio reception may be diminished or temporarily interrupted.	Improve reception by moving away from possible obstructions. If the error indication continues to display, consult an Authorized Mazda Dealer.
Antenna Fail	Satellite radio antenna malfunction	Check the satellite radio antenna, antenna cable and DLP antenna connector. If the error indication continues to display, consult an Authorized Mazda Dealer.
Check Disc	CD is inserted upside down	Insert the CD properly. If the error indication continues to display, consult an Authorized Mazda Dealer.
	CD is defective	Insert another CD properly. If the error indication continues to display, consult an Authorized Mazda Dealer.

#### **NOTE**

*If a broken DLP\* unit is replaced with a new unit, cancel the license for the broken unit and make sure to carry out new registration for the replaced unit. If the license for the broken unit is not canceled, you will be charged a reception fee for both units.*

\* DLP: Down Link Processor (SATELLITE RADIO Module)



## Audio Control Switch Operation

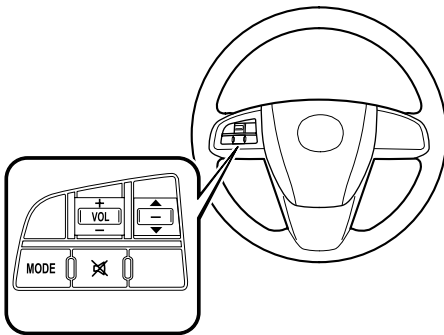
When the audio unit is turned on, operation of the audio unit from the steering wheel is possible.

### NOTE

Because the audio unit will be turned off under the following conditions, the switches will be inoperable.

- When the ignition is switched off.
- When the power button on the audio unit is pressed and the audio unit is turned off.
- When the CD being played is ejected and the audio unit is turned off.

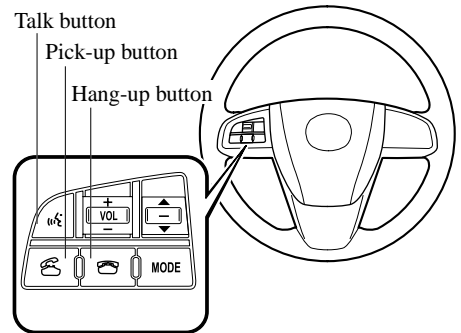
### Without Bluetooth® Hands-Free and navigation system



### With Bluetooth® Hands-Free only/ Bluetooth® Hands-Free and navigation system

Use the talk button, pick-up button, and hang-up button for navigation system sound operation.

For details, refer to the separate manual “NAVIGATION SYSTEM Owner’s Manual”.



### NOTE

- The talk button, pick-up button, and hang-up button are operable with the audio unit turned off.
- Mazda has installed this system to prevent distraction while driving the vehicle and using audio controls on the dashboard. Always make safe driving your first priority.

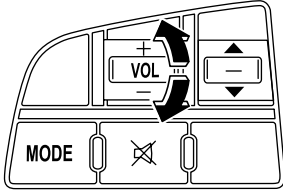
### ▼ Adjusting the Volume

To increase the volume, press up the volume switch.

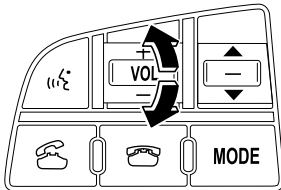
To decrease the volume, press down the volume switch.

# Audio System

## Without Bluetooth® Hands-Free and navigation system



## With Bluetooth® Hands-Free only/ Bluetooth® Hands-Free and navigation system



### ▼ Changing the Source

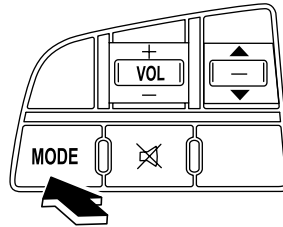
#### (Type A)

Press the mode switch (**MODE**) to change the audio source (FM1 radio → FM2 radio → AM radio → CD player → AUX → cyclical).

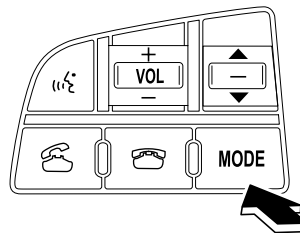
#### (Type B)

Press the mode switch (**MODE**) to change the audio source (FM1 radio → FM2 radio → AM radio → CD changer → SIRIUS1 → SIRIUS2 → SIRIUS3 → AUX → (RSES) → BT audio → cyclical).

## Without Bluetooth® Hands-Free and navigation system



## With Bluetooth® Hands-Free only/ Bluetooth® Hands-Free and navigation system



**NOTE**

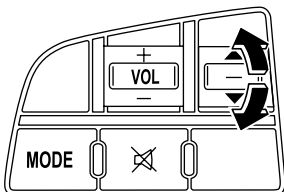
CD, CD changer, RSES, SIRIUS digital satellite radio, and BT audio modes cannot be selected in the following cases:

- RSES, SIRIUS digital satellite radio unit, or BT audio unit is not equipped on the audio system.
- CD has not been inserted.

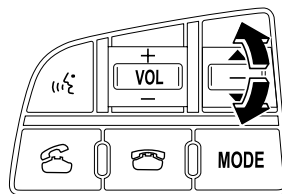
The AUX mode is unavailable unless you connect a commercially available portable audio unit (such as an MP3 player) to the auxiliary jack. Connect a portable audio unit or similar product on the market to the auxiliary jack to listen to music or audio over the vehicle's speakers. Change the audio source to AUX mode (page 6-68).

**▼ Seek Switch**

**Without Bluetooth® Hands-Free and navigation system**



**With Bluetooth® Hands-Free only/  
Bluetooth® Hands-Free and navigation  
system**



**When listening to the radio or SIRIUS  
digital satellite radio**

Press the seek switch up or down. The radio switches to the next/previous stored station in the order that it was stored (1—6).

**(Radio)**

Press and hold the seek switch in the up or down position to seek all usable stations at a higher or lower frequency whether programmed or not.

**(SIRIUS digital satellite radio)**

Press and hold the seek switch in the up or down position to seek all usable stations at a higher or lower channel whether programmed or not.

**When playing a CD or BT audio**

Press up the seek switch to skip to the next track.

Press down the seek switch to repeat the current track.

Press and hold the seek switch in the up or down position to continuously switch the tracks up or down.

# Audio System

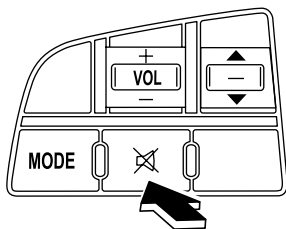
## ▼ Mute Switch \*

Press the mute switch (🔇) once to mute audio, press it again to resume audio output.

### NOTE

*If the ignition is switched off with the audio muted, the mute will be canceled. Therefore, when the engine is restarted, the audio is not muted. To mute the audio again, press the mute switch (🔇).*

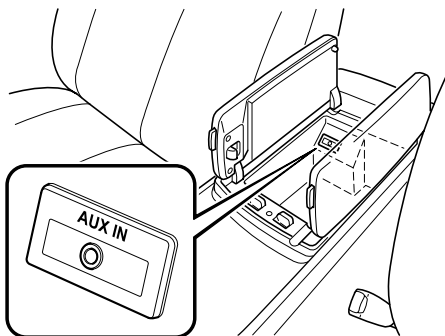
## Without Bluetooth® Hands-Free and navigation system



## AUX Mode (Auxiliary input)

You can connect portable audio units, such as an MP3 player or similar products on the market, to the auxiliary jack to listen to music or audio over the vehicle's speakers.

A commercially-available, non-impedance (3.5ϕ) stereo mini plug cable is required. Contact an Authorized Mazda Dealer for details.



## ⚠ WARNING

**Do not adjust the portable audio unit or a similar product while driving the vehicle:**

*Adjusting the portable audio unit or a similar product while driving the vehicle is dangerous as it could distract your attention from the vehicle operation which could lead to a serious accident. Always adjust the portable audio unit or a similar product while the vehicle is stopped.*

**⚠ CAUTION**

- Close the lid when the auxiliary jack is not in use to prevent foreign objects and liquids from penetrating the auxiliary jack.
- Depending on the portable audio device, noise may occur when using the device with it connected to the accessory socket equipped on the vehicle. (If noise occurs, do not use the accessory socket.)

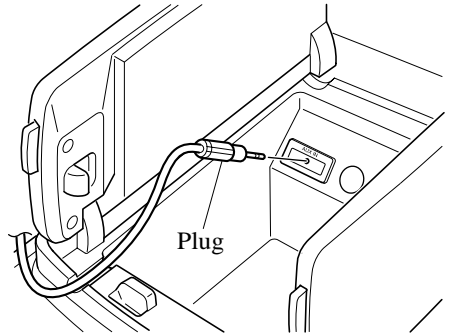
**NOTE**

- Before using the auxiliary jack, read the manufacturer's instructions for the product being connected.
- Use a commercially-available, non-impedance (3.5  $\Phi$ ) stereo mini plug for connecting the portable audio unit to the auxiliary jack. Before using the auxiliary jack, read the manufacturer's instructions for connecting a portable audio unit to the auxiliary jack.
- To prevent discharging of the battery, do not use the auxiliary input for long periods with the engine off or idling.
- Noise may occur depending on the product connected to the auxiliary jack.
- With regard to connecting a portable audio or similar device to a power source, use the battery for the device, not the accessory socket.

**Connecting the auxiliary jack**

1. Open the console lid.

2. Pass the connection plug cord through the cutout of the console and insert the plug into the auxiliary jack.



**⚠ WARNING**

**Do not allow the connection plug cord to get tangled with the parking brake or the shift lever:**

Allowing the plug cord to become tangled with the parking brake or the shift lever is dangerous as it could interfere with driving, resulting in an accident.

**⚠ CAUTION**

Do not place objects or apply force to the auxiliary jack with the plug connected.

**NOTE**

- Insert the plug to the auxiliary jack securely.
- Insert or remove the plug with the plug perpendicular to the auxiliary jack hole.
- Insert or remove the plug by holding its base.

**To listen to a portable audio unit**

1. Switch the ignition to ACC or ON.
2. Press the power/volume dial to turn the audio system on.

# Audio System

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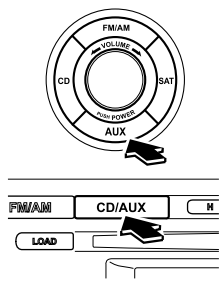
### 3. (Type A)

Press the AUX button (AUX) of the audio unit or the mode switch (MODE) of the audio control switches on the steering wheel to change to the AUX mode.

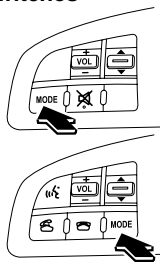
### (Type B)

Press the AUX button (CD/AUX) of the audio unit or the mode switch (MODE) of the audio control switches on the steering wheel to change to the AUX mode.

Audio Unit



Audio Control Switches



### NOTE

- Set the volume of the portable audio unit to the maximum within the range that the sound does not become distorted, then adjust the volume using the power/volume dial of the audio unit or the up/down switch of the audio control switch.
- Audio adjustments other than audio volume can only be done using the portable audio device.
- If the connection plug is pulled out from the auxiliary jack while in AUX mode, noise may occur.

## Safety Certification

This CD player is made and tested to meet exacting safety standards. It meets FCC requirements and complies with safety performance standards of the U.S. Department of Health and Human Services.

### **CAUTION**

- *This CD player should not be adjusted or repaired by anyone except qualified service personnel.  
If servicing is required, contact an Authorized Mazda Dealer.*
- *Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous laser exposure. Never operate the CD player with the top case of the unit removed.*
- *Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.*

### **NOTE**

*For CD player section:*

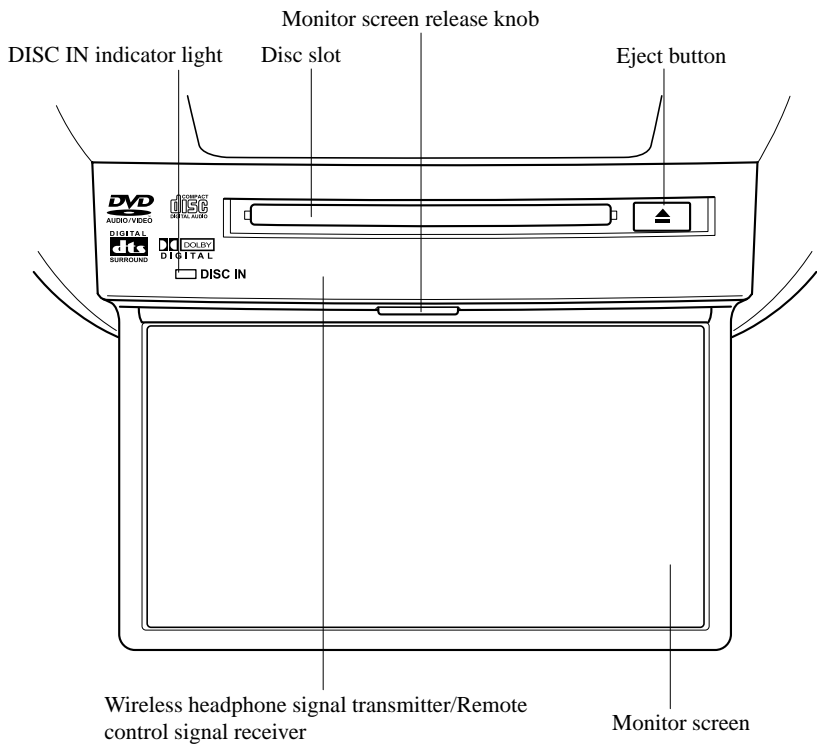
*This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.*

### **NOTE**

*This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.*

# Rear Entertainment System

## Rear Entertainment System \*



### ▼ Rear Entertainment System Outline

The Rear Entertainment System has a 9.0-inch wide LCD, as well as DVD video, DVD audio, video CD, audio CD, and MP3/WMA CD playback functions. Moreover, the system is equipped with input terminals for video picture and audio sound, and AV equipment such as a video game player or a video camera can be connected and displayed on the monitor screen.



## ▼ Proper Operation of Rear Entertainment System

For safe driving, read the following warnings and cautions before starting operation, and use the system properly.

### **WARNING**

- *Do not disassemble or modify this unit.  
It may cause an accident, fire, or electrical shock.*
- *Do not use if there is a malfunction condition such as no screen image or sound.  
It may cause an accident, fire, or electrical shock. Follow the procedures in "Symptoms and Actions" (page 6-122) and if the problem is not resolved, consult an Authorized Mazda Dealer.*
- *Do not use if some problem has occurred.  
If any problem occurs, such as a foreign material penetration, spilled liquid, smoking from internal burning, or other abnormal smells, stop operation immediately and consult an Authorized Mazda Dealer. If operation is continued, it may cause an accident, fire, or electrical shock.*
- *Lower the volume to minimum before turning off the power.  
If the volume is set high, loud sound will be produced when turning on the power, causing auditory problems or an accident.*
- *Adjust the volume while driving so that ambient sound can be heard.  
If the volume is too high and ambient sound cannot be heard while driving, driving operation could be obstructed causing an accident.*
- *Do not leave the remote controller and the headphones unstowed.  
If the remote controller and the headphone are not stowed, they could fall under the brake pedal during a sudden stop or while turning, which could obstruct driving operation and cause an accident.*

### **CAUTION**

- *Do not put foreign material into the disc slot.  
It may cause a fire or malfunction.*
- *Do not clean plastic finished parts with solvent such as benzene or thinner.  
The parts may deform causing a fire or malfunction.*

## Rear Entertainment System

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### ▼ Operating Tips for Disc

#### Playable discs





DVD video <sup>\*1</sup>, DVD audio <sup>\*2</sup>, video CD, audio CD, CD-R, CD-RW, DVD-R, DVD-RW and dts CD <sup>\*3</sup> can be played.

#### **NOTE**

*It may not be possible to play DVD video, DVD audio, video CD, audio CD, and MP3/WMA CD according to the procedures indicated in these instructions if the playback conditions have been restricted by the producer.*

*Read the instruction manual accompanying the DVD video, video CD, DVD audio, audio CD.*

# Rear Entertainment System

<p>DVD video</p> <p>DVD videos bearing the following logo can be played.</p> 	<ul style="list-style-type: none"> <li>●Region code must include “1” or “ALL”.</li> <li>●NTSC (National Television System Committee) recorded type.</li> <li>●8 cm (3in) or 12 cm (5in) size</li> </ul>
<p>DVD audio</p> <p>DVD audio bearing the following logo can be played.</p> 	
<p>DVD-R and DVD-RW</p> <p>DVD-Rs and DVD-RWs bearing each of the following logos can be played.</p> 	
<p>Video CD, audio CD, CD-R, and CD-RW</p> <p>Video CDs, audio CDs, CD-Rs, and CD-RWs bearing each of the following logos can be played.</p> 	<ul style="list-style-type: none"> <li>●Playback control function supported.</li> <li>●8 cm (3in) or 12 cm (5in) size</li> <li>●MP3 recorded type.</li> </ul>

\*1: Audio is not produced by the headphones when DTS audio is selected. Listen to DTS audio over the vehicle's speakers.

\*2: Stereo playback is produced.

\*3: Audio is not produced from the headphones. Listen to this audio from the speakers.

### Unplayable discs

- Discs not bearing the logo mark indicated in the above table.
- Discs not including “1” or “ALL” in region code.
- Discs recorded in other than NTSC (e.g. PAL or SECAM).

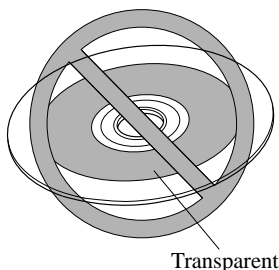
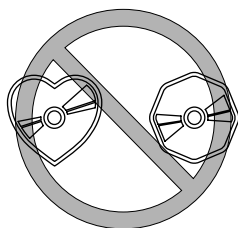
## Rear Entertainment System

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- DVD-ROM, DVD-RAM, DVD+RW, CD-ROM, CDV, CD-G, CVD, VSD, SVCD, SACD, photo CDs, non-conventional discs (e.g. heart-shaped), and partially transparent discs.
- Discs recorded in CD-TEXT format.
- HD DVD and Blu-ray discs

### Handling of discs

- Do not use non-conventional discs such as heart-shaped, octagonal discs, or discs with a memory portion that is transparent or translucent. The unit could be damaged.



- When driving over uneven surfaces, the sound may jump.
- Be sure never to touch the signal surface when handling the discs. Pick up the discs by grasping the outer edge or the edge of the hole and the outer edge.
- Do not write on or attach labels, stickers or similar to discs.
- Defective (cracked or badly bent) discs should never be used.
- A new disc may have rough edges on its inner and outer perimeters. If a disc with rough edges is used, proper setting will not be possible and the unit will not play the disc. Remove the rough edges in advance by using a ball-point pen or pencil as shown below. To remove the rough edges, rub the side of the pen or pencil against the inner and outer perimeter of the discs.

## Rear Entertainment System

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### **Disc cleaning**

Do not use record sprays, antistatic agents, or household spray cleaners. Volatile chemicals such as benzine and thinner can also damage the surface of the disc and must not be used. Anything that can damage, warp or fog plastic should never be used to clean discs.

### **Condensation**

Immediately after turning on the heater when the vehicle is cold, the disc or optical components (prism and lens) in the unit may become clouded with condensation. At this time, the disc will eject immediately when placed in the unit. A clouded disc can be corrected simply by wiping it with a soft cloth. Clouded optical components will clear naturally in about an hour. Wait for normal operation to return before attempting to use the unit.

### **Operating tips for DVD video**

#### **Region code**

The playback restriction area is set in a DVD video. The playback restriction area is indicated by a region code, and a DVD video can be played only in its indicated area. The region code for U.S.A. and Canada are "1". DVD videos bearing region code including "1" or "ALL" on the package or the instruction manual can be played by this unit. The region code setting for this unit has been set to "1".

DVD videos bearing any of the following logos on the package or instruction manual can be played.



## Rear Entertainment System

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### Playable DISC specification

CD-R and CD-RW including MP3/WMA files can be played with this unit. Discs which conform to the following formats can be played.

Name	Standard	Explanation
CD-R, CD-RW format	ISO9660	Level 1
		Level 2
	ISO9660 extension	Joliet
		Romeo
Multi-session	Supported	
Maximum hierarchy number	8 hierarchies (Including root)	
Maximum folder number	256 folders	
Maximum file number	512 files (Total capacity included in a disc.) Files other than MP3 or WMA are not included.)	

### Operating tips for MP3

#### **NOTE**

*Supply of this product only conveys a license for private, non-commercial use and does not convey a license nor imply any right to use this product in any commercial (i.e. revenue-generating) real time broadcasting (terrestrial, satellite, cable and/or any other media), broadcasting/streaming via the Internet, intranets and/or other networks or in other electronic content distribution systems, such as pay-audio or audio-on-demand applications. An independent license for such use is required. For details, please visit <http://www.mp3licensing.com>.*

### Playable MP3 file specification

Playable MP3 files are as follows:

Item	Content	
Specification	MPEG1 AUDIO LAYER3	
	MPEG2.5 AUDIO LAYER3	
	MPEG2 AUDIO LAYER3	
Sampling frequency	MPEG1	32, 44.1, 48kHz
	MPEG2	16, 22.05, 24kHz
Bit rate	MPEG1	32, 40, 48, 56, 64, 80, 96, 112, 128, 160, 192, 224, 256, 320 kbps
	MPEG2, 2.5	32, 40, 48, 56, 64, 80, 96, 112, 128, 144, 160 kbps
VBR (Variable Bit Rate)	Supported	
Channel mode	Stereo, Joint stereo, Dual channel, Monaural	
ID3 tag	Ver. 1.0, Ver. 1.1 title, artist name, album name	

- This unit corresponds to MP3 files in which both header and data comply with the MP3 format.

## Rear Entertainment System

- This unit corresponds to multi-session recorded disc playback at a maximum of 49 sessions.
- Some data on multi-session recorded discs cannot be played.
- Playback of discs with added sessions is possible.
- Packet Write recorded discs cannot be played.
- This unit does not correspond to MP3i (MP3 interactive), MP3 PRO, and RIFF-style MP3 formats.
- The maximum number of characters available for a file name is as follows, however, the displayable number of characters on this unit is limited.

	Maximum number of characters in a file name (including a separator “.” and the three letters of the file extension)
ISO9660 level 1	12*
ISO9660 level 2	31*
Joliet extended format	64
Romeo extended format	128

\* English one-byte characters (capitalized only) and underbar “\_” are available.

### MP3

#### CAUTION

*This unit plays files with the (.mp3) file extension as a MP3 file. Do not use the MP3 file extension for files other than MP3 files. It may cause noise or a malfunction.*

- In a MP3 file, the track name, artist name, album name and category name are recorded with data called “ID3-Tag”, and the information can be displayed on the monitor.
- MP3 files which do not comply with the specific standard may not be played correctly or its file and folder name may not be displayed correctly.
- The file extension may not be provided depending on the computer operating system, version, software, or settings. In this case, add the file extension “.mp3” to the end of the file name, and then write the disc.

### Playlist

This unit can play playlist files. Playlist is a function that allows free setting of the playback order of MP3 files. The file extension of a playlist file in which the order of playback is recorded is “.m3u” or “.pls”.

### Operating tips for WMA

WMA is short for Windows Media Audio and is the audio compression format used by Microsoft.

Audio data can be created and stored at a higher compression ratio than MP3.

\*Microsoft and Window Media are registered trademarks of Microsoft Corporation U.S. in the United States and other countries.

# Rear Entertainment System

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## Playable WMA file specification

CD-R and CD-RW including WMA files can be played with this unit. Discs which conform to the following formats can be played.

Playable WMA files are as follows:

Item		Content
Specification		Windows Media Audio Version7.0
Sampling frequency	Bit rate	22.05kHz . . . . . 32 kbps
		32kHz. . . . . 48, 64 kbps
		44.1kHz . . . . . 48, 64, 80, 96, 128, 160, 192, 256, 320 kbps
		48kHz. . . . . 64, 96, 128, 160, 192 kbps
VBR (Variable Bit Rate)		Supported
Channel mode		Stereo/Monaural
WMA tag		Title, artist name, album name

## WMA



*This unit plays files with the (.wma) file extension as a WMA file. Do not use the WMA file extension for files other than WMA files. It may cause noise or a malfunction.*

- In a WMA file, the track name, artist name, album name and category name are recorded with data called “WMA-Tag”, and the information can be displayed on the monitor.
- WMA files which do not comply with the specific standard may not be played correctly or its file and folder name may not be displayed correctly.
- The file extension may not be provided depending on the computer operating system, version, software, or settings. In this case, add the file extension “.wma” to the end of the file name, and then write the disc.

## Operating tips for Dolby

Manufactured under license from Dolby Laboratories.

“Dolby”, “MLP Lossless”, and the double-D symbol are trademarks of Dolby Laboratories.





**Operating tips for dts**

“DTS” and “DTS Digital Surround” are registered trademarks of Digital Theater Systems, Inc.

**▼ Operation Tips for Headphones**

To listen to audio other than from the speakers of the Rear Entertainment System, it is necessary to use the wireless headphones that are included.

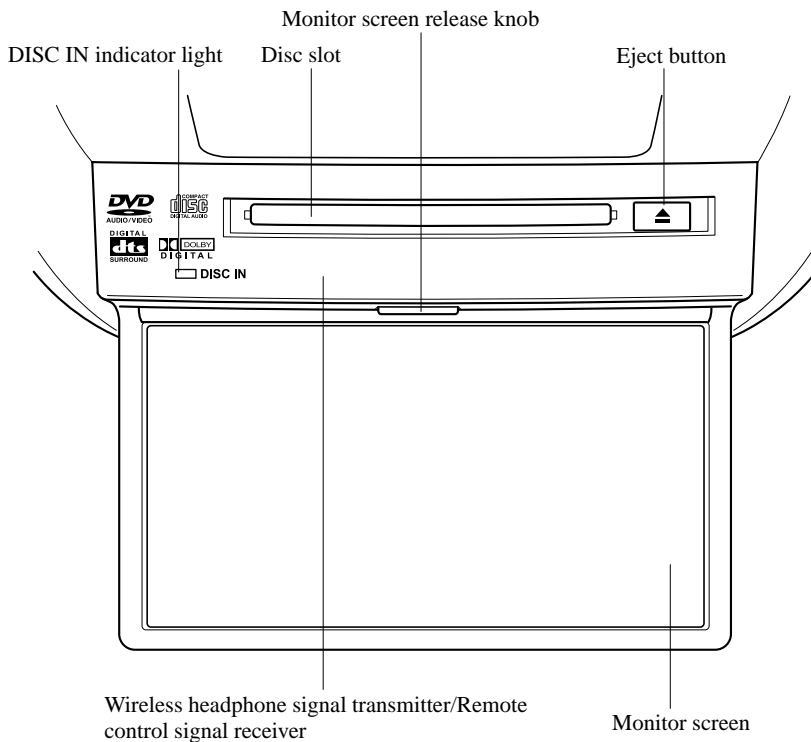
Specification

Item	Content
Transmission system	Infrared light
Modulation system	Frequency modulation
Carrier frequency	Right channel 2.8 MHz, left channel 2.3 MHz

# Rear Entertainment System

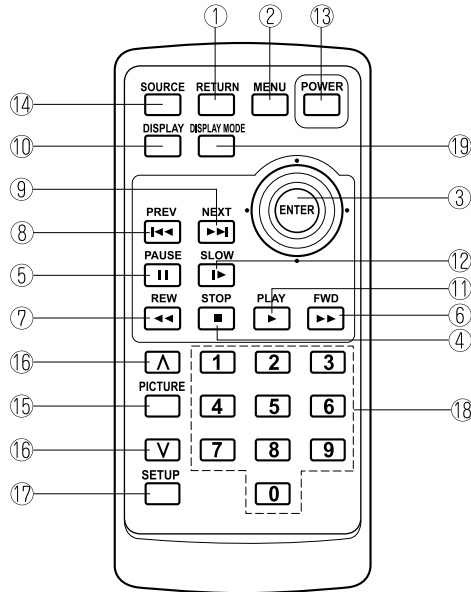
## Part Names

### ▼Rear Entertainment System Main Unit



# Rear Entertainment System

## ▼ Remote Controller

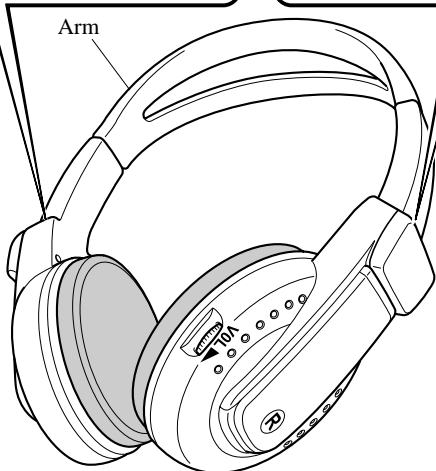
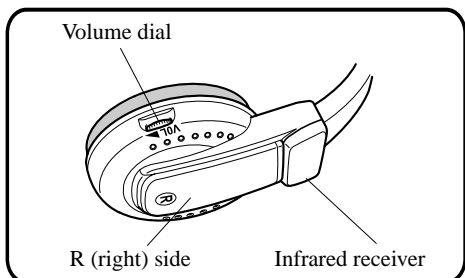
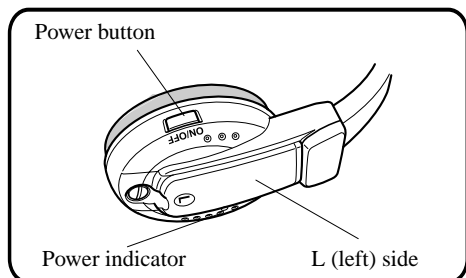


No.	Name	No.	Name
①	RETURN button	⑪	PLAY button
②	MENU button	⑫	Slow playback button
③	ENTER/Select button	⑬	POWER button
④	STOP button	⑭	SOURCE button
⑤	PAUSE button	⑮	Picture adjust mode button
⑥	Fast-forward button	⑯	Picture adjust button
⑦	Rewind button	⑰	SET UP button
⑧	PREVIOUS (Track down) button	⑱	Number keys
⑨	NEXT (Track up) button		
⑩	DISPLAY button		

# Rear Entertainment System

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## ▼ Headphone



# Rear Entertainment System

## Before Operation

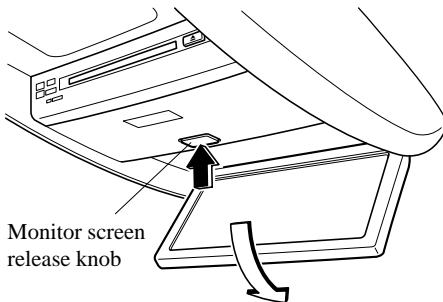
### ▼ Display Opening/Closing

#### **CAUTION**

- Close the display while the Rear Entertainment System is not in use. If the display is left open, a passenger could be injured by hitting the display, or the display could be damaged.
- Do not press the monitor screen while opening the display. It may cause a malfunction.

#### Opening the display

Press the monitor screen release knob and open the display until it is in the lock position.

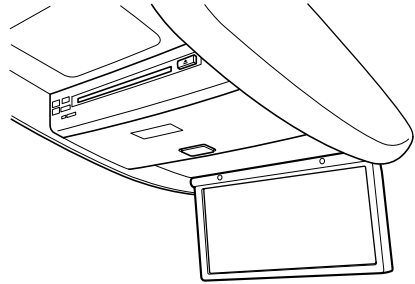


#### Closing the display

Close and press the display until a clicking sound can be heard.

#### **NOTE**

- If the display is closed while the power is on, it automatically turns off.
- The display locks in two positions when opened to 100 or 120-degrees.



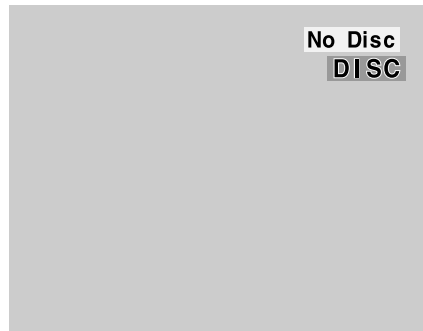
### ▼ Disc Insertion/Ejection

#### **CAUTION**

If the signal surface of a disc is touched, it could cause the sound to skip. Pick up a disc by grasping the edge of the hole and the outer edge.

#### **NOTE**

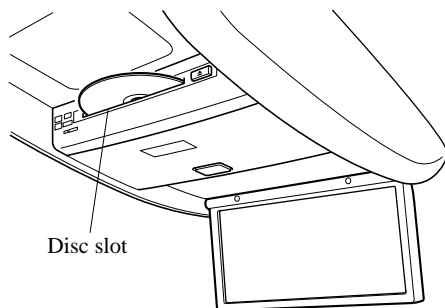
When no disc is inserted, "No Disc" is displayed on the monitor.



## Rear Entertainment System

### Inserting the disc

Insert the disc into the disc slot with the label-side up.



### **CAUTION**

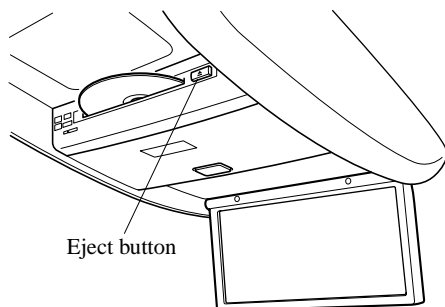
*Insert the disc with its label-side (decorated side) facing upward. If the disc is inserted upside-down, it may cause a malfunction.*

### **NOTE**

*If a disc is inserted while the Rear Entertainment System is turned off but the display is open, and when the ignition is switched to ACC or ON, the system automatically turns on and starts playback.*

### Ejecting the disc

Press the eject button to eject the disc.



### **NOTE**

- *When the eject button is pressed, the disc is ejected halfway.*
- *A disc can be ejected with the Rear Entertainment System turned off.*

### **Picture Adjustment**

The brightness (BRIGHT), color adjustment (TINT), color density (COLOR), and contrast (CONTRAST) of the screen can be adjusted.

Press the picture adjust button (PICTURE) on the remote controller to change to the picture adjustment mode. The picture mode changes in the order of BRIGHT → TINT → COLOR → CONTRAST → OFF each time the button is pressed in this mode.

Press the picture adjust button (Λ) or (∨), positioned to top/bottom of the picture adjustment mode button (PICTURE), to adjust each picture mode.

### **NOTE**

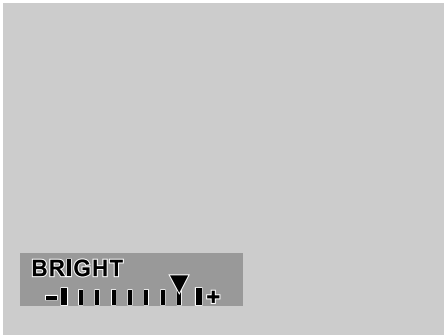
- *If the picture adjustment mode is on and no operation has been done for about 5 seconds, the mode is canceled automatically.*
- *If the picture is no longer adjustable by pressing the picture adjust button (Λ) or (∨), it indicates that the adjustment value has reached the maximum/minimum value.*

### Adjusting the brightness

1. Press the picture adjustment mode button (PICTURE) and select the BRIGHT mode.
2. Press the picture adjust button (Λ) or (∨) to adjust.
  - Picture adjust button (Λ): Brighten

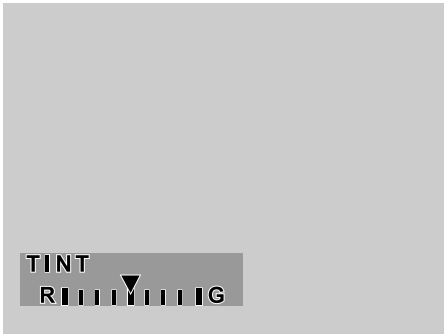
## Rear Entertainment System

- Picture adjust button (V): Darken



### Adjusting the color adjustment

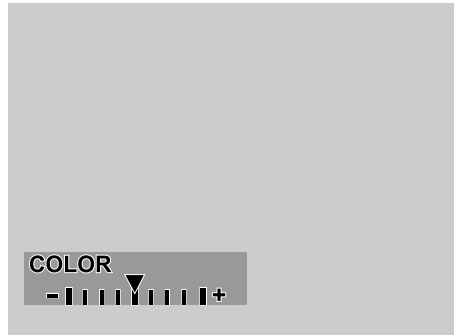
1. Press the picture adjustment mode button (PICTURE) and select the TINT mode.
2. Press the picture adjust button (Λ) or (V) to adjust.
  - Picture adjust button (Λ): Green
  - Picture adjust button (V): Red



### Adjusting the color density

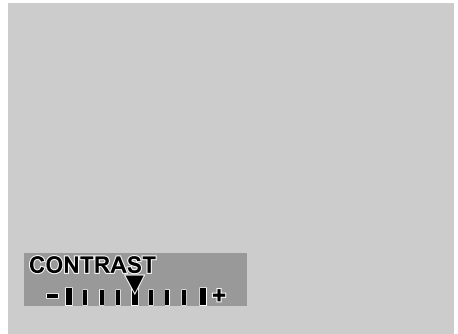
1. Press the picture adjustment mode button (PICTURE) and select the COLOR mode.
2. Press the picture adjust button (Λ) or (V) to adjust.
  - Picture adjust button (Λ): Darken

- Picture adjust button (V): Lighten



### Adjusting the contrast (definition)

1. Press the picture adjustment mode button (PICTURE) and select the CONTRAST mode.
2. Press the picture adjust button (Λ) or (V) to adjust.
  - Picture adjust button (Λ): Higher
  - Picture adjust button (V): Lower



### ▼ Screen Size Setting

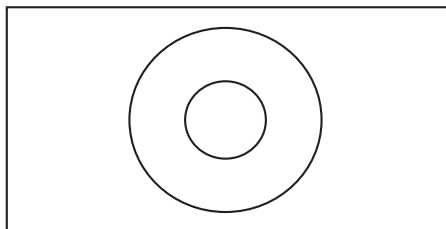
The size of the screen can be changed. Press the DISPLAY MODE button to set the desired screen size.

The screen size changes in the order of Full → Normal → Wide → Cinema each time the button is pressed.

# Rear Entertainment System

## Full screen

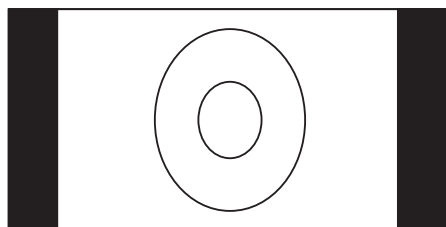
Image is displayed on the full screen.



\* A 16:9 screen ratio image is shown in the above figure.

## Normal screen

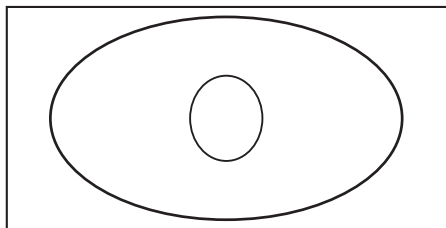
A 4:3 screen ratio image is the standard display, and black bands appear on each side of the screen.



\* A 16:9 screen ratio image is scaled to a 4:3 screen ratio.

## Wide screen

The center part of the image is compressed toward the center, and the surrounding area is enlarged toward the edge.



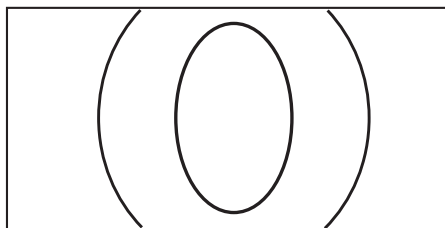
\* A 16:9 screen ratio image is shown in the above figure.

## Cinema screen

The image is enlarged upward and downward. A 4:3 and 16:9 screen ratio image are displayed with the upper/lower part of the image cut off.

### NOTE

*Because images are enlarged lengthwise for display, a horizontal streak may be seen, however, it does not indicate a malfunction.*



\* A 16:9 screen ratio image is shown in the above figure.

### NOTE

*The display varies depending on the style of the image recorded on the disc. Refer to the following table and set the screen size.*

Image style	Recommendation
4:3	Normal or wide screen
16:9	Full screen
Letter box	Full or cinema screen

## ▼ Display Off

Only sound, without image, can be played.

Press and hold the DISPLAY button (DISPLAY ) on the remote controller. "DISPLAY OFF" is displayed, and then image turns off.

Press any button on the remote controller to display the image.



## Rear Entertainment System

### ▼ Remote Controller

Operate the Rear Entertainment System with the remote controller except for disc insertion/ejection.

#### **⚠ CAUTION**

*Do not apply excessive force to the remote controller or get it wet. Also, do not leave the remote controller in a place exposed to direct sunlight or high temperature. It could cause a malfunction.*

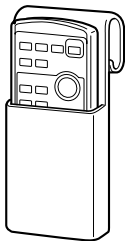
#### **NOTE**

*Operate the remote controller with it pointed to the disc slot of the unit. Signals may not be received depending of the angle.*

### Maintenance

Stow the remote controller in its case and put it in the seatback pocket of a front seat.

Place the remote controller into its case properly in the direction shown in the figure and stow it in the front seatback pocket.



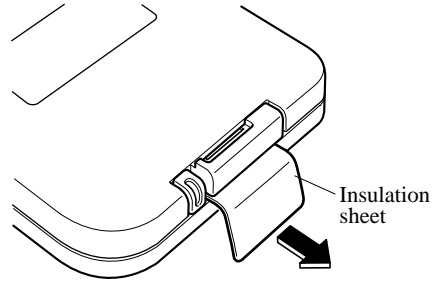
#### **NOTE**

*If the remote controller is placed in the incorrect direction, abnormal noise or an operation error could result.*

### Using the remote controller

A battery has already been installed in the remote controller.

Remove the electrical leak-protection insulation sheet before using the remote controller.



### Replacing the battery

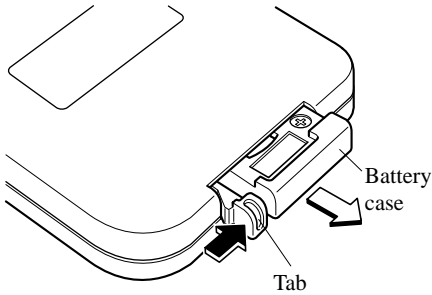
If the buttons on the remote controller are inoperable, or the operation range becomes narrow or unsteady, the battery may be dead.

Replace the battery using the following procedure.

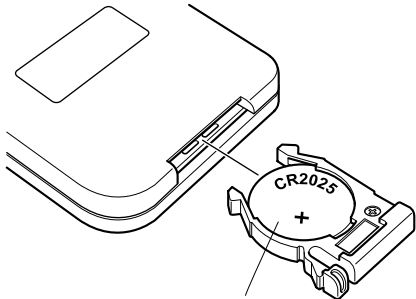
## Rear Entertainment System

### Battery: CR2025 LITHIUM or equivalent (1)

1. Press the battery case tab in the direction indicated by the arrow using your thumbnail, and pull out the battery case.



2. Remove the old battery and install a new one with the plus pole pointed up.



Battery (CR2025 LITHIUM or equivalent)

3. Press the battery case tab in the direction of the arrow until a click sound is heard.

### NOTE

If the remote controller is inoperable even after the batteries are replaced, consult an Authorized Mazda Dealer.

### CAUTION

- Install the battery with the correct pole pointing in the correct direction. Battery leakage could occur if they are not installed correctly.
- When replacing the batteries, be careful not to bend the electrical terminals or get oil on them. Also, be careful not to get dirt in the remote controller as it could be damaged.

## Sound Output

### ▼ Sound Output from Vehicle Speakers

#### Vehicles with audio system

Change the audio system to the Rear Entertainment System mode. Sound/Music being played by the Rear Entertainment System can be heard from the vehicle speakers. For audio operation, refer to “Audio System” (page 6-17).

Press the AUX button (**CD/AUX**) on the audio unit or the mode switch (**MODE**) of the audio control switches on the steering wheel. “AUX” is displayed on the display and the audio system changes to Rear Entertainment System sound.

Adjust the volume with the dial on the audio unit.

#### Vehicles with navigation system

Change the navigation system to the Rear Entertainment System mode. Sound/Music being played by the Rear Entertainment System can be heard from the vehicle speakers. For navigation system operation, refer to the separate manual “NAVIGATION SYSTEM”.

Press the SOURCE button (**SOURCE**), select the AUX2 mode. “RSES” is displayed on the information display and it changes to the Rear Entertainment System sound.

Adjust the volume with the dial on the navigation unit.

### ▼ Using the Headphone Speakers

#### **⚠ CAUTION**

- *For safety reasons, the driver should never wear the headphones while driving. Not being able to hear sound outside of the vehicle could result in a serious accident.*
- *Use the headphones with the volume set at moderate level. Listening at an excessive volume level for extended periods of time will have an adverse effect on your hearing ability.*
- *If the headphone arms are spread excessively it could result in damage.*
- *Do not apply excessive force to the headphones or get them wet. Also, do not leave the headphones in a place exposed to direct sunlight or high temperature. It could cause a malfunction.*

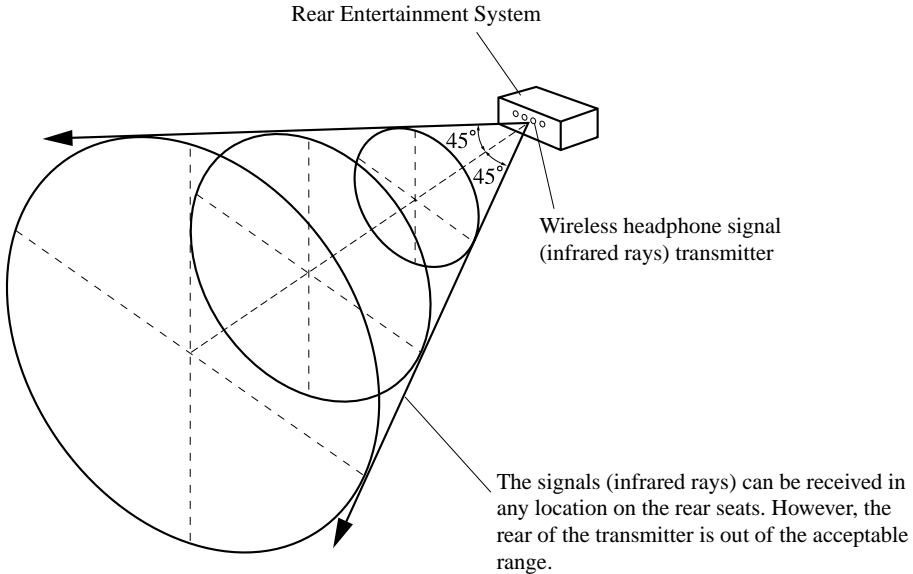
## Rear Entertainment System

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### NOTE

- To listen to audio other than from the speakers of the rear entertainment system, it is necessary to use the wireless headphones that are included. For headphone specification, refer to “Operation Tips for Headphones” (page 6-81).
- When the headphones are not in use, turn them off.
- DTS formatted sound cannot be generated through the headphones. Use the vehicle's speakers.
- If there is no sound produced from a signal for 3 minutes or longer after the headphone power is turned on, or there is no signal reception, the headphone power turns off automatically.
- If the headphones are continuously used for 4 hours or more after the sound signal is received, the headphone power turns off automatically.

The acceptable range for signals (infrared rays) from the Rear Entertainment System is as follows:



A wireless headphone can be used in any position on the rear seats, however, the sound may skip under the following conditions because the acceptable range varies or the signals are blocked.

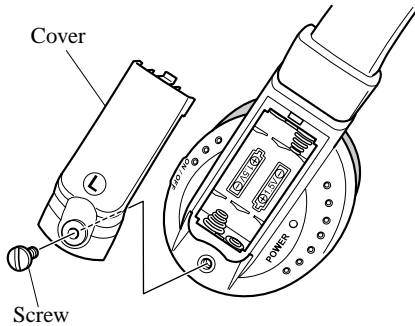
- When affected by intense light such as direct sunshine.

## Rear Entertainment System

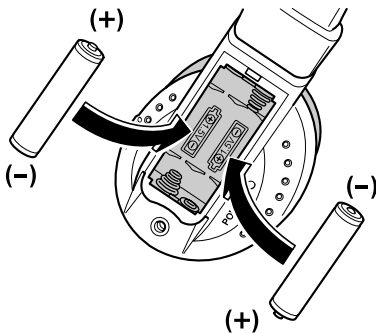
- When the wireless headphone receiver does not point to the Rear Entertainment System transmitter.
- When the signal is blocked by an obstruction such as the seat.

### Replacing the battery

1. Remove the screw using a coin or equivalent, and remove the cover. Remove the batteries.



2. Insert two AAA-size batteries. Match the + polarity of the batteries with the + and - marks in the battery case.



3. Install the cover.
4. Install the screw.

### **NOTE**

*Battery life (reference)*

*Manganese batteries: About 20 hours*

*Alkaline batteries: About 40 hours*

*The battery life is indicated as a reference and does not provide any guarantees. The battery life varies depending on usage conditions (volume, surrounding environment).*

## Rear Entertainment System

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### CAUTION

- *If the battery power is depleted the headphones will not operate properly. If any of the following occurs, replace the batteries.*
    - *The power indicator does not illuminate even when the power is turned on.*
    - *Noise is mixed with the sound.*
    - *The reception range narrows.*
  - *Periodically inspect the batteries for leakage.*
  - *If the headphones are not to be used for an extended period, remove the batteries.*
  - *Be careful not to allow the battery case screw to become loose.*
  - *Install the batteries with the (+ )/(- ) poles correctly positioned. Battery leakage could occur if they are not installed correctly.*
  - *When replacing the batteries, be careful not to bend the electrical terminals or get oil on them.*
  - *Be careful not to allow dirt to get into the headphones as it could damage them.*
- The following points regarding the battery must be observed.*
- If the batteries are not handled properly, it could result in a headphone malfunction.*
- *Do not use rechargeable batteries.*
  - *When replacing the batteries, replace both batteries at the same time. Do not use a new battery and an old battery, or the different types of battery.*

## Rear Entertainment System Functions

### ▼ Mode

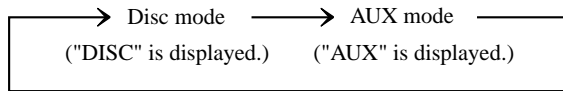
The Rear Entertainment System has Disc and AUX modes.

Mode	Function	Page
Disc mode	DVD video, video CD, DVD audio, and audio CD can be played.	6-96
AUX (Auxiliary) mode *	AV equipment with output terminals for image and sound, such as a video game player and a video camera, can be used.	6-110

\* Auxiliary terminals in which AV equipment can be connected are equipped.  
Refer to Auxiliary Terminals and Power Outlet on page 6-110.

### Mode change

Press the SOURCE button. The mode changes between Disc and AUX.



## Rear Entertainment System

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### DVD video, DVD audio, Video CD, Audio CD and MP3/WMA CD Playback (Disc Mode)

DVD video, DVD audio, Video CD, Audio CD, and MP3/WMA CD can be played in the Disc mode.

#### CAUTION

*For safe driving, adjust the volume while driving so that ambient sound can be heard.*

#### NOTE

- Do not use the Rear Entertainment System for a long period with the engine off. The vehicle battery could run down.
- To listen to the Rear Entertainment System sound from the vehicle speakers, change the audio or navigation system sound to the Rear Entertainment System sound. Refer to *Sound Output from Vehicle Speakers* on page 6-91.
- To listen to audio other than from the speakers of the rear entertainment system, it is necessary to use the wireless headphones that are included. For headphone specification, refer to "Operation Tips for Headphones" (page 6-81).
- The cooling fan of this unit may activate if the temperature of the unit is high, however, this does not indicate a malfunction.

### ▼ Basic Operation

#### Power ON/OFF

##### Turning on the power

The Rear Entertainment System automatically turns on when any of the following operations are done with the ignition switched to ACC or ON.

- The display is open and a disc is inserted.
- The POWER button on the remote controller is pressed.

##### Turning off

The Rear Entertainment System turns off when any of the following operations are done.

- The POWER button on the remote controller is pressed.
- The ignition is switched off.
- The display is closed.

#### Playback

The top menu or disc menu may be displayed on the monitor screen when a disc is played. From these menus, the disc functions can be performed.

Refer to Assist Functions (DVD video, DVD audio, video CD and audio CD) on page 6-99.

#### NOTE

- For some discs, the top menu or disc menu may be displayed automatically after playback.
- Refer to the instruction manual attached to the disc for the top menu or disc menu.

#### When no disc is inserted

1. Switch the ignition to ACC or ON.
2. Insert the disc into the disc slot.  
After the disc is inserted, the playback starts.



## Rear Entertainment System

### **CAUTION**

Insert the disc with its label-side (decorated side) facing upward. If the disc is inserted upside-down, it may cause a malfunction.

#### **When a disc has been inserted**

1. Switch the ignition to ACC or ON.
2. Turn on the Rear Entertainment System.
3. Press the PLAY button to start playback.

#### **NOTE**

If the Rear Entertainment System has been turned off during a previous playback, playback automatically resumes when the system is turned on.

#### **Stopping the playback**

Press the STOP button to stop the playback.  
To resume the playback, press the PLAY button.

#### **Resume playback function**

The Rear Entertainment System stores the position where the playback has been stopped using the resume playback function.

Press the PLAY button to resume the playback from the position previously stopped.

#### **NOTE**

If the RETURN button is pressed after the playback has been stopped, the resume playback function is canceled. Once the resume playback function is canceled, the playback starts from the first chapter (DVD video)/track (video CD, audio CD, DVD audio, or MP3/WMA CD) when the PLAY button is pressed.

#### **Pausing the playback**

Press the PAUSE button to pause the playback.  
Press the PAUSE or PLAY button to resume the playback.

#### **Fast-forward/Reverse**

##### **Fast-forward**

Image and sound is fast-forwarded while the FWD button (▶▶) is pressed.

##### **Reverse**

Image and sound is reversed while the REW button (◀◀) is pressed.

#### **Slow playback (DVD video and video CD)**

Press the SLOW button to slow the playback.  
Press the SLOW or PLAY button to return to normal playback speed.

#### **NOTE**

- Slow playback is not available for audio CD, DVD audio and MP3/WMA CD.
- The unit is muted while in slow playback.

#### **Skipping the chapter/track**

Chapter (DVD video) or track (video CD, DVD audio, audio CD, and MP3/WMA CD) can be skipped (changed).

##### **Fast-forward skip**

Press the NEXT button (▶▶|) to skip to the next chapter/track.

##### **Reverse skip**

Press the PREV button (|◀◀) to return to the beginning of the current chapter/track.

## Rear Entertainment System

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### **NOTE**

To return to the beginning of the previous chapter/track, press the **PREV** button (◀◀) again within 2 seconds after the button is pressed.

### **Skipping to desired chapter/track**

The playback can be started from the desired chapter (DVD video)/track (video CD, DVD audio and audio CD) by entering the chapter/track number.

1. Enter the chapter/track number using the number keys (0 to 9) while the disc is being played.
2. Press the **ENTER** button to start the playback from the selected chapter/track.  
Example: when selecting chapter/track number "10"
  1. Press the number key (1).
  2. Press the number key (0).
  3. Press the **ENTER** button.

### **NOTE**

- If a chapter/track number not in the disc is input, the last chapter/track is played.
- Refer to the instruction manual attached to the disc for chapter/track numbers.

### **Skipping to desired title/group**

The playback can be started from the desired title/group by entering the title/group number.

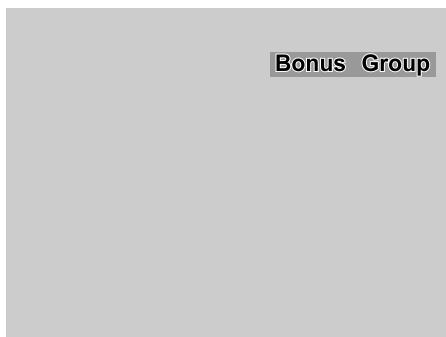
1. Enter the title/group number using the number keys (0 to 9) while the playback is stopped.
2. Press the **ENTER** button to start the playback from the selected title.  
Example: When selecting title number "2"
  1. Press the number key (2).
  2. Press the **ENTER** button.

### **NOTE**

- If a title/group number not in the disc is input, the last title/group is played.
- Refer to the instruction manual attached to the disc for the title/group numbers.

### **Bonus group playback**

1. Press the number button (0) while a disc is not being played.  
If the disc has a bonus group\*, the display shows as follows.



2. Press the **ENTER** button to change the display to the password input screen, then enter the password.  
For the password, see the instruction manual attached to the disc.



- \* Bonus group means the 'Bonus tracks' originally recorded in the disc.

# Rear Entertainment System

## ▼ Assist Functions (DVD video, DVD audio, video CD and audio CD)

### Top menu and disc menu

#### NOTE

Operation may vary or cannot be performed depending on the disc. Refer to the instruction manual attached to the disc.

### Top menu

Multiple titles may have been recorded on some discs.

For these DVD discs, the desired title can be selected in the top menu.

### Disc menu

The unique functions of each DVD disc are recorded as the menu. This is referred to as the disc menu.

Various menu related images and sound are recorded in the disc menu.

### Displaying/selecting top menu/disc menu

1. To display the top menu on the screen, press the MENU button while the disc is not being played. To display the disc menu on the screen, press the MENU button during playback.
2. Move the cursor to the desired menu by operating the select button up/down or left/right.
3. Press the ENTER button to operate the selected menu.
4. To return to playback, press the MENU button or the STOP button, then the PLAY button.

### Function menu

In the function menu, the following items can be selected/operated while in playback.

- ① Language (sound and subtitle) selection (DVD video and DVD audio)
- ② Subtitle ON/OFF (DVD video)
- ③ Display angle change (DVD video and DVD audio)
- ④ Sound output balance adjustment (Video CD)
- ⑤ Repeat/random playback (Video CD, DVD audio and audio CD)

### DVD video function menu

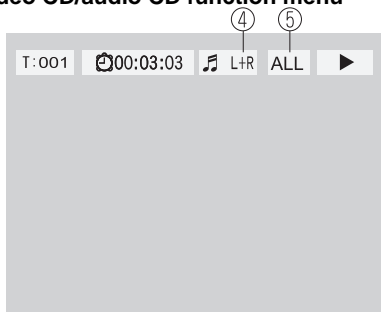


### DVD audio function menu



# Rear Entertainment System

## Video CD/audio CD function menu



### NOTE

- In the function menu, the title/group number, chapter/track number, and playback elapsed time cannot be selected/changed.
- Settings set in the function menu are available only for the current disc. Settings set in the initial setting function menu are available for the Rear Entertainment System unit itself so that the settings remain after the disc is changed. Refer to Initial Setting Function on page 6-105.

### Displaying the function menu

Press the DISPLAY button while in playback to display the function menu on the monitor screen.  
Press the DISPLAY button again to cancel.

### NOTE

For audio CD, the function menu is automatically displayed when playback is started.

### Language (sound and subtitles) selection (DVD video and DVD audio)

Sound and subtitles can be changed to the desired language.

### NOTE

Available languages varies depending on the DVD disc.

1. Press the DISPLAY button to display the function menu.
2. Move the cursor and select the sound select mode or subtitle select mode by operating the select button to the left or right.



3. Move the cursor and select the desired language by operating the select button up or down.
4. Press the DISPLAY button to finish the function menu.

### Subtitle ON/OFF (DVD video)

Subtitle on/off can be set.

1. Press the DISPLAY button to display the function menu.

## Rear Entertainment System

2. Move the cursor to the subtitle ON/OFF mode by operating the select button to the left or right.



3. Select ON to display the subtitles, or OFF to hide them by operating the select button up or down.
4. Press the DISPLAY button to finish the function menu.

### Display angle change (DVD video and DVD audio)

The image can be displayed at the desired angle.

#### NOTE

- Display angle change is not available for discs other than multi-angle recorded DVD discs. Refer to the instruction manual attached to the disc for details.
- The available angles vary depending on the disc.

1. Press the DISPLAY button to display the function menu.

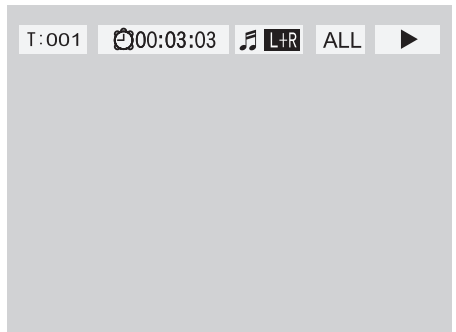
2. Move the cursor to the display angle change mode by operating the select button to the left or right.



3. Move the cursor and select the desired angle by operating the select button up or down.
4. Press the DISPLAY button to finish the function menu.

### Sound output balance adjustment (Video CD)

1. Press the DISPLAY button during the video CD playback to display the function menu.
2. Move the cursor to the sound output balance adjustment mode by operating the select button to the left or right.



## Rear Entertainment System

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3. Set the sound output to the desired balance by operating the select button up or down.

Press the button and the settings changes in the order of L+R →L →R. The sound balance changes according to the setting.

L: Audio recorded in the audio output channel from the left is output.

R: Audio recorded in the audio output channel from the right is output.

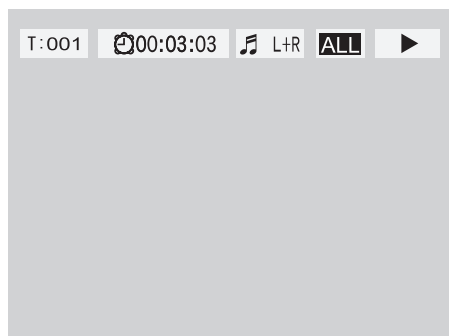
L + R: Audio recorded in the audio output channel from the left/right is output.

4. Press the DISPLAY button to finish the function menu.

### Repeat/random playback (Video CD, DVD audio and audio CD)

Tracks can be played repeatedly or randomly.

1. Press the DISPLAY button while in the playback to display the function menu on the monitor screen.
2. Move the cursor to the repeat/random playback mode by operating the select button to the left or right.



3. Select the desired mode by operating the select button up or down.

(1) During DVD audio:

Each time the button is pressed, the mode changes in the order of 1 — NON — RPF — NOF — RND — RNF — ALL — 1.

ALL: Repeats all tracks.

1: Repeats the current track.

RPF: Repeats all tracks in the current group

NOF: Stops playback after all tracks in the current group are played.

RND: Randomly selects and plays a track from all tracks.

RNF: Randomly selects and plays a track from the current group.

(2) During video CD and audio CD

Each time the button is pressed, the mode changes in the order of 1 — NON — RND — ALL — 1.

ALL: Repeats all tracks. (Returns to the beginning of the disc after all tracks are played.)

1: Repeats the current track.

NON: Stops playback after all tracks in the disc are played.

RND: Randomly plays a track.

4. Press the DISPLAY button to finish the function menu.

### NOTE

The function menu is displayed during audio CD playback and it cannot be canceled by pressing the DISPLAY button during playback.

### ▼ Assist Functions (MP3/WMA CD)

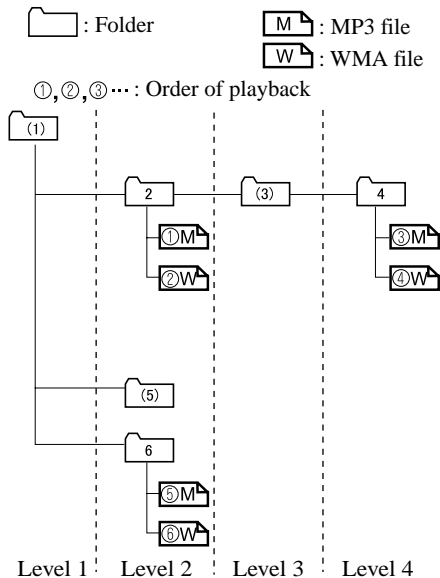
#### Folders and files

The order of MP3/WMA file playback is as follows:

- A folder number is assigned to each folder on a disc.

# Rear Entertainment System

- For example, the folder numbers for folders (1), (3), and (5) in the figure are not displayed because they do not contain MP3/WMA files.
- Folders and files in a hierarchy are played in the order that they are recorded on the disc by the writing software.
- Up to 255 files in 8 hierarchies can be played.
- The loading time may be longer depending on the disc.



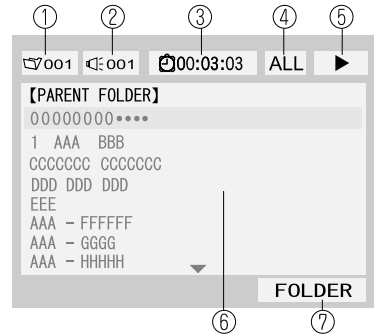
## Function menu

If MP3/WMA files are to be played, operate the select button and move the cursor to select the playback file, playback mode, and display mode.

- ① Folder number/Playback list number
- ② File number
- ③ Playback elapsed time
- ④ Playback mode
- ⑤ Playback status

⑥ Folder/File information display window

⑦ Display mode



## Changing the display mode

1. Move the cursor to the display mode by operating the select button to the left or right.
2. Change the display mode by operating the select button up or down.

Display	Displayed information
FOLDER	All folders and files display
TAG INFO	File tag display (FOLDER name, FILE name, TITLE name, ARTIST name, and ALBUM name) display
TREE IDX	Folder tree display
PLST IDX	Playlist display (If there is a playlist on the disc.)
PLAYLIST	Files on playlist display (If the files on the playlist are being played.)
CD TRACK	CD track display (If CD tracks on a disc which has both MP3/WMA and CD audio files are being played.)

## Changing the playback mode

1. Move the cursor to the playback mode by operating the select button to the left or right.

## Rear Entertainment System

2. Change the display mode by operating the select button up or down.

Display	Playback mode
ALL	All files are played repeatedly.
1	The current file is played repeatedly.
NON	All files are played once and the playback stops.
RPF	All files in the current folder are played repeatedly.
NOF	Files in the current folder are played once and the playback stops.
RND	All files are played randomly.
RNF	Files in the current folder are played randomly.

### NOTE

If RND or RNF is selected during a playlist playback, files on the playlist are played randomly. Refer to Playlist File Playback on page 6-104.

### Selection file

#### While in FOLDER display mode

1. Move the cursor to the folder/file information display window by operating the select button to the left or right.
2. Move the cursor to the desired folder/file by operating the select button up or down.
3. Press the ENTER button to play the selected file or to move to the selected folder.

### NOTE

To return to an upper hierarchy, move the cursor to the "PARENT FOLDER" and press the ENTER button.

#### While in TREEIDX display mode

1. Move the cursor to the folder/file information display window by operating the select button to the left or right.
2. Move the cursor to the folder where the desired file is located by operating the select button up or down.
3. Press the ENTER button. Playback starts from the first track in the selected folder.

### NOTE

- "◀" mark is attached to a folder if the folder has a playable MP3/WMA file.
- If a disc including a playlist is being played, the playlist file can be selected.

### Playlist file playback

Playlist files can be played using the following procedure:

1. Set the display mode to the TREEIDX mode. Refer to Assist Functions (MP3/WMA CD) on page 6-102.
2. Move the cursor to the PLAYLIST by operating the select button.
3. Press the ENTER button to change the display from TREEIDX to PLSTIDX.
4. Move the cursor to the desired playlist file by operating the select button up or down.
5. Press the ENTER button. Playback starts in the order programmed in the playlist file.

### NOTE

The loading time after pressing the ENTER button may be longer depending on the disc.



### ▼ Initial Setting Function

The settings set in the initial setting function remain after the unit is turned off or the disc is changed.

The following items can be set in the initial setting.

**Lang:** Sound and subtitle setting

**Rating:** Parental lock setting

**Mark:** On-Screen Mark, Angle Mark and Mode Priority settings

**Audio:** Audio DRC setting

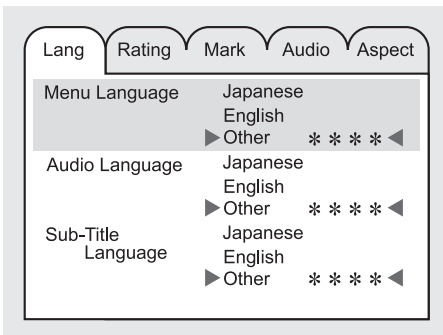
**Aspect:** Not available

#### Displaying/selecting the initial setting function menu

1. Press the SET UP button while the disc is not being played to display the initial setting function menu on the monitor screen.

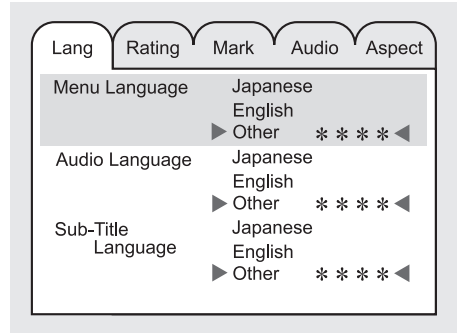
#### **NOTE**

- The initial setting can be performed with no disc inserted.
- After setting the initial setting, the playback starts from the first chapter/track.

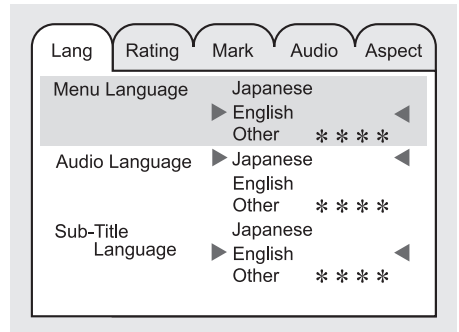


2. Move the cursor to the desired menu by operating the select button up/down or left/right.

3. Press the ENTER button. The selected menu is highlighted to indicate that the menu is selected.

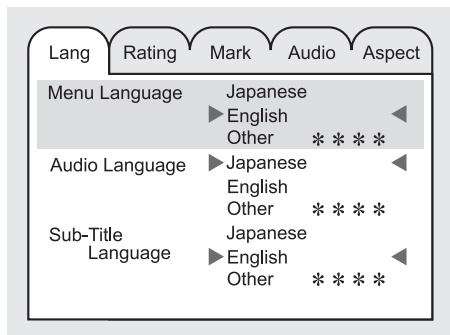


4. Select the item to be set by operating the select button up or down.



# Rear Entertainment System

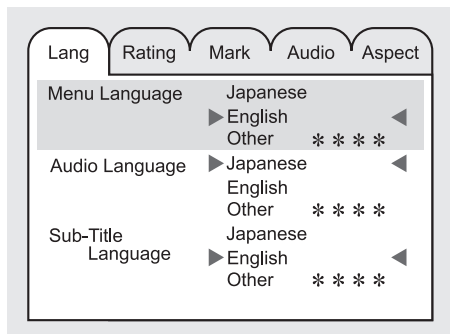
5. Press the ENTER button. The highlighted color returns to the previous color to indicate that the selected item is set.



6. To finish the function menu on the monitor display, press the SET UP, MENU, or STOP button.

## Lang (Language)

Sound and subtitles can be changed to the desired language.



**Menu language:** Language used for top menu/disc menu

**Sound language:** Language used for movie sound (voice)

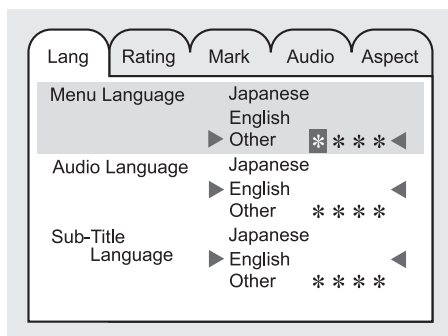
**Subtitle language:** Language used for subtitles

## Changing to a language other than English and Japanese

### NOTE

- Languages other than English and Japanese can be set by entering the language code in the language code list. Refer to Language Code List on page 6-114.
- If the selected language is not recorded in the disc, the language is not available.

1. Move the cursor to “Other” by operating the select button up or down.
2. Press the ENTER button, and then operate the select button to the right.



3. Enter the desired language code by pressing the number keys (0 to 9) or operating the select button up or down.
4. Press the ENTER button to set the language of the entered language code.

### NOTE

If “English” or “Japanese” is selected afterward, the previously entered language code is cleared.

## Rating

If the disc has a parental lock code, viewing can be restricted. Also, the setting can be protected by a password to prevent someone changing the setting.

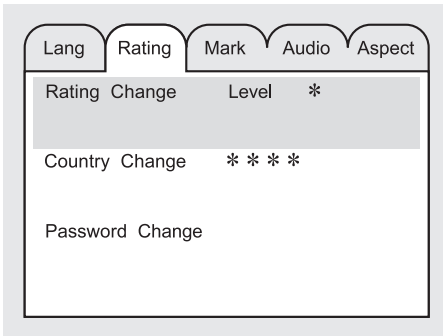
## Rear Entertainment System

Viewing can be restricted by setting the parent lock level.

For example, if the level is set to 6, level 7 or higher viewing is locked and cannot be played.

### NOTE

- Parent lock is not available depending on the disc.
- The initial password setting (when purchased) is "0000".



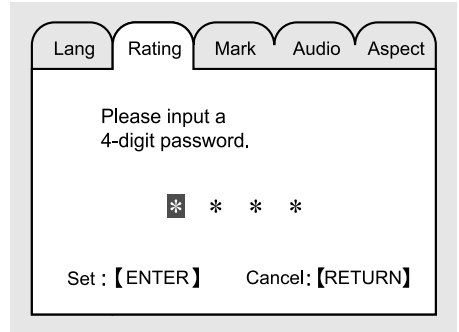
**Rating change:** Parent lock level setting

**Country change:** Setting for the country where the disc is being played.

**Password change:** Registered password changes

### Changing the Rating setting

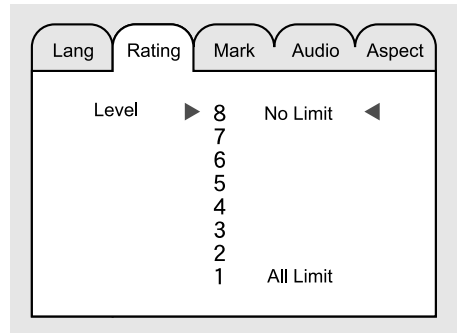
1. Enter the password by pressing the number keys (0 to 9) or operating the select button up or down.



2. Press the ENTER button.  
If the password is confirmed, the Rating change mode is displayed.

### NOTE

The setting cannot be changed without the correct password. Note down the password so you don't forget it.



3. Select the desired parent lock level and press the ENTER button to set.

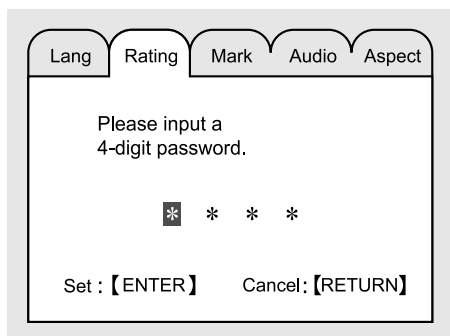
# Rear Entertainment System

## Country change

### NOTE

It is necessary to set the country code because the parent lock level is different depending on the country. When using the unit in U.S.A., set the country code to "3018". The parent lock function is disabled without the country code setting (page 6-116).

1. Enter the password by pressing the number keys (0 to 9) or operating the select button up or down.

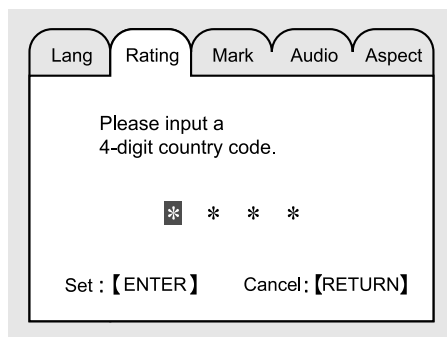


2. Press the ENTER button.  
If the password is confirmed, the password change mode is displayed.

### NOTE

The setting cannot be changed without the correct password. Note down the password so you don't forget it.

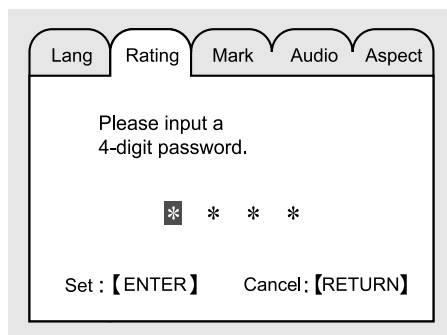
3. Enter the country code by pressing the number keys (0 to 9) or operating the select button up or down.



4. Press the ENTER button to set the country of the entered country code.

## Changing the password

1. Enter the password by pressing the number keys (0 to 9) or operating the select button up or down.

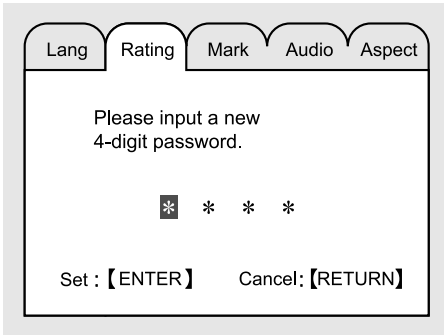


2. Press the ENTER button.  
If the password is confirmed, the password change mode is displayed.

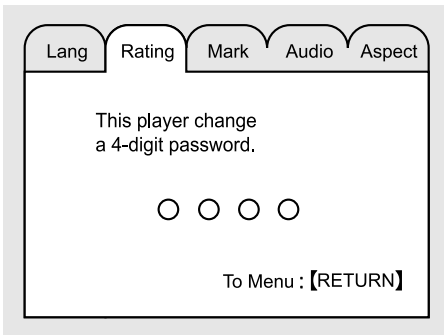
### NOTE

The setting cannot be changed without the correct password. Note down the password so you don't forget it.

## Rear Entertainment System

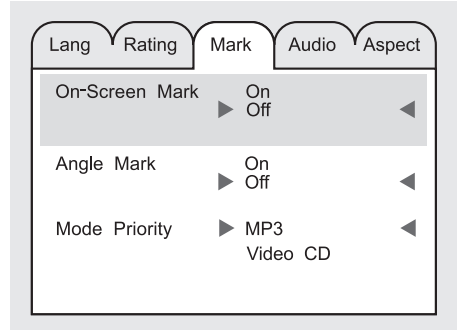


3. Enter the new password by pressing the number keys (0 to 9) or operating the select button up or down.
4. Press the ENTER button to set the new password.



### Mark

The DVD video playback status and angle display on/off, and priority of the inserted discs can be set.



### **On-Screen Mark**

Select ON to display, OFF not to display the DVD video playback status on the upper right corner of the screen.

When the screen display is on, the following marks are displayed on the upper right corner of the screen (in Disc mode).

Mark	Condition
	Playback
	Stop (Resume standby)
	Pause
	Fast-forward
	Reverse

### **Angle display**

The camera mark display when multi-angle can be performed.

# Rear Entertainment System

**NOTE**

- The display angle change is not available for discs other than multi-angle recorded DVD discs. Refer to the instruction manual accompanying the disc for details.
- The screen size and angle can be changed when On-Screen Mark and Angle Mark is off.

**Mode Priority**

The priority of the inserted discs (CD-R/CD-RW) can be selected.

**Audio**

**Digital Output**

Not used with this unit.

**Audio DRC**

The audio dynamic range can be adjusted to reduce the difference between the maximum and minimum audio output. Audio compression of the DVD video playback can be selected or deselected during playback using the following modes:

Mode	Function
NONE	Playback with normal volume
LINE	Lower volume is increased to reduce difference in volume range.
RF	Use when it is still difficult to hear sound while using LINE. Sound quality is reduced while using RF.

**NOTE**

Only sound output from the headphones is available.

## Auxiliary Input (AUX mode)

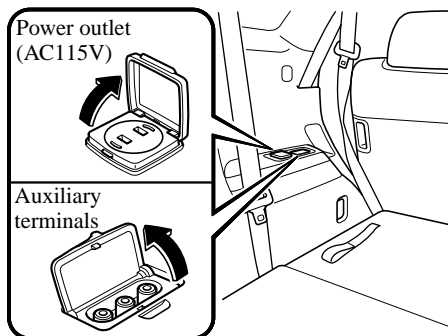
In AUX mode, AV equipment such as a video game player or a video camera can be used by connecting the image and sound cables to the auxiliary terminals.

**NOTE**

- Before operating, read the instruction manual accompanying the AV equipment to be used.
- To listen to the Rear Entertainment System sound from the vehicle speakers, change the audio or navigation system sound to the Rear Entertainment System sound. Refer to Sound Output from Vehicle Speakers on page 6-91. To listen to audio other than from the speakers of the rear entertainment system, it is necessary to use the wireless headphones that are included. For headphone specification, refer to "Operation Tips for Headphones" (page 6-81).
- The cooling fan for this unit may activate if the temperature of the unit is high, however, this does not indicate a malfunction.

## ▼ Auxiliary Terminals and Power Outlet

The auxiliary terminals and power outlet are positioned as shown in the figure.



## Rear Entertainment System

### Auxiliary terminals

The auxiliary terminals consist of one image input terminal and two sound input terminals (for left and right).

Image input terminal: Yellow

Sound input (Right) terminal: Red

Sound input (Left) terminal: White

To use, open the cover.

### CAUTION

*Close the cover when the terminals are not in use. If foreign material penetrates, or liquid is spilled on it, it may cause a malfunction.*

### NOTE

- For monaural equipment (with one sound output terminal), connect the terminal to the sound input terminal (White). The sound is output from the speaker to which the terminal has been connected.
- Noise may occur depending on the connected equipment.

### Power Outlet

The power outlet can be used as a power supply for electrical devices when the ignition is switched to ACC or ON.

Only use AC 115 V electrical appliances requiring no greater than 100 W

Open the cover to use the power outlet.

### WARNING

- Never use medical instruments with the power outlet.
- Follow the cautions below to prevent electrical shock.
  - Do not plug accessories into the power outlet or unplug them with wet hands.
  - Do not put anything other than plugs into the outlet.
  - Do not disassemble the outlet.

### CAUTION

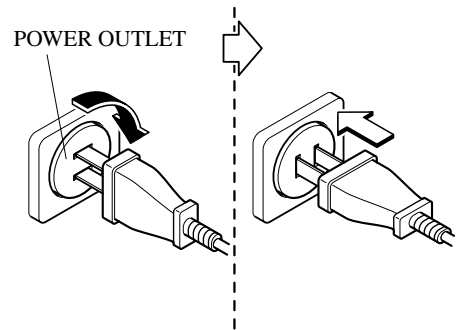
- Always close the cover when not in use. If foreign objects or liquid penetrate the outlet, it may cause a malfunction.
- Do not use electrical appliances that exceed the prescribed power capacity. It may cause a malfunction.

### NOTE

*To prevent discharging of the battery, do not use the auxiliary input for long periods with the engine off or idling.*

### Plug-in

1. Open the cover.
2. Lightly insert the plug and turn the outlet 90 degrees, then insert it fully.



### Unplug

1. Pull the plug out.
2. Close the cover.

# Rear Entertainment System

## NOTE

The following electrical appliances may not operate even if their electrical capacity is 100 W or less.

- Appliances requiring large amounts of power for activation (such as cathode-ray tube televisions, refrigerators with a compressor, electrical pumps, and electrical tools)
- Appliances with a power supply frequency switch function (such as clocks and audio)
- Appliances for precise data processing (such as measurement equipment)

Some electrical appliances other than the above may not operate.

The protection circuit may operate and the power supply may be stopped to prevent battery depletion.

When using an electrical appliance for data processing such as a personal computer, back up the data frequently.

The power outlet (AC115V) cannot be used in the following cases:

- Battery power is weak
- Appliances with a capacity of 100 W or more are used
- Cabin temperature is extremely hot

Noise may occur during radio or television operation depending on the electrical appliance being used.

## ▼ Using AV Equipment

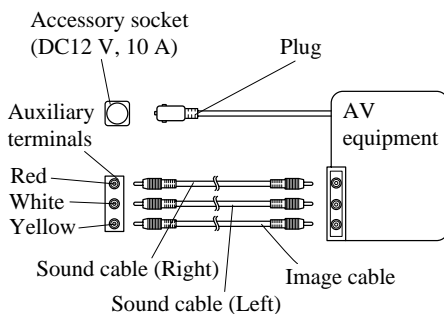
### **CAUTION**

For safe driving, adjust the volume while driving so that ambient sound can be heard.

## NOTE

Before operating, read the instruction manual accompanying the AV equipment to be used.

1. Switch the ignition off.
2. If a power supply is necessary, connect the outlet to the power outlet. Refer to Auxiliary Terminals and Power Outlet on page 6-110.
3. Connect the image cable and sound cables to the input terminals.



## NOTE

- For monaural equipment (with one sound output terminal), connect the terminal to either of the sound input terminals (Red) and (White). The sound is output from the speaker to which the terminal has been connected.
  - Noise may occur depending on the connected equipment.
4. Switch the ignition to ACC or ON.



5. Press the SOURCE button and select the AUX mode.  
Refer to Mode on page 6-95.



6. Operate the equipment following the instruction manual accompanying the equipment.

# Rear Entertainment System

## Language Code List

Language		Code
Abkhazian	ab	1001
Afar	aa	1000
Afrekaans	af	1005
Albanian	sq	2816
Amharic	am	1012
Arabic	ar	1017
Armenian	hy	1724
Assamase	as	1018
Aymara	ay	1024
Azerbaijani	az	1025
Bashkir	ba	1100
Basque	eu	1420
Bengali	bn	1113
Bhutani	dz	1325
Bihari	bh	1107
Bislama	bi	1108
Breton	br	1117
Bulgarian	bg	1106
Burmese	my	2224
Byelorussian	be	1104
Cambodian	km	2012
Catalan	ca	1200
Chinese	zh	3507
Corsican	co	1214
Croatian	hr	1717
Czech	cs	1218
Danish	da	1300
Dutch	nl	2311
English	en	1413
Esperanto	eo	1414
Estonian	et	1419
Faroese	fo	1514
Fiji	fj	1509
Finnish	fi	1508
French	fr	1517
Friesian	fy	1524
Galician	gl	1611
German	de	1304
Gorgian	ka	2000

Language		Code
Greek	el	1411
Greenlandic	kl	2011
Guarani	gn	1613
Gujarati	gu	1620
Hausa	ha	1700
Hebrew	iw	1822
Hindi	hi	1708
Hungarian	hu	1720
Icelandic	is	1818
Indonesian	in	1813
Interlingua	ia	1800
Interlingue	ie	1804
Inupiak	ik	1810
Irish	ga	1600
Italian	it	1819
Japanese	ja	1900
Javanese	jw	1922
Kannada	kn	2013
Kashmiri	ks	2018
Kazakh	kk	2010
Kinyarwanda	rw	2722
Kirghiz	ky	2024
Kirundi	rn	2713
Korean	ko	2014
Kurdish	ku	2020
Laothian	lo	2114
Latin	la	2100
Latvian	lv	2121
Lingala	ln	2113
Lithuanian	lt	2119
Macedonian	mk	2210
Malagasy	mg	2206
Malay	ms	2218
Malayalam	ml	2211
Maltese	mt	2219
Maori	mi	2208
Marathi	mr	2217
Moldavian	mo	2214
Mongolian	mn	2213

## Rear Entertainment System

Language		Code
Nauru	na	2300
Nepali	ne	2304
Norwegian	no	2314
Occitan	oc	2402
Oriya	or	2417
Oromo	om	2412
Panjabi	pa	2500
Pashto, Pushto	ps	2518
Persian	fa	1500
Polish	pl	2511
Portuguese	pt	2519
Quechua	qu	2620
Rhaeto-Romance	rm	2712
Romanian	ro	2714
Russian	ru	2720
Samoan	sm	2812
Sangho	sg	2806
SanSkrit	sa	2800
Scots-Gaelic	gd	1603
Serbian	sr	2817
Serbo-Croatian	sh	2807
Sesotho	st	2819
Setswana	tn	2913
Shona	sn	2813
Sindhi	sd	2803
Singhalese	si	2808
Siswaiti	ss	2818
Slovak	sk	2810
Slovenian	sl	2811
Somali	so	2814
Spanish	es	1418
Sundanese	su	2820
Swahili	sw	2822
Swedish	sv	2821
Tagalog	tl	2911
Tajik	tg	2906
Tamil	ta	2900
Tatar	tt	2919
Telugu	te	2904
Thai	th	2907
Tibetan	bo	1114

Language		Code
Tigrinya	ti	2908
Tonga	to	2914
Tsonga	ts	2918
Tukmen	tk	2910
Turkish	tr	2917
Twi	tw	2922
Ukrainian	uk	3010
Urdu	ur	3017
Uzbek	uz	3025
Vietnamese	vi	3108
Volapuk	vo	3114
Welsh	cy	1224
Wolof	wo	3214
Xhosa	xh	3307
Yiddish	ji	1908
Yoruba	yo	3414
Zulu	zu	3520

# Rear Entertainment System

## Country Code List

Country		Code
Afghanistan	AF	1005
Albania	AL	1011
Algeria	DZ	1325
American Samoa	AS	1018
Andorra	AD	1003
Angola	AO	1014
Anguilla	AI	1008
Antarctica	AQ	1016
Antigua and Barbuda	AG	1006
Argentina	AR	1017
Armenia	AM	1012
Aruba	AW	1022
Australia	AU	1020
Austria	AT	1019
Azerbaijan	AZ	1025
Bahamas	BS	1118
Bahrain	BH	1107
Bangladesh	BD	1103
Barbados	BB	1101
Belarus	BY	1124
Belgium	BE	1104
Belize	BZ	1125
Benin	BJ	1109
Bermuda	BM	1112
Bhutan	BT	1119
Bolivia	BO	1114
Bosnia and Herzegovina	BA	1100
Botswana	BW	1122
Bouvet Island	BV	1121
Brazil	BR	1117
British Indian Ocean Territory	IO	1814
Brunei	BN	1113
Bulgaria	BG	1106
Burkina Faso	BF	1105
Burundi	BI	1108
Cambodia	KH	2007
Cameroon	CM	1212
Canada	CA	1200

Country		Code
Cape Verde	CV	1221
Cayman Islands	KY	2024
Central African Republic	CF	1205
Chad	TD	2903
Chile	CL	1211
China	CN	1213
Christmas Island	CX	1223
Cocos (Keeling) Islands	CC	1202
Colombia	CO	1214
Comoros	KM	2012
Congo	CG	1206
Congo, The Democratic Republic of the	CD	1203
Cook Islands	CK	1210
Costa Rica	CR	1217
Cote D'Ivoire	CI	1208
Croatia (Hrvatska)	HR	1717
Cuba	CU	1220
Cyprus	CY	1224
Czech Republic	CZ	1225
Denmark	DK	1310
Djibouti	DJ	1309
Dominica	DM	1312
Dominican Republic	DO	1314
East Timor	TP	2915
Ecuador	EC	1402
Egypt	EG	1406
El Salvador	SV	2821
Equatorial Guinea	GQ	1616
Eritrea	ER	1417
Estonia	EE	1404
Ethiopia	ET	1419
Falkland Islands (Malvinas)	FK	1510
Faroe Islands	FO	1514
Fiji	FJ	1509
Finland	FI	1508
France	FR	1517
French Guiana	GF	1605
French	PF	2505

## Rear Entertainment System

Country		Code
French Southern Territories	TF	2905
Gabon	GA	1600
Gambia	GM	1612
Georgia	GE	1604
Germany	DE	1304
Ghana	GH	1607
Gibraltar	GI	1608
Greece	GR	1617
Greenland	GL	1611
Grenada	GD	1603
Guadeloupe	GP	1615
Guam	GU	1620
Guatemala	GT	1619
Guinea	GN	1613
Guinea-Bissau	GW	1622
Guyana	GY	1624
Haiti	HT	1719
Heard and McDonald Islands	HM	1712
Holy See (Vatican City State)	VA	3100
Honduras	HN	1713
Hong Kong	HK	1710
Hungary	HU	1720
Iceland	IS	1818
India	IN	1813
Indonesia	ID	1803
Iran, Islamic Republic of	IR	1817
Iraq	IQ	1816
Ireland	IE	1804
Israel	IL	1811
Italy	IT	1819
Jamaica	JM	1912
Japan	JP	1915
Jordan	JO	1914
Kazakstan	KZ	2025
Kenya	KE	2004
Kiribati	KI	2008
Korea (North), Democratic People's Republic	KP	2015
Korea (South), Republic of	KR	2017
Kuwait	KW	2022
Kyrgyzstan	KG	2006

Country		Code
Lao People's Democratic	LA	2100
Latvia	LV	2121
Lebanon	LB	2101
Lesotho	LS	2118
Liberia	LR	2117
Libyan Arab Jamahiriya	LY	2124
Liechtenstein	LI	2108
Lithuania	LT	2119
Luxembourg	LU	2120
Macau	MO	2214
Macedonia, the Former Yugoslav Republic of	MK	2210
Madagascar	MG	2206
Malawi	MW	2222
Malaysia	MY	2224
Maldives	MV	2221
Mali	ML	2211
Malta	MT	2219
Marshall Islands	MH	2207
Martinique	MQ	2216
Mauritania	MR	2217
Mauritius	MU	2220
Mayotte	YT	3419
Mexico	MX	2223
Micronesia, Federated States	FM	1512
Moldova, Republic	MD	2203
Monaco	MC	2202
Mongolia	MN	2213
Montserrat	MS	2218
Morocco	MA	2200
Mozambique	MZ	2225
Myanmar (Burma)	MM	2212
Namibia	NA	2300
Nauru	NR	2317
Nepal	NP	2315
Netherlands	NL	2311
Netherlands Antilles	AN	1013
New Caledonia	NC	2302
New Zealand	NZ	2325
Nicaragua	NI	2308
Niger	NE	2304

# Rear Entertainment System

Country		Code
Nigeria	NG	2306
Niue	NU	2320
Norfolk Island	NF	2305
Northern Mariana Islands	MP	2215
Norway	NO	2314
Oman	OM	2412
Pakistan	PK	2510
Palau	PW	2522
Palestinian Territory, Occupied	PS	2518
Panama	PA	2500
Papua New Guinea	PG	2506
Paraguay	PY	2524
Peru	PE	2504
Philippines	PH	2507
Pitcairn	PN	2513
Poland	PL	2511
Portugal	PT	2519
Puerto Rico	PR	2517
Qatar	QA	2600
Reunion	RE	2704
Romania	RO	2714
Russian Federation	RU	2720
Rwanda	RW	2722
Saint Helena	SH	2807
Saint Kitts and Nevis	KN	2013
Saint Lucia	LC	2102
Saint Pierre and Miquelon	PM	2512
Saint Vincent and the Grenadines	VC	3102
Samoa	WS	3218
San Marino	SM	2812
Sao Tome and Principe	ST	2819
Saudi Arabia	SA	2800
Senegal	SN	2813
Seychelles	SC	2802
Sierra Leone	SL	2811
Singapore	SG	2806
Slovakia (Slovak Republic)	SK	2810
Slovenia	SI	2808
Solomon Islands	SB	2801
Somalia	SO	2814

Country		Code
South Africa	ZA	3500
South Georgia and the South Sandwich Islands	GS	1618
Spain	ES	1418
Sri Lanka	LK	2110
Sudan	SD	2803
Suriname	SR	2817
Svalbard and Jan Mayen Islands	SJ	2809
Swaziland	SZ	2825
Sweden	SE	2804
Switzerland	CH	1207
Syrian Arab Republic	SY	2824
Taiwan, Province of China	TW	2922
Tajikistan	TJ	2909
Tanzania, United Republic	TZ	2925
Thailand	TH	2907
Togo	TG	2906
Tokelau	TK	2910
Tonga	TO	2914
Trinidad and Tobago	TT	2919
Tunisia	TN	2913
Turkey	TR	2917
Turkmenistan	TM	2912
Turks and Caicos Islands	TC	2902
Tuvalu	TV	2921
Uganda	UG	3006
Ukraine	UA	3000
United Arab Emirates	AE	1004
United Kingdom	GB	1601
United States	US	3018
United States Minor Outlying Islands	UM	3012
Uruguay	UY	3024
Uzbekistan	UZ	3025
Vanuatu	VU	3120
Vatican City State See Holy See	VA	3100
Venezuela	VE	3104
Viet Nam	VN	3113
Virgin Islands, British	VG	3106
Virgin Islands, U.S.	VI	3108

## Rear Entertainment System

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Country		Code
Wallis and Futuna Islands	WF	3205
Western Sahara	EH	1407
Yemen	YE	3404
Yugoslavia	YU	3420
Zaire See Congo, The Democratic Republic of the	ZR	3517
Zambia	ZM	3512
Zimbabwe	ZW	3522

# Rear Entertainment System

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## Error Message

### ▼ Message

#### Disc mode error message

Use of Non-supported Disc

An error message is displayed if a non-supported DVD-ROM disc, a non-supported disc format or a disc (PAL, other) with a different image signal encoding is read.



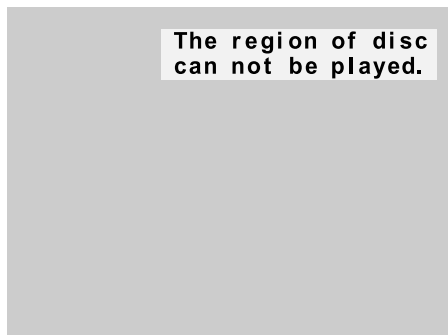
#### **If the disc content cannot be read:**

An error message is displayed if the disc cannot be read due to scratches or the content cannot be read.



#### **Incorrect region code**

An error message is displayed if a disc other than one with region code 1 or including region 1 is inserted.



#### **High temperature malfunction**

If the temperature surrounding the DVD player area exceeds 88°C (190°F), the DVD player operation is stopped to protect the unit. When the temperature decreases to 70°C (158°F) or less, the protective circuit function is cleared and the operation is restored.





**System errors (Common to each mode)****Power malfunction**

An error message is displayed if the power supply to the rear entertainment system drops (About 9.5 V or less), and the power is turned off.

The power is restored when the power supply to the rear entertainment system is 10 V or more.



BATTERY ERROR

**High temperature malfunction**

If the temperature around the LCD area exceeds 95°C (203°F), the power supply is turned off to protect the LCD.

When the temperature around the LCD area is 85°C (185°F) or less, the protective circuit function is cleared and the operation is restored.



HOT PROTECT  
RSES SHUTDOWN

## Rear Entertainment System

### Symptoms and Actions

If any malfunction is suspected, verify the following before requesting a repair. If the problem cannot be solved after performing the procedure, have the system inspected at an Authorized Mazda Dealer.

Some functions are not available depending on the disc. Read the instruction manual attached to the disc before operating.

Symptom	Cause	Action
System cannot be turned on	The ignition is switched off.	Switch the ignition to ACC or ON.
	The remote controller batteries are weak.	Replace the batteries with new ones. Refer to Remote Controller on page 6-89.
	Remote controller batteries poles are pointed in the wrong direction.	Install the batteries in the correct direction. Refer to Remote Controller on page 6-89.
	The vehicle battery is weak.	Recharge or replace the vehicle battery.
	The cabin temperature (Rear Entertainment System unit temperature) is high.	Retry after the temperature has lowered.
Image cannot be displayed	The ignition is switched off.	Switch the ignition to ACC or ON.
	No disc is inserted.	Insert a disc.
	An invalid disc is inserted.	Insert a disc which can be played by this unit. Refer to Operating Tips for Disc on page 6-74.
	The wrong mode has been selected.	Select the correct mode by pressing the SOURCE button. Refer to Mode on page 6-95.
Disc cannot be played	No disc is inserted.	Insert a disc.
	Disc is inserted upside down.	Insert the disc with the label-side up.
	Parent lock level is set.	Clear or change the parent lock level.
Sound cannot be output	The ignition is switched off.	Switch the ignition to ACC or ON.
	Volume is too low.	Adjust the volume.
	The audio unit/navigation system is not set in the Rear Entertainment System mode.	Set the audio unit/navigation system in the Rear Entertainment System mode. Refer to Sound Output on page 6-91.
	An invalid disc has been inserted.	Insert a disc which can be played by this unit. Refer to Operating Tips for Disc on page 6-74.
	No disc is inserted.	Insert a disc.
	Disc is inserted upside down.	Insert the disc with the label-side up.
	Playback has been paused.	Cancel the pause.
The playback is in slow, fast-forward, or reverse mode.	Select normal playback. Refer to Basic Operation on page 6-96.	
Audio output from vehicle speakers but not from headphones	DTS format language is selected and played back. (The wireless headphones cannot playback DTS format language)	Select audio other than DTS format.

## Rear Entertainment System

Symptom	Cause	Action
Image and/or sound is distorted.	The disc is dirty.	Clean the signal surface of the disc.
	The disc has a scratch.	Replace the disc with another one.
	Dew condensation on the disc	Clear the dew condensation.
There are subtle spots or luminescent spots on the screen.	The LCD is high tech equipment with a 99.99% effective sensor resolution. However, please be aware that 0.01% pixel failure or pixel continuous illuminated pixels may exist.	—
Subtitles cannot be changed	Other languages are not recorded on the disc.	Check the available language in the instruction manual accompanying the disc.
Display angle cannot be changed	Multiple angles are not recorded on the disc.	Check the available angle in the instruction manual accompanying the disc.
Remote controller is inoperable	The remote controller is not pointed toward the receiver on the unit.	Point the remote controller toward the receiver on the unit. The receiver is near the disc slot.
	There is an obstruction between the remote controller and the unit.	Operate the remote controller avoiding the obstruction so that the signal reaches the receiver on the unit. The receiver is near the disc slot.
	The remote controller batteries are weak.	Replace the batteries with new ones. Refer to Remote Controller on page 6-89.
	Remote controller batteries poles are pointed in the wrong direction.	Install the batteries in the correct direction. Refer to Remote Controller on page 6-89.
No audio output from the headphones.	No power to the headphones.	Turn on the power to the headphones.
	The headphones' optical receiver is not pointed towards the main unit's transmitter.	Point the headphones' optical receiver towards the main unit's transmitter. The main unit's transmitter is located near the disc insertion area.
	There is an obstruction between the headphones and the main unit.	Avoid the obstruction.
	The headphones' batteries are depleted.	Replace the batteries with new ones.
	The headphones' batteries have not been correctly inserted in the <b>+</b> / <b>-</b> directions.	Insert the batteries correctly.
	The headphones are exposed to direct sunlight.	Use the headphones while avoiding direct sunlight.
	Power turns off automatically.	If there is no sound for 3 minutes or longer, or if the headphones are continuously used for 4 hours, there is a function which automatically turns the power off. Turn the power to headphones back on.
The headphones' optical reception range is too narrow.	The headphones' batteries are weak.	Replace the batteries with new ones.

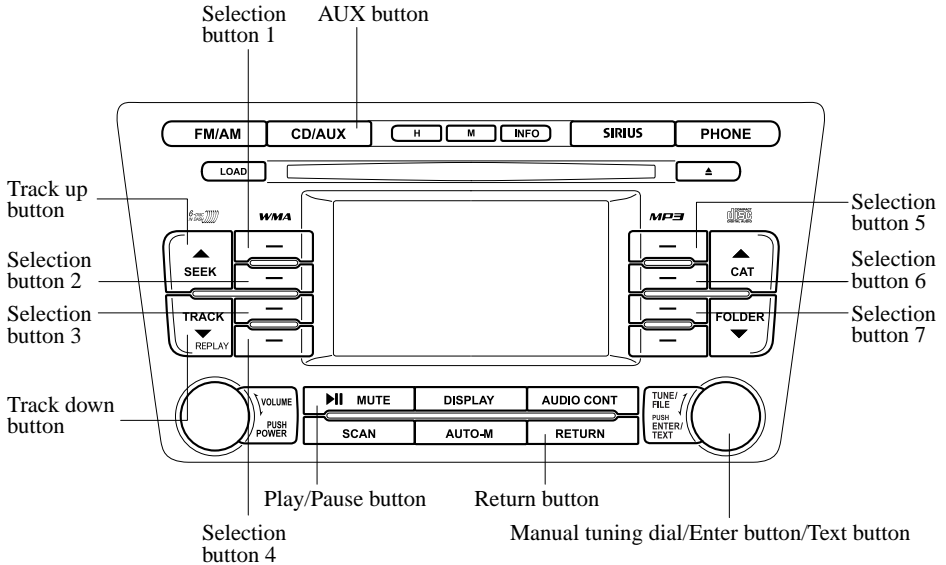
## Rear Entertainment System

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Symptom	Cause	Action
There is excessive noise in the headphone audio	The headphones' batteries are weak.	Replace the batteries with new ones.

# Bluetooth® Audio (Type B)

## Bluetooth® Audio (Type B)\*



### ▼ What is Bluetooth® Audio?

#### Bluetooth® audio outline

By programming portable audio devices equipped with the Bluetooth® communication function to the vehicle's Bluetooth® unit, you can listen to music or audio recorded on these audio devices from the vehicle's speakers. Bluetooth® audio devices do not need to be plugged into the auxiliary jack.

After programming, operate the audio system's control panel to play/stop the music or audio.

#### **CAUTION**

- Always program audio devices to the Bluetooth® audio system while the vehicle is stopped.

## Bluetooth® Audio (Type B)

➤ Because only specified Bluetooth® audio devices can be used, consult an Authorized Mazda Dealer when purchasing or changing devices. Bluetooth® audio devices which correspond to specified Bluetooth® versions and profiles can be Bluetooth®-connected to the vehicle's Bluetooth® unit. However, even among these devices are ones which cannot be Bluetooth®-connected or have limited functionality. Each device to be used with the vehicle's Bluetooth® unit needs to be checked individually for compatibility. Consult an Authorized Mazda Dealer concerning device compatibility.

➤ U.S.A.

Phone: 800-430-0153

Web: [www.MazdaUSA.com/bluetooth](http://www.MazdaUSA.com/bluetooth)

➤ Canada

Phone: 800-430-0153

Web: [www.mazdahandsfree.ca](http://www.mazdahandsfree.ca)

➤ Mexico

Center of Attention to Client (CAC)

Phone: 01-800-01-MAZDA

Web: [www.MazdaUSA.com/bluetooth](http://www.MazdaUSA.com/bluetooth)

### Applicable Bluetooth® specification

Ver. 2.0 or higher

### Audio profile

- A2DP (Advanced Audio Distribution Profile) Ver. 1.0
- AVRCP (Audio/Video Remote Control Profile) Ver. 1.0/1.3

A2DP is a profile which transmits only audio to the Bluetooth® unit. If your Bluetooth® audio device corresponds only to A2DP, but not AVRCP, you cannot operate it using the control panel of the vehicle's audio system. In this case, the Bluetooth® audio device can be operated by controlling the device itself, the same as when a portable audio system without the Bluetooth® communication function is connected to the AUX terminal.

Function	A2DP	A2DP:AVRCP	
		Ver. 1.0	Ver. 1.3
Playback	No	Yes	Yes
Pause	No	Yes	Yes
File (Track) up/down	No	Yes	Yes
Reverse	No	No	Yes
Fast-forward	No	No	Yes
Text display	No	No	Yes

Yes: Available

No: Not available

## Bluetooth® Audio (Type B)

### NOTE

- The system may not operate normally depending on the Bluetooth® audio device.
- To make sure that your Bluetooth® audio device is Ver. 1.0 or 1.3, refer to the Owner's Manual for the Bluetooth® audio device.
- It may not be possible to play a Bluetooth® audio device if it is placed in a location where transmission is compromised, such as inside a metal container or the trunk. Move the Bluetooth® audio device to a location where transmission is possible.
- The battery consumption of Bluetooth® audio devices is higher while Bluetooth® - connected.
- If a non-Bluetooth® device is to be used, a commercially-available Bluetooth® adapter is required. When playing an audio device with a Bluetooth® adapter installed, programming of the audio device may not be possible or audio may not be heard from the vehicle speakers if the connection of the adapter and the device is poor. If this happens, check whether the Bluetooth® adapter is properly connected.

### ▼ Bluetooth® Audio Preparation

#### **Bluetooth® audio device set-up**

Bluetooth® audio programming, changes, deletions, and display of programmed device information can be performed.

#### **Bluetooth® audio device programming**

Any Bluetooth® audio device must be programmed to the vehicle's Bluetooth® unit before it can be listened to over the vehicle's speakers.

A maximum of seven devices including Bluetooth® audio devices and hands-free mobile phones can be programmed to one vehicle.

### NOTE

- Always perform Bluetooth® audio device programming while the vehicle is stopped.
- Programming cannot be performed while the vehicle is moving. If you attempt to perform programming while the vehicle is moving, "Pairing prohibited" is displayed.
- A total of seven devices can be programmed to one vehicle. If you require an additional device to be programmed to a vehicle with seven devices already programmed, delete one of the programmed devices before programming the latest one.
- If a Bluetooth® device has already been programmed to the vehicle as a hands-free mobile phone, it does not need to be programmed again when using the device as a Bluetooth® audio device. Conversely, it does not need to be programmed again as a hands-free mobile phone if it has already been programmed as a Bluetooth® audio device.
- Look around to be sure other likely Bluetooth® audio devices are not in range when you start to program. If in doubt, move your car to another location. The transmission range of a Bluetooth® audio device is about 10 m (32 ft). Therefore, if there is another Bluetooth® audio device within a 10 m (32 ft) radius of the vehicle, the device may be identified and programmed instead.
- Device registration can also be done using voice recognition (page 6-138).

Concerning the operation of a Bluetooth® audio device itself, refer to its instruction manual.

Some Bluetooth® audio devices have PIN codes (four digits). Refer to the audio device's instruction manual because the programming procedure differs depending on whether it has a PIN code or not.

## Bluetooth® Audio (Type B)

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### Programming a Bluetooth® audio device which has a PIN code (four digits)

1. Press selection button 2 to display the Bluetooth® audio setting menu screen.
2. Press selection button 2 again to display the pairing program screen.
3. “Enter Pin:0000” and “Rotate/Press TUNE dial to change code. Select “OK” when complete.” are displayed for input of the PIN code.
4. Turn the manual tuning dial to select the specified number for the Bluetooth® audio device and press the enter button (ENTER) to input the number.

#### NOTE

*Some devices accept only a particular pairing code (Usually, “0000” or “1234”).*

*If pairing cannot be completed, refer to the owner's manual of your mobile device, and try those numbers if necessary.*

5. After inputting the four digits, turn the manual tuning dial and select “OK”, and then press the enter button (ENTER) to set the four digits and display “Pairing is in progress. Please start pairing procedure on your Bluetooth® device. Use the PIN “xxxx”.”.

#### NOTE

*Press the return button (RETURN) to return to the pairing program screen.*

6. Operate the Bluetooth® audio device and set it to the program mode while “Pairing is in progress. Please start pairing procedure on your Bluetooth® device. Use the PIN “xxxx”.” is displayed.

7. When the pairing programming is completed, a “♪” symbol and “Pairing complete” are displayed, and then the display returns to the normal display.

If an error occurs during program pairing, “Error” is displayed and the display returns to the pairing program screen.

#### NOTE

*Some Bluetooth® audio devices need a certain amount of time before the “♪” symbol is displayed.*

### Programming a Bluetooth® audio device which does not have a PIN code (four digits)

1. Press selection button 2 to display the Bluetooth® audio setting menu screen.
2. Press selection button 2 again to display the pairing program screen.
3. “Enter Pin:0000” and “Rotate/Press TUNE dial to change code. Select “OK” when complete.” are displayed for input of the PIN code.
4. Turn the manual tuning dial and select “OK”, and then press the enter button (ENTER) to set the four digits and display “Pairing is in progress. Please start pairing procedure on your Bluetooth® device. Use the PIN “0000”.”.

#### NOTE

*Press the return button (RETURN) to return to the pairing program screen.*



## Bluetooth® Audio (Type B)

5. Operate the Bluetooth® audio device and set it to the program mode while “Pairing is in progress. Please start pairing procedure on your Bluetooth® device. Use the PIN “0000”.” is displayed.
6. The Bluetooth® audio device will request input of a PIN code. Input “0000”.
7. When the pairing programming is completed, a “♫” symbol and “Pairing complete” are displayed, and then it returns to the normal display. If an error occurs during program pairing, “Error” is displayed and the display returns to the pairing program screen.

### NOTE

- If pairing cannot be completed, try “1234” instead. Refer to the owner's manual of your mobile device for the right PIN code.
- Some Bluetooth® audio devices need a certain amount of time before the “♫” symbol is displayed.

### Changing the link to a Bluetooth® audio device

If several devices have been programmed, the Bluetooth® unit links the device last programmed. If you would like to link a different programmed device, it is necessary to change the link. The order of device priority after the link has been changed is maintained even when the ignition is switched off.

### NOTE

- If a hands-free type mobile phone has been the most recently programmed device, the Bluetooth® unit links this device. If you would like to use a Bluetooth® audio type device which has been previously programmed to the Bluetooth® unit, the link must be changed to this device.
- If the device name cannot be displayed, “...” is added at the end of the part of the title which can be displayed.

### Changing the link to only a Bluetooth® audio device

1. Press selection button 2 to display the Bluetooth® audio setting menu screen.
2. Press selection button 3 to display the link change screen and the current pairing programming device name.
3. Press selection button 1, 2, 3, 4, 5, 6, or 7 to select the name of the device you would like to change. The “♫” symbol disappears, and the device name and “Connection is in progress.” are displayed.

### NOTE

Press the return button (RETURN) to return to the link change screen.

4. When the link change is completed, a “♫” symbol and “Link Changed” are displayed, and then it returns to the normal display. If an error occurs while trying to link a device, “Error” is displayed and the display returns to the link change screen.

## Bluetooth® Audio (Type B)

---

### NOTE

- Some Bluetooth® audio devices need a certain amount of time before the “🎵” symbol is displayed.
- If a link change error occurs, check the programming status of the Bluetooth® audio device and the location of the device in the vehicle (not in the trunk or a metal-type box), and then try the link operation again.

### Changing the link to a Bluetooth® Hands-Free and Bluetooth® audio device

1. Press selection button 2 to display the Bluetooth® audio setting menu screen.
2. Press selection button 3 to display the link change screen and the current pairing programming device name.
3. Press selection button 1, 2, 3, 4, 5, 6, or 7 to select the name of the device you would like to change.
4. The device name and “Please Select Device” are displayed.
5. Press selection button 3 to select “Audio”. The “🎵” symbol disappears, and then “Connection is in progress.” is displayed.

### NOTE

Press the return button (RETURN) to return to the link change screen.

6. When the link change is completed, a “🎵” symbol and “Link Changed” are displayed, and then it returns to the normal display.  
If an error occurs while trying to change the link, “Error” is displayed, and then it returns to the link change screen.

### NOTE

- Some Bluetooth® audio devices need a certain amount of time before the “🎵” symbol is displayed.
- If a link change error occurs, check the programming status of the Bluetooth® audio device and the location of the device in the vehicle (not in the trunk or a metal-type box), and then try the link operation again.

### Deleting the link to a Bluetooth® audio device

### NOTE

If the device name and Bluetooth® address cannot be displayed, “...” is added at the end to the part of the title which can be displayed.

1. Press selection button 2 to display the Bluetooth® audio setting menu screen.
2. Press selection button 4 to display the pair link deletion screen and the current pairing programming device name.
3. Press selection button 1, 2, 3, 4, 5, 6, or 7 to select the name of the device you would like to delete.
4. The link delete confirmation screen is displayed, and then “Delete select device?”, the device name, and the Bluetooth® address are displayed.
5. Press selection button 1 to delete the selected device.

### NOTE

Press the return button (RETURN) to return to the previous display.

## Bluetooth® Audio (Type B)

6. When the link deletion is completed, “Deleted” is displayed, and then it returns to the normal display.  
If an error occurs while trying to delete the link, “Error” is displayed, and then it returns to the link deletion screen.

### NOTE

*If a device is deleted while it is being linked, linking to other devices will not be possible.*

### Bluetooth® audio device information display

1. Press selection button 2 to display the Bluetooth® audio setting menu screen.
2. Press selection button 6 to display the device information display screen.  
If the device information is available, the device name and Bluetooth® address are displayed, and then it returns to the Bluetooth® audio setting menu screen.  
If the device information is not available,  
“Failed to obtain device information.” is displayed, and then it returns to the Bluetooth® audio setting menu screen.

### NOTE

*If the device name and Bluetooth® address cannot be displayed, “...” is added at the end to the part of the title which can be displayed.*

### ▼ How to Use the Bluetooth® Audio System

#### Switching to Bluetooth® audio mode

To listen to music or voice audio recorded to a Bluetooth® audio device, switch to the Bluetooth® audio mode to operate the audio device using the audio system control panel.

Any Bluetooth® audio device must be programmed to the vehicle's Bluetooth® unit before it can be used. (Refer to “Bluetooth® audio device programming”)

1. Switch the ignition to ACC or ON.
2. Turn on the Bluetooth® audio device's power.  
Make sure that the “♪” symbol is displayed in the audio unit screen.  
The symbol is not displayed if an unprogrammed Bluetooth® audio device is being used or the vehicle's Bluetooth® unit has a malfunction.

### NOTE

*Some Bluetooth® audio devices need a certain amount of time before the “♪” symbol is displayed.*

3. Press the AUX button (CD/AUX) to switch the Bluetooth® audio mode.
4. The audio recorded to the Bluetooth® audio device begins playback.

## Bluetooth® Audio (Type B)

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### **NOTE**

- If the Bluetooth® audio device does not begin playback, press the Play/Pause button (▶||).
- If the mode is switched from Bluetooth® audio mode to another mode (radio mode), audio playback from the Bluetooth® audio device stops.
- If a call is received on a hands-free mobile phone during playback from the Bluetooth® audio device, the playback is stopped. Playback from the Bluetooth® audio device resumes after the call ends.

### **Playback**

Press the AUX button (CD/AUX) to switch the Bluetooth® audio mode and start playback.

### **NOTE**

If the Bluetooth® audio device does not begin playback, press the Play/Pause button (▶||).

### **If the current device is lower than AVRCP Ver. 1.3:**

“Bluetooth-Audio” is displayed.

### **If the current device is AVRCP Ver. 1.3:**

“Bluetooth-Audio”, track number, elapsed time, album name, artist name, and song name are displayed.

### **NOTE**

- If the entire title cannot be displayed, “...” is added at the end to the part of the title which can be displayed.
- If title information is not available, “NO TITLE” is displayed.
- If there are any undisplayable characters in the title, “-----” is displayed.

### **Pause**

Press the Play/Pause button (▶||). Press the button again to resume playback.

### **File (track) search**

#### **File (track) up**

Press the track up button (▲) or turn the file dial clockwise.

#### **File (track) down**

Press the track down button (▼) or turn the file dial counterclockwise.

### **Fast-forward/Reverse (only AVRCP Ver. 1.3)**

#### **Fast-forward**

Press and hold the track up button (▲).

#### **Reverse**

Press and hold the track down button (▼).

### **Display scroll**

If each title cannot be fully displayed at one time, press the text button (TEXT) to display the rest of the characters. If the last character of the title is displayed, press the text button (TEXT) to return the beginning of the title.

# Bluetooth® Hands-Free (Voice Recognition)

## Bluetooth® Hands-Free \*

### ▼ What is Bluetooth® Hands-Free?

#### Bluetooth® Hands-Free Outline

By connecting a Bluetooth® equipped device (Mobile phone) to the hands-free unit equipped on the vehicle, making and receiving calls is possible using the talk button, pick-up button and hang-up button located on the steering wheel, and saying the voice commands.

### **! WARNING**

**Perform phonebook registration related operations while the vehicle is parked:**

*Performing phonebook registration while driving the vehicle could be a distraction to your driving and result in an accident. In addition, a mistake in performing the phonebook operation could result in the loss of important data.*

#### Bluetooth® equipped device (Mobile phone)

A Bluetooth® equipped device (Mobile phone) communicates with the hands-free unit equipped on the vehicle using radio transmission (Bluetooth®).

For example, if the device (Mobile phone) is placed in a coat pocket, the phone calls can be made through your mobile service without taking out and handling the device (Mobile phone).

### **! CAUTION**

*The types of devices (Mobile phone) which can be connected to the hands-free unit are limited. Therefore, before purchasing or changing your device (Mobile phone) model, consult Mazda Bluetooth® Hands-Free Customer Service or visit [www.MazdaUSA.com/bluetooth](http://www.MazdaUSA.com/bluetooth) for a complete list of compatible phones. Devices (Mobile phone) which can be connected to the hands-free system need to be compliant with Bluetooth® specifications and the appropriate profile. However, even among these Bluetooth® devices (Mobile phone) are some which will not connect with your Mazda or will have limited function. Therefore, consult Mazda Bluetooth® Hands-Free Customer Service for information regarding device (Mobile phone) compatibility:*

- U.S.A.  
Phone: 800-430-0153  
Web: [www.MazdaUSA.com/bluetooth](http://www.MazdaUSA.com/bluetooth)
- Canada  
Phone: 800-430-0153  
Web: [www.mazdahandsfree.ca](http://www.mazdahandsfree.ca)
- Mexico  
Center of Attention to Client (CAC)  
Phone: 01-800-01-MAZDA  
Web: [www.MazdaUSA.com/bluetooth](http://www.MazdaUSA.com/bluetooth)

#### **Applicable Bluetooth® specification**

Ver. 2.0 or higher

#### **Response profile**

- HFP (Hands Free Profile) Ver. 1.5
- DUN (Dial-up Networking Profile) Ver. 1.1

## Bluetooth® Hands-Free (Voice Recognition)

### (Type B/Navigation system)

- PBAP (Phone Book Access Profile) Ver. 1.0
- A2DP (Advanced Audio Distribution Profile) Ver. 1.0
- OPP (Object Push Profile) Ver. 1.1

### NOTE

- *The Bluetooth® Hands-Free system is operable several seconds after the ignition is switched to ACC or ON (requires less than 15 seconds).*
- *If the ignition is switched off during a hands-free call, the line is transferred to the device (Mobile phone) automatically.*
- *If the device (Mobile phone) is in a location where radio reception is difficult such as a metal container or in the trunk, the call may not be connected using Bluetooth®. If communication is not possible, change the location of the device (Mobile phone).*

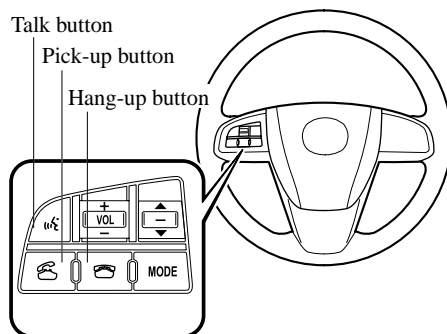
### ▼ Component Parts

Bluetooth® Hands-Free consists of the following items:

- Talk button
- Pick-up button
- Hang-up button
- Information display (Type A/Navigation system)
- Microphone
- Audio unit/Navigation system

### Talk button, Pick-Up button and Hang-Up button

Basic functions of Bluetooth® Hands-Free can be used for such things as making calls or hanging up using the talk button, pick-up button and hang-up button on the steering wheel.



### Talk button operations

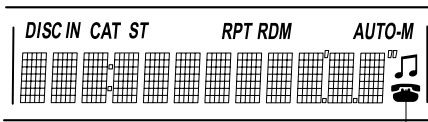
A short press or a long press of the talk button is used to operate the system as follows:

- Short press (Press the button less than 0.7 sec.)
- Long press (Press the button 0.7 sec. or more.)

# Bluetooth® Hands-Free (Voice Recognition)

## Information display (Type A/Navigation system)

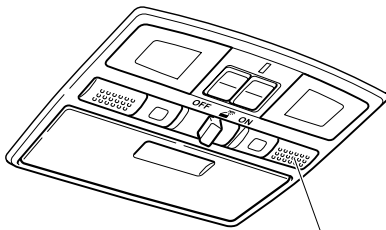
When available, the information display shows telephone numbers, Bluetooth® Hands-Free messages, and operation status.



Bluetooth® phone connected

## Microphone

The microphone is used for speaking voice commands or exchanging conversation.



Microphone

## Audio unit/Navigation system

The audio unit or navigation system is used for adjusting the volume.

## ▼ Voice

To prevent the deterioration in voice recognition rate and voice quality, the following points must be observed:

- It is not necessary to face the microphone or approach it. Speak the voice commands while maintaining a safe driving position.
- Close the windows and/or the moonroof to reduce loud noises from outside the vehicle, or turn down the airflow of the climate control system while Bluetooth® Hands-Free is being used. Voice recognition may not function correctly or voice quality may deteriorate under the following conditions.
  - A passenger is speaking.
  - Driving with the window and/or the moonroof open.
  - Driving on bumpy roads.
  - Noise outside of the vehicle is loud. (Construction sites, inside tunnels, excess oncoming traffic, or heavy rain.)
  - Operation noise from turn signals, wipers, or the horn is heard.
  - A/C airflow is strong or wind is blowing on the microphone.
  - There is noise coming from cargo loaded in the vehicle.
- Voice commands may not be recognized depending on the voice. If the voice commands are not recognized correctly, repeat the commands in a louder voice, at a natural pace, as if speaking to another person.
- Dialects or different wording other than hands-free prompts cannot be recognized by voice recognition. Speak in the wording specified by the voice commands.

## Bluetooth® Hands-Free (Voice Recognition)

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### **NOTE**

If the voice recognition performance is not satisfactory, refer to “Voice Recognition Learning Function (Speaker Enrollment)” (page 6-159).

Please be aware that the voice recognition may still make an error despite following the above points.

### **▼ Function Restrictions While Using Bluetooth® Hands-Free**

Some functions are limited while Bluetooth® Hands-Free is being used.

They include:

- Beep sound and voice guidance related to the audio unit and navigation system are not heard.
- Beep sound related to the A/C operation is not heard.
- The navigation system's voice recognition command does not function.

### **▼ How to Use This Section**

Descriptions in the text are as follows:

**Say:** Voice commands to be spoken by you.

**Prompt:** Voice guidance output from the speaker.

### **NOTE**

Say voice commands after the beep sound [Beep] is heard.

Example)

**Say:** [Beep] “Dial”

**Prompt:** “Number, please”

**Say:** [Beep] “XXXXXXXXXXXX (Ex. “555-1234”) (Telephone number)”

### **Bluetooth® Hands-Free Activation Method**

Press the pick-up button (with/without navigation system) or talk button with a short press (without navigation system) or a long press (with navigation system).

### **NOTE**

For vehicles with the navigation system, you can also press the talk button with a short press and say: [Beep] “Telephone” or “Phone”.

The hands-free system is activated. Functions of the hands-free telephone, such as making and receiving calls, can be used after the activation. (For details on the telephone functions, refer to “Basic Bluetooth® Hands-Free Operation” or “Convenient Use of the Hands-Free System”.)

### **NOTE**

For vehicles with a navigation system, the system operates by speaking the voice recognition command of the navigation system after pressing the talk button with a short press. For voice recognition details with the navigation system, refer to the separate “NAVIGATION SYSTEM Owner's Manual”.

### **Tutorial**

The tutorial explains how to use Bluetooth® Hands-Free.

To activate the tutorial, do the following:

1. Press the pick-up button (with/without navigation system) or talk button with a short press (without navigation system) or a long press (with navigation system).



# Bluetooth® Hands-Free (Voice Recognition)

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## **NOTE**

*For vehicles with the navigation system, you can also press the talk button with a short press and say: [Beep] “Telephone” or “Phone”.*

2. **Say:** [Beep] “Tutorial”
3. Follow the prompts to receive the appropriate voice guidance instructions.

## **▼ Useful Commands at Anytime, Convenient Operations**

### **Help function use**

The help function informs the user of all the available voice commands under the current conditions.

1. Press the talk button with a short press.
2. **Say:** [Beep] “Help”
3. Follow the prompts to receive the appropriate voice guidance instructions.

### **Cancel**

The Bluetooth® Hands-Free system transitions to standby status if the following operation is performed while the system is activating.

Press the hang-up button, or the talk button with a long press.

### **Returning to previous operation (Type B/Navigation system)**

This command is for returning to the previous operation while in the voice recognition mode.

**Say:** [Beep] “Go Back”

### **Voice guidance interrupt operation**

Voice guidance can be skipped by pressing the talk button with a short press while it is being heard. A new voice input command can then be spoken by the user.

### **Voice recognition mode cancel**

If you want to cancel the voice recognition mode during a call, the voice recognition mode can be canceled without having to end the call.

Press the talk button with a long press.

## Bluetooth® Hands-Free (Voice Recognition)

### Basic Bluetooth® Hands-Free Operation

#### ▼ Bluetooth® Hands-Free Preparation

##### Language setting

The available languages are English, Spanish, and Canadian French. If the language setting is changed, all of the voice guidance and voice input commands are done in the selected language.

##### **NOTE**

- *If the language setting is changed, device registration is maintained. Phonebook records are not cleared, but each language has a separate phonebook. Therefore, entries created in one language will need to be re-entered in the phonebook of the new language.*
- *Do these steps before you start driving. These less used functions are too distracting to undertake while driving until you are fully familiar with the system.*

##### **Method 1**

1. Press the pick-up button (with/without navigation system) or talk button with a short press (without navigation system) or a long press (with navigation system).

##### **NOTE**

*For vehicles with the navigation system, you can also press the talk button with a short press and say: [Beep] “Telephone” or “Phone”.*

2. **Say:** [Beep] “Setup”

3. **(Type A)**

**Prompt:** “Select one of the following: Pairing options, confirmation prompts, select phone, language or passcode.”

##### **(Type B/Navigation system)**

**Prompt:** “Select one of the following: Pairing options, confirmation prompts, language, passcode, select phone or select music player.”

4. **Say:** [Beep] “Language”

5. **Prompt:** “Select a language: English, French, or Spanish.”

6. **Say:** [Beep] “French” (Speak the desired language: “English”, “French” or “Spanish”)

##### **NOTE**

*Other language settings can also be made while in the current setting by saying the name of the language in the native pronunciation.*

7. **Prompt:** “French (Desired language) selected. Is this correct?”

8. **Say:** [Beep] “Yes”

9. **Prompt:** “Please wait. Switching to French phonebook. French selected.” (Spoken in the newly selected language).

##### **Method 2**

1. Press the pick-up button (with/without navigation system) or talk button with a short press (without navigation system) or a long press (with navigation system).

##### **NOTE**

*For vehicles with the navigation system, you can also press the talk button with a short press and say: [Beep] “Telephone” or “Phone”.*

# Bluetooth® Hands-Free (Voice Recognition)

- Say:** [Beep] “French” (Say the desired language: “English”, “French”, or “Spanish”.) (Change the desired language by saying the language name.)

## **NOTE**

*Other language settings can also be made while in the current setting by saying the name of the language in the native pronunciation.*

- Prompt:** “Would you like to change the language to French (Desired language)?”
- Say:** [Beep] “Yes”
- Prompt:** “Please wait. Switching to French phonebook. French selected.” (Spoken in the newly selected language).

## **Pairing code setting (Type B/Navigation system)**

The 4-digit pairing code setting for registration of your cell phone (pairing) can be set beforehand.

## **NOTE**

*The initial setting value is “0000”.*

- Press the pick-up button (with/without navigation system) or talk button with a short press (without navigation system) or a long press (with navigation system).

## **NOTE**

*For vehicles with the navigation system, you can also press the talk button with a short press and say: [Beep] “Telephone” or “Phone”.*

- Say:** [Beep] “Setup”

- Prompt:** “Select one of the following: Pairing options, confirmation prompts, language, passcode, select phone or select music player.”
- Say:** [Beep] “Pairing options”
- Prompt:** “Available options are: Pair, Edit, Delete, List, or Set Pairing Code.”
- Say:** [Beep] “Set pairing code”
- Prompt:** “Your current pairing code is XXXX. Do you want to change it to a different pairing code?”
- Say:** [Beep] “Yes”
- Prompt:** “Please say a 4-digit pairing code.”
- Say:** [Beep] “YYYY”
- Prompt:** “YYYY is this correct?”
- Say:** [Beep] “Yes” or “No”
- If “Yes”, go to Step 14. If “No”, the procedure returns to Step 9.
- Prompt:** “Your new pairing code is YYYY. Use this pairing code when pairing devices to the Hands free system. Do you want to pair a device now?”
- Say:** [Beep] “Yes” or “No”
- If “Yes”, the system switches to the device registration mode. If “No”, the system returns to standby status.

## **Device programming (Pairing)**

To use Bluetooth® Hands-Free, the device equipped with Bluetooth® has to be programmed to the hands-free unit using the following procedure.

## Bluetooth® Hands-Free (Voice Recognition)

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### (Type A)

Up to seven Bluetooth® equipped mobile telephones can be programmed to the vehicle.

### (Type B/Navigation system)

A maximum of seven devices including hands-free mobile phones and Bluetooth® audio devices can be programmed to one vehicle.

#### NOTE

- *A device can be programmed only when the vehicle is parked. If the vehicle starts to move, the pairing procedure will end. Programming is dangerous while driving - pair up your device before you start driving. Park the car in a safe place before programming.*
- **(Type B/Navigation system)**  
*If a Bluetooth® device has already been programmed to the vehicle as a Bluetooth® audio device, it does not need to be programmed again when using the device as a hands-free mobile phone. Conversely, it does not need to be programmed again as a Bluetooth® audio device if it has already been programmed as a hands-free mobile phone.*
- *Since the communication range of a Bluetooth® equipped device is about 10 meters (32 ft), if a device is placed within a 10-meter (32 ft) radius of the vehicle, it may be detected/programmed unintentionally while another device is being programmed.*

### (Type A)

1. Activate the Bluetooth® application of the device.

#### NOTE

*For the operation of the device, refer to its instruction manual.*

2. Press the pick-up button or talk button with a short press.
3. **Say:** [Beep] “Setup”
4. **Prompt:** “Select one of the following: Pairing options, confirmation prompts, select phone, language or passcode.”
5. **Say:** [Beep] “Pairing options”
6. **Prompt:** “Select one of the following: Pair, edit, delete, or list.”
7. **Say:** [Beep] “Pair”
8. **Prompt:** “Please say a 4-digit pairing code.”
9. **Say:** [Beep] “XXXX” (Speak an arbitrary 4-digit pairing code. This can be any combination of 4 numbers.)

#### NOTE

- *Some devices accept only a particular pairing code (Usually, “0000” or “1234”). If pairing cannot be completed, refer to the owner's manual of your mobile device, and try those numbers if necessary.*
  - *Record the code as it will be used to program your device in Step 16.*
10. **Prompt:** “Pairing code XXXX (4-digit number). Is this correct?”
  11. **Say:** [Beep] “Yes” or “No”
  12. If “Yes”, go to Step 13.  
If “No”, the procedure returns to Step 8.
  13. **Prompt:** “Start pairing procedure on the device. See the device manual for instructions.”
  14. Using the device, perform a search for the Bluetooth® device (Peripheral device).

## Bluetooth® Hands-Free (Voice Recognition)

### NOTE

For the operation of the device, refer to its instruction manual.

15. Select “Mazda” from the device list searched by the device.
16. Input the 4-digit pairing code set in Step 9 to the device.
17. **Prompt:** “Please say the name of the device after the beep.”
18. **Say:** [Beep] “XXXX - - -” (Speak a “device tag”, an arbitrary name for the device.)  
Example: “Stan's device.”

### NOTE

Speak a programmed “device tag” within 10 seconds.

If more than two devices are to be programmed, they cannot be programmed with the same or similar “device tag”.

19. **Prompt:** “Adding XXXXXXX - - - (Ex. “Stan's device”) (Device tag). Is this correct?”
20. **Say:** [Beep] “Yes”
21. **Prompt:** “Pairing complete”

### (Type B/Navigation system)

1. Activate the Bluetooth® application of the device.

### NOTE

For the operation of the device, refer to its instruction manual.

2. Press the pick-up button (with/without navigation system) or talk button with a short press (without navigation system) or a long press (with navigation system).

### NOTE

For vehicles with the navigation system, you can also press the talk button with a short press and say: [Beep] “Telephone” or “Phone”.

3. **Say:** [Beep] “Setup”
4. **Prompt:** “Select one of the following: Pairing options, confirmation prompts, language, passcode, select phone or select music player.”
5. **Say:** [Beep] “Pairing options”
6. **Prompt:** “Available options are: Pair, Edit, Delete, List, or Set Pairing Code.”
7. **Say:** [Beep] “Pair”
8. **Prompt:** “Start the pairing process on your Bluetooth® device. Your pairing code is 0000 (XXXX). Input this code on your Bluetooth® device when prompted on the device. See device manual for instructions.”
9. Using the device, perform a search for the Bluetooth® device (Peripheral device).

### NOTE

For the operation of the device, refer to its instruction manual.

10. Select “Mazda” from the device list searched by the device.
11. Input the 4-digit pairing code to the device.
12. **Prompt:** “Please say the name of the device after the beep.”
13. **Say:** [Beep] “XXXX - - -” (Speak a “device tag”, an arbitrary name for the device.)  
Example: “Stan's device.”

## Bluetooth® Hands-Free (Voice Recognition)

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### NOTE

Speak a programmed “device tag” within 10 seconds.

If more than two devices are to be programmed, they cannot be programmed with the same or similar “device tag”.

14. **Prompt:** “XXXXXX - - - (Ex. “Stan's device”) (Device tag). Is this correct?”
15. **Say:** [Beep] “Yes”
16. **Prompt:** “Pairing complete”

After a device is registered, the system automatically identifies the device. By activating Bluetooth® Hands-Free again, or by activating Bluetooth® Hands-Free first after switching the ignition from OFF to ACC, the system reads out a voice guidance, “XXXXXX - - - (Ex. “Stan's device”) (Device tag) is connected”.

### NOTE

- **(Type B/Navigation system)**

Device registration can also be done by operating the audio unit or panel buttons on the navigation unit.

- **(Audio system)**

Refer to Bluetooth® Audio Preparation on page 6-127.

- **(Navigation system)**

Refer to the separate manual “NAVIGATION SYSTEM Owner's Manual”

- Depending on the device, the registration status may be lost after a certain period of time. If this occurs, repeat the entire process from Step 1.

### ▼ Making a Call Using a Telephone Number

#### NOTE

Practice this while parked until you are confident you can do it while driving in a non-taxing road situation. If you are not completely comfortable, make all calls from a safe parking position, and move out only when fully under control and you can devote your eyes and mind to driving.

#### (Type A)

1. Press the pick-up button or talk button with a short press.
2. **Say:** [Beep] “Dial”
3. **Prompt:** “Number, please”
4. **Say:** [Beep] “XXXXXXXXXXXX (Ex. “555-1234”) (Telephone number)”
5. **Prompt:** “Dialing XXXXXXXXXXXX (Ex. “555-1234”) (Telephone number) is this correct?”
6. **Say:** [Beep] “Yes” or “No”.
7. When “Yes” is spoken, the procedure proceeds to Step 8. When “No” is spoken, the procedure returns to Step 3.
8. **Prompt:** “Dialing”

#### (Type B/Navigation system)

1. Press the pick-up button (with/without navigation system) or talk button with a short press (without navigation system) or a long press (with navigation system).

#### NOTE

For vehicles with the navigation system, you can also press the talk button with a short press and say: [Beep] “Telephone” or “Phone”.

# Bluetooth® Hands-Free (Voice Recognition)

2. **Say:** [Beep] “Dial”
3. **Prompt:** “Number, please”
4. **Say:** [Beep] “XXXXXXXXXXXXX  
(Telephone number)”
5. **Prompt:** “XXXXXXXXXXXXX.  
(Telephone number) After the beep,  
continue to add numbers, or say Go-  
Back to re-enter the last entered  
numbers, or press the Pick-Up button  
to execute dialing.”
6. **(Dialing)**  
Press the pick-up button or say “Dial”,  
then go to Step 7.  
**(Adding/inputting telephone  
number)**  
Say, “XXXX” (desired telephone  
number), then go to Step 5.  
**(Telephone number correction)**  
Say, “Go Back”. The prompt replies,  
“Go Back. The last entered numbers  
have been removed.”. Then go back to  
Step 3.
7. **Prompt:** “Dialing”

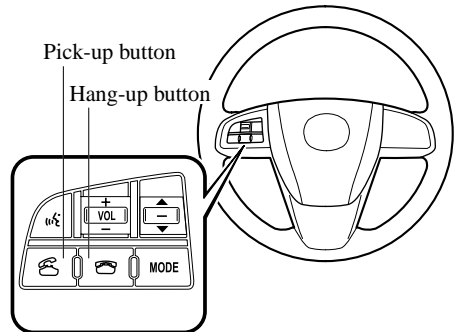
## NOTE

The “Dial” command and a telephone number can be combined.

Ex. In Step 2, say, “Dial 123-4567”, then, Steps 3 and 4 can be skipped.

## ▼ Receiving an Incoming Call

1. **Prompt:** “Incoming call, press the  
pick-up button to answer”.
2. To accept the call, press the pick-up  
button.  
To reject the call, press the hang-up  
button.



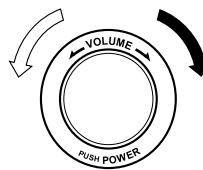
## ▼ Hanging Up a Call

Press the hang-up button during the call.  
A beep sound will confirm that call is  
ended.

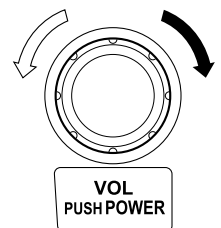
## ▼ Volume Adjustment

The power/volume dial of the audio unit  
or the navigation system is used to adjust  
the volume. Turn the dial to the right to  
increase volume, to the left to decrease it.

### Audio unit



### Navigation system



## Bluetooth® Hands-Free (Voice Recognition)

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### **NOTE**

- The volume can also be adjusted using the volume button on the steering wheel.
- The music volume of the audio unit and the navigation system cannot be adjusted while Bluetooth® Hands-Free is being used.

## Convenient Use of the Hands-Free System

### ▼ Phonebook Usage

#### **Phonebook registration**

Phone numbers can be registered to the Bluetooth® Hands-Free phonebook.

### **NOTE**

*Do this function only when parked. It is too distracting to attempt while driving and you may make too many errors to be effective.*

### **(Type A)**

1. Press the pick-up button or talk button with a short press.
2. **Say:** [Beep] “Phonebook”
3. **Prompt:** “Select one of the following: New entry, edit, list names, delete, erase all or import contact.”
4. **Say:** [Beep] “New entry”
5. **Prompt:** “Name please.”
6. **Say:** [Beep] “XXXXXX... (Ex. “Mary's phone”)” (Say a voice tag for the name registered.)
7. **Prompt:** “Adding XXXXXX... (Ex. “Mary's phone”) (Registered voice tag). Is this correct?”
8. **Say:** [Beep] “Yes”
9. **Prompt:** “Home, Work, Mobile, or Other?”
10. **Say:** [Beep] “Mobile” (Say “Home”, “Work”, “Mobile”, or “Other”, for the desired location to be registered.)
11. **Prompt:** “Mobile (Location to be registered). Is this correct?”



## Bluetooth® Hands-Free (Voice Recognition)

12. **Say:** [Beep] “Yes”
  13. **Prompt:** “Number, please.”
  14. **Say:** [Beep] “XXXXXXXXXXXXX  
(Ex. “555-1234”)” (Say the phone number to be registered.)
  15. **Prompt:** “XXXXXXXXXXXXX (Ex. “555-1234”)” (Phone number registration). Is this correct?”
  16. **Say:** [Beep] “Yes”
  17. **Prompt:** “Number saved. Would you like to add another number for this entry?”
  18. **Say:** [Beep] “Yes” or “No”.
  19. If “Yes”, an additional phone number registration can be made for the same entry.  
If “No”, the procedure proceeds to Step 20.
  20. **Prompt:** “Returning to main menu.”
- (Type B/Navigation system)**
1. Press the pick-up button (with/without navigation system) or talk button with a short press (without navigation system) or a long press (with navigation system).
- NOTE**  
*For vehicles with the navigation system, you can also press the talk button with a short press and say: [Beep] “Telephone” or “Phone”.*
2. **Say:** [Beep] “Phonebook”
  3. **Prompt:** “Select one of the following:  
New entry, edit, list names, delete,  
erase all or import contact.”
  4. **Say:** [Beep] “New entry”
  5. **Prompt:** “Name please.”
6. **Say:** [Beep] “XXXXX... (Ex. “Mary’s phone”)” (Say a voice tag for the name registered.)
  7. **Prompt:** “Adding XXXXX... (Ex. “Mary’s phone”)” (Registered voice tag). Is this correct?”
  8. **Say:** [Beep] “Yes”
  9. **Prompt:** “Home, Work, Mobile, or Other?”
  10. **Say:** [Beep] “Mobile” (Say “Home”, “Work”, “Mobile”, or “Other”, for the desired location to be registered.)
  11. **Prompt:** “Mobile (Location to be registered). Is this correct?”
  12. **Say:** [Beep] “Yes”
  13. **Prompt:** “Number, please.”
  14. **Say:** [Beep] “XXXXXXXXXXXXX”  
(Say the phone number to be registered.)
  15. **Prompt:** “XXXXXXXXXXXXX  
(Phone number registration). After the beep, continue to add numbers, or say Go-Back to re-enter the last entered numbers, or press the Pick-Up button to save the number.”
  16. **(Registration)**  
Press the pick-up button or say “Enter”, then go to Step 17.  
**(Adding/inputting telephone number)**  
Say, “XXXX” (desired telephone number), then go to Step 15.  
**(Telephone number correction)**  
Say, “Go Back”. The prompt replies, “Go Back. The last entered numbers have been removed.”. Then go back to Step 13.

## Bluetooth® Hands-Free (Voice Recognition)

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17. **Prompt:** “Number saved. Would you like to add another number for this entry?”
18. **Say:** [Beep] “Yes” or “No”.
19. If “Yes”, an additional phone number registration can be made for the same entry.  
If “No”, the system returns to standby status.

### **Import contact**

Phonebook data from your device (Mobile phone) can be sent and registered to your Bluetooth® Hands-Free phonebook using Bluetooth®.

1. Press the pick-up button (with/without navigation system) or talk button with a short press (without navigation system) or a long press (with navigation system).

### **NOTE**

*For vehicles with the navigation system, you can also press the talk button with a short press and say: [Beep] “Telephone” or “Phone”.*

2. **Say:** [Beep] “Phonebook”
3. **Prompt:** “Select one of the following: New entry, edit, list names, delete, erase all or import contact.”
4. **Say:** [Beep] “Import contact”

### 5. (Type A)

**Prompt:** “Ready to receive a contact from the phone. Only a home, a work, and a mobile number can be imported.”

### (Type B/Navigation system)

**Prompt:** “The hands free System is ready to receive a contact from a phone. Only a home, a work, and a mobile number can be imported. This process requires operation of a mobile phone. Refer to the phone's manual for more information.”

### 6. Device (Mobile phone) operation:

Select one entry from the phonebook and send it using Bluetooth®.

### 7. **Prompt:** “X (Number of locations which include data) numbers have been imported. What name would you like to use for these numbers?”

### 8. **Say:** [Beep] “XXXXX... (Ex. “Mary's phone”)” (Say a voice tag for the name registered.)

### 9. **Prompt:** “Adding XXXXX... (Ex. “Mary's phone”) (Voice tag). Is this correct?”

### 10. **Say:** [Beep] “Yes”

### 11. **Prompt:** “Number saved. Would you like to import another contact?”

### 12. **Say:** [Beep] “Yes” or “No”

13. If “Yes”, the procedure proceeds to Step 5.  
If “No”, the system returns to standby status.

### **Making calls using the phonebook**

Telephone calls can be made by saying the name of a person (voice tag) whose phone number has been registered in Bluetooth® Hands-Free in advance.

# Bluetooth® Hands-Free (Voice Recognition)

For the phonebook setting method, refer to (page 6-150).

1. Press the pick-up button (with/without navigation system) or talk button with a short press (without navigation system) or a long press (with navigation system).

## NOTE

For vehicles with the navigation system, you can also press the talk button with a short press and say: [Beep] "Telephone" or "Phone".

2. **Say:** [Beep] "Call"
3. **Prompt:** "Name please."
4. **Say:** [Beep] "XXXXX..." (Ex. "John's phone")" (Say a voice tag registered in the phonebook.)
5. **Prompt:** "Calling XXXXX... (Ex. "John's phone") XXXX (Ex. "at home"). Is this correct?" (Voice tag and phone number location registered in phonebook).
6. **Say:** [Beep] "Yes"
7. **Prompt:** "Dialing"

## NOTE

The "Call" command and the voice tag can be combined.

Ex. In Step 2, say, "Call John's phone", then, Steps 3 and 4 can be skipped.

## ▼ Redialing Function

Redialing the number of the person previously dialed using the phone is possible.

1. Press the pick-up button (with/without navigation system) or talk button with a short press (without navigation system) or a long press (with navigation system).

## NOTE

For vehicles with the navigation system, you can also press the talk button with a short press and say: [Beep] "Telephone" or "Phone".

2. **Say:** [Beep] "Redial"
3. **Prompt:** "Dialing"

## ▼ Emergency Calls

A call can be made to the emergency phone number (911: U.S.A/Canada, 066: Mexico) using the voice input command. It may not function properly in some areas in Mexico.

1. Press the pick-up button (with/without navigation system) or talk button with a short press (without navigation system) or a long press (with navigation system).

## NOTE

For vehicles with the navigation system, you can also press the talk button with a short press and say: [Beep] "Telephone" or "Phone".

2. **Say:** [Beep] "Emergency"
3. - USA/Canada vehicles - **Prompt:** "Dialing "911", is this correct?"  
- Mexico vehicles - **Prompt:** "Dialing "066", is this correct?"

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4. **Say:** [Beep] “Yes”

5. **Prompt:** “Dialing”

### ▼ Refusing an Incoming Call

For incoming call refusal, refer to “Receiving an incoming call” (page 6-143).

### ▼ Mute

The microphone can be muted during a call.

1. Press the talk button with a short press.

2. **Say:** [Beep] “Mute”

3. **Prompt:** “Microphone muted”

### Canceling mute

1. Press the talk button with a short press.

2. **Say:** [Beep] “Mute off”

3. **Prompt:** “Microphone unmuted”

### ▼ Transferring a Call

#### Transferring a call from Hands-Free to a device (Mobile phone)

Communication between the hands-free unit and a device (Mobile phone) is canceled, and the line can be switched to a standard call using a device (Mobile phone).

1. Press the talk button with a short press.

2. **Say:** [Beep] “Transfer call”

3. **Prompt:** “Transferred call to phone”

#### Transferring a call from a device (Mobile phone) to Hands-Free

Communication between devices (Mobile phone) can be switched to Bluetooth® Hands-Free.

1. Press the talk button with a short press.

2. **Say:** [Beep] “Transfer call”

3. **Prompt:** “Transferred call to Hands Free system”

### ▼ Multi-Call Functions

#### Call waiting

A call can be interrupted to receive an incoming call from a third party.

#### Call interrupt

A call can be switched to a new incoming call.

#### **Method 1**

1. Press the pick-up button.

2. **Prompt:** “Swapping calls.”

#### **Method 2**

1. Press the talk button with a short press.

2. **Say:** [Beep] “Swap calls”

3. **Prompt:** “Swapping calls”

#### **NOTE**

- *To refuse an incoming call, press the hang-up button.*
- *After receiving a new incoming call, the previous call is placed on hold.*

#### Switching calls

Switching back to the previous call can also be done.

# Bluetooth® Hands-Free (Voice Recognition)

## Method 1

1. Press the pick-up button.
2. **Prompt:** “Swapping calls.”

## Method 2

1. Press the talk button with a short press.
2. **Say:** [Beep] “Swap calls”
3. **Prompt:** “Swapping calls”

## Three-way call function

1. Press the talk button with a short press.
2. **Say:** [Beep] “Join calls”
3. **Prompt:** “Joining calls”

## Making a call using a telephone number

### (Type A)

1. Press the talk button with a short press.
2. **Say:** [Beep] “Dial”
3. **Prompt:** “Number, please”
4. **Say:** [Beep] “XXXXXXXXXXXX (Ex. “555-1234”) (Telephone number)”
5. **Prompt:** “Dialing XXXXXXXXXXXX (Ex. “555-1234”) (Telephone number) is this correct?”
6. **Say:** [Beep] “Yes” or “No”.
7. When “Yes” is spoken, the procedure proceeds to Step 8.  
When “No” is spoken, the procedure returns to Step 3.
8. **Prompt:** “Dialing”

### (Type B/Navigation system)

1. Press the pick-up button (with/without navigation system) or talk button with a short press (without navigation system) or a long press (with navigation system).
  2. **Say:** [Beep] “Dial”
  3. **Prompt:** “Number, please”
  4. **Say:** [Beep] “XXXXXXXXXXXX (Telephone number)”
  5. **Prompt:** “XXXXXXXXXXXX. (Telephone number) After the beep, continue to add numbers, or say Go-Back to re-enter the last entered numbers, or press the Pick-Up button to execute dialing.”
  6. **(Dialing)**  
Press the pick-up button or say “Dial”, then go to Step 7.  
**(Adding/inputting telephone number)**  
Say, “XXXX” (desired telephone number), then go to Step 5.  
**(Telephone number correction)**  
Say, “Go Back”. The prompt replies, “Go Back. The last entered numbers have been removed.”. Then go back to Step 3.
  7. **Prompt:** “Dialing”
- ## Making calls using the phonebook
1. Press the talk button with a short press.
  2. **Say:** [Beep] “Call”
  3. **Prompt:** “Name please.”
  4. **Say:** [Beep] “XXXXX... (Ex. “John's phone”)” (Say a voice tag registered in the phonebook.)

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5. **Prompt:** “Calling XXXXX... (Ex. “John’s phone”) XXXX (Ex. “at home”). Is this correct?” (Voice tag and phone number location registered in phonebook).

6. **Say:** [Beep] “Yes”

7. **Prompt:** “Dialing”

### **Redialing function**

1. Press the talk button with a short press.

2. **Say:** [Beep] “Redial”

3. **Prompt:** “Dialing”

### **Ending the current call**

Press the hang-up button during the call.

## ▼ Phonebook Settings

### **Editing phonebook**

The data registered to the Bluetooth® Hands-Free phonebook can be edited.

#### ***NOTE***

*Do this function only when parked. It is too distracting to attempt while driving and you may make too many errors to be effective.*

1. Press the pick-up button (with/without navigation system) or talk button with a short press (without navigation system) or a long press (with navigation system).

#### ***NOTE***

*For vehicles with the navigation system, you can also press the talk button with a short press and say: [Beep] “Telephone” or “Phone”.*

2. **Say:** [Beep] “Phonebook”

3. **Prompt:** “Select one of the following: New entry, edit, list names, delete, erase all or import contact.”

4. **Say:** [Beep] “Edit”

5. **Prompt:** “Please say the name of the entry you would like to edit or say, “List names”.”

6. **Say:** [Beep] “XXXXX... (Ex. “Mary’s phone”)” (Say the voice tag for the registered name to be edited in the phonebook.)

7. **Prompt:** “Home, Work, Mobile, or Other?”

8. **Say:** [Beep] “Home” (Say the registered location to be edited: “Home”, “Work”, “Mobile”, or “Other”).

9. **Prompt:** “XXXXX... (Ex. “Mary’s phone”) (Registered voice tag) XXXX (Ex. “Home”) (Registered location). Is this correct?”

10. **Say:** [Beep] “Yes”

11. **Prompt:** “The current number is XXXXXXXXXXXX (Ex. “555-1234”) (Currently registered number). New number, please.”

#### ***NOTE***

*If there was no previous phone number registered to a location (Ex. “Work”), the prompt will only read out “Number, please”.*

12. **Say:** [Beep] “XXXXXXXXXXXX (Ex. “555-5678”)” (Say the new phone number to be registered.)

13. **Prompt:** “XXXXXXXXXXXX (Ex. “555-5678”) (The new phone number to be registered). Is this correct?”

14. **Say:** [Beep] “Yes”

15. **Prompt:** “Number changed, returning to main menu.”

# Bluetooth® Hands-Free (Voice Recognition)

## **Phonebook data deletion**

### **Erasing individual phonebook data**

Individual data registered to the Bluetooth® Hands-Free phonebook can be cleared.

#### **NOTE**

*Do this function only when parked. It is too distracting to attempt while driving and you may make too many errors to be effective.*

1. Press the pick-up button (with/without navigation system) or talk button with a short press (without navigation system) or a long press (with navigation system).

#### **NOTE**

*For vehicles with the navigation system, you can also press the talk button with a short press and say: [Beep] "Telephone" or "Phone".*

2. **Say:** [Beep] "Phonebook"
3. **Prompt:** "Select one of the following: New entry, edit, list names, delete, erase all or import contact."
4. **Say:** [Beep] "Delete"
5. **Prompt:** "Please say the name of the entry you would like to delete or say, "List names"."
6. **Say:** [Beep] "XXXXX... (Ex. "John's phone")" (Say the registered voice tag to be deleted from the phonebook.)
7. **Prompt:** "Deleting XXXXX... (Ex. "John's phone") (Registered voice tag) Home (Registered location). Is this correct?"
8. **Say:** [Beep] "Yes"

9. **Prompt:** "XXXXX... (Ex. "John's phone") (Registered voice tag) Home (Registered location) deleted."

### **Complete deletion of the phonebook data**

All data registered to the Bluetooth® Hands-Free phonebook can be erased.

#### **NOTE**

*Do this function only when parked. It is too distracting to attempt while driving and you may make too many errors to be effective.*

1. Press the pick-up button (with/without navigation system) or talk button with a short press (without navigation system) or a long press (with navigation system).

#### **NOTE**

*For vehicles with the navigation system, you can also press the talk button with a short press and say: [Beep] "Telephone" or "Phone".*

2. **Say:** [Beep] "Phonebook"
3. **Prompt:** "Select one of the following: New entry, edit, list names, delete, erase all or import contact."
4. **Say:** [Beep] "Erase all"
5. **Prompt:** "Are you sure you want to erase everything from your Hands Free system phonebook?"
6. **Say:** [Beep] "Yes"
7. **Prompt:** "You are about to delete everything from your Hands Free system phonebook. Do you want to continue?"
8. **Say:** [Beep] "Yes"
9. **Prompt:** "Please wait, erasing the Hands Free system phonebook."

## Bluetooth® Hands-Free (Voice Recognition)

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10. **Prompt:** “Hands-Free system phonebook erased.”

### **Read-out of names registered to the Bluetooth® Hands-Free phonebook**

Bluetooth® Hands-Free can read out the list of names registered to its phonebook.

1. Press the pick-up button (with/without navigation system) or talk button with a short press (without navigation system) or a long press (with navigation system).

#### **NOTE**

*For vehicles with the navigation system, you can also press the talk button with a short press and say: [Beep] “Telephone” or “Phone”.*

2. **Say:** [Beep] “Phonebook”
3. **Prompt:** “Select one of the following: New entry, edit, list names, delete, erase all or import contact.”
4. **Say:** [Beep] “List names”
5. **Prompt:** “XXXXX..., XXXXX..., XXXXX... (Ex. “John's phone”, Mary's phone, Bill's phone)” (Voice guidance reads out the voice tags registered to the phonebook.)

Press the talk button with a short press during the read-out at the desired name, and then say one of the following voice commands to execute it.

- “Continue”: Continues the list read-out.
- “Call”: Calls the registered phonebook data when the talk button is short-pressed.
- “Edit”: Edits the registered phonebook data when the talk button is short-pressed.

- “Delete”: Deletes the registered phonebook data when the talk button is short-pressed.
- “Previous”: Returns to the previous phonebook data in read-out when the talk button is short-pressed.

6. **Prompt:** “End of list, would you like to start from the beginning?”

7. **Say:** [Beep] “No”

### **▼DTMF (Dual Tone Multi-Frequency Signal) Transmission**

This function is used when transmitting DTMF via the user's voice. The receiver of a DTMF transmission is generally a home telephone answering machine or a company's automated guidance call center (When you send tone signals back according to the voice guidance recording).

1. Press the talk button with a short press.
2. **Say:** [Beep] “XXXX... send” (Say DTMF code)
3. **Prompt:** “Sending XXXX... (DTMF code)”



# Bluetooth® Hands-Free (Voice Recognition)

## Hands-Free Setting

### ▼ Device

#### Device registration

For the registration of a Bluetooth® equipped device to Bluetooth® Hands-Free.

Refer to Bluetooth® Hands-Free Preparation on page 6-138.

#### Registered device read-out

Bluetooth® Hands-Free can read-out the devices registered to its system.

#### **NOTE**

*Do this function only when parked. It is too distracting to attempt while driving and you may make too many errors to be effective.*

1. Press the pick-up button (with/without navigation system) or talk button with a short press (without navigation system) or a long press (with navigation system).

#### **NOTE**

*For vehicles with the navigation system, you can also press the talk button with a short press and say: [Beep] "Telephone" or "Phone".*

2. **Say:** [Beep] "Setup"

3. **(Type A)**

**Prompt:** "Select one of the following: Pairing options, confirmation prompts, select phone, language or passcode."

**(Type B/Navigation system)**

**Prompt:** "Select one of the following: Pairing options, confirmation prompts, language, passcode, select phone or select music player."

4. **Say:** [Beep] "Pairing options"

5. **(Type A)**

**Prompt:** "Select one of the following: Pair, edit, delete, or list."

**(Type B/Navigation system)**

**Prompt:** "Available options are: Pair, Edit, Delete, List, or Set Pairing Code."

6. **Say:** [Beep] "List"

7. **Prompt:** "XXXXX..., XXXXX..., XXXXX..." (Ex. Device A, device B, device C)" (The voice guidance reads out the device tags registered to the hands-free system.)

Press the talk button with a short press during the read-out at the desired device, and then say one of the following voice commands to execute it.

- "Select phone": Selects device (Mobile phone) when the talk button is short-pressed.
  - **(Type B/Navigation system)** "Select music player": Selects device (Music player) when the talk button is short-pressed.
  - "Edit": Edits device when the talk button is short-pressed.
  - "Continue": Continues the list read-out.
  - "Delete": Deletes the registered device when the talk button is short-pressed.
  - "Previous": Returns to the previous device in read-out when the talk button is short-pressed.
8. **Prompt:** "End of list, would you like to start from the beginning?"

9. **Say:** [Beep] "No"

## Bluetooth® Hands-Free (Voice Recognition)

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### **Device selection**

If several devices have been programmed, the Bluetooth® unit links the device last connected. If you would like to link a different programmed device, it is necessary to change the link. The order of device priority after the link has been changed is maintained even when the ignition is switched off.

#### **(Type A)**

#### **Hands-free phone**

1. Press the pick-up button or talk button with a short press.
2. **Say:** [Beep] “Setup”
3. **Prompt:** “Select one of the following: Pairing options, confirmation prompts, select phone, language or passcode.”
4. **Say:** [Beep] “Select phone”
5. **Prompt:** “Please say 1 for XXXXX... (Ex. device A), 2 for XXXXX... (Ex. device B...)”
6. **Say:** [Beep] “X” (Say the number for the mobile phone to be connected.)
7. **Prompt:** “XXXXX... (Ex. device B...) (Registered device tag) selected, is this correct?”
8. **Say:** [Beep] “Yes”
9. **Prompt:** “XXXXX... (Ex. device B...) (Device tag) selected, returning to main menu.”

#### **(Type B/Navigation system)**

#### **Hands-free phone**

1. Press the pick-up button (with/without navigation system) or talk button with a short press (without navigation system) or a long press (with navigation system).

### **NOTE**

*For vehicles with the navigation system, you can also press the talk button with a short press and say: [Beep] “Telephone” or “Phone”.*

2. **Say:** [Beep] “Setup”
3. **Prompt:** “Select one of the following: Pairing options, confirmation prompts, language, passcode, select phone or select music player.”
4. **Say:** [Beep] “Select phone”
5. **Prompt:** “Please say the name of the device you would like to select. Available devices are XXXXX... (Ex. device A), XXXXX... (Ex. device B), XXXXX... (Ex. device C). Which device please?”
6. **Say:** [Beep] “XXXXX... (Ex. Device B)”
7. **Prompt:** “XXXXX... (Ex. Device B). Is this correct?”
8. **Say:** [Beep] “Yes” or “No”
9. If “Yes”, go to Step 10. If “No”, the procedure returns to Step 5.
10. **Prompt:** “XXXXX... (Ex. Device B) selected.”

#### **Music player**

1. Press the pick-up button (with/without navigation system) or talk button with a short press (without navigation system) or a long press (with navigation system).

### **NOTE**

*For vehicles with the navigation system, you can also press the talk button with a short press and say: [Beep] “Telephone” or “Phone”.*

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2. **Say:** [Beep] “Setup”
3. **Prompt:** “Select one of the following: Pairing options, confirmation prompts, language, passcode, select phone or select music player.”
4. **Say:** [Beep] “Select music player”
5. **Prompt:** “Please say the name of the device you would like to select. Available devices are XXXXX... (Ex. device A), XXXXX... (Ex. device B), XXXXX... (Ex. device C). Which device please?”
6. **Say:** [Beep] “XXXXX... (Ex. Device B)”
7. **Prompt:** “XXXXX... (Ex. Device B). Is this correct?”
8. **Say:** [Beep] “Yes” or “No”
9. If “Yes”, go to Step 10. If “No”, the procedure returns to Step 5.
10. **Prompt:** “XXXXX... (Ex. Device B) selected.”

## **NOTE**

### **(Type B)**

*Device (Music player) selection can also be done by operating the panel button (page 6-127).*

## **Registered device (Mobile phone) deletion**

Registered devices (Mobile phone) can be deleted individually or collectively.

## **NOTE**

*Do this function only when parked. It is too distracting to attempt while driving and you may make too many errors to be effective.*

## **(Type A)**

1. Press the pick-up button or talk button with a short press.
2. **Say:** [Beep] “Setup”
3. **Prompt:** “Select one of the following: Pairing options, confirmation prompts, select phone, language or passcode.”
4. **Say:** [Beep] “Pairing options”
5. **Prompt:** “Select one of the following: Pair, edit, delete, or list.”

## **NOTE**

*A registered device (Mobile phone) can be deleted using the registration list.*

6. **Say:** [Beep] “Delete”
7. **Prompt:** “Please say 1 for XXXXX... (Ex. device A), 2 for XXXXX... (Ex. device B...)” (The device tag of the registered device is read out by the HFP.)
8. **Say:** [Beep] “X” (Say the number of the device to be deleted.)

## **NOTE**

*Say “All” to delete all devices (Mobile phone).*

9. **Prompt:** “Deleting XXXXX... (Ex. device B...) (Registered device tag). Is this correct?”
10. **Say:** [Beep] “Yes”
11. **Prompt:** “Deleted”

## **(Type B/Navigation system)**

1. Press the pick-up button (with/without navigation system) or talk button with a short press (without navigation system) or a long press (with navigation system).

## Bluetooth® Hands-Free (Voice Recognition)

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### **NOTE**

For vehicles with the navigation system, you can also press the talk button with a short press and say: [Beep] “Telephone” or “Phone”.

2. **Say:** [Beep] “Setup”
3. **Prompt:** “Select one of the following: Pairing options, confirmation prompts, language, passcode, select phone or select music player.”
4. **Say:** [Beep] “Pairing options”
5. **Prompt:** “Available options are: Pair, Edit, Delete, List, or Set Pairing Code.”

### **NOTE**

A registered device (Mobile phone) can be deleted using the registration list.

6. **Say:** [Beep] “Delete”
7. **Prompt:** “Please say the name of the device you would like to delete. Available devices are XXXXX... (Ex. device A), XXXXX... (Ex. device B), XXXXX... (Ex. device C), or all. Which device please?”
8. **Say:** [Beep] “X” (Say the number of the device to be deleted.)

### **NOTE**

Say “All” to delete all devices (Mobile phone).

9. **Prompt:** “Deleting XXXXX... (Ex. device B...) (Registered device tag). Is this correct?”
10. **Say:** [Beep] “Yes”
11. **Prompt:** “Deleted”

### **Registered device editing**

#### **(Type A)**

1. Press the pick-up button or talk button with a short press.
2. **Say:** [Beep] “Setup”
3. **Prompt:** “Select one of the following: Pairing options, confirmation prompts, select phone, language or passcode.”
4. **Say:** [Beep] “Pairing options”
5. **Prompt:** “Select one of the following: Pair, edit, delete, or list.”
6. **Say:** [Beep] “Edit”
7. **Prompt:** “Please say 1 for XXXXX... (Ex. device A), 2 for XXXXX... (Ex. device B...), which device please?” (The device tag of the registered device is read out by the HFP.)
8. **Say:** [Beep] “X” (Say the number of the device to be edited.)
9. **Prompt:** “New name please?”
10. **Say:** [Beep] “XXXXX... (Ex. device C)” (Speak a “device tag”, an arbitrary name for the device.)
11. **Prompt:** “XXXXX... (Ex. device C) (Device tag), is this correct?”
12. **Say:** [Beep] “Yes”
13. **Prompt:** “New name saved, returning to main menu.”

#### **(Type B/Navigation system)**

1. Press the pick-up button (with/without navigation system) or talk button with a short press (without navigation system) or a long press (with navigation system).

# Bluetooth® Hands-Free (Voice Recognition)

## NOTE

For vehicles with the navigation system, you can also press the talk button with a short press and say: [Beep] “Telephone” or “Phone”.

2. **Say:** [Beep] “Setup”
3. **Prompt:** “Select one of the following: Pairing options, confirmation prompts, language, passcode, select phone or select music player.”
4. **Say:** [Beep] “Pairing options”
5. **Prompt:** “Available options are: Pair, Edit, Delete, List, or Set Pairing Code.”
6. **Say:** [Beep] “Edit”
7. **Prompt:** “Please say the name of the device you would like to edit.  
Available devices are XXXXX... (Ex. device A), XXXXX... (Ex. device B), XXXXX... (Ex. device C). Which device please?”
8. **Say:** [Beep] “X” (Say the number of the device to be edited.)
9. **Prompt:** “New name please?”
10. **Say:** [Beep] “XXXXX... (Ex. device C)” (Speak a “device tag”, an arbitrary name for the device.)
11. **Prompt:** “XXXXX... (Ex. device C) (Device tag), is this correct?”
12. **Say:** [Beep] “Yes”
13. **Prompt:** “New name saved.”

## ▼ Security Setting

If a passcode is set, the system cannot be activated unless the passcode is input.

## NOTE

Do this function only when parked. It is too distracting to attempt while driving and you may make too many errors to be effective.

## Passcode setting

1. Press the pick-up button (with/without navigation system) or talk button with a short press (without navigation system) or a long press (with navigation system).

## NOTE

For vehicles with the navigation system, you can also press the talk button with a short press and say: [Beep] “Telephone” or “Phone”.

2. **Say:** [Beep] “Setup”
3. **(Type A)**  
**Prompt:** “Select one of the following: Pairing options, confirmation prompts, select phone, language or passcode.”  
**(Type B/Navigation system)**  
**Prompt:** “Select one of the following: Pairing options, confirmation prompts, language, passcode, select phone or select music player.”
4. **Say:** [Beep] “Passcode”
5. **Prompt:** “Passcode is disabled. Would you like to enable it?”
6. **Say:** [Beep] “Yes”
7. **Prompt:** “Please say a 4-digit passcode. Remember this passcode. It will be required to use this system.”
8. **Say:** [Beep] “XXXX” (Say a desired 4-digit passcode, “PCode”.)

## Bluetooth® Hands-Free (Voice Recognition)

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9. **Prompt:** “Passcode XXXX (Passcode, PCode). Is this correct?”

10. **Say:** [Beep] “Yes”

11. **Prompt:** “Passcode is enabled.”

### Using Bluetooth® Hands-Free with a passcode

1. Press the pick-up button (with/without navigation system) or talk button with a short press (without navigation system) or a long press (with navigation system).

#### **NOTE**

*For vehicles with the navigation system, you can also press the talk button with a short press and say: [Beep] “Telephone” or “Phone”.*

2. **Prompt:** “Hands-Free system is locked. State the passcode to continue.”

3. **Say:** [Beep] “XXXX” (Say the set passcode “PCode”).

4. If the correct passcode is input, voice guidance “XXXXXX... (Ex. “Mary’s device) (Device tag) is connected” is announced.

If the passcode is incorrect, voice guidance “XXXX (4-digit passcode, Pcode) incorrect passcode, please try again” is announced.

### Canceling the passcode

#### **NOTE**

*Do this function only when parked. It is too distracting to attempt while driving and you may make too many errors to be effective.*

1. Press the pick-up button (with/without navigation system) or talk button with a short press (without navigation system) or a long press (with navigation system).

#### **NOTE**

*For vehicles with the navigation system, you can also press the talk button with a short press and say: [Beep] “Telephone” or “Phone”.*

2. **Say:** [Beep] “Setup”

3. **(Type A)**

**Prompt:** “Select one of the following: Pairing options, confirmation prompts, select phone, language or passcode.”

**(Type B/Navigation system)**

**Prompt:** “Select one of the following: Pairing options, confirmation prompts, language, passcode, select phone or select music player.”

4. **Say:** [Beep] “Passcode”

5. **Prompt:** “Passcode is enabled. Would you like to disable it?”

6. **Say:** [Beep] “Yes”

7. **Prompt:** “Passcode is disabled.”

### Confirmation Prompts

The confirmation prompt confirms the command content to the user before advancing to the operation requested by the user. When this function is turned on, the system reads out the voice input command previously received and confirms whether the command is correct before advancing to the command execution.

When the confirmation prompt function is turned on:

(Ex. “Calling John’s device. Is this correct?”)

# Bluetooth® Hands-Free (Voice Recognition)

When the confirmation prompt function is turned off:

(Ex. “Calling John’s device.”)

## **NOTE**

*If the confirmation prompt function is turned off when making an emergency call, the system reads out and confirms the command before executing it.*

1. Press the pick-up button (with/without navigation system) or talk button with a short press (without navigation system) or a long press (with navigation system).

## **NOTE**

*For vehicles with the navigation system, you can also press the talk button with a short press and say: [Beep] “Telephone” or “Phone”.*

2. **Say:** [Beep] “Setup”
3. **(Type A)**  
**Prompt:** “Select one of the following: Pairing options, confirmation prompts, select phone, language or passcode.”  
**(Type B/Navigation system)**  
**Prompt:** “Select one of the following: Pairing options, confirmation prompts, language, passcode, select phone or select music player.”
4. **Say:** [Beep] “Confirmation prompts”
5. **Prompt:** “Confirmation prompts are on/off. Would you like to turn confirmation prompts off/on?”
6. **Say:** [Beep] “Yes”
7. **Prompt:** “Confirmation prompts are off/on.”

## ▼ **Voice Recognition Learning Function (Speaker Enrollment)**

The voice recognition learning function enables voice recognition appropriate to the characteristics of the user’s voice.

If the recognition of the voice input commands to the system is not adequate, this function can largely improve the system’s voice recognition of the user. If your voice can be recognized sufficiently without using this function, you may not realize the added benefit of the function. To register your voice, the voice input command list must be read out. Read out the list when the vehicle is parked.

Perform the registration in as quiet a place as possible (page 6-135).

The registration must be performed completely. The required time is a few minutes. The user needs to be seated in the driver’s seat with the voice input command list for voice recognition learning open to the page indicated below.

### **When voice recognition learning is done for the first time**

1. Press the pick-up button (with/without navigation system) or talk button with a short press (without navigation system) or a long press (with navigation system).

## **NOTE**

*For vehicles with the navigation system, you can also press the talk button with a short press and say: [Beep] “Telephone” or “Phone”.*

2. **Say:** [Beep] “Voice training”

## Bluetooth® Hands-Free (Voice Recognition)

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- Prompt:** “This operation must be performed in a quiet environment while the vehicle is stopped. See the owner’s manual for the list of required training phrases. Press and release the talk button when you are ready to begin. Press the hangup button to cancel at any time.”
- Press the talk button with a short press.
- The voice guidance reads out the voice input command number (refer to the voice input command list for voice recognition learning). (Ex. “Please read phrase 1”)
- Say:** [Beep] “0123456789” (Say the voice input command for voice recognition learning (1 to 8) according to the voice guidance.)
- Prompt:** “Speaker enrollment is complete.”

### **NOTE**

*If an error occurred in the voice recognition learning, re-learning can be done by pressing the talk button with a short press.*

### **Voice recognition re-learning**

If voice recognition learning has already been done.

- Press the pick-up button (with/without navigation system) or talk button with a short press (without navigation system) or a long press (with navigation system).

### **NOTE**

*For vehicles with the navigation system, you can also press the talk button with a short press and say: [Beep] “Telephone” or “Phone”.*

- Say:** [Beep] “Voice training”

- Prompt:** “Enrollment is enabled/ disabled. Would you like to disable/ enable or retrain?”
- Say:** [Beep] “Retrain”
- Prompt:** “This operation must be performed in a quiet environment while the vehicle is stopped. See the owner’s manual for the list of required training phrases. Press and release the talk button when you are ready to begin. Press the hangup button to cancel at any time.”
- Press the talk button with a short press.
- The voice guidance reads out the voice input command number (refer to the voice input command list for voice recognition learning). (Ex. “Please read phrase 1”)
- Say:** [Beep] “0123456789” (Say the voice input command for voice recognition learning (1 to 8) according to the voice guidance.)
- Prompt:** “Speaker enrollment is complete.”

### **NOTE**

*If an error occurred in the voice recognition learning, re-learning can be done by pressing the talk button with a short press.*

### **Voice input command list for voice recognition learning**

When reading out, the following points must be observed:

- Read out the numbers one at a time correctly and naturally.



# Bluetooth® Hands-Free (Voice Recognition)

(For example, “1234” must be read out “one, two, three, four”, not “twelve, thirty four”.)

- Do not read out parentheses. “(” and hyphens “-” are used for separating numbers in a phone number.

Ex.

“(888) 555-1212” must be spoken “Eight, eight, eight, five, five, five, one, two, one, two.”

Phrase	Command
1	0123456789
2	(888) 555-1212
3	Call
4	Dial
5	Setup
6	Cancel
7	Continue
8	Help

## NOTE

- The applicable phrase appears in the display.
- After user voice registration is completed, voice guidance “Speaker enrollment is complete” is announced.

## Voice recognition learning on/off

1. Press the pick-up button (with/without navigation system) or talk button with a short press (without navigation system) or a long press (with navigation system).

## NOTE

For vehicles with the navigation system, you can also press the talk button with a short press and say: [Beep] “Telephone” or “Phone”.

2. **Say:** [Beep] “Voice training”
3. **Prompt:** “Enrollment is enabled/disabled. Would you like to disable/enable or retrain?”
4. **Say:** [Beep] “Disable” or “Enable”

5. When “Disable” is spoken, the voice recognition learning is turned off. When “Enable” is spoken, the voice recognition learning is turned on.
6. **Prompt:** “Speaker Enrollment is disabled/enabled.”

## Bluetooth® Hands-Free (Voice Recognition)

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### When Bluetooth® Hands-Free Cannot be Used

Bluetooth® Hands-Free cannot be used under the following conditions:

- The device is outside of the communication area.
- The device has a malfunction.
- The device is not connected to the hands-free unit equipped on the vehicle.
- The device's battery is weak.
- The device is turned off.
- The device is placed where radio reception is difficult.
- The ignition is switched off.

### Safety Certification

FCC ID: CB2MBLUEC09 IC:279B-MBLUEC09

This device complies with Part 15 of the FCC Rules and with RSS-210 of Industry Canada. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) This device must accept any interference received, including interference that may cause undesired operation.

### WARNING

*Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.*

The term "IC:" before the radio certification number only signifies that Industry Canada technical specifications were met.

The antenna used for this transmitter must not be co-located or operating in conjunction with any other antenna or transmitter. End-users and installers must be provided with installation instructions and transmitter operating conditions for satisfying RF exposure compliance.

## Bluetooth® Hands-Free (Voice Recognition)

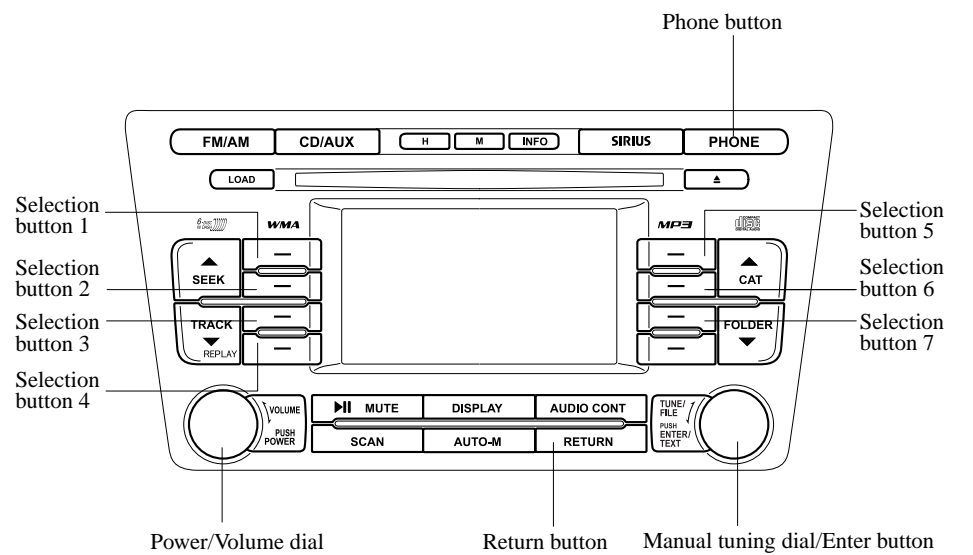
---

### Mazda Bluetooth® Hands-Free Customer Service

- U.S.A.  
Phone: 800-430-0153 (Toll-free)  
[www.MazdaUSA.com/bluetooth](http://www.MazdaUSA.com/bluetooth)
- Canada  
Phone: 800-430-0153 (Toll-free)  
[www.mazdahandsfree.ca](http://www.mazdahandsfree.ca)
- Mexico  
Center of Attention to Client (CAC)  
Phone: 01-800-01-MAZDA (Toll-free)  
[www.MazdaUSA.com/bluetooth](http://www.MazdaUSA.com/bluetooth)

# Bluetooth® Hands-Free (Panel Operation)

## Bluetooth® Hands-Free \*



### ▼ What is Bluetooth® Hands-Free?

#### Bluetooth® Hands-Free Outline

By connecting a Bluetooth® equipped device (Mobile phone) to the hands-free unit equipped on the vehicle, making and receiving calls are possible using the audio unit, and the pick-up and hang-up buttons located on the steering wheel.

#### **⚠ WARNING**

**Perform phonebook registration related operations while the vehicle is parked:**  
*Performing phonebook registration while driving the vehicle could be a distraction to your driving and result in an accident. In addition, a mistake in performing the phonebook operation could result in the loss of important data.*

#### Bluetooth® equipped device (Mobile phone)

A Bluetooth® equipped device (Mobile phone) communicates with the hands-free unit equipped on the vehicle using radio transmission (Bluetooth®). For example, if the device (Mobile phone) is placed in a coat pocket, the phone calls can be made through your mobile service without taking out and handling the device (Mobile phone).

## Bluetooth® Hands-Free (Panel Operation)

### CAUTION

The types of devices (Mobile phone) which can be connected to the hands-free unit are limited. Therefore, before purchasing or changing your device (Mobile phone) model, consult Mazda Bluetooth® Hands-Free Customer Service or visit [www.MazdaUSA.com/bluetooth](http://www.MazdaUSA.com/bluetooth) for a complete list of compatible phones. Devices (Mobile phone) which can be connected to the hands-free system need to be compliant with Bluetooth® specifications and the appropriate profile. However, even among these Bluetooth® devices (Mobile phone) are some which will not connect with your Mazda or will have limited function. Therefore, consult Mazda Bluetooth® Hands-Free Customer Service for information regarding device (Mobile phone) compatibility:

- U.S.A.  
Phone: 800-430-0153  
Web: [www.MazdaUSA.com/bluetooth](http://www.MazdaUSA.com/bluetooth)
- Canada  
Phone: 800-430-0153  
Web: [www.mazdahandsfree.ca](http://www.mazdahandsfree.ca)
- Mexico  
Center of Attention to Client (CAC)  
Phone: 01-800-01-MAZDA  
Web: [www.MazdaUSA.com/bluetooth](http://www.MazdaUSA.com/bluetooth)

### Applicable Bluetooth® specification

Ver. 2.0 or higher

### Response profile

- HFP (Hands Free Profile) Ver. 1.5
- DUN (Dial-up Networking Profile) Ver. 1.1

- PBAP (Phone Book Access Profile) Ver. 1.0
- A2DP (Advanced Audio Distribution Profile) Ver. 1.0
- OPP (Object Push Profile) Ver. 1.1

### NOTE

- The Bluetooth® Hands-Free system is operable several seconds after the ignition is switched to ACC or ON (requires less than 15 seconds).
- If the ignition is switched off during a hands-free call, the line is transferred to the device (Mobile phone) automatically.
- If the device (Mobile phone) is in a location where radio reception is difficult such as a metal container or in the trunk, the call may not be connected using Bluetooth®. If communication is not possible, change the location of the device (Mobile phone).

### ▼ Component Parts

Bluetooth® Hands-Free consists of the following items:

- Audio unit
- Pick-up button
- Hang-up button

### Audio unit

The audio unit can be used for Bluetooth® Hands-Free activation, making calls, hanging up, device programming, device selection, device deletion, device information display, import contact, and volume adjustment.

### Pick-up button and Hang-up button

Basic functions of Bluetooth® Hands-Free can be used for such things as making calls or hanging up using the pick-up button and hang-up button on the steering wheel.

## Bluetooth® Hands-Free (Panel Operation)

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### ▼ How to Use This Section

#### Bluetooth® Hands-Free activation method

Press the phone button (PHONE ).

The hands-free system is activated. Functions of the hands-free telephone, such as making and receiving calls, can be used after the activation. (For details on the telephone functions, refer to “Basic Bluetooth® Hands-Free Operation” or “Convenient Use of the Hands-Free System”.)

### Basic Bluetooth® Hands-Free Operation

#### ▼ Bluetooth® Hands-Free Preparation

##### Device programming (Pairing)

To use Bluetooth® Hands-Free, the device equipped with Bluetooth® has to be programmed to the hands-free unit using the following procedure.

A maximum of seven devices including hands-free mobile phones and Bluetooth® audio devices can be programmed to one vehicle.

## Bluetooth® Hands-Free (Panel Operation)

### NOTE

- *A device can be programmed only when the vehicle is parked. If the vehicle starts to move, the pairing procedure will end. Programming is dangerous while driving - pair up your device before you start driving. Park the car in a safe place before programming.*
- *A total of seven devices can be programmed to one vehicle. If you require an additional device to be programmed to a vehicle with seven devices already programmed, delete one of the programmed devices before programming the latest one.*
- *If a Bluetooth® device has already been programmed to the vehicle as a Bluetooth® audio device, it does not need to be programmed again when using the device as a hands-free mobile phone. Conversely, it does not need to be programmed again as a Bluetooth® audio device if it has already been programmed as a hands-free mobile phone.*
- *Since the communication range of a Bluetooth® equipped device is about 10 meters (32 ft), if a device is placed within a 10-meter (32 ft) radius of the vehicle, it may be detected/programmed unintentionally while another device is being programmed.*
- *Device registration can also be done by operating the audio unit. Refer to Bluetooth® Audio Preparation on page 6-127.*
- *Device registration can also be done using voice recognition (page 6-138).*
- *Depending on the device, the registration status may be lost after a certain period of time. If this occurs, repeat the entire process from Step 1.*

### Programming a Bluetooth® Hands-Free device which has a PIN code (four digits)

1. Press selection button 6 to display the Bluetooth® Hands-Free setting menu screen.
2. Press selection button 2 to display the pairing program screen.
3. “Enter Pin:0000” and “Rotate/Press TUNE dial to change code. Select “OK” when complete.” are displayed for input of the PIN code.
4. Turn the manual tuning dial to select the specified number for the Bluetooth® Hands-Free device and press the enter button (ENTER ) to input the number.

### NOTE

- *Some devices accept only a particular pairing code (Usually, “0000” or “1234”).*
  - *If pairing cannot be completed, refer to the owner's manual of your mobile device, and try those numbers if necessary.*
5. After inputting the four digits, turn the manual tuning dial and select “OK”, and then press the enter button (ENTER ) to set the four digits and display “Pairing is in progress. Please start pairing procedure on your Bluetooth® device. Use the PIN “xxxx”.”.

### NOTE

*Press the return button (RETURN ) to return to the pairing program screen.*

## Bluetooth® Hands-Free (Panel Operation)

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6. Operate the Bluetooth® Hands-Free device while “Pairing is in progress. Please start pairing procedure on your Bluetooth® device. Use the PIN “xxxx”.” is displayed and set it to the program mode.
7. When the pairing programming is completed, a “☎” symbol and “Pairing complete” are displayed, and then the display returns to the normal display.  
If an error occurs during program pairing, “Error” is displayed and the display returns to the pairing program screen.

### Programming a Bluetooth® Hands-Free device which does not have a PIN code (four digits)

1. Press selection button 6 to display the Bluetooth® Hands-Free setting menu screen.
2. Press selection button 2 to display the pairing program screen.
3. “Enter Pin:0000” and “Rotate/Press TUNE dial to change code. Select “OK” when complete.” are displayed for input of the PIN code.
4. Turn the manual tuning dial and select “OK”, and then press the enter button (ENTER) to set the four digits and display “Pairing is in progress. Please start pairing procedure on your Bluetooth® device. Use the PIN “0000”.”.

#### NOTE

Press the return button (RETURN) to return to the pairing program screen.

5. Operate the Bluetooth® Hands-Free device while “Pairing is in progress. Please start pairing procedure on your Bluetooth® device. Use the PIN “0000”.” is displayed and set it to the program mode.
6. The Bluetooth® Hands-Free device will request input of a PIN code. Input “0000”.
7. When the pairing programming is completed, a “☎” symbol and “Pairing complete” are displayed, and then the display returns to the normal display.  
If an error occurs during program pairing, “Error” is displayed and the display returns to the pairing program screen.

#### NOTE

If pairing cannot be completed, try “1234” instead. Refer to the owner's manual of your mobile device for the right PIN code.

### ▼ Making a Call Using a Telephone Number

#### NOTE

Practice this while parked until you are confident you can do it while driving in a non-taxing road situation. If you are not completely comfortable, make all calls from a safe parking position, and move out only when fully under control and you can devote your eyes and mind to driving.

1. Turn the manual tuning dial to select a number and then press the enter button (ENTER) to input the number.
2. After inputting the telephone number, press selection button 1 or the pick-up button of the audio control switch to make a call.



## Bluetooth® Hands-Free (Panel Operation)

### ▼ Receiving an Incoming Call

#### Receiving an incoming call

Press selection button 1 or the pick-up button of the audio control switch.

#### Refusing an incoming call

Press selection button 5 or the hang-up button of the audio control switch.

### ▼ Hanging Up a Call

Press selection button 5 or the hang-up button of the audio control switch during a call.

### ▼ Volume Adjustment

The power/volume dial of the audio unit is used to adjust the volume.

#### Increasing volume

Turn the power/volume dial clockwise.

#### Decreasing volume

Turn the power/volume dial counterclockwise.

#### **NOTE**

- The volume can be adjusted using the volume switch of the audio control switch.
- The music volume of the audio unit cannot be adjusted while Bluetooth® Hands-Free is being used.

## Convenient Use of the Hands-Free System

### ▼ Phonebook Usage

#### **NOTE**

*Do this function only when parked. It is too distracting to attempt while driving and you may make too many errors to be effective.*

#### Import contact

Phonebook data from your device (Mobile phone) can be sent and registered to your Bluetooth® Hands-Free phonebook using Bluetooth®.

#### **NOTE**

*When the import begins, the previous phonebook data is deleted. The previous phonebook data remains deleted even if the operation is canceled during the import.*

1. Press selection button 7 to display the Bluetooth® Hands-Free phonebook import screen.  
“It takes time to import.” is displayed.
2. Press selection button 1 and select “Start” to start import.  
“Importing” is displayed.

#### **NOTE**

*If you want to cancel the import, press selection button 2 and select “Cancel”. The phonebook data being imported is deleted.*

3. When import is completed, the Bluetooth® Hands-Free phonebook screen is displayed.

#### Phonebook data deletion

1. Press selection button 7 to display the Bluetooth® Hands-Free phonebook import screen.  
“It takes time to import.” is displayed.

## Bluetooth® Hands-Free (Panel Operation)

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2. Press selection button 1 and select “Start” to start import. “Importing” is displayed.
3. Before the import is completed, press selection button 2 and select “Cancel”. The phonebook data is deleted, and the screen returns to the normal display after “Importing has been cancelled.” is displayed.

### Making calls using the phonebook

1. Press selection button 2 to display the Bluetooth® Hands-Free phonebook screen.
2. Turn the manual tuning dial to select a list and then press the enter button (ENTER) to display the Bluetooth® Hands-Free phonebook screen containing the detailed information recorded.

#### **NOTE**

*Press each selection button to display the alphabetical sequence for the selection button selected.*

- Each time the selection button is pressed a letter is displayed in alphabetical order. (Ex. selection button 1: A → B → C → A)
  - Each time selection button 8 is pressed, the display shows the last four letters of the alphabet (W, X, Y, Z), followed by symbols, and then numerals.
3. Press selection button 1, 2, 3, or 4 to make a call.

### Voice tag addition

1. Press selection button 2 to display the Bluetooth® Hands-Free phonebook screen.

2. Turn the manual tuning dial to select a list and then press the enter button (ENTER) to display the Bluetooth® Hands-Free phonebook screen containing the detailed information recorded.

#### **NOTE**

*Press each selection button to display the alphabetical sequence for the selection button selected.*

- Each time the selection button is pressed a letter is displayed in alphabetical order. (Ex. selection button 1: A → B → C → A)
  - Each time selection button 8 is pressed, the display shows the last four letters of the alphabet (W, X, Y, Z), followed by symbols, and then numerals.
3. Press selection button 5 to display “Voice Tag will be recorded in phonebook. After completion, this Voice Tag will be available with “Call” command.”.

#### **NOTE**

- Descriptions in the text are as follows:
    - **Say:** Voice commands to be spoken by you.
    - **Prompt:** Voice guidance output from the speaker.
  - Say voice commands after the beep sound [Beep] is heard.
4. **Prompt:**  
“Adding a voice tag allows you to access a contact using the CALL command. After the beep, say the name you would like to use for this contact.”

#### **NOTE**

*If you want to cancel a voice tag registration, press selection button 1.*

## Bluetooth® Hands-Free (Panel Operation)

5. **Say:** [Beep] XXXXX... (Ex. “Mary’s phone”)” (Say a voice tag for the name registered.)
6. **Prompt:**  
“Adding XXXXX... (Ex. “Mary’s phone”) (Registered voice tag). Is this correct?”
7. **Say:** [Beep] “Yes”
8. When a voice tag registration is completed, the display returns to the Hands-Free phonebook screen.

### ▼ Mute

The microphone can be muted during a call.

Press selection button 3.

### ▼ Transferring a Call

#### Transferring a call from Hands-Free to a device (Mobile phone)

Press selection button 2.

### ▼ Outgoing Call Records

A maximum of six outgoing call records are displayed.

Making phone calls using the outgoing call record or deleting one or all outgoing call records is possible.

#### Making a call using the outgoing call record

1. Press selection button 3 to display the outgoing call record screen.
2. Press the desired selection button of the outgoing call record.  
The content of the outgoing call record is displayed.

3. Press selection button 1 or the pick-up button of the audio control switch to make a call.

#### Deleting one outgoing call record

1. Press selection button 3 to display the outgoing call record screen.
2. Press the desired selection button of the outgoing call record.  
The content of the outgoing call record is displayed.
3. Press selection button 2 to display “Delete recent outgoing call?”.
4. Press selection button 1 to delete the outgoing call record.

#### **NOTE**

Press the return button (**RETURN**) to return to the previous display.

#### Deleting all the outgoing call records

1. Press selection button 3 to display the outgoing call record screen.
2. Press selection button 5 to display “Delete all recent outgoing calls?”.
3. Press selection button 1 to delete all outgoing call records.

#### **NOTE**

Press the return button (**RETURN**) to return to the previous display.

### ▼ Incoming Call Records

A maximum of six incoming call records are displayed.

Making phone calls using the incoming call record or deleting one or all incoming call records is possible.

## Bluetooth® Hands-Free (Panel Operation)

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### Making a call using the incoming call record

1. Press selection button 4 to display the incoming call record screen.
2. Press the desired selection button of the incoming call record.  
The content of the incoming call record is displayed.
3. Press selection button 1 or the pick-up button of the audio control switch to make a call.

### Deleting one incoming call record

1. Press selection button 4 to display the incoming call record screen.
2. Press the desired selection button of the incoming call record.  
The content of the incoming call record is displayed.
3. Press selection button 2 to display "Delete recent incoming call?".
4. Press selection button 1 to delete the incoming call record.

#### **NOTE**

Press the return button (RETURN ) to return to the previous display.

### Deleting all the incoming call records

1. Press selection button 4 to display the incoming call record screen.
2. Press selection button 5 to display "Delete all recent incoming calls?".
3. Press selection button 1 to delete all the incoming call records.

#### **NOTE**

Press the return button (RETURN ) to return to the previous display.

### **▼DTMF (Dual Tone Multi-Frequency Signal) Transmission**

This function is used when transmitting DTMF via the audio control panel's manual tuning dial.

The receiver of a DTMF transmission is generally a home telephone answering machine or a company's automated guidance call center.

1. Press selection button 4 after connecting to a home device or service to display the tone transmission screen.
2. Turn the manual tuning dial to select a number or symbol and then press the enter button (ENTER ) to transmit the code.

#### **NOTE**

If the DTMF code has two or more digits or symbols, each one must be transmitted individually.

# Bluetooth® Hands-Free (Panel Operation)

## Hands-Free Setting

### ▼ Device

#### Device registration

For the registration of a Bluetooth® equipped device to Bluetooth® Hands-Free.

Refer to Bluetooth® Hands-Free Preparation on page 6-166.

#### Device selection

If several devices have been programmed, the Bluetooth® unit links the device last programmed. If you would like to link a different programmed device, it is necessary to change the link. The order of device priority after the link has been changed is maintained even when the ignition is switched off.

#### **NOTE**

*If the device name cannot be displayed, “...” is added at the end of the part of the title which can be displayed.*

#### **Changing the link to only a Bluetooth® Hands-Free device**

1. Press selection button 6 to display the Bluetooth® Hands-Free setting menu screen.
2. Press selection button 3 to display the link change screen and the current pairing programming device name.
3. Press selection button 1, 2, 3, 4, 5, 6, or 7 to select the name of the device you would like to change.  
The “☎” symbol disappears, and the device name and “Connection is in progress.” are displayed.

#### **NOTE**

*Press the return button (RETURN ) to return to the link change screen.*

4. When the link change is completed, a “☎” symbol and “Link Changed” are displayed, and then it returns to the normal display.

If an error occurs while trying to link a device, “Error” is displayed and the display returns to the link change screen.

#### **NOTE**

*If a link error occurs, check the programming status of the Bluetooth® Hands-Free device and the location of the device in the vehicle (not in the trunk or a metal-type box), and then try the link operation again.*

#### **Changing the link to a Bluetooth® Hands-Free and Bluetooth® audio device**


1. Press selection button 6 to display the Bluetooth® Hands-Free setting menu screen.
2. Press selection button 3 to display the link change screen and the present pairing programming device name.
3. Press selection button 1, 2, 3, 4, 5, 6, or 7 to select the name of the device you would like to change.
4. The device name and “Please Select Device” are displayed.
5. Press selection button 2 to select “Phone”. The “☎” symbol disappears, and then “Connection is in progress.” is displayed.

#### **NOTE**

*Press the return button (RETURN ) to return to the link change screen.*

## Bluetooth® Hands-Free (Panel Operation)

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- When the link change is completed, a “” symbol and “Link Changed” are displayed, and then it returns to the normal display.

If an error occurs while trying to change the link, “Error” is displayed, and then it returns to the link change screen.

### **NOTE**

- If a link error occurs, check the programming status of the Bluetooth® Hands-Free device and the location of the device in the vehicle (not in the trunk or a metal-type box), and then try the link operation again.
- Device (Music player) selection can also be done by operating the panel button (page 6-127).

### **Registered device (Mobile phone) deletion**

An individually registered device can be cleared.

### **NOTE**

- Do this function only when parked. It is too distracting to attempt while driving and you may make too many errors to be effective.
  - If the device name and Bluetooth® address cannot be displayed, “...” is added at the end to the part of the title which can be displayed.
- Press selection button 6 to display the Bluetooth® Hands-Free setting menu screen.
  - Press selection button 4 to display the pair link deletion screen and the current pairing programming device name.
  - Press selection button 1, 2, 3, 4, 5, 6, or 7 to select the name of the device you would like to change.

- The link delete confirmation screen is displayed, and then “Delete select device?”, the device name, and the Bluetooth® address are displayed.

- Press selection button 1 to delete the selected device.

### **NOTE**

Press the return button (RETURN ) to return to the previous display.

- When the link deletion is completed, “Deleted” is displayed, and then it returns to the normal display.  
If an error occurs while trying to delete the link, “Error” is displayed, and then it returns to the link deletion screen.

### **NOTE**

If a device is deleted while it is being linked, linking to other devices will not be possible.

### **Bluetooth® Hands-Free device information display**

- Press selection button 6 to display the Bluetooth® Hands-Free setting menu screen.
- Press selection button 6 to display the device information display screen.  
If the device information is available, the device name and Bluetooth® address are displayed, and then it returns to the Bluetooth® Hands-Free setting menu screen.  
If the device information is not available, “Failed to obtain device information.” is displayed, and then it returns to the Bluetooth® Hands-Free setting menu screen.

## Bluetooth® Hands-Free (Panel Operation)

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**NOTE**

*If the device name and Bluetooth® address cannot be displayed, "...” is added at the end to the part of the title which can be displayed.*

### When Bluetooth® Hands-Free Cannot be Used

Bluetooth® Hands-Free cannot be used under the following conditions:

- The device is outside of the communication area.
- The device has a malfunction.
- The device is not connected to the hands-free unit equipped on the vehicle.
- The device's battery is weak.
- The device is turned off.
- The device is placed where radio reception is difficult.
- The ignition is switched off.

## Bluetooth® Hands-Free (Panel Operation)

---

### Safety Certification

FCC ID: CB2MBLUEC09 IC:279B-MBLUEC09

This device complies with Part 15 of the FCC Rules and with RSS-210 of Industry Canada. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) This device must accept any interference received, including interference that may cause undesired operation.

### WARNING

*Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.*

The term "IC:" before the radio certification number only signifies that Industry Canada technical specifications were met.

The antenna used for this transmitter must not be co-located or operating in conjunction with any other antenna or transmitter. End-users and installers must be provided with installation instructions and transmitter operating conditions for satisfying RF exposure compliance.

### Mazda Bluetooth® Hands-Free Customer Service

- U.S.A.  
Phone: 800-430-0153 (Toll-free)  
[www.MazdaUSA.com/bluetooth](http://www.MazdaUSA.com/bluetooth)
- Canada  
Phone: 800-430-0153 (Toll-free)  
[www.mazdahandsfree.ca](http://www.mazdahandsfree.ca)
- Mexico  
Center of Attention to Client (CAC)  
Phone: 01-800-01-MAZDA (Toll-free)  
[www.MazdaUSA.com/bluetooth](http://www.MazdaUSA.com/bluetooth)



## Rear View Monitor\*

The rear view monitor is a visual assist system when reversing the vehicle that provides images from the rear of the vehicle.

### **WARNING**

*The rear view monitor is only a visual assist device when reversing the vehicle. The images on the screen may be different from the actual conditions. Always drive carefully confirming the safety of the rear and the surrounding conditions by looking directly with your eyes. Reversing the vehicle by only looking at the screen may cause an accident or a collision with an object.*

### **CAUTION**

- Do not use the rear view monitor under the following conditions: Using the rear view monitor under the following conditions is dangerous and could result in injury or vehicle damage or both.
  - Icy or snow-covered roads.
  - Tire chains or a temporary spare tire is installed.
  - The liftgate is not fully closed.
  - The vehicle is on a road incline.
- When the display is cold, images may course across the monitor or the screen and may be dimmer than usual, which could cause difficulty in confirming the surrounding conditions of the vehicle. Always drive carefully confirming the safety of the rear and the surrounding conditions by looking directly with your eyes.
- Do not apply excessive force to the camera. The camera position and angle may deviate.
- Do not disassemble, modify, or remove it as it may no longer be waterproof.
- The camera cover is made of plastic. Do not apply degreasing agents, organic solvents, wax, or glass coating agents to the camera cover. If any are spilled on the cover, wipe off with a soft cloth immediately.
- Do not rub the cover excessively, or polish it using an abrasive compound or a hard brush. The cover may be damaged affecting the image.

## Rear View Monitor

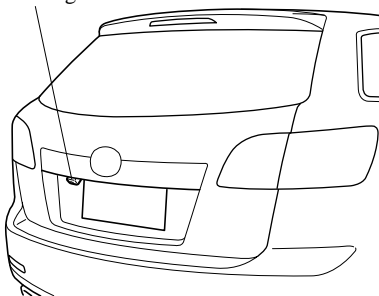
---

### **NOTE**

- If water, snow, or mud is stuck on the camera lens, wipe it off using a soft cloth. If it cannot be wiped off, use a mild detergent.
- If the camera temperature changes rapidly, such as by pouring hot water on it under cold temperature conditions, the rear view monitor may not operate correctly.
- When replacing the tires, consult an Authorized Mazda Dealer. Replacing the tires could result in deviation of the guide lines which appear on the display.
- If the vehicle's front, side, or rear has been involved in a collision, the alignment of the rear view parking camera (location, installation angle) may have deviated. Always consult an Authorized Mazda Dealer to have the vehicle inspected.
- **(With navigation system)**  
The screen may not change to the camera image while the navigation system is being activated immediately after the vehicle battery has been connected. If this occurs, activate the rear-view monitor camera again soon after the navigation system.

### ▼ Rear View Parking Camera Location

Rear View Parking Camera



### ▼ Switching to the Rear View Monitor Display

Shift the shift lever to R with the ignition switched ON to switch the display to the rear view monitor display.

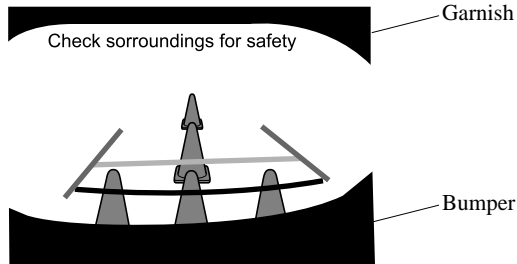
### **NOTE**

When the shift lever is shifted from R to another shift lever position, the screen returns to the previous display.

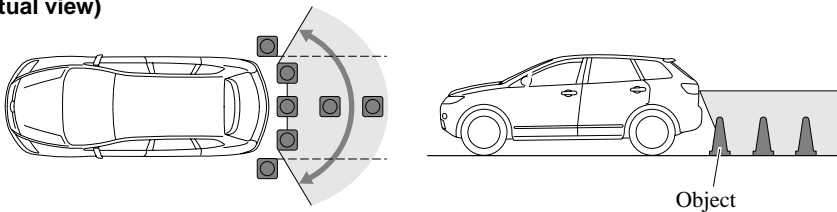
## ▼ Displayable Range on the Screen

The images on the screen may be different from the actual conditions.

### (Screen display)



### (Actual view)



## NOTE

- The displayable range varies depending on the vehicle and road conditions.
- The displayable range is limited. Objects under the bumper or around the bumper ends cannot be displayed.
- The distance appearing in the displayed image is different from the actual distance because the rear view parking camera is equipped with a specific lens.
- Some optionally installed vehicle accessories may be picked up by the camera. Do not install any optional parts that can interfere with the camera view, such as illuminating parts or parts made of reflective material.
- It may be difficult to see the display under the following conditions, however, it does not indicate a malfunction.
  - In darkened areas.
  - When the temperature around the lens is high/low.
  - When the camera is wet such as on a rainy day or during periods of high humidity.
  - When foreign material such as mud is stuck around the camera.
  - When the camera lens reflects sunlight or headlight beams.
- Image display may be delayed if the temperature around the camera is low.

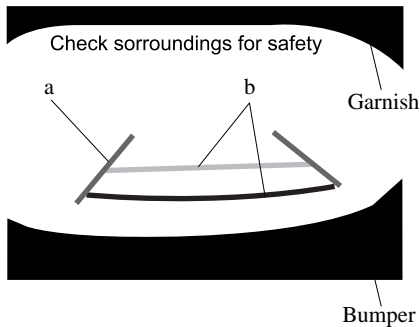
## Rear View Monitor

---

### ▼ Viewing the Display

Guide lines which indicate the width of the vehicle (green) are displayed on the screen as a reference to the approximate width of the vehicle in comparison to the width of the parking space you are about to back into.

Use this display view for parking your vehicle in a parking space or garage.



- a) Vehicle width guide lines (green)  
Guide lines serve as a reference to the approximate width of the vehicle.
- b) Distance guide lines  
These guide lines indicate the approximate distance to a point measured from the vehicle's rear (from the end of the bumper).  
The red and yellow lines indicate the points about 50 cm (red) and 1 meter (yellow) from the rear bumper (at the center point of each of the lines).

### **⚠ CAUTION**

*The guide lines on the screen are fixed lines. They are not synced to the driver's turning of the steering wheel. Always be careful and check the area to the vehicle's rear and the surrounding area directly with your eyes while backing up.*

### ▼ Rear View Monitor Operation

The operation of the rear view monitor when reversing the vehicle varies depending on the traffic, road, and vehicle conditions. The amount of steering and the timing also varies depending on conditions, so confirm the surrounding conditions directly with your eyes and steer the vehicle in accordance with the conditions.

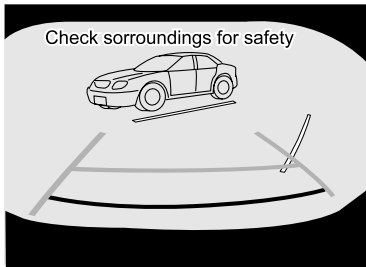
Be well aware of the above cautions prior to using the rear view monitor.

#### **NOTE**

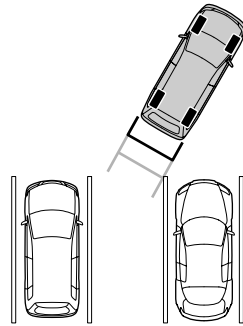
*Images displayed on the monitor from the rear view parking camera are reversed images (mirror images).*

1. Shift the shift lever to R to switch the display to the rear view monitor display.
2. Confirming the surrounding conditions, reverse the vehicle.

**(Screen display)**



**(Actual view)**



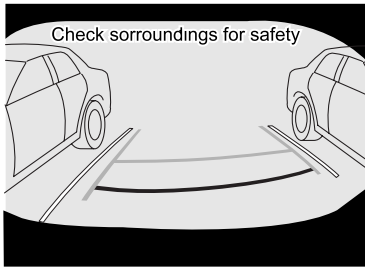
3. After your vehicle begins entering the parking space, continue backing up slowly so that the distance between the vehicle width lines and the sides of the parking space on the left and right are roughly equal.
4. Continue to adjust the steering wheel until the vehicle width guide lines are parallel to the left and right sides of the parking space.

## Rear View Monitor

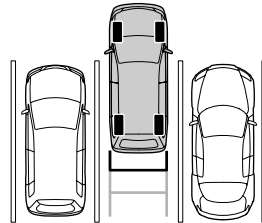
---

5. Once they are parallel, straighten the wheels and back your vehicle slowly into the parking space. Continue checking the vehicle's surroundings and then stop the vehicle in the best possible position. (If the parking space has division lines, check whether the vehicle width guide lines are parallel to them.)

**(Screen display)**



**(Actual view)**

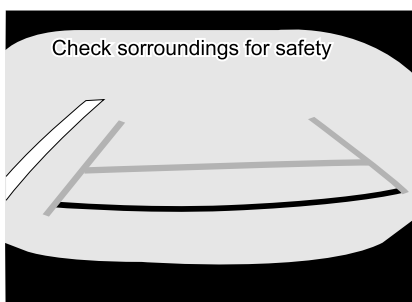


6. When the shift lever is shifted from R to another shift lever position, the screen returns to the previous display.

**NOTE**

Because there may be a difference between the displayed image, such as indicated below, and the actual conditions when parking, always verify the safety at the rear of the vehicle and the surrounding area directly with your eyes.

- In the image of the parking space (or garage) displayed below, even though the back end and distance guide lines appear parallel in the monitor, they may not actually be parallel on the ground.
- When parking in a space with a division line on only one side of the parking space, the division line and the vehicle width guide line may appear parallel on the monitor; but they may not actually be parallel on the ground.



# Rear View Monitor

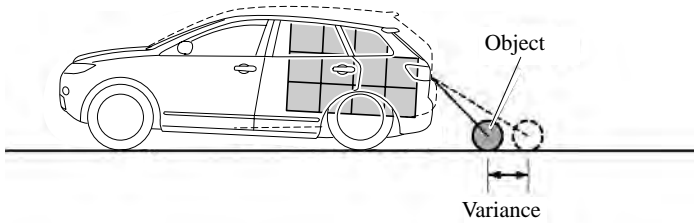
---

## ▼ Variance Between Actual Road Conditions and Displayed Image

Some variance occurs between the actual road and the displayed road. Such variance in distance perspective could lead to an accident. Note the following conditions that may cause a variance in distance perspective.

### When the vehicle is tilted due to the weight of passengers and load

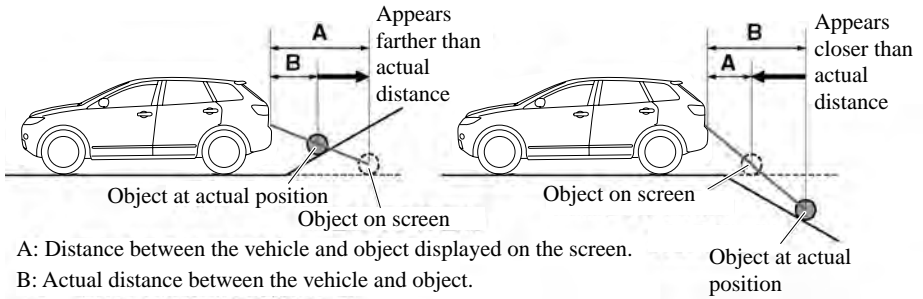
When the vehicle rear is lowered, the object displayed on the screen appears farther than the actual distance.





**When there is a steep grade behind the vehicle**

When there is a steep upgrade (downgrade) behind the vehicle, the object displayed on the screen appears farther (downgrade: closer) than the actual distance.

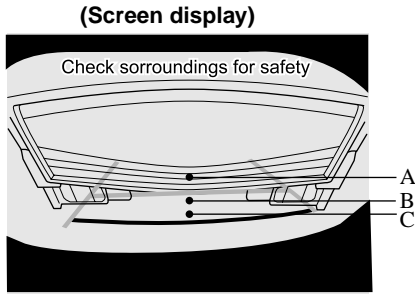


# Rear View Monitor

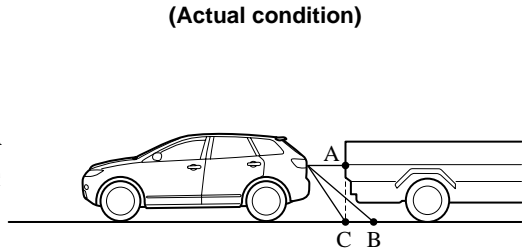
---

## Three-dimensional object on vehicle rear

Because the distance guide lines are displayed based on a flat surface, the distance to the three-dimensional object displayed on the screen is different from the actual distance.



Sensed distance on screen  $A > B > C$



(Actual distance)  $B > C = A$

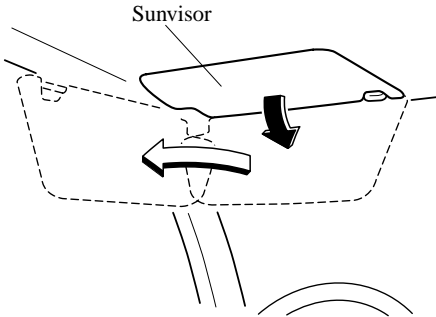
## ▼ Image Quality Adjustment

Image quality adjustment can be done while the shift lever is in reverse (R) and the rear view monitor is displayed. For detailed information, refer to the audio section or the screen adjustment related information in the “NAVIGATION SYSTEM Owner's Manual”.

While the shift lever is in reverse (R), always check the vehicle's surroundings adequately before performing the image quality adjustment.

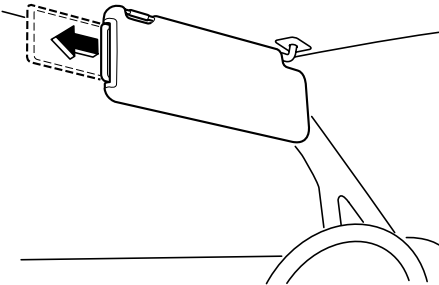
## Sunvisors

When you need a sunvisor, lower it for use in front or swing it to the side.



### ▼ Side Extension Sunvisors

The visor extender extends the sunvisor's range of sun shading.  
To use, pull it out.



### **⚠ CAUTION**

*When moving the sunvisor, retract the visor extender to its original position. Otherwise, the visor extender could hit the rearview mirror.*

### ▼ Vanity Mirrors

To use the vanity mirror, lower the sunvisor.

The vanity mirror light will illuminate when you open the cover.

# Interior Equipment

## Interior Lights

### ▼ Illuminated Entry System

When the illuminated entry system operates, the overhead light (switch is in the DOOR position) and the courtesy lights turn on for:

- About 30 seconds after the driver's door is unlocked and the ignition is switched off (with the ignition key removed).
- About 15 seconds after all doors are closed.

**(With Advanced key)**

About 5 seconds after all doors are closed when the advanced key is outside of the vehicle.

- About 15 seconds after the ignition is switched off (with the ignition key removed) with all doors closed.

The light also turns off when:

- The ignition is switched ON and all doors are closed.
- The driver's door is locked.

**NOTE**

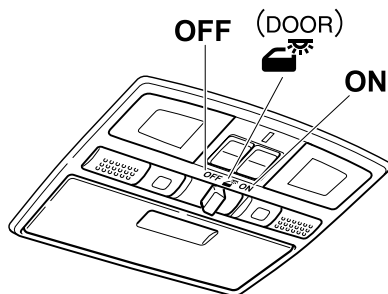
**Battery saver**

*If any door is left opened, the light turns off after about 30 minutes to save the battery. The light turns on again when the ignition is switched ON, or when any door is opened after all doors have been closed.*

### ▼ Overhead Lights

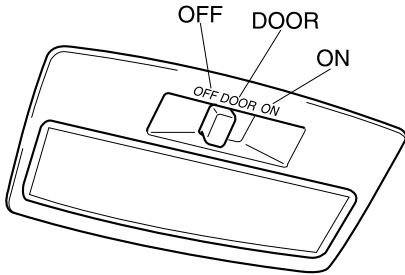
When the center/rear overhead light switch is in the DOOR position, the center/rear overhead light can be turned on or off using the front overhead light switch.

**Front**



Switch Position	Overhead Lights
OFF	<ul style="list-style-type: none"> <li>• Light off</li> <li>• All overhead lights are off when the center/rear overhead light switch is in the DOOR position</li> </ul>
DOOR	<ul style="list-style-type: none"> <li>• Light is on when any door is open</li> <li>• Light is on or off when the illuminated entry system is on</li> </ul>
ON	<ul style="list-style-type: none"> <li>• Light on</li> <li>• All overhead lights are on when the center/rear overhead light switch is in the DOOR position</li> </ul>

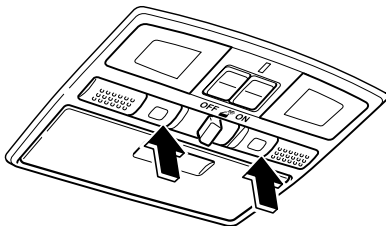
**Center/Rear**



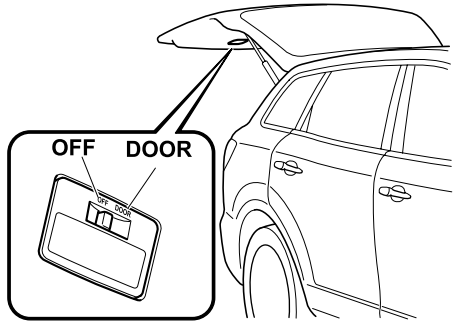
Switch Position	Overhead Lights
OFF	Light off
DOOR	Light on or off in accordance with the operation of front overhead light switch
ON	Light on

**▼ Map Lights**

The map lights are switched on or off by pressing the switches.



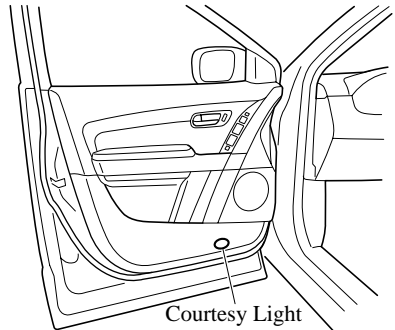
**▼ Luggage Compartment Light**



Switch Position	Luggage Compartment Light
OFF	Light off
DOOR	Light on when the liftgate is open

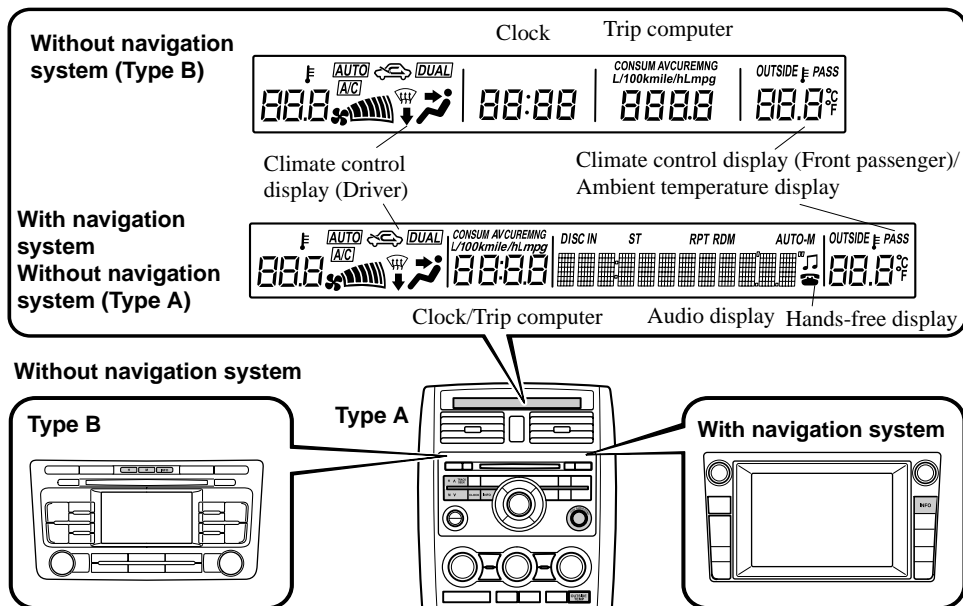
**▼ Courtesy Lights**

Turns on when any door is open or the illuminated entry system is on.



# Interior Equipment

## Information Display



### ▼ Information Display Functions

The information display has the following functions:

- Clock\*
- Ambient Temperature Display (Outside Temperature Display)
- Climate Control Display
- Audio Display\*
- Trip Computer
- Bluetooth® Hands-Free Display\* Refer to Bluetooth® Hands-Free (Voice Recognition) on page 6-133.

## ▼ Clock

### NOTE

#### **Without navigation system (Type A)**

When the trip computer is displayed, press the **CLOCK** button to change the display to the time.

#### **With navigation system, Without navigation system (Type B)**

When the trip computer is displayed, press the **INFO** button consecutively until the time is displayed.

When the ignition is switched to ACC or ON, the time is displayed.

A digital display showing the time 12:00 in a large, black, seven-segment font.

### Without navigation system

#### **Time setting (Type A)**

1. Press the **CLOCK** button until the beep sounds and the displayed time flashes.
2. Press the **H** button to set the hour.
3. Press the **M** button to set the minutes, then press the **CLOCK** button.

#### **Time setting (Type B)**

1. Switch the ignition to ACC or ON.

2. Adjust the time using the time setting buttons (**H**, **M**). The hours advance while the time setting button (**H**) is pressed. The minutes advance while the time setting button (**M**) is pressed.

### With navigation system

Refer to the separate manual “NAVIGATION SYSTEM”.

### NOTE

Minutes and seconds are adjusted by the GPS, however, it is necessary to adjust hours under the following conditions:

- Driving across different time zones
- Daylight saving time start and end

## ▼ Ambient Temperature Display

When the ignition is switched ON, press the **OUTSIDE** switch (page 6-6) to display the ambient temperature.

A digital display showing the ambient temperature 78°F. The word "OUTSIDE" is displayed above the temperature, with a small "F" symbol to the right of the temperature digits.

## Interior Equipment

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### NOTE

- Under the following conditions, the ambient temperature display may differ from the actual ambient temperature depending on the surroundings and vehicle conditions:
  - Significantly cold or hot temperatures.
  - Sudden changes in ambient temperature.
  - The vehicle is parked.
  - The vehicle is driven at low speeds.
- Press the **OUTSIDE** switch for a few seconds or more to switch the display from Fahrenheit to Centigrade or vice versa.
- Press the **OUTSIDE** switch again to switch the display from ambient temperature to the temperature set for the air conditioner.

### ▼ Climate Control Display

The climate control system status is displayed. To operate the climate control system, refer to “Climate Control System” (page 6-2).

### ▼ Audio Display\*

The audio system status is displayed. To operate the audio system, refer to “Audio System” (page 6-17).

### ▼ Trip Computer

The trip computer can display the following:

- The current fuel economy.
- The average fuel economy.
- The approximate distance you can travel on the available fuel.
- The average vehicle speed.

Switch the ignition ON.

Press the **INFO** switch to change the display mode.

### NOTE

When the time is being displayed, press the **INFO** switch to change the display to the trip computer.

If you have any problems with your trip computer, consult an Authorized Mazda Dealer.

### Current fuel economy mode

This mode displays the current fuel economy by calculating the amount of fuel consumption and the distance traveled.

Current fuel economy will be calculated and displayed every 2 seconds.

When this mode is selected, **CONSUM CUR** will be displayed.  
**U.S.A.**

**CONSUM CUR**  
mpg  
**22.4**



CANADA

**CONSUM CUR**  
**L/100km**

**10.5**

When you've slowed to about 5 km/h (3 mph), - - - L/100 km (- - - mpg) will be displayed.

**Average fuel economy mode**

This mode displays the average fuel economy by calculating the total fuel consumption and the total traveled distance since purchasing the vehicle, re-connecting the battery after disconnection, or resetting the data. The average fuel economy is calculated and displayed every minute.

When this mode is selected, CONSUM AV will be displayed.

**U.S.A.**

**CONSUM AV**  
**mpg**

**22.4**

CANADA

**CONSUM AV**  
**L/100km**

**10.5**

To clear the data being displayed, press the INFO switch for more than 1.5 second.

After pressing the INFO switch, - - - L/100 km (- - - mpg) will be displayed for about 1 minute before the fuel economy is recalculated and displayed.

**Distance-to-empty mode**

This mode displays the approximate distance you can travel on the remaining fuel based on the fuel economy.

The distance-to-empty will be calculated and displayed every second.

When this mode is selected, REMNG will be displayed.

**U.S.A.**

**REMNG**  
**mile**

**100**

## Interior Equipment

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### CANADA

REMNG  
km  
160

#### NOTE

- Even though the distance-to-empty display may indicate a sufficient amount of remaining mileage before refueling is required, refuel as soon as possible if the fuel gauge needle nears E or the low fuel warning light illuminates.
- The display won't change unless you add more than approximately 20 L (5.3 US gal, 4.5 Imp gal) of fuel.

#### Average vehicle speed mode

This mode displays the average vehicle speed by calculating the distance and the time traveled since connecting the battery or resetting the data.

Average vehicle speed will be calculated and displayed every 10 seconds.

When this mode is selected, AV will be displayed.

### U.S.A.

AV  
mile/h  
25

### CANADA

AV  
km /h  
40

To clear the data being displayed, press the INFO switch for more than 1.5 second. After pressing the INFO switch, - - - km/h (- - - mile/h) will be displayed for about 1 minute before the vehicle speed is recalculated and displayed.

## Cup Holder

### **⚠ WARNING**

**Never use a cup holder to hold hot liquids while the vehicle is moving:**

*Using a cup holder to hold hot liquids while the vehicle is moving is dangerous. If the contents spill, you could be scalded.*

**Do not put anything other than cups or drink cans in cup holders:**

*Putting objects other than cups or drink cans in a cup holder is dangerous.*

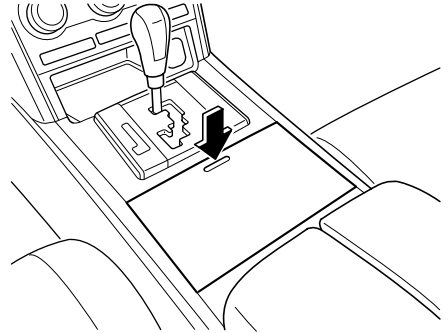
*During sudden braking or maneuvering, occupants could be hit and injured, or objects could be thrown around the vehicle, causing interference with the driver and the possibility of an accident. Only use a cup holder for cups or drink cans.*

### **⚠ CAUTION**

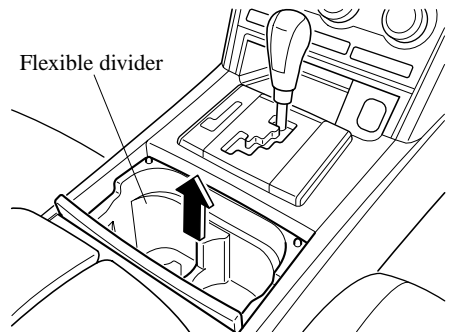
*To reduce the possibility of injury in an accident or a sudden stop, keep cup holders closed when not in use.*

### ▼ Front

To use the cup holder, push the release button.



To fit small items in the cup holder, remove the flexible divider.



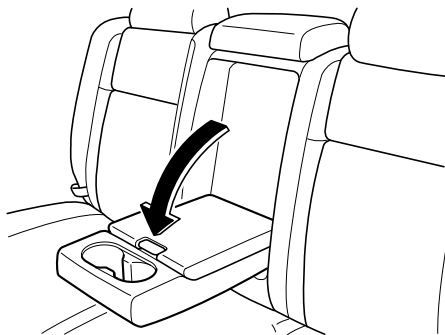
## Interior Equipment

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### ▼ Rear

#### Second-row seat

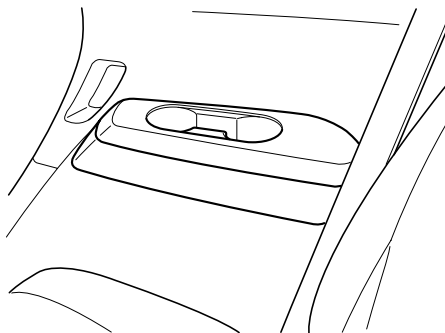
Cup holders are located in the armrest.



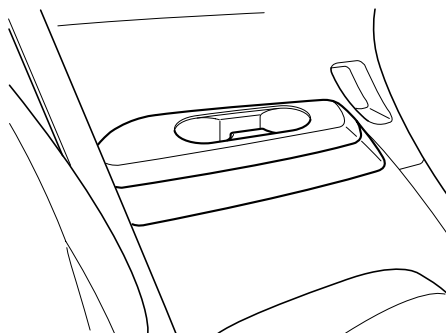
#### Third-row seat

Cup holders are located in the third-row seat side trims.

#### Right-side

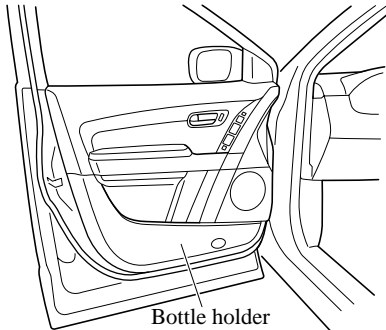


#### Left-side\*



## Bottle Holder

Bottle holders are on the inside of the doors.



### **CAUTION**

*Do not use the bottle holders for containers without caps. The contents may spill when the door is opened or closed.*

## Storage Compartments

### **WARNING**

*Keep storage boxes closed when driving:*

*Driving with the storage boxes open is dangerous. To reduce the possibility of injury in an accident or a sudden stop, keep the storage boxes closed when driving.*

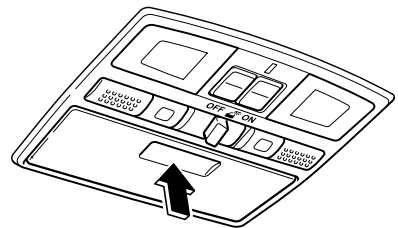
### **CAUTION**

*Do not leave lighters or eyeglasses in the storage boxes while parked under the sun. A lighter could explode or the plastic material in eyeglasses could deform and crack from high temperature.*

### ▼ Overhead Console

This console box is designed to store accessories.

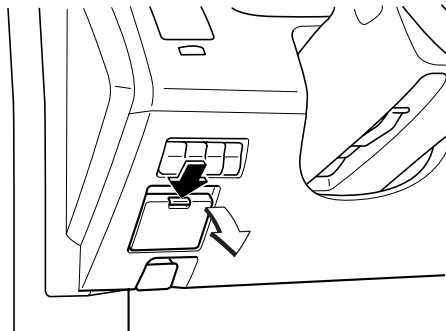
Push and release to open.



## Interior Equipment

### ▼ Coin Box

To open, press the release catch down and pull the lid downward.

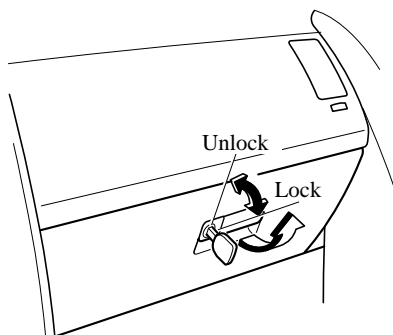


### ▼ Glove Compartment

To open the glove compartment, pull the latch toward you.

Insert the key (auxiliary key\*) and turn it clockwise to lock, counterclockwise to unlock.

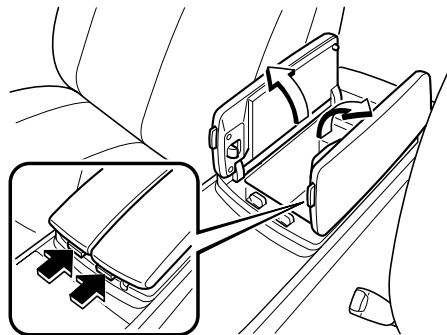
\* Advanced key equipped vehicle



To close the glove compartment, firmly press in the center of the glove compartment lid.

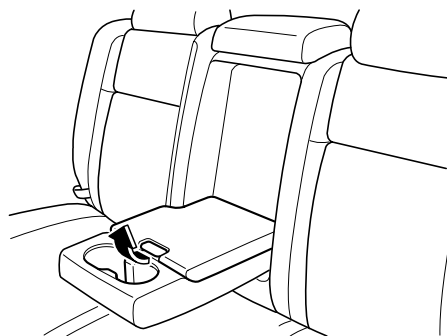
### ▼ Center Console

To open, push the button.



### ▼ Armrest Box\*

To open, pull the release catch.



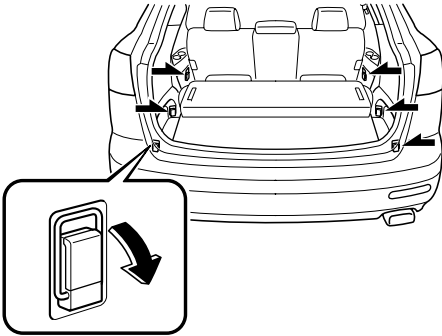
### ▼ Cargo Securing Loops

#### **⚠ WARNING**

***Make sure luggage and cargo are secured before driving:***

*Not securing cargo while driving is dangerous as it could move or be crushed during sudden braking or a collision and cause injury.*

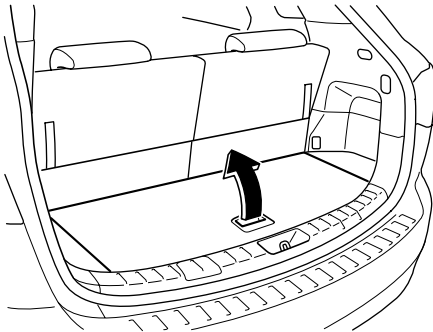
Use the loops in the luggage compartment to secure cargo with a rope or net. The tensile strength of the loops is 196 N (20 kgf, 44 lbf). Do not apply excessive force to the loops as it will damage them.



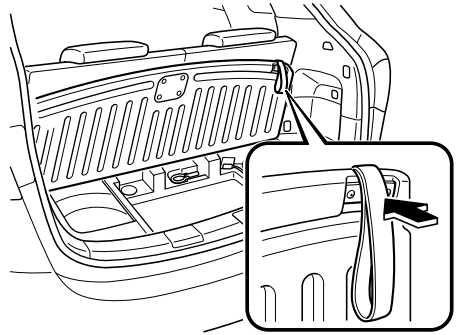
### ▼ Cargo Sub-Compartment

#### Center cargo sub-compartment

1. Lift the trunk board.

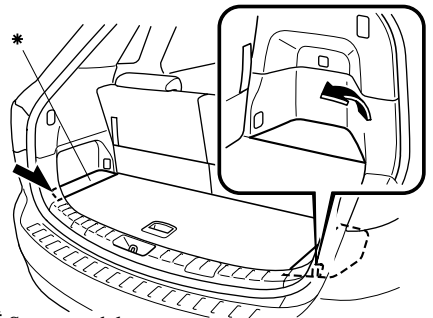


2. Secure the trunk board using the straps on the third-row seatbacks.



#### Side cargo sub-compartment

Open the cover.



\* Some models.

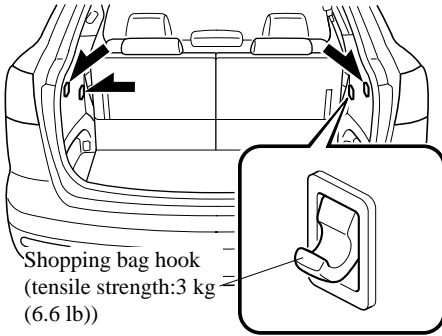
### ▼ Shopping Bag Hook

The shopping bag hook can be used for hanging shopping bags.

#### **⚠ CAUTION**

*Do not hang excessive weight on the shopping bag hook as it could be damaged.*

# Interior Equipment

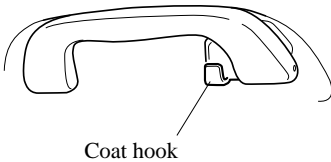


## ▼ Rear Coat Hooks

### **⚠ WARNING**

**Never hang heavy or sharp objects on the assist grips and coat hooks:**  
*Hanging heavy or sharp-ended objects such as a coat hanger from the assist grips or coat hooks is dangerous as they can fly off and hit an occupant in the cabin if a curtain air bag was to deploy, which could result in serious injury or death.*

Always hang clothes on the coat hooks and the assist grips without hangers.

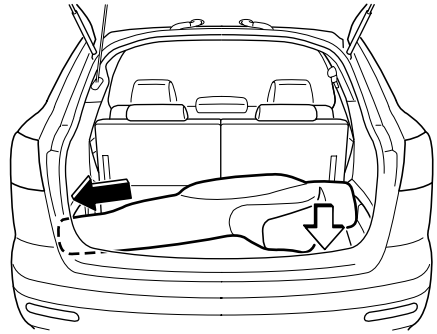


## ▼ Luggage Compartment

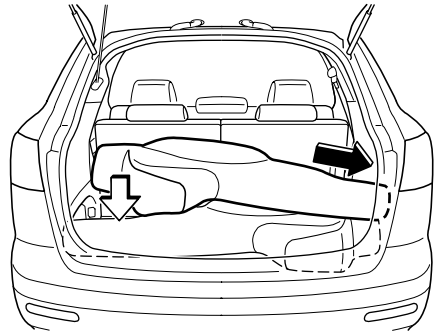
Golf bags can be carried in the luggage compartment.

To carry two golf bags, use the following procedure:

1. Put one golf bag in the luggage compartment with its top pointing to the left.



2. Put the other golf bag on top of the first bag with its top pointing to the right.



### **NOTE**

- Some golf bags cannot fit depending on their size.
- Golf bags up to nine inches in diameter can be carried.

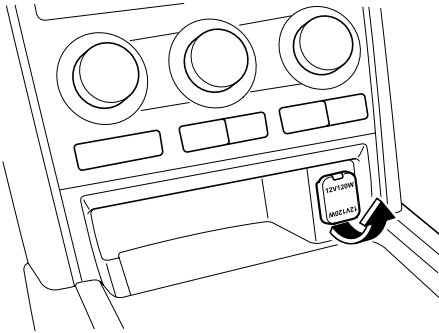


## Accessory Sockets

Only use genuine Mazda accessories or the equivalent requiring no greater than 120 W (DC 12 V, 10 A).

### Front

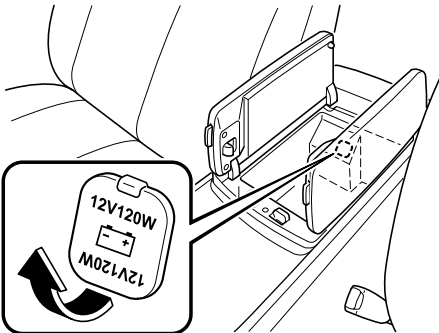
The ignition must be switched to ACC or ON.



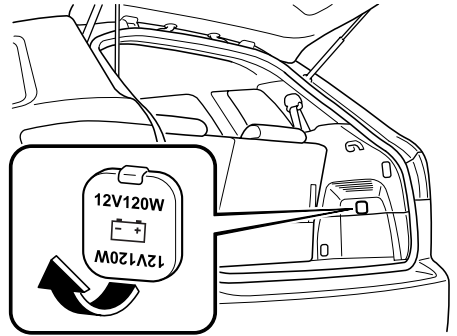
### Center/Rear

The accessory sockets can be used regardless of whether the ignition is on or off.

### Center



### Rear



## Interior Equipment

### **CAUTION**

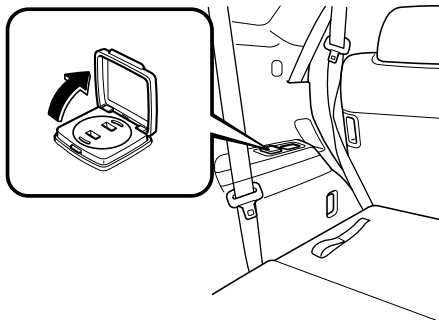
- To prevent accessory socket damage or electrical failure, pay attention to the following:
  - Do not use accessories that require more than 120 W (DC 12 V, 10 A).
  - Do not use accessories that are not genuine Mazda accessories or the equivalent.
  - Close the cover when the accessory socket is not in use to prevent foreign objects and liquids from getting into the accessory socket.
  - Correctly insert the plug into the accessory socket.
- Noise may occur on the audio playback depending on the device connected to the accessory socket.
- Depending on the device connected to the accessory socket, the vehicle's electrical system may be affected, which could cause the warning light to illuminate. Disconnect the connected device and make sure that the problem is resolved. If the problem is resolved, disconnect the device from the socket and switch the ignition off. If the problem is not resolved, consult an Authorized Mazda Dealer.

### **NOTE**

To prevent discharging of the battery, do not use the socket for long periods with the engine off or idling.

### **Power Outlet\***

The power outlet is positioned as shown in the figure.



For more details, refer to “Auxiliary terminals and power outlet” (page 6-110).

Helpful information on what to do in an emergency.

<b>Parking in an Emergency .....</b>	<b>7-2</b>
Parking in an Emergency .....	7-2
<b>Flat Tire .....</b>	<b>7-3</b>
Spare Tire and Tool Storage .....	7-3
Changing a Flat Tire .....	7-8
<b>Overheating .....</b>	<b>7-16</b>
Overheating .....	7-16
<b>Emergency Starting .....</b>	<b>7-18</b>
Jump-Starting .....	7-18
Push-Starting .....	7-20
<b>Emergency Towing .....</b>	<b>7-21</b>
Towing Description .....	7-21
Tiedown Hooks .....	7-22
Recreational Towing .....	7-24

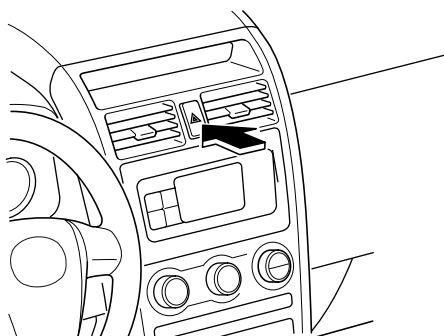
## Parking in an Emergency

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### Parking in an Emergency

The hazard warning lights should always be used when you stop on or near a roadway in an emergency.

The hazard warning lights warn other drivers that your vehicle is a traffic hazard and that they must take extreme caution when near it.



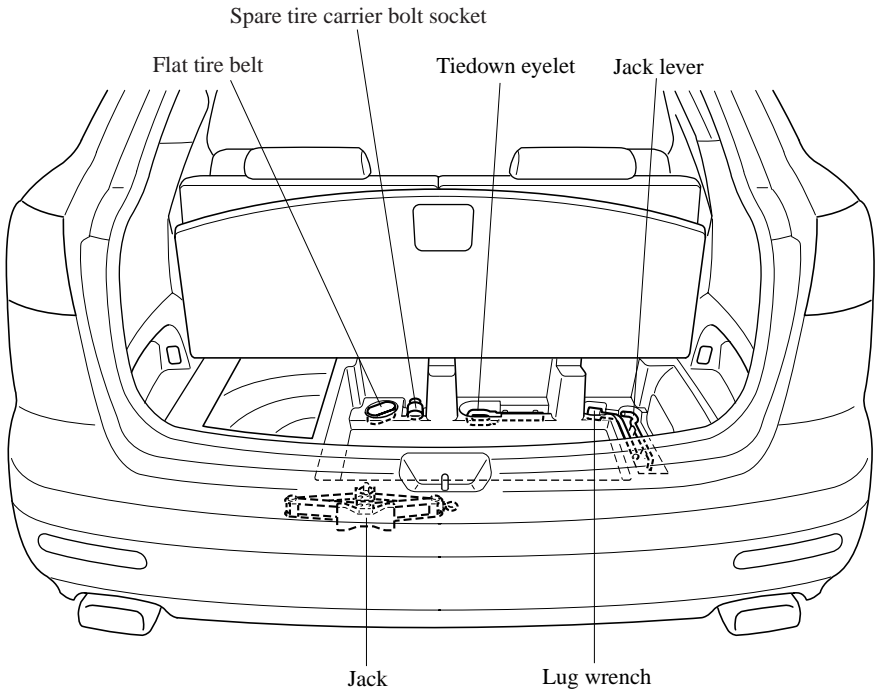
Depress the hazard warning flasher and all the turn signals will flash.

#### **NOTE**

- *The turn signals do not work when the hazard warning lights are on.*
- *Check local regulations about the use of hazard warning lights while the vehicle is being towed to verify that it is not in violation of the law.*

## Spare Tire and Tool Storage

Spare tire and tools are stored in the locations illustrated in the diagram.

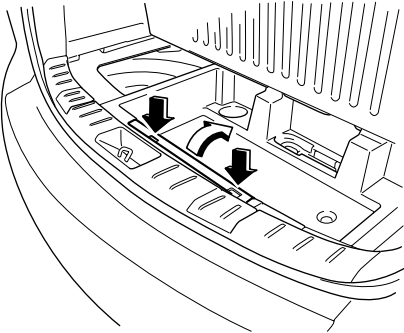


# Flat Tire

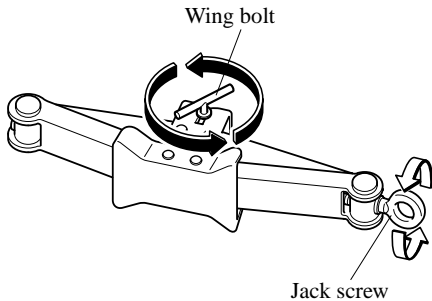
## ▼ Jack

### To remove the jack

1. Open the cargo sub-compartment.
2. Remove the cover.

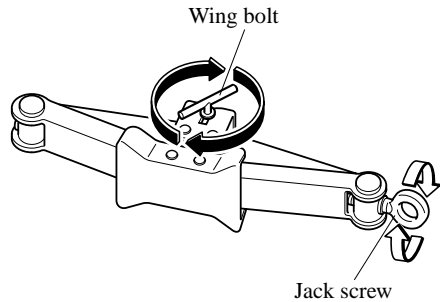


3. Turn the wing bolt and jack screw counterclockwise.



### To secure the jack

1. Insert the wing bolt into the jack with the jack screw pointing right and turn the wing bolt clockwise to temporarily tighten it.
2. Turn the jack screw in the direction shown in the figure.



3. Turn the wing bolt completely to secure the jack.

### **NOTE**

*If the jack is not completely secured, it could rattle while driving. Make sure the jack screw is sufficiently tightened.*

### Maintenance

- Always keep the jack clean.
- Make sure the moving parts are kept free from dirt or rust.
- Make sure the screw thread is adequately lubricated.

**▼ Spare Tire**

Your Mazda has a temporary spare tire. The temporary spare tire is lighter and smaller than a conventional tire, and is designed only for emergency use and should be used only for VERY short periods. Temporary spare tires should NEVER be used for long drives or extended periods.

**⚠ WARNING**

**Do not install the temporary spare tire in place of the front wheels (driving wheels):**

*Driving with the temporary spare tire on one of the front driving wheels is dangerous. Especially on ice or snow. Handling will be affected. You could lose control of the vehicle and have an accident. Move a regular tire to the front wheel and install the temporary spare tire to the rear.*

**⚠ CAUTION**

- *When using the temporary spare tire, driving stability may decrease compared to when using only the conventional tire. Drive carefully.*
- *To avoid damage to the temporary spare tire or to the vehicle, observe the following precautions:*
  - *Do not exceed 80 km/h (50 mph).*
  - *Avoid driving over obstacles. Also, do not drive through an automatic car wash. This tire's diameter is smaller than a conventional tire, so the ground clearance is reduced about 25 mm (1 in).*
  - *Do not use a tire chain on this tire because it will not fit properly.*
  - *Do not use your temporary spare tire on any other vehicle; it has been designed only for your Mazda.*
  - *Use only one temporary spare tire on your vehicle at the same time.*

**NOTE****(With Tire Pressure Monitoring System)**

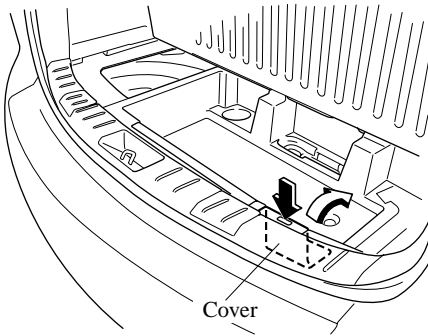
*A tire pressure sensor is not installed to the temporary spare tire. The warning light will flash continuously while the temporary spare tire is being used (page 5-30).*

**To remove the spare tire**

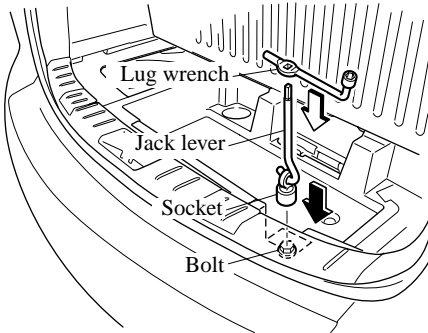
1. Have everyone get out of the vehicle and away from the vehicle and traffic.
2. Open the cargo sub-compartment. Refer to Cargo Sub-Compartment on page 6-199.

# Flat Tire

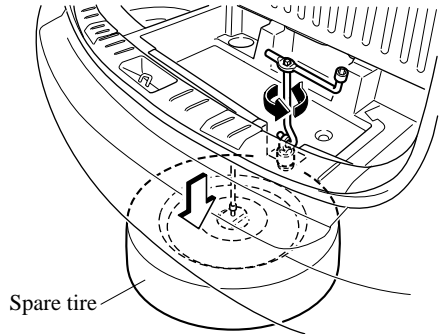
3. Remove the cover.



4. Attach the socket to the spare tire carrier bolt, the jack lever to the socket, and the lug wrench to the opposite end of the jack lever.



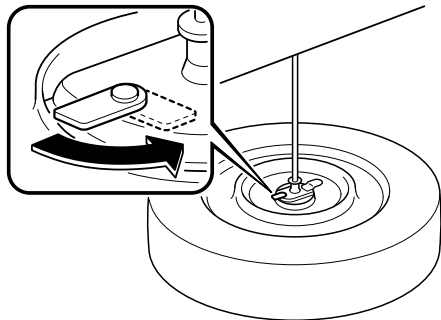
5. Slowly turn the lug wrench counterclockwise until the spare tire reaches the ground and the cable becomes loose.



## **CAUTION**

*Do not loosen the cable too much as this may cause damage to the spare tire carrier.*

6. Rotate the small lever on top of the retaining plate and pull the retaining plate out from the center hole of the tire.

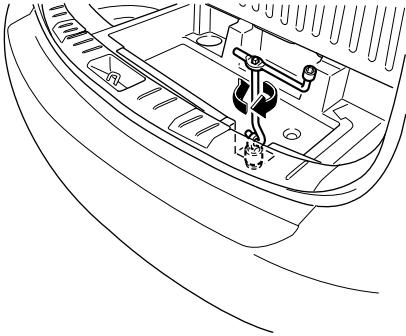




**NOTE**

A flat tire which has been removed from the vehicle for repair cannot be carried in the spare tire carrier. Secure the flat tire with the flat tire belt in the cargo sub-compartment (page 7-12).

7. If the temporary spare tire is not reinstalled in the spare tire carrier, tighten the spare tire carrier bolt completely to wind up the spare tire carrier cable.

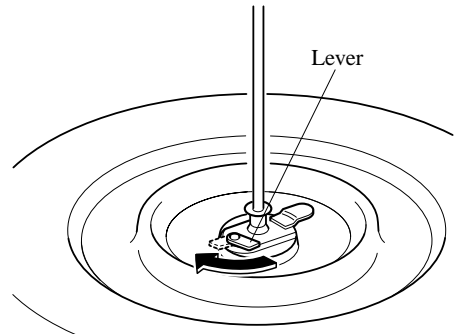
**⚠ WARNING**

**Always tighten the spare tire carrier bolt completely tight and make sure the spare tire is locked in the highest position:**

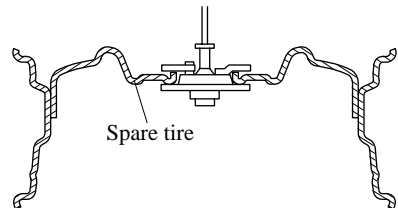
A loose spare tire carrier bolt is dangerous. The cable could be cut causing the spare tire to fall off. This could result in someone being seriously injured or even killed. Use a lug wrench to tighten the carrier bolt and make sure to tighten it until a click sound is heard.

**To secure the spare tire**

1. Place the tire with the outer side facing upward, rotate the small lever on top of the retaining plate and slide the retaining plate through the center hole of the tire. Rotate the small lever into place.

**NOTE**

Secure the spare tire as shown below.



2. Raise the spare tire slowly in reverse order of removal.

## Flat Tire

### WARNING

**Place the specialized temporary spare tire in the spare tire carrier correctly:**

Placing the specialized temporary spare tire in the spare tire carrier wrong side up or using any tire other than the small temporary spare tire designed for use with this vehicle is dangerous. It will result in poor attachment and insufficient ground clearance in the spare tire carrier and the danger of the tire falling off. This could result in someone being badly injured or even killed.

**Always tighten the spare tire carrier bolt completely tight and make sure the spare tire is locked in the highest position:**

A loose spare tire carrier bolt is dangerous. The cable could be cut causing the spare tire to fall off. This could result in someone being seriously injured or even killed. Use a lug wrench to tighten the carrier bolt and make sure to tighten it until a click sound is heard.

### CAUTION

If you hear rattling from the spare tire carrier while the vehicle is moving, the spare tire carrier cable may be cut.

Have it repaired at an Authorized Mazda Dealer as soon as possible.

### Changing a Flat Tire

#### NOTE

If the following occurs while driving, it could indicate a flat tire.

- Steering becomes difficult.
- The vehicle begins to vibrate excessively.
- The vehicle pulls in one direction.

If you have a flat tire, drive slowly to a level spot that is well off the road and out of the way of traffic to change the tire. Stopping in traffic or on the shoulder of a busy road is dangerous.

### WARNING

**Be sure to follow the directions for changing a tire:**

Changing a tire is dangerous if not done properly. The vehicle can slip off the jack and seriously injure someone. No person should place any portion of their body under a vehicle that is supported by a jack.

**Never allow anyone inside a vehicle supported by a jack:**

Allowing someone to remain in a vehicle supported by a jack is dangerous. The occupant could cause the vehicle to fall resulting in serious injury.

### CAUTION

**(With Tire Pressure Monitoring System)**

The wheels equipped on your Mazda are specially designed for installation of the tire pressure sensors. Do not use non-genuine wheels, otherwise it may not be possible to install the tire pressure sensors.

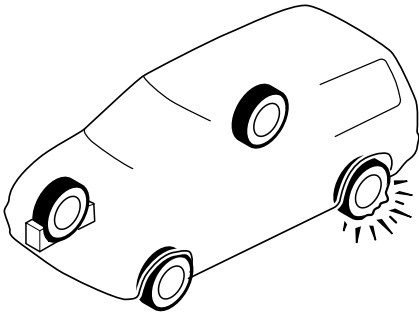
**NOTE**

- Make sure the jack is well lubricated before using it.

**(With Tire Pressure Monitoring System)**

- Be sure to register the tire pressure sensor ID signal code whenever tires or wheels are changed (page 5-32).

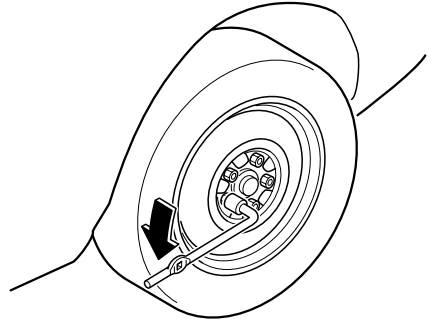
1. Park on a level surface off the right-of-way and firmly set the parking brake.
2. Shift into Park (P) and turn off the engine.
3. Turn on the hazard warning flasher.
4. Have everyone get out of the vehicle and away from the vehicle and traffic.
5. Remove the jack, tool, and spare tire (page 7-3).
6. Block the wheel diagonally opposite the flat tire. When blocking a wheel, place a tire block both in front and behind the tire.

**NOTE**

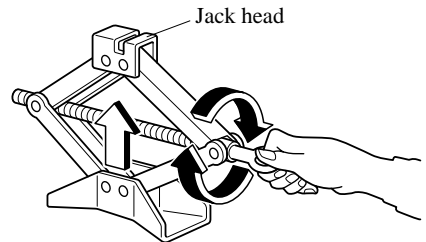
When blocking a tire, use rocks or wood blocks of sufficient size if possible to hold the tire in place.

**▼ Removing a Flat Tire**

1. Loosen the lug nuts by turning them counterclockwise one turn each, but do not remove any lug nuts until the tire has been raised off the ground.

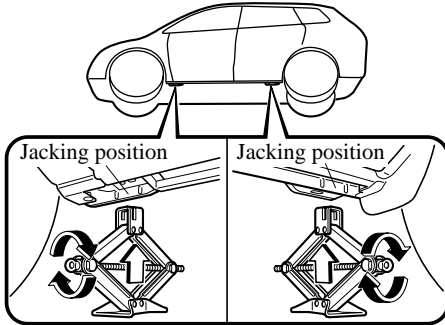


2. Place the jack on the ground.
3. Turn the jack screw in the direction shown in the figure and adjust the jack head so that it is close to the jack-up position.

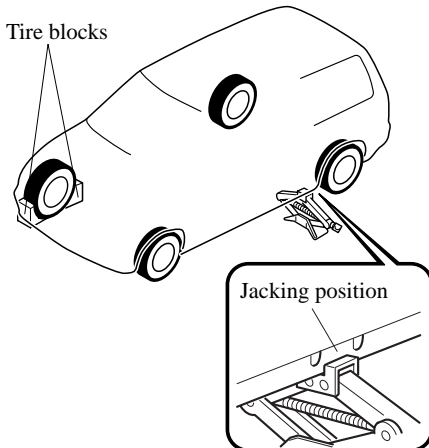


## Flat Tire

- Place the jack under the jack-up position closest to the tire being changed with the jack head squarely under the jack-up point.



- Continue raising the jack head gradually by rotating the screw with your hand until the jack head is inserted into the jack-up position.



### **⚠ WARNING**

**Use only the front and rear jacking positions recommended in this manual:**

Attempting to jack the vehicle in positions other than those recommended in this manual is dangerous. The vehicle could slip off the jack and seriously injure or even kill someone. Use only the front and rear jacking positions recommended in this manual.

**Do not jack up the vehicle in a position other than the designated jack-up position or place any objects on or under the jack:**

Jacking up the vehicle in a position other than the designated jack-up position or placing objects on or under the jack is dangerous as it could deform the vehicle body or the vehicle could fall off the jack resulting in an accident.

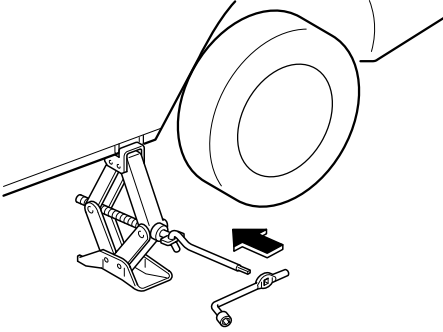
**Use only the jack provided with your Mazda:**

Using a jack that is not designed for your Mazda is dangerous. The vehicle could slip off the jack and seriously injure someone.

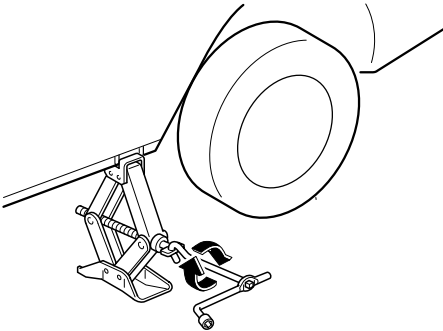
**Never place objects under the jack:**

Jacking the vehicle with an object under the jack is dangerous. The jack could slip and someone could be seriously injured by the jack or the falling vehicle.

6. Insert the jack lever and attach the lug wrench to tire jack.



7. Turn the lug wrench clockwise and raise the vehicle high enough so that the spare tire can be installed. Before removing the lug nuts, make sure your Mazda is firmly in position and that it cannot slip or move.



### **⚠ WARNING**

**Do not jack up the vehicle higher than is necessary:**

*Jacking up the vehicle higher than is necessary is dangerous as it could destabilize the vehicle resulting in an accident.*

**Do not start the engine or shake the vehicle while it is jacked up:**

*Starting the engine or shaking the vehicle while it is jacked up is dangerous as it could cause the vehicle to fall off the jack resulting in an accident.*

**Never go under the vehicle while it is jacked up:**

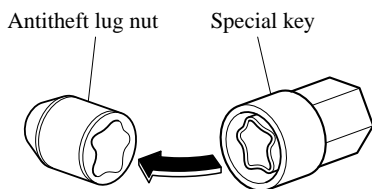
*Going under the vehicle while it is jacked up is dangerous as it could result in death or serious injury if the vehicle were to fall off the jack.*

8. Remove the lug nuts by turning them counterclockwise; then remove the wheel and center cap.

## Flat Tire

### ▼ Locking Lug Nuts \*

If your vehicle has optional antitheft wheel lug nuts, one on each wheel will lock the tires and you must use a special key to unlock them. This key is attached to the lug wrench and is stored with the spare tire. Register them with the lock manufacturer by filling out the card provided in the glove compartment and mailing it in the accompanying envelope. If you lose this key, consult an Authorized Mazda Dealer or use the lock manufacturer's order form, which is with the registration card.



### To remove an antitheft lug nut

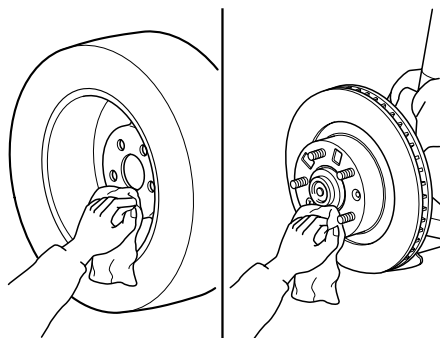
1. Obtain the key for the antitheft lug nut.
2. Place the key on top of the nut, and be sure to hold the key square to it. If you hold the key at an angle, you may damage both key and nut. Do not use a power impact wrench.
3. Place the lug wrench on top of the key and apply pressure. Turn the wrench counterclockwise.

### To install the nut

1. Place the key on top of the nut, and be sure to hold the key square to it. If you hold the key at an angle, you may damage both key and nut. Do not use a power impact wrench.
2. Place the lug wrench on top of the key, apply pressure, and turn it clockwise.

### ▼ Mounting the Spare Tire

1. Remove dirt and grime from the mounting surfaces of the wheel and hub, including the hub bolts, with a cloth.



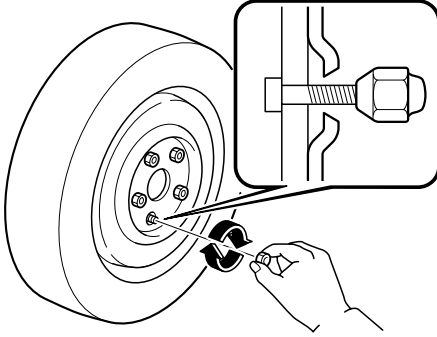
### **⚠ WARNING**

***Make sure the mounting surfaces of the wheel, hub and lug nuts are clean before changing or replacing tires:***

*When changing or replacing a tire, not removing dirt and grime from the mounting surfaces of the wheel, hub and hub bolts is dangerous. The lug nuts could loosen while driving and cause the tire to come off, resulting in an accident.*

2. Mount the spare tire.

3. Install the lug nuts with the beveled edge inward; tighten them by hand.

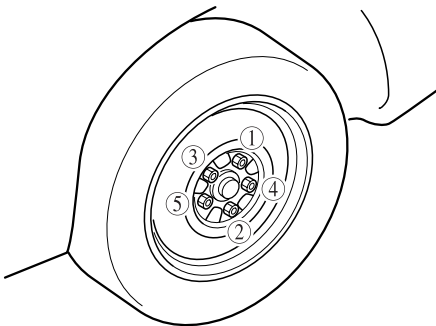


### **⚠ WARNING**

**Do not apply oil or grease to lug nuts and bolts and do not tighten the lug nuts beyond the recommended tightening torque:**

*Applying oil or grease to lug nuts and bolts is dangerous. The lug nuts could loosen while driving and cause the tire to come off, resulting in an accident. In addition, lug nuts and bolts could be damaged if tightened more than necessary.*

4. Turn the lug wrench counterclockwise and lower the vehicle. Use the lug wrench to tighten the nuts in the order shown.



If you are unsure of how tight the nuts should be, have them inspected at an Authorized Mazda Dealer.

Nut tightening torque	
N·m (kgf·m, ft·lbf)	107.8—147.0 (11.0—14.9, 79.6—108.4)

### **⚠ WARNING**

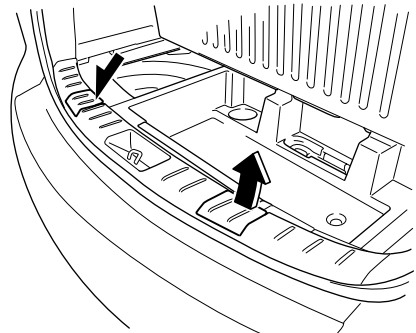
**Always securely and correctly tighten the lug nuts:**

*Improperly or loosely tightened lug nuts are dangerous. The wheel could wobble or come off. This could result in loss of vehicle control and cause a serious accident.*

**Be sure to reinstall the same nuts you removed or replace them with metric nuts of the same configuration:**

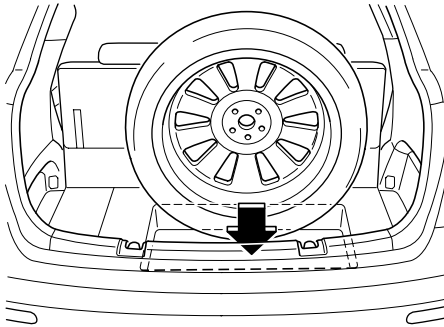
*Because the wheel studs and lug nuts on your Mazda have metric threads, using a non-metric nut is dangerous. On a metric stud, it would not secure the wheel and would damage the stud, which could cause the wheel to slip off and cause an accident.*

5. Open the cargo sub-compartment. Refer to Cargo Sub-Compartment on page 6-199.
6. Remove the cover.

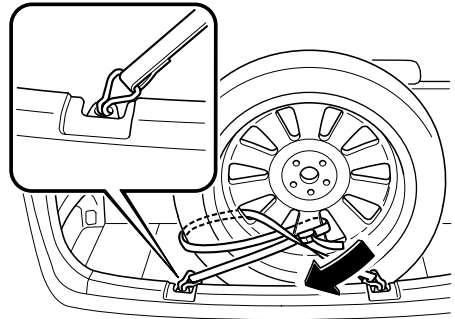
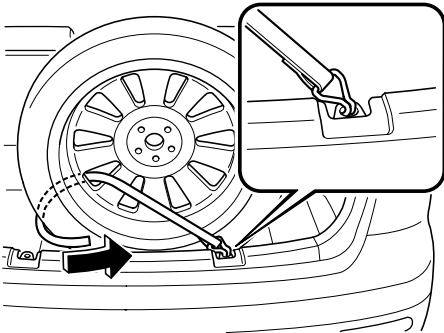


# Flat Tire

7. Remove the belt for securing the flat tire.
8. Return the third-row seatback to its original position.  
Refer to Split-Folding the Third-Row Seat on page 2-14.
9. Remove the tire blocks and store the tools and jack.
10. Place the flat tire in the cargo sub-compartment.

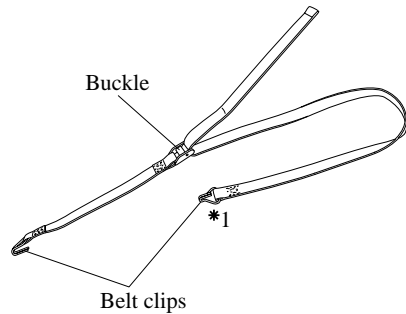


11. Thread the belt through the wheel as shown in the figure, then attach the belt clips to the attachment loop.

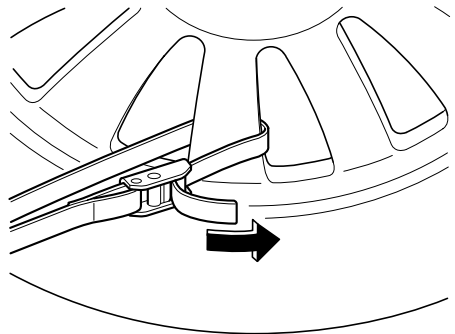


## NOTE

Attach location \*1 of the belt to the attachment loop on the right.



12. Pull the belt end to secure the flat tire.



13. Check the tire inflation pressure.  
Refer to Tires on page 10-6.



14. Have the flat tire repaired or replaced as soon as possible.

## **WARNING**

**Do not drive with any tires that have incorrect air pressure:**

*Driving on tires with incorrect air pressure is dangerous. Tires with incorrect pressure could affect handling and result in an accident. When you check the regular tires' air pressure, check the spare tire, too.*

### **NOTE**

**(With Tire Pressure Monitoring System)**

*A tire pressure sensor is not installed to the temporary spare tire. The warning light will flash continuously while the temporary spare tire is being used (page 5-30).*

### **NOTE**

*To prevent the jack and tool from rattling, store them properly.*


## Overheating

### Overheating

If the temperature gauge indicates overheating, the vehicle loses power, or you hear a loud knocking or pinging noise, the engine is probably too hot.

#### **WARNING**



 **Switch the ignition to off and make sure the fan is not running before attempting to work near the cooling fan:**

*Working near the cooling fan when it is running is dangerous. The fan could continue running indefinitely even if the engine has stopped and the engine compartment temperature is high. You could be hit by the fan and seriously injured.*



**Do not remove either cooling system caps when the engine and radiator are hot:**

*When the engine and radiator are hot, scalding coolant and steam may shoot out under pressure and cause serious injury.*

**Open the hood ONLY after steam is no longer escaping from the engine:**

*Steam from an overheated engine is dangerous. The escaping steam could seriously burn you.*

If the temperature gauge indicates overheating:

1. Drive safely to the side of the road and park off the right-of-way.
2. Shift into park (P).

3. Apply the parking brake.
4. Turn off the air conditioner.
5. Check whether coolant or steam is escaping from under the hood or from the engine compartment.

#### **If steam is coming from the engine compartment:**

Do not go near the front of the vehicle. Stop the engine. Wait until the steam dissipates, then open the hood and start the engine.

#### **If neither coolant nor steam is escaping:**

Open the hood and idle the engine until it cools.

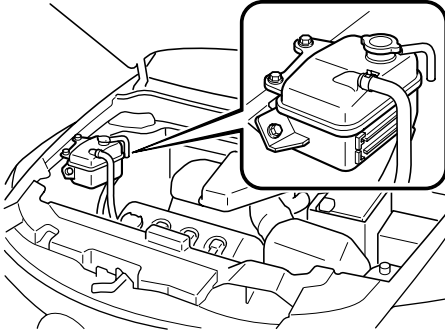
#### **CAUTION**

*If the cooling fan does not operate while the engine is running, the engine temperature will increase. Stop the engine and call an Authorized Mazda Dealer.*

6. Make sure the cooling fan is operating, then turn off the engine after the temperature has decreased.
7. When cool, check the coolant reservoir level. If it's low, look for coolant leaks from the radiator and hoses.

**If you find a leak or other damage, or if coolant is still leaking:**

Stop the engine and call an Authorized Mazda Dealer.



**If you find no problems, the engine is cool, and no leaks are obvious:**

Carefully add coolant as required (page 8-21).

**⚠ CAUTION**

*If the engine continues to overheat or frequently overheats, have the cooling system inspected. The engine could be seriously damaged unless repairs are made. Consult an Authorized Mazda Dealer.*

## Emergency Starting

---

### Jump-Starting

Jump-starting is dangerous if done incorrectly. So follow the procedure carefully. If you feel unsure about jump-starting, we strongly recommend that you have a competent service technician do the work.

#### **WARNING**



#### **Follow These Precautions Carefully:**

To ensure safe and correct handling of the battery, read the following precautions carefully before using the battery or inspecting it.



#### **Always wear eye protection when working near the battery:**

Working without eye protection is dangerous. Battery fluid contains SULFURIC ACID which could cause blindness if splashed into your eyes. Also, hydrogen gas produced during normal battery operation, could ignite and cause the battery to explode.



#### **Wear eye protection and protective gloves to prevent contact with battery fluid:**

Spilled battery fluid is dangerous.

Battery fluid contains SULFURIC ACID which could cause serious injuries if it gets in eyes, skin or clothing. If this happens, immediately flush your eyes with water for 15 minutes or wash your skin thoroughly and get medical attention.



#### **Always keep batteries out of the reach of children:**

Allowing children to play near batteries is dangerous. Battery fluid could cause serious injuries if it gets in the eyes or on the skin.



#### **Do not allow the positive (+) terminal to contact any other metal object that could cause sparks:**

Flames and sparks near open battery cells are dangerous. Hydrogen gas, produced during normal battery operation, could ignite and cause the battery to explode. An exploding battery can cause serious burns and injuries. When working near a battery, do not allow metal tools to contact the positive (+) or negative (–) terminal of the battery.

## Emergency Starting



**Keep all flames, including cigarettes, and sparks away from open battery cells:**

Flames and sparks near open battery cells are dangerous. Hydrogen gas, produced during normal battery operation, could ignite and cause the battery to explode. An exploding battery can cause serious burns and injuries.

**Do not jump-start a frozen battery or one with a low fluid level:**

Jump-starting a frozen battery or one with a low fluid level is dangerous. It may rupture or explode, causing serious injury.

**Connect the negative cable to a good ground point away from the battery:**

Connecting the end of the second jumper cable to the negative (–) terminal of the discharged battery is dangerous.

A spark could cause the gas around the battery to explode and injure someone.

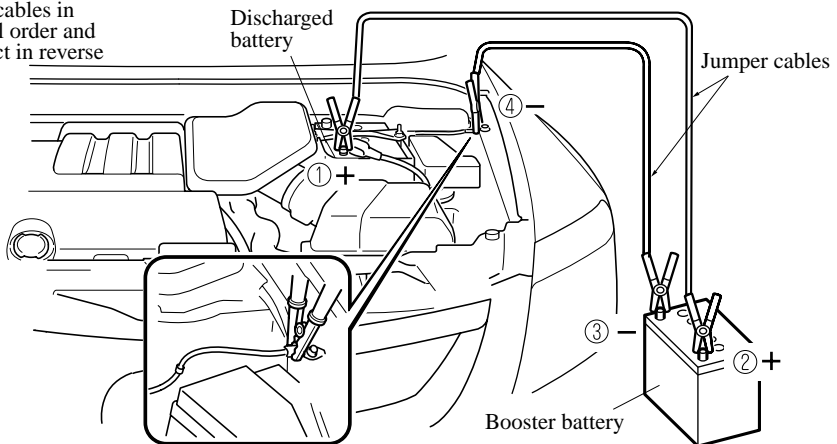
**Route the jumper cables away from parts that will be moving:**

Connecting a jumper cable near or to moving parts (cooling fans, belts) is dangerous. The cable could get caught when the engine starts and cause serious injury.

### CAUTION

Use only a 12 V booster system. You can damage a 12 V starter, ignition system, and other electrical parts beyond repair with a 24 V power supply (two 12 V batteries in series or a 24 V motor generator set).

Connect cables in numerical order and disconnect in reverse order



## Emergency Starting

---

1. Make sure the booster battery is 12 V and that its negative terminal is grounded.
2. If the booster battery is in another vehicle, don't allow both vehicles to touch. Turn off the engine of the vehicle with the booster battery and all unnecessary electrical loads in both vehicles.
3. Connect the jumper cables in the exact sequence as in the illustration.
  - Connect one end of a cable to the positive terminal on the discharged battery (1).
  - Attach the other end to the positive terminal on the booster battery (2).
  - Connect one end of the other cable to the negative terminal of the booster battery (3).
  - Connect the other end to the ground point indicated in the illustration away from the discharged battery (4).
4. Start the engine of the booster vehicle and run it a few minutes. Then start the engine of the other vehicle.
5. When finished, carefully disconnect the cables in the reverse order described in the illustration.

### Push-Starting

Do not push-start your Mazda.

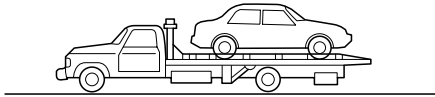
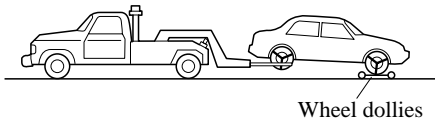
**NOTE**

*You can't start a vehicle with an automatic transaxle by pushing it.*

## Towing Description

We recommend that towing be done only by an Authorized Mazda Dealer or a commercial tow-truck service.

Proper lifting and towing are necessary to prevent damage to the vehicle. Particularly when towing a AWD vehicle, where all the wheels are connected to the drive train, proper transporting of the vehicle is absolutely essential to avoid damaging the drive system. Government and local laws must be followed.



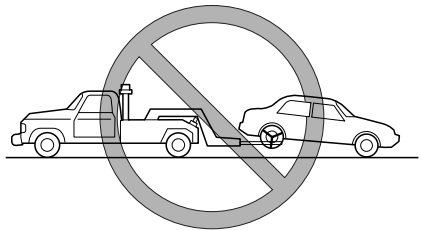
A towed 2WD vehicle should have its drive wheels (front wheels) off the ground. If excessive damage or other conditions prevent this, use wheel dollies.

When towing a 2WD vehicle with the rear wheels on the ground, release the parking brake.

A towed AWD vehicle must have all its wheels off the ground.

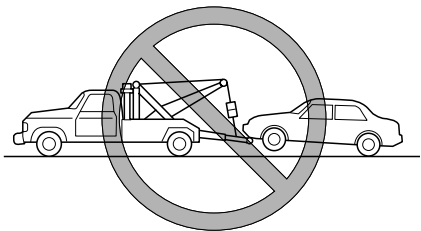
### **CAUTION**

*Do not tow the vehicle pointed backward with driving wheels on the ground. This may cause internal damage to the transaxle.*



### **CAUTION**

*Do not tow with sling-type equipment. This could damage your vehicle. Use wheel-lift or flatbed equipment.*

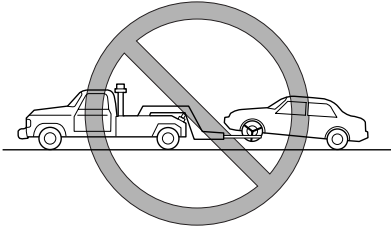


## Emergency Towing

### **⚠ WARNING**

**Always tow a AWD vehicle with all four wheels off the ground:**

Towing a AWD vehicle with either the front or rear wheels on the ground is dangerous as the drive train could be damaged, or the vehicle could trail away from the tow truck and cause an accident. If the drive train has been damaged, transport the vehicle on a flat bed truck.



### Tiedown Hooks

#### **⚠ CAUTION**

Do not use the front and rear tiedown eyelets for towing the vehicle.

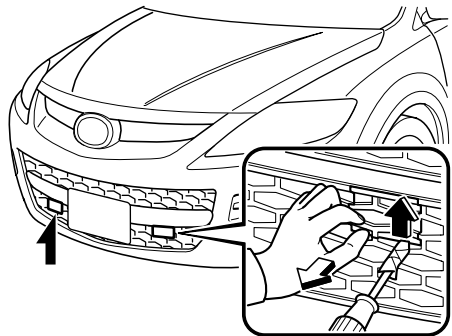
They have been designed only for securing the vehicle to a transport vessel during shipping.

Using the eyelets for any other purpose could result in the vehicle being damaged.

#### ▼ Tiedown Hooks

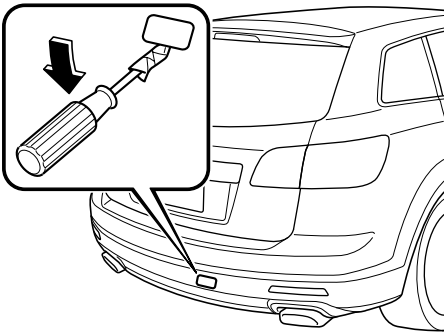
1. Remove the tiedown eyelet and the lug wrench from the trunk (page 7-3).
2. Wrap a flathead screwdriver or similar tool with a soft cloth to prevent damage to a painted bumper, and open the cap located on the front or rear bumper.  
Remove the front bumper cap by pulling it from the position shown in the figure.

#### Front





**Rear**



**⚠ CAUTION**

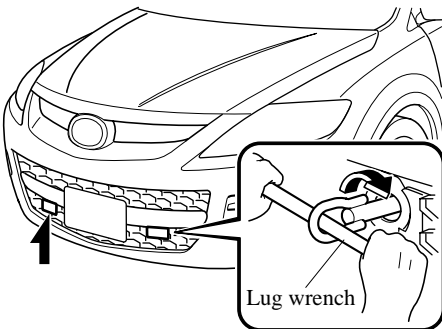
- Do not use excessive force as it may damage the cap or scratch the painted bumper surface.
- The rear bumper cover cannot be removed completely. Attempting to forcefully remove the rear bumper cover could result in it being damaged.

**NOTE**

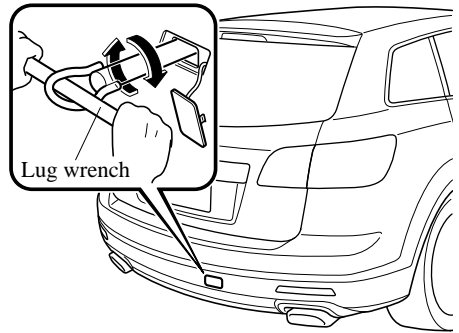
Remove the front bumper cover completely and store it so as not to lose it.

3. Securely install the tiedown eyelet using the lug wrench.

**Front**

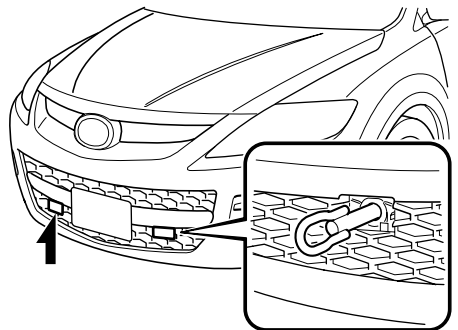


**Rear**

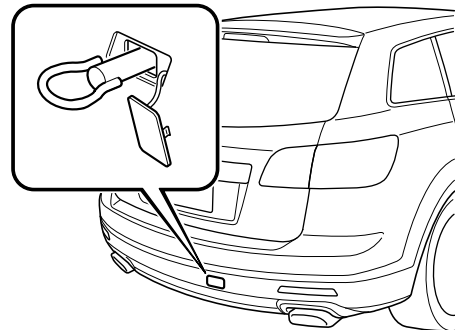


4. Hook the tying rope to the tiedown eyelet.

**Front**



**Rear**



## Emergency Towing

---

### CAUTION

*If the tiedown eyelet is not securely tightened, it may loosen or disengage from the bumper when tying down the vehicle. Make sure that the tiedown eyelet is securely tightened to the bumper.*

### Recreational Towing

An example of “recreational towing” is towing your vehicle behind a motorhome. The transaxle is not designed for towing this vehicle on all 4 wheels.

When doing recreational towing refer to “Towing Description” (page 7-21) and “Tiedown Hooks” (page 7-22) and carefully follow the instructions.

# 8

## Maintenance and Care

How to keep your Mazda in top condition.

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## Introduction

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### Introduction

Be extremely careful and prevent injury to yourself and others or damage to your vehicle when using this manual for inspection and maintenance.

If you are unsure about any procedure it describes, we strongly urge you to have a reliable and qualified service shop perform the work, preferably an Authorized Mazda Dealer.

Factory-trained Mazda technicians and genuine Mazda parts are best for your vehicle. Without this expertise and the parts that have been designed and made especially for your Mazda, inadequate, incomplete, and insufficient servicing may result in problems. This could lead to vehicle damage or an accident and injuries.

For expert advice and quality service, consult an Authorized Mazda Dealer.

The owner should retain evidence that proper maintenance has been performed as prescribed.

Claims against the warranty resulting from lack of maintenance, as opposed to defective materials or authorized Mazda workmanship, will not be honored.

Any auto repair shop using parts equivalent to your Mazda's original equipment may perform maintenance. **But we recommend that it always be done by an Authorized Mazda Dealer using genuine Mazda parts.**

## **Scheduled Maintenance (USA, Canada, and Puerto Rico)**

Follow Schedule 1 if the vehicle is operated mainly where none of the following conditions apply.

- Repeated short-distance driving
- Driving in dusty conditions
- Driving with extended use of brakes
- Driving in areas where salt or other corrosive materials are used
- Driving on rough or muddy roads
- Extended periods of idling or low-speed operation
- Driving for long periods in cold temperatures or extremely humid climates
- Driving in extremely hot conditions
- Driving in mountainous conditions continually

If any do apply, follow Schedule 2 (Canada and Puerto Rico residents follow Schedule 2).

### **NOTE**

*After the prescribed period, continue to follow the described maintenance at the recommended intervals.*

# Scheduled Maintenance

## ▼ Schedule 1

Maintenance Interval	Number of months or kilometers (miles), whichever comes first								
	Months	6	12	18	24	30	36	42	48
	×1000 km	12	24	36	48	60	72	84	96
	×1000 miles	7.5	15	22.5	30	37.5	45	52.5	60
<b>ENGINE</b>									
Drive belts	Inspect every 168,000 km (105,000 miles) Replace every 240,000 km (150,000 miles)								
Engine oil	R	R	R	R	R	R	R	R	R
Engine oil filter	R	R	R	R	R	R	R	R	R
<b>COOLING SYSTEM</b>									
Engine coolant	FL22 type*1	Replace at first 192,000 km (120,000 miles) or 10 years; after that, every 96,000 km (60,000 miles) or 5 years							
	Others	Replace at first 96,000 km (60,000 miles) or 4 years; after that, every 2 years							
<b>FUEL SYSTEM</b>									
Air filter			C		R				C
Fuel lines and hoses*2				I					I
Hoses and tubes for emission*2									I
<b>IGNITION SYSTEM</b>									
Spark plugs	Replace every 160,000 km (100,000 miles)								
<b>CHASSIS and BODY</b>									
Brake lines, hoses and connections				I					I
Disc brakes		I		I		I			I
Tire (Rotation)	Rotate every 12,000 km (7,500 miles)								
Steering operation and linkages				I					I
Front and rear suspension, ball joints and wheel bearing axial play				I					I
Rear differential oil (AWD)	*3*4								
Driveshaft dust boots				I					I
Bolts and nuts on chassis and body				T					T
Exhaust system and heat shields	Inspect every 72,000 km (45,000 miles) or 5 years								
All locks and hinges	L	L	L	L	L	L	L	L	L

Maintenance and Care  
**Scheduled Maintenance**

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Maintenance Interval	Number of months or kilometers (miles), whichever comes first								
	Months	6	12	18	24	30	36	42	48
	×1000 km	12	24	36	48	60	72	84	96
	×1000 miles	7.5	15	22.5	30	37.5	45	52.5	60
<b>AIR CONDITIONER SYSTEM</b>									
Cabin air filter					Replace every 40,000 km (25,000 miles) or 2 years				

**Chart symbols:**

- I:** Inspect: Inspect and clean, repair, adjust, fill up, or replace if necessary.
- R:** Replace
- C:** Clean
- T:** Tighten
- L:** Lubricate

**Remarks:**

- \*1 Use FL22 type coolant in vehicles with the inscription “FL22” on the radiator cap itself or the surrounding area. Use FL22 when replacing the coolant.
- \*2 According to state/provincial and federal regulations, failure to perform maintenance on these items will not void your emissions warranties. However, Mazda recommends that all maintenance services be performed at the recommended time or mileage/kilometer period to ensure long-term reliability.
- \*3 If the vehicle is operated primarily under any of the following conditions, replace the rear differential oil at every 45,000 km (28,100 miles).
  - a) Towing a trailer or using a car-top carrier
  - b) Driving in dusty, sandy or wet conditions
  - c) Extended periods of idling or low speed operation
  - d) Repeated short trips of less than 16 km (10 miles)
- \*4 If this component has been submerged in water, the oil should be replaced.

# Scheduled Maintenance

## ▼ Schedule 2

Maintenance Interval	Number of months or kilometers (miles), whichever comes first												
	Months	4	8	12	16	20	24	28	32	36	40	44	48
	×1000 km	8	16	24	32	40	48	56	64	72	80	88	96
	×1000 miles	5	10	15	20	25	30	35	40	45	50	55	60
<b>ENGINE</b>													
Drive belts		Inspect every 160,000 km (100,000 miles)											
		Replace every 240,000 km (150,000 miles)											
Engine oil		Puerto Rico											
		Replace every 5,000 km (3,000 miles) or 3 months											
Others		R	R	R	R	R	R	R	R	R	R	R	R
Engine oil filter		R	R	R	R	R	R	R	R	R	R	R	R
<b>COOLING SYSTEM</b>													
Engine coolant		FL22 type*1											
		Replace at first 192,000 km (120,000 miles) or 10 years; after that, every 96,000 km (60,000 miles) or 5 years											
Others		Replace at first 96,000 km (60,000 miles) or 4 years; after that, every 2 years											
Engine coolant level		I	I	I	I	I	I	I	I	I	I	I	I
<b>FUEL SYSTEM</b>													
Air filter		Puerto Rico											
				C			R			C			R
Others					C			R				C	
Fuel lines and hoses*2							I						I
Hoses and tubes for emission*2													I
<b>IGNITION SYSTEM</b>													
Spark plugs		USA											
		Replace every 96,000 km (60,000 miles)											
Others*3		Replace every 160,000 km (100,000 miles)											
<b>ELECTRICAL SYSTEM</b>													
Function of all lights		I	I	I	I	I	I	I	I	I	I	I	I



Maintenance and Care  
**Scheduled Maintenance**

Maintenance Interval	Number of months or kilometers (miles), whichever comes first												
	Months	4	8	12	16	20	24	28	32	36	40	44	48
	×1000 km	8	16	24	32	40	48	56	64	72	80	88	96
	×1000 miles	5	10	15	20	25	30	35	40	45	50	55	60
<b>CHASSIS and BODY</b>													
Brake lines, hoses and connections							I						I
Brake fluid level	I	I	I	I	I	I	I	I	I	I	I	I	I
Disc brakes			I				I			I			I
Tire (Rotation)	Rotate every 8,000 km (5,000 miles)												
Tire inflation pressure and tire wear	I	I	I	I	I	I	I	I	I	I	I	I	I
Steering operation and linkages							I						I
Power steering fluid level	I	I	I	I	I	I	I	I	I	I	I	I	I
Front and rear suspension, ball joints and wheel bearing axial play							I						I
Rear differential oil (AWD)	*4*5												
Driveshaft dust boots							I						I
Bolts and nuts on chassis and body							T						T
Exhaust system and heat shields	Inspect every 72,000 km (45,000 miles) or 5 years												
All locks and hinges	L	L	L	L	L	L	L	L	L	L	L	L	L
Washer fluid level	I	I	I	I	I	I	I	I	I	I	I	I	I

# Scheduled Maintenance

Maintenance Interval	Number of months or kilometers (miles), whichever comes first												
	Months	4	8	12	16	20	24	28	32	36	40	44	48
	×1000 km	8	16	24	32	40	48	56	64	72	80	88	96
	×1000 miles	5	10	15	20	25	30	35	40	45	50	55	60
<b>AIR CONDITIONER SYSTEM</b>													
Cabin air filter		Replace every 40,000 km (25,000 miles) or 2 years											

**Chart symbols:**

- I:** Inspect: Inspect and clean, repair, adjust, fill up, or replace if necessary.
- R:** Replace
- C:** Clean
- T:** Tighten
- L:** Lubricate

**Remarks:**

- \*1 Use FL22 type coolant in vehicles with the inscription “FL22” on the radiator cap itself or the surrounding area. Use FL22 when replacing the coolant.
- \*2 According to state/provincial and federal regulations, failure to perform maintenance on these items will not void your emissions warranties. However, Mazda recommends that all maintenance services be performed at the recommended time or mileage/kilometer period to ensure long-term reliability.
- \*3 If the vehicle is operated primarily under any of the following conditions, replace the spark plugs at every 96,000 km (60,000 miles) or shorter.
  - a) Repeated short-distance driving
  - b) Extended periods of idling or low-speed operation
  - c) Driving for long periods in cold temperatures or extremely humid climates
- \*4 If the vehicle is operated primarily under any of the following conditions, replace the rear differential oil at every 45,000 km (28,100 miles).
  - a) Towing a trailer or using a car-top carrier
  - b) Driving in dusty, sandy or wet conditions
  - c) Extended periods of idling or low speed operation
  - d) Repeated short trips of less than 16 km (10 miles)
- \*5 If this component has been submerged in water, the oil should be replaced.

## **Scheduled Maintenance (Mexico)**

Follow Schedule 1 if the vehicle is operated mainly where none of the following conditions apply.

- Repeated short-distance driving
- Driving in dusty conditions
- Driving with extended use of brakes
- Driving in areas where salt or other corrosive materials are used
- Driving on rough or muddy roads
- Extended periods of idling or low-speed operation
- Driving for long periods in cold temperatures or extremely humid climates
- Driving in extremely hot conditions
- Driving in mountainous conditions continually

If any do apply, follow Schedule 2.

### **NOTE**

*After the prescribed period, continue to follow the described maintenance at the recommended intervals.*

# Scheduled Maintenance

## ▼ Schedule 1

Maintenance Interval	Number of months or kilometers, whichever comes first												
	Months	6	12	18	24	30	36	42	48	54	60	66	72
	×1000 km	10	20	30	40	50	60	70	80	90	100	110	120
<b>ENGINE</b>													
Drive belts	Inspect every 40,000 km or 2 years Replace every 240,000 km												
Engine oil	R	R	R	R	R	R	R	R	R	R	R	R	R
Engine oil filter	R	R	R	R	R	R	R	R	R	R	R	R	R
<b>COOLING SYSTEM</b>													
Cooling system				I					I				I
Engine coolant	FL22 type*1	Replace at first 190,000 km or 10 years; after that, every 60,000 km or 3 years											
	Others				R				R				R
<b>FUEL SYSTEM</b>													
Air filter		R		R		R		R		R		R	
Fuel lines and hoses				I*2				I*2					I
Hoses and tubes for emission				I*2				I*2					I
Fuel filter				R				R					R
<b>IGNITION SYSTEM</b>													
Spark plugs	Replace every 60,000 km												
<b>CHASSIS and BODY</b>													
Brake lines, hoses and connections		I		I		I		I		I		I	
Brake fluid level	I	I	I		I	I	I		I	I	I		
Brake fluid				R				R					R
Disc brakes	I	I	I	I	I	I	I	I	I	I	I	I	I
Tire (Rotation)	Rotate every 10,000 km												
Tire inflation pressure and tire wear	I	I	I	I	I	I	I	I	I	I	I	I	I
Steering operation and linkages	I	I	I	I	I	I	I	I	I	I	I	I	I
Power steering fluid level	I	I	I	I	I	I	I	I	I	I	I	I	I
Front and rear suspension, ball joints and wheel bearing axial play		I		I		I		I		I		I	
Rear differential oil (AWD)	*3*4												
Driveshaft dust boots		I		I		I		I		I		I	
Bolts and nuts on chassis and body		T		T		T		T		T		T	
Exhaust system and heat shields		I		I		I		I		I		I	
All locks and hinges	L	L	L	L	L	L	L	L	L	L	L	L	L
Washer fluid level	I	I	I	I	I	I	I	I	I	I	I	I	I

## Scheduled Maintenance

Maintenance Interval	Number of months or kilometers, whichever comes first												
	Months	6	12	18	24	30	36	42	48	54	60	66	72
	×1000 km	10	20	30	40	50	60	70	80	90	100	110	120
<b>AIR CONDITIONER SYSTEM</b>													
Cabin air filter					R				R				R

### **Chart symbols:**

**I:** Inspect: Inspect and clean, repair, adjust, fill up, or replace if necessary.

**R:** Replace

**T:** Tighten

**L:** Lubricate

### **Remarks:**

- \*1 Use FL22 type coolant in vehicles with the inscription “FL22” on the radiator cap itself or the surrounding area. Use FL22 when replacing the coolant.
- \*2 According to state/provincial and federal regulations, failure to perform maintenance on these items will not void your emissions warranties. However, Mazda recommends that all maintenance services be performed at the recommended time or kilometer period to ensure long-term reliability.
- \*3 If the vehicle is operated primarily under any of the following conditions, replace the rear differential oil at every 40,000 km.
  - a) Towing a trailer or using a car-top carrier
  - b) Driving in dusty, sandy or wet conditions
  - c) Extended periods of idling or low speed operation
  - d) Repeated short trips of less than 16 km
- \*4 If this component has been submerged in water, the oil should be replaced.

# Scheduled Maintenance

## ▼ Schedule 2

Maintenance Interval	Number of months or kilometers, whichever comes first												
	Months	3	6	9	12	15	18	21	24	27	30	33	36
	×1000 km	5	10	15	20	25	30	35	40	45	50	55	60
<b>ENGINE</b>													
Drive belts	Inspect every 40,000 km or 2 years Replace every 240,000 km												
Engine oil	R	R	R	R	R	R	R	R	R	R	R	R	R
Engine oil filter	R	R	R	R	R	R	R	R	R	R	R	R	R
<b>COOLING SYSTEM</b>													
Cooling system									I				
Engine coolant	FL22 type*1	Replace at first 190,000 km or 10 years; after that, every 60,000 km or 3 years											
	Others							R					
Engine coolant level		I	I	I	I	I	I	I	I	I	I	I	I
<b>FUEL SYSTEM</b>													
Air filter		C		R		C		R		C		R	
Fuel lines and hoses								I*2					
Hoses and tubes for emission								I*2					
Fuel filter								R					
<b>IGNITION SYSTEM</b>													
Spark plugs	Replace every 60,000 km												
<b>ELECTRICAL SYSTEM</b>													
Function of all lights	I	I	I	I	I	I	I	I	I	I	I	I	I
<b>CHASSIS and BODY</b>													
Brake lines, hoses and connections				I				I					I
Brake fluid level		I		I		I				I			I
Brake fluid								R					
Disc brakes		I		I		I		I		I			I
Tire (Rotation)	Rotate every 10,000 km												
Tire inflation pressure and tire wear		I		I		I		I		I			I
Steering operation and linkages		I		I		I		I		I			I
Power steering fluid level		I		I		I		I		I			I
Front and rear suspension, ball joints and wheel bearing axial play				I				I					I
Rear differential oil (AWD)	*3*4												
Driveshaft dust boots				I				I					I
Bolts and nuts on chassis and body				T				T					T
Exhaust system and heat shields				I				I					I
All locks and hinges		L		L		L		L		L			L
Washer fluid level		I		I		I		I		I			I

Maintenance and Care

# Scheduled Maintenance

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Maintenance Interval	Number of months or kilometers, whichever comes first												
	Months	3	6	9	12	15	18	21	24	27	30	33	36
	×1000 km	5	10	15	20	25	30	35	40	45	50	55	60
<b>AIR CONDITIONER SYSTEM</b>													
Cabin air filter					R				R				R

**Chart symbols:**

**I:** Inspect: Inspect and clean, repair, adjust, fill up, or replace if necessary.

**R:** Replace

**C:** Clean

**T:** Tighten

**L:** Lubricate

**Remarks:**

- \*1 Use FL22 type coolant in vehicles with the inscription “FL22” on the radiator cap itself or the surrounding area. Use FL22 when replacing the coolant.
- \*2 According to state/provincial and federal regulations, failure to perform maintenance on these items will not void your emissions warranties. However, Mazda recommends that all maintenance services be performed at the recommended time or kilometer period to ensure long-term reliability.
- \*3 If the vehicle is operated primarily under any of the following conditions, replace the rear differential oil at every 40,000 km.
  - a) Towing a trailer or using a car-top carrier
  - b) Driving in dusty, sandy or wet conditions
  - c) Extended periods of idling or low speed operation
  - d) Repeated short trips of less than 16 km
- \*4 If this component has been submerged in water, the oil should be replaced.

# Scheduled Maintenance

(Cont.)

Maintenance Interval	Number of months or kilometers, whichever comes first												
	Months	39	42	45	48	51	54	57	60	63	66	69	72
	×1000 km	65	70	75	80	85	90	95	100	105	110	115	120
<b>ENGINE</b>													
Drive belts	Inspect every 40,000 km or 2 years												
	Replace every 240,000 km												
Engine oil	R	R	R	R	R	R	R	R	R	R	R	R	R
Engine oil filter	R	R	R	R	R	R	R	R	R	R	R	R	R
<b>COOLING SYSTEM</b>													
Cooling system				I									I
Engine coolant	FL22 type *1	Replace at first 190,000 km or 10 years; after that, every 60,000 km or 3 years											
	Others				R								R
Engine coolant level	I	I	I	I	I	I	I	I	I	I	I	I	I
<b>FUEL SYSTEM</b>													
Air filter		C		R		C		R		C			R
Fuel lines and hoses				I*2									I
Hoses and tubes for emission				I*2									I
Fuel filter				R									R
<b>IGNITION SYSTEM</b>													
Spark plugs	Replace every 60,000 km												
<b>ELECTRICAL SYSTEM</b>													
Function of all lights	I	I	I	I	I	I	I	I	I	I	I	I	I
<b>CHASSIS and BODY</b>													
Brake lines, hoses and connections				I				I					I
Brake fluid level		I				I		I		I			
Brake fluid				R									R
Disc brakes		I		I		I		I		I			I
Tire (Rotation)	Rotate every 10,000 km												
Tire inflation pressure and tire wear		I		I		I		I		I			I
Steering operation and linkages		I		I		I		I		I			I
Power steering fluid level		I		I		I		I		I			I
Front and rear suspension, ball joints and wheel bearing axial play				I				I					I
Rear differential oil (AWD)	*3*4												
Driveshaft dust boots				I				I					I
Bolts and nuts on chassis and body				T				T					T
Exhaust system and heat shields				I				I					I
All locks and hinges		L		L		L		L		L			L
Washer fluid level		I		I		I		I		I			I



## Scheduled Maintenance

Maintenance Interval	Number of months or kilometers, whichever comes first												
	Months	39	42	45	48	51	54	57	60	63	66	69	72
	×1000 km	65	70	75	80	85	90	95	100	105	110	115	120
<b>AIR CONDITIONER SYSTEM</b>													
Cabin air filter					R				R				R

### Chart symbols:

**I:** Inspect: Inspect and clean, repair, adjust, fill up, or replace if necessary.

**R:** Replace

**C:** Clean

**T:** Tighten

**L:** Lubricate

### Remarks:

- \*1 Use FL22 type coolant in vehicles with the inscription “FL22” on the radiator cap itself or the surrounding area. Use FL22 when replacing the coolant.
- \*2 According to state/provincial and federal regulations, failure to perform maintenance on these items will not void your emissions warranties. However, Mazda recommends that all maintenance services be performed at the recommended time or kilometer period to ensure long-term reliability.
- \*3 If the vehicle is operated primarily under any of the following conditions, replace the rear differential oil at every 40,000 km.
  - a) Towing a trailer or using a car-top carrier
  - b) Driving in dusty, sandy or wet conditions
  - c) Extended periods of idling or low speed operation
  - d) Repeated short trips of less than 16 km
- \*4 If this component has been submerged in water, the oil should be replaced.

## Owner Maintenance

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### Owner Maintenance Schedule

The owner or a qualified service technician should make these vehicle inspections at the indicated intervals to ensure safe and dependable operation.

Bring any problem to the attention of an Authorized Mazda Dealer or qualified service technician as soon as possible.

#### ▼ When Refueling

- Brake fluid level (page 8-23)
- Engine coolant level (page 8-21)
- Engine oil level (page 8-20)
- Washer fluid level (page 8-24)

#### ▼ At Least Monthly

Tire inflation pressures (page 8-32)

#### ▼ At Least Twice a Year (For Example, Every Spring and Fall)

- Power steering fluid level (page 8-24)

You can do the following scheduled maintenance items if you have some mechanical ability and a few basic tools and if you closely follow the directions in this manual.

- Engine coolant (page 8-21)
- Engine oil (page 8-19)

## Owner Maintenance Precautions

Improper or incomplete service may result in problems. This section gives instructions only for items that are easy to perform.

As explained in the Introduction (page 8-2), several procedures can be done only by a qualified service technician with special tools.

Improper owner maintenance during the warranty period may affect warranty coverage. For details, read the separate Mazda Warranty statement provided with the vehicle. If you're unsure about any servicing or maintenance procedure, have it done by an Authorized Mazda Dealer.

There are strict environmental laws regarding the disposal of waste oil and fluids. Please dispose of your waste properly and with due regard to the environment.

We recommend that you entrust the oil and fluid changes of your vehicle to an Authorized Mazda Dealer.

### **WARNING**

***Do not perform maintenance work if you lack sufficient knowledge and experience or the proper tools and equipment to do the work. Have maintenance work done by a qualified technician:***

*Performing maintenance work on a vehicle is dangerous if not done properly. You can be seriously injured while performing some maintenance procedures.*

***If you must run the engine while working under the hood, make certain that you remove all jewelry (especially rings, bracelets, watches, and necklaces) and all neckties, scarves, and similar loose clothing before getting near the engine or cooling fan which may turn on unexpectedly:***

*Working under the hood with the engine running is dangerous. It becomes even more dangerous when you wear jewelry or loose clothing.*

*Either can become entangled in moving parts and result in injury.*

***Switch the ignition to off and make sure the fan is not running before attempting to work near the cooling fan:***

*Working near the cooling fan when it is running is dangerous. The fan could continue running indefinitely even if the engine has stopped and the engine compartment temperature is high. You could be hit by the fan and seriously injured.*

***Do not leave items in the engine compartment:***

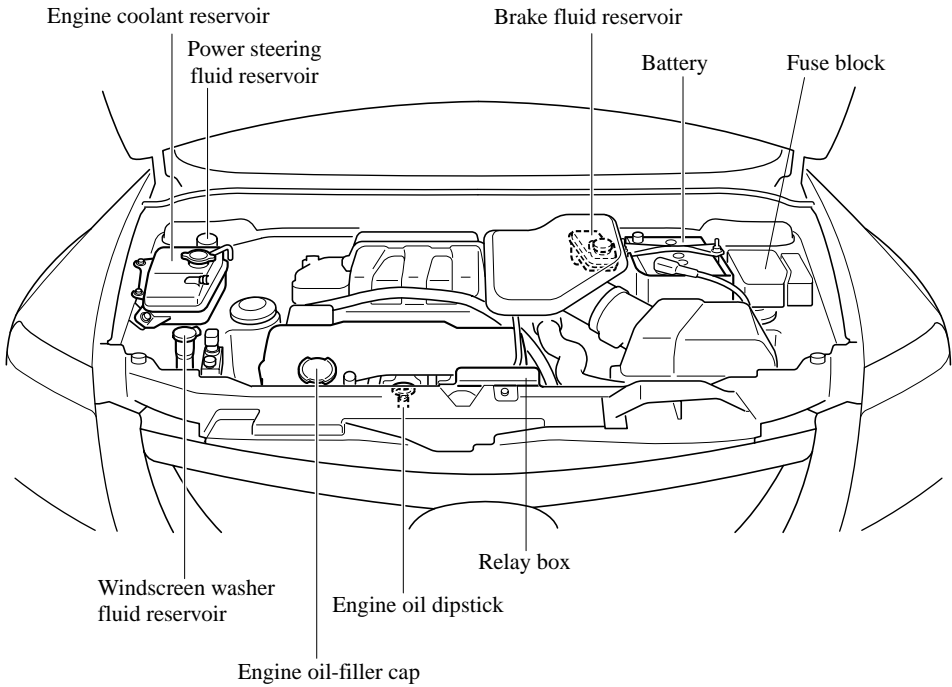
*After you have finished checking or doing servicing in the engine compartment, do not forget and leave items such as tools or rags in the engine compartment.*

*Tools or other items left in the engine compartment could cause engine damage or a fire leading to an unexpected accident.*

# Owner Maintenance

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## Engine Compartment Overview



## Engine Oil

### **NOTE**

*Changing the engine oil should be done by an Authorized Mazda Dealer.*

Mazda recommends Mazda Genuine Parts and Castrol (U.S.A and Mexico). For optimal engine performance, there are certain types of engine oils and filters suitable for your vehicle. Please consult an Authorized Mazda Dealer.

### ▼ Recommended Oil

#### **Use SAE 5W-20 engine oil.**

Oil container labels provide important information.

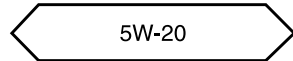
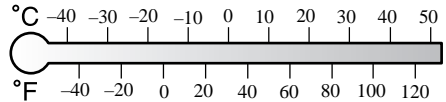
A chief contribution this type of oil makes to fuel economy is reducing the amount of fuel necessary to overcome engine friction.

#### **U.S.A. and CANADA**

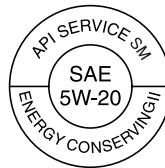


(ILSAC)

Only use oils “Certified For Gasoline Engines” by the American Petroleum Institute (API). An oil with this trademark symbol conforms to the current engine and emission system protection standards and fuel economy requirements of the International Lubricant Standardization and Approval Committee (ILSAC), comprised of U.S. and Japanese automobile manufacturers.



#### **Except U.S.A. and CANADA**

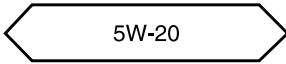
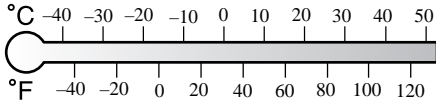


(ILSAC)

## Owner Maintenance

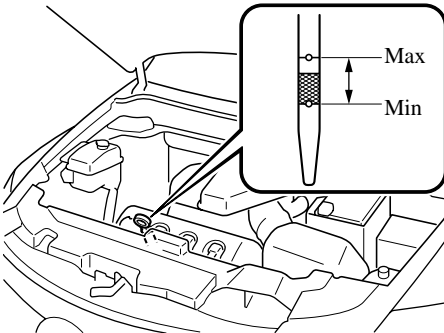
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The quality designation SM, or ILSAC must be on the label.



### ▼ Inspecting Engine Oil Level

1. Be sure the vehicle is on a level surface.
2. Warm up the engine to normal operating temperature.
3. Turn it off and wait at least 5 minutes for the oil to return to the oil pan.
4. Pull out the dipstick, wipe it clean, and reinsert it fully.



5. Pull it out again and examine the level. The level is normal if it is between MIN and MAX. If it is below MIN, add oil to raise the level within the hatching zone.

### **⚠ CAUTION**

*Do not add engine oil over MAX. This may cause engine damage.*

6. Make sure the O-ring on the dipstick is positioned properly before reinserting the dipstick.

## Engine Coolant

### ▼ Inspecting Coolant Level

#### **⚠ WARNING**

**Do not use a match or live flame in the engine compartment. DO NOT ADD COOLANT WHEN THE ENGINE IS HOT:**

*A hot engine is dangerous. If the engine has been running, parts of the engine compartment can become very hot. You could be burned.*

*Carefully inspect the engine coolant in the coolant reservoir, but do not open it.*



**Switch the ignition to off and make sure the fan is not running before attempting to work near the cooling fan:**

*Working near the cooling fan when it is running is dangerous. The fan could continue running indefinitely even if the engine has stopped and the engine compartment temperature is high. You could be hit by the fan and seriously injured.*



**Do not remove either cooling system cap when the engine and radiator are hot:**

*When the engine and radiator are hot, scalding coolant and steam may shoot out under pressure and cause serious injury.*

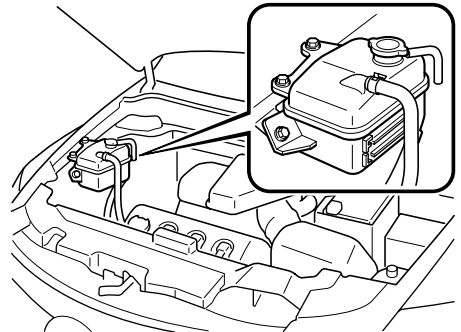
#### **NOTE**

*Changing the coolant should be done by an Authorized Mazda Dealer.*

Inspect the antifreeze protection and coolant level in the coolant reservoir at least once a year—at the beginning of the winter season—and before traveling where temperatures may drop below freezing.

Inspect the condition and connections of all cooling system and heater hoses. Replace any that are swollen or deteriorated.

The coolant should be at full in the radiator and between the F and L marks on the coolant reservoir when the engine is cool.



If it is at or near L, add enough coolant to provide freezing and corrosion protection and to bring the level to F.

Securely tighten the coolant reservoir tank cap after adding coolant.

## Owner Maintenance

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### **CAUTION**

- Radiator coolant will damage paint.  
Rinse it off quickly if spilled.
- Use only soft (demineralized) water in the coolant mixture. Water that contains minerals will cut down on the coolant's effectiveness.
- Do not add only water. Always add a proper coolant mixture.
- The engine has aluminum parts and must be protected by an ethylene-glycol-based coolant to prevent corrosion and freezing.
- DO NOT USE coolants Containing Alcohol, methanol, Borate or Silicate.  
These coolants could damage the cooling system.
- DO NOT MIX alcohol or methanol with the coolant. This could damage the cooling system.
- Do not use a solution that contains more than 60% antifreeze.  
This would reduce effectiveness.

### **NOTE**

If the "FL22" mark is shown on or near the cooling system cap, it is recommended to use Mazda Genuine FL22 engine coolant (page 8-3).



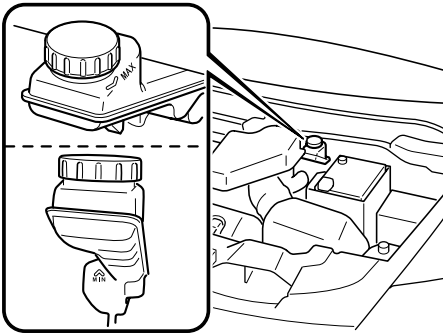
If the coolant reservoir is empty or new coolant is required frequently, consult an Authorized Mazda Dealer.



## Brake Fluid

### ▼ Inspecting Brake Fluid Level

Inspect the fluid level in the reservoir regularly. It should be kept at MAX. The level normally drops with accumulated distance, a condition associated with wear of brake linings. If it is excessively low, have the brake system inspected by an Authorized Mazda Dealer.



### ▼ Adding Brake Fluid

#### **⚠ WARNING**

***Be careful not to spill brake fluid on yourself or on the engine:***

*Spilled brake fluid is dangerous. If it gets in your eyes, they could be seriously injured. If this happens, immediately flush your eyes with water and get medical attention. Brake fluid spilled on a hot engine could cause a fire.*

***If the brake fluid level is low, have the brakes inspected:***

*Low brake fluid levels are dangerous. Low levels could signal brake lining wear or a brake system leak. Your brakes could fail and cause an accident.*

If the fluid level is low, add fluid until it reaches MAX.

Before adding fluid, thoroughly clean the area around the cap.

#### **⚠ CAUTION**

- *Brake fluid will damage painted surfaces. If brake fluid does get on a painted surface, wash it off with water immediately.*
- *Using nonspecified brake fluids (page 10-4) will damage the system. Mixing different fluids will also damage it. If the brake system frequently requires new fluid, consult an Authorized Mazda Dealer.*

## Owner Maintenance

### Power Steering Fluid

#### ▼ Inspecting Power Steering Fluid Level

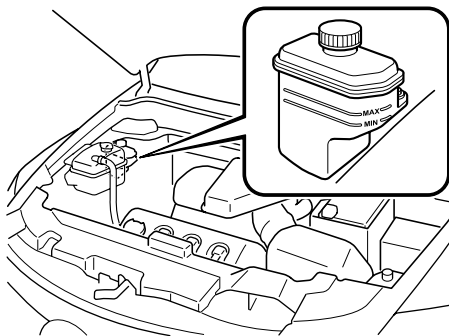
#### **CAUTION**

To avoid damage to the power steering pump, don't operate the vehicle for long periods when the power steering fluid level is low.

#### **NOTE**

Use specified power steering fluid (page 10-4).

Inspect the fluid level in the reservoir at each engine oil change with the engine off and cold. Add fluid if necessary; it does not require periodic changing.



The level must be kept between MAX and MIN.

Visually examine the lines and hoses for leaks and damage.

If new fluid is required frequently, consult an Authorized Mazda Dealer.

### Washer Fluid

#### ▼ Inspecting Washer Fluid Level

#### **WARNING**

Use only windshield washer fluid or plain water in the reservoir:

Using radiator antifreeze as washer fluid is dangerous. If sprayed on the windshield, it will dirty the windshield, affect your visibility, and could result in an accident.

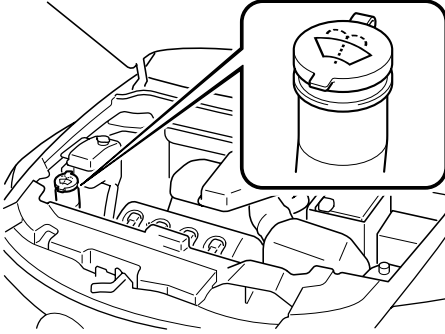
#### Using Washer Fluid Without Anti-freeze Protection in Cold Weather:

Operating your vehicle in temperatures below 4 degrees C (40 degrees F) using washer fluid without anti-freeze protection is dangerous as it could cause impaired windshield vision and result in an accident. In cold weather, always use washer fluid with anti-freeze protection.

#### **NOTE**

State or local regulations may restrict the use of volatile organic compounds (VOCs), which are commonly used as anti-freeze agents in washer fluid. A washer fluid with limited VOC content should be used only if it provides adequate freeze resistance for all regions and climates in which the vehicle will be operated.

Inspect fluid level in the washer fluid reservoir; add fluid if necessary.



Use plain water if washer fluid is unavailable.  
But use only washer fluid in cold weather to prevent it from freezing.

**NOTE**

*Front and rear washer fluid is supplied from the same reservoir.*

## Body Lubrication

All moving points of the body, such as door and hood hinges and locks, should be lubricated each time the engine oil is changed. Use a nonfreezing lubricant on locks during cold weather.

Make sure the hood's secondary latch keeps the hood from opening when the primary latch is released.

## Owner Maintenance

### Wiper Blades

#### **CAUTION**

- *Hot waxes applied by automatic car washers have been known to affect the wiper's ability to clean windows.*
- *To prevent damage to the wiper blades, do not use gasoline, kerosene, paint thinner, or other solvents on or near them.*
- *When the wiper lever is in the AUTO position and the ignition is switched ON, the wipers may move automatically in the following cases:*
  - *If the windshield above the rain sensor is touched.*
  - *If the windshield above the rain sensor is wiped with a cloth.*
  - *If the windshield is struck with a hand or other object.*
  - *If the rain sensor is struck with a hand or other object from inside the vehicle.*

*Be careful not to pinch hands or fingers as it may cause injury, or damage the wipers. When washing or servicing your Mazda, make sure the wiper lever is in the OFF position.*

Contamination of either the windshield or the blades with foreign matter can reduce wiper effectiveness. Common sources are insects, tree sap, and hot wax treatments used by some commercial car washes.

If the blades are not wiping properly, clean the window and blades with a good cleaner or mild detergent; then rinse thoroughly with clean water. Repeat if necessary.

#### ▼ Replacing Windshield Wiper Blades

When the wipers no longer clean well, the blades are probably worn or cracked. Replace them.

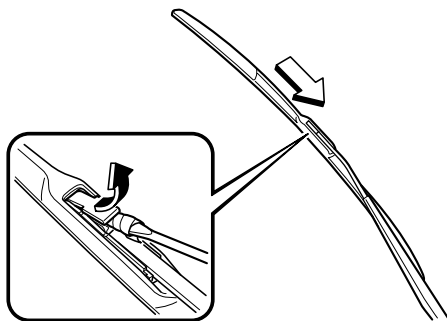
#### **CAUTION**

*To prevent damage to the wiper arms and other components, don't try to sweep the wiper arm by hand.*

#### **NOTE**

*To prevent damage to the wiper arm blades when raising both the driver and passenger side wiper arms, raise the driver side wiper arm first. Conversely, when setting down the wiper arms, set the passenger side wiper arm down first.*

1. Raise the wiper arm.
2. Open the clip and slide the blade assembly in the direction of the arrow.
3. Wrap a flathead screwdriver or similar tool with a soft cloth to prevent damage to the clip.

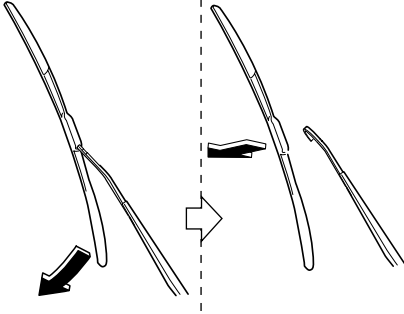


#### **NOTE**

*Using a soft cloth-wrapped flathead screwdriver.*

## Owner Maintenance

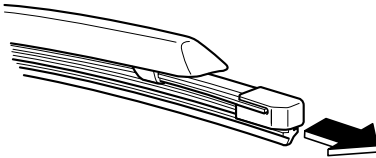
4. Tilt the blade assembly and remove it from the arm.



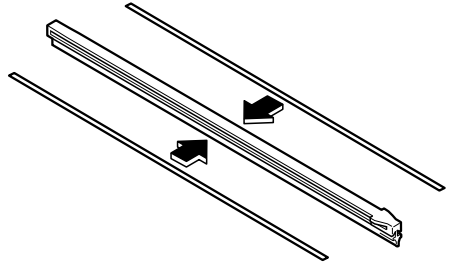
### CAUTION

*To prevent damage to the windshield let the wiper arm down easily, don't let it slap down on the windshield.*

5. Pull down the blade rubber and slide it out of blade holder.



6. Remove the metal stiffeners from each blade rubber and install them in the new blade.

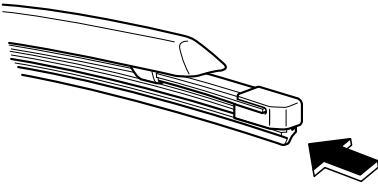


### CAUTION

- *Don't bend or discard the stiffeners. You need to use them again.*
- *If the metal stiffeners are switched, the blade's wiping efficiency could be reduced. So don't use the driver's side metal stiffeners on the passenger's side, or vice versa.*
- *Be sure to reinstall the metal stiffeners in the new blade rubber so that the curve is the same as it was in the old blade rubber.*

# Owner Maintenance

7. Carefully insert the new blade rubber. Then install the blade assembly in the reverse order of removal.



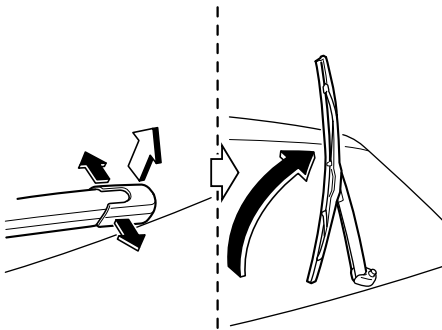
## ▼ Replacing Rear Window Wiper Blade

When the wiper no longer cleans well, the blade is probably worn or cracked. Replace it.

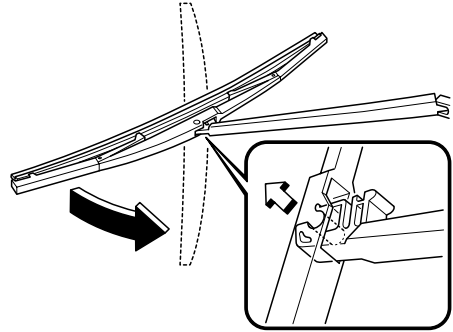
### **⚠ CAUTION**

*To prevent damage to the wiper arm and other components, don't try to sweep the wiper arm by hand.*

1. Remove the cover and raise the wiper arm.



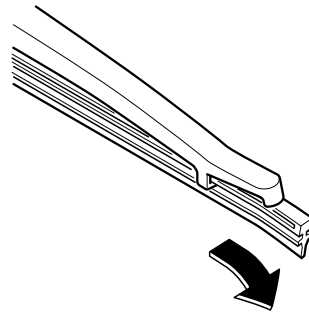
2. Firmly rotate the wiper blade to the right until it unlocks, then remove the blade.



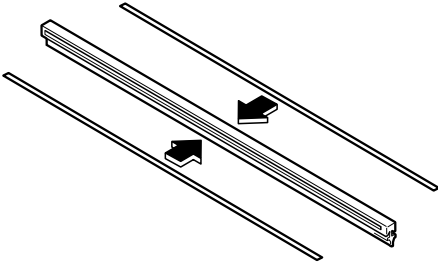
### **⚠ CAUTION**

*To prevent damage to the rear window let the wiper arm down easily, don't let it slap down on the rear window.*

3. Pull down the blade rubber and slide it out of the blade holder.



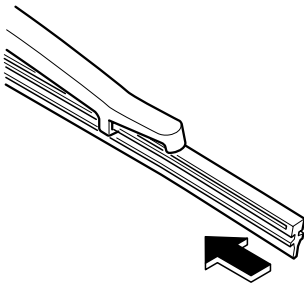
4. Remove the metal stiffeners from each blade rubber and install them in the new blade.



**⚠ CAUTION**

*Don't bend or discard the stiffeners.  
You need to use them again.*

5. Carefully insert the new blade rubber. Then install the blade assembly in the reverse order of removal.



## Owner Maintenance

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### Battery

#### **WARNING**

**Wash hands after handling the battery and related accessories:**

Battery posts, terminals and related accessories contain lead and lead compounds, chemicals known to the State of California to cause cancer and reproductive harm.



**Read the following precautions carefully before using the battery or inspecting to ensure safe and correct handling:**



**Always wear eye protection when working near the battery:**

Working without eye protection is dangerous. Battery fluid contains SULFURIC ACID which could cause blindness if splashed into your eyes. Also, hydrogen gas produced during normal battery operation, could ignite and cause the battery to explode.



**Wear eye protection and protective gloves to prevent contact with battery fluid:**

Spilled battery fluid is dangerous.

Battery fluid contains SULFURIC ACID which could cause serious injuries if it gets in eyes, or on the skin or clothing. If this happens, immediately flush your eyes with water for 15 minutes or wash your skin thoroughly and get medical attention.



**Always keep batteries out of the reach of children:**

Allowing children to play near batteries is dangerous. Battery fluid could cause serious injuries if it gets in the eyes or on the skin.



**Keep flames and sparks away from open battery cells and do not allow metal tools to contact the positive (+) or negative (-) terminal of the battery when working near a battery. Do not allow the positive (+) terminal to contact the vehicle body:**

Flames and sparks near open battery cells are dangerous. Hydrogen gas, produced during normal battery operation, could ignite and cause the battery to explode. An exploding battery can cause serious burns and injuries. Keep all flames including cigarettes and sparks away from open battery cells.

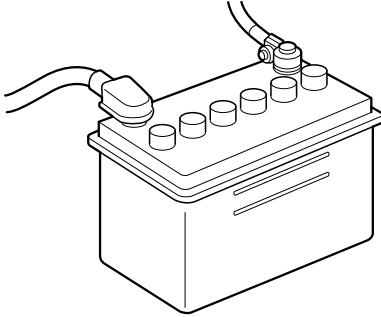




**Keep all flames, including cigarettes, and sparks away from open battery cells:**

*Flames and sparks near open battery cells are dangerous. Hydrogen gas, produced during normal battery operation, could ignite and cause the battery to explode. An exploding battery can cause serious burns and injuries.*

### ▼ Battery Maintenance



To get the best service from a battery:

- Keep it securely mounted.
- Keep the top clean and dry.
- Keep terminals and connections clean, tight, and coated with petroleum jelly or terminal grease.
- Rinse off spilled electrolyte immediately with a solution of water and baking soda.
- If the vehicle will not be used for an extended time, disconnect the battery cables.

## Owner Maintenance

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### Tires

For reasons of proper performance, safety, and better fuel economy, always maintain recommended tire inflation pressures and stay within the recommended load limits and weight distribution.

#### **WARNING**

##### **Using Different Tire Types:**

*Driving your vehicle with different types of tires is dangerous. It could cause poor handling and poor braking; leading to loss of control. Except for the limited use of the temporary spare tire, use only the same type tires (radial, bias-belted, bias-type) on all four wheels.*

##### **Using Wrong-Sized Tires:**

*Using any other tire size than what is specified for your Mazda (page 10-6) is dangerous. It could seriously affect ride, handling, ground clearance, tire clearance, and speedometer calibration. This could cause you to have an accident. Use only tires that are the correct size specified for your Mazda.*

### ▼ Tire Inflation Pressure

#### **WARNING**

***Always inflate the tires to the correct pressure:***

*Overinflation or underinflation of tires is dangerous. Adverse handling or unexpected tire failure could result in a serious accident.*

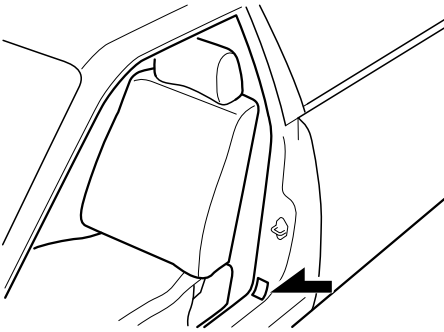
*Refer to Tires on page 10-6.*

***Use only a Mazda-genuine tire valve cap:***

*Use of a non-genuine part is dangerous as the correct tire air pressure cannot be maintained if the tire valve becomes damaged. If the vehicle is driven under this condition, the tire air pressure will decrease which could result in a serious accident. Do not use any part for the tire valve cap that is not a Mazda-genuine part.*

The Tire Pressure Monitoring System\* does not alleviate the need to check the tire condition every day, including whether the tires all look inflated properly. Inspect all tire pressure monthly (including the spare) when the tires are cold. Maintain recommended pressures for the best ride, handling, and minimum tire wear.

When checking the tire pressures, use of a digital tire pressure gauge is recommended.



Refer to the specification charts (page 10-6).

#### **NOTE**

- Always check tire pressure when tires are cold.
- Warm tires normally exceed recommended pressures. Don't release air from warm tires to adjust the pressure.
- Underinflation can cause reduced fuel economy, uneven and accelerated tire wear, and poor sealing of the tire bead, which will deform the wheel and cause separation of tire from rim.
- Overinflation can produce a harsh ride, uneven and accelerated tire wear, and a greater possibility of damage from road hazards.

Keep your tire pressure at the correct levels. If one frequently needs inflating, have it inspected.

#### **▼ Tire Rotation**

#### **⚠ WARNING**

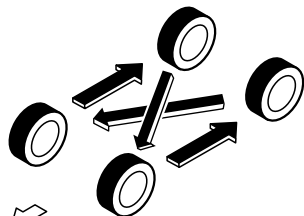
#### **Rotate tires periodically:**

Irregular tire wear is dangerous. To equalize tread wear for maintaining good performance in handling and braking, rotate the tires according to the scheduled maintenance charts. Refer to Scheduled Maintenance on page 8-3.

## Owner Maintenance

---

During rotation, inspect them for correct balance.



Do not include (TEMPORARY USE ONLY) spare tire in rotation.

Also, inspect them for uneven wear and damage. Abnormal wear is usually caused by one or a combination of the following:

- Incorrect tire pressure
- Improper wheel alignment
- Out-of-balance wheel
- Severe braking

After rotation, inflate all tire pressures to specification (page 10-6) and inspect the lug nuts for tightness.

### **CAUTION**

*Rotate unidirectional tires and radial tires that have an asymmetrical tread pattern or studs only from front to rear, not from side to side. Tire performance will be reduced if rotated from side to side.*

### ▼ Replacing a Tire

#### **WARNING**

**Always use tires that are in good condition:**

*Driving with worn tires is dangerous. Reduced braking, steering, and traction could result in an accident.*

**Replace all four tires at the same time:**

*Replacing just one tire is dangerous. It could cause poor handling and poor braking resulting in loss of vehicle control. Mazda strongly recommends that you replace all four tires at the same time.*

#### **CAUTION**

**(With Tire Pressure Monitoring System)**

*When replacing/repairing the tires or wheels or both, have the work done by an Authorized Mazda Dealer, or the tire pressure sensors may be damaged.*

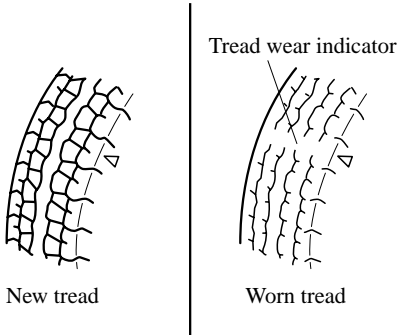
#### **NOTE**

**(With Tire Pressure Monitoring System)**

- *When tires with steel wire reinforcement in the sidewalls are used, the system may not function correctly even with a genuine wheel. Refer to System Error Activation on page 5-32.*
- *Be sure to install the tire pressure sensors whenever tires or wheels are replaced. Refer to Tires and Wheels on page 5-32.*

If a tire wears evenly, a wear indicator will appear as a solid band across the tread.

Replace the tire when this happens.



You should replace the tire before the band crosses the entire tread.

#### **NOTE**

Tires degrade over time, even when they are not being used on the road. It is recommended that tires generally be replaced when they are 6 years or older. Heat caused by hot climates or frequent high loading conditions can accelerate the aging process. You should replace the spare tire when you replace the other road tires due to the aging of the spare tire. The period in which the tire was manufactured (both week and year) is indicated by a 4-digit number. Refer to Tire Labeling on page 9-25.

### ▼ Temporary Spare Tire

Inspect the temporary spare tire at least monthly to make sure it's properly inflated and stored.

#### **NOTE**

The temporary spare tire condition gradually deteriorates even if it has not been used.

The temporary spare tire is easier to handle because of its construction which is lighter and smaller than a conventional tire. This tire should be used only for an emergency and only for a short distance.

Use the temporary spare tire only until the conventional tire is repaired, which should be as soon as possible.

#### **(Except Mexico)**

Maintain its pressure at 420 kPa (4.2 kgf/cm<sup>2</sup> or bar, 60 psi).

#### **(Mexico)**

Maintain its pressure at 250 kPa (2.5 kgf/cm<sup>2</sup> or bar, 36 psi).

### **⚠ CAUTION**

- Do not use your temporary spare tire rim with a snow tire or a conventional tire. Neither will properly fit and could damage both tire and rim.
- The temporary spare tire has a tread life of less than 5,000 km. The tread life may be shorter depending on driving conditions.
- The temporary spare tire is for limited use, however, if the tread wear solid-band indicator appears, replace the tire with the same type of temporary spare (page 8-34).

## Owner Maintenance

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### NOTE

Tires degrade over time, even when they are not being used on the road. It is recommended that tires generally be replaced when they are 6 years or older. Heat caused by hot climates or frequent high loading conditions can accelerate the aging process. You should replace the spare tire when you replace the other road tires due to the aging of the spare tire. The period in which the tire was manufactured (both week and year) is indicated by a 4-digit number. Refer to Tire Labeling on page 9-25.

### ▼ Replacing a Wheel

#### **WARNING**

**Always use wheels of the correct size on your vehicle:**

*Using a wrong-sized wheel is dangerous. Braking and handling could be affected, leading to loss of control and an accident.*

#### **CAUTION**

- A wrong-sized wheel may adversely affect:
  - Tire fit
  - Wheel and bearing life
  - Ground clearance
  - Snow-chain clearance
  - Speedometer calibration
  - Headlight aim
  - Bumper height
  - Tire Pressure Monitoring System
- **(With Tire Pressure Monitoring System)**
  - When replacing/repairing the tires or wheels or both, have the work done by an Authorized Mazda Dealer, or the tire pressure sensors may be damaged.
  - The wheels equipped on your Mazda are specially designed for installation of the tire pressure sensors. Do not use non-genuine wheels, otherwise it may not be possible to install the tire pressure sensors.

### NOTE

*Be sure to install the tire pressure sensors whenever tires or wheels are replaced. Refer to Tires and Wheels on page 5-32.*

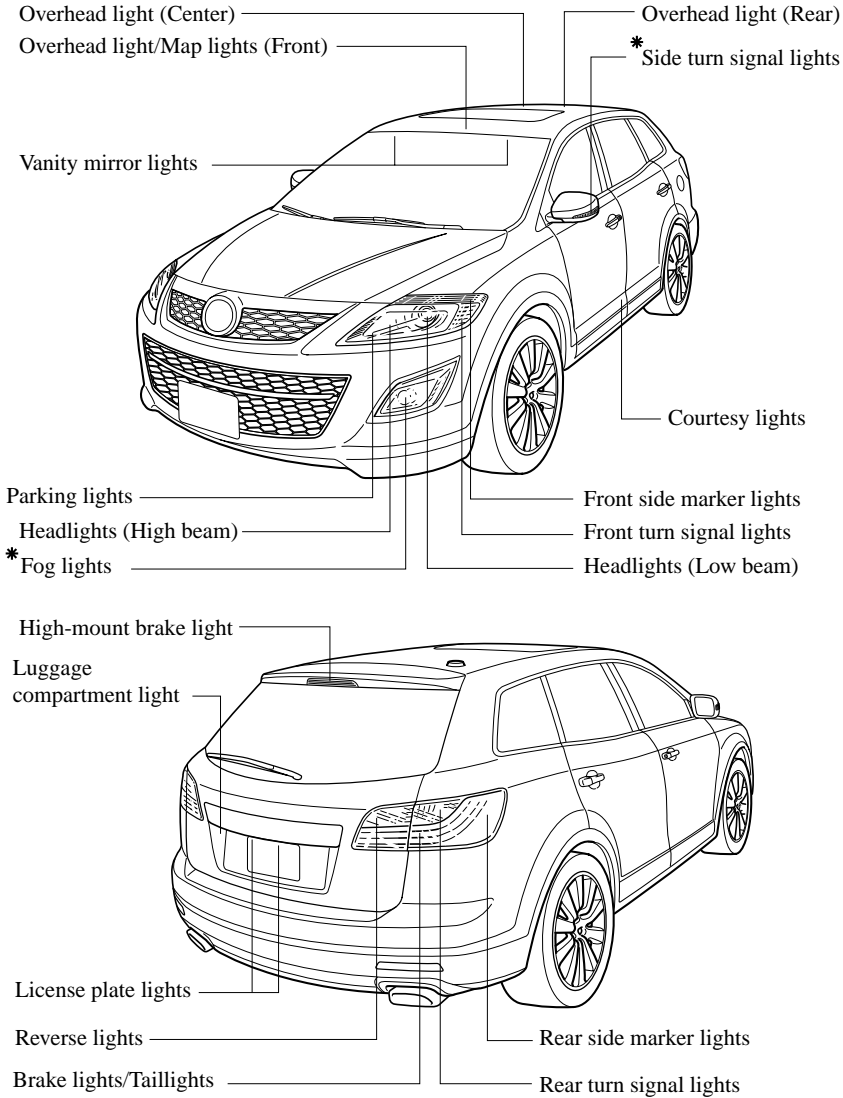
When replacing a wheel, make sure the new one is the same as the original factory wheel in diameter, rim width, and offset (inset/outset).

Proper tire balancing provides the best riding comfort and helps reduce tread wear. Out-of-balance tires can cause vibration and uneven wear, such as cupping and flat spots.

# MEMO

# Owner Maintenance

## Light Bulbs



\*Some models.



**⚠ WARNING**

**Do not replace the xenon fusion bulbs yourself:**

Replacing the xenon fusion bulbs yourself is dangerous. Because the xenon fusion bulbs require high voltage, you could receive an electric shock if the bulbs are handled incorrectly. Consult an Authorized Mazda Dealer when the replacement is necessary.

**Never touch the glass portion of a halogen bulb with your bare hands and always wear eye protection when handling or working around the bulbs:**

When a halogen bulb breaks, it is dangerous. These bulbs contain pressurized gas. If one is broken, it will explode and serious injuries could be caused by the flying glass. If the glass portion is touched with bare hands, body oil could cause the bulb to overheat and explode when lit.

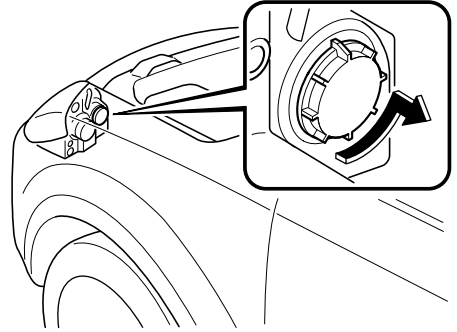
**Always keep halogen bulbs out of the reach of children:**

Playing with a halogen bulb is dangerous. Serious injuries could be caused by dropping a halogen bulb or breaking it some other way.

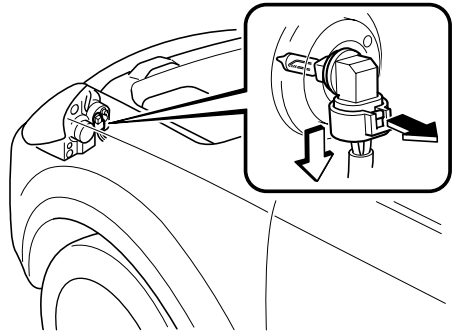
**▼ Replacing Exterior Light Bulbs****Headlight bulb****High-beam bulb**

1. Make sure the ignition is switched off, and the headlight switch is off.
2. Lift the hood.

3. Turn the cover counterclockwise and remove it.

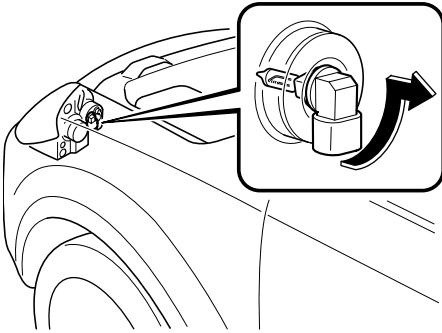


4. Disconnect the electrical connector from the bulb by pulling the tab on the connector with your finger and pulling the connector downward.



## Owner Maintenance

5. Turn the socket and bulb assembly to remove it. Carefully remove the bulb from its socket in the reflector by gently pulling it straight backward out of the socket.



6. Install the new bulb in the reverse order of removal.

### NOTE

- To replace the bulb, contact an Authorized Mazda Dealer
- If the halogen bulb is accidentally touched, it should be cleaned with rubbing alcohol before being used.
- Use the protective cover and carton of the replacement bulb to dispose of the old bulb promptly out of the reach of children.

### Low-beam bulb

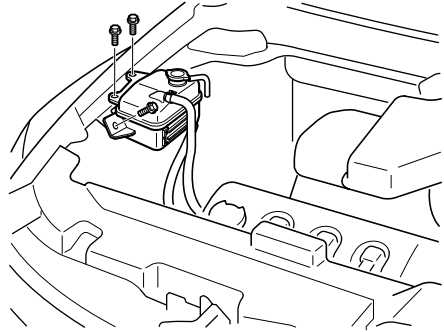
#### (Xenon fusion bulb)

You cannot replace the low beam bulbs by yourself. The bulbs must be replaced at an Authorized Mazda Dealer.

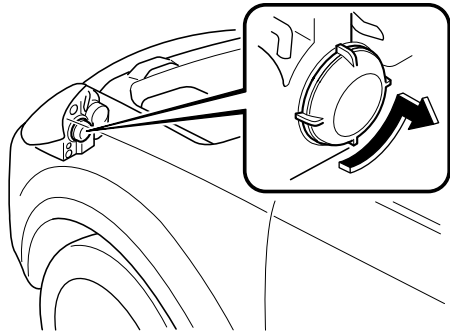
#### (Halogen bulbs)

1. Make sure the headlight switch is off.
2. Lift the hood.

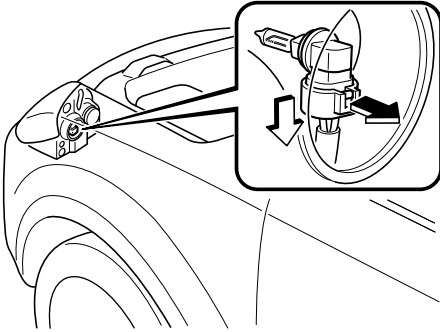
3. Remove the attachment bolts and the coolant reservoir before replacing the light bulb.



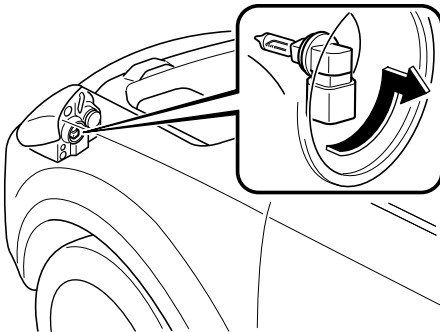
4. Turn the cover counterclockwise and remove it.



5. Disconnect the electrical connector from the bulb by pulling the tab on the connector with your finger and pulling the connector downward.



6. Turn the socket and bulb assembly to remove it. Carefully remove the bulb from its socket in the reflector by gently pulling it straight backward out of the socket.



7. Install the new bulb in the reverse order of removal.
8. Install the coolant reservoir. If you are unsure of how tight the bolts should be, have them inspected at an Authorized Mazda Dealer.

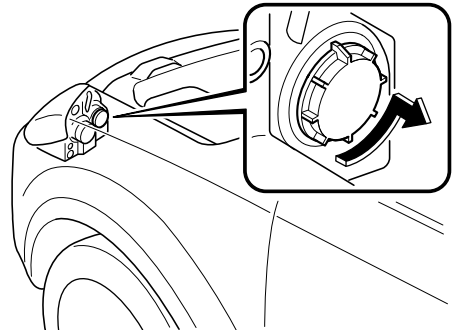
Bolt tightening torque	
N·m (kgf·m, ft·lbf)	6.9—11.8 (0.7—1.2, 5.1—8.7)

**NOTE**

- To replace the bulb, contact an Authorized Mazda Dealer
- If the halogen bulb is accidentally touched, it should be cleaned with rubbing alcohol before being used.
- Use the protective cover and carton of the replacement bulb to dispose of the old bulb promptly out of the reach of children.

**Parking lights**

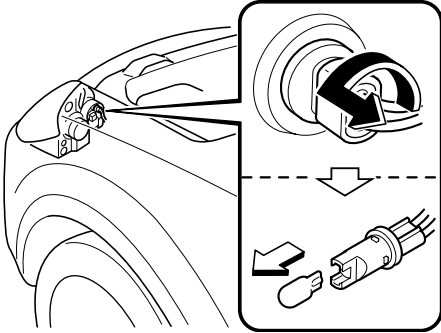
1. Make sure the ignition is switched off, and the headlight switch is off.
2. Lift the hood.
3. Turn the cover counterclockwise and remove it.



4. Turn the socket and bulb assembly counterclockwise and remove it.

# Owner Maintenance

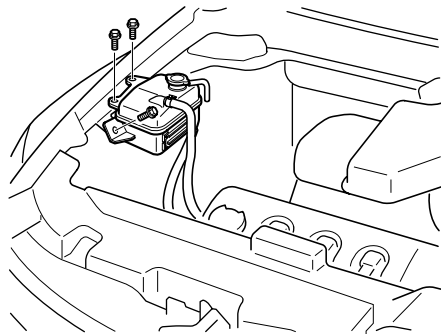
- Remove the bulb by pushing it in slightly and turning it counterclockwise.



- Install the new bulb in the reverse order of removal.

### **Front side marker lights, Front turn signal lights**

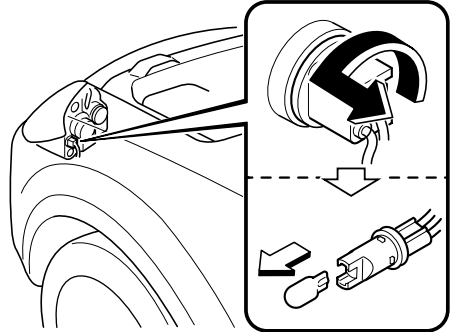
- Make sure the headlight switch is off.
- Lift the hood.
- Remove the attachment bolts and the coolant reservoir before replacing the light bulb.



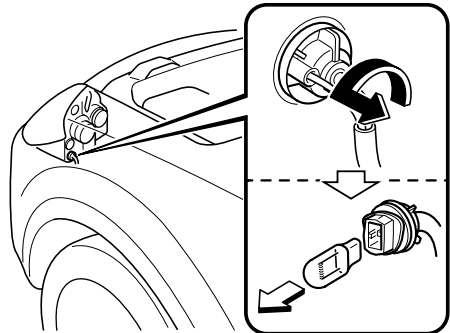
- Turn the socket and bulb assembly counterclockwise and remove it.

- Remove the bulb by pushing it in slightly and turning it counterclockwise.

### **Front side marker lights**



### **Front turn signal lights**



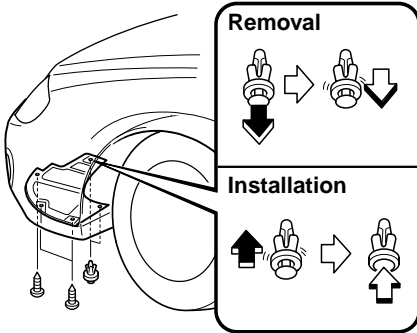
- Install the new bulb in the reverse order of removal.
- Install the coolant reservoir. If you are unsure of how tight the bolts should be, have them inspected at an Authorized Mazda Dealer.

Bolt tightening torque	
N·m (kgf·m, ft·lbf)	6.9—11.8 (0.7—1.2, 5.1—8.7)

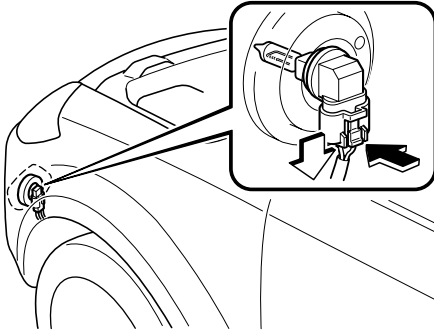
### **Fog lights**\*

- Make sure the headlight switch is off.

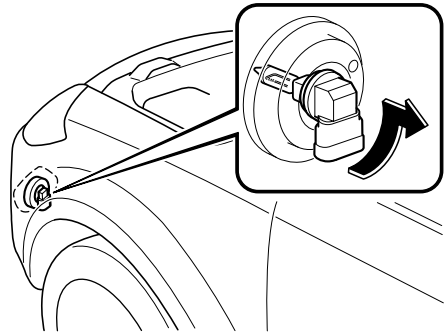
- Turn the screws counterclockwise and remove them.
- Turn the screws and the center section of the plastic retainers counterclockwise and remove them, then remove the mudguard.



- Disconnect the electrical connector from the bulb by pressing the tab on the connector with your finger and pulling the connector downward.



- Turn the socket and bulb assembly counterclockwise and remove it. Carefully remove the bulb from its socket in the reflector by gently pulling it straight backward out of the socket.



- Install the new bulb in the reverse order of removal.

**NOTE**

- To replace the bulb, contact an Authorized Mazda Dealer
- If the halogen bulb is accidentally touched, it should be cleaned with rubbing alcohol before being used.
- Use the protective cover and carton of the replacement bulb to dispose of the old bulb promptly out of the reach of children.

**Side turn signal lights\*, Brake lights, Taillights, High-mount brake light**

Due to the complexity and difficulty of the procedure, the LED bulbs must be replaced by an Authorized Mazda Dealer.

**NOTE**

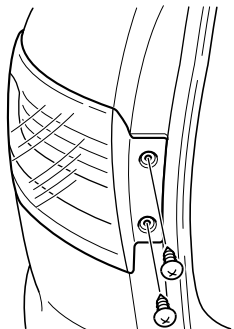
LED bulb replacement is not possible because it is built into the unit. Replace the unit.

# Owner Maintenance

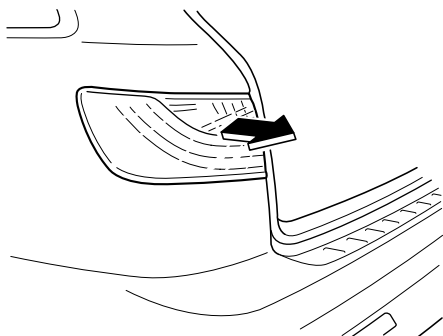
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## Rear turn signal lights, Rear side-marker light

1. Turn the bolts counterclockwise and remove them.

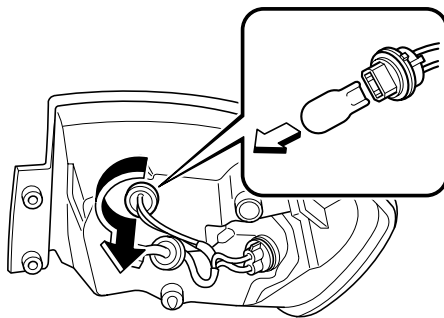


2. Pull the unit rearward to remove it.

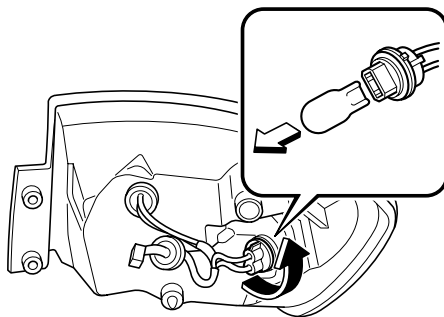


3. Turn the socket and bulb assembly counterclockwise and remove it.

## Rear turn signal lights



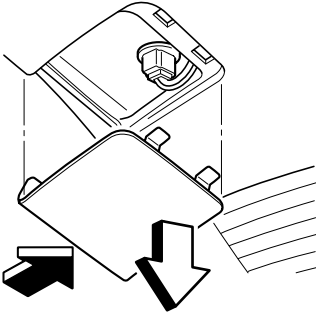
## Rear side-marker light



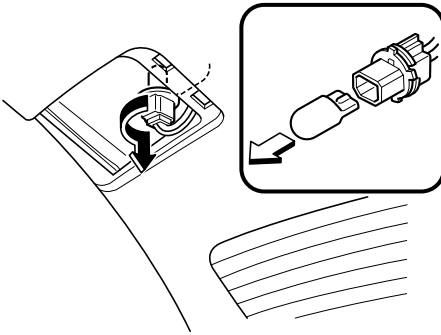
4. Disconnect the bulb from the socket.
5. Install the new bulb in the reverse order of removal.

**Reverse lights**

1. Remove the cover.



2. Turn the socket and bulb assembly counterclockwise and remove it.
3. Disconnect the bulb from the socket.



4. Install the new bulb in the reverse order of removal.

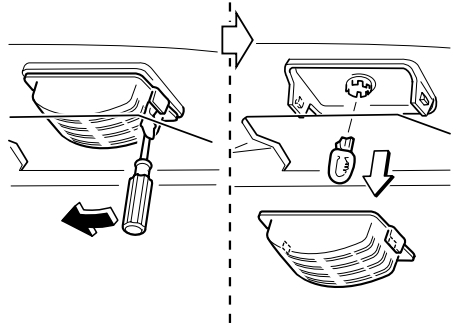
***NOTE***

To replace the bulb, contact an Authorized Mazda Dealer.

**License plate lights**

1. Wrap a flathead screwdriver with a soft cloth to prevent damage to the lens and remove the lens by carefully prying on the edge of the lens with a flathead screwdriver.

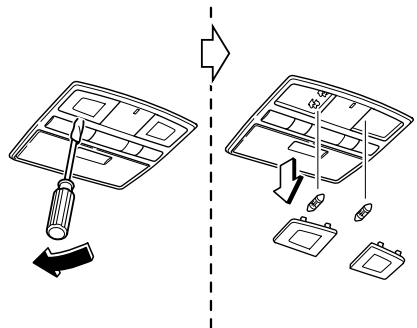
2. Disconnect the bulb by pulling it out.



3. Install the new bulb in the reverse order of removal.

**▼ Replacing Interior Light Bulbs****Overhead light/Map lights (Front),  
Overhead light (Center, Rear), Luggage  
compartment light, Courtesy lights,  
Vanity mirror lights**

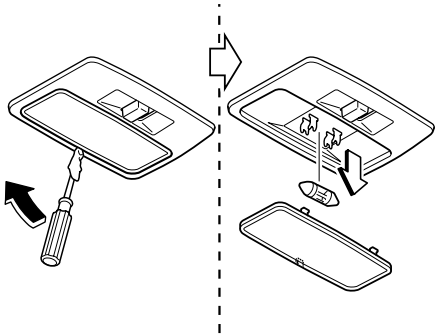
1. Wrap a small flathead screwdriver with a soft cloth to prevent damage to the lens and remove the lens by carefully prying on the edge of the lens with the flathead screwdriver.
2. Disconnect the bulb by pulling it out.

**Overhead light/Map lights (Front)**

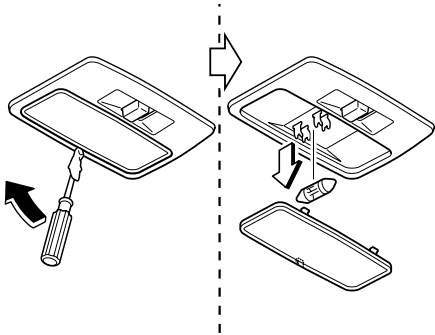
# Owner Maintenance

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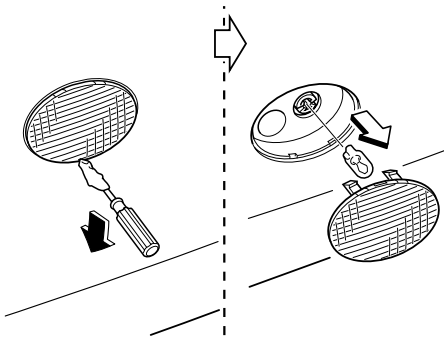
## Overhead light (Center, Rear)



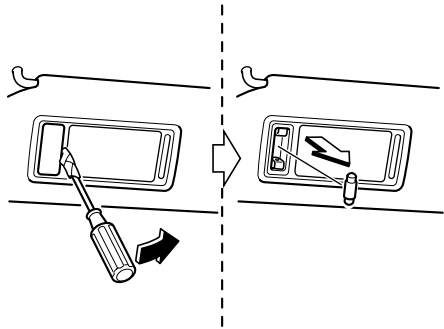
## Luggage compartment light



## Courtesy lights



## Vanity mirror lights



3. Install the new bulb in the reverse order of removal.



## Fuses

Your vehicle's electrical system is protected by fuses.

If any lights, accessories, or controls don't work, inspect the appropriate circuit protector. If a fuse has blown, the inside element will be melted.

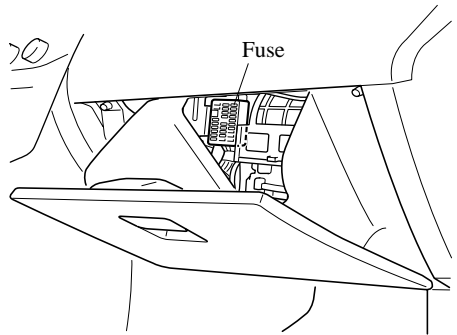
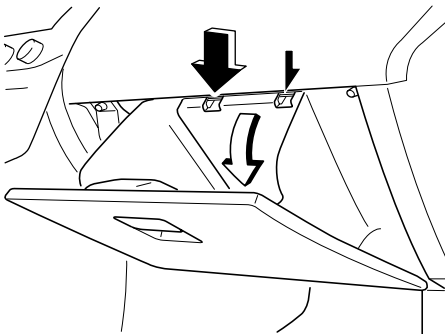
If the same fuse blows again, avoid using that system and consult an Authorized Mazda Dealer as soon as possible.

### ▼ Fuse Replacement

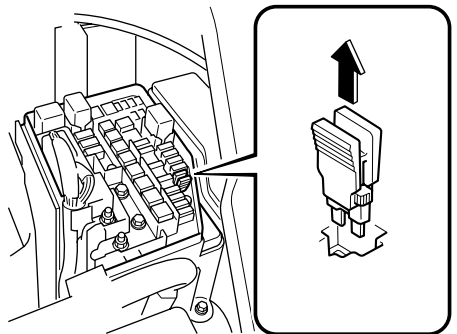
#### **Replacing fuses located behind the glove compartment**

If an electrical system is inoperative, inspect the fuses located behind the glove compartment.

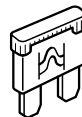
1. Make sure the ignition is switched off, and other switches are off.
2. Open the glove compartment.
3. Remove the cover.



4. Pull the fuse straight out with the fuse puller provided on the fuse block located in the engine compartment.



5. Inspect the fuse and replace it if it's blown.



Normal



Blown

# Owner Maintenance

6. Insert a new fuse of the same amperage rating, and make sure it fits tightly. If it does not fit tightly, have an expert install it. We recommend an Authorized Mazda Dealer. If you have no spare fuses, borrow one of the same rating from a circuit not essential to vehicle operation, such as the ROOM circuit.

## **CAUTION**

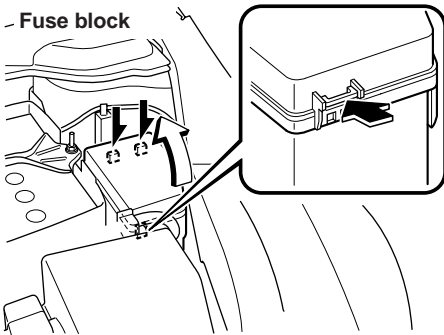
*Always replace a fuse with one of the same rating. Otherwise you may damage the electric system.*

7. Reinstall the cover and make sure that it is securely installed.

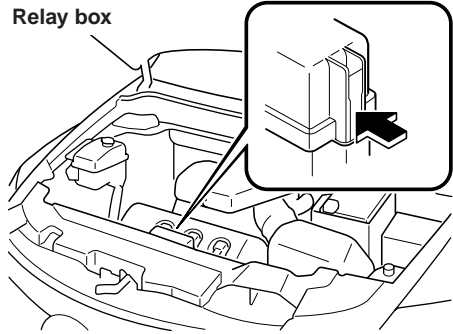
### **Replacing the fuses under the hood**

If the headlights or other electrical components do not work and the fuses in the cabin are normal, inspect the fuse block under the hood. If a fuse is blown, it must be replaced. Follow these steps:

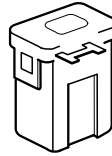
1. Make sure the ignition is switched off, and other switches are off.
2. Remove the fuse block cover or the relay box cover.



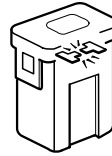
Relay box



3. If any fuse but the MAIN fuse is blown, replace it with a new one **of the same amperage rating**.



Normal



Blown

## **WARNING**

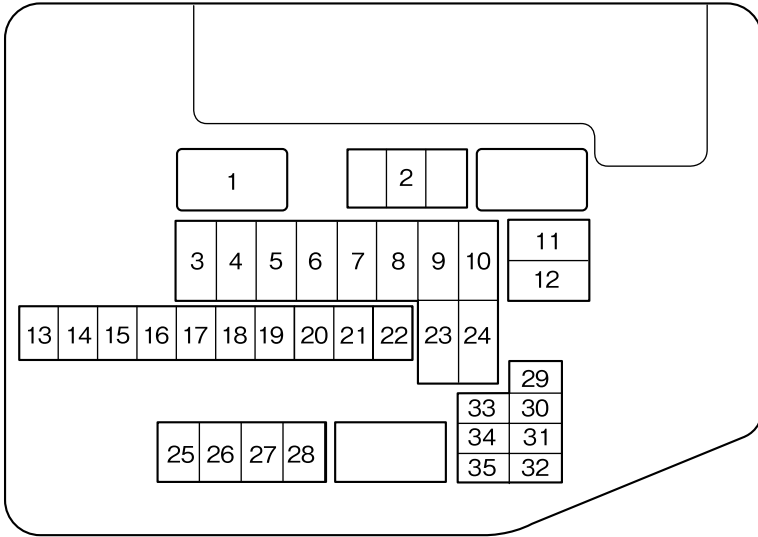
**Do not replace the main fuse by yourself. Have an Authorized Mazda Dealer perform the replacement:**

*Replacing the fuse by yourself is dangerous because the MAIN fuse is a high current fuse. Incorrect replacement could cause an electrical shock or a short circuit resulting in a fire.*

4. Reinstall the cover and make sure that it is securely installed.

▼ **Fuse Panel Description**

**Fuse block (Engine compartment)**



DESCRIPTION		FUSE RATING	PROTECTED COMPONENT
1	MAIN	150 A	For protection of all circuits
2	ENGINE	20 A	Engine control system
3	R HEATER	40 A	Heater
4	P.SEAT R	30 A	Power seat (RH) *
5	HEATER	50 A	Heater
6	IGKEY2	40 A	For protection of various circuits
7	FAN1	30 A *	Cooling fan
		40 A *	
8	P.SEAT L	40 A	Power seat (LH) *
9	DEFOG	30 A	Rear window defroster
10	BTN	50 A	For protection of various circuits
11	FUEL PUMP	30 A	Fuel pump
12	IGKEY1	30 A	For protection of various circuits
13	FOG	15 A	Fog lights *
14	ABS (SOL)	30 A	ABS
15	D/L	25 A	Power door locks
16	ROOM	15 A	Overhead light

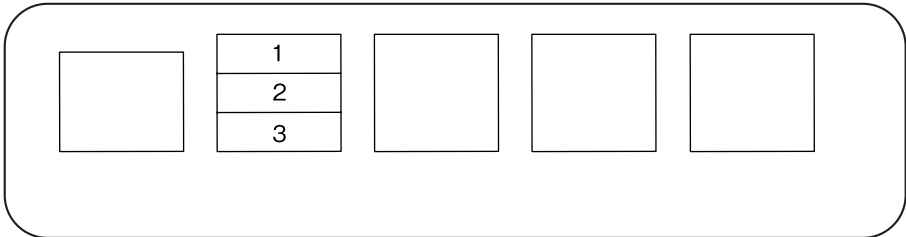
\*Some models.

## Owner Maintenance

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DESCRIPTION		FUSE RATING	PROTECTED COMPONENT
17	OUTLET CTR	15 A	Accessory socket (Center)
18	OUTLET RR	15 A	Accessory socket (Rear)
19	AC PWR	15 A	Moonroof*, DC/AC inverter*
20	S.WARM	15 A	Seat warmer*
21	A/C MAG	10 A	Air conditioner
22	BOSE	25 A	Audio system (Bose® Sound System-equipped model)*
23	FAN2	30 A*	Cooling fan
		40 A*	
24	ABS	50 A	ABS
25	IG COIL	25 A	Engine control system
26	H/L LOW L	15 A	Headlight-left (Low beam)
27	H/L LOW R	15 A	Headlight-right (Low beam)
28	H/L HIGH	20 A	Headlight-high (High beam)
29	HAZARD	15 A	Hazard warning flashers
30	ENG+B	10 A	PCM
31	HORN	15 A	Horn
32	STOP	7.5 A	Brake lights
33	EGI INJ	10 A	Engine control system
34	ENG BAR	20 A	Engine control system
35	ENG BAR 2	7.5 A	PCM

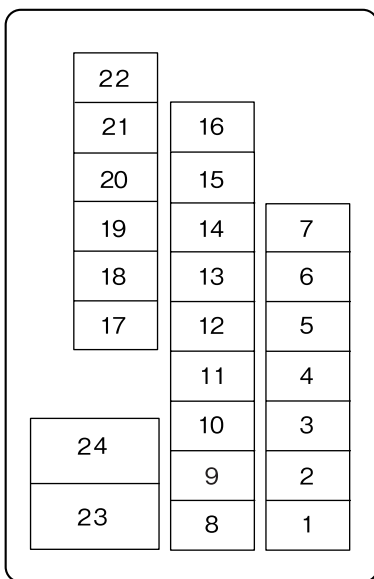
**Relay box (Engine compartment)\***



DESCRIPTION		FUSE RATING	PROTECTED COMPONENT
1	INJ	7.5 A	Engine control system
2	—	—	—
3	—	—	—

# Owner Maintenance

## Fuse block (Glove box)



DESCRIPTION		FUSE RATING	PROTECTED COMPONENT
1	OUTLET FR	15 A	Accessory socket (Front)
2	MIRROR	7.5 A	Power control mirror
3	—	—	—
4	METER	10 A	Instrument cluster
5	SAS	7.5 A	ABS, Air bag
6	ENG.IGA	7.5 A	Engine control system
7	STA	7.5 A	Ignition system
8	—	—	—
9	A/C	7.5 A	Air conditioner
10	R.WIPER	15 A	Rear window wiper and washer
11	TRAILER	—	—
12	P.LIFT GATE	20 A	Power lift gate *
13	SUNROOF	15 A	Moonroof*
14	AUDIO	10 A	Audio system *
15	M.DEF	10 A	Mirror defroster *
16	P/W	25 A	Power windows (Passenger-side)
17	TAIL	10 A	Taillight
18	ILLUMI	10 A	Dashboard illumination
19	INJ	7.5 A	Engine control system

**Owner Maintenance**

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DESCRIPTION		FUSE RATING	PROTECTED COMPONENT
20	—	—	—
21	OUTLET CTR	—	—
22	OUTLET RR	—	—
23	WIPER	30 A	Windshield wiper and washer
24	P.WIND	30 A	Power windows (Driver-side)

## Appearance Care

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### How to Minimize Environmental Paint Damage

The paintwork on your Mazda represents the latest technical developments in composition and methods of application.

Environmental hazards, however, can harm the paint's protective properties, if proper care is not taken.

Here are some examples of possible damage, with tips on how to prevent them.

#### ▼ Etching Caused by Acid Rain or Industrial Fallout

##### Occurrence

Industrial pollutants and vehicle emissions drift into the air and mix with rain or dew to form acids. These acids can settle on a vehicle's finish. As the water evaporates, the acid becomes concentrated and can damage the finish.

And the longer the acid remains on the surface, the greater the chance is for damage.

##### Prevention

It is necessary to wash and wax your vehicle to preserve its finish according to the instructions in this section. These steps should be taken immediately after you suspect that acid rain has settled on your vehicle's finish.

#### ▼ Damage Caused by Bird Dropping, Insects, or Tree Sap

##### Occurrence

Bird droppings contain acids. If these aren't removed they can eat away the clear and color base coat of the vehicle's paintwork.

When insects stick to the paint surface and decompose, corrosive compounds form. These can erode the clear and color base coat of the vehicle's paintwork if they are not removed.

Tree sap will harden and adhere permanently to the paint finish. If you scratch the sap off while it is hard, some vehicle paint could come off with it.

##### Prevention

It is necessary to have your Mazda washed and waxed to preserve its finish according to the instructions in this section. This should be done as soon as possible.

Bird droppings can be removed with a soft sponge and water. If you are traveling and these are not available, a moistened tissue may also take care of the problem. The cleaned area should be waxed according to the instructions in this section.

Insects and tree sap are best removed with a soft sponge and water or a commercially available chemical cleaner.

Another method is to cover the affected area with dampened newspaper for one to two hours. After removing the newspaper, rinse off the loosened debris with water.



## ▼ Water Marks

### Occurrence

Rain, fog, dew, and even tap water can contain harmful minerals such as salt and lime. If moisture containing these minerals settles on the vehicle and evaporates, the minerals will concentrate and harden to form white rings. The rings can damage your vehicle's finish.

### Prevention

It is necessary to wash and wax your vehicle to preserve its finish according to the instructions in this section. These steps should be taken immediately after you find water marks on your vehicle's finish.

## ▼ Paint Chipping

### Occurrence

Paint chipping occurs when gravel thrown in the air by another vehicle's tires hits your vehicle.

### How to avoid paint chipping

Keeping a safe distance between you and the vehicle ahead reduces the chances of having your paint chipped by flying gravel.

### **NOTE**

- *The paint chipping zone varies with the speed of the vehicle. For example, when traveling at 90 km/h (56 mph), the paint chipping zone is 50 m (164 ft).*
- *In low temperatures a vehicle's finish hardens. This increases the chance of paint chipping.*
- *Chipped paint can lead to rust forming on your Mazda. Before this happens, repair the damage by using Mazda touch-up paint according to the instructions in this section. Failure to repair the affected area could lead to serious rusting and expensive repairs.*

## Appearance Care

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### Exterior Care

Follow **all** label and container directions when using a chemical cleaner or polish. Read all warnings and cautions.

#### ▼ Maintaining the Finish

##### Washing

### CAUTION

- *When the wiper lever is in the AUTO position and the ignition is switched ON, the wipers may move automatically in the following cases:*
  - *If the windshield above the rain sensor is touched or wiped with a cloth.*
  - *If the windshield is struck with a hand or other object from either outside or inside the vehicle.*

*Keep hands and scrapers clear of the windshield when the wiper lever is in the AUTO position and the ignition is switched ON as fingers could be pinched or the wipers and wiper blades damaged when the wipers activate automatically.*

*If you are going to clean the windshield, be sure the wipers are turned off completely—this is particularly important when clearing ice and snow—when it is most likely that the engine is left running.*

- *Do not spray water in the engine compartment. Otherwise, it could result in engine-starting problems or damage to electrical parts.*

To help protect the finish from rust and deterioration, wash your Mazda thoroughly and frequently, at least once a month, with lukewarm or cold water.

If the vehicle is washed improperly, the paint surface could be scratched. Here are some examples of how scratching could occur.

Scratches occur on the paint surface when:

- The vehicle is washed without first rinsing off dirt and other foreign matter.
- The vehicle is washed with a rough, dry, or dirty cloth.
- The vehicle is washed at a car wash that uses brushes that are dirty or too stiff.
- Cleansers or wax containing abrasives are used.

#### **NOTE**

- *Mazda is not responsible for scratches caused by automatic car washes or improper washing.*
- *Scratches are more noticeable on vehicles with darker paint finishes.*

To minimize scratches on the vehicle's paint finish:

- Rinse off any dirt or other foreign matter using lukewarm or cold water before washing.
- Use plenty of lukewarm or cold water and a soft cloth when washing the vehicle. Do not use a nylon cloth.
- Rub gently when washing or drying the vehicle.
- Take your vehicle only to a car wash that keeps its brushes well maintained.
- Do not use abrasive cleansers or wax that contain abrasives.

**⚠ CAUTION**

- *Do not use steel wool, abrasive cleaners, or strong detergents containing highly alkaline or caustic agents on chrome-plated or anodized aluminum parts. This may damage the protective coating; also, cleaners and detergents may discolor or deteriorate the paint.*
- *To prevent damaging the antenna, remove it before entering a car wash facility or passing beneath a low overhead clearance.*

Pay special attention to removing salt, dirt, mud, and other foreign material from the underside of the fenders, and make sure the drain holes in the lower edges of the doors and rocker panels are clean.

Insects, tar, tree sap, bird droppings, industrial fallout, and similar deposits can damage the finish if not removed immediately. When prompt washing with plain water is ineffective, use a mild soap made for use on vehicles.

Thoroughly rinse off all soap with lukewarm or cold water. Do not allow soap to dry on the finish.

After washing the vehicle, dry it with a clean chamois to prevent water spots from forming.

**⚠ WARNING**

***Dry off brakes that have become wet by driving slowly, releasing the accelerator pedal and lightly applying the brakes several times until the brake performance returns to normal:***

*Driving with wet brakes is dangerous. Increased stopping distance or the vehicle pulling to one side when braking could result in a serious accident. Light braking will indicate whether the brakes have been affected.*

**When using a high water pressure car wash**

High water temperature and high water pressure car washers are available depending on the type of car wash machine. If the car washer nozzle is put too close to the vehicle, the force of the spray could damage or deform the molding, affect the sealability of parts, and allow water to penetrate the interior. Keep a sufficient space (30 cm or more) between the nozzle and the vehicle. In addition, do not spend too much time spraying the same area of the vehicle, and be very careful when spraying between gaps in doors and around windows.

**Waxing**

Your vehicle needs to be waxed when water no longer beads on the finish. Always wash and dry the vehicle before waxing it. In addition to the vehicle body, wax the metal trim to maintain its luster.

1. Use wax which contains no abrasives. Waxes containing abrasive will remove paint and could damage bright metal parts.

## Appearance Care

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2. Use a good grade of natural wax for metallic, mica, and solid colors.
3. When waxing, coat evenly with the sponge supplied or a soft cloth.
4. Wipe off the wax with a soft cloth.

### NOTE

*A spot remover to remove oil, tar, and similar materials will usually also take off the wax. Rewax these areas even if the rest of the vehicle does not need it.*

### ▼ Repairing Damage to the Finish

Deep scratches or chips on the finish should be repaired promptly. Exposed metal quickly rusts and can lead to major repairs.

### ⚠ CAUTION

*If your Mazda is damaged and needs metal parts repaired or replaced, make sure the body shop applies anti-corrosion materials to all parts, both repaired and new. This will prevent them from rusting.*

### ▼ Bright-Metal Maintenance

- Use tar remover to remove road tar and insects. Never do this with a knife or similar tool.
- To prevent corrosion on bright-metal surfaces, apply wax or chrome preservative and rub it to a high luster.
- During cold weather or in coastal areas, cover bright-metal parts with a coating of wax or preservative heavier than usual. It would also help to coat them with noncorrosive petroleum jelly or some other protective compound.

### ⚠ CAUTION

*Don't use steel wool, abrasive cleaners, or strong detergents containing highly alkaline or caustic agents on chrome-plated or anodized aluminum parts. This may result in damage to the protective coating and cause discoloration or paint deterioration.*

### ▼ Underbody Maintenance

Road chemicals and salt used for ice and snow removal and solvents used for dust control may collect on the underbody. If not removed, they will speed up rusting and deterioration of such underbody parts as fuel lines, frame, floor pan, and exhaust system, even though these parts may be coated with anti-corrosive material.

Thoroughly flush the underbody and wheel housings with lukewarm or cold water at the end of each winter. Try also to do this every month.

Pay special attention to these areas because they easily hide mud and dirt. **It will do more harm than good to wet down the road grime without removing it.**

The lower edges of doors, rocker panels, and frame members have drain holes that should not be clogged. Water trapped there will cause rusting.

**⚠ WARNING**

**Dry wet brakes by driving very slowly and applying the brakes lightly until brake performance is normal:**

*Driving with wet brakes is dangerous. Increased stopping distance or the vehicle pulling to one side when braking could result in a serious accident. Light braking will indicate whether the brakes have been affected.*

**▼ Aluminum Wheel Maintenance**

A protective coating is provided over the aluminum wheels. Special care is needed to protect this coating.

**⚠ CAUTION**

*Do not use any detergent other than mild detergent. Before using any detergent, verify the ingredients. Otherwise, the product could discolor or stain the aluminum wheels.*

**NOTE**

- *Do not use a wire brush or any abrasive cleaner, polishing compound, or solvent on aluminum wheels. They may damage the coating.*
- *Always use a sponge or soft cloth to clean the wheels.*  
*Rinse the wheels thoroughly with lukewarm or cold water. Also, be sure to clean the wheels after driving on dusty or salted roads to help prevent corrosion.*
- *Avoid washing your vehicle in an automatic car wash that uses high-speed or hard brushes.*
- *If your aluminum wheels lose luster, wax the wheels.*

**(With Tire Pressure Monitoring System)**

*Check special requirements for Tire Pressure Monitoring System.*

*Refer to Tires and Wheels on page 5-32.*

**▼ Plastic Part Maintenance**

- *When cleaning the plastic lenses of the lights, do not use gasoline, kerosene, rectified spirit, paint, thinner, highly acidic detergents, or strongly alkaline detergents. Otherwise, these chemical agents can discolor or damage the surfaces resulting in a significant loss in functionality. If plastic parts become inadvertently exposed to any of these chemical agents, flush with water immediately.*
- *If plastic parts such as the bumpers become inadvertently exposed to chemical agents or fluids such as gasoline, oil, engine coolant, or battery fluid, it could cause discoloration, staining, or paint peeling. Wipe off any such chemical agents or fluids using a soft cloth immediately.*

## Appearance Care

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- High water temperature and high water pressure car washers are available depending on the type of high pressure car washer device. If the car washer nozzle is put too close to the vehicle or aimed at one area for an extended period of time, it could deform plastic parts or damage the paint.
- Do not use wax containing compounds (polish). Otherwise, it could result in paint damage.
- In addition, do not use an electrical or air tool to apply wax. Otherwise, the frictional heat generated could result in deformation of plastic parts or paint damage.

### Interior Care

#### **WARNING**

**Do not spray water in the cabin:**

*Splashing water on electrical parts such as the audio unit and switches is dangerous as it could cause a malfunction or a fire.*

#### **▼ Dashboard Precautions**

Prevent caustic solutions such as perfume and cosmetic oils from contacting the dashboard. They'll damage and discolor the dashboard. If these solutions get on the dashboard, wipe them off immediately.

#### **CAUTION**

*Do not use glazing agents. Glazing agents contain ingredients which may cause discoloration, wrinkling, cracks and peeling.*

#### **▼ Cleaning the Upholstery and Interior Trim**

##### Vinyl

Remove dust and loose dirt from vinyl with a whisk broom or vacuum cleaner. Clean vinyl with a leather-and-vinyl cleaner.

### **Leather**

Remove dust and sand first using a vacuum cleaner or other means, then wipe dirt off using a soft cloth with a leather cleaner or a soft cloth soaked in mild soap.

Wipe off the remaining cleaner or soap using a cloth soaked in clean water and wrung out well.

Remove moisture with a dry, soft cloth and allow the leather to further dry in a well-ventilated, shaded area. If the leather gets wet such as from rain, also remove moisture and dry it as soon as possible.

### ***NOTE***

- *Because genuine leather is a natural material, its surface is not uniform and it may have natural scars, scratches, and wrinkles.*
- *To maintain the quality for as long as possible, periodical maintenance, about twice a year, is recommended.*
- *Sand and dust on the seat surface may damage the overcoat of the genuine leather surfaces and accelerate wear.*
- *Greasy soiling on genuine leather may cause molding and stains.*
- *Rubbing hard with a stiff brush or cloth may cause damage.*
- *Do not wipe the leather using alcohol, chlorine bleach, or organic solvents such as thinner, benzene, or gasoline. Otherwise, it may cause discoloration or stains.*
- *If the seats get wet, promptly remove moisture with a dry cloth. Remaining moisture on the surface may cause deterioration such as hardening and shrinkage.*
- *Exposure to direct sunlight for long periods may cause deterioration and shrinkage. When parking the car under direct sunlight for long periods, shade the interior using sunshades.*
- *Do not leave vinyl products on the seats for long periods as they may affect the leather quality and coloring. If the cabin temperature becomes hot, the vinyl may deteriorate and adhere to the genuine leather.*

### **Fabric**

Remove dust and loose dirt from fabric with a whisk broom or vacuum cleaner. Clean it with a mild soap solution good for upholstery and carpets. Remove fresh spots immediately with a fabric spot cleaner.

## Appearance Care

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To keep the fabric looking clean and fresh, take care of it. Otherwise its color will be affected, it can be stained easily, and its fire-resistance may be reduced.

### CAUTION

*Use only recommended cleaners and procedures. Others may affect appearance and fire-resistance.*

### **Piano black panel\***

The following parts are fitted with panels that have been treated with a special coating that resists scratching.

- Center panel
- Steering wheel (partial)
- Door trim panel

When the panel needs to be cleaned, use a soft cloth to wipe off dirt from the surface.

### **NOTE**

*Scratches or nicks on the panels resulting from the use of a hard brush or cloth may not be repairable.*

### **▼ Cleaning the Lap/Shoulder Belt Webbing**

Clean the webbing with a mild soap solution recommended for upholstery or carpets. Follow instructions. Don't bleach or dye the webbing; this may weaken it.

After cleaning the belts, thoroughly dry the belt webbing and make sure there is no remaining moisture before retracting them.

### WARNING

***Have an Authorized Mazda Dealer replace damaged seat belts immediately:***

*Using damaged seat belts is dangerous. In a collision, damaged belts cannot provide adequate protection.*

### **▼ Cleaning the Window Interiors**

If the windows become covered with an oily, greasy, or waxy film, clean them with glass cleaner. Follow the directions on the container.

### CAUTION

- *Do not scrape or scratch the inside of the window glass. It could damage the thermal filaments and the antenna lines.*
- *When washing the inside of the window glass, use a soft cloth dampened in lukewarm water, gently wiping the thermal filaments and the antenna lines. Use of glass cleaning products could damage the thermal filaments and the antenna lines.*



### ▼ Cleaning the Floor Mats

Rubber floor mats should be cleaned with mild soap and water only.

#### **WARNING**

*Do not use rubber cleaners, such as tire cleaner or tire shine, when cleaning rubber floor mats:*

*Cleaning the rubber floor mats with rubber cleaning products makes the floor mats slippery.*

*This may cause an accident when depressing the accelerator or brake pedal or when getting in or out of the vehicle.*

After removing the floor mats for cleaning, always reinstall them securely. Refer to Floor Mat on page 4-9.



# 9

## Customer Information and Reporting Safety Defects

Important consumer information including warranties and add-on equipment.

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## Customer Assistance

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### Customer Assistance (U.S.A.)

Your complete and permanent satisfaction is our business. We are here to serve you. All Authorized Mazda Dealers have the knowledge and the tools to keep your Mazda vehicle in top condition.

If you have any questions or recommendations for improvement regarding the service of your Mazda vehicle or servicing by Mazda Dealer personnel, we recommend that you take the following steps:

#### **NOTE**

*If it becomes necessary to have the components or wiring system for the supplementary restraint system modified to accommodate a person with certain medical conditions in accordance with a certified physician, contact an Authorized Mazda Dealer.*

#### **▼ STEP 1: Contact Your Mazda Dealer**

Discuss the matter with an Authorized Mazda Dealer. This is the quickest and best way to address the issue.

- If your concern has not been resolved by the CUSTOMER RELATIONS, SALES, SERVICE, or PARTS MANAGER, then please contact the GENERAL MANAGER of the dealership or the OWNER.
- If it becomes necessary to have the components or wiring system for the supplementary restraint system modified to accommodate a person with certain medical conditions in accordance with a certified physician, go to STEP2.

#### **▼ STEP 2: Contact Mazda North American Operations**

If for any reason you feel the need for further assistance after contacting your dealership management or it becomes necessary to have the components or wiring system for the supplementary restraint system modified to accommodate a person with certain medical conditions in accordance with a certified physician, you can reach Mazda North American Operations by one of the following ways.

Log on: at [www.mazdaUSA.com](http://www.mazdaUSA.com)

Answers to many questions, including how to locate or contact a local Mazda dealership in the U.S., can be found here.

E-mail: click on “Contact Us” located on the “Inside Mazda” tab, or at the bottom of the page at [www.mazdaUSA.com](http://www.mazdaUSA.com)

By phone at: 1 (800) 222-5500

By letter at:

Attn: Customer Assistance  
Mazda North American Operations  
7755 Irvine Center Drive  
Irvine, CA 92618-2922  
P.O. Box 19734  
Irvine, CA 92623-9734

In order to serve you efficiently and effectively, please help us by providing the following information:

1. Your name, address, and telephone number
2. Year and model of vehicle
3. Vehicle Identification Number (17 digits, noted on your registration or title or located on the upper driver's side corner of the dash)
4. Purchase date and current mileage
5. Your dealer's name and location
6. Your question(s)

If you live outside the U.S.A., please contact your nearest Mazda Distributor.

**▼ STEP 3: Contact Better Business Bureau (BBB)**

Mazda North American Operations realizes that mutual agreement on some issues may not be possible. As a final step to ensure that your concerns are being fairly considered, Mazda North American Operations has agreed to participate in a dispute settlement program administered by the Better Business Bureau (BBB) system, at no cost to you the consumer.

BBB AUTO LINE works with consumers and the manufacturer in an attempt to reach a mutually acceptable resolution of any warranty related concerns. If the BBB is not able to facilitate a settlement they will provide an informal hearing before an arbitrator.

You are required to resort to BBB AUTO LINE before exercising rights or seeking remedies under the Federal Magnuson-Moss Warranty Act, 15 U.S.C. § 2301 et seq. To the extent permitted by the applicable state "Lemon Law", you are also required to resort to BBB AUTO LINE before exercising any rights or seeking remedies under the "Lemon Law". If you choose to seek remedies that are not created by the Magnuson-Moss Warranty Act or the applicable state "Lemon Law", you are not required to first use BBB AUTO LINE.

## Customer Assistance

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The whole process normally takes 40 days or less. The arbitration decision is not binding on you or Mazda unless you accept the decision. For more information about BBB AUTO LINE, including current eligibility standards, please call 1-800-955-5100 or visit the BBB website at [www.lemonlaw.bbb.org](http://www.lemonlaw.bbb.org).

Being truly committed to customer satisfaction is more than a phrase with Mazda. We hope to satisfy every customer directly, but if there is ever a question about our decision, Mazda believes in providing a fast, fair and free method such as the BBB AUTO LINE to ensure Mazda delivers on our commitment to do the right thing for our customers!

### ▼ California Customers

1. Mazda North American Operations participates in BBB AUTO LINE, a mediation/arbitration program administered by the Council of Better Business Bureaus [4200 Wilson Boulevard, Arlington, Virginia 22203] through local Better Business Bureaus. BBB AUTO LINE and Mazda have been certified by the Arbitration Certification Program of the California Department of Consumer Affairs.
2. If you have a problem arising under a Mazda written warranty, we encourage you to bring it to our attention. If we are unable to resolve it, you may file a claim with BBB AUTO LINE. Claims must be filed with BBB AUTO LINE within six (6) months after the expiration of the warranty.
3. To file a claim with BBB AUTO LINE, call 1-800-955-5100. There is no charge for the call.
4. In order to file a claim with BBB AUTO LINE, you will have to provide your name and address, the brand name and vehicle identification number (VIN) of your vehicle, and a statement of the nature of your problem or complaint. You will also be asked to provide: the approximate date of your acquisition of the vehicle, the vehicle's current mileage, the approximate date and mileage at the time any problem(s) were first brought to the attention of Mazda or one of our dealers, and a statement of the relief you are seeking.
5. BBB AUTO LINE staff may try to help resolve your dispute through mediation. If mediation is not successful, or if you do not wish to participate in mediation, claims within the program's jurisdiction may be presented to an arbitrator at an informal hearing. The arbitrator's decision should ordinarily be issued within 40 days from the time your complaint is filed; there may be a delay of 7 days if you did not first contact Mazda about your problem, or a delay of up to 30 days if the arbitrator requests an inspection/report by an impartial technical expert or further investigation and report by BBB AUTO LINE.

6. You are required to use BBB AUTO LINE before asserting in court any rights or remedies conferred by California Civil Code Section 1793.22. You are also required to use BBB AUTO LINE before exercising rights or seeking remedies created by Title I of the Magnuson-Moss Warranty Act, 15 U.S.C. sec. 2301 et seq. If you choose to seek redress by pursuing rights and remedies not created by California Civil Code Section 1793.22 or Title I of the Magnuson-Moss Warranty Act, resort to BBB AUTO LINE is not required by those statutes.
7. California Civil Code Section 1793.2 (d) requires that, if Mazda or its representative is unable to repair a new motor vehicle to conform to the vehicle's applicable express warranty after a reasonable number of attempts, Mazda may be required to replace or repurchase the vehicle. California Civil Code Section 1793.22 (b) creates a presumption that Mazda has had a reasonable number of attempts to conform the vehicle to its applicable express warranties if, within 18 months from delivery to the buyer or 18,000 miles on the vehicle's odometer, whichever occurs first, one or more of the following occurs:
  - The same nonconformity [a failure to conform to the written warranty that substantially impairs the use, value or safety of the vehicle] results in a condition that is likely to cause death or serious bodily injury if the vehicle is driven **AND** the nonconformity has been subject to repair two or more times by Mazda or its agents **AND** the buyer or lessee has directly notified Mazda of the need for the repair of the nonconformity; OR
  - The same nonconformity has been subject to repair 4 or more times by Mazda or its agents **AND** the buyer has notified Mazda of the need for the repair of the nonconformity; OR
  - The vehicle is out of service by reason of repair of nonconformities by Mazda or its agents for a cumulative total of more than 30 calendar days after delivery of the vehicle to the buyer.

**NOTICE TO Mazda AS REQUIRED ABOVE SHALL BE SENT TO THE FOLLOWING ADDRESS:**

Mazda North American Operations  
7755 Irvine Center Drive  
Irvine, CA 92618  
ATTN: Customer Mediation

8. The following remedies may be sought in BBB AUTO LINE: repairs, reimbursement for money paid to repair a vehicle or other expenses incurred as result of a vehicle nonconformity, repurchase or replacement of your vehicle, and compensation for damages and remedies available under Mazda's written warranty or applicable law.
9. The following remedies may **not** be sought in BBB AUTO LINE: punitive or multiple damages, attorneys' fees, or consequential damages other than as provided in California Civil Code Section 1794 (a) and (b).

## Customer Assistance

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10. You may reject the decision issued by a BBB AUTO LINE arbitrator. If you reject the decision, you will be free to pursue further legal action. The arbitrator's decision and any findings will be admissible in a court action.
11. If you accept the arbitrator's decision, Mazda will be bound by the decision, and will comply with the decision within a reasonable time not to exceed 30 days after we receive notice of your acceptance of the decision.
12. Please call BBB AUTO LINE at 1-800-955-5100 for further details about the program.



## Customer Assistance (Canada)

### ▼ Satisfaction Review Process

Your complete and permanent satisfaction is of primary concern to Mazda. All Authorized Mazda Dealers have both the knowledge and tools to keep your Mazda in top condition. In our experience, any questions, problems, or complaints regarding the operation of your Mazda or any other general service transactions are most effectively resolved by your dealer. If the cause of your dissatisfaction cannot adequately be addressed by normal dealership procedures, we recommend that you take the following steps:

### ▼ STEP 1: Contact the Mazda Dealer

Discuss the matter with a member of dealership management. If the Service Manager has already reviewed your concerns, contact the owner of the dealership or its General Manager.

### ▼ STEP 2: Contact the Mazda Regional Office

If you feel that you still require assistance, ask the dealer Service Manager to arrange for you to meet the local Mazda Service Representative. If more expedient, contact Mazda Canada Inc. Regional Office nearest you for such arrangements. Regional Office address and phone numbers are shown (page 9-9).

### ▼ STEP 3: Contact the Mazda Customer Relations Department

If still not substantially satisfied, contact the Customer Relations Department, Mazda Canada Inc., 55 Vogell Road, Richmond Hill, Ontario, L4B 3K5 Canada TEL: 1 (800) 263-4680.

Provide the Department with the following information:

1. Your name, address and telephone number
2. Year and model of vehicle
3. Vehicle Identification Number (VIN). Refer to the "Vehicle Identification Labels" page of section 10 of this manual for the location of the VIN.
4. Purchase date
5. Present odometer reading
6. Your dealer's name and location
7. The nature of your problem and/or cause of dissatisfaction

The Department, in cooperation with the local Mazda Service Representative, will review the case to determine if everything possible has been done to ensure your satisfaction.

## Customer Assistance

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Please recognize that the resolution of service problems in most cases requires the use of your Mazda dealer's service facilities, personnel and equipment. We urge you to follow the above three steps in sequence for most effective results.

### ▼ Mediation/Arbitration Program

Occasionally a customer concern cannot be resolved through Mazda's Customer Satisfaction Program. If after exhausting the procedures in this manual your concern is still not resolved, you have another option.

Mazda Canada Inc. participates in an arbitration program administered by the Canadian Motor Vehicle Arbitration Plan (CAMVAP). CAMVAP will advise you about how your concern may be reviewed and resolved by an independent third party through binding arbitration.

Your complete satisfaction is the goal of Mazda Canada Inc. and our dealers. Mazda's participation in CAMVAP makes a valuable contribution to our achieving that goal. There is no charge for using CAMVAP. CAMVAP results are fast, fair and final as the award is binding on both you and Mazda Canada Inc.

### ▼ Canadian Motor Vehicle Arbitration Plan (CAMVAP)

If a specific item of concern arises, where a solution cannot be reached between an owner, Mazda, and/or one of its dealers (that all parties cannot agree upon), the owner may wish to use the services offered by the Canadian Motor Vehicle Arbitration Plan (CAMVAP).

CAMVAP uses the services of Provincial Administrators to assist consumers in scheduling and preparing for their arbitration hearings. However, before you can proceed with CAMVAP you must follow your Mazda dispute resolution process as outlined previously.

## Customer Assistance

CAMVAP is fully implemented in all provinces and territories.

Consumers wishing to obtain further information about the Program should contact the Provincial Administrator at 1 (800) 207-0685, or by contacting the Canadian Motor Vehicle Arbitration Plan Office at:

Canadian Motor Vehicle Arbitration Plan

235 Yorkland Boulevard, suite 300

North York, Ontario

M2J 4Y8

<http://camvap.ca>

Provincial Administrators may be reached locally as listed below:

Province/Territory	CAMVAP Number
British Columbia & Yukon Territories	1 (800) 207-0685
Alberta & Northwest Territories	1 (800) 207-0685
Saskatchewan	1 (800) 207-0685
Manitoba	1 (800) 207-0685
Ontario	1 (800) 207-0685
Atlantic Canada	1 (800) 207-0685
Quebec	1 (800) 207-0685

### ▼ Regional Offices

REGIONAL OFFICES	AREAS COVERED
MAZDA CANADA INC. WESTERN REGION 8171 ACKROYD ROAD SUITE 2000 RICHMOND B.C. V6X 3K1 (604) 303-5670	ALBERTA, BRITISH COLUMBIA, MANITOBA, SASKATCHEWAN, YUKON
MAZDA CANADA INC. CENTRAL/ATLANTIC REGION 55 VOGELL ROAD, RICHMOND HILL, ONTARIO, L4B 3K5 (905) 787-7000	ONTARIO
MAZDA CANADA INC. QUEBEC REGION 6111 ROUTE TRANS CANADIENNE POINTE CLAIRE, QUEBEC H9R 5A5 (514) 694-6390	QUEBEC, NEW BRUNSWICK, NOVA SCOTIA, PRINCE EDWARD ISLAND, NEWFOUNDLAND

## Customer Assistance

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### Customer Assistance (Puerto Rico)

Your complete and permanent satisfaction is our business. That is why all Authorized Mazda Dealers have the knowledge and the tools to keep your Mazda vehicle in top condition.

If you have any questions or recommendations for improvement regarding the service of your Mazda vehicle or servicing by Mazda Dealer personnel, we recommend that you take the following steps:

#### ▼ STEP 1

Discuss the matter with an Authorized Mazda Dealer. This is the quickest and best way to address the issue. If your concern has not been resolved by the CUSTOMER RELATIONS, SALES, SERVICE, or PARTS MANAGER, then please contact the GENERAL MANAGER of the dealership or the OWNER.

#### ▼ STEP 2

If, after following STEP 1, you feel the need for further assistance, please contact your area's Mazda representative (Indicated on the next page).

Please help us by providing the following information:

1. Your name, address, and telephone number
2. Year and model of vehicle
3. Vehicle Identification Number (17 digits, noted on your registration or title or located on the upper driver's side corner of the dash)
4. Purchase date and current mileage
5. Your dealer's name and location
6. Your question(s)

## **Customer Assistance (Mexico)**

Your complete and permanent satisfaction is our business. We are here to serve you. All Authorized Mazda Dealers have the knowledge and the tools to keep your Mazda vehicle in top condition.

If you have any questions or recommendations for improvement regarding the service of your Mazda vehicle or servicing by Mazda Dealer personnel, we recommend that you take the following steps:

### **▼ Contact Your Mazda Dealer**

Discuss the matter with an Authorized Mazda Dealer. This is the quickest and best way to address the issue.

- If your concern has not been resolved by the CUSTOMER RELATIONS, SALES, SERVICE, or PARTS MANAGER, then please contact the GENERAL MANAGER of the dealership or the OWNER.
- If it becomes necessary to have the components or wiring system for the supplementary restraint system modified to accommodate a person with certain medical condition in accordance with a certified physician you must contact your dealership in order to avoid the potential loss of the warranty of your vehicle which may occur if some third party is hired by the customer to make any modifications to this system.

Log on: at [www.MazdaMexico.com.mx](http://www.MazdaMexico.com.mx)

Answers to many questions, including how to locate or contact a local Mazda dealership in Mexico, can be found here.

E-mail: click on “Contactanos” at the top of the page at [www.MazdaMexico.com.mx](http://www.MazdaMexico.com.mx)

By phone at: 01 800 01 MAZDA (62932)

By letter at:

Attn: Customer Assistance

Mazda Motor de Mexico

Mario Pani #150, PB Col. Lomas de Santa Fe

Mexico, D.F. C.P. 05300

Del. Cuajimalpa de Morelos

Tel: Customer Assistance

01 800 01 MAZDA (62932).

In order to serve you efficiently and effectively, please help us by providing the following information:

1. Your name, address, and telephone number

## Customer Assistance

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2. Year and model of vehicle
3. Vehicle Identification Number (17 digits, noted on your registration or title or located on the upper driver's side corner of the dash)
4. Purchase date and current mileage
5. Your dealer's name and location
6. Your question(s)

## **Importer/Distributor**

### **▼ U.S.A.**

#### **Mazda North American Operations**

7755 Irvine Center Drive

Irvine, CA 92618-2922 U.S.A.

P.O. Box 19734

Irvine, CA 92623-9734 U.S.A.

TEL: 1 (800) 222-5500 (in U.S.A.)

(949) 727-1990 (outside U.S.A.)

## **Distributor in Each Area**

### **▼ CANADA**

#### **Mazda Canada Inc.**

55 Vogell Road, Richmond Hill,

Ontario, L4B 3K5 Canada

TEL: 1 (800) 263-4680 (in Canada)

(905) 787-7000 (outside Canada)

### **▼ PUERTO RICO/U.S. Virgin Island**

#### **Plaza Motors Corp. (Mazda de Puerto Rico)**

P.O. Box 362722, San Juan, Puerto Rico

00936-2722

TEL: (787) 641-9300

### **▼ MEXICO**

#### **Mazda Motor de Mexico**

Mario Pani # 150, PB Col. Lomas de

Santa Fe Mexico, D.F. C.P. 05300 Del.

Cuajimalpa

TEL: Center of Attention to Clients:

01 (800) 016 2932. in Mexico

### **▼ GUAM**

#### **Triple J Motors**

157 South Marine Drive, Tamuning,

GUAM 96911 USA

P.O. Box 6066 Tamuning, Guam 96931

TEL: (671) 649-6555

### **▼ SAIPAN**

#### **Pacific International Marianas, Inc. (d.b.a. Midway Motors)**

P.O. Box 887 Saipan, MP 96950

TEL: (670) 234-7524

## **Mazda Importer/Distributors**

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**Triple J Saipan, Inc.**

**(d.b.a. Triple J Motors)**

P.O. Box 500487 Saipan, MP 96950-0487

TEL: (670) 234-7133/3051



## **Warranties for Your Mazda**

- New Vehicle Limited Warranty
- Powertrain Limited Warranty
- Safety Restraint System Limited Warranty
- Anti-perforation Limited Warranty
- Federal Emission Control Warranty/California Emission Control Warranty
  - Emission Defect Warranty
  - Emission Performance Warranty
- Emission Control Warranty
- Replacement Parts and Accessories Limited Warranty
- Tire Warranty

**NOTE**

*Warranty information varies depending on the country. Refer to the Warranty Booklet for detailed warranty information.*

## Warranty

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### Outside the United States and Canada

Government regulations in the United States and Canada require that automobiles meet specific emission regulations and safety standards. Therefore, vehicles built for use in the United States, its territories, and Canada may differ from those sold in other countries.

The differences may make it difficult or even impossible for your vehicle to receive satisfactory servicing in other countries. We strongly recommend that you NOT take your Mazda outside these areas.

You may have these problems if you do:

- Recommended fuel may be unavailable. Any kind of leaded fuel or low-octane fuel will affect vehicle performance and damage the emission controls and engine.
- Proper repair facilities, tools, testing equipment, and replacement parts may not be available.

The Mazda warranty applies only to Mazda vehicles registered and normally operated in the United States, its territories, and Canada.

## Outside the United States

Government regulations in the United States require that automobiles meet specific emission regulations and safety standards. Therefore, vehicles built for use in the United States may differ from those sold in other countries.

The differences may make it difficult or even impossible for your vehicle to receive satisfactory servicing in other countries. We strongly recommend that you NOT take your Mazda outside the United States. However, in the event that you are moving to Canada permanently, Mazda vehicles built for use in the United States could be eligible for exportation to Canada with specific vehicle modifications to comply with the Canadian Motor Vehicle Safety Standards (CMVSS).

### **NOTE**

*The above is applicable for a permanent import/export situation and not related to travelers on vacation.*

You may have the following problems if you do take your vehicle outside of the United States:

- Recommended fuel may be unavailable. Any kind of leaded fuel or low-octane fuel will affect vehicle performance and damage the emission controls and engine.
- Proper repair facilities, tools, testing equipment, and replacement parts may not be available.

Please refer to your Manufacturer's Warranty Booklet for more information.

## Warranty

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### Outside Canada

Government regulations in Canada require that automobiles meet specific emission regulations and safety regulations. Therefore, vehicles built for use in Canada may differ from those sold in other countries.

The differences may make it difficult or even impossible for your vehicle to receive satisfactory servicing in other countries. We strongly recommend that you NOT take your Mazda outside Canada. However, in the event that you are moving to the United States permanently, Mazda vehicles built for use in Canada could be eligible for exportation to the United States with specific vehicle modifications to comply with the United States Federal Motor Vehicle Safety Standards (FMVSS).

#### **NOTE**

*The above is applicable for a permanent import/export situation and not related to travelers on vacation.*

You may have the following problems if you do take your vehicle outside of Canada:

- Recommended fuel may be unavailable. Any kind of leaded fuel or low-octane fuel will affect vehicle performance and damage the emission controls and engine.
- Proper repair facilities, tools, testing equipment, and replacement parts may not be available.

Please refer to your Manufacturer's Warranty Booklet for more information.

## **Registering Your Vehicle in A Foreign Country (Except United States and Canada)**

Registering your vehicle in a foreign country may be problematic depending on whether it meets the specific emission and safety standards of the country in which the vehicle will be driven. Consequently, your vehicle may require modifications at personal expense in order to meet the regulations.

In addition, you should be aware of the following issues:

Satisfactory vehicle servicing may be difficult or impossible in another country.

The fuel specified for your vehicle may be unavailable.

Parts, servicing techniques, and tools necessary to maintain and repair your vehicle may be unavailable.

There might not be an Authorized Mazda Dealer in the country you plan to take your vehicle.

The Mazda warranty is valid only in certain countries.

## Warranty

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### Add-On Non-Genuine Parts and Accessories

Non-genuine parts and accessories for Mazda vehicles can be found in stores. These may fit your vehicle, but they are not approved by Mazda for use with Mazda vehicles. When you install non-genuine parts or accessories, they could affect your vehicle's performance or safety systems; the Mazda warranty doesn't cover this. Before you install any non-genuine parts or accessories, consult an Authorized Mazda Dealer.

#### **WARNING**

***Always consult an Authorized Mazda Dealer before you install non-genuine parts or accessories:***

*Installation of non-genuine parts or accessories is dangerous. Improperly designed parts or accessories could seriously affect your vehicle's performance or safety systems. This could cause you to have an accident or increase your chances of injuries in an accident.*

***Be very careful in choosing and installing add-on electrical equipment, such as mobile telephones, two-way radios, stereo systems, and car alarm systems:***

*Incorrectly choosing or installing improper add-on equipment or choosing an improper installer is dangerous. Essential systems could be damaged, causing engine stalling, air-bag (SRS) activation, ABS/TCS/DSC inactivation, or a fire in the vehicle.*

Mazda assumes no responsibility for death, injury, or expenses that may result from the installation of add-on non-genuine parts or accessories.

## Cell Phones Warning

### **WARNING**

***Please comply with the legal regulations concerning the use of communication equipment in vehicles in your State or Province:***

*Use of any electrical devices such as cell phones, computers, portable radios, vehicle navigation or other devices by the driver while the vehicle is moving is dangerous. Dialing a number on a cell phone while driving also ties-up the driver's hands. Use of these devices will cause the driver to be distracted and could lead to a serious accident. If a passenger is unable to use the device, pull off the right-of-way to a safe area before use. If use of a cell phone is necessary despite this warning, use a hands-free system to at least leave the hands free to drive the vehicle. Never use a cell phone or other electrical devices while the vehicle is moving and, instead, concentrate on the full-time job of driving.*

## Event Data Recorder

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### Event Data Recorder

This vehicle is equipped with an event data recorder (EDR). The main purpose of an EDR is to record, in certain crash or near crash-like situations, such as an air bag deployment or hitting a road obstacle. The data that will assist in understanding how a vehicle's systems performed. The EDR is designed to record data related to vehicle dynamics and safety systems for a short period of time, typically 30 seconds or less. The EDR in this vehicle is designed to record such data as:

- How various systems in your vehicle were operating;
- Whether or not the driver and passenger safety belts were buckled/fastened;
- How far (if at all) the driver was depressing the accelerator and/or brake pedal; and,
- How fast the vehicle was traveling.

These data can help provide a better understanding of the circumstances in which crashes and injuries occur.

#### **NOTE**

*EDR data is recorded by your vehicle only if a non-trivial crash or near crash-like situation occurs; no data is recorded by the EDR under normal driving conditions and no personal data (e.g., name, gender, age, and crash location) are recorded. However, other parties, such as law enforcement, could combine the EDR data with the type of personally identifying data routinely acquired during a crash investigation.*

To read data recorded by an EDR, special equipment is required, and access to the vehicle or the EDR is needed. In addition to the vehicle manufacturer, other parties, such as law enforcement, that have the special equipment, can read the information if they have access to the vehicle or the EDR.

Mazda will not disclose any of the data recorded in an EDR to a third party unless:

- A written agreement from the vehicle owner or the lessee is obtained
- Officially requested by the police or other law enforcement authorities
- Used as a defense for Mazda in a law suit, claim, or arbitration
- Ordered by a judge or court

However, if necessary Mazda will:

- Use the data for research on Mazda vehicle performance, including safety.
- Disclose the data or the summarized data to a third party for research purposes without disclosing vehicle or owner identification information.



# Uniform Tire Quality Grading System (UTQGS)

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## Uniform Tire Quality Grading System (UTQGS)

This information relates to the tire grading system developed by the U.S. National Highway Traffic Safety Administration for grading tires by tread wear, traction, and temperature performance.

### ▼ Tread Wear

The tread wear grade is a comparative rating based on the wear rate of the tire when tested under controlled conditions on a specified government test course. For example, a tire graded 150 would wear one-and-a-half times as well on the government course as a tire graded 100.

The relative performance of tires depends upon the actual conditions of their use, however, and may depart significantly from the norm because of variations in driving habits, service practices and differences in road characteristics and climate.

### ▼ Traction-AA, A, B, C

The traction grades, from highest to lowest, are AA, A, B, and C. These grades represent the tire's ability to stop on wet pavement as measured under controlled conditions on specified government test surfaces of asphalt and concrete. A tire marked C may have poor traction performance.

### WARNING

*The traction grade assigned to this tire is based on braking (straight ahead) traction tests and does not include acceleration cornering (turning), hydroplaning, or peak traction characteristics.*

### ▼ Temperature-A, B, C

The temperature grades A (the highest), B, and C, represent the tire's resistance to the generation of heat and its ability to dissipate heat when tested under controlled conditions on a specified indoor laboratory test wheel.

Sustained high temperature can cause the material of the tire to degenerate and reduce tire life, and excessive temperatures can lead to sudden tire failure.

Grade C corresponds to a level of performance which all passenger vehicle tires must meet under the Federal Motor Vehicle Safety Standard No. 109. Grades B and A represent higher levels of performance on the laboratory test wheel than the minimum required by law.

## Uniform Tire Quality Grading System (UTQGS)

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### **⚠ WARNING**

**Keep your vehicle's tires properly inflated and not overloaded:**

*Driving with improperly inflated or overloaded tires is dangerous. Excessive speed, underinflation, or excessive loading, either separately or in combination, can cause heat buildup and possible tire failure. The temperature grade for this tire is established for a tire that is properly inflated and not overloaded.*

These grades will be added to the sidewalls of passenger vehicle tires over the next several years according to a schedule established by the NHTSA and the tire manufacturers.

The grade of tires available as standard or optional equipment on Mazda vehicles may vary with respect to grade.

**ALL PASSENGER VEHICLE TIRES MUST CONFORM TO THESE GRADES AND TO ALL OTHER FEDERAL TIRE-SAFETY REQUIREMENTS.**

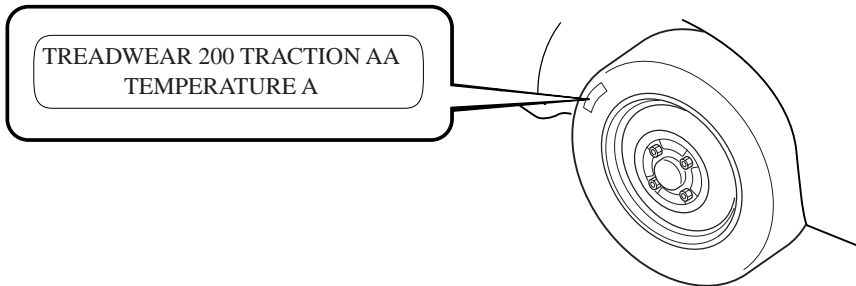
### **▼ Uniform Tire Quality Grading**

Quality grades can be found where applicable on the tire sidewall between tread shoulder and maximum section width.

For example:

**Treadwear 200 Traction AA Temperature A**

**UTQGS MARK (example)**



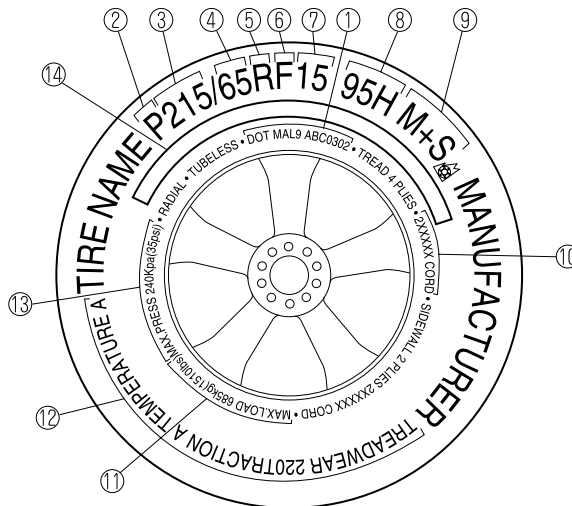
## Tire Information (except Canada)

### Tire Labeling

Federal law requires tire manufacturers to place standardized information on the sidewall of all tires. This information identifies and describes the fundamental characteristics of the tire and also provides a tire identification number for safety standard certification and in case of a recall.

#### ▼ Information on Passenger Vehicle Tires

Please refer to the sample below.



1. TIN: U.S. DOT tire identification number
2. Passenger car tire
3. Nominal width of tire in millimeters
4. Ratio of height to width (aspect ratio)
5. Radial
6. Run-flat tire
7. Rim diameter code
8. Load index & speed symbol
9. Severe snow conditions
10. Tire ply composition and materials used

## Tire Information (except Canada)

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11. Max. load rating
12. Tread wear, traction and temperature grades
13. Max. permissible inflation pressure
14. SAFETY WARNING

P215/65R15 95H is an example of a tire size and load index rating. Here is an explanation of the various components of that tire size and load index rating. Note that the tire size and load index rating may be different from the example.

### **P**

Indicates a tire that may be installed on cars, SUVs, minivans and light trucks as designated by the Tire and Rim Association (T&RA).

### ***NOTE***

*If your tire size does not begin with a letter this may mean it is designated by either ETRTO (European Tire and Rim Technical Organization) or JATMA (Japan Tire Manufacturing Association).*

### **215**

“215” is the nominal width of the tire in millimeters. This three-digit number gives the width in millimeters of the tire from sidewall edge to sidewall edge. In general, the larger the number, the wider the tire.

### **65**

“65” is the aspect ratio. This two-digit number indicates the tire's ratio of height to width.

### **R**

“R” is the tire construction symbol. R indicates “Radial ply construction”.

### **15**

“15” is the wheel rim diameter in inches.

### **95**

“95” is the Load Index. This two-or three-digit number indicates how much weight each tire can support.

## Tire Information (except Canada)

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### **H**

“H” is the speed rating. The speed rating denotes the maximum speed for which the use of the tire is rated.

Letter Rating	Speed Rating
Q	99 mph
R	106 mph
S	112 mph
T	118 mph
U	124 mph
H	130 mph
V	149 mph
W	168* mph
Y	186* mph

\* For tires with a maximum speed capability over 149 mph, tire manufacturers sometimes use the letters ZR. For tires with a maximum speed capability over 186 mph, tire manufacturers always use the letters ZR.

### **M+ S or M/S: Mud and Snow**

AT: All Terrain.

AS: All Season. The “M+ S” or “M/S” indicates that the tire has some functional use in mud and snow.

### **U.S. DOT Tire Identification Number (TIN)**

This begins with the letters “DOT” which indicates the tire meets all federal standards. The next two numbers or letters are the plant code where it was manufactured, and the last four numbers represent the week and year the tire was manufactured. For example, the numbers 457 means the 45th week of 1997. After 2000 the numbers go to four digits. For example, the number 2102 means the 21th week of 2002. The other numbers are marketing codes used at the manufacturer's discretion. This information is used to contact consumers if a tire defect requires a recall.

### **Tire Ply Composition and Materials Used**

The number of plies indicates the number of layers of rubber-coated fabric in the tire. In general, the greater the number of plies, the more weight a tire can support. Tire manufacturers also must indicate the tire materials, which include steel, nylon, polyester, and other.

### **Maximum Load Rating**

This number indicates the maximum load in kilograms and pounds that can be carried by the tire.

### **Maximum Permissible Inflation Pressure**

This number is the greatest amount of air pressure that should ever be put in the tire under normal driving conditions.

## **Tire Information (except Canada)**

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### **Tread Wear, Traction and Temperature Grades**

**Tread wear:** The tread wear grade is a comparative rating based on the wear rate of the tire when tested under controlled conditions on a specified government test course. For example, a tire graded 150 would wear one and one-half (1 1/2) times as well on the government course as a tire graded 100.

**Traction:** The traction grades, from highest to lowest are AA, A, B, and C. The grades represent the tire's ability to stop on wet pavement as measured under controlled conditions on specified government test surfaces of asphalt and concrete. A tire marked C may have poor traction performance.

**Temperature:** The temperature grades are A (the highest), B and C, representing the tire's resistance to the generation of heat and its ability to dissipate heat when tested under controlled conditions on a specified indoor laboratory test wheel.

### **Snow Tires**

In some heavy snow areas, local governments may require true snow tires, those with very deeply cut tread. These tires should only be used in pairs or placed on all four wheels. Make sure you purchase snow tires that are the same size and construction type as the other tires on your vehicle.

### **SAFETY WARNING**

The following safety warning appears on the tire's sidewall.

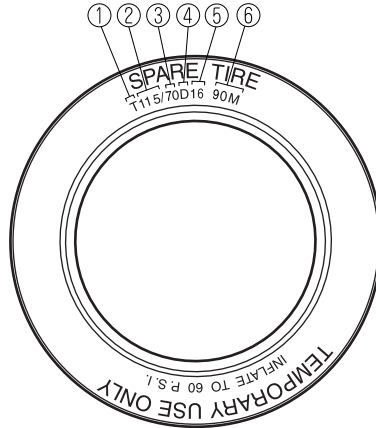
SERIOUS INJURY MAY RESULT FROM:

- EXPLOSION OF TIRE/RIM ASSEMBLY DUE TO IMPROPER MOUNTING-MATCH TIRE DIAMETER TO RIM DIAMETER; NEVER EXCEED 40 psi (275 kPa) TO SEAT BEADS-ONLY SPECIALLY TRAINED PERSONS SHOULD MOUNT TIRES.
- TIRE FAILURE DUE TO UNDER-INFLATION/OVERLOADING/DAMAGE-FOLLOW OWNER'S MANUAL AND PLACARD IN VEHICLE-FREQUENTLY CHECK INFLATION PRESSURE AND INSPECT FOR DAMAGE.

## Tire Information (except Canada)

### ▼ Information on Temporary Tires

Please refer to the sample below.



1. Temporary tires
2. Nominal width of tire in millimeters
3. Ratio of height to width (aspect ratio)
4. Diagonal
5. Rim diameter code
6. Load index & speed symbol

T115/70D 16 90M is an example of a tire size and load index rating. Here is an explanation of the various components of that tire size and load index rating. Note that the tire size and load index rating may be different from the example.

#### **T**

Indicates a tire that may be installed on cars, SUVs, minivans and light trucks as designated by the Tire and Rim Association (T&RA).

#### **115**

“115” is the nominal width of the tire in millimeters. This three-digit number gives the width in millimeters of the tire from sidewall edge to sidewall edge. In general, the larger the number, the wider the tire.

## Tire Information (except Canada)

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### **70**

“70” is the aspect ratio. This two-digit number indicates the tire's ratio of height to width.

### **D**

“D” is the tire construction symbol. D indicates “diagonal ply construction”.

### **16**

“16” is the wheel rim diameter in inches.

### **90**

“90” is the Load Index. This two-or three-digit number indicates how much weight each tire can support.

### **M**

“M” is the speed rating. The speed rating denotes the maximum speed for which the use of the tire is rated.

Letter Rating	Speed Rating
M	81 mph




## Tire Information (except Canada)

### Location of the Tire Label (Placard)

You will find the tire label containing tire inflation pressure by tire size and other important information on the driver's side B-pillar or on the edge of the driver's door frame.

#### SAMPLE

 <b>TIRE AND LOADING INFORMATION</b> <b>RENSEIGNEMENTS SUR LES PNEUS ET LE CHARGEMENT</b>				
SEATING CAPACITY NOMBRE DE PLACES		TOTAL 5	FRONT AVANT 2	REAR ARRIÈRE 3
The combined weight of occupants and cargo should never exceed <b>xxx</b> kg or <b>xxx</b> lbs.* Le poids total des occupants et du chargement ne doit jamais dépasser <b>xxx</b> kg ou <b>xxx</b> lb.*				
TIRE PNEU	SIZE DIMENSIONS	COLD TIRE PRESSURE PRESSION DES PNEUS À FROID	SEE OWNER'S MANUAL FOR ADDITIONAL INFORMATION	
FRONT AVANT	P195/70R14	200 kPa, 29 psi	VOIR LE MANUEL DE L'USAGER POUR PLUS DE RENSEIGNEMENTS	
REAR ARRIÈRE	P195/70R14	200 kPa, 29 psi		
SPARE DE SECOURS	T125/70D15	420 kPa, 60 psi		

(XXX)

#### ▼ Recommended Tire Inflation Pressure

On the tire label you will find the recommended tire inflation pressure in both kPa and psi for the tires installed as original equipment on the vehicle. It is very important that the inflation pressure of the tires on your vehicle is maintained at the recommended pressure. You should check the tire pressure regularly to insure that the proper inflation pressure is maintained.

Refer to Tires on page 10-6.

#### NOTE

*Tire pressures listed on the vehicle placard or tire information label indicate the recommended cold tire inflation pressure, measured when the tires are cold, after the vehicle has been parked for at least 3 hours. As you drive, the temperature in the tire warms up, increasing the tire pressure.*

## Tire Information (except Canada)

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### **WARNING**

**Always check the tire inflation pressures on a regular basis according to the recommended tire inflation pressure on the tire label and in conjunction with the information in this owner's manual:**

*Driving your vehicle with under-inflated tires is dangerous.*

*Under-inflation is the most common cause of failures in any kind of tire and may result in severe cracking, tread separation or "blowout", with unexpected loss of vehicle control and increased risk of injury. Under-inflation increases sidewall flexing and rolling resistance, resulting in heat buildup and internal damage to the tire. It results in unnecessary tire stress, irregular wear, loss of control and accidents. A tire can lose up to half of its air pressure and not appear to be flat!*

*It is impossible to determine whether or not tires are properly inflated just by looking at them.*

### ▼ **Checking Tire Pressure**

1. When you check the air pressure, make sure the tires are cold —meaning they are not hot from driving even a mile.
2. Remove the cap from the valve on one tire.
3. Firmly press a tire gauge onto the valve.
4. Add air to achieve recommended air pressure.
5. If you overfill the tire, release air by pushing on the metal stem in the center of the valve. Then recheck the pressure with your tire gauge.
6. Replace the valve cap.
7. Repeat with each tire, including the spare.

#### **NOTE**

*Some spare tires require higher inflation pressure.*

8. Visually inspect the tires to make sure there are no nails or other objects embedded that could poke a hole in the tire and cause an air leak.
9. Check the sidewalls to make sure there are no gouges, cuts, bulges, cracks or other irregularities.

#### **NOTE**

*Warm tires normally exceed recommended pressures. Don't release air from warm tires to adjust the pressure.*

*Under-inflation can cause serious failures and accidents.*

*Over-inflation can produce a harsh ride and the greater possibility of damage from road hazards.*

## Tire Information (except Canada)

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### ▼ Glossary of Terms

**Tire Placard:** A label indicating the OE tire sizes, recommended inflation pressure, and the maximum weight the vehicle can carry.

**Tire Identification Number (TIN):** A number on the sidewall of each tire providing information about the tire brand and manufacturing plant, tire size, and date of manufacture.

**Inflation Pressure:** A measure of the amount of air in a tire.

**kPa:** Kilopascal, the metric unit for air pressure.

**psi:** Pounds per square inch, the English unit for air pressure.

**B-pillar:** The structural member at the side of the vehicle behind the front door.

**Original Equipment (OE):** Describes components originally equipped on the vehicle.

**Vehicle Load Limit:** The maximum value of the combination weight of occupants and cargo.

**Bead Area of the Tire:** Area of the tire next to the rim.

**Sidewall Area of the Tire:** Area between the bead area and the tread.

**Tread Area of the Tire:** Area on the perimeter of the tire that contacts the road when it's mounted on the vehicle.

**Seating capacity** means the total allowable number of vehicle occupants. Seating capacity is described on the tire label.

**Production options weight** is the combination weight of installed regular production options weighing over 2.3 kilograms in excess of the standard items which they replace, and not previously considered in the curb weight or accessory weight, including heavy duty brakes, ride levelers, roof rack, heavy duty battery, and special trim.

**Rim** is the metal support (wheel) for a tire or a tire and tube assembly upon which the tire beads are seated.

## Tire Information (except Canada)

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### Tire Maintenance

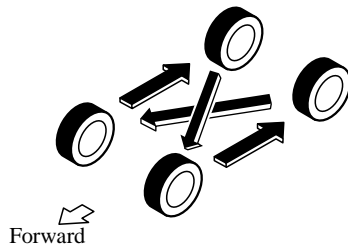
Improper or inadequate vehicle maintenance can cause tires to wear abnormally. Here are some important maintenance points:

#### ▼ Tire Inflation Pressure

Inspect all tire pressure monthly (including the spare) when the tires are cold. Maintain recommended pressures for the best ride, top handling, and minimum tire wear. Use the pressures specified on the vehicle tire information placard or tire label for optimum service.

#### ▼ Tire Rotation

To equalize tread wear, rotate the tires every 12,000 km (7,500 miles) or sooner if irregular wear develops. During rotation, inspect them for correct balance.



Do not include (TEMPORARY USE ONLY) spare tire in rotation.

Inspect the tires for uneven wear and damage. Abnormal wear is usually caused by one or a combination of the following:

- Incorrect tire pressure
- Improper wheel alignment
- Out-of-balance wheel
- Severe braking

After rotation, inflate all tire pressures to specification (page 10-6) and inspect the lug nuts for tightness.

#### **⚠ CAUTION**

*Rotate unidirectional tires and radial tires that have an asymmetrical tread pattern or studs only from front to rear, not from side to side. Tire performance will be weakened if rotated from side to side.*

## Tire Information (except Canada)

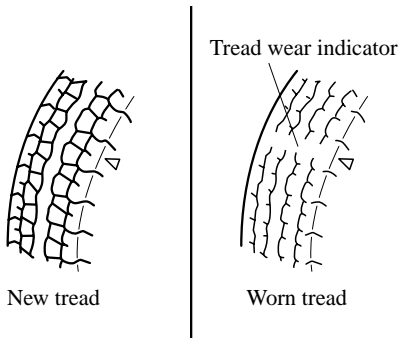
### ▼ Replacing a Tire

#### ⚠ WARNING

**Always use tires that are in good condition:**

*Driving with worn tires is dangerous. Reduced braking, steering, and traction could result in an accident.*

If a tire wears evenly, a wear indicator will appear as a solid band across the tread. Replace the tire when this happens.



You should replace the tire before the band crosses the entire tread.

#### **NOTE**

*Tires degrade over time, even when they are not being used on the road. It is recommended that tires generally be replaced when they are 6 years or older. Heat caused by hot climates or frequent high loading conditions can accelerate the aging process. You should replace the spare tire when you replace the other road tires due to the aging of the spare tire. The period in which the tire was manufactured (both week and year) is indicated by a 4-digit number.*

*Refer to Tire Labeling on page 9-25.*

### ▼ Safety Practices

The way you drive has a great deal to do with your tire mileage and safety. So cultivate good driving habits for your own benefit.

- Observe posted speed limits
- Avoid fast starts, stops and turns
- Avoid potholes and objects on the road
- Do not run over curbs or hit the tire against the curb when parking

## Tire Information (except Canada)

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 **CAUTION**

*If you feel a sudden vibration or ride disturbance while driving or you suspect your tire or vehicle has been damaged, immediately reduce your speed. Drive with caution until you can safely pull off the road. Stop and inspect the tire for damage. If the tire is under-inflated or damaged, deflate it, remove the tire and rim and replace it with your spare tire. If you cannot detect a cause, have the vehicle towed to the nearest vehicle or tire dealer to have the vehicle inspected.*

## Tire Information (except Canada)

### Vehicle Loading

This section will guide you in the proper loading of your vehicle and/or trailer, to keep your loaded vehicle weight within its design rating capability, with or without a trailer. Properly loading your vehicle will provide maximum return of vehicle design performance. Before loading your vehicle, familiarize yourself with the following terms for determining your vehicle's weight ratings, with or without a trailer, from the vehicle's Safety Certification Label and Tire and Load Information Label:

#### **⚠ WARNING**

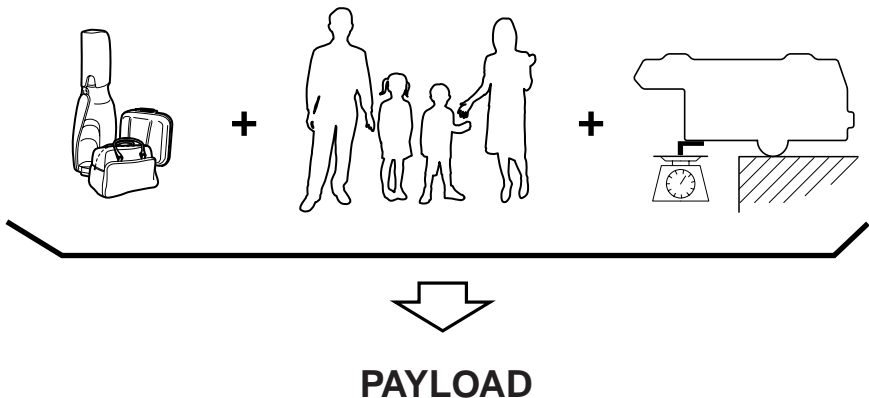
##### **Overloaded Vehicle:**

*Overloading a vehicle is dangerous. The results of overloading can have serious consequences in terms of passenger safety. Too much weight on a vehicle's suspension system can cause spring or shock absorber failure, brake failure, handling or steering problems, irregular tire wear, tire failure or other damage. Overloading makes a vehicle harder to drive and control. It also increases the distance required for stopping. In cases of serious overloading, brakes can fail completely, particularly on steep grades. The load a tire will carry safely is a combination of the size of the tire, its load range, and corresponding inflation pressure.*

*Never overload the vehicle and always observe the vehicle's weight ratings from the vehicle's Safety Certification and Tire and Load Information labels.*

**Base Curb Weight** is the weight of the vehicle including a full tank of fuel and all standard equipment. It does not include passengers, cargo, or optional equipment.


**Vehicle Curb Weight** is the weight of your new vehicle when you picked it up from your dealer plus any aftermarket equipment.



## Tire Information (except Canada)

**Payload** is the combination weight of cargo and passengers that the vehicle is designed to carry. The maximum payload for your vehicle can be found on the Tire and Load Information label on the driver's door frame or door pillar. Look for "THE COMBINATION WEIGHT OF OCCUPANTS AND CARGO SHOULD NEVER EXCEED XXX kg or XXX lbs" for your maximum payload. The payload listed on the tire label is the maximum payload for the vehicle as built by the assembly plant. If any aftermarket or dealer installed equipment has been installed on the vehicle, the weight of the equipment must be subtracted from the payload listed on the tire label in order to be accurate.

### SAMPLE



TIRE AND LOADING INFORMATION			
RENSEIGNEMENTS SUR LES PNEUS ET LE CHARGEMENT			
SEATING CAPACITY NOMBRE DE PLACES	TOTAL 5	FRONT AVANT 2	REAR ARRIÈRE 3

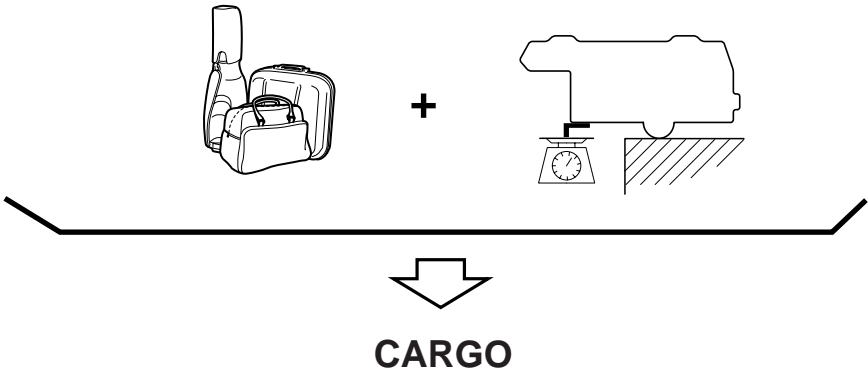
The combined weight of occupants and cargo should never exceed kg or lbs.\*  
 Le poids total des occupants et du chargement ne doit jamais dépasser xxx kg ou xxx lb.\*

TIRE PNEU	SIZE DIMENSIONS	COLD TIRE PRESSURE PRESSION DES PNEUS À FROID	SEE OWNER'S MANUAL FOR ADDITIONAL INFORMATION  VOIR LE MANUEL DE L'USAGER POUR PLUS DE RENSEIGNEMENTS
FRONT AVANT	P195/70R14	200 kPa, 29 psi	
REAR ARRIÈRE	P195/70R14	200 kPa, 29 psi	
SPARE DE SECOURS	T125/70D15	420 kPa, 60 psi	

(XXX)



## Tire Information (except Canada)



**Cargo Weight** includes all weight added to the Base Curb Weight, including cargo and optional equipment. When towing, trailer tongue load or king pin weight is also part of cargo weight.

The cargo weight limit decreases depending on the number of vehicle occupants. The cargo weight limit can be calculated by subtracting the total weight of the vehicle occupants from the “combination weight of occupants and cargo should never exceed” value on the tire label.

Examples: Based on a single occupant weight of 68 kg (150 lbs), and a value of 385 kg (849 lbs) for the “combination weight of occupants and cargo should never exceed”:  
The cargo weight limit with one occupant is  $385 \text{ kg (849 lbs)} - 68 \text{ kg (150 lbs)} = 317 \text{ kg (699 lbs)}$

The cargo weight limit with two occupants is  $385 \text{ kg (849 lbs)} - (68 \times 2) \text{ kg (} (150 \times 2) \text{ lbs)} = 249 \text{ kg (549 lbs)}$

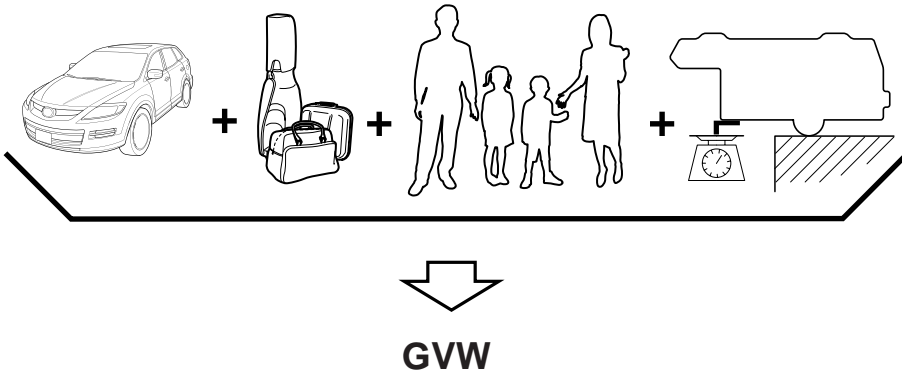
If the weight of the occupant increases, the cargo weight limit decreases by that much.

**GAW (Gross Axle Weight)** is the total weight placed on each axle (front and rear) - including vehicle curb weight and all payload.

## Tire Information (except Canada)

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**GAWR (Gross Axle Weight Rating)** is the maximum allowable weight that can be carried by a single axle (front or rear). **These numbers are shown on the Safety Compliance Certification Label located on the driver's door frame or door pillar. The total load on each axle must never exceed its GAWR.**



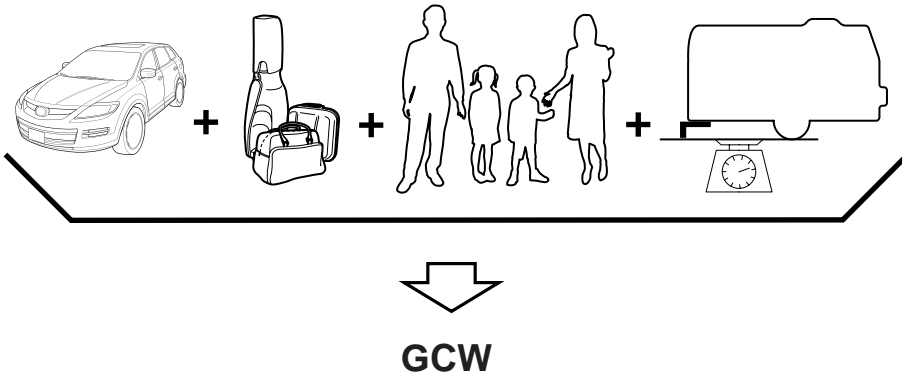
**GVW (Gross Vehicle Weight)** is the Vehicle Curb Weight + cargo + passengers.

**GVWR (Gross Vehicle Weight Rating)** is the maximum allowable weight of the fully loaded vehicle (including all options, equipment, passengers and cargo). **The GVWR is shown on the Safety Compliance Certification Label located on the driver's door frame or door pillar. The GVW must never exceed the GVWR.**



## Tire Information (except Canada)

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**GCW (Gross Combination Weight)** is the weight of the loaded vehicle (GVW) plus the weight of the fully loaded trailer.

**GCWR (Gross Combination Weight Rating)** is the maximum allowable weight of the vehicle and the loaded trailer - including all cargo and passengers - that the vehicle can handle without risking damage. (Important: The towing vehicle's braking system is rated for operation at GVWR, not at GCWR. Separate functional brakes should be used for safe control of towed vehicles and for trailers weighing more than 1,500 lbs). **The GCW must never exceed the GCWR.**

**Maximum Loaded Trailer Weight** is the highest possible weight of a fully loaded trailer the vehicle can tow. It assumes a vehicle with only mandatory options, no cargo (internal or external), a tongue load of 10–15% (conventional trailer) or king pin weight of 15–25% (fifth-wheel trailer), and driver only (150 lbs). **Consult your dealership (or the RV and Trailer Towing Guide provided by your dealership) for more detailed information.** **Tongue Load or Fifth-Wheel King Pin Weight** refers to the amount of the weight that a trailer pushes down on a trailer hitch.

**Examples:** For a 5000 lb conventional trailer, multiply 5000 by 0.10 and 0.15 to obtain a proper tongue load range of 500 to 750 lbs. For an 11,500 lb fifth-wheel trailer, multiply by 0.15 and 0.25 to obtain a proper king pin load range of 1,725 to 2,875 lbs.

## Tire Information (except Canada)

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### **WARNING**

#### **Exceeding GVWR or GAWR Specifications:**

*Exceeding the GVWR or the GAWR specified on the certification label is dangerous. Exceeding any vehicle rating limitation could result in a serious accident, injury, or damage to the vehicle.*

*Do not use replacement tires with lower load carrying capacities than the originals because they may lower the vehicle's GVWR and GAWR limitations. Replacement tires with a higher limit than the originals do not increase the GVWR and GAWR limitations.*

*Never exceed the GVWR or the GAWR specified on the certification label.*

## Tire Information (except Canada)

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### Steps for Determining the Correct Load Limit:

Steps for Determining Correct Load Limit:

- (1) Locate the statement “The combined weight of occupants and cargo should never exceed XXX kg or XXX lbs” on your vehicle's placard.
- (2) Determine the combined weight of the driver and passengers that will be riding in your vehicle.
- (3) Subtract the combined weight of the driver and passengers from XXX kg or XXX lbs.
- (4) The resulting figure equals the available amount of cargo and luggage load capacity. For example, if the “XXX” amount equals 1400 lbs. and there will be five 150 lb passengers in your vehicle, the amount of available cargo and luggage load capacity is 650 lbs. ( $1400 - 750 (5 \times 150) = 650$  lbs.)
- (5) Determine the combined weight of luggage and cargo being loaded on the vehicle. That weight may not safely exceed the available cargo and luggage load capacity calculated in Step 4.
- (6) If your vehicle will be towing a trailer, the load from your trailer will be transferred to your vehicle. Consult this manual to determine how this reduces the available cargo and luggage load capacity of your vehicle.

## Reporting Safety Defects (U.S.A.)

If you believe that your vehicle has a defect which could cause a crash or could cause injury or death, you should immediately inform the National Highway Traffic Safety Administration (NHTSA) in addition to notifying Mazda Motor Corporation (Your Mazda Importer/Distributor).

If NHTSA receives similar complaints, it may open an investigation, and if it finds that a safety defect exists in a group of vehicles, it may order a recall and remedy campaign. However, NHTSA cannot become involved in individual problems between you, your dealer, or Mazda Motor Corporation (Your Mazda Importer/Distributor).

To contact NHTSA, you may call the Vehicle Safety Hotline toll-free at 1-888-327-4236 (TTY:1-800-424-9153) ; go to <http://www.safercar.gov>; or write to: Administrator, NHTSA, 1200 New Jersey Avenue, SE., Washington, DC, 20590. You can also obtain other information about motor vehicle safety from <http://www.safercar.gov>.

### **NOTE**

*If you live in the U.S.A., all correspondence to Mazda Motor Corporation should be forwarded to:*

*Mazda North American Operations*

*7755 Irvine Center Drive*

*Irvine, California 92618-2922*

*or*

*P.O. Box 19734*

*Irvine, CA 92623-9734*

*Customer Assistance Center or toll free at 1 (800) 222-5500*

*If you live outside of the U.S.A., please contact the nearest Mazda Distributor shown (page 9-13) in this booklet.*

## Reporting Safety Defects

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### Reporting Safety Defects (Canada)

Canadian customers who wish to report a safety-related defect to Transport Canada, Defect Investigations and Recalls, may telephone the toll free hotline 1-800-333-0510, or contact Transport Canada by mail at: Transport Canada, ASFAD, Place de Ville Tower C, 330 Sparks Street, Ottawa ON K1A 0N5.

For additional road safety information, please visit the Road Safety website at:  
<http://www.tc.gc.ca/roadsafety/menu.htm>



## Service Publications

Factory-authorized Mazda service publications are available for owners who wish to do some of their own maintenance and repair.

When requesting any of our publications through an Authorized Mazda Dealer, refer to the chart below.

If they do not have what you need in stock, they can order it for you.

PUBLICATION ORDER NUMBER	PUBLICATION DESCRIPTION
9999-95-003B-12	2012 WORKSHOP MANUAL (English)
9999-MX-003B-12	2012 WORKSHOP MANUAL (Spanish)
9999-95-009G-12	2012 WIRING DIAGRAM (English)
9999-MX-009G-12	2012 WIRING DIAGRAM (Spanish)
9999-95-011C-12 (U.S.A. only)	2012 OWNER'S MANUAL
9999-EC-011C-12 (Canada only)	2012 OWNER'S MANUAL
9999-PR-011C-12 (Puerto Rico, Mexico only)	2012 OWNER'S MANUAL
9999-95-011C-12NAV (U.S.A. only)	2012 NAVIGATION SYSTEM OWNER'S MANUAL
9999-EC-011C-12NAV (Canada only)	2012 NAVIGATION SYSTEM OWNER'S MANUAL
9999-PR-011C-12NAV (Puerto Rico, Mexico only)	2012 NAVIGATION SYSTEM OWNER'S MANUAL

### ▼ WORKSHOP MANUAL:

Covers recommended maintenance and repair procedures of the drive train, body and chassis.

### ▼ WIRING DIAGRAM:

Provides electrical schematics as well as component location for the entire electrical system.

### ▼ OWNER'S MANUAL:

This booklet contains information regarding the proper care and operation of your vehicle. This is not a technician's manual.

### ▼ SERVICE HIGHLIGHTS:

Provides description and operation of the many systems of your Mazda.

## Service Publications

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### ▼ NAVIGATION SYSTEM OWNER'S MANUAL:

This booklet contains information regarding the proper operation and use of the navigation system. This is not a technician's manual.

# 10

## Specifications

Technical information about your Mazda.

<b>Identification Numbers .....</b>	<b>10-2</b>
Vehicle Information Labels .....	10-2
<b>Specifications .....</b>	<b>10-4</b>
Specifications .....	10-4
<b>Personalization Features .....</b>	<b>10-8</b>
Personalization Features .....	10-8

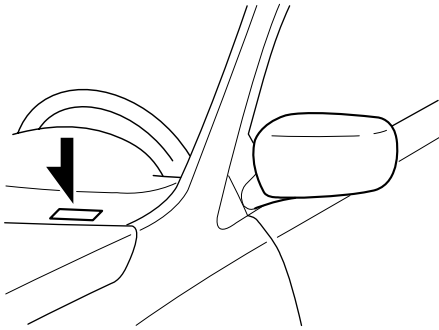
# Identification Numbers

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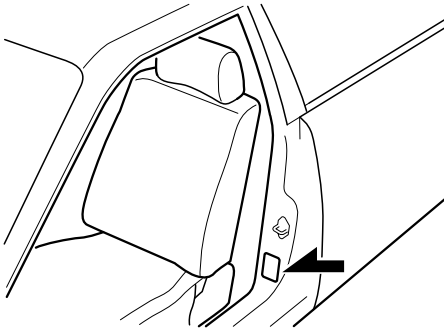
## Vehicle Information Labels

### ▼ Vehicle Identification Number

The vehicle identification number legally identifies your vehicle. The number is on a plate attached to the cowl panel located on the left corner of the dashboard. This plate can easily be seen through the windshield.

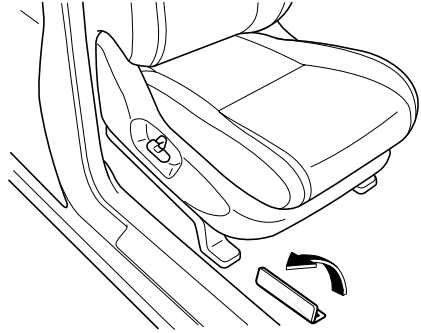


### ▼ Motor Vehicle Safety Standard Label

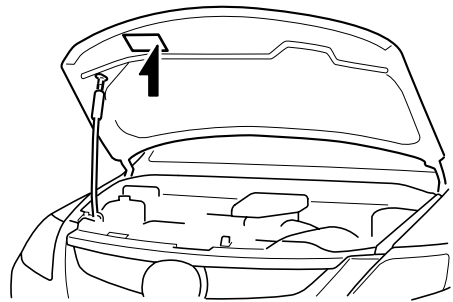


### ▼ Chassis Number

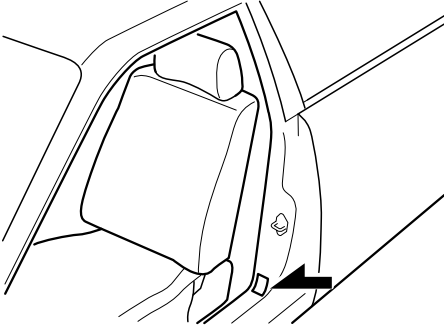
Open the cover shown in the figure to check the chassis number.



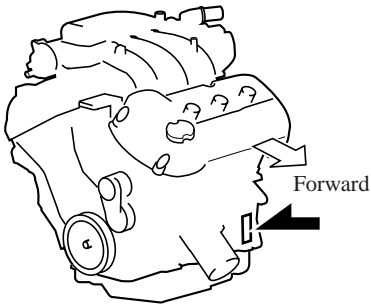
### ▼ Vehicle Emission Control Information Label



## ▼ Tire Pressure Label



## ▼ Engine Number



# Specifications

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## Specifications

### ▼ Engine

Item	Specification
Type	DOHC-24V 60°V, 6-cylinder
Bore×Stroke	95.5 × 86.7 mm (3.75 × 3.41 in)
Displacement	3,726 ml (3,726 cc, 227.4 cu in)
Compression ratio	10.3

### ▼ Electrical System

Item	Classification
Battery	12V-55AH/5HR
Spark-plug number	Motorcraft AYFS22FM
Spark-plug gap	1.29—1.45 mm (0.051—0.057 in)

### CAUTION

*When cleaning the platinum plugs, do not use a wire brush. The fine particulate coating on the platinum alloy could be damaged.*

### ▼ Lubricant Quality

Lubricant	Classification
Engine oil	Refer to Recommended Oil on page 8-19.
Automatic transaxle fluid	Mazda Genuine JWS3309
Transfer case oil	API Service GL-5 (SAE 75W-140)
Rear differential oil	API Service GL-5 (SAE 80W-90)
Power steering fluid	Mazda Genuine ATF M-III, M-V, or equivalent (e.g. Dexron® II)
Brake fluid	SAE J1703, or FMVSS116 DOT-3

## ▼ Capacities

### (Approximate Quantities)

Item		Capacity	
Engine oil	With oil filter replacement	5.2 L (5.5 US qt, 4.6 Imp qt)	
	Without oil filter replacement	4.7 L (5.0 US qt, 4.2 Imp qt)	
Coolant	Mexico	12.1 L (12.8 US qt, 10.6 Imp qt)	
	Except Mexico	With Towing Package	12.1 L (12.8 US qt, 10.6 Imp qt)
		Without Towing Package	11.5 L (12.2 US qt, 10.1 Imp qt)
Automatic transaxle fluid		6.6 L (7.0 US qt, 5.8 Imp qt)	
Transfer case oil		0.532 L (0.562 US qt, 0.468 Imp qt)	
Rear differential oil		1.0 L (1.1 US qt, 0.9 Imp qt)	
Washer fluid		4.5 L (4.8 US qt, 4.0 Imp qt)	
Fuel tank		76.0 L (20.1 US gal, 16.7 Imp gal)	

Check oil and fluid levels with dipsticks or reservoir gauges.

## ▼ Dimensions

Item	Vehicle specification
Overall length	5,086 mm (200.2 in)
Overall width	1,936 mm (76.2 in)
Overall height	1,728 mm (68.0 in)
Front tread	1,654 mm (65.1 in)
Rear tread	1,644 mm (64.7 in)
Wheelbase	2,875 mm (113.2 in)

## ▼ Weights

Item	Weight	
	2WD	AWD
GVWR (Gross Vehicle Weight Rating)	2,645 kg (5,831 lbs)	2,720 kg (5,997 lbs)
GAWR (Gross Axle Weight Rating)	Front	1,276 kg (2,813 lbs)
	Rear	1,400 kg (3,086 lbs)
		1,458 kg (3,214 lbs)

## ▼ Air Conditioner

Item	Classification
Refrigerant Type	HFC134a (R-134a)

# Specifications

## ▼ Light Bulbs

### Exterior light

Light bulb			Category	
			Wattage	ECE R (SAE)
Headlights	High beam		60	HB3 (HB3)
	Low beam	Halogen	55	H11 (H11)
		Xenon fusion	35	D2S (D2S)
Front turn signal lights			21	WY21W (23CP)
Front side-marker lights			5	WY5W (3CP)
Parking lights			5	W5W (4CP)
Fog lights *			51	HB4 (#9006)
Side turn signal lights (Integrated with outside mirrors) *			LED* <sup>1</sup>	— (—)
High-mount brake light			LED* <sup>1</sup>	— (—)
Rear turn signal lights			21	WY21W (23CP)
Taillights/Brake lights			LED* <sup>1</sup>	— (—)
Reverse lights			21	W21W (#7440)
License plate lights			5	W5W (4CP)
Rear side-marker lights			5	W5W (4CP)

\*1 LED is the abbreviation for Light Emitting Diode.

### Interior light

Light bulb	Category	
	Wattage	ECE R
Overhead lights/Map lights (Front)	8	—
Overhead light (Center)	10	—
Overhead light (Rear)	10	—
Courtesy lights	5	T10
Vanity mirror lights	2	—
Luggage compartment light	10	—

## ▼ Tires

### NOTE

The tires have been optimally matched with the chassis of your vehicle.

When replacing tires, Mazda recommends that you replace tires of the same type originally fitted to your vehicle. For details, contact an Authorized Mazda Dealer.



# Specifications

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Check the tire pressure label for tire size and inflation pressure.  
Refer to Tire Inflation Pressure on page 8-32.

## **Standard tire**

Tire size	Inflation pressure	
	Front	Rear
P245/60R18 104H	250 kPa (36 psi)	250 kPa (36 psi)
P245/50R20 102V	230 kPa (34 psi)	230 kPa (34 psi)

## **Temporary spare tire**

(Except Mexico)

Tire size	Inflation pressure
T155/90D18 103M	420 kPa (60 psi)

(Mexico)

Tire size	Inflation pressure
195/80R17 99M	250 kPa (36 psi)

## **▼ Fuses**

Refer to Fuses on page 8-47.

# Personalization Features

## Personalization Features

The following “Personalization Features” are available. These settings can only be changed by an Authorized Mazda Dealer.

Item	Feature	Factory Setting	Available Settings
Auto headlight on/off	The headlight illumination on/off timing based on surrounding lightness/darkness can be changed	Standard (Illuminates under average levels of darkness)	Later
Auto headlight off	The time required for headlights to turn off after ignition is switched off can be changed	30 seconds	0/60/120 seconds
Blind spot warning	The warning beep function can be changed	Activated	Deactivated
Advanced keyless entry	The advanced key's remaining battery level warning light in the instrument cluster can be deactivated	Activated	Deactivated
	The beep sound which is heard when locking/unlocking all doors or the liftgate can be deactivated* <sup>1</sup>	Activated	Deactivated
	The function to automatically lock the doors and the liftgate when leaving the vehicle while carrying the key can be activated* <sup>2</sup>	Deactivated	Activated
	The method for unlocking the doors using the request switch can be selected	Press × 2	Press × 1
	The method for unlocking the doors using the transmitter switch can be selected	Press × 2	Press × 1
	The time required for the doors to relock automatically after unlocking with the transmitter can be changed	30 seconds	60/90 seconds

\*1 When the autolock function is operating, the warning sound will be heard regardless of the setting.

\*2 When the autolock function is enabled, windows will not automatically close. You must close them before leaving vehicle.



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# EXHIBIT E

## **Zoom-Zoom**

**All children instinctively know it.**

**A few adults still remember it.**

**One unique car company refuses to outgrow it.**

**In grown-up language, it means the exhilaration and  
liberation that come from experiencing sheer motion.**

**But as usual, children put it much better and simply call it " Go Zoom-Zoom."**

**We practice it every day.**

**It's why we build the kind of cars we do.**

**Zoom-Zoom.**

**Can we re-awaken it in you today?**



## A Word to Mazda Owners

---

Thank you for choosing a Mazda. We at Mazda design and build vehicles with complete customer satisfaction in mind.

To help ensure enjoyable and trouble-free operation of your Mazda, read this manual carefully and follow its recommendations.

An Authorized Mazda Dealer knows your vehicle best. So when maintenance or service is necessary, that's the place to go.

Our nationwide network of Mazda professionals is dedicated to providing you with the best possible service.

We assure you that all of us at Mazda have an ongoing interest in your motoring pleasure and in your full satisfaction with your Mazda product.

### Mazda North American Operations

**Important Notes About This Manual**

Keep this manual in the glove box as a handy reference for the safe and enjoyable use of your Mazda. Should you resell the vehicle, leave this manual with it for the next owner.

All specifications and descriptions are accurate at the time of printing. Because improvement is a constant goal at Mazda, we reserve the right to make changes in specifications at any time without notice and without obligation.

**Event Data Recorder**

This vehicle is equipped with an event data recorder. In the event of a crash, this device records data related to vehicle dynamics and safety systems for a short period of time. These data can help provide a better understanding of the circumstances in which crashes and injuries occur and lead to the designing of safer vehicles.

**Air Conditioning and the Environment**

Your Mazda's genuine air conditioner is filled with HFC134a (R134a), a refrigerant that has been found not to damage the earth's ozone layer. If the air conditioner does not operate properly, consult an Authorized Mazda Dealer.

**Perchlorate**

Certain components of this vehicle such as [air bag modules, seat belt pretensioners, lithium batteries, ...] may contain Perchlorate Material—Special handling may apply for service or vehicle end of life disposal. See [www.dtsc.ca.gov/hazardouswaste/perchlorate](http://www.dtsc.ca.gov/hazardouswaste/perchlorate).

**Please be aware that this manual applies to all models, equipment and options. As a result, you may find some explanations for equipment not installed on your vehicle.**

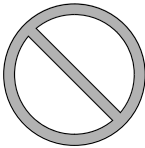
# How to Use This Manual

---

We want to help you get the most driving pleasure from your vehicle. Your owner's manual, when read from cover to cover, can do that in many ways.

Illustrations complement the words of the manual to best explain how to enjoy your Mazda. By reading your manual, you can find out about the features, important safety information, and driving under various road conditions.

The symbol below in this manual means "Do not do this" or "Do not let this happen".



**Index:** A good place to start is the Index, an alphabetical listing of all information in your manual.

You'll find several WARNINGS, CAUTIONS, and NOTES in the manual.

## **WARNING**

*A WARNING indicates a situation in which serious injury or death could result if the warning is ignored.*

## **CAUTION**

*A CAUTION indicates a situation in which bodily injury or damage to your vehicle, or both, could result if the caution is ignored.*

## **NOTE**

*A NOTE provides information and sometimes suggests how to make better use of your vehicle.*

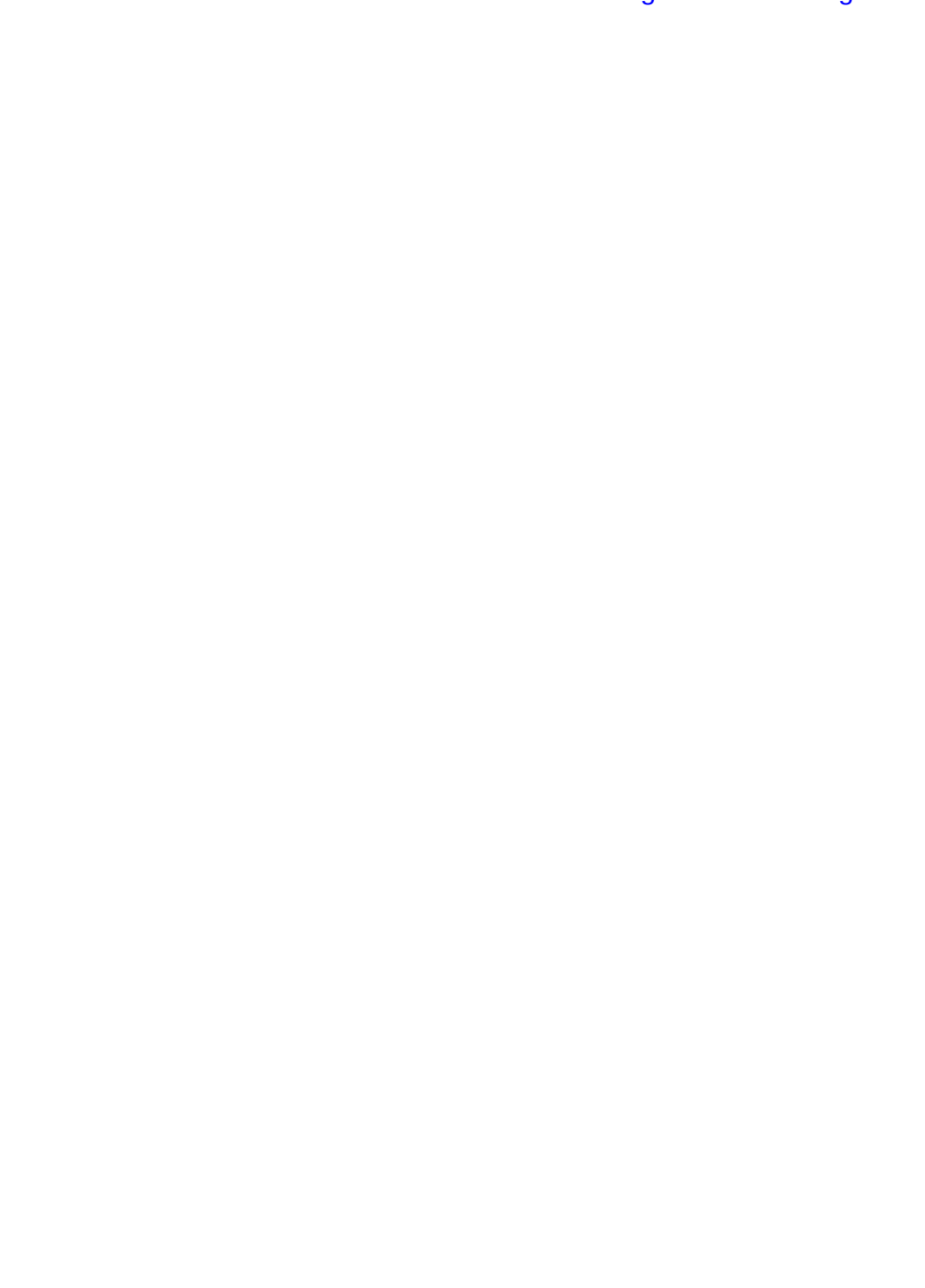
The symbol below, located on some parts of the vehicle, indicates that this manual contains information related to the part. Please refer to the manual for a detailed explanation.



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<b>Before Driving Your Mazda</b> Important information about driving your Mazda.	<b>4</b>
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<b>Maintenance and Care</b> How to keep your Mazda in top condition.	<b>8</b>
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# 1

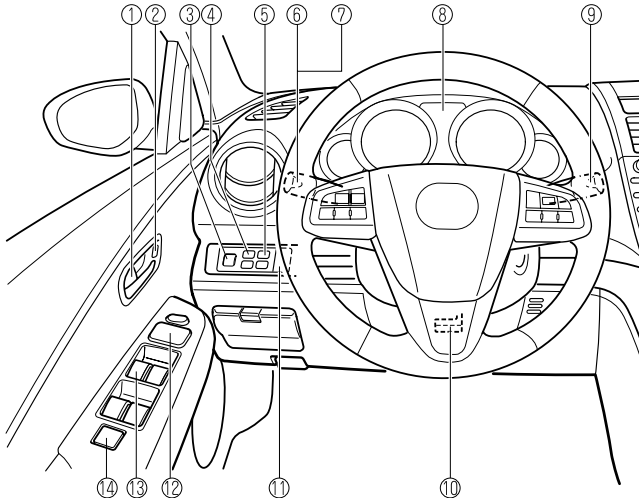
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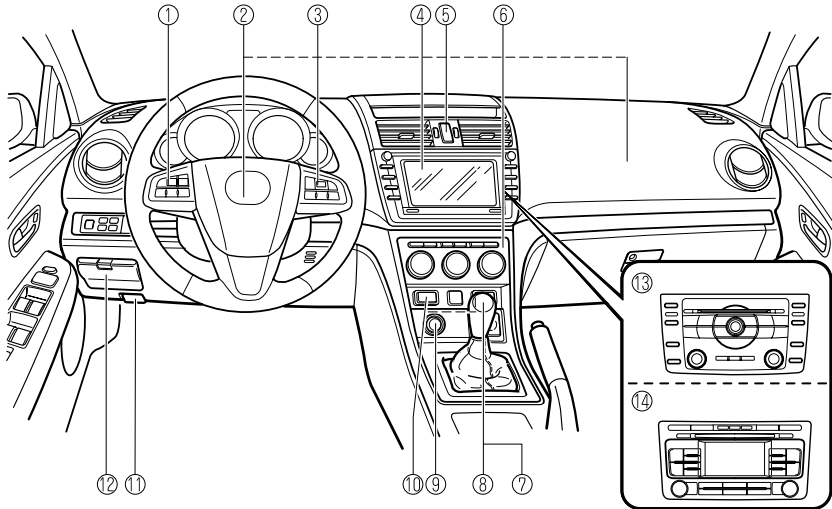
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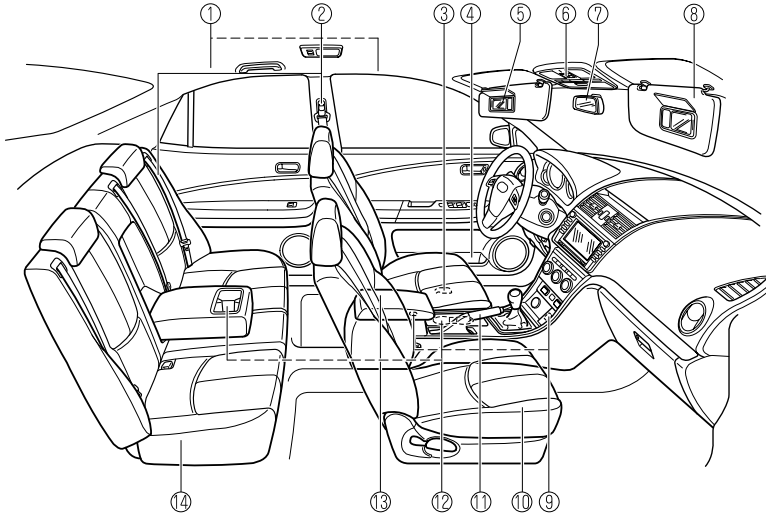
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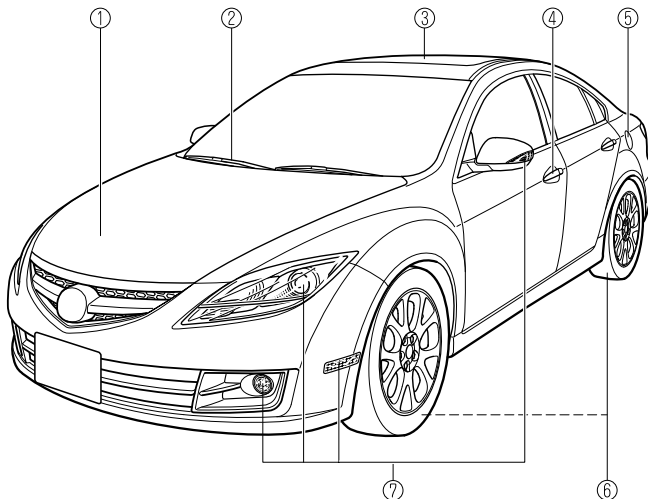
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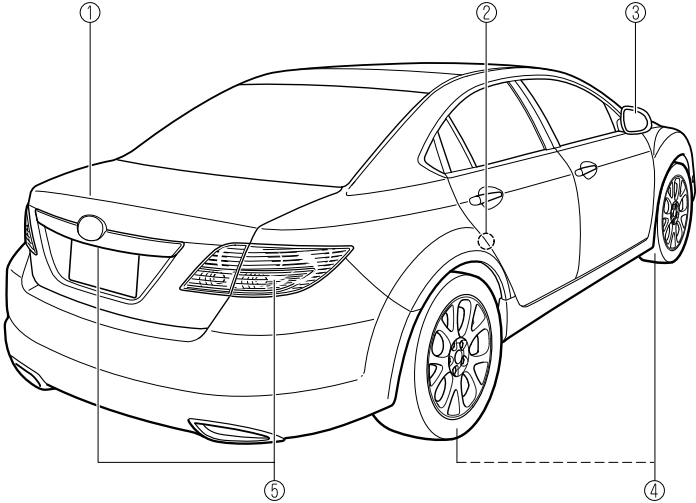
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# 2

## Essential Safety Equipment

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\*Some models.



## Seats

### Front Seats (Manually Operated Seats)

#### **! WARNING**

**Do not modify or replace the front seats:**

*Modifying or replacing the front seats such as replacing the upholstery or loosening any bolts is dangerous. The front seats contain air bag components essential to the supplemental restraint system. Such modifications could damage the supplemental restraint system and result in serious injury. Consult an Authorized Mazda Dealer if there is any need to remove or reinstall the front seats.*

**Do not drive with damaged front seats:** *Driving with damaged front seats is dangerous. A collision, even one not strong enough to inflate the air bags, could damage the front seats which contain essential air bag components. If there was a subsequent collision, an air bag may not deploy which could lead to injuries. Always have an Authorized Mazda Dealer inspect the front seats, front seat belt pretensioners and air bags after a collision.*

**Make sure the adjustable components of a seat are locked in place:**

*Adjustable seats and seatbacks that are not securely locked are dangerous. In a sudden stop or collision, the seat or seatback could move, causing injury. Make sure the adjustable components of the seat are locked in place by attempting to slide the seat forward and backward and rocking the seatback.*

**Adjust the driver's seat only when the vehicle is stopped:**

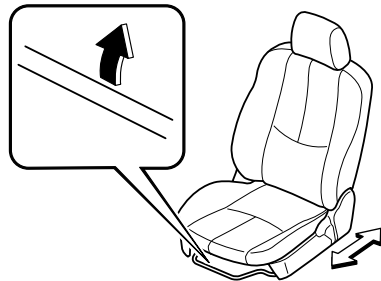
*Adjusting the driver's seat while the vehicle is moving is dangerous. The driver could lose control of the vehicle and have an accident.*

#### **! CAUTION**

*Be careful not to place your hands and fingers around moving parts of the front seat when adjusting the seat positions to prevent injury.*

#### ▼ Seat Slide

To move a seat forward or backward, raise the lever and slide the seat to the desired position and release the lever.



Make sure the lever returns to its original position and the seat is locked in place by attempting to push it forward and backward.

### ▼ Seat Recline

#### **⚠ WARNING**

**Do not drive with either front seat reclined:**

*Sitting in a reclined position while the vehicle is moving is dangerous because you do not get the full protection from seat belts. During sudden braking or a collision, you can slide under the lap belt and suffer serious internal injuries. For maximum protection, sit well back and upright.*

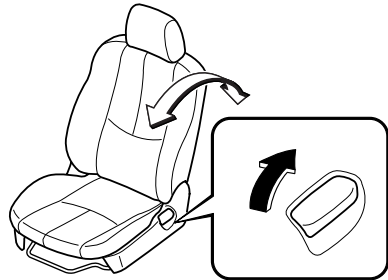
**Always sit in the passenger seat properly with the seatback upright and feet on the floor (With Driver and Front Passenger Occupant Classification System):**

*Your front passenger seat has weight sensors, sitting in the front passenger seat improperly out of position or with the seatback reclined too far while the vehicle is moving is dangerous as it can take off weight from the seat bottom and affect the weight determination of the front passenger sensing system. As a result the front passenger will not have the supplementary protection of the air bag and seat belt pretensioner, which could result in serious injury. Always sit upright against the seatback with your feet on the floor.*

**Do not drive with the seatback unlocked:**

*All of the seatbacks play an important role in your protection in a vehicle. Leaving the seatback unlocked is dangerous as it can allow passengers to be ejected or thrown around and baggage to strike occupants in a sudden stop or collision, resulting in severe injury. After adjusting the seatback at any time, even when there are no other passengers, rock the seatback to make sure it is locked in place.*

To change the seatback angle, lean forward slightly while raising the lever. Then lean back to the desired position and release the lever.



Make sure the lever returns to its original position and the seatback is locked in place by attempting to push it forward and backward.

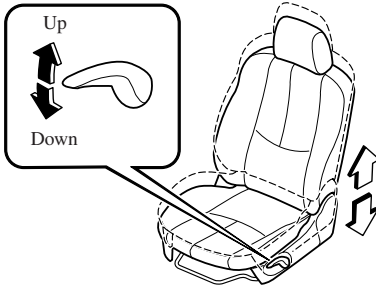
## Seats

### **CAUTION**

*When returning a rear-reclined seatback to its upright position, make sure you hold onto the seatback with your other hand while operating the lever. If the seatback is not supported, it will flip forward suddenly and could cause injury.*

### **▼ Height Adjustment (Driver's Seat)**

To adjust the seat height, move the lever up or down.



## Front Seats (Electrically Operated Seats)

### **WARNING**

**Do not modify or replace the front seats:**

*Modifying or replacing the front seats such as replacing the upholstery or loosening any bolts is dangerous. The front seats contain air bag components essential to the supplemental restraint system. Such modifications could damage the supplemental restraint system and result in serious injury. Consult an Authorized Mazda Dealer if there is any need to remove or reinstall the front seats.*

**Do not drive with damaged front seats:**

*Driving with damaged front seats is dangerous. A collision, even one not strong enough to inflate the air bags, could damage the front seats which contain essential air bag components. If there was a subsequent collision, an air bag may not deploy which could lead to injuries. Always have an Authorized Mazda Dealer inspect the front seats, front seat belt pretensioners and air bags after a collision.*

**Adjust the driver's seat only when the vehicle is stopped:**

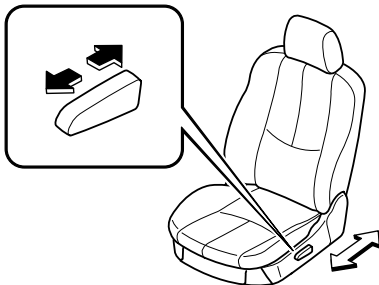
*Adjusting the driver's seat while the vehicle is moving is dangerous. The driver could lose control of the vehicle and have an accident.*

**⚠ CAUTION**

- *The seat-bottom power adjustment is operated by motors. Avoid extended operation because excessive use can damage the motors.*
- *To prevent the battery from running down, avoid using the power adjustment when the engine is stopped. The adjuster uses a large amount of electrical power.*
- *Do not use the switch to make more than one adjustment at a time.*
- *Be careful not to place your hands and fingers around moving parts of the front seat when adjusting the seat positions to prevent injury.*

**▼ Seat Slide**

To slide the seat, move the slide lifter switch on the outside of the seat to the front or back and hold it. Release the switch at the desired position.

**▼ Seat Recline****⚠ WARNING**

**Do not drive with either front seat reclined:**

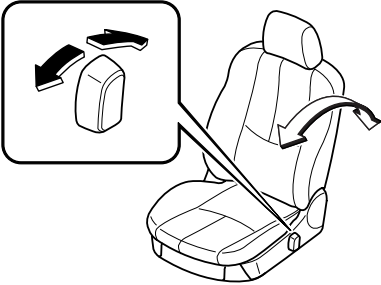
*Sitting in a reclined position while the vehicle is moving is dangerous because you do not get the full protection from seat belts. During sudden braking or a collision, you can slide under the lap belt and suffer serious internal injuries. For maximum protection, sit well back and upright.*

**Always sit in the front passenger seat properly with the seatback upright and feet on the floor (With Driver and Front Passenger Occupant Classification System):**

*Your front passenger seat has weight sensors, sitting in the front passenger seat improperly out of position or with the seatback reclined too far while the vehicle is moving is dangerous as it can take off weight from the seat bottom and affect the weight determination of the front passenger sensing system. As a result the front passenger will not have the supplementary protection of the air bag and seat belt pretensioner, which could result in serious injury. Always sit upright against the seatback with your feet on the floor.*

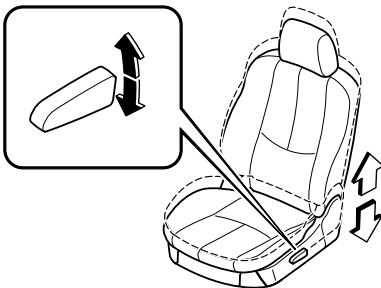
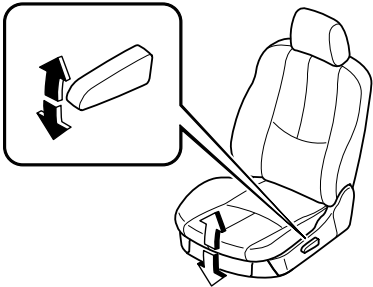
## Seats

To change the seatback angle, press the front or rear side of the reclining switch. Release the switch at the desired position.



### ▼ Height Adjustment (Driver's Seat)

To adjust the seat height, move the switch up or down.

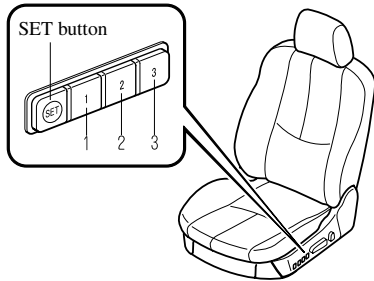


### ▼ Seat Position Memory (Driver's Seat)\*

One-touch seat position programming and activation is available on the driver's seat.

#### ▲ CAUTION

*When activating the seat position, do not place your hands or fingers around the seat bottom. The seat moves to the desired position automatically, and if your hands or fingers are placed around the seat bottom, it could cause injury.*



Programming of the driver's seat positions is possible using the following functions:

- Programming buttons 1, 2, or 3 and the SET button.
- Operation using the advanced key/retractable type key

Programmed seat positions can be activated using the following functions:

- Programming buttons 1, 2, or 3.
- Operation using advanced keyless functions/keyless entry system

#### NOTE

*Individual seat positions can be programmed to the three available programming buttons on the side of the driver's seat, plus one seat position for each advanced key/retractable type key used with the vehicle.*

**Operation using the seat-side buttons****Programming**

Park the vehicle in a safe location before performing the seat position programming. (Vehicle must be stopped)

1. Adjust the seat to the desired position.  
For each seat position adjustment method refer to the following pages:  
Seat Slide (page 2-5)  
Seat Recline (page 2-5)  
Height Adjustment (page 2-6)
2. While holding the SET button in, press the desired programming button 1, 2, or 3 until a beep sound is heard.  
The button is programmed after a beep sound is heard. Other buttons can be programmed using the same procedure.

***NOTE***

*Vehicle maintenance or other reasons requiring the vehicle battery to be disconnected will result in the seat position memory being erased.*

*In this case, re-program the seat positions.*

**Setting the driver's seat to a pre-programmed position**

There are two methods for setting the driver's seat to a pre-programmed position. For example, the type A method can be used before sitting in the seat and while the driver's door is open, and the type B method can be used after getting in the vehicle with the driver's door closed.

**TYPE A**

When the ignition is switched off and the driver's door is open, press the programming button 1, 2, or 3 for the desired seating position.

***NOTE***

*In the following cases, the seat position set function cancels:*

- *Any of the seat adjustment switches are operated.*
- *The SET button is pressed.*
- *A programming button 1, 2, or 3 is pressed.*
- *The vehicle starts moving.*
- *Vehicle locking/unlocking is done using the transmitter.*
- *Vehicle locking/unlocking is done using the advanced keyless functions.*

**TYPE B**

When the ignition is switched ON or the driver's door is closed, press and hold the desired programming button 1, 2, or 3.

***NOTE***

*In the following cases, the seat position set function cancels:*


- *Any of the seat adjustment switches are operated.*
- *The SET button is pressed.*
- *The vehicle starts moving.*

**Operation using the advanced key/retractable type key****Programming**

One seat position can be programmed into each advanced key/retractable type key. After the following conditions have been met, operate the seat and the advanced key/retractable type key to program the seat positions.


- The ignition is switched off  
(The auxiliary key/retractable type key is removed from the ignition switch)
- The driver's door is open

## Seats

1. Adjust the seat to the desired position.  
For each seat position adjustment method, refer to the following pages:  
Seat Slide (page 2-5)  
Seat Recline (page 2-5)  
Height Adjustment (page 2-6)
2. While holding the SET button in, press and hold the  button on the advanced key/retractable type key until a beep sound is heard.  
The advanced key/retractable type key is programmed after a beep sound is heard.



### Seat position memory setting procedure

To set the driver's seat to pre-programmed position, switch the ignition off, unlock the doors using any of the following methods, and then open the driver's door within about 40 seconds.


- Press the  button on the advanced key/retractable type key.
- Touch the sensor area on the backside of the front door handle while the advanced key is being carried.

### NOTE

If any of the following occurs, the seat position activation function cancels:

- The   button on the advanced key/retractable type key is pressed while the key is not inserted into the ignition switch or the key slot.
- A seat adjustment switch is operated.
- The vehicle starts moving.
- The selected programming button 1, 2, or 3 is pressed.
- Vehicle unlocking is done using the advanced keyless functions.
- The SET button is pressed.

### Erasing memory

After the following conditions have been met, while holding the SET button in, press the  button on the advanced key/retractable type key until a beep sound is heard.

- The ignition is switched off  
(The auxiliary key/retractable type key is removed from the ignition switch)
- The driver's door is open

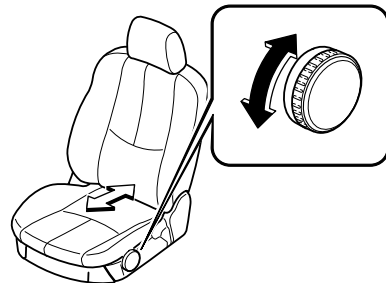
### NOTE

Memory will also be erased if any of the following operations are performed:

- The advanced key/retractable type key code has been changed.  
Refer to Immobilizer System (with Advanced Key) on page 3-50.  
Refer to Immobilizer System on page 3-54.
- The vehicle battery is disconnected for vehicle maintenance or other reasons.

### ▼ Lumbar Support Adjustment (Driver's Seat)

The amount of lumbar support can be adjusted by rotating dial.



## Rear Seat

### **⚠ WARNING**

**Make sure luggage and cargo are secured before driving:**

Not securing cargo while driving is dangerous as it could move or be crushed during sudden braking or a collision and cause injury.

**Do not drive with the seatback unlocked:**

All of the seatbacks play an important role in your protection in a vehicle. Leaving the seatback unlocked is dangerous as it can allow passengers to be ejected or thrown around and baggage to strike occupants in a sudden stop or collision, resulting in severe injury. After returning the seatback at any time, even when there are no other passengers, rock the seatback to make sure it is locked in place.

**Never allow a passenger to sit or stand on the folded seatback while the vehicle is moving:**

Driving with a passenger on the folded seatback is dangerous. Allowing a child to sit up on the folded seatback while the vehicle is moving is particularly dangerous. In a sudden stop or even a minor collision, a child not in a proper seat or child-restraint system and seat belt could be thrown forward, back or even out of the vehicle resulting in serious injuries or death. The child in the baggage area could be thrown into other occupants and cause serious injury.

**Never give the car keys to children and do not allow them to play in the vehicle:**

Playing with the folding rear seats is dangerous. Once the seatbacks are back up, a child in the trunk would not be able to get out the way they had entered. If you have small children, keep the seatbacks locked.

**Always leave your car locked and keep the car keys safely away from children:**

Leaving your car unlocked or the keys in reach of children is dangerous. Children who find their way into the trunk through an unlocked rear seatback or an open trunk can become accidentally locked in the trunk. This could result in death or brain damage from heat prostration, particularly in the summer. Always lock the doors and the trunk, and as an added measure, keep the rear seatbacks locked, whether you have children in your home or not.

**Do not leave the key in your vehicle with children and keep them in a place where your children will not find or play with them:**

Leaving children in a vehicle with the key is dangerous. This could result in someone being badly injured or even killed. Children may find these new kinds of keys to be an interesting toy to play with and could cause the power windows or other controls to operate, or even make the vehicle move.



## Seats

### NOTE

When returning a rear seat to its original position, also replace the seat belt to its normal position. Verify that the seat belt pulls out and retracts.

### ▼ Split-Folding Rear Seatback

The seatbacks can be folded down to provide more space in the trunk.

#### To fold down the seatbacks

### ⚠ WARNING

Always remove the child-restraint system from the rear seat before operating the straps (in trunk) for the rear seat:

Operating (pulling) the straps (in trunk) while a rear-facing child-restraint system is in the rear seat is dangerous. It could cause injury to a child seated in the child-restraint system when the seatback suddenly flips forward.

Make sure there is nobody in the rear seat area before operating (pulling) the straps (in trunk):

Not checking the rear seat area for persons before folding the seatbacks down with the straps (in trunk) is dangerous. The rear seat area is difficult to see from the rear of the vehicle. Operating (pulling) the straps (in trunk) without checking could cause injury to a person when a seatback suddenly flips forward.

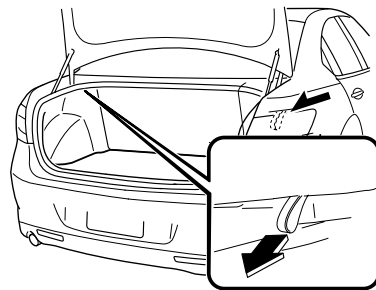
### ⚠ CAUTION

Before folding the seatbacks down with the straps (in trunk), make sure there is no cup in a rear cup holder. Folding the seatbacks with the straps (in trunk) while a cup is in the cup holder could soil or damage the seat bottom and seatback.

### ⚠ CAUTION

Be careful of the following when using the straps (in trunk):  
On a downward slope, the seatback could flip forward faster than on a flat surface.

1. After checking that the rear seats are clear, open the trunk and pull the straps (in trunk) on the left and right sides of the trunk.



2. Open the rear door and fold the rear seatbacks forward.

#### To return the seatbacks to the upright position

1. Lift the seatbacks upright.
2. Pull on the top of the seatbacks from inside the vehicle to make sure they are locked.

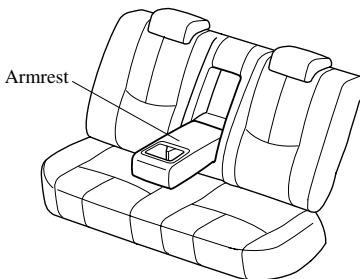
**⚠ WARNING**

**Always make sure the seat belts are fully pulled out from under the seatbacks:**

*A seat belt caught under a seatback after the seatback is returned to its upright position is dangerous. In a collision or sudden stop, the seat belt cannot provide adequate protection.*

**▼ Armrest**

The rear armrest in the center of the rear seatback can be used (no occupant in the center seat) or placed upright.

**Head Restraints**

Your vehicle is equipped with head restraints on all outboard seats. The head restraints are intended to help protect you and the passengers from neck injury.

**⚠ WARNING**

**Always drive with the head restraints installed when seats are being used and make sure they are properly adjusted:**

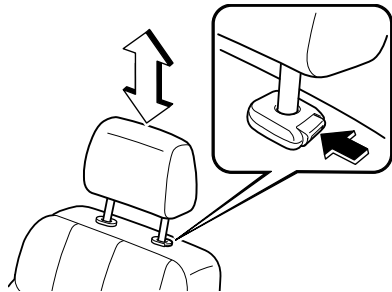
*Driving with the head restraints adjusted too low or removed is dangerous. With no support behind your head, your neck could be seriously injured in a collision.*

**Height adjustment**

To raise a head restraint, pull it up to the desired position.

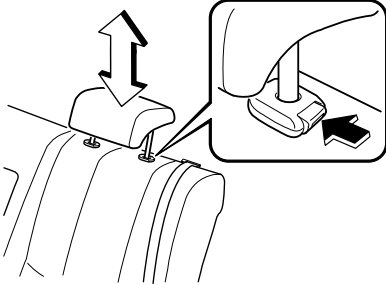
To lower the head restraint, press the stop-catch release, then push the head restraint down.

Adjust the head restraint so that the top is even with the top of the passenger's ears, never the passenger's neck to prevent injury.

**Front outboard seat**

# Seats

## Rear outboard seat

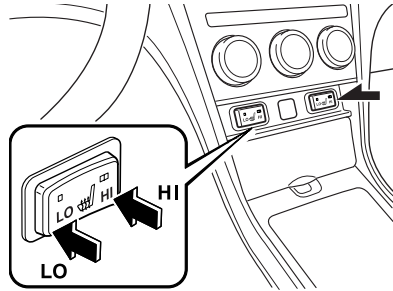


## Seat Warmer\*

Press the HI or LO side of the seat warmer switch with the ignition switched ON. The indicator on the switch illuminates and the seat warms up.

If a higher temperature is preferred, press the HI side of the switch, and for a lower temperature, press the LO side.

When not using the seat warmer, set the switch to neutral with neither HI or LO depressed.



**⚠ WARNING**

- Be careful when using the seat warmer. The heat from the seat warmer may be too hot for some people, as indicated below, and could cause a low-temperature burn.
- Infants, small babies, elderly people, and physically challenged people
- People with delicate skin
- People who are excessively fatigued
- People who are intoxicated
- People who have taken sleep-inducing medicine such as sleeping pills or cold medicine
- Do not use the seat warmer with anything having high moisture-retention ability such as a blanket or cushion on the seat. The seat may be heated excessively and cause a low-temperature burn.
- Do not use the seat warmer even when taking a short nap in the vehicle. The seat may be heated excessively and cause a low-temperature burn.
- Do not place heavy objects with sharp projections on the seat, or insert needles or pins into it. This could cause the seat to become excessively heated and result in injury from a minor burn.

**⚠ CAUTION**

Do not use organic solvents to clean the seat. It may damage the seat surface and the heater.

**NOTE**

- Use the seat warmer when the engine is running, and do not continue to use it for a long period of time.
- The temperature of the seat warmer cannot be adjusted beyond High and Low because the seat warmer is controlled by a thermostat.

## Seat Belt Systems

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### Seat Belt Precautions

Seat belts help to decrease the possibility of severe injury during accidents and sudden stops. Mazda recommends that the driver and all passengers always wear seat belts.

All of the seat belt retractors are designed to keep the lap/shoulder belts out of the way when not in use.

The driver's seat belt has no provisions for child-restraint systems and has only an emergency locking mode. The driver may wear it comfortably, and it will lock during a collision.

However, the front passenger's seat and all rear lap/shoulder belt retractors operate in two modes: emergency locking mode, and for child-restraint systems, automatic locking mode. While we recommend you put all children in the rear seats, if you must use the front passenger seat for a child, slide the front passenger seat as far back as possible and make sure any child-restraint system is secured properly.

** WARNING**

**Always wear your seat belt and make sure all occupants are properly restrained:**

Not wearing a seat belt is extremely dangerous. During a collision, occupants not wearing seat belts could hit someone or things inside the vehicle or even be thrown out of the vehicle. They could be seriously injured or even killed. In the same collision, occupants wearing seat belts would be much safer.

**Do not wear twisted seat belts:**

Twisted seat belts are dangerous. In a collision, the full width of the belt is not available to absorb the impact. This puts more force on the bones beneath the belt, which could cause serious injury or death. So, if your seat belt is twisted, you must straighten the seat belt to remove any twists and to allow the full width of the belt to be used.

**Never use one seat belt on more than one person at a time:**

Using one seat belt for more than one person at a time is dangerous. A seat belt used in this way cannot spread the impact forces properly and the two passengers could be crushed together and seriously injured or even killed. Never use one belt for more than one person at a time and always operate the vehicle with each occupant properly restrained.

**Do not operate a vehicle with a damaged seat belt:**

Using a damaged seat belt is dangerous. An accident could damage the belt webbing of the seat belt in use. A damaged seat belt cannot provide adequate protection in a collision. Have an Authorized Mazda Dealer inspect all seat belt systems in use during an accident before they are used again.

**Have your seat belts changed immediately if the pretensioner or load limiter has been expended:**

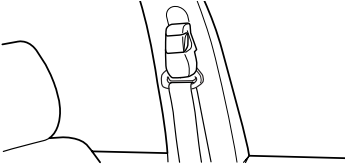
Always have an Authorized Mazda Dealer immediately inspect the front seat belt pretensioners and air bags after any collision. Like the air bags, the front seat belt pretensioners and load limiters will only function once and must be replaced after any collision that caused them to deploy. A seat belt with an expended pretensioner or load limiter is still better than wearing no seat belt at all; however, if the front seat belt pretensioners and load limiters are not replaced, the risk of injury in a collision will increase.

## Seat Belt Systems

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### **⚠ CAUTION**

*Belt retraction may become difficult if the belts and rings are soiled, so try to keep them clean. For more details about cleaning the seat belts, refer to "Cleaning the Lap/Shoulder Belt Webbing" (page 8-60).*



### **▼ Pregnant Women and Persons with Serious Medical Conditions**

Pregnant women should always wear seat belts. Ask your doctor for specific recommendations.

The lap belt should be worn **SNUGLY AND AS LOW AS POSSIBLE OVER THE HIPS**. The shoulder belt should be worn across your shoulder properly, but never across the stomach area.

Persons with serious medical conditions also should wear seat belts. Check with your doctor for any special instructions regarding specific medical conditions.



### **▼ Emergency Locking Mode**

In the emergency locking mode, the belt remains comfortable on the occupant and the retractor will lock in position during a collision. When the seat belt is fastened, it will always be in the emergency locking mode until it is switched to automatic locking mode by pulling it all the way out to its full length. If the belt feels tight and hinders comfortable movement while the vehicle is stopped or in motion, it may be in the automatic locking mode because the belt has been pulled too far out. To return the belt to the more comfortable emergency locking mode, wait until the vehicle has stopped in a safe, level area, retract the belt fully to convert it back to emergency locking mode and then extend it around you again.

If the belt is locked and cannot be pulled out, retract the belt once, and then try pulling it out slowly. If this fails, pull the belt strongly one time and loosen, then pull it out again slowly.

**▼ Automatic Locking Mode**

Always use the automatic locking mode to keep the child-restraint system from shifting to an unsafe position in the event of an accident. To enable seat belt automatic locking mode, pull it all the way out and connect it as instructed on the child-restraint system. It will retract down to the child-restraint system and stay locked on it. See the section on child restraint (page 2-26).

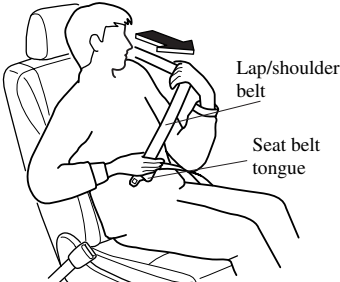


# Seat Belt Systems

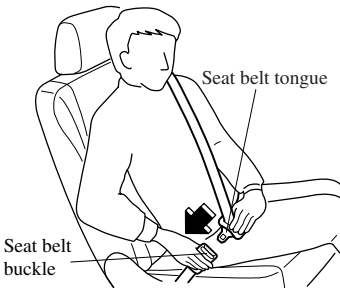
## Seat Belt

### ▼ Fastening the Seat Belt

1. Grasp the seat belt tongue.
2. Slowly pull out the lap/shoulder belt.



3. Insert the seat belt tongue into the seat belt buckle until you hear a click sound.

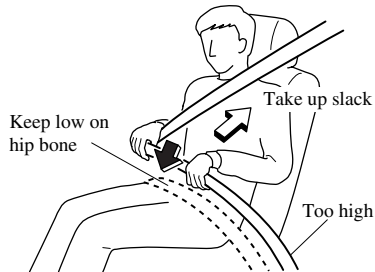


### ⚠ WARNING

#### Positioning the Shoulder Portion of the Seat Belt:

*Improper positioning of the shoulder portion of the seat belt is dangerous. Always make sure the shoulder portion of the seat belt is positioned across your shoulder and near your neck, but never under your arm, on your neck, or on your upper arm.*

4. Position the lap belt as low as possible, not on the abdominal area, then adjust the shoulder belt so that it fits snugly against your body.



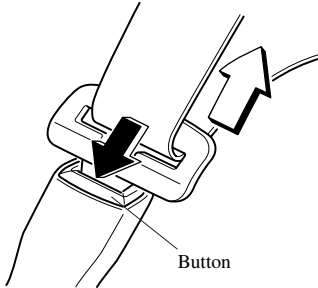
### ⚠ WARNING

#### Positioning the Lap Portion of the Seat Belt:

*The lap portion of the seat belt worn too high is dangerous. In a collision, this would concentrate the impact force directly on the abdominal area, causing serious injury. Wear the lap portion of the belt snugly and as low as possible.*

**▼ Unfastening the Seat Belt**

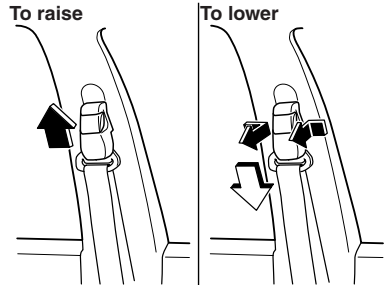
Depress the button on the seat belt buckle. If the belt does not fully retract, pull it out and check for kinks or twists. Then make sure it remains untwisted as it retracts.

**NOTE**

*If a belt does not fully retract, inspect it for kinks and twists. If it is still not retracting properly, have it inspected at an Authorized Mazda Dealer.*

**▼ Front Shoulder Belt Adjuster**

Adjust the height of the shoulder belt if the seat belt touches your neck, or if it crosses your arm instead of your shoulder. To raise the shoulder belt adjuster, push the adjuster up. To lower the shoulder belt adjuster, pull the adjuster and slide it down. Make sure the adjuster is locked.

**⚠ WARNING****Positioning the Shoulder Portion of the Seat Belt:**

*Improper positioning of the shoulder portion of the seat belt is dangerous. Always make sure the shoulder portion of the seat belt is positioned across your shoulder and near your neck, but never under your arm, on your neck, or on your upper arm.*

## Seat Belt Systems

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### Front Seat Belt Pretensioner and Load Limiting Systems

For optimum protection, the driver and front passenger seat belts are equipped with pretensioner and load limiting systems. For both these systems to work properly you must wear the seat belt properly.

#### **Pretensioners:**

In moderate or severe frontal or near-frontal accidents, the front air bag and pretensioner systems deploy simultaneously. The front seat belt retractors remove slack quickly as the air bags are expanding. Any time the air bags and front seat belt pretensioners have fired they must be replaced.

#### **(With Driver and Front Passenger Occupant Classification System)**

In addition, the pretensioner system for the front passenger, like the front passenger air bag, is designed to only deploy in accordance with the total seated weight on the front passenger seat. For details, refer to the front passenger seat weight sensors (page 2-54).

#### **Load limiter:**

The load limiting system releases belt webbing in a controlled manner to reduce belt force on the occupant's chest. While the most severe load on a seat belt occurs in frontal collisions, the load limiter has an automatic mechanical function and can activate in any accident mode with sufficient occupant movement.

Even if the pretensioners have not fired, the load limiting function must be checked by an Authorized Mazda Dealer after any collision.

### **WARNING**

***Wear seat belts only as recommended in this owner's manual:***

*Incorrect positioning of the driver and front passenger seat belts is dangerous. Without proper positioning, the pretensioner and load limiting systems cannot provide adequate protection in an accident and this could result in serious injury. For more details about wearing seat belts, refer to "Fastening the seat belts" (page 2-18).*

***Have your seat belts changed immediately if the pretensioner or load limiter has been expended:***

*Always have an Authorized Mazda Dealer immediately inspect the front seat belt pretensioners and air bags after any collision. Like the air bags, the front seat belt pretensioners and load limiters will only function once and must be replaced after any collision that caused them to deploy. A seat belt with an expended pretensioner or load limiter is still better than wearing no seat belt at all; however, if the front seat belt pretensioners and load limiters are not replaced, the risk of injury in a collision will increase.*

**Do not modify the components or wiring, or use electronic testing devices on the pretensioner system:**

Modifying the components or wiring of the pretensioner system, including the use of electronic testing devices is dangerous. You could accidentally activate it or make it inoperable which would prevent it from activating in an accident. The occupants or repairers could be seriously injured.

**Properly dispose of the pretensioner system:**

Improper disposal of the pretensioner system or a vehicle with non-deactivated pretensioners is dangerous. Unless all safety procedures are followed, injury could result. Ask an Authorized Mazda Dealer how to safely dispose of the pretensioner system or how to scrap a pretensioner-equipped vehicle.

#### **NOTE**

- *The pretensioner system will activate in a moderate or greater frontal or near-frontal collision. It will not activate in most rollovers, side or rear impacts.*  
**(With Driver and Front Passenger Occupant Classification System)**  
*The pretensioner system for the front passenger is designed to only deploy in accordance with the total seated weight on the front passenger seat.*
- *Some smoke (non-toxic gas) will be released when the air bags and pretensioners deploy. This does not indicate a fire. This gas normally has no effect on occupants, however, those with sensitive skin may experience light skin irritation. If residue from the deployment of the air bags or the front pretensioner system gets on the skin or in the eyes, wash it off as soon as possible.*

#### **▼ Air Bag/Front Seat Belt Pretensioner System Warning Light**



If the air bag/front seat belt pretensioner system is working properly, the warning light illuminates when the ignition is switched ON or after the engine is cranked. The warning light turns off after a specified period of time.

## Seat Belt Systems

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A system malfunction is indicated if the warning light constantly flashes, constantly illuminates or does not illuminate at all when the ignition is switched ON. If any of these occur, consult an Authorized Mazda Dealer as soon as possible. The system may not work in an accident.

### **WARNING**

***Never tamper with the air bag/pretensioner systems and always have an Authorized Mazda Dealer perform all servicing and repairs:***

*Self-servicing or tampering with the systems is dangerous. An air bag/pretensioner could accidentally activate or become disabled causing serious injury or death.*

### **▼ Air Bag/Front Seat Belt Pretensioner System Warning Beep**

If a malfunction is detected in the air bag/front seat belt pretensioner systems and the warning light, a warning beep sound will be heard for about 5 seconds every minute.

The air bag and seat belt pretensioner system warning beep sound will continue to be heard for approximately 35 minutes. Have your vehicle inspected at an Authorized Mazda Dealer as soon as possible.

### **WARNING**

***Do not drive the vehicle with the air bag/front seat belt pretensioner system warning beep sounding:***

*Driving the vehicle with the air bag/front seat belt pretensioner system warning beep sounding is dangerous. In a collision, the air bags and the front seat belt pretensioner system will not deploy and this could result in death or serious injury. Contact an Authorized Mazda Dealer to have the vehicle inspected as soon as possible.*

## Seat Belt Extender

If your seat belt is not long enough, even when fully extended, a seat belt extender may be available to you at no charge from your Authorized Mazda Dealer.

This extender will be only for you and for the particular vehicle and seat. Even if it plugs into other seat belts, it may not hold in the critical moment of a crash.

When ordering an extender, only order one that provides the necessary additional length to fasten the seat belt properly.

Please contact your Authorized Mazda Dealer for more information.

### **⚠ WARNING**

***Do not use a seat belt extender unless it is necessary:***

*Using a seat belt extender when not necessary is dangerous. The seat belt will be too long and not fit properly. In an accident, the seat belt will not provide adequate protection and you could be seriously injured. Only use the extender when it is required to fasten the seat belt properly.*

***Do not use an improper extender:***

*Using a seat belt extender that is for another person or a different vehicle or seat is dangerous. The seat belt will not provide adequate protection and the user could be seriously injured in an accident. Only use the extender provided for you and for the particular vehicle and seat. NEVER use the extender in a different vehicle or seat. If you sell your Mazda, do not leave your seat belt extender in the vehicle. It could be used accidentally by the new owner of the vehicle. After removing the seat belt extender, discard it. Never use the seat belt extender in any other vehicle you may own in the future.*

***Do not use an extender that is too long:***

*Using an extender that is too long is dangerous. The seat belt will not fit properly. In an accident, the seat belt will not provide adequate protection and you could be seriously injured. Do not use the extender or choose one shorter in length if the distance between the extender's buckle and the center of the user's body is less than 15 cm (6 in).*

## Seat Belt Systems

### **Do not leave a seat belt extender connected to the buckle:**

Leaving a seat belt extender connected to the buckle without using the seat belt is dangerous. When the seat belt extender is connected to the driver's seat belt buckle (or front passenger) seat, the SRS driver's (or front passenger's) air bag system will determine that the driver (or front passenger) is wearing the seat belt even if the driver (or front passenger) is not wearing it. This condition could cause the driver's (or front passenger's) air bag to not activate correctly and result in death or serious injury in the event of collision. Always wear the seat belt with the seat belt extender.

### **Do not use the seat belt extender when installing a child-restraint system on the front or rear passenger seat:**

Using a seat belt extender to fasten a child-restraint system on any seat is dangerous. Always follow the child-restraint system manufacturer's installation instructions and never use a seat belt extender.

#### **NOTE**

When not in use, remove the seat belt extender and store it in the vehicle. If the seat belt extender is left connected, the seat belt extender might get damaged as it will not retract with the rest of the seat belt and can easily fall out of the door when not in use and be damaged. In addition, the seat belt warning light will not illuminate and function properly.

## Seat Belt Warning Light/Beep



The seat belt warning light illuminates and a beep sound will be heard if the driver's seat belt is not fastened when the ignition is switched ON.

#### Conditions of operation

Condition	Result
The driver's seat belt is not fastened when the ignition is switched ON.	The warning light flashes and a beep sound will be heard for about 6 seconds.
The driver's seat belt is fastened while the warning light and the beep sound are activated.	The warning light turns off and the beep sound stops.
The driver's seat belt is fastened before the ignition is switched ON.	The warning light will not illuminate and the beep sound will not be heard.

#### ▼ Belt Reminder

#### **NOTE**

Consult an Authorized Mazda Dealer to deactivate or restore the belt reminder. Though the belt reminder can be deactivated, doing so will defeat the purpose of the system to warn the driver and the front passenger in the event that their seat belts are not fastened. For the safety of the driver and front passenger, Mazda recommends not deactivating the belt reminder.

## Seat Belt Systems

### Driver seated/Front passenger not seated\*1

The belt reminder is a supplemental warning to the seat belt warning function. If the driver's seat belt is not fastened when the ignition is switched ON, the warning light/beep operates to give you further reminders according to the chart below.

\*1 The belt reminder operates according to the chart below even if the front passenger is seated (Without Driver and Front Passenger Occupant Classification System).

Condition	Vehicle speed			
	Between 0 — 20 km/h (0 — 12 mph)		20 km/h (12 mph) or more	
Seat belt (Driver)	○	×	○	×
Indicator		⬆		⬆
Beep				♪

○ : Fastened  
 × : Unfastened  
 ⬆ : Illuminated  
 ⬆ : Flashing  
 ♪ : Beep

Once the beep sound is heard, it continues sounding even if the vehicle speed lowers to 20 km/h (12 mph) or less until the seatbelt is fastened or the beep sound period has passed.

### Driver seated/Front passenger seated

The seat belt warning function reminds the front passenger to fasten the seat belt according to the chart below.

Condition	Vehicle speed							
	Between 0 — 20 km/h (0 — 12 mph)			20 km/h (12 mph) or more				
Seat belt (Driver)	○	○	×	×	○	○	×	×
Seat belt (Passenger)	○	×	○	×	○	×	○	×
Indicator			⬆	⬆	⬆	⬆	⬆	⬆
Beep					♪	♪	♪	

○ : Fastened  
 × : Unfastened  
 ⬆ : Illuminated  
 ⬆ : Flashing  
 ♪ : Beep

Placing heavy items on the front passenger seat may cause the front passenger seat belt warning function to operate depending on the weight of the item.

Once the beep sound is heard, it continues sounding even if the vehicle speed lowers to 20 km/h (12 mph) or less until the seatbelt is fastened or the beep sound period has passed.

#### **NOTE**

- To allow the front passenger seat weight sensor to function properly, do not place and sit on an additional seat cushion on the front passenger seat. The sensor may not function properly because the additional seat cushion could cause sensor interference.
- When a small child sits on the front passenger seat, it is possible that neither the warning light nor the warning beep operate.



## Child Restraint

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### Child Restraint Precautions

Mazda strongly urges the use of child-restraint systems for children small enough to use them.

You are required by law to use a child-restraint system for children in the U.S. and Canada. Check your local and state or provincial laws for specific requirements regarding the safety of children riding in your vehicle.

Whatever child-restraint system you consider, please pick the appropriate one for the age and size of the child, obey the law and follow the instructions that come with the individual child-restraint system.

A child who has outgrown child-restraint systems should sit in the rear and use seat belts, both lap and shoulder. If the shoulder belt crosses the neck or face, move the child closer to the center of the vehicle in the outboard seats, and towards the buckle on the right if the child is seated on the center seat.

Statistics confirm that the rear seat is the best place for all children up to 12 years of age, and more so with a supplemental restraint system (air bags).

A rear-facing child-restraint system should **NEVER** be used on the front seat with the air bag system activated. The front passenger's seat is also the least preferred seat for other child-restraint systems.

#### **(With Driver and Front Passenger Occupant Classification System)**

To reduce the chance of injuries caused by deployment of the front passenger air bag, the front passenger seat weight sensors work as a part of the supplemental restraint system. This system deactivates the front passenger front and side air bags and also the front passenger seat belt pretensioner system when the front passenger air bag deactivation indicator light illuminates.

When an infant or small child sits on the front passenger seat, the system shuts off the front passenger front and side air bags and seat belt pretensioner system, so make sure the front passenger air bag deactivation indicator light illuminates.

Even if the front passenger air bag is shut off, Mazda strongly recommends that children be properly restrained and child-restraint systems of all kinds are properly secured on the rear seats which are the best place for children.

For more details, refer to “Front passenger seat weight sensors” (page 2-54).

**⚠ WARNING****Use the correct size child-restraint system:**

For effective protection in vehicle accidents and sudden stops, a child must be properly restrained using a seat belt or child-restraint system depending on age and size. If not, the child could be seriously injured or even killed in an accident.

**Follow the manufacturer's instructions and always keep the child-restraint system buckled down:**

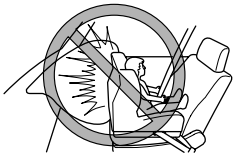
An unsecured child-restraint system is dangerous. In a sudden stop or a collision it could move causing serious injury or death to the child or other occupants. Make sure any child-restraint system is properly secured in place according to the child-restraint system manufacturer's instructions. When not in use, remove it from the vehicle or fasten it with a seat belt, or latch it down to BOTH LATCH lower anchors for LATCH child-restraint systems and the corresponding tether anchor.

**Always secure a child in a proper child-restraint system:**

Holding a child in your arms while the vehicle is moving is extremely dangerous. No matter how strong the person may be, he or she cannot hold onto a child in a sudden stop or collision and it could result in serious injury or death to the child or other occupants. Even in a moderate accident, the child may be exposed to air bag forces that could result in serious injury or death to the child, or the child may be slammed into an adult, causing injury to both child and adult.

**Never use a rear-facing child-restraint system in the front seat with an air bag that could deploy:**

Rear-facing child-restraint systems on the front seat are particularly dangerous even though you may feel assured that a front passenger air bag will not deploy based on the fact that the front passenger air bag deactivation indicator light illuminates. The child-restraint system can be hit by a deploying air bag and moved violently backward resulting in serious injury or death to the child.



## Child Restraint

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**Do not install a front-facing child-restraint system on the front passenger seat unless it is unavoidable:**

*In a collision, the force of a deploying air bag could cause serious injury or death to the child. If installing a front-facing child-restraint system on the front passenger seat is unavoidable, move the front passenger seat as far back as possible.*



**Seating a child in a child-restraint system on the front passenger seat is dangerous under certain conditions (With Driver and Front Passenger Occupant Classification System):**

Your vehicle is equipped with front passenger seat weight sensors. Even with the front passenger seat weight sensors, if you must use the front passenger seat to seat a child, using a child-restraint system on the front passenger seat under the following conditions increases the danger of the front passenger air bag deploying and could result in serious injury or death to the child.

- The front passenger air bag deactivation indicator light does not illuminate when seating a child in the child-restraint system.
- Luggage or other items are placed on the seat with the child in the child-restraint system.
- A rear passenger or luggage pushing or pulling down on the front passenger seatback.
- A rear passenger puts their feet on the front seat rails.
- Luggage or other items are placed on the seatback or hung on the head restraint.
- Heavy items are placed in the seatback map pocket.
- The seat is washed.
- Liquids are spilled on the seat.
- The front passenger seat is moved backward, pushing into luggage or other items placed behind it.
- The front passenger seatback contacts the rear seat.
- Luggage or other items are placed between the front passenger seat and driver seat.
- Any accessories, which might increase the total seated weight on the front passenger seat, are attached to the front passenger seat.

The designated positions with seat belts on the rear seats are the safest places for children. Always use seat belts and child restraints.

**Do not allow a child or anyone to lean over or against the side window of a vehicle with side and curtain air bags:**

It is dangerous to allow anyone to lean over or against the side window, the area of the front passenger seat, the front and rear window pillars and the roof edge along both sides from which the side and curtain air bags deploy, even if a child-restraint system is used. The impact of inflation from a side or curtain air bag could cause serious injury or death to an out of position child. Furthermore, leaning over or against the front door could block the side and curtain air bags and eliminate the advantages of supplemental protection. With the front air bag and the additional side air bag that comes out of the front seat, the rear seat is always a better location for children. Take special care not to allow a child to lean over or against the side window, even if the child is seated in a child-restraint system.

**Never use one seat belt on more than one person at a time:**

Using one seat belt for more than one person at a time is dangerous. A seat belt used in this way cannot spread the impact forces properly and the two passengers could be crushed together and seriously injured or even killed. Never use one belt for more than one person at a time and always operate the vehicle with each occupant properly restrained.

** CAUTION**

A seat belt or child-restraint system can become very hot in a closed vehicle during warm weather. To avoid burning yourself or a child, check them before you or your child touches them.

**NOTE**

Your Mazda is equipped with LATCH lower anchors for attachment of specially designed LATCH child-restraint systems in the rear seat. When using these anchors to secure a child-restraint system, refer to “LATCH Child-Restraint Systems” (page 2-37).

## Child Restraint

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### Child-Restraint System Installation Position

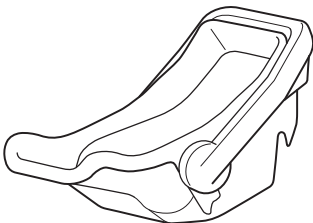
In this owner's manual, explanation of child-restraint systems is provided for the following three types of popular child-restraint systems: infant seat, child seat, booster seat.

#### **NOTE**

- *Installation position is determined by the type of child-restraint system. Always read the manufacturer's instructions and this owner's manual carefully.*
- *Due to variations in the design of child-restraint systems, vehicle seats and seat belts, all child-restraint systems may not fit all seating positions. Before purchasing a child-restraint system, it should be tested in the specific vehicle seating position (or positions) where it is intended to be used. If a previously purchased child-restraint system does not fit, you may need to purchase a different one that will.*

#### **Infant seat**

An infant seat provides restraint by bracing the infant's head, neck and back against the seating surface.



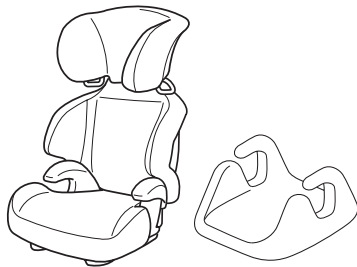
#### **Child seat**

A child seat restrains a child's body using the harness.



#### **Booster seat**

A booster seat is a child restraint accessory designed to improve the fit of the seat belt system around the child's body.



## Installing Child-Restraint Systems

Accident statistics reveal that a child is safer in the rear seat. The front passenger's seat is clearly the worst choice for any child under 12, and with rear-facing child-restraint systems it is clearly unsafe due to air bags.

### **NOTE**

*Even if your vehicle is equipped with front passenger seat weight sensors (page 2-54), which automatically deactivates the front passenger air bag, a rear seat is the safest place for a child of any age or size.*

Some child-restraint systems now come with tethers and therefore must be installed on the seats that take tethers to be effective. In your Mazda, tethered child-restraint systems can only be accommodated in the three positions on the rear seat.

Some child-restraint systems also employ specially designed LATCH attachments; refer to “LATCH Child-Restraint Systems” (page 2-37).

## **⚠ WARNING**

***Tethered Child-Restraint Systems Work Only on Tether-Equipped Rear Seats:***  
*Installation of a tether equipped child-restraint system in the front passenger's seat defeats the safety design of the system and will result in an increased chance of serious injury if the child-restraint system goes forward without benefit of being tethered.*

*Place tether equipped child-restraint systems where there are tether anchors.*

## **▼ Rear Seat Child-Restraint System Installation**

Follow these instructions when using a child-restraint system, unless you are attaching a LATCH-equipped child-restraint system to the rear LATCH lower anchors. Refer to “LATCH Child-Restraint Systems” (page 2-37).

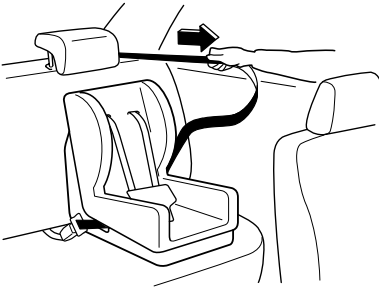
### **NOTE**

*Follow the child-restraint system manufacturer's instructions carefully. If you are not sure whether you have a LATCH system or tether, check in the child-restraint system manufacturer's instructions and follow them accordingly. Depending on the type of child-restraint system, it may use LATCH system instead of seat belts or if the belt goes across the child's chest, may recommend against using automatic locking mode.*

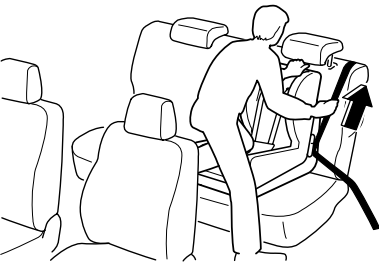
1. Raise the head restraint to the top locked position (except center seat position).  
Refer to Head Restraints on page 2-11.

# Child Restraint

2. Secure the child-restraint system with the lap portion of the lap/shoulder belt. See the manufacturer's instructions on the child-restraint system for belt routing instructions.
3. To get the retractor into the automatic locking mode, pull the shoulder belt portion of the seat belt until the entire length of the belt is out of the retractor.



4. Push the child-restraint system firmly into the vehicle seat. Be sure the belt retracts as snugly as possible. A clicking noise from the retractor will be heard during retraction if the system is in the automatic locking mode. If the belt does not lock the seat down tight, repeat this step.

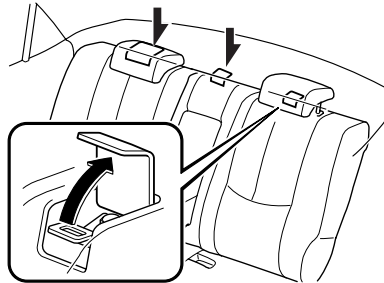


### NOTE

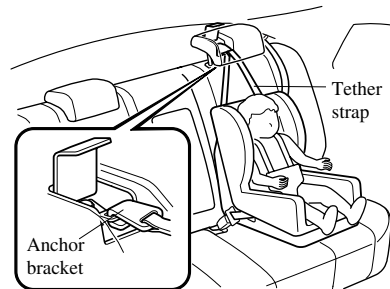
Inspect this function before each use of the child-restraint system. You should not be able to pull the shoulder belt out of the retractor while the system is in the automatic locking mode. When you remove the child-restraint system, be sure the belt fully retracts to return the system to emergency locking mode before occupants use the seat belts.

5. If your child-restraint system requires the use of a tether strap, refer to the manufacturer's instructions to hook and tighten the tether strap after raising the head restraint (except center position).

### Anchor bracket location



### Tether strap position



**⚠ WARNING**

**Use the tether and tether anchor only for a child-restraint system:**

*Using the tether or tether anchor to secure anything but a child-restraint system is dangerous. This could weaken or damage the tether or tether anchor and result in injury.*

**Always route the tether strap between the head restraint and the seatback (Except center seat position):**

*Routing the tether strap on top of the head restraint is dangerous. In a collision the tether strap could slide off the head restraint and loosen the child-restraint system. The child-restraint system could move which may result in death or injury to the child.*

**Always attach the tether strap to the correct tether anchor position:**

*Attaching the tether strap to the incorrect tether anchor position is dangerous. In a collision, the tether strap could come off and loosen the child-restraint system. If the child-restraint system moves it could result in death or injury to the child.*

**▼ If You Must Use the Front Seat for Children**

If you cannot put all children in the rear seat, at least put the smallest children in the rear and be sure the largest child up front uses the shoulder belt over the shoulder.

NEVER put a rear-facing child-restraint system on the front passenger seat whether your vehicle is equipped with a seat weight sensor or not.

This seat is also not set up for tethered child-restraint systems, put them in one of the rear seat positions set up with tether anchors.

Likewise the LATCH child-restraint system cannot be secured in the front passenger's seat and should be used in the rear seat.

Do not allow anyone to sleep against the side window if you have an optional side and curtain air bags, it could cause serious injuries to an out of position occupant. As children more often sleep in cars, it is better to put them in the rear seat. If installing the child-restraint system on the front seat is unavoidable, follow these instructions when using a front-facing child-restraint system in the front passenger's seat.

**NOTE**

- *To check if your front seats have side air bags:  
Mazda vehicles equipped with side air bag will have a "SRS AIRBAG" tag on the outboard shoulder of the front seats.*
- *To check if your vehicle has curtain air bags:  
Mazda vehicles equipped with curtain air bag will have an "SRS AIRBAG" marking on the window pillars along the roof edge.*



## Child Restraint

### **⚠ WARNING**

*Always move the front passenger seat as far back as possible if installing a front-facing child-restraint system on it is unavoidable:*

*As your vehicle has front air bags and doubly so because your vehicle has side air bags, a front-facing child-restraint system should be put on the front passenger seat only when it is unavoidable.*

*Even if the front passenger air bag deactivation indicator light illuminates, always move the seat as far back as possible, because the force of a deploying air bag could cause serious injury or death to the child.*

**Never use a rear-facing child-restraint system in the front seat with an air bag that could deploy:**

*Rear-facing child-restraint systems on the front seat are particularly dangerous.*

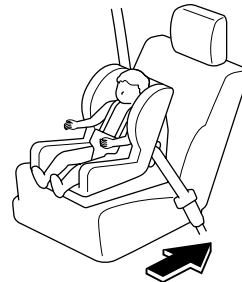
*Even in a moderate collision, the child-restraint system can be hit by a deploying air bag and moved violently backward resulting in serious injury or death to the child. Even though you may feel assured that the front passenger air bag will not deploy based on the fact that the front passenger air bag deactivation indicator light illuminates.*

**Do not allow a child or anyone to lean over or against the side window of a vehicle with side and curtain air bags:**

*It is dangerous to allow anyone to lean over or against the side window, the area of the front passenger seat, the front and rear window pillars and the roof edge along both sides from which the side and curtain air bags deploy, even if a child-restraint system is used. The impact of inflation from a side or curtain air bag could cause serious injury or death to an out of position child. Furthermore, leaning over or against the front door could block the side and curtain air bags and eliminate the advantages of supplemental protection. With the front air bag and the additional side air bag that comes out of the front seat, the rear seat is always a better location for children. Take special care not to allow a child to lean over or against the side window, even if the child is seated in a child-restraint system.*

### **▼ Front Passenger's Seat Child-Restraint System Installation**

1. Switch the ignition ON.
2. Slide the seat as far back as possible.



3. Place the child-restraint system on the seat without putting your weight on the seat and fasten the seat belt. See the manufacturer's instructions on the child-restraint system for belt routing instructions.
4. To get the retractor into the automatic locking mode, pull the shoulder belt portion of the seat belt until the entire length of the belt is out of the retractor.
5. Push the child-restraint system firmly into the vehicle seat. Be sure the belt retracts as snugly as possible. A clicking noise from the retractor will be heard during retraction if the system is in automatic locking mode. If the belt does not lock the seat down tight, repeat the previous step and also this one.

**NOTE**

- *Inspect this function before each use of the child-restraint system. You should not be able to pull the shoulder belt out of the retractor while the system is in the automatic locking mode. When you remove the child-restraint system, be sure the belt fully retracts to return the system to emergency locking mode before occupants use the seat belts.*
  - *Follow the child-restraint system manufacturer's instructions carefully. Depending on the type of child-restraint system, it may not employ seat belts which are in automatic locking mode.*
6. Seat your child safely in the child-restraint system and secure the child according to the instructions from the child-restraint system manufacturer.

**7. (With Driver and Front Passenger Occupant Classification System)**

Make sure the front passenger air bag deactivation indicator light illuminates after installing a child-restraint system on the front passenger seat.

If the front passenger air bag deactivation indicator light does not illuminate, remove the child-restraint system, switch the ignition to OFF or ACC, and then re-install the child-restraint system.

Refer to Front passenger air bag deactivation indicator light on page 2-54.



## Child Restraint

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### **WARNING**

**Do not seat a child in a child-restraint system on the front passenger seat if the front passenger air bag deactivation indicator light does not illuminate (With Driver and Front Passenger Occupant Classification System):**

*While it is always better to install any child-restraint system on the rear seat, it is imperative that a child-restraint system **ONLY** be used on the front passenger seat if the deactivation indicator light illuminates when the child is seated in the child-restraint system (page 2-54). Seating a child in a child-restraint system installed on the front passenger seat with the front passenger air bag deactivation indicator light not illuminated is dangerous. If this indicator light does not illuminate, this means that the front passenger front and side air bags, and seat belt pretensioner are ready for deployment. If an accident were to deploy an air bag, a child in a child-restraint system sitting in the front passenger seat could be seriously injured or killed. If the indicator light does not illuminate after seating a child in a child-restraint system on the front passenger seat, seat a child in a child-restraint system on the rear seat and consult an Authorized Mazda Dealer as soon as possible.*

## LATCH Child-Restraint Systems

Your Mazda is equipped with LATCH lower anchors for attachment of specially designed LATCH child-restraint systems in the rear seat. Both anchors must be used, otherwise the seat will bounce around and put the child in danger. Most LATCH child-restraint systems must also be used in conjunction with a tether to be effective. If they have a tether you must use it to better assure your child's safety.

### **WARNING**

**Follow the manufacturer's instructions for the use of the child-restraint system:**

*An unsecured child-restraint system is dangerous. In a sudden stop or a collision it could move causing serious injury or death to the child or other occupants. Make sure the child-restraint system is properly secured in place according to the child-restraint system manufacturer's instructions.*

**Never attach two child-restraint systems to the same LATCH lower anchor:**

*Attaching two child-restraint systems to the same LATCH lower anchor is dangerous. In a collision, one anchor may not be strong enough to hold two child-restraint system attachments, and it may break, causing serious injury or death. If you use the seat position for another child-restraint system when an outboard LATCH position is occupied, use the center seat belts instead, and the tether if tether-equipped.*

**Make sure the child-restraint system is properly secured:**

*An unsecured child-restraint system is dangerous. In a sudden stop or a collision it could move causing serious injury or death to the child or other occupants. Follow the child-restraint system manufacturer's instructions on belt routing to secure the seat just as you would with a child in it so that nobody is tempted to put a child in an improperly secured seat later on. When not in use, remove it from the vehicle or fasten it with a seat belt, or latch it down to BOTH LATCH lower anchors for LATCH child-restraint systems.*

**Make sure there are no seat belts or foreign objects near or around the LATCH child-restraint system:**

*Not following the child-restraint system manufacturer's instructions when installing the child-restraint system is dangerous. If seat belts or a foreign object prevent the child-restraint system from being securely attached to the LATCH lower anchors and the child-restraint system is installed improperly, the child-restraint system could move in a sudden stop or collision causing serious injury or death to the child or other occupants. When installing the child-restraint system, make sure there are no seat belts or foreign objects near or around the LATCH lower anchors. Always follow the child-restraint system manufacturer's instructions.*

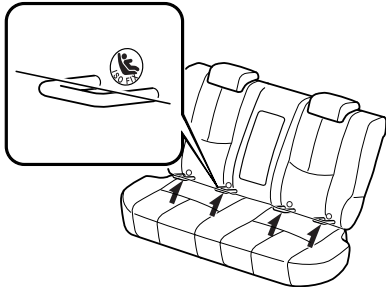
### **NOTE**

*To install a child-restraint system on the rear-seat center position, use a seat belt-secured child-restraint system.*

## Child Restraint

### ▼ LATCH Child-Restraint System Installation Procedure (Rear Outboard Seats)

1. Make sure the seatback is securely latched by pushing it back until it is fully locked.
2. Expand the area between the seat bottom and the seatback slightly to verify the locations of the LATCH lower anchors.



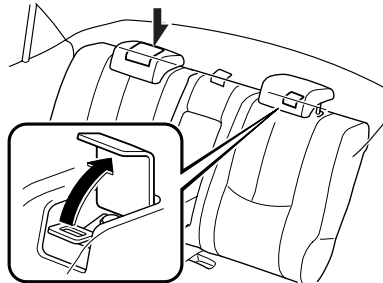
#### **NOTE**

The markings above the LATCH lower anchors indicate the locations of LATCH lower anchors for the attachment of a child-restraint system.

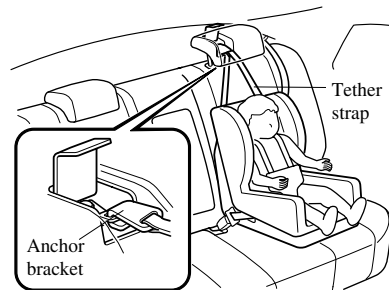
3. Raise the head restraint to the top locked position. Refer to Head Restraints on page 2-11.
4. Secure the child-restraint system using BOTH LATCH lower anchors, following the child-restraint system manufacturer's instruction. Pull on the child-restraint to be sure both anchors are engaged.

5. If your child-restraint system came equipped with a tether, that means it is very important to properly secure the tether for child safety. Please carefully follow the child-restraint system manufacturer's instructions when installing tethers.

#### **Anchor bracket location**



#### **Tether strap position**



**⚠ WARNING**

**Use the tether and tether anchor only for a child-restraint system:**

*Using the tether or tether anchor to secure anything but a child-restraint system is dangerous. This could weaken or damage the tether or tether anchor and result in injury.*

**Always route the tether strap between the head restraint and the seatback:**

*Routing the tether strap on top of the head restraint is dangerous. In a collision the tether strap could slide off the head restraint and loosen the child-restraint system. The child-restraint system could move which may result in death or injury to the child.*

**Always attach the tether strap to the correct tether anchor position:**

*Attaching the tether strap to the incorrect tether anchor position is dangerous. In a collision, the tether strap could come off and loosen the child-restraint system. If the child-restraint system moves it could result in death or injury to the child.*

**▼ LATCH Child-Restraint System Installation Procedure (Rear Center Seat)**

The LATCH lower anchors at the center of the rear seat are much further apart than the sets of LATCH lower anchors for child-restraint system installation at other seating positions. Child-restraint systems with rigid LATCH attachments cannot be installed on the center seating position. Some LATCH equipped child-restraint systems can be placed in the center position and will reach the nearest LATCH lower anchors which are 466 mm (18.35 in) apart. LATCH compatible child-restraint systems (with attachments on belt webbing) can be used at this seating position only if the child-restraint system manufacturer's instructions state that the child-restraint system can be installed to LATCH lower anchors that are 466 mm (18.35 in) apart. Do not attach two child-restraint systems to the same LATCH lower anchor. If your child-restraint system has a tether, it must also be used for your child's optimum safety.

# Child Restraint

## **⚠ WARNING**

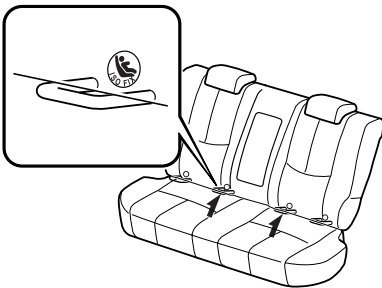
**Use the tether and tether anchor only for a child-restraint system:**

*Using the tether or tether anchor to secure anything but a child-restraint system is dangerous. This could weaken or damage the tether or tether anchor and result in injury.*

**Always attach the tether strap to the correct tether anchor position:**

*Attaching the tether strap to the incorrect tether anchor position is dangerous. In a collision, the tether strap could come off and loosen the child-restraint system. If the child-restraint system moves it could result in death or injury to the child.*

1. Make sure the seatback is securely latched by pushing it back until it is fully locked.
2. Expand the area between the seat bottom and the seatback slightly to verify the locations of the LATCH lower anchors.

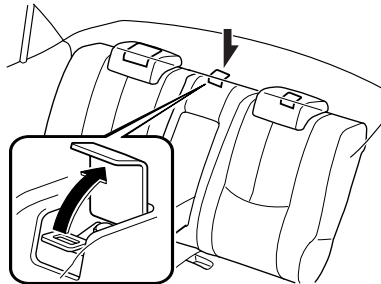


### **NOTE**

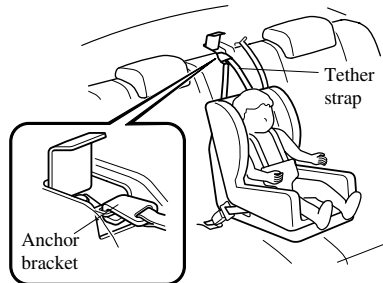
*The markings above the LATCH lower anchors indicate the locations of LATCH lower anchors for the attachment of a child-restraint system.*

3. Secure the child-restraint system using BOTH LATCH lower anchors, following the child-restraint system manufacturer's instructions. Pull on the child-restraint to be sure both anchors are engaged.
4. If your child-restraint system came equipped with a tether, that means it is very important to properly secure the tether for child safety. Please carefully follow the child-restraint system manufacturer's instructions when installing tethers.

### **Anchor bracket location**



### **Tether strap position**



## Supplemental Restraint System (SRS) Precautions

The front and side supplemental restraint systems (SRS) include 6 air bags. **Please verify the air bags equipped on your vehicle by locating the “SRS AIRBAG” location indicators.** These indicators are visible in the area where the air bags are installed.

The air bags are installed in the following locations:

- The steering wheel hub (driver air bag)
- The front passenger dashboard (front passenger air bag)
- The outboard sides of the front seatbacks (side air bags)
- The front and rear window pillars, and the roof edge along both sides (curtain air bags)

The air bag supplemental restraint systems are designed to provide supplemental protection in certain situations, so seat belts are always important in the following ways:

Without seat belt usage, the air bags cannot provide adequate protection during an accident. Seat belt usage is necessary to:

- Keep the occupant from being thrown into an inflating air bag.
- Reduce the possibility of injuries during an accident that is not designed for air bag inflation, such as roll-over or rear impact.
- Reduce the possibility of injuries in frontal, near frontal, side collisions that are not severe enough to activate the air bags.
- Reduce the possibility of being thrown from your vehicle.
- Reduce the possibility of injuries to lower body and legs during an accident because the air bags provide no protection to these parts of the body.
- Hold the driver in a position which allows better control of the vehicle.



## SRS Air Bags

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If your vehicle is also equipped with a driver and front passenger occupant classification system, refer to the Driver and Front Passenger Occupant Classification System (page 2-54) for details.

If your vehicle is equipped with a driver and front passenger occupant classification system, the front passenger air bag deactivation indicator light illuminates for a specified time after the ignition is switched ON.



Small children must be protected by a child-restraint system as stipulated by law in every state and province. In certain states and provinces, larger children must use a child-restraint system (page 2-26).

Carefully consider which child-restraint system is necessary for your child and follow the installation directions in this Owner's Manual as well as the child-restraint system manufacturer's instructions.

### **⚠ WARNING**

#### **Seat belts must be worn in air bag equipped vehicles:**

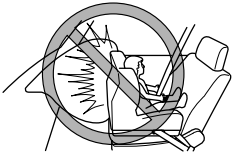
*Depending only on the air bags for protection during an accident is dangerous. Alone, air bags may not prevent serious injuries. The appropriate air bags can be expected to inflate only in the first accident, such as frontal, near frontal, side collisions that are at least moderate. Vehicle occupants should always wear seat belts.*

#### **Children should not ride in the front passenger seat:**

*Placing a child, 12 years or under, in the front seat is dangerous. The child could be hit by a deploying air bag and be seriously injured or even killed. Even if the front passenger air bag deactivation indicator light illuminates, always move the front passenger seat as far back as possible. A sleeping child is more likely to lean against the door and be hit by the side air bag in a moderate collision to the front-passenger side of the vehicle. Whenever possible, always secure a child 12 years and under on the rear seat with an appropriate child-restraint system for the child's age and size.*

**Never use a rear-facing child-restraint system in the front seat with an air bag that could deploy:**

Rear-facing child-restraint systems on the front seat are particularly dangerous even though you may feel assured that a front passenger air bag will not deploy based on the fact that the front passenger air bag deactivation indicator light illuminates. The child-restraint system can be hit by a deploying air bag and moved violently backward resulting in serious injury or death to the child.



**Do not sit too close to the driver and front passenger air bags:**

Sitting too close to the driver and front passenger air bag modules or placing hands or feet on them is extremely dangerous. The driver and front passenger air bags inflate with great force and speed. Serious injuries could occur if someone is too close. The driver should always hold onto only the rim of the steering wheel. The front seat passenger should keep both feet on the floor. Front seat occupants should adjust their seats as far back as possible and always sit upright against the seatbacks with seat belts worn properly.

**Sit in the center of the seat and wear seat belts properly:**

Sitting too close to the side air bag modules or placing hands on them, or sleeping up against the door or hanging out the windows is extremely dangerous. The side and curtain air bags inflate with great force and speed directly expanding along the door on the side the car is hit. Serious injury could occur if someone is sitting too close to the door or leaning against a window, or if rear seat occupants grab the sides of the front seatbacks. Give the side and curtain air bags room to work by sitting in the center of the seat while the vehicle is moving with seat belts worn properly.

**Do not attach objects on or around the area where driver and front passenger air bags deploy:**

Attaching an object to the driver and front passenger air bag modules or placing something in front of them is dangerous. In an accident, an object could interfere with air bag inflation and injure the occupants.

## SRS Air Bags

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**Do not attach objects on or around the area where a side air bag deploys:**

Attaching objects to the front seat in such a way as to cover the outboard side of the seat in any way is dangerous. In an accident the object could interfere with the side air bag, which inflates from the outboard side of the front seats, impeding the added protection of the side air bag system or redirecting the air bag in a way that is dangerous. Furthermore, the bag could be cut open releasing the gas.

Do not hang net bags, map pouches or backpacks with side straps on the front seats. Never use seat covers on the front seats. Always keep the side air bag modules in your front seats free to deploy in the event of a side collision.

**Do not attach objects on or around the area where a curtain air bag deploys:**

Attaching objects to the areas where the curtain air bag activates such as on the windshield glass, side door glass, front and rear window pillars and along the roof edge and assist grips is dangerous. In an accident the object could interfere with the curtain air bag, which inflates from the front and rear window pillars and along the roof edge, impeding the added protection of the curtain air bag system or redirecting the air bag in a way that is dangerous. Furthermore, the bag could be cut open releasing the gas.

Do not place hangers or any other objects on the assist grips. When hanging clothes, hang them on the coat hook directly. Always keep the curtain air bag modules free to deploy in the event of a side collision.

**Do not place luggage or other objects under the front seats:**

Placing luggage or other objects under the front seats is dangerous. The components essential to the supplemental restraint system could be damaged, and in the event of a side collision, the appropriate air bags may not deploy, which could result in death or serious injury. To prevent damage to the components essential to the supplemental restraint system, do not place luggage or other objects under the front seats.

**Do not touch the components of the supplemental restraint system after the air bags have inflated:**

Touching the components of the supplemental restraint system after the air bags have inflated is dangerous. Immediately after inflation, they are very hot. You could get burned.

**Never install any front-end equipment to your vehicle:**

Installation of front-end equipment, such as frontal protection bar (kangaroo bar, bull bar, push bar, or other similar devices), snowplow, or winches, is dangerous. The air bag crash sensor system could be affected. This could cause air bags to inflate unexpectedly, or it could prevent the air bags from inflating during an accident. Front occupants could be seriously injured.

**Do not modify the suspension:**

*Modifying the vehicle suspension is dangerous. If the vehicle's height or the suspension is modified, the vehicle will be unable to accurately detect a collision resulting in incorrect or unexpected air bag deployment and the possibility of serious injuries.*

**Do not drive with a damaged front door:**

*Driving with a damaged front door is dangerous. Each front door has a side crash sensor as a component of supplemental restraint system. If a door is damaged, the sensor could be affected and not operate correctly during a side collision. Have an Authorized Mazda Dealer inspect a damaged front door.*

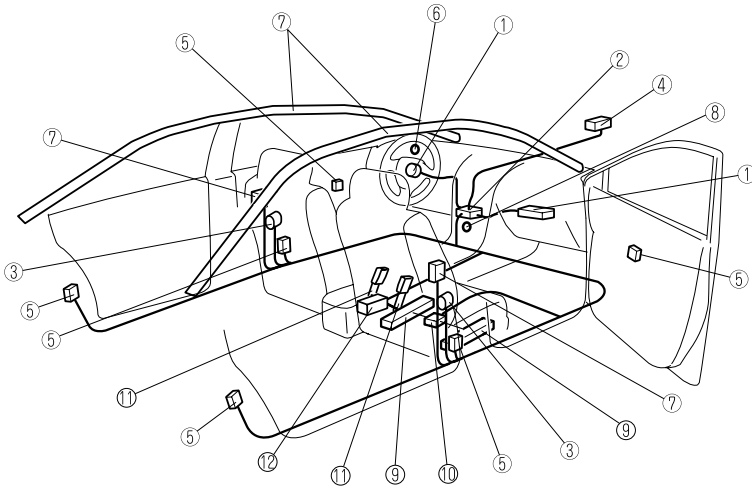
**Do not modify the supplemental restraint system:**

*Modifying the components or wiring of the supplemental restraint system is dangerous. You could accidentally activate it or make it inoperable. Do not make any modifications to the supplemental restraint system. This includes installing trim, badges, or anything else over the air bag modules. It also includes installing extra electrical equipment on or near system components or wiring. An Authorized Mazda Dealer can provide the special care needed in the removal and installation of front seats. It is important to protect the air bag wiring and connections to assure that the bags do not accidentally deploy, the driver seat slide position sensor and front passenger seat weight sensors are not damaged and that the seats retain an undamaged air bag connection.*

**NOTE**

- *When an air bag deploys, a loud inflation noise can be heard and some smoke will be released. Neither is likely to cause injury, however, the texture of the air bags may cause light skin injuries on body parts not covered with clothing through friction.*
- *Should you sell your Mazda, we urge you to tell the new owner of its air bag systems and that familiarization with all instructions about them, from the Owner's Manual, is important.*

## Supplemental Restraint System Components



- ① Driver/Front passenger inflators and air bags
- ② Crash sensor, and diagnostic module (SAS unit)
- ③ Front seat belt pretensioner and load limiting systems (page 2-20)
- ④ Front air bag sensor
- ⑤ Side crash sensors
- ⑥ Air bag/front seat belt pretensioner system warning light (page 2-49)
- ⑦ Side and curtain inflators and air bags
- ⑧ Front passenger air bag deactivation indicator light (page 2-54)
- ⑨ Front passenger seat weight sensors (page 2-54)
- ⑩ Front passenger seat weight sensor control module
- ⑪ Driver and front passenger seat belt buckle switches (page 2-58)
- ⑫ Driver seat slide position sensor (page 2-54)

**NOTE**

⑧ - ⑫ are equipped only on models with the driver and front passenger occupant classification system.

## How the SRS Air Bags Work

Your Mazda is equipped with the following types of SRS air bags. SRS air bags are designed to work together with the seat belts to help to reduce injuries during an accident. The SRS air bags are designed to provide further protection for passengers in addition to the seat belt functions. Be sure to wear seat belts properly.

### ▼ Front Seat Belt Pretensioners

The front seat belt pretensioners are designed to deploy in moderate or severe frontal, near frontal collisions.

### ▼ Driver Air Bag

The driver's air bag is mounted in the steering wheel.

When air bag crash sensors detect a frontal impact of greater than moderate force, the driver's air bag inflates quickly helping to reduce injury mainly to the driver's head or chest caused by directly hitting the steering wheel.

For more details about air bag deployment, refer to “SRS Air Bag Deployment Criteria” (page 2-51).

#### **(With Driver and Front Passenger Occupant Classification System)**

The driver's dual-stage air bag controls air bag inflation in two energy stages. During an impact of moderate severity the driver's air bag deploys with lesser energy, whereas during more severe impacts, it deploys with more energy.



### ▼ Front Passenger Air Bag

The front passenger air bag is mounted in the front passenger dashboard. The inflation mechanism for the front passenger air bag is the same as the driver's air bag, as mentioned above.

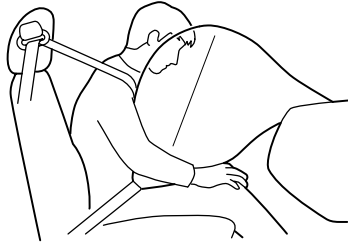
For more details about air bag deployment, refer to “SRS Air Bag Deployment Criteria” (page 2-51).

## SRS Air Bags

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### **(With Driver and Front Passenger Occupant Classification System)**

In addition, the front passenger air bag is designed to only deploy in accordance with the total seated weight on the front passenger seat. For details, refer to the driver and front passenger occupant classification system (page 2-54).



### **▼ Side Air Bags**

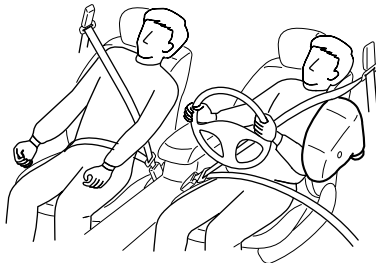
The side air bags are mounted in the outboard sides of the front seatbacks.

When the air bag crash sensors detect a side impact of greater than moderate force, the system inflates the side air bag only on the side in which the vehicle was hit. The side air bag inflates quickly to reduce injury to the driver or front passenger's chest caused by directly hitting interior parts such as a door or window.

For more details about air bag deployment, refer to “SRS Air Bag Deployment Criteria” (page 2-51).

### **(With Driver and Front Passenger Occupant Classification System)**

In addition, the front passenger side air bag is designed to only deploy in accordance with the total seated weight on the front passenger seat. For details, refer to the driver and front passenger occupant classification system (page 2-54).



**▼ Curtain Air Bags**

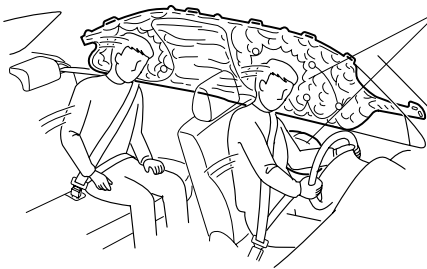
The curtain air bags are mounted in the front and rear window pillars, and the roof edge along both sides.

When the air bag crash sensors detect a side impact of greater than moderate force, the curtain air bag inflates quickly and helps to reduce injury mainly to the rear outboard passenger's head caused by directly hitting interior parts such as a door or window.

For more details about air bag deployment, refer to “SRS Air Bag Deployment Criteria” (page 2-51).

**In a side impact:**

Greater than moderate impact to one side of the vehicle will cause the curtain air bag on that side only to inflate.



The side and curtain air bags will deploy only on the side the vehicle receives the force of the impact.

**▼ Air Bag/Front Seat Belt Pretensioner System Warning Light**

If the air bag/front seat belt pretensioner system is working properly, the warning light illuminates when the ignition is switched ON or after the engine is cranked. The warning light turns off after a specified period of time.

A system malfunction is indicated if the warning light constantly flashes, constantly illuminates or does not illuminate at all when the ignition is switched ON. If any of these occur, consult an Authorized Mazda Dealer as soon as possible. The system may not work in an accident.



## SRS Air Bags

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### **WARNING**

***Never tamper with the air bag/pretensioner systems and always have an Authorized Mazda Dealer perform all servicing and repairs:***

*Self-servicing or tampering with the systems is dangerous. An air bag/pretensioner could accidentally activate or become disabled causing serious injury or death.*

### **▼ Air Bag/Front Seat Belt Pretensioner System Warning Beep**

If a malfunction is detected in the air bag/front seat belt pretensioner systems and the warning light, a warning beep sound will be heard for about 5 seconds every minute.

The air bag and seat belt pretensioner system warning beep sound will continue to be heard for approximately 35 minutes.

Have your vehicle inspected at an Authorized Mazda Dealer as soon as possible.

### **WARNING**

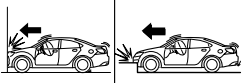
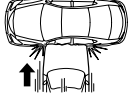

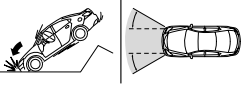
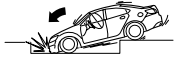
***Do not drive the vehicle with the air bag/front seat belt pretensioner system warning beep sounding:***

*Driving the vehicle with the air bag/front seat belt pretensioner system warning beep sounding is dangerous. In a collision, the air bags and the front seat belt pretensioner system will not deploy and this could result in death or serious injury. Contact an Authorized Mazda Dealer to have the vehicle inspected as soon as possible.*

## SRS Air Bag Deployment Criteria

This chart indicates the applicable SRS equipment that will deploy depending on the type of collision.

(The illustrations are the representative cases of collisions.)

	Types of collision		
	A severe frontal/near frontal collision	A severe side collision	A rear collision
SRS equipment			
			
			
Front seat belt pretensioner	X* <sup>1</sup> (both sides)		No air bag and front seat belt pretensioner will be activated in a rear collision.
Driver air bag	X		
Front passenger air bag	X* <sup>1</sup>		
Side air bag		X* <sup>1</sup> (impact side only)	
Curtain air bag		X (impact side only)	

X: The SRS air bag equipment is designed to deploy in a collision.

\*1: **(With Driver and Front Passenger Occupant Classification System)**

The front passenger front and side air bags and the seat belt pretensioner are designed to deploy depending on the condition of the total seated weight on the front passenger seat.

# SRS Air Bags

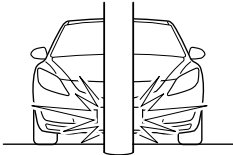
## Limitations to SRS Air Bag

In severe collisions such as those described previously in “SRS Air Bag Deployment Criteria”, the applicable SRS air bag equipment will deploy. However, in some accidents, the equipment may not deploy depending on the type of collision and its severity.

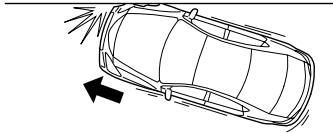
### Limitations to front/near front collision detection:

The following illustrations are examples of front/near front collisions that may not be detected as severe enough to deploy the SRS air bag equipment.

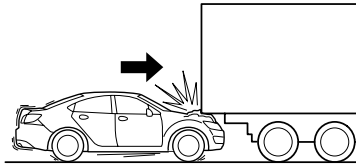
Impacts involving trees or poles



Frontal offset impact to the vehicle



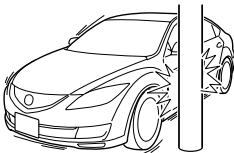
Rear-ending or running under a truck's tail gate



### Limitations to side collision detection:

The following illustrations are examples of side collisions that may not be detected as severe enough to deploy the SRS air bag equipment.

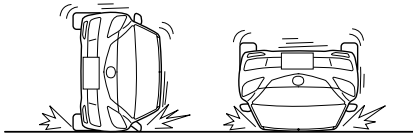
Side impacts involving trees or poles



Side impacts with two-wheeled vehicles



Roll-over



### Driver and Front Passenger Occupant Classification System \*

First, please read “Supplemental Restraint System (SRS) Precautions” (page 2-41) carefully.

#### **NOTE**

*This system is equipped on models for the U.S., Canadian and Puerto Rican markets.*

#### ▼ **Driver Seat Slide Position Sensor**

Your vehicle is equipped with a driver seat slide position sensor as a part of the supplemental restraint system. The sensor is located under the driver seat. The sensor determines whether the driver seat is fore or aft of a reference position and sends the seat position to the diagnostic module (SAS unit). The SAS unit is designed to control the deployment of the driver air bag depending on how close the driver seat is to the steering wheel.

The air bag/front seat belt pretensioner system warning light flashes if the sensor has a possible malfunction (page 2-49).

#### ▼ **Front Passenger Seat Weight Sensors**

Your vehicle is equipped with a front passenger seat weight sensors as a part of the supplemental restraint system. These sensors are located under both of the front passenger seat rails. These sensors determine the total seated weight on the front passenger seat and monitor the seat belt buckle for the front passenger seat. The SAS unit is designed to prevent the front passenger front and side air bags and seat belt pretensioner system from deploying if the front passenger air bag deactivation indicator light illuminates.

To reduce the chance of injuries caused by deployment of the front passenger air bag, the system deactivates the front passenger front and side air bags and also the seat belt pretensioner system when the front passenger air bag deactivation indicator light illuminates. **Refer to the following table for the front passenger air bag deactivation indicator light illumination conditions.**

This system shuts off the front passenger front and side air bags and seat belt pretensioner system, so make sure the front passenger air bag deactivation indicator light illuminates according to the following table.

The air bag/front seat belt pretensioner system warning light flashes and the front passenger air bag deactivation indicator light illuminates if the sensors have a possible malfunction. If this happens, the front passenger front and side air bags and seat belt pretensioner system will not deploy.

### Front passenger air bag deactivation indicator light

This indicator light illuminates to remind you that the front passenger front and side air bags and seat belt pretensioner will not deploy during a collision.



If the front passenger weight sensors are normal, the indicator light illuminates when the ignition is switched ON. The light turns off after a few seconds.

The front passenger air bag deactivation indicator light illuminates or is off under the following conditions:

Condition detected by the front passenger occupant classification system	Front passenger air bag deactivation indicator light	Front passenger front and side air bags	Front passenger seat belt pretensioner system
Empty (Not occupied) <sup>*1</sup>	Off	Deactivated	Deactivated
Child or child-restraint system <sup>*2</sup>	On	Deactivated	Deactivated
Adult <sup>*3</sup>	Off	Ready	Ready

\*1 : If the front passenger seat belt is buckled, the front passenger air bag deactivation indicator light illuminates, however this does not indicate a malfunction.

\*2 : If a larger child sits on the front passenger seat, the sensors might detect the child as being an adult depending on the child's physique.

\*3 : If a smaller adult sits on the front passenger seat, the sensors might detect the person as being a child depending on the person's physique.

The curtain air bag is ready for inflating despite the chart above.

If the front passenger air bag deactivation indicator light does not illuminate when the ignition is switched ON and does not illuminate as indicated in the above chart, do not allow a child to sit in the front passenger seat and consult an Authorized Mazda Dealer as soon as possible. The system may not work properly in an accident.

## SRS Air Bags

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### WARNING

**Do not decrease the total seated weight on the front passenger seat:**

*When an adult or large child sits on the front passenger seat, decreasing the total seated weight on the front passenger seat required for air bag deployment is dangerous. The front passenger seat weight sensors will detect the reduced total seated weight condition and the front passenger front and side air bags and seat belt pretensioner system will not deploy during an accident. The front passenger will not have the supplementary protection of the air bag, which could result in serious injury. Decreasing the total seated weight on the front passenger seat could result in an air bag not deploying under the following conditions, for example:*

- *A rear passenger pushes up on the front passenger seat with their feet.*
- *Luggage or other items placed under the front passenger seat or between the front passenger seat and driver seat that push up the front passenger seat bottom.*
- *The front passenger seat occupant sits in a manner that does not place the entire weight of the occupant on the seat such as by sitting too close to the door, grasping the assist grip or the rim of the moonroof and sitting with the seatback reclined too far.*
- *Any accessories which might decrease the total seated weight on the front passenger seat are attached to the front passenger seat.*

*The front passenger front and side air bags and seat belt pretensioner systems will deactivate if the front passenger air bag deactivation indicator light illuminates.*

**Do not increase the total seated weight on the front passenger seat:**

When an infant or small child sits on the front passenger seat, increasing the total seated weight on the front passenger seat is dangerous. The front passenger seat weight sensors will detect the increased total seated weight, which could result in the unexpected deployment of the front passenger front and side air bags and seat belt pretensioner system in an accident and may cause serious injury. Increasing the total seated weight on the front passenger seat could result in the front passenger front and side air bags and seat belt pretensioner system deployment in an accident under the following conditions, for example:

- Luggage or other items are placed on the seat with the child in the child-restraint system.
- A rear passenger or luggage push or pull down on the front passenger seatback.
- A rear passenger steps on the front passenger seat rails with their feet.
- Luggage or other items are placed on the seatback or hung on the head restraint.
- Heavy items are placed in the seatback map pocket.
- The seat is washed.
- Liquids are spilled on the seat.
- The front passenger seat is moved backward, pushing into luggage or other items placed behind it.
- The front passenger seatback contacts the rear seat.
- Luggage or other items are placed between the front passenger seat and driver seat.
- Any accessories which might increase the total seated weight on the front passenger seat are attached to the front passenger seat.

The front passenger front and side air bags and seat belt pretensioner systems will deactivate if the front passenger air bag deactivation indicator light illuminates.

**⚠ CAUTION**

- To assure proper deployment of the front air bag and to prevent damage to the sensors in the front seat bottoms:
  - Do not place sharp objects on the front seat bottoms or leave heavy luggage on them.
  - Do not spill any liquids on the front seats or under the front seats.
- To allow the sensors to function properly, always perform the following:
  - Adjust the front seats as far back as possible and always sit upright against the seatbacks with seat belts worn properly.
  - If you place your child on the front passenger seat, secure the child-restraint system properly and slide the front passenger seat as far back as possible (page 2-34).



## SRS Air Bags

---

### **NOTE**

- *The system requires about 10 seconds to alternate between turning the front passenger front and side air bags and seat belt pretensioner system on or off.*
- *The front passenger air bag deactivation indicator light may illuminate repeatedly if luggage or other items are put on the front passenger seat, or if the temperature of the vehicle's interior changes suddenly.*
- *The front passenger air bag deactivation indicator light may illuminate for 10 seconds if the total seated weight on the front passenger seat changes.*
- *The air bag/front seat belt pretensioner system warning light might illuminate if the front passenger seat receives a severe impact.*
- *If the front passenger air bag deactivation indicator light does not illuminate after installing a child-restraint system on the front passenger seat, first, re-install your child-restraint system according to the procedure in this owner's manual. Then, if the front passenger air bag deactivation indicator light still does not illuminate, install the child-restraint system on the rear seat and consult an Authorized Mazda Dealer as soon as possible.*
- *If the front passenger air bag deactivation indicator light illuminates when an adult is seated in the front passenger seat, have the passenger re-adjust their posture by sitting with their feet on the floor, and then re-fastening the seat belt. If the front passenger air bag deactivation indicator light still illuminates, move the passenger to the rear seat. If sitting in the rear seat is not possible, slide the front passenger seat as far back as possible.*

### **▼ Driver and Front Passenger Buckle Switches**

The buckle switches on the front seat belts detect whether or not the front seat belts are securely fastened and further control the deployment of the air bags.

## Monitoring and Maintenance

### ▼ Constant Monitoring

The following components of the air bag systems are monitored by a diagnostic system:

- Crash sensors, and diagnostic module (SAS unit)
- Front air bag sensor
- Air bag modules
- Side crash sensors
- Air bag/Front seat belt pretensioner system warning light
- Front seat belt pretensioners
- Related wiring

#### **(With Driver and Front Passenger Occupant Classification System)**

- Front passenger air bag deactivation indicator light
- Driver seat slide position sensor
- Front passenger seat weight sensors
- Front passenger seat weight sensor control module

The diagnostic module continuously monitors the system's readiness. This begins when the ignition is switched ON and continues while the vehicle is being driven.

### ▼ Maintenance

The air bag systems do not require regular maintenance. But if any of the following occurs, take your vehicle to an Authorized Mazda Dealer as soon as possible:

- The air bag system warning light flashes.
- The air bag system warning light remains illuminated.
- The air bag system warning light does not illuminate when the ignition is switched ON.
- The air bag system warning beep sound is heard.
- The air bags have deployed.

#### **(With Driver and Front Passenger Occupant Classification System)**

Front passenger air bag deactivation indicator light does not illuminate when the ignition is switched ON or does not illuminate as indicated in the chart. For more details about this indicator light and this chart, refer to "Front passenger seat weight sensors" (page 2-54).

## SRS Air Bags

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### **WARNING**

**Do not operate a vehicle with damaged air bag/seat belt pretensioner system components:**

*Expanded or damaged air bag/seat belt pretensioner system components must be replaced after any collision which caused them to deploy or damage them. Only a trained Authorized Mazda Dealer can fully evaluate these systems to see that they will work in any subsequent accident. Driving with an expanded or damaged air bag or pretensioner unit will not afford you the necessary protection in the event of any subsequent accident which could result in serious injury or death.*

**Do not remove interior air bag parts:**

*Removing any components such as the front seats, front dashboard, the steering wheel or parts on the front and rear window pillars and along the roof edge, containing air bag parts or sensors is dangerous. These parts contain essential air bag components. The air bag could accidentally activate and cause serious injuries. Always have an Authorized Mazda Dealer remove these parts.*

**Dispose of the air bag properly:**

*Improper disposal of an air bag or a vehicle with live air bags in it can be extremely dangerous. Unless all safety procedures are followed, injury can result. Ask an Authorized Mazda Dealer how to safely dispose of an air bag or how to scrap an air bag equipped vehicle.*

### **NOTE**

*If it becomes necessary to have the components or wiring system for the supplementary restraint system modified to accommodate a person with certain medical conditions in accordance with a certified physician, contact an Authorized Mazda Dealer, refer to "Customer Assistance (U.S.A.)" (page 9-2).*

# 3

## Knowing Your Mazda

Explanation of basic operations and controls; opening/closing and adjustment of various parts.

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\*Some models.

## Advanced Keyless Entry and Start System

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### Advanced Keys\*

The advanced keyless functions (advanced keyless entry and start system) enable the following operations while the advanced key is being carried (page 3-7).

- Locking/unlocking the doors, and opening the trunk lid, without operating the key.
- Starting the engine without operating the key.

Additional functions are available using the buttons on the advanced key.

Refer to Operation Using Advanced Key Functions on page 3-15.

- The following operations are possible using the transmitter of the keyless entry system from a distance (Lock/Unlock/Trunk/Panic button):
  - Locking/unlocking the doors.
  - Opening the trunk lid.
  - Operating the theft-deterrent system\*.
  - Turning on the alarm.
- Locking/unlocking the doors or starting the engine using the auxiliary key.

#### **WARNING**

**Do not leave the key in your vehicle with children and keep them in a place where your children will not find or play with them:**

*Leaving children in a vehicle with the key is dangerous. This could result in someone being badly injured or even killed. Children may find these new kinds of keys to be an interesting toy to play with and could cause the power windows or other controls to operate, or even make the vehicle move.*

**Radio waves from the advanced key may affect medical equipment such as pacemakers:**

*Before using the advanced key near people who use medical equipment, ask the medical equipment manufacturer or your physician if radio waves from the advanced key will affect the equipment.*

#### **NOTE**

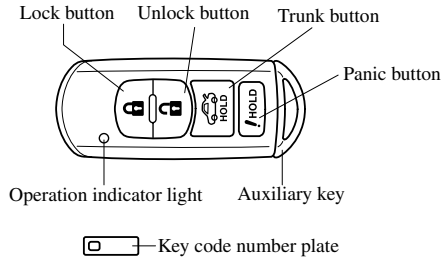
- *The driver must carry the advanced key to ensure the system functions properly.*
- *Refer to Immobilizer System (page 3-50) for information regarding keys and engine starting.*
- **(With theft-deterrent system)**

*Refer to Theft-Deterrent System (page 3-58) for information regarding keys and the prevention of vehicle and vehicle contents theft.*

- *The advanced keyless functions can be turned off.*  
*Refer to Personalization Features on page 10-8.*

## Advanced Keyless Entry and Start System

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A code number is stamped on the plate attached to the key set; detach this plate and store it in a safe place (not in the vehicle) for use if you need to make a replacement key.

Also write down the code number and keep it in another safe and handy place, but not in the vehicle.

If your key is lost, consult your Authorized Mazda Dealer with the code number ready.

## Advanced Keyless Entry and Start System

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### CAUTION

- Because the advanced key uses low-intensity radio waves, it may not function correctly under the following conditions:
  - The advanced key is carried with communication devices such as cellular phones.
  - The advanced key contacts or is covered by a metal object.
  - The advanced key is near electronic devices such as personal computers or cell phones.
  - Non-Mazda genuine electronic equipment is installed in the vehicle.
  - There is equipment which discharges radio waves near the vehicle.
  - If the vehicle is near equipment such as wireless pay devices installed at certain gas stations.
- The advanced key may consume battery power excessively if it receives high-intensity radio waves. Do not place the advanced key near electronic devices such as televisions or personal computers.
- To avoid damage to the advanced key, DO NOT:
  - Drop the advanced key.
  - Get the advanced key wet.
  - Disassemble the advanced key.
  - Expose the advanced key to high temperatures on places such as the dashboard or hood, under direct sunlight.
  - Place heavy objects on the advanced key.
  - Put the advanced key in an ultrasonic cleaner.
  - Put any magnetized objects close to the advanced key.

### NOTE

- Battery life is about one year. Be sure to replace the battery as soon as you see the green KEY indicator light in the instrument cluster begin flashing for 30 seconds after turning off the engine, otherwise, you will not be able to start the engine using the advanced keyless start system once the battery is completely dead. Refer to KEY warning light (red) on page 5-54. If this occurs, you will have to either force-start the engine or use the auxiliary key. Refer to Advanced Key Battery Dead Warning on page 3-21.



- Additional advanced keys can be obtained at an Authorized Mazda Dealer. Up to 6 advanced keys can be used with the advanced keyless functions per vehicle.

## Advanced Keyless Entry and Start System

### ▼ Advanced Key Maintenance

#### ⚠ CAUTION

- *Make sure the battery is installed with the correct pole facing upward. Battery leakage could occur if it is not installed correctly.*
- *When replacing the battery, be careful not to touch any of the internal circuitry and electrical terminals, bend the electrical terminals, or get dirt in the transmitter as the transmitter could be damaged.*
- *There is the danger of explosion if the battery is not correctly replaced.*
- *Replace only with the same type battery (CR2025 or equivalent).*
- *Dispose of used batteries according to the following instructions.*
  - *Insulate the plus and minus terminals of the battery using cellophane or equivalent tape.*
  - *Never disassemble.*
  - *Never throw the battery into fire or water.*
  - *Never deform or crush.*

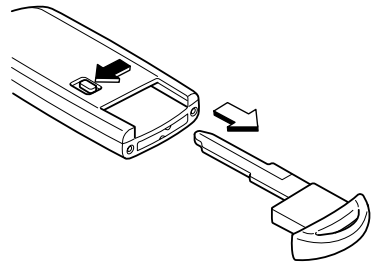
The following conditions indicate that the battery power is low:

- The KEY indicator light (green) flashes in the instrument cluster for about 30 seconds after the engine is turned off.
- The system does not operate and the operation indicator light on the transmitter does not flash when the buttons are pressed.
- The system's operational range is reduced.

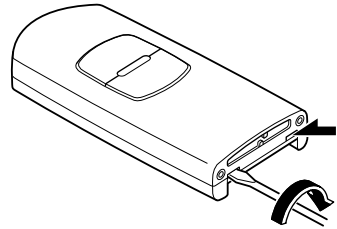
Replacing the battery at an Authorized Mazda Dealer is recommended to prevent damage to the advanced key. If replacing the battery by yourself, follow the instruction below.

#### Replacing the advanced key battery

1. Pull out the auxiliary key.



2. Gently and slowly pry open the cover using a small flathead screwdriver.

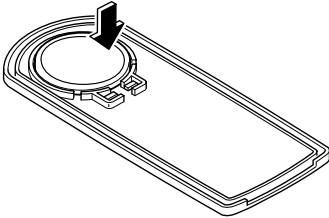




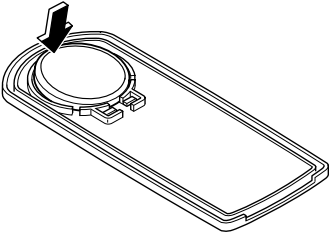
## Advanced Keyless Entry and Start System

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3. Remove the battery by pressing its edge.



4. Install a new battery (CR2025 or equivalent) with the positive pole facing down.



5. Close the cover.
6. Reinsert the auxiliary key.

### ▼ Service

If you have a problem with the advanced keyless functions, consult an Authorized Mazda Dealer.

If your advanced key is lost or stolen, bring all remaining advanced keys to an Authorized Mazda Dealer as soon as possible for a replacement and to make the lost or stolen advanced key inoperative.

### **⚠ CAUTION**

*Radio equipment like this is governed by laws in the United States. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.*

## Advanced Keyless Entry and Start System

### Operation Using Advanced Keyless Functions

#### ▼ Operational Range

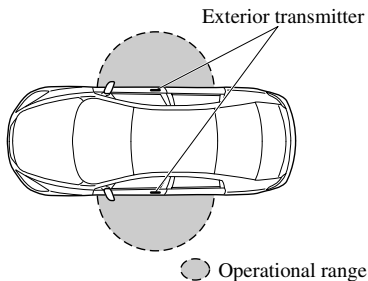
The system operates only when the driver is in the vehicle or within operational range while the advanced key is being carried.

#### **NOTE**

*When the battery power is low, or in places where there are high-intensity radio waves or noise, the operational range may become narrower or the system may not operate.*

#### **Locking, unlocking the doors**

The operational range for locking/unlocking the doors is an area of up to 80 cm (31 in) from the center of the front door handles.

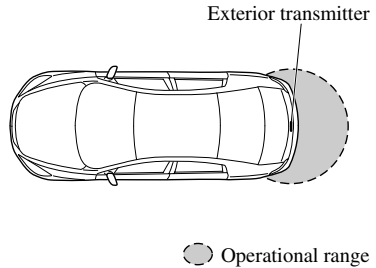


#### **NOTE**

*The system may not operate if you are too close to the windows, door handles.*

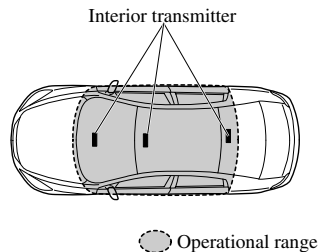
#### **Opening the trunk lid**

The operational range for opening the trunk lid is an area of up to 80 cm (31 in) from the center of the trunk lid.



#### **Starting the engine**

The operational range for starting the engine includes nearly the entire cabin area.



## Advanced Keyless Entry and Start System

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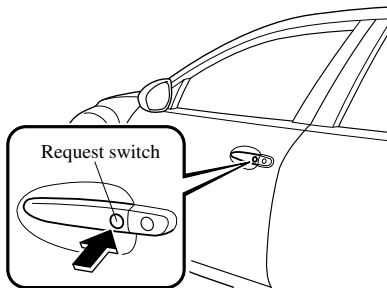
### NOTE

- The trunk is out of the operational range, however, starting the engine may be possible.
- The engine may not start if the advanced key is placed in the following areas:
  - Around the dashboard
  - In the storage compartments such as the glove box
  - On the rear parcel shelf
- Starting the engine may be possible even if the advanced key is outside of the vehicle and extremely close to a door and window, however, always start the engine from the driver's seat.  
*If the vehicle is started and driven away while the advanced key is not in the vehicle, the vehicle will not restart after it is turned off and the ignition is switched off.*
- If the advanced key is detected within operational range, the operation indicator light on the transmitter flashes momentarily.

### ▼ Locking, Unlocking Doors

#### To lock

All the doors can be locked by pressing the request switch on either front door while the advanced key is being carried. A beep sound will be heard once and the hazard warning lights will flash once.



### NOTE

- Confirm that all the doors are securely locked.
- All the doors cannot be locked when any door is open.
- If your vehicle has a theft-deterrent system, the hazard warning lights only flash when the system is armed.  
*Refer to the theft-deterrent system on page 3-58.*
- A beep sound is heard for confirmation when the doors are locked using the request switch. If you prefer, the beep sound can be turned off.  
*The volume of the beep sound can also be changed.  
Refer to Personalization Features on page 10-8.*
- The setting can be changed so that the doors are locked automatically without pressing the request switch when walking away from the vehicle (page 10-8).  
**(Auto-lock function)**

Three seconds after the doors and the trunk lid are closed and the advanced key is out of the operational range, the doors will lock automatically. Also, the hazard warning lights flash once. (Even if the driver is in the operational range, all doors are locked automatically after about 30 seconds.)  
*If you are out of the operational range before the doors are completely closed or another advanced key is left in the vehicle, the auto-lock function will not work.  
Always make sure that all doors are closed and locked before leaving the vehicle.  
The auto-lock function does not close the power windows or moonroof.*

## Advanced Keyless Entry and Start System

### **To unlock**

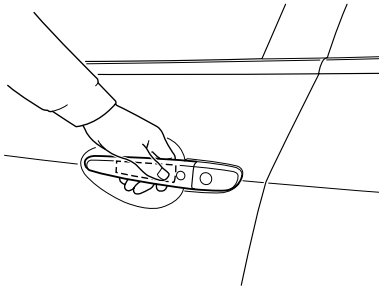
#### **Driver's door handle**

To unlock the driver's door, touch the sensor area on the inside of the driver's door handle. A beep sound will be heard twice and the hazard warning lights will flash twice.

After unlocking the driver's door, unlock all the other doors by pressing the door-lock switch on the inside of the driver's door.

#### **Front passenger door handle**

To unlock the doors, touch the sensor area on the inside of a front passenger door handle. A beep sound will be heard twice and the hazard warning lights will flash twice.



### ***NOTE***

- *The doors cannot be unlocked for about three seconds after they are locked even if the sensor area on the inside of either front door handle is touched.*
- *Grasp either front door handle properly to unlock the doors, and make sure it is unlocked before opening it.  
If the door handle is pulled before the door is unlocked, the door may not open. If this happens, lock the door and securely grasp the door handle again to confirm that the door is unlocked, then open the door.*

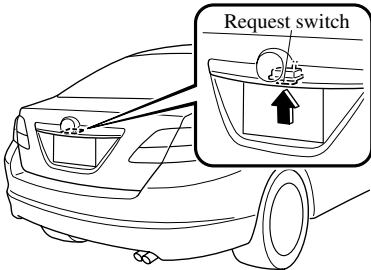
- *The sensor is installed on the inside of the front door handles. The doors cannot be unlocked by touching any area other than the sensor area.*
- *If you grasp a front door handle while wearing gloves, the doors may not unlock, or they could require extra time to unlock.*
- *The doors could unlock if someone is carrying the advanced key near the front door handle and the front door handle is splashed with water such as by rain, or by a car wash.*
- *If your vehicle has a theft-deterrent system, the hazard warning lights only flash when the system is turned off.  
Refer to the theft-deterrent system on page 3-58.*
- *The method for unlocking the doors can be changed.  
Refer to Personalization Features on page 10-8.*
- *A beep sound is heard for confirmation when the doors are unlocked using a door handle. If you prefer, the beep sound can be turned off.  
The volume of the beep sound can also be adjusted.  
Refer to Personalization Features on page 10-8.*
- **(Auto re-lock function)**  
*After unlocking the doors using the sensor on the inside of the door handle, all the doors will automatically lock if any of the following operations are not done within about 30 seconds. If your vehicle has a theft-deterrent system, the hazard warning lights will flash for confirmation.*
  - *A door or the trunk lid is opened.*
  - *The auxiliary key is inserted into the key slot.*
  - *The push button start is in any position except off position.*

## Advanced Keyless Entry and Start System

- It may require a few seconds for the doors to unlock after touching the sensor area on the inside of either front door handle.

### ▼ Opening the Trunk Lid with Request Switch

The trunk lid can be opened by pressing the request switch on the under side of the trunk lid above the license plate while the advanced key is being carried.



### NOTE

- If the advanced key is left in the trunk, the trunk lid will close, however, the trunk lid can be opened using the request switch and the vehicle could be stolen.
- While the ignition is switched ON, the trunk lid can be opened only when the vehicle is stopped with the parking brake applied (manual transaxle) or with the selector lever in the P position (automatic transaxle).

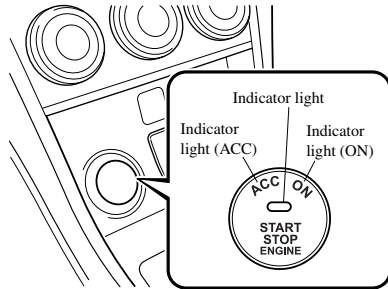
### ▼ Starting the Engine

#### Locked steering wheel\*

If the electronic steering lock warning light is flashing and the beep sound is heard, this indicates that the steering wheel is not unlocked. To unlock the steering wheel, move the steering wheel left and right while pressing the push button start.

#### Ignition positions

Each time the push button start is pressed, the ignition switches in the order of off, ACC, and ON. Pressing the push button start again from ON switches the ignition off.



## Advanced Keyless Entry and Start System

### NOTE

- The order in which the ignition is switched can be changed.  
Refer to Personalization Features on page 10-8.
- The engine starts by pressing the push button start while depressing the clutch pedal (manual transaxle) or the brake pedal (automatic transaxle). To switch the ignition position, press the push button start without depressing the pedal.
- Do not leave the ignition switched ON while the engine is not running. Doing so could result in the battery going dead. If the ignition is left in ACC (For automatic transaxle, the shift lever is in the P position, and the ignition is in ACC), the ignition switches off automatically after one hour. The setting can be changed to not switch the ignition off automatically.  
Refer to Personalization Features on page 10-8.

### Off

The power supply to electrical devices turns off and the push button start indicator lights (ACC and ON) also turn off.

### WARNING

**Before leaving the driver's seat, always switch the ignition off, set the parking brake, and make sure the shift lever is in P (automatic transaxle) or in 1st gear or R (manual transaxle):**

Leaving the driver's seat without switching the ignition off, setting the parking brake, and shifting the shift lever to P (automatic transaxle) or to 1st gear or R (manual transaxle) is dangerous. Unexpected vehicle movement could occur which could result in an accident.

In addition, if your intention is to leave the vehicle for even a short period, it is important to switch the ignition off, as leaving it in another position will disable some of the vehicle's security systems and run the battery down.

### ACC (Accessory)

Some electrical accessories will operate and the indicator light (ACC) illuminates. In addition, for vehicles equipped with the steering column lock function, the steering wheel unlocks.

### NOTE

The advanced keyless entry system does not function while the push button start has been pressed to ACC, and the doors will not lock/unlock even if they have been locked manually.

## Advanced Keyless Entry and Start System

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### ON

This is the normal running position after the engine is started. The indicator light (ON) turns off. (The indicator light (ON) illuminates when the ignition is switched ON and the engine is not running.) The warning lights (except brakes) should be inspected before the engine is started (page 5-44).

### Starting the engine

#### **NOTE**

- *The advanced key must be carried because the advanced key carries an immobilizer chip that must communicate with the engine controls at short range.*
- *The engine can be started when the push button start is pressed from off, ACC, or ON.*

1. Make sure you are carrying the advanced key.
2. Occupants should fasten their seat belts.
3. Make sure the parking brake is on.
4. Continue to press the brake pedal firmly until the engine has completely started.
5. **(Manual transaxle)**  
Continue to press the clutch pedal firmly until the engine has completely started.  
**(Automatic transaxle)**  
Put the vehicle in park (P). If you must restart the engine while the vehicle is moving, shift into neutral (N).

#### **NOTE**

##### **(Manual transaxle)**

*The starter will not operate if the clutch pedal is not depressed sufficiently.*

##### **(Automatic transaxle)**

*The starter will not operate if the shift lever is not in P or N and the brake pedal is not depressed sufficiently.*

6. Verify that the KEY indicator light (green) in the instrument cluster and the push button start indicator light (green) illuminate. If the KEY indicator light (green) does not illuminate, make sure that the advanced key is being carried. If the KEY indicator light (green) does not illuminate while the advanced key is being carried, you may have to use the auxiliary key to start the engine instead (page 3-23).



#### **CAUTION**

*If the KEY warning light (red) illuminates, and the push button start indicator light (red) illuminates, this could indicate a problem with the engine starting system and the inability to start the engine or switch the ignition to ACC or ON. Have your vehicle inspected at an Authorized Mazda Dealer as soon as possible.*

## Advanced Keyless Entry and Start System

### NOTE

- Under the following conditions, the KEY warning light (red) flashes to inform the driver that the push button start will not switch to ACC even if it is pressed from off.
    - The advanced key battery is dead.
    - The advanced key is out of operational range.
    - The advanced key is placed in areas where it is difficult for the system to detect the signal (page 3-7).
    - A key from another manufacturer similar to the advanced key is in the operational range.
  - **(Forced engine starting method)**  
If the KEY warning light (red) and the push button start indicator light (red) illuminate when the brake pedal (Automatic transaxle) or the clutch pedal (Manual transaxle) is depressed to start the engine, the engine may not start using these methods. Have your vehicle inspected at an Authorized Mazda Dealer as soon as possible. If this occurs, the engine can be force-started. Press and hold the push button start until the engine starts. Other procedures necessary for starting the engine such as having the advanced key in the cabin, and depressing the brake pedal (Automatic transaxle) or the clutch pedal (Manual transaxle) are required.
  - When the engine is force-started, the key warning light (red) remains illuminated and the key indicator light (green) does not illuminate.
  - If the attempt to start the engine using the forced-start method is unsuccessful, it may be necessary to use the auxiliary key.
7. Press the push button start after both the KEY indicator light (green) in the instrument cluster and the push button start indicator light (green) illuminate.

### NOTE

- After starting the engine, the push button start indicator lights (ACC and ON) turn off and the ignition is in the ON position.
  - After pressing the push button start and before the engine starts, the operation sound of the fuel pump motor from near the fuel tank can be heard, however, this does not indicate a malfunction.
8. After starting the engine, let it idle for about ten seconds.

### NOTE

- Whether the engine is cold or warm, it should be started without the use of the accelerator.
- If the engine does not start the first time, refer to Starting a Flooded Engine under Emergency Starting. If the engine still does not start, have your vehicle inspected by an Authorized Mazda Dealer (page 7-15).

### Starting the engine using the auxiliary key

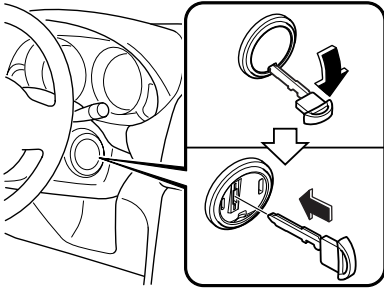
If the engine cannot be started for reasons such as the advanced key battery is dead, the engine can be started using the auxiliary key.

1. Slide the auxiliary key out from the bottom of the advanced key.
2. Use the auxiliary key to remove the key slot cover.
3. Depress the clutch (manual transaxle) or brake pedal (automatic transaxle) until the ring around the key slot starts flashing.



## Advanced Keyless Entry and Start System

4. Insert the auxiliary key into the slot while it is flashing, but **DO NOT TURN THE AUXILIARY KEY IN THE SLOT.**



### **CAUTION**

After inserting the auxiliary key, do not attempt to turn it in the key slot. It could damage the vehicle or the auxiliary key.

5. Press the push button start to start the engine.

### **NOTE**

- Leave the auxiliary key in the key slot while the engine is running.
- When leaving the vehicle, remove the auxiliary key from the key slot and the vehicle.  
*A thief does not need your advanced key to steal the vehicle if the thief has your auxiliary key.*
- To switch the ignition position, insert the auxiliary key into the key slot, depress the clutch pedal (manual transaxle) or the brake pedal (automatic transaxle), and then press the push button start right after releasing the pedal.

### **Turning the engine off**

1. Stop the vehicle completely.

2. **(Manual transaxle)**  
Shift into neutral.  
**(Automatic transaxle)**  
Shift the shift lever to the P position.
3. Press the push button start to turn off the engine.

### **CAUTION**

When leaving the vehicle, make sure the push button start is pressed to off.

### **NOTE**

- When the push button start is pressed to off from ON, the KEY indicator light (green) flashes for approximately 30 seconds indicating that the remaining battery power of the advanced key is low. Replace with a new battery before the advanced key becomes unusable.  
*Refer to Advanced Key Maintenance on page 3-5.*
- **(Automatic transaxle)**  
*If the engine is turned off while the shift lever is in a position other than P, the ignition switches to ACC.*

### **Emergency engine stop**

### **WARNING**

**Do not press (or touch) the push button start while the vehicle is moving:**

Pressing the push button start and stopping the engine while the vehicle is moving for any reason other than in an emergency is dangerous. Stopping the engine while the vehicle is moving will result in reduced maneuverability and braking ability due to the loss of power steering and power braking, which could cause an accident and serious injury.

## Advanced Keyless Entry and Start System

---

Continuously pressing the push button start while the engine is running and the vehicle is stopped, or quickly pressing it any number of times will turn the engine off immediately.

### Operation Using Advanced Key Functions

#### ▼ Keyless Entry System

This system uses the more traditional keyless entry buttons to remotely lock and unlock the doors and opens the trunk lid. It can also help you signal for attention. Press the buttons slowly and carefully.

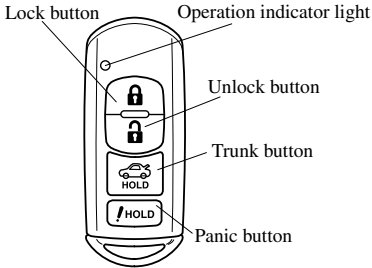
#### **NOTE**

- *The keyless entry system is designed to operate up to about 2.5 m (8 ft) from the center of the vehicle, but this may vary due to local conditions.*
- *The system does not operate when the auxiliary key is in the key slot.*
- *The keyless entry system is fully operational when the push button start is switched off. The system does not operate if the push button start is switched to any position other than off.*
- *All doors cannot be locked by pressing the lock button while any door is open. The hazard warning lights will also not flash.*
- *If the transmitter does not operate when pressing a button or the operational range becomes too small, the battery may be dead. To install a new battery, refer to Maintenance (page 3-5).*

## Advanced Keyless Entry and Start System

---

### Transmitter



The operation indicator light flashes when the buttons are pressed.

#### Lock button

To lock the doors, press the lock button. A beep sound will be heard once and the hazard warning lights will flash once.

To confirm that all doors have been locked, press the lock button again within 5 seconds. If they are closed and locked, the horn will sound.

The system can be set not to sound the horn.

Refer to Personalization Features on page 10-8.

### NOTE

- A beep sound can be heard for confirmation when the doors are locked using the advanced keyless transmitter. If you prefer, the beep sound can be turned off. The volume of the beep sound can be changed. Refer to Personalization Features on page 10-8.

#### (Without theft-deterrent system)

The hazard warning lights will flash once to indicate that all doors are locked.

#### (With theft-deterrent system)

The hazard warning lights flash when the theft deterrent system is armed.

The hazard warning lights do not flash if all the doors are locked before the theft-deterrent system is properly armed.

When the doors are locked by pressing the lock button on the transmitter while the theft-deterrent system is armed, the hazard warning lights will flash once to indicate that the system is armed.

Refer to the theft-deterrent system on page 3-58.

### NOTE

- All doors cannot be locked when any door is open.
- Confirm that all doors are locked visually or audibly by use of the double click.

#### Unlock button

To unlock the driver's door, press the unlock button. A beep will be heard twice and the hazard warning lights will flash twice.

To unlock all doors, press the unlock button again within 3 seconds and two more beep sounds will be heard.

## Advanced Keyless Entry and Start System

### NOTE

- A beep sound can be heard for confirmation when the doors are unlocked using the advanced keyless transmitter. If you prefer, the beep sound can be turned off. The volume of the beep sound can be changed. Refer to Personalization Features on page 10-8.
- The system can be set to unlock all doors by performing a single operation. Refer to Personalization Features on page 10-8.
- **(Without theft-deterrent system)**  
The hazard warning lights will flash twice to indicate that all doors are unlocked.
- **(With theft-deterrent system)**  
The hazard warning lights flash when the theft deterrent system is turned off.  
The hazard warning lights do not flash unless the theft deterrent system has been properly turned off.  
When the doors are unlocked by pressing the unlock button on the transmitter while the theft-deterrent system is turned off, the hazard warning lights will flash twice to indicate that the system is turned off.  
Refer to the theft-deterrent system on page 3-58.

### NOTE

#### **(Auto re-lock function)**

After unlocking with the transmitter, all doors will automatically lock if any of the following operations are not performed within about 30 seconds. If your vehicle has a theft-deterrent system, the hazard warning lights will flash for confirmation.

- A door or the trunk lid is opened.
- The auxiliary key is inserted into the key slot.
- The push button start is in any position except off position.

### Trunk button

To open the trunk, press and hold the trunk button until the trunk lid opens.

### NOTE

To open the trunk when the ignition is switched to a position other than off, use the remote release button inside the vehicle (page 3-36).

### Panic button

If you witness from a distance someone attempting to break into or damage your vehicle, pressing the panic button will activate the vehicle's alarm.

### NOTE

The panic button will work whether any door or the trunk lid is open or closed.

### **(Turning on the alarm)**

Pressing the panic button for 1 second or more will trigger the alarm for about 2 minutes and 30 seconds, and the following will occur:

- The horn sounds intermittently.
- The hazard warning lights flash.

### NOTE

However, if the driver is too close to the vehicle the panic button may not function.

### **(Turning off the alarm)**

The alarm stops by pressing any button on the transmitter.

# Advanced Keyless Entry and Start System

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## Declaration of Conformity

### Keyless entry system

Country	Approval number	Country	Approval number
CAN	<p>Operation is subject to the following two conditions:</p> <p>(1) this device may not cause harmful interference.</p> <p>(2) this device must accept any interference received, including interference that may cause undesired operation.</p>	US	<p>This device complies with Part 15 of the FCC Rules.</p> <p>Operation is subject to the following two conditions:</p> <p>(1) this device may not cause harmful interference.</p> <p>(2) this device must accept any interference received, including interference that may cause undesired operation.</p> <p>Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.</p>

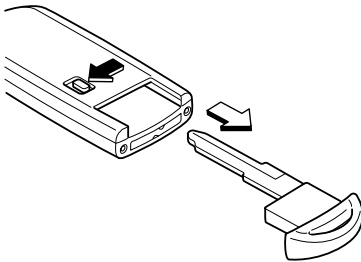
## Advanced Keyless Entry and Start System

### ▼ Auxiliary Key Function

Use the auxiliary key stored in the advanced key in the event of a dead transmitter battery or malfunction.

#### Removing the auxiliary key

Pull out the auxiliary key from the advanced key.



#### Locking, unlocking the doors

The doors can be locked/unlocked using the auxiliary key, refer to Locking, Unlocking with Key (page 3-31).

#### Starting the engine

The engine can be started with the auxiliary key, refer to Starting the engine (page 3-10).

#### Locking, unlocking the glove box

The glove box can be locked/unlocked using the auxiliary key, refer to Glove Box (page 6-151).

### Advanced Key Suspend Function

If an advanced key is left in the vehicle, the functions of the advanced key left in the vehicle are temporarily suspended to prevent theft of the vehicle.

The following are inoperable:

- Starting the engine using the push button start.
- Operating the request switches.

To restore these functions, perform any one of the following:

- Press a switch on the advanced key which has had its functions temporarily suspended.
- **(Manual transaxle)**

When carrying another advanced key, depress the clutch pedal until the KEY indicator light (green) illuminates.

#### **(Automatic transaxle)**

When carrying another advanced key, depress the brake pedal until the KEY indicator light (green) illuminates.

## Advanced Keyless Entry and Start System

---

### Warning Lights and Beep Sounds

#### ▼ System Malfunction Warning Light

If any malfunction occurs in the advanced keyless function, the KEY warning light (red) in the instrument cluster illuminates continuously.

#### CAUTION

*If the KEY warning light (red) remains illuminated, do not continue to drive the vehicle with the advanced keyless function. Park the vehicle in a safe place and use the auxiliary key to continue driving the vehicle. Have the vehicle inspected at an Authorized Mazda Dealer as soon as possible. Refer to Starting the engine (page 3-10).*

#### ▼ Ignition Not Switched Off (STOP) Warning Beep

If the driver's door is opened while the ignition is switched to ACC, a continuous beep sound will be heard to notify the driver that the ignition has not been switched off (STOP). Left in this condition, the keyless entry system will not operate, the car cannot be locked, and the battery power will be depleted.

#### ▼ Advanced Key Removed from Vehicle Warning Beep

Under the following conditions, a beep sound will be heard and the KEY warning light (red) will flash continuously when the push button start has not been switched off to notify the driver that the advanced key has been removed. The KEY warning light (red) will stop flashing when the advanced key is back inside the vehicle:

- The push button start has not been switched off, the driver's door is open, and the advanced key is removed from the vehicle. (A beep sound will be heard 3 times.)  
However the beep sound will be heard continuously when the push button start is switched to ACC and the door is open due to the activation of the warning beep sound indicating that the push button start is not switched off.
- The push button start has not been switched off and all the doors are closed after removing the advanced key from the vehicle. (A beep sound will be heard 6 times. The volume of the beep sound can be changed.)  
Refer to Personalization Features on page 10-8.

#### **NOTE**

*Because the advanced key utilizes low-intensity radio waves, the Advanced Key Removed From Vehicle Warning may activate if the advanced key is carried together with a metal object or it is placed in a poor signal reception area within the vehicle.*

## Advanced Keyless Entry and Start System

### ▼ Request Switch Inoperable Warning Beep

If the request switch for a front door is pressed under the following conditions while the advanced key is being carried, a beep will be heard 6 times to indicate that the front doors cannot be locked.

- A door is open (door ajar included).
- The ignition has not been switched off.
- The auxiliary key is inserted into the key slot.

### ▼ Advanced Key Battery Dead Warning

When the ignition is switched to ACC or switched off from ON, the KEY indicator light (green) flashes for approximately 30 seconds indicating that the remaining battery power is low. Replace with a new battery before the advanced key becomes unusable.

Refer to Advanced Key Maintenance (page 3-5).

#### **NOTE**

*The advanced key can be set so that the KEY indicator light (green) does not flash even if the battery power is low.*

*Refer to Personalization Features on page 10-8.*

### ▼ Engine Start Not Permitted Warning

Under the following conditions, the KEY warning light (red) flashes to inform the driver that the ignition will not switch to ACC even if the ignition is switched off.

- The advanced key battery is dead.
- The advanced key is not within operational range.
- The advanced key is placed in areas where it is difficult for the system to detect the signal (page 3-7).

- A key from another manufacturer similar to the advanced key is in the operational range.

### ▼ Advanced Key Left-in-trunk Warning Beep

If the advanced key is left in the trunk compartment with all doors locked and the trunk lid closed, a beep sound is heard for about 10 seconds to remind the driver the advanced key has been left in the trunk compartment. If this happens, open the trunk lid by pressing the request switch and remove the advanced key. An advanced key removed from the trunk may not function because its functions may have been temporarily suspended. To restore the advanced key function, perform the applicable procedure (page 3-19).

The system can be set not to open the trunk.

Refer to Personalization Features on page 10-8.



## Advanced Keyless Entry and Start System

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### ▼ Advanced Key Left-in-vehicle Warning Beep

If an advanced key is left in the vehicle cabin and all the doors are locked using a separate advanced key, a beep sound is heard for about 10 seconds to remind the driver that the advanced key has been left in the vehicle cabin. If this happens, the doors lock but the functions of the advanced key left in the vehicle cabin may be temporarily suspended. Perform the following procedure to restore the functions of the advanced key (page 3-19).

The volume of the beep sound can be changed.

Refer to Personalization Features on page 10-8.

#### **NOTE**

*The warning beep does not sound while the trunk is open. The warning beep sounds after the trunk is closed.*

### ▼ Auxiliary Key Removed Warning Beep

If the auxiliary key is removed under the following conditions while it is in use and in the ACC or ON position, the warning beep sounds three times.

- The advanced key is not in the vehicle.
- The battery for the advanced key is dead.

## Advanced Keyless Entry and Start System

### When Warning Indicator/Beep is Activated

Under the following conditions, warning beeps are heard and a warning/indicator light in the instrument cluster illuminates to notify the driver of improper operation of the advanced key to prevent theft of the vehicle (page 3-20).

Warning	How to check
When a door is open, a continuous beep sound will be heard.	Check whether the ignition has been switched off.
When a door is open, 3 beep sounds are heard, and the KEY warning light (red) in the instrument cluster flashes.	Check whether the advanced key has been removed from the vehicle.
When a door is closed, a beep sound is heard 6 times, and the KEY warning light (red) in the instrument cluster flashes.	Check whether the advanced key has been removed from the vehicle.
When locking the doors or closing the trunk, the chime sounds for about ten seconds.	Check whether the advanced key has been left in the vehicle or the trunk.
When attempting to lock the doors by pressing the request switch on the front doors, and six beep sounds are heard.	Check whether the ignition has been switched off.
	Check whether a door is open.
When the KEY indicator light (green) flashes in the instrument cluster.	The advanced key battery power is low. Replace the battery with a new one. Refer to Advanced Key Maintenance on page 3-5.
When the KEY warning light (red) remains illuminated in the instrument cluster.	The advanced key is malfunctioning. Park the vehicle in a safe place, and use the auxiliary key to continue driving the vehicle. Have the vehicle inspected at an Authorized Mazda Dealer as soon as possible.

## Doors and Locks

### Keys

#### **⚠ WARNING**

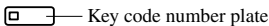
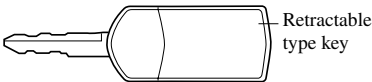
**Do not leave the key in your vehicle with children and keep them in a place where your children will not find or play with them:**

Leaving children in a vehicle with the key is dangerous. This could result in someone being badly injured or even killed. Children may find these new kinds of keys to be an interesting toy to play with and could cause the power windows or other controls to operate, or even make the vehicle move.

#### **NOTE**

- Refer to *Immobilizer System* (page 3-54) for information regarding keys and engine starting.
- **(With theft-deterrent system)**  
Refer to *Theft-Deterrent System* (page 3-58) for information regarding keys and the prevention of vehicle and vehicle contents theft.

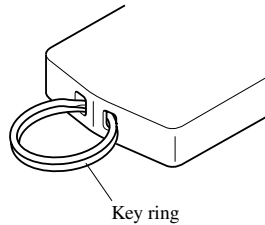
The keys operate all locks.



A code number is stamped on the plate attached to the key set; detach this plate and store it in a safe place (not in the vehicle) for use if you need to make a replacement key.

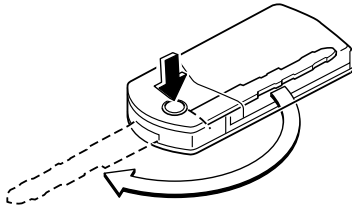
#### **NOTE**

- Write down the code number and keep it in a separate, safe and convenient place, but not in the vehicle.  
If your key is lost, consult your Authorized Mazda Dealer and have your code number ready.
- Some types of key chains cannot be attached to the retractable type key. In this case, use the key ring provided with the transmitter which has the key code number plate attached.

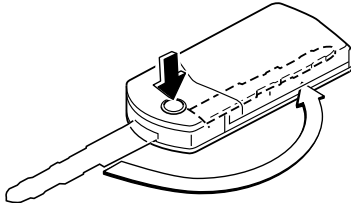


**Key extend/retract method (Retractable type key)**

To extend the key, press the release button.



To retract the key, rotate it into the holder while pressing the release button.

**Keyless Entry System**

This system remotely locks and unlocks the doors and opens the trunk lid. It can also help you signal for attention. Operating the theft-deterrent system with the keyless entry system transmitter is also possible on theft-deterrent system-equipped vehicles. Press the buttons slowly and carefully.

**⚠ CAUTION**

To avoid damage to the transmitter, do not:

- Drop the transmitter.
- Get the transmitter wet.
- Disassemble the transmitter.
- Expose the transmitter to any kind of magnetic field.
- Expose the transmitter to high temperatures on places such as the dashboard or hood, under direct sunlight.

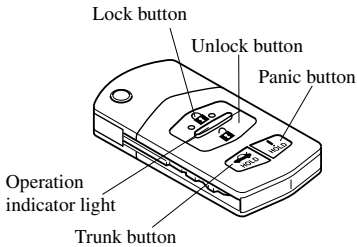
**NOTE**

- The keyless entry system is designed to operate up to about 2.5 m (8 ft) from the center of the vehicle, but this may vary due to local conditions.
- The system does not operate when the key is in the ignition switch.
- If the transmitter does not operate when pressing a button or the operation range becomes too small, the battery may be dead. To install a new battery, refer to Maintenance (page 3-28).
- Additional transmitters can be obtained at an Authorized Mazda Dealer. Up to 3 transmitters can be used with the keyless entry system per vehicle. Bring all transmitters to an Authorized Mazda Dealer when additional transmitters are required.

## Doors and Locks

---

### ▼ Transmitter



The operation indicator light flashes when the buttons are pressed.

#### **Lock button**

To lock the doors, press the lock button.

To confirm that all doors have been locked, press the lock button again within 5 seconds. If they are closed and locked, the horn will sound.

The system can be set not to sound the horn.

Refer to Personalization Features on page 10-8.

### ***NOTE***

- *Doors can be locked by pressing the lock button while any other door is open. However, the hazard warning lights will not flash and the horn will not sound.*
- ***(Without theft-deterrent system)***  
*The hazard warning lights will flash once to indicate that all doors are locked.*  
***(With theft-deterrent system)***  
*The hazard warning lights flash when the theft deterrent system is armed. The hazard warning lights do not flash if all the doors are locked before the theft-deterrent system is properly armed. When the doors are locked by pressing the lock button on the transmitter while the theft-deterrent system is armed, the hazard warning lights will flash once to indicate that the system is armed. Refer to the theft-deterrent system on page 3-58.*
- *All doors cannot be locked when the key is in the ignition switch.*
- *Confirm that all doors are locked visually or audibly by use of the double click.*

#### **Unlock button**

To unlock the driver's door, press the unlock button.

To unlock all doors, press the unlock button again within 5 seconds.

**NOTE****(Without theft-deterrent system)**

The hazard warning lights will flash twice to indicate that all doors are unlocked.

**(With theft-deterrent system)**

The hazard warning lights flash when the theft deterrent system is turned off.

The hazard warning lights do not flash unless the theft deterrent system has been properly turned off.

When the doors are unlocked by pressing the unlock button on the transmitter while the theft-deterrent system is turned off, the hazard warning lights will flash twice to indicate that the system is turned off.

Refer to the theft-deterrent system on page 3-58.

The system can be set to unlock all doors by performing a single operation.

Refer to Personalization Features on page 10-8.

**NOTE****Auto re-lock function**

After unlocking with the transmitter, all doors will automatically lock if one of the doors or the trunk lid is not opened within about 30 seconds.

The time required for the doors to lock automatically can be changed.

Refer to Personalization Features on page 10-8.

**Trunk button**

To open the trunk, press and hold the trunk button until the trunk lid opens.

**NOTE**

To open the trunk when the ignition is switched to a position other than off, use the remote release button inside the vehicle (page 3-36).

**Panic button**

If you witness from a distance someone attempting to break into or damage your vehicle, pressing the panic button will activate the vehicle's alarm.

**NOTE**

The panic button will work whether any door or the trunk lid is open or closed.

**Turning on the alarm**

Pressing the panic button for 1 second or more will trigger the alarm for about 2 minutes and 30 seconds, and the following will occur:

- The horn sounds intermittently.
- The hazard warning lights flash.

**Turning off the alarm**

Press any button on the transmitter.

## Doors and Locks

### ▼ Transmitter Maintenance

If the buttons on the transmitter are inoperable and the operation indicator light does not flash, the battery may be dead.

Replace with a new battery before the transmitter becomes unusable.

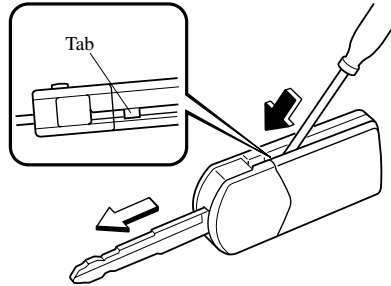
#### **CAUTION**

- Install the battery with the positive pole (+) facing down. Battery leakage could occur if it is not installed correctly.
- When replacing the battery, be careful not to touch any of the internal circuitry and electrical terminals, bend the electrical terminals, or get dirt in the transmitter as the transmitter could be damaged.
- There is the danger of explosion if the battery is not correctly replaced.
- Replace only with the same type battery (CR1620 or equivalent).
- Dispose of used batteries according to the following instructions.
  - Insulate the plus and minus terminals of the battery using cellophane or equivalent tape.
  - Never disassemble.
  - Never throw the battery into fire and/or water.
  - Never deform or crush.

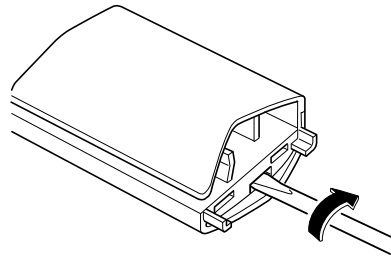
#### **Replacing the transmitter battery**

1. Unfold the key (page 3-24).

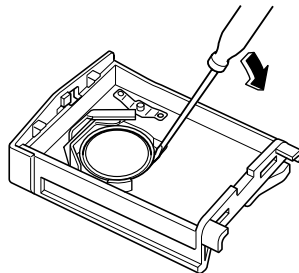
2. Insert a screwdriver into the slot and push the tab to remove the key from the transmitter.



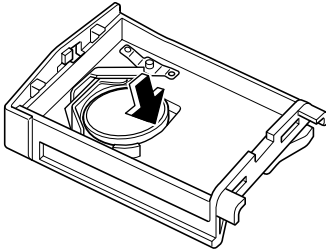
3. Insert a screwdriver into the slot and gently pry open the transmitter.



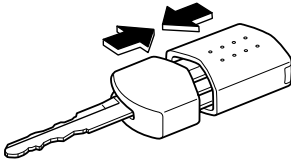
4. Remove the battery.



- Put in the new battery (CR1620 or equivalent) with the positive pole (+) facing down.



- Align the front and back covers and snap the transmitter shut.
- Align the key with the transmitter as shown in the figure, and insert the key until a click sound is heard.



### **CAUTION**

*Insert the key into the transmitter securely until a click sound is heard. If it is not inserted securely, it could detach from the transmitter.*

### ▼ Service

If you have a problem with the keyless entry system, consult an Authorized Mazda Dealer.

If your transmitter is lost or stolen, bring all remaining transmitters to an Authorized Mazda Dealer as soon as possible for a replacement and to make the lost or stolen transmitter inoperative.

### **CAUTION**

*Radio equipment like this is governed by laws in the United States. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.*



## Doors and Locks

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### ▼ Declaration of Conformity

#### Keyless entry system

##### FCC WARNING

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

##### (FCC)

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation .

##### (IC)

This device complies with RSS-210 of Industry CANADA. Operation is subject to the following two conditions:

(1) this device may not cause harmful interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

##### (MEXICO)

Este equipo opera a título secundario, consecuentemente, debe aceptar interferencias perjudiciales incluyendo equipos de la misma clase y puede no causar interferencias a sistemas operando a título primario

Sistema de acceso normal sin llave

Modelo : SKE125-01

Sistema de acceso normal sin llave con marcado de confirmación por radio

COFETEL RCPMASK05-615
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UAE [ Approved by TRA ]

## Door Locks

### ⚠ WARNING

**Always take all children and pets with you or leave a responsible person with them:**

*Leaving a child or a pet unattended in a parked vehicle is dangerous. In hot weather, temperatures inside a vehicle can become high enough to cause brain damage or even death.*

**Do not leave the key in your vehicle with children and keep them in a place where your children will not find or play with them:**

*Leaving children in a vehicle with the key is dangerous. This could result in someone being badly injured or even killed.*

**Keep all doors locked when driving:**

*Unlocked doors in a moving vehicle are dangerous. Passengers can fall out if a door is accidentally opened and can more easily be thrown out in an accident.*

**Always close all the windows and the moonroof, lock the doors and take the key with you when leaving your vehicle unattended:**

*Leaving your vehicle unlocked is dangerous as children could lock themselves in a hot vehicle, which could result in death. Also, a vehicle left unlocked becomes an easy target for thieves and intruders.*

**After closing the doors, always verify that they are securely closed:**

*Doors not securely closed are dangerous, if the vehicle is driven with a door not securely closed, the door could open unexpectedly resulting in an accident.*

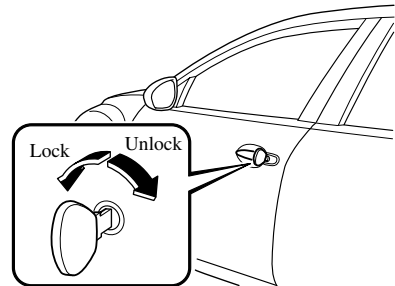
**Always confirm the safety around the vehicle before opening a door:**

*Suddenly opening a door is dangerous. A passing vehicle or a pedestrian could be hit and cause an accident.*

### ▼ Locking, Unlocking with Key

The driver's door can be locked/unlocked with the key.

Turn the key toward the front to lock, toward the back to unlock.



### ▼ Locking with Request Switch (with Advanced Key)

The doors can be locked by operating the request switch while carrying the advanced key outside the vehicle, refer to Operations Using Advanced Keyless Functions (page 3-7).

## Doors and Locks

### ▼ Unlocking with Door Handle (With Advanced Key)

The doors can be unlocked by operating the door handle on the front doors while carrying the advanced key outside the vehicle, refer to Operations Using Advanced Keyless Functions (page 3-7).

### ▼ Locking, Unlocking with Transmitter (with Advanced Key)

The doors can be locked/unlocked by operating the keyless entry system transmitter, refer to Keyless Entry System (page 3-15).

### ▼ Locking, Unlocking with Transmitter (with Retractable Type Key)

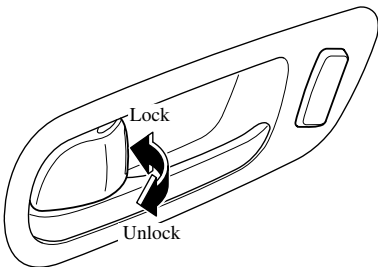
The doors can be locked/unlocked by operating the keyless entry system transmitter, refer to Keyless Entry System (page 3-25).

### ▼ Locking, Unlocking with Door-Lock Knob

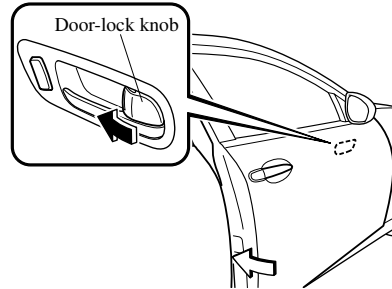
To lock any door from the inside, press the door-lock knob.

To unlock, pull it outward.

This does not operate the other door locks.



To lock any door with the door-lock knob from the outside, press the door-lock knob to the lock position and close the door. This does not operate the other door locks.



#### **NOTE**

- *When locking the doors this way, be careful not to leave the key inside the vehicle.*
- **(With advanced key)**  
*The driver's door cannot be locked using the door-lock knob from the outside.*
- **(Without advanced key)**  
*The driver's door cannot be locked using the door-lock knob from the outside if the key is in the ignition switch.*

### ▼ Power Door Locks

#### **Vehicle lock-out prevention**

##### **(With advanced key)**

The vehicle lock-out prevention feature prevents you from locking yourself out of the vehicle. All doors will automatically unlock if they are locked using the power door locks with any door open.

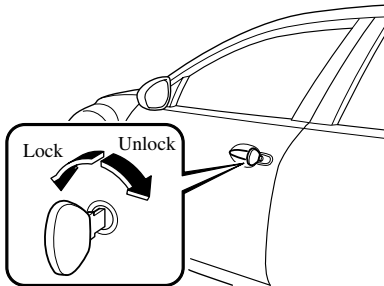
## Doors and Locks

### **(With retractable type key)**

The vehicle lock-out prevention feature prevents you from locking yourself out of the vehicle. With the key in the ignition switch, all doors will automatically unlock if they are locked using the power door locks with any door open.

### **Locking, unlocking with key**

All doors lock automatically when the driver's door is locked with the key. All doors unlock when the driver's door is unlocked and the key is held in the unlock position for one second or longer.

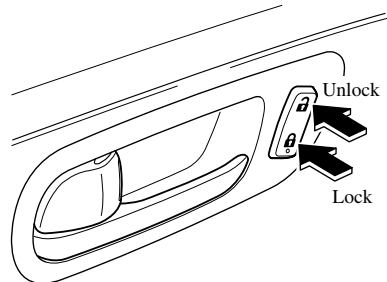


### **NOTE**

- Holding the key in the unlocked position in the driver's door lock for about a second unlocks all doors. To unlock only the driver's door, insert the key into the driver's door lock and turn the key briefly to the unlock position and then immediately return it to the center position.
- The system can be set to unlock all doors by performing a single operation. Refer to Personalization Features on page 10-8.

### **Locking, unlocking with door-lock switch**

All doors lock automatically when lock side is pressed. They all unlock when unlock side is pressed.



### **Locking with request switch (with advanced key)**

All doors can be locked by operating the request switch on the front doors while carrying the advanced key outside the vehicle, refer to Operations Using Advanced Keyless Functions (page 3-7).

### **Unlocking with door handle (with advanced key)**

Driver's door or all doors can be unlocked by operating the door handle on the front doors while carrying the advanced key outside the vehicle, refer to Operating Using Advanced Keyless Functions (page 3-7).

### **Locking, unlocking with transmitter (with advanced key)**

All doors can be locked/unlocked by operating the keyless entry system transmitter, refer to Keyless Entry System (page 3-15).

## Doors and Locks

### **Locking, unlocking with transmitter (with retractable type key)**

All doors can be locked/unlocked by operating the keyless entry system transmitter, refer to Keyless Entry System (page 3-25).

### **Auto lock/unlock function**

#### **⚠ WARNING**

**Do not pull the inner handle on a front door:**

*Pulling an inner handle on a front door while the vehicle is moving is dangerous. Passengers can fall out of the vehicle if a front door accidentally opens, which could result in death or serious injury.*

- When the vehicle speed exceeds 20 km/h (12 mph), all doors lock automatically.
- When the ignition is switched off, all doors unlock automatically.

These functions can also be disabled so that they do not operate.

#### **NOTE**

#### ***Additional auto lock/unlock function (Automatic transaxle)***

*A function setting is also available which enable automatic locking and unlocking of doors when shifting gears.*

### **Auto lock/unlock function setting change using door-lock switch**

The doors and the liftgate can set to lock or unlock automatically by selecting any one of the functions from the following table and using the driver's door-lock switch on the interior to perform the setting change as indicated in the procedure which follows.

Settings can be changed using the following operation.

Function number	Function
1	The auto door-lock function is disabled.
2	All the doors and the liftgate lock automatically when the vehicle speed is about 20 km/h (12 mph) or more.
3	All the doors and the liftgate lock automatically when the vehicle speed is about 20 km/h (12 mph) or more. All the doors and the liftgate unlock when the ignition is switched from ON to ACC or Off.
4	When the ignition is switched ON and the shift lever is shifted from park (P) to any other gear position, all the doors and the liftgate lock automatically.
5	When the ignition is switched ON and the shift lever is shifted from park (P) to any other gear position, all the doors and the liftgate lock automatically. When the shift lever is shifted to park (P) while the ignition is switched ON, all the doors and the liftgate unlock automatically.

1. Stop the vehicle and close all the doors.
2. Switch the ignition ON.
3. Press and hold the lock side of the driver's door-lock switch within 10 seconds of switching the ignition ON, and make sure a beep sound is heard about eight seconds afterwards.
4. Referring to the auto lock/unlock function setting table, determine the function number for the desired setting and press the unlock side of the driver's door-lock switch only in the amount of the selected function number (Ex. If you select function 2, press the unlock side of the switch only 2 times).

## Doors and Locks

### NOTE

There are only a total of five auto lock/unlock settings available. Be sure to press the unlock side of the driver's door-lock switch the correct number of times according to the selected function number. If the switch is mistakenly pressed six times, the procedure will be invalidated. If this occurs, start the procedure from the beginning.

5. Three seconds after the function setting has been changed, a beep sound will beep in the amount of the selected function number.

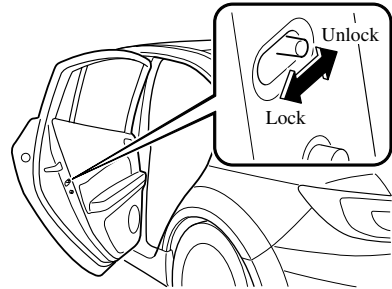
### NOTE

- The doors cannot be locked or unlocked while the setting function is being performed.
- The procedure can be cancelled by pressing the lock side of the driver's door-lock switch.

### ▼ Rear Door Child Safety Locks

These locks are intended to help prevent children from accidentally opening the rear doors. Use them both whenever a child rides in the vehicle.

If you slide the child safety lock to the lock position before closing that door, the door cannot be opened from the inside. The door can be opened only by pulling the outside handle.



## Doors and Locks

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### Trunk Lid

#### **⚠ WARNING**

**Never allow a person to ride in the trunk:**

*Allowing a person to ride in the trunk is dangerous. In addition, the person in the trunk could be seriously injured or killed during sudden braking or a collision.*

**Keep the trunk closed when driving:**

*Exhaust gas entering the cabin of a vehicle through an open trunk is dangerous. This gas contains CO (carbon monoxide), which is colorless, odorless, and highly poisonous. If inhaled, it can cause loss of consciousness and death.*

### ▼ Opening and Closing the Trunk Lid

#### **⚠ WARNING**

**Close the trunk lid, be sure the seat backs are latched and do not allow children to play inside the vehicle:**

*Leaving the trunk lid open or leaving children in the vehicle with the keys is dangerous. Children could open the trunk lid and climb inside resulting in possible injury or death from heat exposure.*

**Always keep the car from being a tempting place to play by latching the rear seats, doors and the trunk, and keeping the keys where children can not play with them:**

*Leaving children or animals unattended in a parked vehicle is dangerous. Babies left sleeping and children who lock themselves in cars or trunks can die very quickly from heat prostration. Do not leave your children or pets alone in a car at any time. Do not leave the car, the rear folding seats or the trunk unlocked.*

#### **Opening the trunk lid with the request switch (with advanced key)**

The trunk lid can be opened by operating the request switch on the trunk lid while carrying the advanced key outside the vehicle, refer to Operations Using Advanced Keyless Functions (page 3-7).

#### **Opening the trunk lid with the transmitter (with advanced key)**

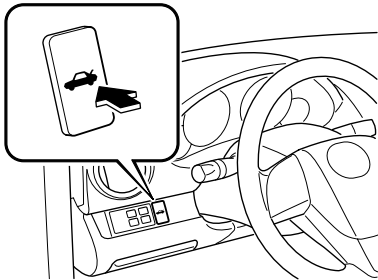
The trunk lid can be opened by operating the keyless entry system transmitter, refer to Keyless Entry System (page 3-15).

**Opening the trunk lid with the transmitter (with retractable type key)**

The trunk lid can be opened by operating the keyless entry system transmitter, refer to Keyless Entry System (page 3-25).

**Opening the trunk lid with the remote release button**

Push the release button.

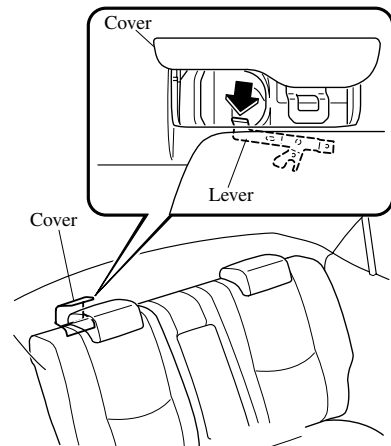
**NOTE**

While the ignition is switched ON, the trunk lid can be opened only when the vehicle is stopped with the parking brake applied (manual transaxle) or with the selector lever in the P position (automatic transaxle).

**When the trunk lid cannot be opened**

If the vehicle battery is dead or there is a malfunction in the electrical system and the trunk lid cannot be opened, perform the following procedure as an emergency measure to Open it:

1. Open the cover behind the right rear passenger seat head restraint.



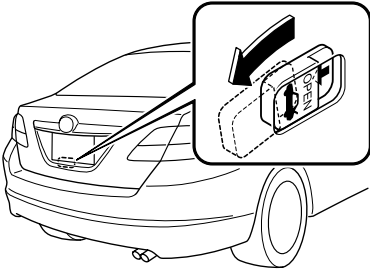
2. Pull the lever forward and fold down the seatback.
3. Carefully climb into the trunk from the back seat.



## Doors and Locks

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4. Slide the inside trunk release lever in the direction of the arrow.



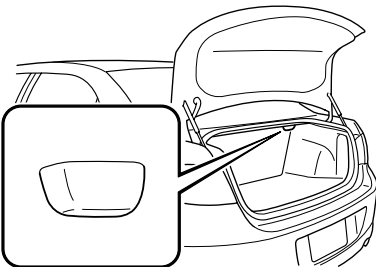
After performing this emergency measure, have the vehicle inspected at an Authorized Mazda Dealer as soon as possible.

### **Closing the trunk lid**

Use both hands to push the trunk lid down until the lock snaps shut. Do not slam it. Pull up on the trunk lid to make sure it is secure.

### **▼ Trunk Light**

The trunk light is on when the lid is open and off when it's closed.



### **NOTE**

- To prevent the battery from being discharged, do not leave the trunk open for a long period when the engine is not running.
- **(Battery saver)**  
If the lid is left open, the trunk light turns off after about 30 minutes to prevent battery depletion.

### **Inside Trunk Release Lever**

Your vehicle is equipped with an inside trunk release lever that provides a means of escape for children and adults in the event they become locked inside the trunk.

No matter how careful adults might be with keys and locking their cars, parents should be aware that children may be tempted to play around vehicles and use the trunk as a hiding place.

Adults are advised to familiarize themselves with the operation and location of the inside trunk release lever so that all children can be told about it in an appropriate way, keeping in mind that most vehicles do not have such levers.

### **⚠ WARNING**

***Close the trunk lid, be sure the seat backs are latched and do not allow children to play inside the vehicle:***

*Leaving the trunk lid open or leaving children in the vehicle with the keys is dangerous. Children could open the trunk lid and climb inside resulting in possible injury or death from heat exposure.*

***Always keep the car from being a tempting place to play by latching the rear seats, doors and the trunk, and keeping the keys where children can not play with them:***

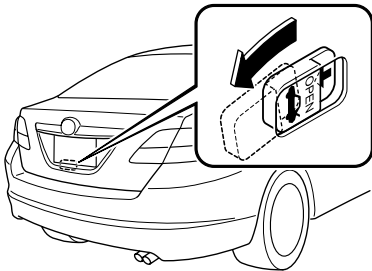
*Leaving children or animals unattended in a parked vehicle is dangerous. Babies left sleeping and children who lock themselves in cars or trunks can die very quickly from heat prostration. Do not leave your children or pets alone in a car at any time. Do not leave the car, the rear folding seats or the trunk unlocked.*

## Doors and Locks

### ▼ Opening the Trunk Lid from the Inside

Slide the inside trunk release lever in the direction of the arrow. The lever is made of material that will glow for hours in the darkness of the trunk following a brief exposure to ambient light.

The inside trunk release lever is located on the inside of the trunk lid.



### Power Windows

The ignition must be switched ON for the power windows to operate.

#### **⚠ WARNING**

***Make sure the opening is clear before closing a window:***

*Closing power windows are dangerous. A person's hands, head, or even neck could be caught by the window and result in serious injury or even death.*

*This warning applies especially to children.*

***Always lock all passenger power windows with the power window lock switch on the driver's side while children are in the vehicle, and never allow children to play with power window switches, the advanced key or the keyless entry system:***

*Leaving the power window switches unlocked while children are in the vehicle is dangerous. Power window switches that are not locked with the power window lock switch would allow children to operate power windows unintentionally which could result in serious injury if a child's hands, head or neck becomes caught by the window.*

*Letting children play with advanced keys or keyless entry systems are just as dangerous.*

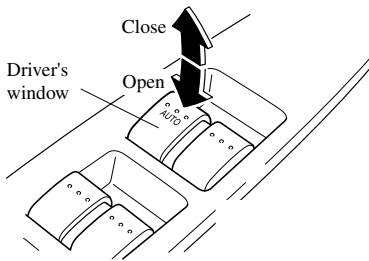
#### **⚠ CAUTION**

*To prevent burning out the fuse and damaging the power window system, do not open or close more than three windows at once.*

## ▼ Operating the Driver's Side Power Window

### Manual opening/closing

To open the window to the desired position, lightly hold down the switch.  
To close the window to the desired position, lightly pull up the switch.



### Auto-opening/closing

To fully open the window automatically, press the switch completely down, then release. The window will fully open automatically.

To fully close the window automatically, pull the switch completely up, then release. The window will fully close automatically.

To stop the window partway, pull or press the switch in the opposite direction and then release it.

### **NOTE**

*If the battery was disconnected during vehicle maintenance, or for other reasons such as a switch continues to be operated after the window is fully open/close, the window will not fully open and close automatically. Carry out the following procedure to resume operation:*

1. Switch the ignition ON.
2. Press the switch and fully open the window.
3. Pull up the switch to fully close the window and continue holding the switch for about 2 seconds after the window fully closes.

### Jam-safe window

If a person's hands, head or an object blocks the window during the auto-closing operation, the window will stop and open halfway.

### **⚠ WARNING**

***Make sure nothing blocks the window just before it reaches the fully closed position or while holding up the power window switch:***

*Blocking the power window just before it reaches the fully closed position or while holding up the power window switch is dangerous. In this case, the jam-safe function cannot prevent the window from closing all the way. If fingers are caught, serious injuries could occur.*

### **NOTE**

*Depending on driving conditions, a closing power window could stop and start opening when the window feels a shock that is similar to something blocking it.*

*In the event the jam-safe function activates and the power window cannot be closed automatically, pull and hold the switch and the window will close.*

## Doors and Locks

### **Engine-off power window operation**

The power window can be operated for about 40 seconds after the ignition is switched from ON to ACC or OFF with all doors closed. If any door is opened, the power window will be inoperable.

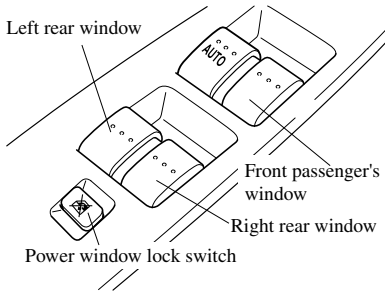
#### **NOTE**

*For engine-off operation of the power window, the switch must be held up firmly throughout window closure because the auto-closing function will be inoperable.*

### **▼ Operating the Passenger Power Windows**

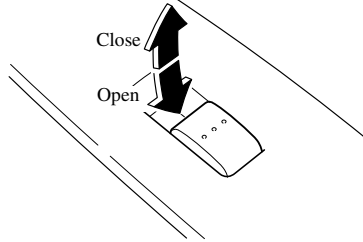
The power windows may be operated when the power window lock switch on the driver's door is in the unlocked position.

The passenger windows may be opened or closed by the power window master control switches on the driver's door.



To open the window to the desired position, hold down the switch. To close the window to the desired position, pull up the switch.

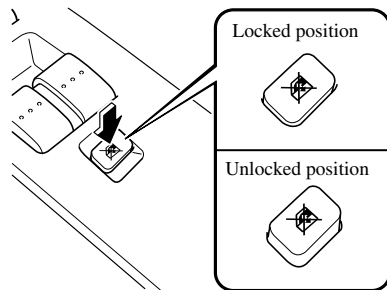
### **Front/rear passenger switch**



### **▼ Power Window Lock Switch**

With the lock switch in the unlocked position (button not depressed), all power windows on each door can be operated.

With the lock switch in the locked position (button depressed), only the driver's side power window can be operated.



**⚠ WARNING**

*Unless a passenger needs to operate a power window, keep the power window lock switch in the locked position:*

*Unintentional power window operation is dangerous. A person's hands, head, or neck could be caught by the window and result in serious injury.*

**Fuel-Filler Lid and Cap****⚠ WARNING**

*When removing the fuel-filler cap, loosen the cap slightly and wait for any hissing to stop. Then remove it:*

*Fuel spray is dangerous. Fuel can burn skin and eyes and cause illness if ingested. Fuel spray is released when there is pressure in the fuel tank and the fuel-filler cap is removed too quickly.*

*Before refueling, stop the engine, and always keep sparks and flames away from the filler neck:*

*Fuel vapor is dangerous. It could be ignited by sparks or flames causing serious burns and injuries.*

*Additionally, use of the incorrect fuel-filler cap or not using a fuel-filler cap may result in fuel leak, which could result in serious burns or death in an accident.*

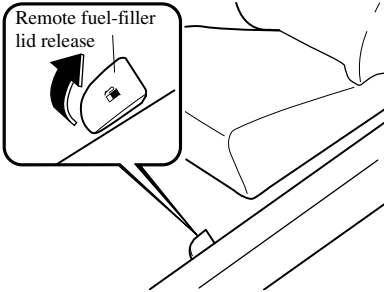
**⚠ CAUTION**

*Always use only a genuine Mazda fuel-filler cap or an approved equivalent, available at an Authorized Mazda Dealer. The wrong cap can result in a serious malfunction of the fuel and emission control systems. It may also cause the check engine light in the instrument cluster to illuminate.*

## Doors and Locks

### ▼ Fuel-Filler Lid

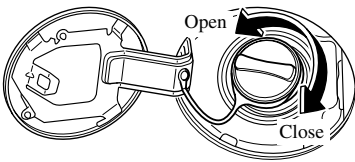
To open, pull the remote fuel-filler lid release.



### ▼ Fuel-Filler Cap

To remove the fuel-filler cap, turn it counterclockwise.

To close the fuel-filler cap, turn it clockwise until two or more clicks are heard.



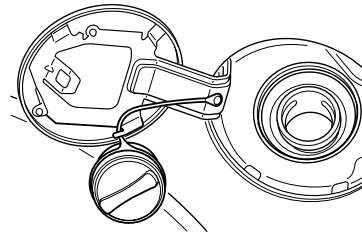
### ▲ CAUTION

If the check fuel cap warning light illuminates, the fuel-filler cap may not be properly installed. If the warning light illuminates, park your vehicle safely off the right-of-way, remove the fuel-filler cap and reinstall it correctly. After the cap has been correctly installed, the fuel cap warning light may continue to illuminate until a number of driving cycles have been completed. A drive cycle consists of starting the engine (after four or more hours with the engine off) and driving the vehicle on city and highway roads.

Continuing to drive with the check fuel cap warning light illuminated could cause the check engine light to illuminate as well.

### NOTE

The removed cap can be attached to the inner side of the lid during refueling to prevent fuel on the cap from dripping onto the vehicle.



## Hood

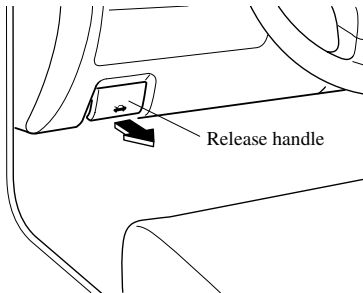
### **⚠ WARNING**

**Always check that the hood is closed and securely locked:**

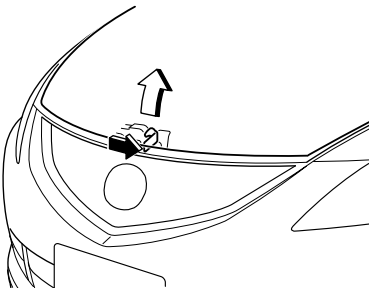
*A hood that is not closed and securely locked is dangerous as it could fly open while the vehicle is moving and block the driver's vision which could result in a serious accident.*

### ▼ Opening the Hood

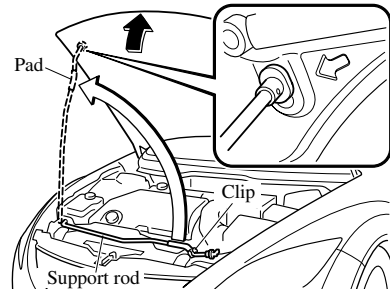
1. With the vehicle parked, pull the release handle to unlock the hood.



2. Insert your hand into the hood opening, slide the hood latch lever to the right, and lift the hood.



3. Grasp the support rod in the padded area and secure it in the stay hole indicated by the arrow to hold the hood open.



### ▼ Closing the Hood

### **⚠ WARNING**

**Do not leave items in the engine compartment:**

*After you have finished checking or doing servicing in the engine compartment, do not forget and leave items such as tools or rags in the engine compartment.*

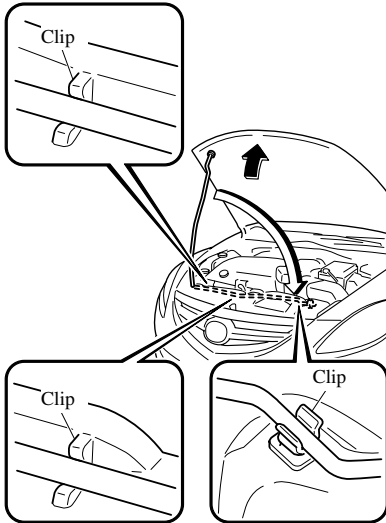
*Tools or other items left in the engine compartment could cause engine damage or a fire leading to an unexpected accident.*



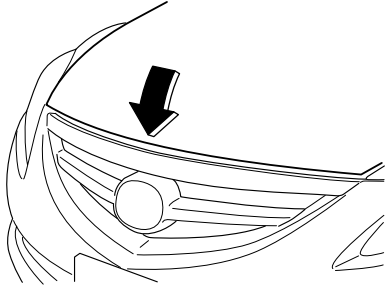
## Doors and Locks

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1. Check under the hood area to make certain all filler caps are in place and all loose items (e.g. tools, oil containers, etc.) have been removed.
2. Lift the hood, grasp the padded area on the stay, and secure the stay in the clip. Verify that the support rod is secured in the clip before closing the hood.

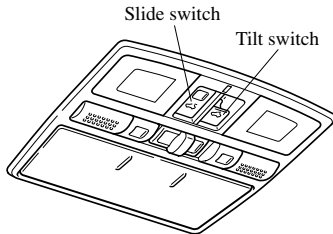


3. Lower the hood slowly until it rests in the unlocked position, and then remove your hands. Push the front center edge of the hood downward until a latching sound is heard, and the hood closes completely.



## Moonroof\*

The moonroof can be opened or closed electrically only when the ignition is switched ON.



### **⚠ WARNING**

**Do not let passengers stand up or extend part of their body through the open moonroof while the vehicle is moving:**

Extending the head, arms, or other parts of the body through the moonroof is dangerous. The head or arms could hit something while the vehicle is moving. This could cause serious injury or death.

**Make sure the opening is clear before closing the moonroof:**

A closing moonroof is dangerous. The hands, head, or even neck of a person—especially a child—could be caught in it as it closes, causing serious injury or even death.

### **NOTE**

Before washing your Mazda, make sure the moonroof is completely closed so that water does not get inside the cabin area. After washing your Mazda or after it rains, wipe the water off the moonroof before operating it to avoid water penetration which could cause rust and water damage to your headliner.

### ▼ Operating the Moonroof

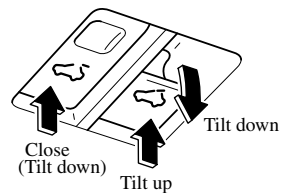
#### **Tilt Operation**

The rear of the moonroof can be tilted open to provide more ventilation.

To fully tilt automatically, momentarily press the tilt switch.

To fully close automatically, momentarily pull the tilt switch or press the front of the slide switch.

To stop tilting partway, press any part of the tilt or slide switch.



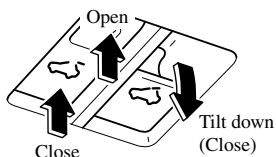
#### **Slide Operation**

To fully open automatically, momentarily press the rear of the slide switch.

To fully close automatically, momentarily press the front of the slide switch or pull the tilt switch.

## Doors and Locks

To stop sliding partway, press any part of the tilt or slide switch.



### Power moonroof re-set procedure

If the battery had been disconnected during vehicle maintenance or for other reasons, the moonroof may not fully open or close. The moonroof's jam-safe function does not function while the moonroof is re-setting. Carry out the following procedure to resume operation:

1. Switch the ignition ON.
2. Press the tilt switch, to partially tilt open the rear of the moonroof.

#### **NOTE**

*If the re-set procedure is performed while the moonroof is in the slide position (partially open) it closes before the rear tilts open.*

3. Repeat the procedure in Step 2. The rear of the moonroof tilts open to the fully open position, then closes a little.

### ▼ **Engine-off Moonroof Operation**

The moonroof can be operated for about 40 seconds after the ignition is switched from ON to ACC or OFF with all doors closed. If any door is opened, the moonroof will be inoperable.

#### **NOTE**

*For engine-off operation of the moonroof, the switch must be pushed firmly throughout moonroof closure because the auto-closing function will be inoperable.*

### ▼ **Jam-safe Moonroof**

If a person's hands, head or an object blocks the moonroof during closing operation, the moonroof will stop and open halfway.

#### **⚠ WARNING**

**Make sure nothing blocks the moonroof just before it reaches the fully closed position:**

*Blocking the moonroof just before it reaches the closed position is dangerous.*

*In this case, the jam-safe function cannot prevent the moonroof from stopping. If fingers are caught, serious injuries could occur.*

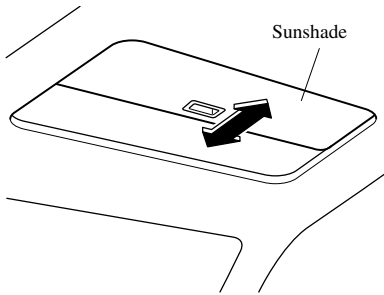
#### **NOTE**

- Depending on driving conditions, a closing moonroof could stop and start opening when the moonroof feels a shock that is similar to something blocking it.
- The moonroof's jam-safe function does not function while the moonroof is initializing.

### ▼ Sunshade

The sunshade can be opened and closed by hand.

The sunshade opens automatically when the moonroof is opened, but must be closed by hand.



#### **⚠ CAUTION**

- *The sunshade does not tilt. To avoid damaging the sunshade, do not push up on it.*
- *Do not close the sunshade while the moonroof is opening. Trying to force the sunshade closed could damage it.*

## Security System

### Immobilizer System (with Advanced Key)

The immobilizer system allows the engine to start only with an advanced key the system recognizes.

If someone attempts to start the engine with an unrecognized advanced key, the engine will not start, thereby helping to prevent the theft of your vehicle. If you have a problem with the immobilizer system or the advanced key (including auxiliary key), consult an Authorized Mazda Dealer.

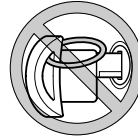
#### **CAUTION**

- *Radio equipment like this is governed by laws in the United States. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.*
- *To avoid damage to the key, do not:*
  - *Drop the key.*
  - *Get the key wet.*
  - *Expose the key to any kind of magnetic field.*
  - *Expose the key to high temperatures on places such as the dashboard or hood, under direct sunlight.*

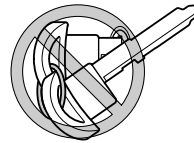
#### **CAUTION**

*Do not allow the following when starting the engine with the auxiliary key due to an advanced key dead battery or other malfunction. Otherwise the signal from the auxiliary key will not be received correctly and the engine may not start.*

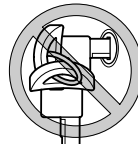
- *A key ring rests on the key grip.*



- *Metal parts of other keys or metal objects touch the auxiliary key grip.*



- *Spare auxiliary keys or keys for other vehicles equipped with an immobilizer system touch or come near the auxiliary key.*



- *Devices for electronic purchases, or security passage which touch or come near the auxiliary key.*

**NOTE**

- *The advanced keys (including auxiliary key) carry a unique electronic code. For this reason, and to assure your safety, obtaining a replacement advanced key (including auxiliary key) requires some waiting time. They are only available through an Authorized Mazda Dealer.*
- *Always keep a spare advanced key in case one is lost. If an advanced key is lost, consult an Authorized Mazda Dealer as soon as possible.*
- *If you lose an advanced key (including auxiliary key), an Authorized Mazda Dealer will reset the electronic codes of your remaining advanced keys (including auxiliary keys) and immobilizer system. Bring all the remaining advanced keys (including auxiliary keys) to an Authorized Mazda Dealer to reset. Starting the vehicle with a key that has not been reset is not possible.*

## Security System

---

### Declaration of Conformity

#### Immobilizer system

U.S.A

#### FCC WARNING

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

CANADA

This device complies with RSS-210 of Industry CANADA. Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

MEXICO

Este equipo opera a título secundario, consecuentemente, debe aceptar interferencias perjudiciales incluyendo equipos de la misma clase y puede no causar interferencias a sistemas operando a título primario.

Sistema inmovilizador

Modelo : IMB111-04

**Sistema inmovilizador con marcado de confirmación por radio**

<b>COFETEL RCPMAIM08-0139</b>
-------------------------------

UAE : 「Approved by TRA」

## ▼ Operation

### **Arming**

The system is armed when the ignition is switched from ON to ACC or OFF. The security indicator light in the instrument cluster flashes every 2 seconds until the system is disarmed.



### **Disarming**

The system is disarmed when the ignition is switched ON with the registered advanced key.

The security indicator light illuminates for about 3 seconds and goes out.

If the engine does not start with the correct advanced key, and the security indicator light keeps illuminating or flashing, the system may have a malfunction. Consult an Authorized Mazda Dealer.

### **NOTE**

- *The engine may not start and the security indicator light may illuminate or flash if the advanced key is placed in an area where it is difficult for the system to detect the signal, such as on the dashboard, or in the glove box. Move the advanced key to another place, switch the ignition off, and then restart the engine.*
- *Signals from a TV or radio station, or from a transceiver or a mobile telephone could interfere with your immobilizer system. If you are using the proper advanced key and the engine fails to start, check the security indicator light. If the indicator light is flashing, switch the ignition to ACC or switch the ignition off and wait for a while, then restart the engine. If it does not start after 3 or more tries, contact an Authorized Mazda Dealer.*
- *If the security indicator light flashes continuously while you are driving, do not shut off the engine. Go to an Authorized Mazda Dealer and have it checked. If the engine is shut off while the indicator light is flashing, you will not be able to restart it.*
- *Since the electronic codes are reset when repairing the immobilizer system, the advanced key (including auxiliary key) are needed. Bring all the advanced keys (including auxiliary keys) to an Authorized Mazda Dealer.*



## Security System

---

### ▼ Modification and Add-On Equipment

Mazda cannot guarantee the immobilizer system's operation if the system has been modified or if any add-on equipment has been installed.

#### CAUTION

*To avoid damage to your vehicle, do not modify the system or install any add-on equipment to the immobilizer system or the vehicle.*

### Immobilizer System (without Advanced Key)

The immobilizer system allows the engine to start only with a key the system recognizes.

If someone attempts to start the engine with an unrecognized key, the engine will not start, thereby helping to prevent the theft of your vehicle.

If you have a problem with the immobilizer system or the key, consult an Authorized Mazda Dealer.

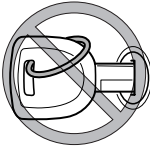
#### CAUTION

- *Radio equipment like this is governed by laws in the United States. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.*
- *To avoid damage to the key, do not:*
  - *Drop the key.*
  - *Get the key wet.*
  - *Expose the key to any kind of magnetic field.*
  - *Expose the key to high temperatures on places such as the dashboard or hood, under direct sunlight.*

**CAUTION**

When starting the engine do not allow the following, as the engine may not start due to the electronic signal from the ignition key not being transmitted correctly.

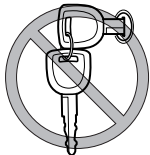
- A key ring rests on the key grip.



- Metal parts of other keys or metal objects touch the key grip.



- Spare keys or keys for other vehicles equipped with an immobilizer system touch or come near the key grip.



- Devices for electronic purchases, or security passage which touch or come near the key.

**NOTE**

- The keys carry a unique electronic code. For this reason, and to assure your safety, obtaining a replacement key requires some waiting time. They are only available through an Authorized Mazda Dealer.
- Always keep a spare key, in case one is lost. If a key is lost, contact an Authorized Mazda Dealer as soon as possible.
- If you lose a key, an Authorized Mazda Dealer will reset the electronic codes of your remaining keys and immobilizer system. Bring all the remaining keys to an Authorized Mazda Dealer to reset. Starting the vehicle with a key that has not been reset is not possible.

## Security System

---

### Declaration of Conformity

#### Immobilizer system

U.S.A

#### FCC WARNING

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

CANADA

This device complies with RSS-210 of Industry CANADA. Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

MEXICO

Este equipo opera a título secundario, consecuentemente, debe aceptar interferencias perjudiciales incluyendo equipos de la misma clase y puede no causar interferencias a sistemas operando a título primario.

Sistema inmovilizador

Modelo : IMB111-04

**Sistema inmovilizador con marcado de confirmación por radio**

**COFETEL RCPMAIM08-0139**

UAE : 「Approved by TRA」

## ▼ Operation

### Arming

The system is armed when the ignition is switched from ON to ACC or OFF. The security indicator light in the instrument cluster flashes every two seconds until the system is disarmed.



### Disarming

The system is disarmed when the ignition is switched ON with the correct ignition key.

The security indicator light illuminates for about three seconds and goes out.

If the engine does not start with the correct ignition key, and the security indicator light keeps illuminating or flashing, the system may have a malfunction. Consult an Authorized Mazda Dealer.

### **NOTE**

- *Signals from a TV or radio station, or from a transceiver or a mobile telephone, could interfere with your immobilizer system. If you are using the proper key and your engine fails to start, check the security indicator light. If it is flashing, remove the ignition key and wait 2 seconds or more, then reinsert it and try starting the engine again. If it does not start after 3 or more tries, contact an Authorized Mazda Dealer.*
- *If the security indicator light flashes continuously while you are driving, do not shut off the engine. Go to an Authorized Mazda Dealer and have it checked. If you shut off the engine while the light is flashing you will not be able to restart it.*
- *Since the electronic codes are reset when repairing the immobilizer system, the keys are needed. Bring all the existing keys to an Authorized Mazda Dealer.*

## ▼ Modification and Add-On Equipment

Mazda cannot guarantee the immobilizer system's operation if the system has been modified or if any add-on equipment has been installed.

### **⚠ CAUTION**

*To avoid damage to your vehicle, do not modify the system or install any add-on equipment to the immobilizer system or the vehicle.*

## Security System

### Theft-Deterrent System \*

If the theft deterrent system detects an inappropriate entry into the vehicle, which could result in the vehicle or its contents being stolen, the alarm alerts the surrounding area of an abnormality by sounding the horn and flashing the hazard warning lights.

Refer to Operation on page 3-58.

#### NOTE

- *The theft-deterrent system operates with the key or the keyless entry system transmitter.*
- **(With advanced key)**  
*The theft-deterrent system can also be operated using the advanced keyless function.*  
*The system operates only when the driver is in the vehicle or within operational range while the advanced key is being carried.*
- *The system will not function unless it is properly armed. To properly secure the vehicle, always make sure all windows are completely closed and all doors and the trunk lid are locked before leaving the vehicle. Remember to take your key and transmitter.*

#### ▼ Operation

##### System triggering conditions

The horn sounds intermittently and the hazard warning lights flash for about 30 seconds when the system is triggered by any one of the following:

- Forcing open a door, the hood or the trunk lid.
- Unlocking a door with the inside door-lock knob.
- Unlocking a door with the door lock switch.
- Opening a door by operating an inside door-lock knob.

- Opening the hood by operating the hood release handle.
- **(Without advanced key)**  
Switching the ignition ON without the key.  
**(With advanced key)**  
Switching the ignition ON without using the push button start.
- Opening the trunk lid by operating the trunk lid release button.

If the system is triggered again, the lights and horn will activate until a door is unlocked or the trunk lid is opened with the key or with the transmitter.

#### **(With advanced key)**

The lights and horn can also be deactivated by unlocking a door using the sensor on the inside of the door handle.

#### NOTE

*If the battery goes dead while the theft-deterrent system is armed, the horn will activate and the hazard warning lights will flash when the battery is charged or replaced.*

#### ▼ How to Arm the System

1. Close the windows and the moonroof securely.
2. Remove the key from the ignition switch.  
**(With advanced key)**  
Press the push button start to off position, if the auxiliary key is inserted in the key slot, remove it.


3. Make sure all windows, the moonroof, the hood and the trunk lid are closed. Close and lock all doors and the trunk lid from the outside using the key. If you have the keyless entry system, press the lock button on the transmitter. The hazard warning lights will flash once to indicate that the system is armed.

The following method will also arm the theft-deterrent system:

**(With advanced key)**

Press a request switch on the doors or the lock button on the transmitter.

**(Without advanced key)**

Close the hood and the trunk lid. Press the area on the door-lock switch marked “” once. Close all doors.

The theft deterrent system can also be armed by activating the auto re-lock function with all the doors, the trunk lid and the hood closed.

4. After 20 seconds, the system is fully armed.

**NOTE**

- *The system will disarm if one of the following operations takes place within 20 seconds after closing the trunk lid/hood and locking all the doors:*
  - *Pressing the unlock button on the transmitter.*
  - *Any door or the trunk lid is opened.*
  - *Unlocking a door with the inside door-lock knob.*
  - *The hood is opened.*
  - *The key is inserted in the ignition switch.*
  - *The auxiliary key inserted into the key slot (With advanced key).*
  - *The push button start is pressed or a door is unlocked using the sensor on the inside of the door handle (With advanced key).*
  - *The ignition is switched ON.*
- *To rearm the system, do the arming procedure again.*
- *When the doors are locked by pressing the lock button on the transmitter or request switch on the front doors or using the key while the theft-deterrent system is armed, the hazard warning lights will flash once to indicate that the system is armed.*
- *There is nothing to sense that a window or the moonroof is open in the system, you must confirm the windows and moonroof before you activate the system, and be careful with the advanced key not to open the windows and moonroof unintentionally when unlocking the vehicle.*

**▼ To Turn Off an Armed System**

An armed system can be turned off by any one of the following methods:

- **Unlock a door with the key.**
- **Press the unlock button on the keyless entry system transmitter.**
- **The ignition is switched ON.**

## Security System

---

- **(With advanced key)**  
Unlock a door using the sensor on the inside of the door handle.

The hazard warning lights will flash twice to indicate that the system is turned off.

### **NOTE**

*When the doors are unlocked by pressing the unlock button on the transmitter or using the key while the theft-deterrent system is turned off, the hazard warning lights will flash twice to indicate that the system is turned off.*

### ▼ To Stop the Alarm

A triggered alarm can be turned off by any one of the following methods:

- Unlock a door with the key.
- Press the unlock button or press and hold the trunk button on the keyless entry system transmitter.
- The engine is started with the ignition key.
- **(With advanced key)**
  - Press the unlock button or press and hold the trunk button on the transmitter.
  - Unlock a door using the sensor on the inside of the door handle.
  - The engine is started with the push button start.

### **NOTE**

*If you have any problem with the theft-deterrent system, consult an Authorized Mazda Dealer.*

### ▼ Theft-Deterrent Labels



A label indicating that your vehicle is equipped with a Theft-Deterrent System is in the glove compartment.

Mazda recommends that you affix it to the lower rear corner of a front door window.

## Steering Wheel and Mirrors

### Steering Wheel

#### **⚠ WARNING**

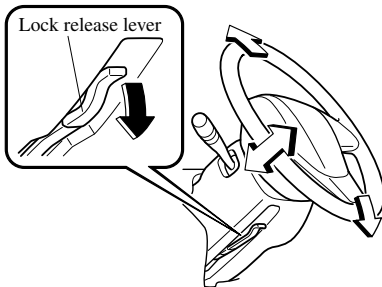
**Never adjust the steering wheel while the vehicle is moving:**

*Adjusting the steering wheel while the vehicle is moving is dangerous. Moving it can very easily cause the driver to abruptly turn to the left or right. This can lead to loss of control or an accident.*

#### ▼ Steering Wheel Adjustment

To change the angle or length of the steering wheel:

1. Stop the vehicle, pull down the lock release lever under the steering column.



2. Tilt the steering wheel and/or adjust the steering column length to the desired positions, push the lever up to lock the column.
3. Push the wheel up and down to be certain it's locked before driving.

### Mirrors

#### ▼ Outside Mirrors

Check the mirror angles before driving.

#### Mirror type

##### **Flat type (driver's side)**

Flat surface mirror.

##### **Convex type (front passenger side)**

The mirror has single curvature on its surface.

#### **⚠ WARNING**

**Be sure to look over your shoulder before changing lanes:**

*Changing lanes without looking over the appropriate shoulder is dangerous, particularly not taking the actual distance of the vehicle in the right convex mirror. You could have a serious accident. What you see in the convex mirror is closer than it appears.*

#### **Power mirror**

The ignition must be switched to ACC or ON .

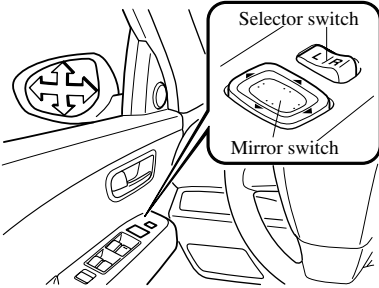
To adjust:

1. Press the left or right side of the selector switch to choose the left or right side mirror.



## Steering Wheel and Mirrors

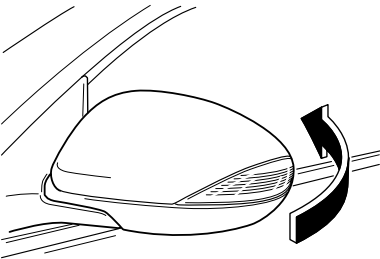
2. Depress the mirror switch in the appropriate direction.



After adjusting the mirror, lock the control by placing the selector switch in the center position.

### **Folding the mirror**\*

Fold the outside mirror rearward until it is flush with the vehicle .



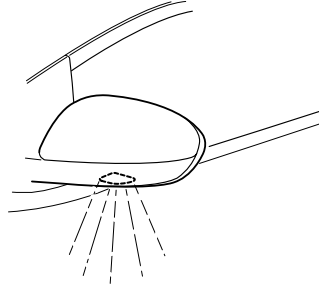
### **WARNING**

**Always return the outside mirrors to the driving position before you start driving:**

*Driving with the outside mirrors folded in is dangerous. Your rear view will be restricted, and you could have an accident.*

### **Ground illumination light**\*

The ground illumination light turns on or off when the illuminated entry system is on (page 6-143) .



### **Driver's side auto-dimming door mirror**\*

The movement of the auto-dimming door mirror is interlocked with the auto-dimming rearview mirror in the interior to automatically reduce glare from rear on-coming vehicles.

Refer to Rearview mirror on page 3-62.

### **NOTE**

*Front passenger-side door mirror does not have auto-dimming feature.*

### **▼ Rearview Mirror**

### **WARNING**

**Do not stack cargo or objects higher than the seatbacks:**

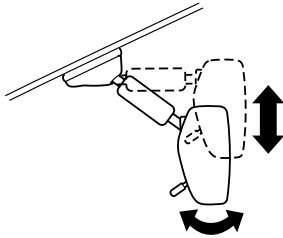
*Cargo stacked higher than the seatbacks is dangerous. It can block your view in the rearview mirror, which might cause you to hit another car when changing lanes.*

## Steering Wheel and Mirrors

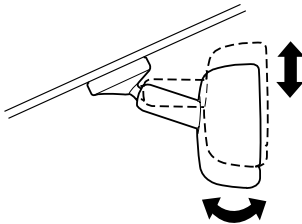
### **Rearview mirror adjustment**

Before driving, adjust the rearview mirror to center on the scene through the rear window.

### **Manual day/night mirror**



### **Auto-dimming mirror**



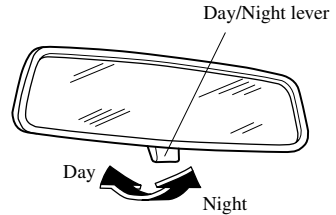
### ***NOTE***

*For the manual day/night mirror, perform the adjustment with the day/night lever in the day position.*

### **Reducing glare from headlights**

### **Manual day/night mirror**

Push the day/night lever forward for day driving. Pull it back to reduce glare of headlights from cars at the rear.

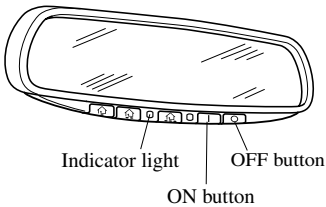


### **Auto-dimming mirror**

The auto-dimming mirror automatically reduces glare of headlights from cars at the rear when the ignition is switched ON. The door mirrors also adjust in conjunction with the interior rear view mirror.

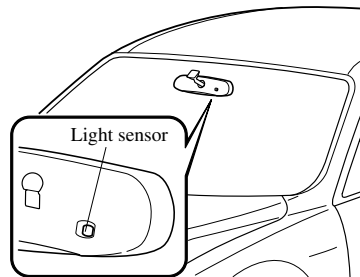
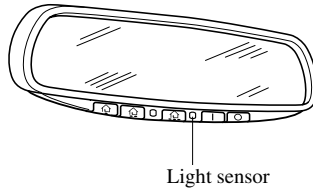
## Steering Wheel and Mirrors

Press the OFF button (○) to cancel the automatic dimming function. The indicator light will turn off.  
To reactivate the automatic dimming function, press the ON button (⊥). The indicator light will illuminate.



### NOTE

- Do not use glass cleaner or suspend objects on or around the light sensor. Otherwise, light sensor sensitivity will be affected and may not operate normally.



- For information regarding the 3 buttons (⏮, ⏪, ⏩) on the auto-dimming mirror; refer to HomeLink Wireless Control System (page 5-73).
- The auto-dimmer function is canceled when the ignition is switched ON and the shift lever/selector lever is in reverse (R).

# 4

## Before Driving Your Mazda

Important information about driving your Mazda.

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## Fuel and Engine Exhaust Precautions

### Fuel Requirements

Vehicles with catalytic converters or oxygen sensors must use **ONLY UNLEADED FUEL**, which will reduce exhaust emissions and keep spark plug fouling to a minimum.

Your Mazda will perform best with fuel listed in the table.

Fuel	Octane Rating* (Anti-knock index)
Regular unleaded fuel	87 [(R+M)/2 method] or above (91 RON or above)

\* U.S. federal law requires that octane ratings be posted on gasoline station pumps.

Fuel with a rating lower than 87 octane (91 RON) could cause the emission control system to lose effectiveness. It could also cause engine knocking and serious engine damage.

#### CAUTION

- **USE ONLY UNLEADED FUEL.**  
*Leaded fuel is harmful to the catalytic converter and oxygen sensors and will lead to deterioration of the emission control system and or failures.*
- *Your vehicle can only use oxygenated fuels containing no more than 10 % ethanol by volume. Damage to your vehicle may occur when ethanol exceeds this recommendation, or if the gasoline contains any methanol. Stop using gasohol of any kind if your vehicle engine is performing poorly.*
- *Never add fuel system additives. Never add cleaning agents other than those specified by Mazda. Other cleaning agents and additives may damage the system. Consult an Authorized Mazda Dealer.*

Gasoline blended with oxygenates such as alcohol or other compounds are generally referred to as oxygenated fuels. The common gasoline blend that can be used with your vehicle is ethanol blended at no more than 10%. Gasoline containing alcohol, such as ethanol or methanol, may be marketed under the name “Gasohol”.

Vehicle damage and drivability problems resulting from the use of the following may not be covered by the Mazda warranty.

- Gasohol containing more than 10% ethanol.
- Gasoline or gasohol containing methanol.
- Leaded fuel or leaded gasohol.

## Fuel and Engine Exhaust Precautions

### Emission Control System

Your vehicle is equipped with an emission control system (the catalytic converter is part of this system) that enables your vehicle to comply with existing exhaust emissions requirements.

#### **WARNING**

**Never park over or near anything flammable:**

*Parking over or near anything flammable, such as dry grass, is dangerous. Even with the engine turned off, the exhaust system remains very hot after normal use and could ignite anything flammable. A resulting fire could cause serious injury or death.*

#### **CAUTION**

*Ignoring the following precautions could cause lead to accumulate on the catalyst inside the converter or cause the converter to get very hot. Either condition will damage the converter and cause poor performance.*

- **USE ONLY UNLEADED FUEL.**
- *Do not drive your Mazda with any sign of engine malfunction.*
- *Do not coast with the ignition switched off.*
- *Do not descend steep grades in gear with the ignition switched off.*
- *Do not operate the engine at high idle for more than 5 minutes.*
- *Do not tamper with the emission control system. All inspections and adjustments must be made by a qualified technician.*
- *Do not push-start or pull-start your vehicle.*

#### **NOTE**

*Under U.S. federal law, any modification to the original-equipment emission control system before the first sale and registration of a vehicle is subject to penalties. In some states, such modification made on a used vehicle is also subject to penalties.*

#### **NOTE**

*After the vehicle has been driven a certain distance and the engine is turned off, the sound of a valve opening and closing can be heard. This does not indicate an abnormality. Your vehicle has a self-checking mechanism which operates after the engine is turned off.*

## Fuel and Engine Exhaust Precautions

---

### Engine Exhaust (Carbon Monoxide)

#### **WARNING**

**Do not drive your vehicle if you smell exhaust gas inside the vehicle:**

*Engine exhaust gas is dangerous. This gas contains carbon monoxide (CO), which is colorless, odorless, and poisonous. When inhaled, it can cause loss of consciousness and death. If you smell exhaust gas inside your vehicle, keep all windows fully open and contact an Authorized Mazda Dealer immediately.*

**Do not run the engine when inside an enclosed area:**

*Running the engine inside an enclosed area, such as a garage, is dangerous. Exhaust gas, which contains poisonous carbon monoxide, could easily enter the cabin. Loss of consciousness or even death could occur.*

**Open the windows or adjust the heating or cooling system to draw fresh air when idling the engine:**

*Exhaust gas is dangerous. When your vehicle is stopped with the windows closed and the engine running for a long time even in an open area, exhaust gas, which contains poisonous carbon monoxide, could enter the cabin. Loss of consciousness or even death could occur.*

**Clear snow from underneath and around your vehicle, particularly the tail pipe, before starting the engine:**

*Running the engine when a vehicle is stopped in deep snow is dangerous. The exhaust pipe could be blocked by the snow, allowing exhaust gas to enter the cabin. Because exhaust gas contains poisonous carbon monoxide, it could cause loss of consciousness or even death to occupants in the cabin.*

## Before Starting the Engine

---

### Before Getting In

- Be sure the windows, outside mirrors, and outside lights are clean.
- Inspect inflation pressures and condition of tires.
- Look under the vehicle for any sign of fluid leaks.
- If you plan to back up, make sure nothing is in your way.

#### **NOTE**

*Engine oil, engine coolant, brake/clutch fluid, washer fluid, and other fluid levels should be inspected. See Maintenance, Section 8.*

### After Getting In

- Are all doors closed and locked?
- Is the seat adjusted properly?
- Are the inside and outside mirrors adjusted?
- Is the steering wheel adjusted properly?
- Is everyone's seat belt fastened?
- Check all gauges.
- Check all warning lights when the ignition is switched ON.
- Release the parking brake and make sure the brake warning light goes off.

Always be thoroughly familiar with your Mazda.



## Driving Tips

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### Break-In Period

No special break-in is necessary, but a few precautions in the first 1,000 km (600 miles) may add to the performance, economy, and life of your Mazda.

- Do not race the engine.
- Do not maintain one constant speed, either slow or fast, for a long period of time.
- Do not drive constantly at full-throttle or high engine rpm for extended periods of time.
- Avoid unnecessary hard stops.
- Avoid full-throttle starts.

### Money-Saving Suggestions

How you operate your Mazda determines how far it will travel on a tank of fuel. Use these suggestions to help save money on fuel and repairs.

- Avoid long warm-ups. Once the engine runs smoothly, begin driving.
- Avoid fast starts.
- Keep the engine tuned. Follow the maintenance schedule (page 8-3) and have an Authorized Mazda Dealer perform inspections and servicing.
- Use the air conditioner only when necessary.
- Slow down on rough roads.
- Keep the tires properly inflated.
- Do not carry unnecessary weight.
- Do not rest your foot on the brake pedal while driving.
- Keep the wheels in correct alignment.
- Keep windows closed at high speeds.
- Slow down when driving in crosswinds and headwinds.

### WARNING

***Never stop the engine when going down a hill:***

*Stopping the engine when going down a hill is dangerous. This causes the loss of power steering and power brake control, and may cause damage to the drivetrain. Any loss of steering or braking control could cause an accident.*

## Hazardous Driving

### ⚠️ WARNING

**Be extremely careful if it is necessary to downshift on slippery surfaces:**

*Downshifting into lower gear while driving on slippery surfaces is dangerous. The sudden change in tire speed could cause the tires to skid. This could lead to loss of vehicle control and an accident.*

**Do not rely on ABS as a substitute for safe driving:**

*The ABS cannot compensate for unsafe and reckless driving, excessive speed, tailgating (following another vehicle too closely), driving on ice and snow, and hydroplaning (reduced tire friction and road contact because of water on the road surface). You can still have an accident.*

When driving on ice or in water, snow, mud, sand, or similar hazards:

- Be cautious and allow extra distance for braking.
- Avoid sudden braking and sudden maneuvering.
- Do not pump the brakes. Continue to press down on the brake pedal. Refer to Anti-Lock Brake System (ABS) on page 5-8.
- If you get stuck, select a lower gear and accelerate slowly. Do not spin the front wheels.
- For more traction in starting on slippery surfaces such as ice or packed snow, use sand, rock salt, chains, carpeting, or other nonslip material under the front wheels.

### NOTE

*Use snow chains only on the front wheels.*

## Floor Mat

### ⚠️ WARNING

**Make sure the floor mats are hooked on the retention pins to prevent them from bunching up under the foot pedals:**

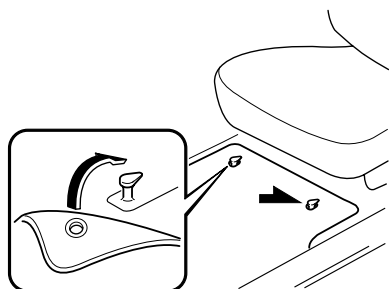
*Using a floor mat that is not secured is dangerous as it will interfere with the accelerator and brake pedal operation, which could result in an accident.*

**Do not install two floor mats, one on top of the other, on the driver's side:**

*Installing two floor mats, one on top of the other, on the driver's side is dangerous as the retention pins can only keep one floor mat from sliding forward.*

*In using a heavy duty floor mat for winter use always remove the original floor mat.*

*Loose floor mat(s) will interfere with the foot pedal and could result in an accident.*



When setting a floor mat, position the floor mat so that its eyelets are inserted over the pointed end of the retention posts.

## Driving Tips

---

### Rocking the Vehicle

#### WARNING

***Do not spin the wheels at more than 56 km/h (35 mph), and do not allow anyone to stand behind a wheel when pushing the vehicle:***

*When the vehicle is stuck, spinning the wheels at high speed is dangerous. The spinning tire could overheat and explode. This could cause serious injuries.*

#### CAUTION

*Too much rocking may cause engine overheating, transaxle failure, and tire damage.*

If you must rock the vehicle to free it from snow, sand or mud, depress the accelerator slightly and slowly move the shift lever from 1 (D) to R.

### Winter Driving

- Carry emergency gear, window scraper, flares, a small shovel, jumper cables, and a small bag of sand or salt. Ask an Authorized Mazda Dealer to perform the following precautions:
- Have the proper ratio of antifreeze in the radiator. Refer to Engine Coolant on page 8-22.
- Inspect the battery and its cables. Cold reduces battery capacity.
- Use only cold-weather engine oil (page 8-19).
- Inspect the ignition system for damage and loose connections.
- Use washer fluid made with antifreeze—but do not use engine coolant antifreeze for washer fluid (page 8-26).
- Do not use the parking brake in freezing weather as it may freeze. Instead, shift to P with an automatic transaxle and to 1 or R with a manual transaxle. Block the rear wheels.
- Do not apply excessive force to a window scraper when removing ice or frozen snow on the mirror glass and windshield.
- Never use warm or hot water for removing snow or ice from windows and mirrors as it could result in the glass cracking.
- Braking performance can be adversely affected if snow or ice adheres to the brake equipment. If this situation occurs, drive the vehicle slowly, releasing the accelerator pedal and lightly applying the brakes several times until the brake performance returns to normal.

## ▼ Snow Tires

### Use snow tires on all four wheels

Do not go faster than 120 km/h (75 mph) while driving with snow tires. Inflate snow tires 30 kPa (0.3 kgf/cm<sup>2</sup>, 4.3 psi) more than recommended on the tire pressure label (driver's door frame), but never more than the maximum cold-tire pressure shown on the tires.

Your vehicle is originally equipped with all season radials designed to be used all year around. In some extreme climates you may find it necessary to replace them with snow tires during the winter months to further improve traction on snow and ice covered roads.

### **⚠ WARNING**

**Use only the same size and type tires (snow, radial, or non-radial) on all four wheels:**

*Using tires different in size or type is dangerous. Your vehicle's handling could be greatly affected and result in an accident.*

### **⚠ CAUTION**

*Check local regulations before using studded tires.*

## ▼ Tire Chains

This vehicle cannot be operated with tire chains because it could cause interference with the vehicle body and scratching.

## Driving In Flooded Area

### **⚠ WARNING**

***Dry wet brakes by driving very slowly and applying the brakes lightly until brake performance returns to normal:***

*Driving with wet brakes is dangerous. Increased stopping distance or the vehicle pulling to one side when braking could result in a serious accident. Light braking will indicate whether the brakes have been affected.*

### **⚠ CAUTION**

*Do not drive the vehicle on flooded roads as it could cause short circuiting of electrical/electronic parts, or engine damage or stalling from water absorption. If the vehicle has been immersed in water, consult an Authorized Mazda Dealer.*

## Driving Tips

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### Overloading

#### **WARNING**

**Be careful not to overload your vehicle:**

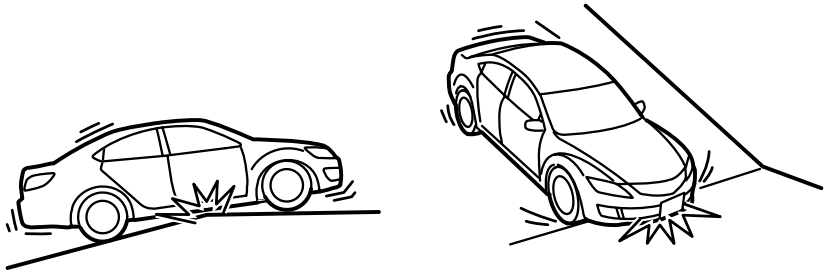
*The gross axle weight rating (GAWR) and the gross vehicle weight rating (GVWR) of your vehicle are on the Motor Vehicle Safety Standard Label on the driver's door frame. Exceeding these ratings can cause an accident or vehicle damage. You can estimate the weight of your load by weighing the items (or people) before putting them in the vehicle.*

## Driving on Uneven Road

Your vehicle's suspension and underbody can be damaged if driven on rough/uneven roads or over speed bumps at excessive speeds. Use care and reduce speed when traveling on rough/uneven roads or over speed bumps.

Use care not to damage the vehicle's underbody, bumpers or muffler(s) when driving under the following conditions:

- Ascending or descending a slope with a sharp transition angle
- Ascending or descending a driveway or trailer ramp with a sharp transition angle



Your vehicle is equipped with low profile tires allowing class-leading performance and handling. As a result, the sidewall of the tires are very thin and the tires and wheels can be damaged if driven through potholes or on rough/uneven roads at excessive speeds. Use care and reduce speed when traveling on rough/uneven roads or through potholes.

## Towing

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### Trailer Towing

The Mazda6 is not designed for towing.  
Never tow a trailer with your Mazda6.

# 5

## Driving Your Mazda

Explanation of instruments and controls.

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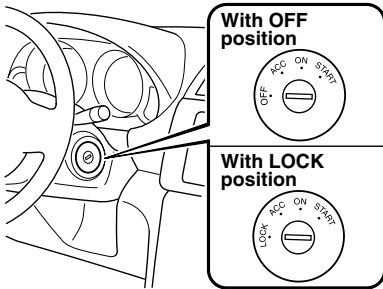
# Starting and Driving

## Ignition Switch

### With advanced key

Refer to “Starting the engine (page 3-10)” for information on how to use the ignition switch.

### ▼ Ignition Switch Positions (without Advanced Key)



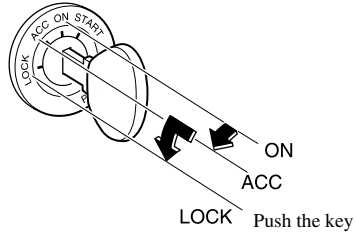
The engraved mark (LOCK) indicated in the illustration may differ from that indicated on the actual vehicle (it may read OFF).

### OFF/LOCK

The power supply to electrical devices is turned off. Only in this position can the key be removed.

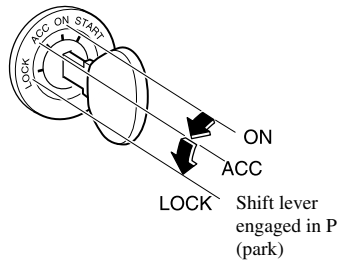
### Manual transaxle

To switch the ignition from ACC to OFF/LOCK, push the key in at the ACC position, then turn it to the OFF/LOCK position.



### Automatic transaxle

To switch the ignition from ACC to OFF/LOCK, the shift lever must be in the P position.



**⚠ WARNING**

**Remove the key only when the vehicle is parked (with steering lock mechanism):**

*Removing the key from the ignition switch while the vehicle is moving is dangerous. Removing the key allows the steering wheel to lock. You will lose steering control and a serious accident could occur.*

**Before leaving the driver's seat, always switch the ignition off, set the parking brake, and make sure the shift lever is in P (automatic transaxle) or in 1st gear or R (manual transaxle):**

*Leaving the driver's seat without switching the ignition off, setting the parking brake, and shifting the shift lever to P (automatic transaxle) or to 1st gear or R (manual transaxle) is dangerous. Unexpected vehicle movement could occur which could result in an accident.*

*In addition, if your intention is to leave the vehicle for even a short period, it is important to switch the ignition off, as leaving it in another position will disable some of the vehicle's security systems and run the battery down.*

**NOTE**

*If turning the key is difficult, move the steering wheel left and right.*

*Leaving the key in any position but the OFF/LOCK position also disables some of the security features and may run the battery down.*

**ACC (Accessory)**

In this position, some electrical accessories will operate.

**ON**

This is the normal running position after the engine is started. Some indicator lights/warning lights should be inspected before the engine is started (page 5-44).

**NOTE**

*When the ignition is switched ON, the sound of the fuel pump motor operating near the fuel tank can be heard. This does not indicate an abnormality.*

**START**

The engine is started in this position. It will crank until you release the key. It then returns to the ON position.

**▼ Ignition Key Reminder**

If the ignition is switched off or the ignition is switched to ACC with the key inserted, a continuous beep sound will be heard when the driver's door is opened.

## Starting and Driving

---

### Starting the Engine

#### **With advanced key**

Refer to “Starting the engine (page 3-10)” for information on how to start the engine.

#### **NOTE**

*Engine-starting is controlled by the spark ignition system.*

*This system meets all Canadian Interference-Causing Equipment Standard requirements regulating the impulse electrical field strength of radio noise.*

1. Occupants should fasten their seat belts.
2. Make sure the parking brake is on.
3. Depress the brake pedal.
4. **(Manual transaxle)**  
Depress the clutch pedal all the way and shift into neutral.  
Keep the clutch pedal depressed while cranking the engine.  
**(Automatic transaxle)**  
Put the vehicle in park (P). If you must restart the engine while the vehicle is moving, shift into neutral (N).

#### **NOTE**

##### **(Manual transaxle)**

*The starter will not operate unless the clutch is depressed sufficiently.*

##### **(Automatic transaxle)**

*The starter will not operate if the shift lever is not in P or N.*

5. Switch the ignition to START and hold (up to 10 seconds at a time) until the engine starts.

### **CAUTION**

*Do not try the starter for more than 10 seconds at a time. If the engine stalls or fails to start, wait 10 seconds before trying again. Otherwise, you may damage the starter and drain the battery.*

6. After starting the engine, let it idle for about 10 seconds.

#### **NOTE**

- *In extremely cold weather or after the vehicle has not been driven in several days, let the engine warm up without operating the accelerator.*
- *Whether the engine is cold or warm, it should be started without use of the accelerator.*
- *If the engine does not start the first time, refer to Starting a Flooded Engine under Emergency Starting. If the engine still does not start, have your vehicle inspected by an Authorized Mazda Dealer (page 7-15).*

## Turning the Engine Off

1. Stop the vehicle completely.
2. **(Manual transaxle)**  
Shift into neutral.  
**(Automatic transaxle)**  
Shift the shift lever to the P position.
3. **(Without Advanced Keyless Entry & Push Button Start System)**  
Switch the ignition from ON to OFF/LOCK.  
**(With Advanced Keyless Entry & Push Button Start System)**  
Press the push button start to turn off the engine.

### WARNING

**Do not stop the engine while the vehicle is moving:**

*Stopping the engine while the vehicle is moving for any reason other than in an emergency is dangerous.*

*Stopping the engine while the vehicle is moving will result in reduced maneuverability and braking ability due to the loss of power steering and power braking, which could cause an accident and serious injury.*

### CAUTION

*When leaving the vehicle, make sure the ignition is switched off.*

## Brake System

### ▼ Foot Brake

Your Mazda has power-assisted brakes that adjust automatically through normal use.

Should power-assist fail, you can stop by applying greater force than normal to the brake pedal. But the distance required to stop will be greater than usual.

## Starting and Driving

---

### **⚠ WARNING**

**Do not coast with the engine stalled or turned off, find a safe place to stop:**

Coasting with the engine stalled or turned off is dangerous. Braking will require more effort, and the brake's power-assist could be depleted if you pump the brake. This will cause longer stopping distances or even an accident.

**Shift to a lower gear when going down steep hills:**

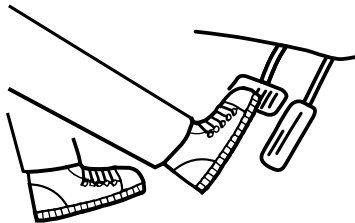
Driving with your foot continuously on the brake pedal or steadily applying the brakes for long distances is dangerous. This causes overheated brakes, resulting in longer stopping distances or even total brake failure. This could cause loss of vehicle control and a serious accident. Avoid continuous application of the brakes.

**Dry off brakes that have become wet by driving slowly, releasing the accelerator pedal and lightly applying the brakes several times until the brake performance returns to normal:**

Driving with wet brakes is dangerous. Increased stopping distance or the vehicle pulling to one side when braking could result in a serious accident. Light braking will indicate whether the brakes have been affected.

### **⚠ CAUTION**

- Do not drive with your foot held on the clutch pedal or brake pedal, or hold the clutch pedal depressed halfway unnecessarily. Doing so could result in the following:
  - The clutch and brake parts will wear out more quickly.
  - The brakes can overheat and adversely affect brake performance.
- Always depress the brake pedal with the right foot. Applying the brakes with the unaccustomed left foot could slow your reaction time to an emergency situation resulting in insufficient braking operation.



- Wear shoes appropriate for driving in order to avoid your shoe contacting the brake pedal when depressing the accelerator pedal.

### ▼ Parking Brake

#### **⚠ WARNING**

*Before leaving the driver's seat, always switch the ignition off, set the parking brake, and make sure the shift lever is in P (automatic transaxle) or in 1st gear or R (manual transaxle):*

*Leaving the driver's seat without switching the ignition off, setting the parking brake, and shifting the shift lever to P (automatic transaxle) or to 1st gear or R (manual transaxle) is dangerous. Unexpected vehicle movement could occur which could result in an accident.*

*In addition, if your intention is to leave the vehicle for even a short period, it is important to switch the ignition off, as leaving it in another position will disable some of the vehicle's security systems and run the battery down.*

#### **⚠ CAUTION**

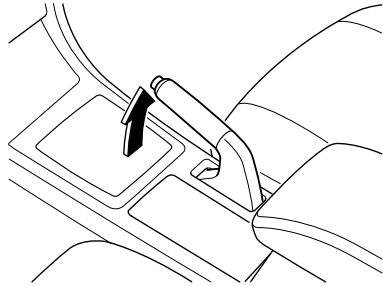
*Driving with the parking brake on will cause excessive wear of the brake linings or pads.*

#### **NOTE**

*For parking in snow, refer to Winter Driving (page 4-8) regarding parking brake use.*

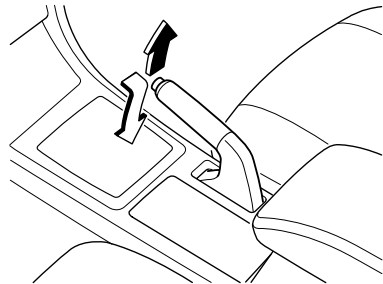
### Setting the parking brake

Depress the brake pedal and then firmly pull the parking brake lever fully upwards with sufficient force to hold the vehicle in a stationary position.



### Releasing the parking brake

Depress the brake pedal and pull the parking brake lever upwards, then press the release button. While holding the button, lower the parking brake lever all the way down to the released position.



## Starting and Driving

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### ▼ Brake System Warning Light



This warning has the following functions:

#### **Brake system warning (2.5-liter engine)**

Illuminates when there is a malfunction in the brake switch.

#### **Parking brake warning**

The light illuminates when the parking brake is applied with the ignition switched to START or ON. It turns off when the parking brake is fully released.

#### **Low brake fluid level warning**

If the light stays on after the parking brake is fully released, you may have a brake problem.

Drive to the side of the road and park off the right-of-way.

You may notice that the pedal is harder to depress or that it may go closer to the floor. In either case, it will take longer to stop the vehicle.

1. With the engine stopped, open the hood and check the brake fluid level immediately, and then add fluid if required (page 8-24).
2. After adding fluid, check the light again.

If the warning light remains on, or if the brakes do not operate properly, do not drive the vehicle. Have it towed to an Authorized Mazda Dealer.

Even if the light turns off have your brake system inspected as soon as possible by an Authorized Mazda Dealer.

#### **NOTE**

*Having to add brake fluid is sometimes an indicator of leakage. Consult an Authorized Mazda Dealer as soon as possible even if the brake light is no longer illuminated.*

### **⚠ WARNING**

**Do not drive with the brake system warning light illuminated. Contact an Authorized Mazda Dealer to have the brakes inspected as soon as possible:**

*Driving with the brake system warning light illuminated is dangerous. It indicates that your brakes may not work at all or that they could completely fail at any time. If this light remains illuminated, after checking that the parking brake is fully released, have the brakes inspected immediately.*

### ▼ Anti-Lock Brake System (ABS)

The ABS control unit continuously monitors the speed of each wheel. If one is about to lock up, the ABS responds by automatically releasing and reapplying that wheel's brake.

The driver will feel a slight vibration in the brake pedal and may hear a chattering noise from the brake system. This is normal when the ABS operates. Continue to depress the brake pedal without pumping the brakes.

## Starting and Driving

### WARNING

**Do not rely on ABS as a substitute for safe driving:**

*The ABS cannot compensate for unsafe and reckless driving, excessive speed, tailgating (following another vehicle too closely), driving on ice and snow, and hydroplaning (reduced tire friction and road contact because of water on the road surface). You can still have an accident.*

#### NOTE

- *Braking distances may be longer on loose surfaces (snow or gravel, for example) which usually have a hard foundation. A vehicle with a normal braking system may require less distance to stop under these conditions because the tires will build up a wedge of surface layer when the wheels skid.*
- *The sound of the ABS operating may be heard when starting the engine or immediately after starting the vehicle. However, it does not indicate a malfunction.*

#### ▼ ABS Warning Light



The warning light stays on for a few seconds when the ignition is switched ON.

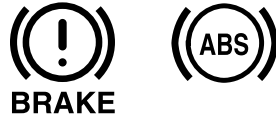
If the ABS warning light stays on while you're driving, the ABS control unit has detected a system malfunction. If this occurs, your brakes will function normally as if the vehicle had no ABS. Should this happen, consult an Authorized Mazda Dealer as soon as possible.

#### NOTE

*When the engine is jump-started to charge the battery, uneven rpm occurs and the ABS warning light may illuminate. If this occurs, it is the result of the weak battery and does not indicate an ABS malfunction.*

*Recharge the battery.*

#### ▼ Electronic Brake Force Distribution System Warning



If the electronic brake force distribution control unit determines that some components are operating incorrectly, the control unit may illuminate the brake system warning light and the ABS warning light on simultaneously. The problem is likely to be the electronic brake force distribution system.



## Starting and Driving

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### **⚠ WARNING**

**Do not drive with both the ABS warning light and brake warning light illuminated. Have the vehicle towed to an Authorized Mazda Dealer to have the brakes inspected as soon as possible:**

*Driving when the brake system warning light and ABS warning light are illuminated simultaneously is dangerous.*

*When both lights are illuminated, the rear wheels could lock more quickly in an emergency stop than under normal circumstances.*

### **▼ Brake Assist**

During emergency braking situations when it is necessary to depress the brake pedal with greater force, the brake assist system provides braking assistance, thus enhancing braking performance.

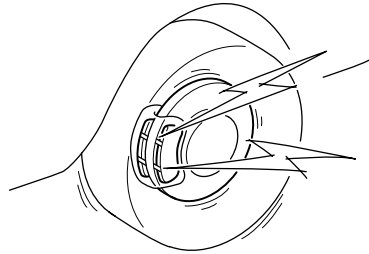
When the brake pedal is depressed hard or depressed more quickly, the brakes apply more firmly.

#### **NOTE**

- *When the brake pedal is depressed hard or depressed more quickly, the pedal will feel softer but the brakes will apply more firmly. This is a normal effect of the brake assist operation and does not indicate an abnormality.*
- *When the brake pedal is depressed hard or depressed more quickly, a motor/pump operation noise may be heard. This is a normal effect of the brake assist and does not indicate an abnormality.*
- *The brake assist equipment does not supersede the functionality of the vehicle's main braking system.*

### **▼ Brake Pad Wear Indicator**

When the disc brake pads become worn, the built-in wear indicators contact the disc plates. This causes a loud screeching noise to warn that the pads should be replaced.



When you hear this noise, consult an Authorized Mazda Dealer as soon as possible.

### **⚠ WARNING**

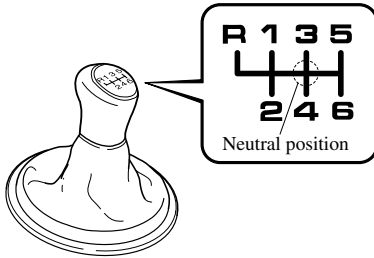
**Do not drive with worn disc pads:**

*Driving with worn disc pads is dangerous. The brakes could fail and cause a serious accident. As soon as you hear a screeching noise consult an Authorized Mazda Dealer.*

## Starting and Driving

### Manual Transaxle Operation

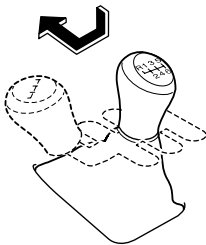
#### ▼ Manual Transaxle Shift Pattern



The shift pattern of the transaxle is conventional, as shown.

Depress the clutch pedal all the way down while shifting; then release it slowly.

Your vehicle is equipped with a device to prevent shifting to R (reverse) by mistake. Push the shift lever downward and shift to R.



### ⚠ WARNING

**Do not use sudden engine braking on slippery road surfaces or at high speeds:**

*Shifting down while driving on wet, snowy, or frozen roads, or while driving at high speeds causes sudden engine braking, which is dangerous. The sudden change in tire speed could cause the tires to skid. This could lead to loss of vehicle control and an accident.*

**Be sure to leave the shift lever in 1 or R position and set the parking brake when leaving the vehicle unattended:**

*Otherwise the vehicle could move and cause an accident.*

### ⚠ CAUTION

- *Keep your foot off the clutch pedal except when shifting gears. Also, do not use the clutch to hold the vehicle on an upgrade. Riding the clutch will cause needless clutch wear and damage.*
- *Do not apply any excessive lateral force to the gear lever when changing from 5th to 4th gear. This could lead to the accidental selection of 2nd gear, which can result in damage to the transaxle.*
- *Make sure the vehicle comes to a complete stop before shifting to R. Shifting to R while the vehicle is still moving may damage the transaxle.*

### NOTE

*If shifting to R is difficult, shift back into neutral, release the clutch pedal, and try again.*

# Starting and Driving

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## ▼ Recommendations for Shifting

### Upshifting

For normal acceleration, we recommend these shift points.

Gear	Vehicle speed
1 to 2	24 km/h (15 mph)
2 to 3	43 km/h (27 mph)
3 to 4	56 km/h (35 mph)
4 to 5	72 km/h (45 mph)
5 to 6	90 km/h (56 mph)

For cruising

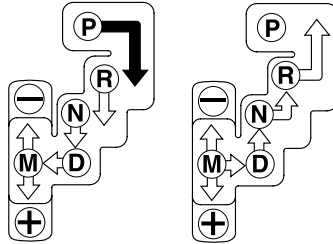
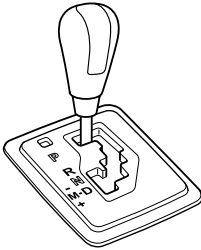
Gear	Vehicle speed
1 to 2	16 km/h (10 mph)
2 to 3	32 km/h (20 mph)
3 to 4	48 km/h (30 mph)
4 to 5	60 km/h (37 mph)
5 to 6	71 km/h (44 mph)

### Downshifting

When you must slow down in heavy traffic or on a steep **upgrade**, downshift before the engine starts to overwork. This reduces the chance of stalling and gives better acceleration when you need more speed.

On a steep **downgrade**, downshifting helps maintain safe speed and prolongs brake life.

## Automatic Transaxle Controls



### Various Lockouts:



Indicates that you must depress the brake pedal to shift (The ignition must be switched to ACC or ON).



Indicates the shift lever can be shifted freely into any position.

### **NOTE**

*The Sport AT has an option that is not included in the traditional automatic transaxle giving the driver the option of selecting each gear instead of leaving it to the transaxle to shift gears. Even if you intend to use the automatic transaxle functions as a traditional automatic, you should also be aware that you can inadvertently shift into manual shift mode and an inappropriate gear may be retained as the vehicle speed increases. If you notice the engine speed going higher or hear the engine racing, confirm you have not accidentally slipped into manual shift mode (page 5-16).*

## Starting and Driving

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### ▼ Transaxle Ranges

The shift lever must be in P or N to operate the starter.

#### **P (Park)**

P locks the transaxle and prevents the front wheels from rotating.

#### **⚠ WARNING**

**Always set the shift lever to P and set the parking brake:**

*Only setting the shift lever to the P position without using the parking brake to hold the vehicle is dangerous. If P fails to hold, the vehicle could move and cause an accident.*

#### **⚠ CAUTION**

- *Shifting into P, N or R while the vehicle is moving can damage your transaxle.*
- *Shifting into a driving gear or reverse when the engine is running faster than idle can damage the transaxle.*

#### **R (Reverse)**

In position R, the vehicle moves only backward. You must be at a complete stop before shifting to or from R, except under rare circumstances as explained in *Rocking the Vehicle* (page 4-8).

#### **N (Neutral)**

In N, the wheels and transaxle are not locked. The vehicle will roll freely even on the slightest incline unless the parking brake or brakes are on.

#### **⚠ WARNING**

**If the engine is running faster than idle, do not shift from N or P into a driving gear:**

*It's dangerous to shift from N or P into a driving gear when the engine is running faster than idle. If this is done, the vehicle could move suddenly, causing an accident or serious injury.*

**Do not shift into N when driving the vehicle:**

*Shifting into N while driving is dangerous. Engine braking cannot be applied when decelerating which could lead to an accident or serious injury.*

#### **⚠ CAUTION**

**Do not shift into N when driving the vehicle. Doing so can cause transaxle damage.**

#### **NOTE**

*Apply the parking brake or depress the brake pedal before moving the shift lever from N to prevent the vehicle from moving unexpectedly.*

#### **D (Drive)**

D is the normal driving position. From a stop, the transaxle will automatically shift through a 5-gear/6-gear\* sequence.

\* 3.7-liter engine

#### **M (Manual)**

M is the manual shift mode position.

Gears can be shifted up or down by operating the shift lever.

Refer to Manual Shift Mode (page 5-16).

### ▼ Active Adaptive Shift (AAS)

Active Adaptive Shift (AAS) automatically controls the transaxle shift points to best suit the road conditions and driver input. This optimizes engine performance and improves driving comfort. When cornering the vehicle, AAS mode will hold the transaxle in the gear the vehicle was in before entering the curve, allowing the vehicle to be accelerated from the same gear after exiting the curve.

If the driver accelerates rapidly, or accelerates and decelerates rapidly by operating the accelerator and brake pedal for a certain period of time while the selector lever is in the D position, AAS mode could activate. When this occurs, AAS mode will maintain the transaxle in the optimum gear and the driver may sense that the transaxle is not shifting, however this does not indicate an abnormality.

### ▼ Shift-Lock System

**The shift-lock system prevents shifting out of P unless the brake pedal is depressed.**

To shift from P:

1. Depress and hold the brake pedal.
2. Start the engine.
3. Move the shift lever.

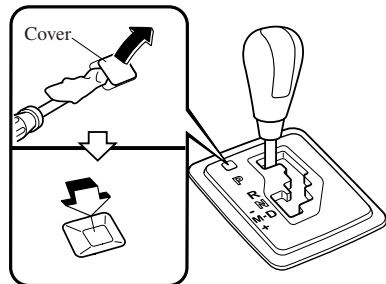
### NOTE

- *When the ignition is switched off, the shift lever cannot be shifted from P.*
- *To be sure the vehicle is in park, the ignition key cannot be removed unless the shift lever is in P.*
- *(With Advanced Key)  
The ignition cannot be switched from ACC to OFF when the shift lever is not in P.*

### ▼ Shift-Lock Override

If the shift lever will not move from P using the proper shift procedure, continue to hold down the pedal.

1. Remove the shift-lock override cover using a cloth-wrapped flat head screwdriver.
2. Insert a screwdriver and push it down.



3. Move the shift lever.
4. Take the vehicle to an Authorized Mazda Dealer to have the system checked.

# Starting and Driving

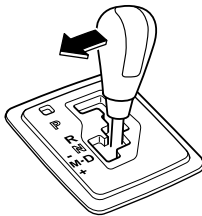
## ▼ Manual Shift Mode

This mode gives you the feel of driving a manual transaxle vehicle by operating the shift lever and allows you to control engine rpm and torque to the front wheels much like a manual transaxle when more control is desired.

To change to manual shift mode, shift the lever from D to M.

### NOTE

*Changing to manual shift mode while driving will not damage the transaxle.*



To return to automatic shift mode, shift the lever from M to D.

### NOTE

- If you change to manual shift mode when the vehicle is stopped, the gear will shift to M1.
- If you change to manual shift mode without depressing the accelerator pedal when driving in D range, 5th gear, the gear will shift to M4.
- (3.7-liter engine model)  
If you change to manual shift mode without depressing the accelerator pedal when driving in D range, 6th gear, the gear will shift to M5.

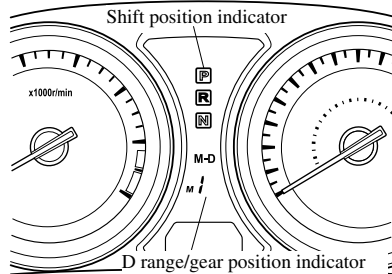
## Indicators

### Shift position indicator

In manual shift mode, the “M” of the shift position indicator in the instrument panel illuminates.

### Gear position indicator

The numeral for the selected gear illuminates.



### NOTE

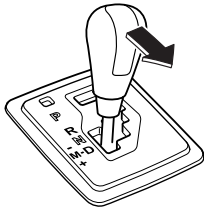
- If the gears cannot be shifted down when driving at higher speeds, the gear position indicator will flash twice to signal that the gears cannot be shifted down (to protect the transaxle).
- (2.5-liter engine model)  
If the automatic transaxle fluid (ATF) temperature becomes too high, there is the possibility that the transaxle will switch to automatic shift mode, canceling manual shift mode and turning off the gear position indicator illumination. This is a normal function to protect the AT. After the ATF temperature has decreased, the gear position indicator illumination turns back on and driving in manual shift mode is restored.

## Shifting

### Manually Shifting up

(M1 → M2 → M3 → M4 → M5 → M6\*)

To shift up to a higher gear, tap the shift lever back (←) once.



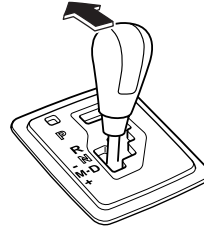
### NOTE

- When driving slowly, the gears may not shift up.
- In manual shift mode, gears do not shift up automatically. Do not run the engine with the tachometer needle in the RED ZONE. If the tachometer needle enters the RED ZONE, you may feel engine-braking because the fuel delivery will be stopped to protect the engine. However, this does not indicate an abnormality.
- When depressing the accelerator fully, the transaxle will shift to a lower gear, depending on vehicle speed.

### Manually Shifting down

(M6\* → M5 → M4 → M3 → M2 → M1)

To shift down to a lower gear, tap the shift lever forward (→) once.



## ⚠ WARNING

**Do not use engine braking on slippery road surfaces or at high speeds:**

Shifting down while driving on wet, snowy, or frozen roads, or while driving at high speeds causes sudden engine braking, which is dangerous. The sudden change in tire speed could cause the tires to skid. This could lead to loss of vehicle control and an accident.

### NOTE

- When driving at high speeds, the gear may not shift down depending on vehicle speed.
- During deceleration, the gear may automatically shift down depending on vehicle speed.
- When depressing the accelerator fully, the transaxle will shift to a lower gear, depending on vehicle speed.



# Starting and Driving

## Second gear fixed mode

When the shift lever is tapped back (+) while the vehicle is stopped or driven at about 12 km/h (7.5 mph) or less, the transaxle is set in the second gear fixed mode. The gear is fixed in second while in this mode for easier starting and driving on slippery roads. If the shift lever is tapped back (+) or forward (-) while in the second gear fixed mode, the mode will be canceled.

## Shifting specification

### Shifting up

If the vehicle speed is lower than the speed specified for each gear, the gear cannot be shifted up to a higher gear.

Gear	Vehicle speed	
	2.5-liter engine model	3.7-liter engine model
M1 → M2	You can shift up to M2 whether the vehicle is stopped or moving.	
M2 → M3	20.9 km/h (13.0 mph)	15.6 km/h (9.70 mph)
M3 → M4	35.8 km/h (22.3 mph)	32.0 km/h (19.9 mph)
M4 → M5		43.8 km/h (27.3 mph)
M5 → M6	—	56.6 km/h (35.2 mph)

### Shifting down

If the vehicle speed is higher than the speed specified for each gear, the gear cannot be shifted to a lower gear so as to protect the transaxle.

Gear	Vehicle speed	
	2.5-liter engine model	3.7-liter engine model
M6 → M5	—	230 km/h (142 mph)
M5 → M4	210 km/h (130 mph)	194.9 km/h (121.1 mph)
M4 → M3	143 km/h (88.8 mph)	135.2 km/h (84.0 mph)
M3 → M2	89.9 km/h (55.8 mph)	85.3 km/h (53.0 mph)
M2 → M1	47.5 km/h (29.5 mph)	42.3 km/h (26.2 mph)

### NOTE

Regarding the vehicle speed at the highest gear indicated above, achieving this speed may not actually be possible depending on various driving conditions such as the wind, upslope, and road surface.

During deceleration, the gears shift down automatically when speed is reduced to the following:

Gear	Vehicle speed	
	2.5-liter engine model	3.7-liter engine model
M6 → M5	—	53.5 km/h (33.2 mph)
M5 → M4	32.6 km/h (20.2 mph)	40.7 km/h (25.2 mph)
M4 → M3		28.9 km/h (17.9 mph)
M3 or M2 → M1	10 km/h (6 mph)	7.5 km/h (4.6 mph)

### NOTE

The gear does not shift down to M1 automatically while in the second gear fixed mode.

If the vehicle is kicked down at the following speeds or lower, the gears shift down automatically:

Gear	Vehicle speed	
	2.5-liter engine model	3.7-liter engine model
M6 → M5	—	230 km/h (142 mph)
M5 → M4	199 km/h (123 mph)	172.7 km/h (107.3 mph)
M4 → M3	133 km/h (82.6 mph)	74.9 km/h (46.5 mph)
M3 → M2	79.7 km/h (49.5 mph)	48.9 km/h (30.3 mph)

### Recommendations for shifting

#### Upshifting

For normal acceleration and cruising, we recommend these shift points.

Gear	Vehicle speed	
	2.5-liter engine model	3.7-liter engine model
M1 to M2	24 km/h (15 mph)	24 km/h (15 mph)
M2 to M3	40 km/h (25 mph)	40 km/h (25 mph)
M3 to M4	65 km/h (40 mph)	65 km/h (40 mph)
M4 to M5	73 km/h (45 mph)	73 km/h (45 mph)
M5 to M6	—	80 km/h (50 mph)

#### Downshifting

When you must slow down in heavy traffic or on a steep **upgrade**, downshift before the engine starts to overwork. This gives better acceleration when you need more speed.

On a steep **downgrade**, downshifting helps maintain safe speed and prolongs brake life.

### ▼ Driving Tips

#### **⚠ WARNING**

*Do not allow the vehicle to move in reverse on an up-slope while the selector lever is in a forward gear position, or move forward on a down-slope while the selector lever is in the reverse position.*

*Otherwise, the engine will stop, causing the loss of the power brake and power steering functions, and make it difficult to control the vehicle which could result in an accident.*

#### Passing

For extra power when passing another vehicle or climbing steep grades, depress the accelerator fully. The transaxle will shift to a lower gear, depending on vehicle speed.

#### Climbing steep grades from a stop

To climb a steep grade from a stopped position:

1. Depress the brake pedal.
2. Shift to D or M1, depending on the load weight and grade steepness.
3. Release the brake pedal while gradually accelerating.

#### Descending steep grades

When descending a steep grade, shift to lower gears, depending on load weight and grade steepness. Descend slowly, using the brakes only occasionally to prevent them from overheating.

## Starting and Driving

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### Power Steering

Power steering is only operable when the engine is running. If the engine is off or if the power steering system is inoperable, you can still steer, but it requires more physical effort.

If the steering feels stiffer than usual during normal driving, consult an Authorized Mazda Dealer.

#### CAUTION

*Never hold the steering wheel to the extreme left or right for more than 5 seconds with the engine running. This could damage the power steering system.*

### Cruise Control\*

With cruise control, you can set and automatically maintain any speed of more than about 32 km/h (20 mph).

#### WARNING

***Do not use the cruise control under the following conditions:***

*Using the cruise control under the following conditions is dangerous and could result in loss of vehicle control.*

- *Hilly terrain*
- *Steep inclines*
- *Heavy or unsteady traffic*
- *Slippery or winding roads*
- *Similar restrictions that require inconsistent speed*

▼ **Cruise Main Indicator Light (Amber)/Cruise Set Indicator Light (Green)**

## CRUISE

The indicator light has two colors.

#### **Cruise Main Indicator Light (Amber)**

The indicator light illuminates amber when the ON switch is pressed and the cruise control system is activated.

#### **Cruise Set Indicator Light (Green)**

The indicator light illuminates green when a cruising speed has been set.

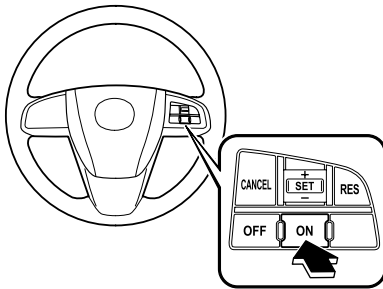
### ▼ Activation/Deactivation

To activate the system, press the ON switch.

The cruise main indicator light illuminates.

To deactivate the system, press the OFF switch.

The cruise main indicator light turns off.



### ▲ WARNING

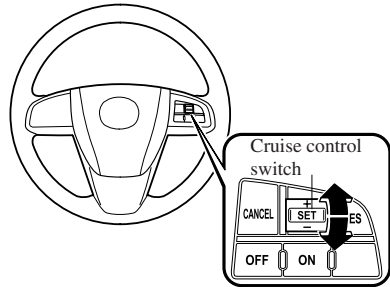
**Always turn off the cruise control system when it is not in use:**

*Leaving the cruise control system in an activation-ready state while the cruise control is not in use is dangerous as the cruise control could unexpectedly activate if the activation button is accidentally pressed, and result in loss of vehicle control and an accident.*

### ▼ To Set Speed

1. Activate the cruise control system by pressing the ON switch.
2. Accelerate to the desired speed, which must be more than 32 km/h (20 mph).

3. Set the cruise control by pressing the cruise control SET + /SET - switch up or down at the desired speed. The cruise control is set at the moment the cruise control SET + /SET - switch is pressed up or down. Release the accelerator pedal simultaneously.



### NOTE

- Release the cruise control switch at the desired speed, otherwise the speed will continue increasing while the switch is pressed up, and continue decreasing while it is pressed down (except when the accelerator pedal is depressed).
- On a steep grade, the vehicle may momentarily slow down while ascending, or speed up while descending.
- Cruise control will turn off if the vehicle speed decreases below about 27 km/h (17 mph) when cruise is activated, such as when climbing a steep grade.

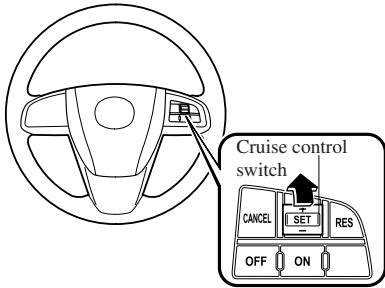
# Starting and Driving

## ▼ To Increase Cruising Speed

Follow either of these procedures.

### To increase speed using cruise control switch

Press up the cruise control SET + switch and hold it. Your vehicle will accelerate. Release the switch at the speed you want.

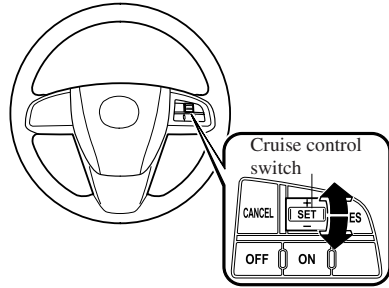


Your vehicle has a tap-up feature that allows you to increase your current speed in increments of 1.6 km/h (1 mph) by a momentary tap of the cruise control SET + switch. Multiple taps will increase your vehicle speed 1.6 km/h (1 mph) for each tap.

### To increase speed using accelerator pedal

Depress the accelerator pedal to accelerate to the desired speed.

Press down or press up on the cruise control SET + /SET - switch and release it immediately.



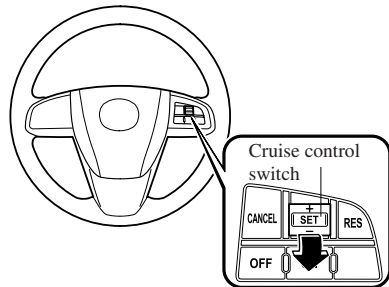
### **NOTE**

*Accelerate if you want to speed up temporarily when the cruise control is on. Greater speed will not interfere with or change the set speed. Take your foot off the accelerator to return to the set speed.*

## ▼ To Decrease Cruising Speed

Press down the cruise control SET - switch and hold it. The vehicle will gradually slow.

Release the switch at the speed you want.

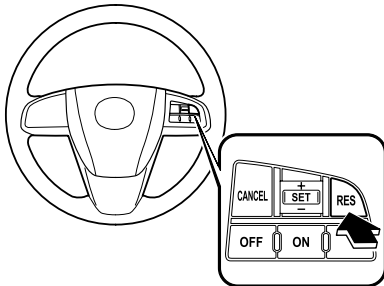


Your vehicle has a tap-down feature that allows you to decrease your current speed in decrements of 1.6 km/h (1 mph) by a momentary tap of the cruise control SET- switch. Multiple taps will decrease your vehicle speed 1.6 km/h (1 mph) for each tap.

### ▼ To Resume Cruising Speed at More Than 32 km/h (20 mph)

If some other method besides the OFF switch was used to cancel cruising speed (such as applying the brake pedal) and the system is still activated, the most recent set speed will automatically resume when the RES switch is pressed.

If vehicle speed is below 32 km/h (20 mph), increase the vehicle speed up to 32 km/h (20 mph) or more and press the RES switch.

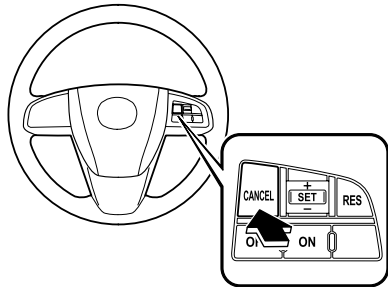


### ▼ To Cancel

To cancel the system, use **one** of these methods:

- Press the OFF switch.
- Slightly depress the brake pedal.
- Depress the clutch pedal (Manual transaxle only).

- Press the CANCEL switch.



The system turns off when the ignition is switched off.

### NOTE

*Cruise control will cancel at about 15 km/h (9 mph) below the preset speed (such as may happen when climbing a long, steep grade).*

## Starting and Driving

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### Traction Control System (TCS)

The Traction Control System (TCS) enhances traction and safety by controlling engine torque and braking. When the TCS detects driving wheel slippage, it lowers engine torque and operates the brakes to prevent loss of traction.

This means that on a slick surface, the engine adjusts automatically to provide optimum power to the drive wheels, limiting wheel spin and loss of traction.

#### **⚠ WARNING**

**Do not rely on the traction control system as a substitute for safe driving:**

*The traction control system (TCS) cannot compensate for unsafe and reckless driving, excessive speed, tailgating (following another vehicle too closely), and hydroplaning (reduced tire friction and road contact because of water on the road surface). You can still have an accident.*

**Use snow tires and drive at reduced speeds when roads are covered with ice and/or snow:**

*Driving without proper traction devices on snow and/or ice-covered roads is dangerous. The traction control system (TCS) alone cannot provide adequate traction and you could still have an accident.*

#### **NOTE**

*To turn off the TCS, press the DSC OFF switch (page 5-26).*

### ▼ TCS/DSC Indicator Light



This indicator light stays on for a few seconds when the ignition is switched ON. If the TCS or DSC is operating, the indicator light flashes.

If the light stays on, the TCS, DSC or the brake assist system may have a malfunction and they may not operate correctly. Take your vehicle to an Authorized Mazda Dealer.

#### **NOTE**

- *In addition to the indicator light flashing, a slight lugging sound will come from the engine. This indicates that the TCS is operating properly.*
- *On slippery surfaces, such as fresh snow, it will be impossible to achieve high rpm when the TCS is on.*

## Dynamic Stability Control (DSC)

The Dynamic Stability Control (DSC) automatically controls braking and engine torque in conjunction with systems such as ABS and TCS to help control side slip when driving on slippery surfaces, or during sudden or evasive maneuvering, enhancing vehicle safety.

Refer to ABS (page 5-8) and TCS (page 5-24).

DSC operation is possible at speeds greater than 15 km/h (9 mph).

### **⚠ WARNING**

***Do not rely on the dynamic stability control as a substitute for safe driving:***

*The dynamic stability control (DSC) cannot compensate for unsafe and reckless driving, excessive speed, tailgating (following another vehicle too closely), and hydroplaning (reduced tire friction and road contact because of water on the road surface). You can still have an accident.*

### **⚠ CAUTION**

- *The DSC may not operate correctly unless the following are observed:*
  - *Use tires of the correct size specified for your Mazda on all four wheels.*
  - *Use tires of the same manufacturer, brand and tread pattern on all four wheels.*
  - *Do not mix worn tires.*
- *The DSC may not operate correctly when a temporary spare tire is installed because the tire diameter changes.*

### ▼ TCS/DSC Indicator Light



This indicator light stays on for a few seconds when the ignition is switched ON. If the TCS or DSC is operating, the indicator light flashes.

If the light stays on, the TCS, DSC or the brake assist system may have a malfunction and they may not operate correctly. Take your vehicle to an Authorized Mazda Dealer.



## Starting and Driving

### ▼ DSC OFF Indicator Light



This indicator light stays on for a few seconds when the ignition is switched ON.

It also illuminates when the DSC OFF switch is pressed and TCS/DSC is switched off (page 5-26).

If the light stays on when the TCS/DSC is not switched off, take your vehicle to an Authorized Mazda Dealer. The dynamic stability control may have a malfunction.

#### **NOTE**

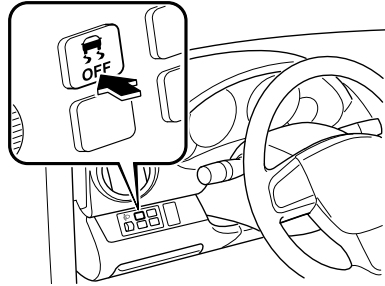
*If the battery is disconnected or a fuse is replaced, the DSC will be inoperable. In this case, the DSC OFF indicator light flashes and the TCS/DSC indicator light illuminates. To make the DSC operable, do the following procedure with the battery connected.*

1. Switch the ignition ON.
2. Turn the steering clockwise fully, then turn it counterclockwise fully.
3. Make sure the DSC OFF indicator and the TCS/DSC indicator turn off.

*If the TCS/DSC indicator light and the DSC OFF indicator light remain illuminated even after switching the ignition from ON to OFF, and back to ON, attempt the procedure again. If this still does not resolve the issue, consult an Authorized Mazda Dealer.*

### ▼ DSC OFF Switch

Press the DSC OFF switch to turn off the TCS/DSC. The DSC OFF indicator light will illuminate.



Press the switch again to turn the TCS/DSC back on. The DSC OFF indicator light will go out.

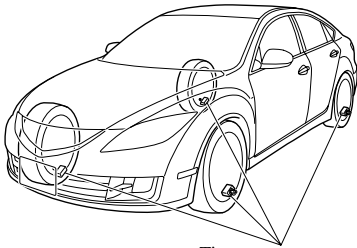
#### **NOTE**

- *When DSC is on and you attempt to free the vehicle when it is stuck, or drive it out of freshly fallen snow, the TCS (part of the DSC system) will activate. Depressing the accelerator will not increase engine power and freeing the vehicle may be difficult. When this happens, turn off the TCS/DSC.*
- *If the TCS/DSC is off when the engine is turned off, it automatically activates when the ignition is switched ON.*
- *Leaving the TCS/DSC on will provide the best stability.*

## Tire Pressure Monitoring System

The tire pressure monitoring system (TPMS) monitors the pressure for each tire. If tire pressure is too low in one or more tires, the system will inform the driver via the warning light in the instrument panel and by the warning beep sound.

The tire pressure sensors installed on each wheel send tire pressure data by radio signal to the receiver unit in the vehicle.



Tire pressure sensors

### **NOTE**

*When the ambient temperature is low due to seasonal changes, tire temperatures are also lower. When the tire temperature decreases, the air pressure decreases as well. The TPMS warning light may illuminate more frequently. Visually inspect the tires daily before driving, and check tire pressures monthly with a tire pressure gauge. When checking tire pressures, use of a digital tire pressure gauge is recommended.*

TPMS does not alleviate your need to check the pressure and condition of all four tires regularly.

## Starting and Driving

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### CAUTION

- Each tire, including the spare (if provided), should be checked monthly when cold and inflated to the inflation pressure recommended by the vehicle manufacturer on the vehicle placard or tire inflation pressure label. (If your vehicle has tires of a different size than the size indicated on the vehicle placard or tire inflation pressure label, you should determine the proper tire inflation pressure for those tires.)

As an added safety feature, your vehicle has been equipped with a tire pressure monitoring system (TPMS) that illuminates a low tire pressure telltale when one or more of your tires is significantly under-inflated. Accordingly, when the low tire pressure telltale illuminates, you should stop and check your tires as soon as possible, and inflate them to the proper pressure. Driving on a significantly under-inflated tire causes the tire to overheat and can lead to tire failure. Under-inflation also reduces fuel efficiency and tire tread life, and may affect the vehicle's handling and stopping ability.

Please note that the TPMS is not a substitute for proper tire maintenance, and it is the driver's responsibility to maintain correct tire pressure, even if under-inflation has not reached the level to trigger illumination of the TPMS low tire pressure telltale.

- Your vehicle has also been equipped with a TPMS malfunction indicator to indicate when the system is not operating properly. The TPMS malfunction indicator is combined with the low tire pressure telltale. When the system detects a malfunction, the telltale will flash for approximately one minute and then remain continuously illuminated. This sequence will continue upon subsequent vehicle start-ups as long as the malfunction exists. When the malfunction indicator is illuminated, the system may not be able to detect or signal low tire pressure as intended. TPMS malfunctions may occur for a variety of reasons, including the installation of replacement or alternate tires or wheels on the vehicle that prevent the TPMS from functioning properly. Always check the TPMS malfunction telltale after replacing one or more tires or wheels on your vehicle to ensure that the replacement or alternate tires and wheels allow the TPMS to continue to function properly.
- To avoid false readings, the system samples for a little while before indicating a problem. As a result it will not instantaneously register a rapid tire deflation or blow out.

### NOTE

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

### ▼ Tire Pressure Monitoring System Warning Light



This warning light illuminates for a few seconds when the ignition is switched ON.

Thereafter, the warning light illuminates and a beep is heard when tire pressure is too low in one or more tires, and flashes when there is a system malfunction.

### **⚠ WARNING**

*If the tire pressure monitoring system warning light illuminates or flashes, or the tire pressure warning beep sound is heard, decrease vehicle speed immediately and avoid sudden maneuvering and braking:*

*If the tire pressure monitoring system warning light illuminates or flashes, or the tire pressure warning beep sound is heard, it is dangerous to drive the vehicle at high speeds, or perform sudden maneuvering or braking. Vehicle drivability could worsen and result in an accident. To determine if you have a slow leak or a flat, pull over to a safe position where you can check the visual condition of the tire and determine if you have enough air to proceed to a place where air may be added and the system monitored again by an Authorized Mazda Dealer or a tire repair station.*

**Do not ignore the TPMS Warning Light:** *Ignoring the TPMS warning light is dangerous, even if you know why it is illuminated. Have the problem taken care of as soon as possible before it develops into a more serious situation that could lead to tire failure and a dangerous accident.*

### **Warning light illuminates/Warning beep sounds**

When the warning light illuminates, and the warning beep sound is heard (about 3 seconds), tire pressure is too low in one or more tires.

## Starting and Driving

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Adjust the tire pressure to the correct tire pressure. Refer to the specification charts (page 10-7).

### CAUTION

*When replacing/repairing the tires or wheels or both, have the work done by an Authorized Mazda Dealer, or the tire pressure sensors may be damaged.*

### NOTE

- *Perform tire pressure adjustment when the tires are cold. Tire pressure will vary according to the tire temperature, therefore let the vehicle stand for 1 hour or only drive it 1.6 km (1 mile) or less before adjusting the tire pressures. When pressure is adjusted on hot tires to the cold inflation pressure, the TPMS warning light/beep may turn on after the tires cool and pressure drops below specification. Also, an illuminated TPMS warning light, resulting from the tire air pressure dropping due to cold ambient temperature, may turn off if the ambient temperature rises. In this case, it will also be necessary to adjust the tire air pressures. If the TPMS warning light illuminates due to a drop in tire air pressure, make sure to check and adjust the tire air pressures.*
- *After adjusting the tire air pressures, it may require some time for the TPMS warning light to turn off. If the TPMS warning light remains illuminated, drive the vehicle at a speed of at least 25 km/h (16 mph) for 10 minutes, and then verify that it turns off.*
- *Tires lose air naturally over time and the TPMS cannot tell if the tires are getting too soft over time or you have a flat. However, when you find one low tire in a set of four—that is an indication of trouble; you should have someone drive the vehicle slowly forward so you can inspect any low tire for cuts and any metal objects sticking through tread or sidewall. Put a few drops of water in the valve stem to see if it bubbles indicating a bad valve. Leaks need to be addressed by more than simply refilling the trouble tire as leaks are dangerous - take it to an Authorized Mazda Dealer which has all the equipment to fix tires, TPMS systems and order the best replacement tire for your vehicle.*

If the warning light illuminates again even after the tire pressures are adjusted, there may be a tire puncture. Replace the punctured tire with the temporary spare tire (page 7-6).

**NOTE**

*A tire pressure sensor is not installed to the temporary spare tire. The warning light will flash continuously while the temporary spare tire is being used.*

**Warning light flashes**

When the warning light flashes, there may be a system malfunction. Consult an Authorized Mazda Dealer.

**▼ System Error Activation**

When the warning light flashes, there may be a system malfunction. Consult an Authorized Mazda Dealer.

A system error activation may occur in the following cases:

- When there is equipment or a device near the vehicle using the same radio frequency as that of the tire pressure sensors.
- When using the following devices in the vehicle that may cause radio interference with the receiver unit.
  - A digital device such as a personal computer.
  - A current converter device such as a DC-AC converter.
- When excess snow or ice adheres to the vehicle, especially around the wheels.
- When the tire pressure sensor batteries are exhausted.
- When using a wheel with no tire pressure sensor installed.
- When using tires with steel wire reinforcement in the side walls.

**▼ Tires and Wheels**** CAUTION**

*When inspecting or adjusting the tire air pressures, do not apply excessive force to the stem part of the wheel unit. The stem part could be damaged.*

**Changing tires and wheels**

The following procedure allows the TPMS to recognize a tire pressure sensor's unique ID signal code whenever tires or wheels are changed, such as changing to and from winter tires.

**NOTE**

*Each tire pressure sensor has a unique ID signal code. The signal code must be registered with the TPMS before it can work. The easiest way to do it is to have an Authorized Mazda Dealer change your tire and complete ID signal code registration.*

**When having tires changed at an Authorized Mazda Dealer**

When an Authorized Mazda Dealer changes your vehicle's tires, they will complete the tire pressure sensor ID signal code registration.

**When changing tires yourself**

If you or someone else changes tires, you or someone else can also undertake the steps for the TPMS to complete the ID signal code registration.

1. After tires have been changed, switch the ignition ON, then back to ACC or OFF.
2. Wait for about 15 minutes.

## Starting and Driving

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3. After about 15 minutes, drive the vehicle at a speed of at least 25 km/h (16 mph) for 10 minutes and the tire pressure sensor ID signal code will be registered automatically.

### **NOTE**

*If the vehicle is driven within about 15 minutes of changing tires, the tire pressure monitoring system warning light will flash because the sensor ID signal code would not have been registered. If this happens, park the vehicle for about 15 minutes, after which the sensor ID signal code will register upon driving the vehicle for 10 minutes.*

### **Replacing tires and wheels**

#### **CAUTION**

- *When replacing/repairing the tires or wheels or both, have the work done by an Authorized Mazda Dealer, or the tire pressure sensors may be damaged.*
- *The wheels equipped on your Mazda are specially designed for installation of the tire pressure sensors. Do not use non-genuine wheels, otherwise it may not be possible to install the tire pressure sensors.*

Be sure to have the tire pressure sensors installed whenever tires or wheels are replaced.

When having a tire or wheel or both replaced, the following types of tire pressure sensor installations are possible.

- The tire pressure sensor is removed from the old wheel and installed to the new one.
- The same tire pressure sensor is used with the same wheel. Only the tire is replaced.

- A new tire pressure sensor is installed to a new wheel.

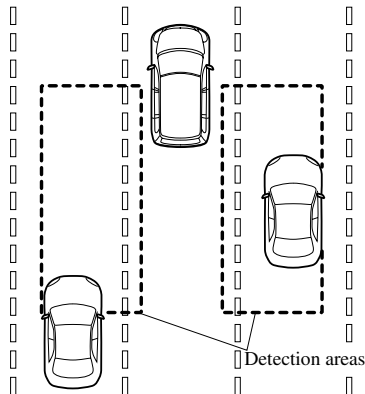
### **NOTE**

- *The tire pressure sensor ID signal code must be registered when a new tire pressure sensor is purchased. For purchase of a tire pressure sensor and registration of the tire pressure sensor ID signal code, consult an Authorized Mazda Dealer.*
- *When reinstalling a previously removed tire pressure sensor to a wheel, replace the grommet (seal between valve body/sensor and wheel) for the tire pressure sensor.*

## Blind Spot Monitoring (BSM) System\*

The Blind Spot Monitoring (BSM) system is designed to assist the driver by monitoring blind spots on both sides of the vehicle to the rear in certain situations such as when changing lanes on roads and freeways.

The BSM system monitors the detection areas on both sides of the vehicle to the rear when the vehicle speed is about 32 km/h (20 mph) or more, and notifies the driver of vehicles in the detection area by illuminating the BSM warning light. If the turn signal lever is operated in the direction the BSM warning light is illuminated, the system warns the driver of the vehicle in the detection area with a beep sound.



### **⚠ WARNING**

**Do not rely completely on the BSM system and be sure to look over your shoulder before changing lanes:**

*The BSM system can assist the driver in confirming the safety of the surroundings but is not a complete substitute. The driver is responsible for assuring lane changes and other maneuvers. Always pay attention to the direction in which the vehicle is traveling and the vehicle's surroundings.*

### **NOTE**

- The BSM system does not operate when the vehicle speed is lower than about 32 km/h (20 mph).
- The radar sensors are equipped inside the rear bumper. (page 5-36)
- The radar sensors do not detect human, animal, or static objects such as fences. In addition, the system pauses when the selector lever is shifted to the R position. (The system resumes automatically when the selector lever is shifted from the R position.)



## Starting and Driving

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- *The detectability of the radar sensors has its limitations. The BSM system may not operate properly under the following conditions:*
  - *Ice, snow, or soil adheres to the rear bumper surface around the radar sensors.*
  - *During adverse weather conditions such as rain or snow, or under conditions where water is sprayed.*
  - *The rear bumper area around the radar sensors is blocked by foreign material (such as stickers or a bicycle carrier).*
- *The radar sensors may not detect all types of vehicles around your vehicle, especially the following types of vehicles:*
  - *Motorcycles*
  - *Vehicles with body shapes that radar may not reflect such as a flatbed trailer with no cargo.*
  - *Vehicles with lower body height such as sports cars.*
- *Have the radar sensors inspected at an Authorized Mazda Dealer if any shock is applied to the rear bumper, even in a minor accident. If the vehicle is driven with a damaged radar sensor, the system may not operate properly resulting in an accident.*
- *For repairs or paintwork around the radar sensors, or replacement of the bumper, consult an Authorized Mazda Dealer.*
- *The radar sensors of the BSM system may be regulated under the radio wave related laws of the country where the vehicle is driven. The sensors in this system are approved for use in the U.S.A. (including territories), Canada, and Mexico. If a vehicle with a BSM system is driven in a country other than the U.S.A., Canada, or Mexico, the system has to be turned off using the BSM OFF switch.*
- *The detection area of the system has been determined based on the lane width of general freeways. Therefore on a road with a narrower lane width, the system may detect vehicles on a lane next to the adjacent lane and operate the warning light/beep. On a road with wider lane width, the system may not detect vehicles on the adjacent lane and may not operate the warning light/beep.*
- *Operation of the warning light/beep may be delayed or the system may not operate the warning light/beep under the following conditions:*
  - *The vehicle accelerates from a standing-start with a vehicle alongside.*
  - *A vehicle moves from a lane two lanes over to the adjacent lane.*
  - *The difference in vehicle speed between your vehicle and another vehicle is larger when passing or being passed, and the vehicle passes the detection area within a short period of time.*
  - *On a steep incline, or when there is a difference in height between lanes.*
  - *Immediately after the system has been activated by pressing the BSM OFF switch again after it has been turned off (BSM OFF indicator light in instrument panel illuminates) by pressing the switch.*
- *Although the system may detect objects on the road side such as parked vehicles or guardrails and operate the warning light/beep, it does not indicate a malfunction.*
- *If the vehicle is driven on a road with less traffic and few vehicles that the radar sensors can detect, the system may pause (The BSM OFF indicator light in the instrument panel flashes). However, it does not indicate a malfunction.*

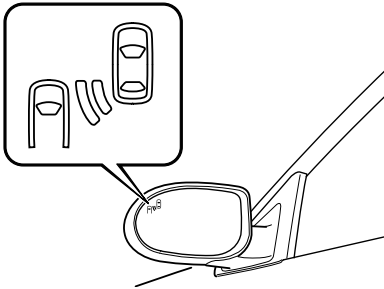
## Starting and Driving

- *The following conditions may affect the visibility of the BSM warning lights on the outside mirror, making it difficult to confirm the illumination of the lights:*
  - *Ice or snow adheres to the surface of the outside mirrors.*
  - *The door window glass is tinted.*

### ▼ BSM Warning Light/Beep

#### **BSM warning light**

Equipped on the left and right door mirrors.



This warning light illuminates for a few seconds when the ignition is switched ON.

If the BSM system detects a vehicle in the detection area while the vehicle is driven at a speed of about 32 km/h (20 mph) or more, the BSM warning light illuminates on the side of the vehicle where the rear on-coming vehicle is detected.

#### ***NOTE***

- *If ice or snow adhere to the outer mirror surface, the BSM warning light may not be visible.*
- *If the door window glass is tinted, it may affect the visibility of the BSM warning light, making it difficult to confirm the illumination of the light.*

#### **BSM warning beep**

The warning beep operates when the turn signal lever is operated to the side where the BSM warning light is illuminated.

#### ***NOTE***

*The system can be personalized so that the BSM warning beep does not operate. Refer to Personalization Features on page 10-8.*

### ▼ BSM OFF Indicator Light

# BSM OFF

This indicator light illuminates for a few seconds when the ignition is switched ON.

The BSM OFF indicator light illuminates when the BSM system is turned off by pressing the BSM OFF switch.

The indicator light flashes if the BSM system has a malfunction. Consult an Authorized Mazda Dealer.

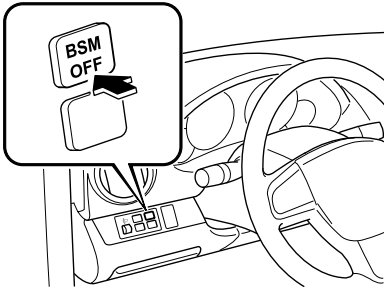
#### ***NOTE***

*If the vehicle is driven on a road with less traffic and few vehicles that the radar sensors can detect, the system may pause (The BSM OFF indicator light in the instrument panel flashes). However, it does not indicate a malfunction.*

## Starting and Driving

### ▼ BSM OFF Switch

When the BSM switch is pressed, the BSM system turns off and the BSM OFF indicator light illuminates.



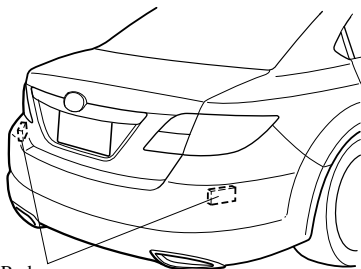
Press the BSM OFF switch again to turn on the BSM system. The BSM OFF indicator light turns off.

#### **NOTE**

*If the ignition is switched off with the BSM system turned off, the system becomes operable automatically when the ignition is switched ON.*

### ▼ Care of Radar Sensors

The radar sensors are equipped inside the rear bumper.



Always keep the bumper surface near the radar sensor area clean so that the BSM system operates normally. Refer to the Exterior Care (page 8-55).

#### **NOTE**

- *The BSM OFF indicator light flashes if the radar sensors cannot operate normally. If the light remains flashing after cleaning the bumper surface near the radar sensor area, consult an Authorized Mazda Dealer.*
- *For repairs or paintwork around the radar sensors, or replacement of the bumper, consult an Authorized Mazda Dealer.*

### ▼ Safety Certification

#### **Radiation Hazard**

This BSM (blind spot monitoring) device emits intentional electromagnetic radiation in the 24 GHz to 25 GHz frequency range. The total radiated average power over the entire bandwidth is below  $-14$  dBm ( $40 \mu\text{W}$ ). The active emitting antenna surface is  $72 \text{ cm}^2$ ; therefore the radiated power density in front of the BSM device is  $0.55 \mu\text{W}/\text{cm}^2$ . This value is far below the legal human exposure protection limit of  $1 \text{ mW}/\text{cm}^2$  (MPE) in Europe and US.

#### **Declaration of compliance for 24 GHz blind spot radar**

(U.S.A)

**FCC ID: KR5SV2008BSD**

**FCC ID: OAYBSDTX**

This vehicle is equipped with a 24 GHz blind spot monitoring (BSM) radar system, which complies with part 15 of the FCC rules. Operation is subject to the following conditions:

1. This device may not cause harmful interference, and

2. This device must accept any interference received, including interference that may cause undesired operation.
3. This device may only work when the vehicle is in operation pursuant to § 15.252 (a) (4).

**(CANADA)****ICDCE2008075 (temporary permission until RSS-220 is in force)****IC:4135A-BSDTX**

This vehicle is equipped with a 24 GHz blind spot monitoring (BSM) radar system, which complies with the radio standards specification RSS-220 of Industry Canada. Operation is subject to the following conditions:

1. This device may not cause harmful interference, and
2. This device must accept any interference received, including interference that may cause undesired operation.

**(MEXICO)****RLVSISV07-725****RLVCOBS10-0567****NOTE**

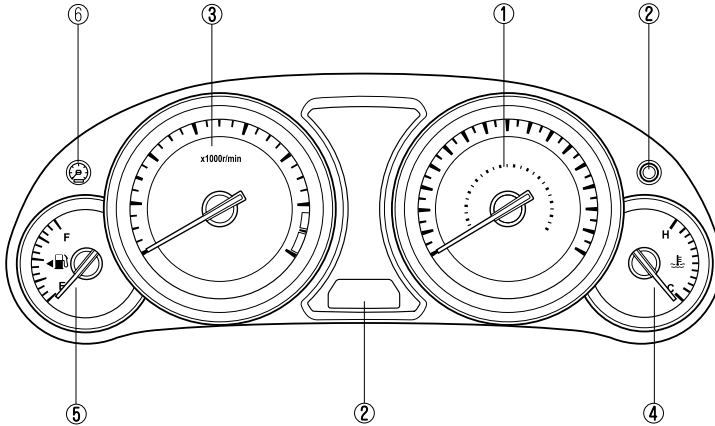
*During printing time of this user manual the approvals listed below are granted. Further countries may become available or actual certification identifiers may be subject to change or update.*

** WARNING**

*Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.*

# Instrument Cluster and Indicators

## Meters and Gauges



- ① Speedometer ..... page 5-39
- ② Odometer, Trip Meter, Outside Temperature Display and Selector ..... page 5-39
- ③ Tachometer ..... page 5-41
- ④ Engine Coolant Temperature Gauge ..... page 5-42
- ⑤ Fuel Gauge ..... page 5-42
- ⑥ Dashboard Illumination ..... page 5-43

**NOTE**

**(Black-out meter)**

*When the ignition is switched ON, the dashboard gauges illuminate.*

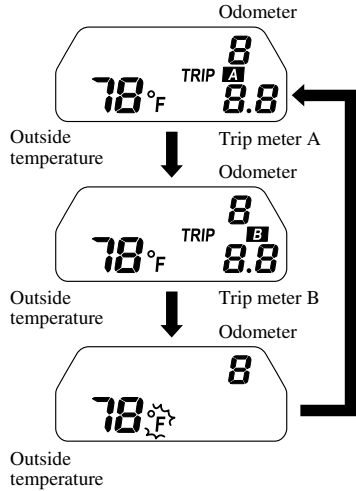
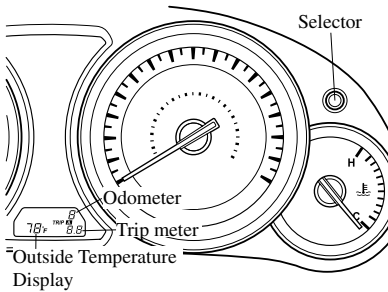
## Instrument Cluster and Indicators

### ▼ Speedometer

The speedometer indicates the speed of the vehicle.

### ▼ Odometer, Trip Meter, Outside Temperature Display and Selector

The display mode changes from trip meter A to trip meter B, and to the temperature unit change function display each time the selector is pressed while one of the modes is displayed. The selected mode will be displayed.



## Instrument Cluster and Indicators

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### NOTE

• **(Standard meter)**

The odometer and trip meter can be displayed and the selector can be operated as follows even when the ignition is switched to ACC or the ignition is switched off. The trip meter can be switched/reset by pressing the selector.

The headlight switch must be in the  $\text{D}$  or  $\text{D}$  position to see the display.

- Displays for approx. 10 minutes after the ignition is switched to ACC or OFF from ACC or ON.
- Displays for approx. 10 minutes after the driver's door is opened.

• **(Black-out meter)**

When the ignition is switched to ACC or the ignition is switched off, the odometer or trip meters cannot be displayed, however, pressing the selector button can inadvertently switch the trip meters or reset them during an approximate ten-minute period in the following cases:

- After the ignition is switched to ACC or OFF from ON.
- After the driver's door is opened.

### Odometer

The odometer records the total distance the vehicle has been driven.

### Trip meter

The trip meter can record the total distance of two trips. One is recorded in trip meter A, and the other is recorded in trip meter B.

For instance, trip meter A can record the distance from the point of origin, and trip meter B can record the distance from where the fuel tank is filled.

When trip meter A is selected, pressing the selector again within one second will change to trip meter B mode.

When trip meter A is selected, TRIP A will be displayed. When trip meter B is selected, TRIP B will be displayed.

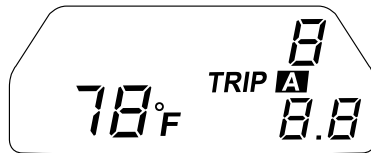
The trip meter records the total distance the vehicle is driven until the meter is again reset. Return it to "0.0" by holding the selector depressed for 1 second or more. Use this meter to measure trip distances and to compute fuel consumption.

### NOTE

- Only the trip meters record tenths of kilometers (miles).
- The trip record will be erased when;
  - The power supply is interrupted (blown fuse or the battery is disconnected).
  - The vehicle is driven over 999.9 km (miles).

### Outside temperature display

The outside temperature is displayed when the ignition is switched ON.

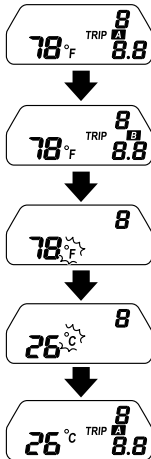


## Instrument Cluster and Indicators

### Temperature unit change function

The unit (°F/°C) for the ambient temperature can be switched using the following operation.

1. Switch the ignition ON.
2. Press the selector two times. After that, the trip meter display turns off and the unit flashes. The unit can be switched by pressing the selector for approx. 1 second or more while the unit is flashing.
3. The unit illuminates and the trip meter is displayed by pressing the selector again.



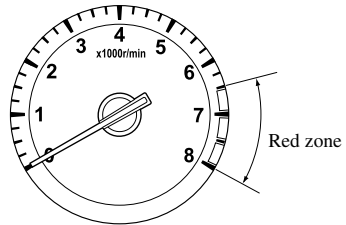
### NOTE

The displayed ambient temperature varies from the actual ambient temperature depending on the surrounding conditions as well as the driving conditions.

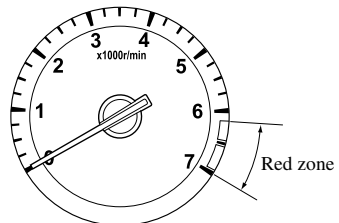
### ▼ Tachometer

The tachometer shows engine speed in thousands of revolutions per minute (rpm).

#### 3.7-liter engine



#### 2.5-liter engine



### ⚠ CAUTION

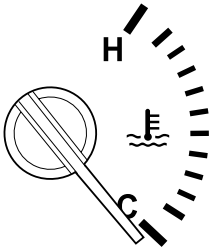
Do not run the engine with the tachometer needle in the RED ZONE. This may cause severe engine damage.



## Instrument Cluster and Indicators

### ▼ Engine Coolant Temperature Gauge

The engine coolant temperature gauge shows the temperature of the engine coolant.



If the needle is near H, it indicates overheating.

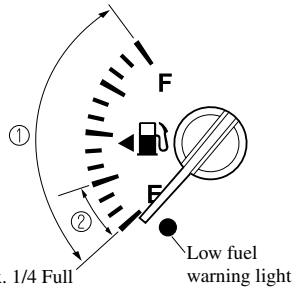
#### **CAUTION**

*Driving with an overheated engine can cause serious engine damage (page 7-13).*

### ▼ Fuel Gauge

The fuel gauge shows approximately how much fuel is remaining in the tank when the ignition is switched ON.

We recommend keeping the tank over 1/4 full. When the low fuel warning light illuminates or when the needle is near E, refuel as soon as possible.



#### **NOTE**

- After refueling, it may require some time for the needle to stabilize. In addition, the needle may deviate while driving on a slope or curve since the fuel moves in the tank.
- The direction of the arrow (↔) next to the low fuel warning light indicates that the fuel-filler lid is on the left side of the vehicle.

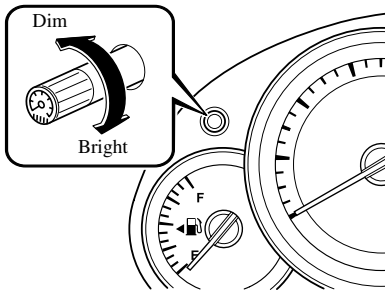
## Instrument Cluster and Indicators

### ▼ Dashboard Illumination

Rotate the knob to adjust the brightness of the instrument cluster and other illuminations in the dashboard.

#### NOTE

- The brightness of dashboard illuminations can be adjusted when the headlight switch is in the  $\exists 00\zeta$  or  $\exists 1\Delta$  position.
- When the dashboard illumination brightness cannot be adjusted any more, a beep sound will be heard.
- **(Black-out meter)**  
The brightness of the instrument cluster illumination can be adjusted when the headlight switch is in any position.



#### **Canceling the illumination dimmer (Black-out meter and dashboard illuminations)**

When the headlight switch is in the  $\exists 00\zeta$  or  $\exists 1\Delta$  position, the illumination of the instrument cluster and the information display dims.

When driving on snowy or foggy roads, or in other situations when the instrument cluster or information display's visibility is reduced due to glare from surrounding brightness, cancel the illumination dimmer and increase the illumination intensity.

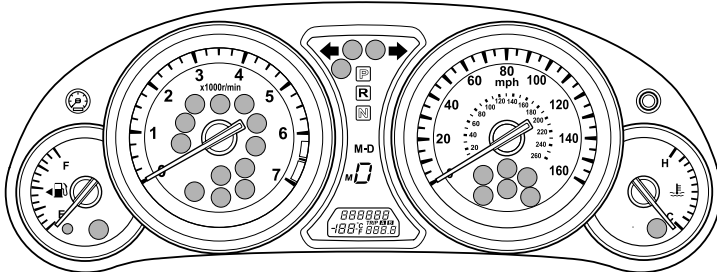
To cancel the illumination dimmer, press the dashboard illumination knob.

#### NOTE








- This symbol (⊗) indicates the knob to adjust the brightness of the dashboard illumination.
- If the illumination dimmer is cancelled, the instrument cluster and the information display will not dim when the headlight switch is turned to the  $\exists 00\zeta$  or  $\exists 1\Delta$  position again. Press the dashboard illumination knob to activate the illumination dimmer.

# Warning/Indicator Lights and Beep Sounds













## Warning/Indicator Lights





Warning/Indicator lights will appear in any of the highlighted areas

Signal	Warning/Indicator Lights	Page
	Brake System Warning Light	5-46
	Charging System Warning Light	5-48
	Engine Oil Pressure Warning Light	5-48
	Check Engine Light	5-48
	Powertrain Malfunction/Reduced Power Warning Light	5-49
	ABS Warning Light	5-47
	Air Bag/Front Seat Belt Pretensioner System Warning Light	5-49

## Warning/Indicator Lights and Beep Sounds

Signal	Warning/Indicator Lights	Page
	Low Fuel Warning Light	5-50
	Check Fuel Cap Warning Light	5-50
	Seat Belt Warning Light/Beep	5-50
	Door-Ajar Warning Light	5-52
	Low Washer Fluid Level Warning Light	5-52
<b>AT</b>	Automatic Transaxle Warning Light	5-52
	Tire Pressure Monitoring System Warning Light	5-52
	KEY Warning Light (Red)/KEY Indicator Light (Green)	5-54
	Electronic Steering Lock Warning Light	5-56
	Security Indicator Light	5-56
	Headlight High-Beam Indicator Light	5-56
<b>PRNDM</b>	Shift Position Indicator Light	5-57
	TCS/DSC Indicator Light	5-57
	DSC OFF Indicator Light	5-57
<b>CRUISE</b>	Cruise Main Indicator Light (Amber)/Cruise Set Indicator Light (Green)	5-58
<b>BSM OFF</b>	BSM OFF Indicator Light	5-58

## Warning/Indicator Lights and Beep Sounds

Signal	Warning/Indicator Lights	Page
	Lights-On Indicator Light	5-58
	Turn Signal/Hazard Warning Indicator Lights	5-59

### ▼ Brake System Warning Light



This warning has the following functions:

#### **Brake system warning (2.5-liter engine)**

Illuminates when there is a malfunction in the brake switch.

#### **Parking brake warning**

The light illuminates when the parking brake is applied with the ignition switched to START or ON. It turns off when the parking brake is fully released.

#### **Low brake fluid level warning**

If the light stays on after the parking brake is fully released, you may have a brake problem.

Drive to the side of the road and park off the right-of-way.

You may notice that the pedal is harder to depress or that it may go closer to the floor. In either case, it will take longer to stop the vehicle.

1. With the engine stopped, open the hood and check the brake fluid level immediately, and then add fluid if required (page 8-24).
2. After adding fluid, check the light again.

If the warning light remains on, or if the brakes do not operate properly, do not drive the vehicle. Have it towed to an Authorized Mazda Dealer.

Even if the light turns off have your brake system inspected as soon as possible by an Authorized Mazda Dealer.

#### ***NOTE***

*Having to add brake fluid is sometimes an indicator of leakage. Consult an Authorized Mazda Dealer as soon as possible even if the brake light is no longer illuminated.*

## Warning/Indicator Lights and Beep Sounds

### WARNING

**Do not drive with the brake system warning light illuminated. Contact an Authorized Mazda Dealer to have the brakes inspected as soon as possible:**

*Driving with the brake system warning light illuminated is dangerous. It indicates that your brakes may not work at all or that they could completely fail at any time. If this light remains illuminated, after checking that the parking brake is fully released, have the brakes inspected immediately.*

### ▼ ABS Warning Light



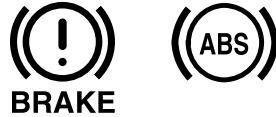
The warning light stays on for a few seconds when the ignition is switched ON.

If the ABS warning light stays on while you're driving, the ABS control unit has detected a system malfunction. If this occurs, your brakes will function normally as if the vehicle had no ABS. Should this happen, consult an Authorized Mazda Dealer as soon as possible.

#### **NOTE**

*When the engine is jump-started to charge the battery, uneven rpm occurs and the ABS warning light may illuminate. If this occurs, it is the result of the weak battery and does not indicate an ABS malfunction. Recharge the battery.*

### ▼ Electronic Brake Force Distribution System Warning



If the electronic brake force distribution control unit determines that some components are operating incorrectly, the control unit may illuminate the brake system warning light and the ABS warning light on simultaneously. The problem is likely to be the electronic brake force distribution system.

### WARNING

**Do not drive with both the ABS warning light and brake warning light illuminated. Have the vehicle towed to an Authorized Mazda Dealer to have the brakes inspected as soon as possible:**

*Driving when the brake system warning light and ABS warning light are illuminated simultaneously is dangerous.*

*When both lights are illuminated, the rear wheels could lock more quickly in an emergency stop than under normal circumstances.*

## Warning/Indicator Lights and Beep Sounds

---

### ▼ Charging System Warning Light



This warning light illuminates when the ignition is switched ON and turns off when the engine is started.

If the warning light illuminates while driving, it indicates a malfunction of the alternator or of the charging system. Drive to the side of the road and park off the right-of-way. Consult an Authorized Mazda Dealer.

#### **CAUTION**

*Do not continue driving when the charging system warning light is illuminated because the engine could stop unexpectedly.*

### ▼ Engine Oil Pressure Warning Light



This warning light illuminates when the ignition is switched ON and turns off when the engine is started.

This warning light indicates low engine oil pressure.

If the light illuminates while driving:

1. Drive to the side of the road and park off the right-of-way on level ground.
2. Turn off the engine and wait 5 minutes for the oil to drain back into the oil pan.
3. Inspect the engine oil level (page 8-21). If it's low, add the appropriate amount of engine oil while being careful not to overfill.
4. Start the engine and check the warning light.

If the light remains illuminated even after you add oil, stop the engine immediately and have your vehicle towed to an Authorized Mazda Dealer.

#### **CAUTION**

*Do not run the engine if the oil pressure is low. It could result in extensive engine damage.*

### ▼ Check Engine Light



This indicator light illuminates when the ignition is switched ON and turns off when the engine is started.

If this light illuminates while driving, the vehicle may have a problem. It is important to note the driving conditions when the light illuminated and consult an Authorized Mazda Dealer.

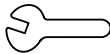
## Warning/Indicator Lights and Beep Sounds

The check engine light may illuminate in the following cases:

- The fuel tank level being very low or approaching empty.
- The engine's electrical system has a problem.
- The emission control system has a problem.

If the check engine light remains on or flashes continuously, do not drive at high speeds and consult an Authorized Mazda Dealer as soon as possible.

### ▼ Powertrain Malfunction/Reduced Power Warning Light (3.7-liter engine)



This warning light illuminates for a few seconds when the ignition is switched ON.

If this light illuminates while driving, the vehicle may have a problem. It is important to note the driving conditions when the light illuminated and consult an Authorized Mazda Dealer.

The powertrain malfunction/reduced power warning light may illuminate in the following cases:

- The engine's electrical system has a problem.
- The emission control system has a problem.
- The brake switch has a problem.

If the powertrain malfunction/reduced power warning light remains on, do not drive at high speeds and consult an Authorized Mazda Dealer as soon as possible.

### ▼ Air Bag/Front Seat Belt Pretensioner System Warning Light



If the air bag/front seat belt pretensioner system is working properly, the warning light illuminates when the ignition is switched ON or after the engine is cranked. The warning light turns off after a specified period of time.

A system malfunction is indicated if the warning light constantly flashes, constantly illuminates or does not illuminate at all when the ignition is switched ON. If any of these occur, consult an Authorized Mazda Dealer as soon as possible. The system may not work in an accident.

### **⚠ WARNING**

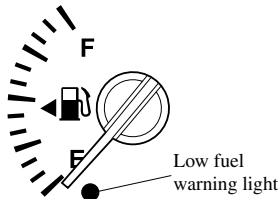
***Never tamper with the air bag/pretensioner systems and always have an Authorized Mazda Dealer perform all servicing and repairs:***

*Self-servicing or tampering with the systems is dangerous. An air bag/pretensioner could accidentally activate or become disabled causing serious injury or death.*



## Warning/Indicator Lights and Beep Sounds

### ▼ Low Fuel Warning Light



This warning light in the fuel gauge signals that the fuel tank will soon be empty. Refuel as soon as possible.

### ▼ Check Fuel Cap Warning Light



This warning light illuminates for a few seconds when the ignition is switched ON.

If the check fuel cap warning light illuminates while driving, the fuel-filler cap may not be installed properly. Stop the engine and reinstall the fuel-filler cap. Refer to the fuel-filler cap on page 3-44.

### ▼ Seat Belt Warning Light/Beep



The seat belt warning light illuminates and a beep sound will be heard if the driver's seat belt is not fastened when the ignition is switched ON.

#### Conditions of operation

Condition	Result
The driver's seat belt is not fastened when the ignition is switched ON.	The warning light illuminates for about 1 minute and a beep sound will be heard for about 6 seconds.
The driver's seat belt is fastened while the warning light and the beep sound are activated.	The warning light turns off and the beep sound stops.
The driver's seat belt is fastened before the ignition is switched ON.	The warning light will not illuminate and the beep sound will not be heard.

#### **Belt reminder**

##### ***NOTE***

*Consult an Authorized Mazda Dealer to deactivate or restore the belt reminder. Though the belt reminder can be deactivated, doing so will defeat the purpose of the system to warn the driver and the front passenger in the event that their seat belts are not fastened. For the safety of the driver and front passenger, Mazda recommends not deactivating the belt reminder.*

## Warning/Indicator Lights and Beep Sounds

### Driver seated/Front passenger not seated\*1

The belt reminder is a supplemental warning to the seat belt warning function. If the driver's seat belt is not fastened when the ignition is switched ON, the warning light/beep operates to give you further reminders according to the chart below.

\*1 The belt reminder operates according to the chart below even if the front passenger is seated (Without Driver and Front Passenger Occupant Classification System).

Condition	Vehicle speed			
	Between 0 — 20 km/h (0 — 12 mph)		20 km/h (12 mph) or more	
Seat belt (Driver)	○	×	○	×
Indicator		⦿		⦿
Beep				♪

○ : Fastened  
 × : Unfastened  
 ⦿ : Illuminated  
 ⦿ : Flashing  
 ♪ : Beep

Once the beep sound is heard, it continues sounding even if the vehicle speed lowers to 20 km/h (12 mph) or less until the seatbelt is fastened or the beep sound period has passed.

### Driver seated/Front passenger seated

The seat belt warning function reminds the front passenger to fasten the seat belt according to the chart below.

Condition	Vehicle speed							
	Between 0 — 20 km/h (0 — 12 mph)				20 km/h (12 mph) or more			
Seat belt (Driver)	○	○	×	×	○	○	×	×
Seat belt (Passenger)	○	×	○	×	○	×	○	×
Indicator			⦿	⦿	⦿	⦿	⦿	
Beep					♪	♪	♪	

○ : Fastened  
 × : Unfastened  
 ⦿ : Illuminated  
 ⦿ : Flashing  
 ♪ : Beep

Placing heavy items on the front passenger seat may cause the front passenger seat belt warning function to operate depending on the weight of the item.

Once the beep sound is heard, it continues sounding even if the vehicle speed lowers to 20 km/h (12 mph) or less until the seatbelt is fastened or the beep sound period has passed.

### NOTE

- To allow the front passenger seat weight sensor to function properly, do not place and sit on an additional seat cushion on the front passenger seat. The sensor may not function properly because the additional seat cushion could cause sensor interference.
- When a small child sits on the front passenger seat, it is possible that neither the warning light nor the warning beep operate.

## Warning/Indicator Lights and Beep Sounds

---

### ▼ Door-Ajar Warning Light



This warning light illuminates when any door or the trunk is not securely closed. Close the door or the trunk securely before driving the vehicle.

### ▼ Low Washer Fluid Level Warning Light



This warning light indicates that little washer fluid remains. Add fluid (page 8-26).

### ▼ Automatic Transaxle Warning Light



This warning light stays on for a few seconds when the ignition is switched ON.

The light illuminates when the transaxle has a problem.

### ▲ CAUTION

*If the automatic transaxle warning light illuminates, the transaxle has an electrical problem. Continuing to drive your Mazda in this condition could cause damage to your transaxle. Consult an Authorized Mazda Dealer as soon as possible.*

### ▼ Tire Pressure Monitoring System (TPMS) Warning Light



This warning light illuminates for a few seconds when the ignition is switched ON.

Thereafter, the warning light illuminates and a beep is heard when tire pressure is too low in one or more tires, and flashes when there is a system malfunction.

## Warning/Indicator Lights and Beep Sounds

### **WARNING**

*If the tire pressure monitoring system warning light illuminates or flashes, or the tire pressure warning beep sound is heard, decrease vehicle speed immediately and avoid sudden maneuvering and braking:*

*If the tire pressure monitoring system warning light illuminates or flashes, or the tire pressure warning beep sound is heard, it is dangerous to drive the vehicle at high speeds, or perform sudden maneuvering or braking. Vehicle drivability could worsen and result in an accident.*

*To determine if you have a slow leak or a flat, pull over to a safe position where you can check the visual condition of the tire and determine if you have enough air to proceed to a place where air may be added and the system monitored again by an Authorized Mazda Dealer or a tire repair station.*

**Do not ignore the TPMS Warning Light:**  
*Ignoring the TPMS warning light is dangerous, even if you know why it is illuminated. Have the problem taken care of as soon as possible before it develops into a more serious situation that could lead to tire failure and a dangerous accident.*

### **Warning light illuminates/Warning beep sounds**

When the warning light illuminates, and the warning beep sound is heard (about 3 seconds), tire pressure is too low in one or more tires.

Adjust the tire pressure to the correct tire pressure. Refer to the specification charts (page 10-7).

### **CAUTION**

*When replacing/repairing the tires or wheels or both, have the work done by an Authorized Mazda Dealer, or the tire pressure sensors may be damaged.*

## Warning/Indicator Lights and Beep Sounds

---

### NOTE

- *Perform tire pressure adjustment when the tires are cold. Tire pressure will vary according to the tire temperature, therefore let the vehicle stand for 1 hour or only drive it 1.6 km (1 mile) or less before adjusting the tire pressures. When pressure is adjusted on hot tires to the cold inflation pressure, the TPMS warning light/beep may turn on after the tires cool and pressure drops below specification. Also, an illuminated TPMS warning light, resulting from the tire air pressure dropping due to cold ambient temperature, may turn off if the ambient temperature rises. In this case, it will also be necessary to adjust the tire air pressures. If the TPMS warning light illuminates due to a drop in tire air pressure, make sure to check and adjust the tire air pressures.*
- *After adjusting the tire air pressures, it may require some time for the TPMS warning light to turn off. If the TPMS warning light remains illuminated, drive the vehicle at a speed of at least 25 km/h (16 mph) for 10 minutes, and then verify that it turns off.*
- *Tires lose air naturally over time and the TPMS cannot tell if the tires are getting too soft over time or you have a flat. However, when you find one low tire in a set of four—that is an indication of trouble; you should have someone drive the vehicle slowly forward so you can inspect any low tire for cuts and any metal objects sticking through tread or sidewall. Put a few drops of water in the valve stem to see if it bubbles indicating a bad valve. Leaks need to be addressed by more than simply refilling the trouble tire as leaks are dangerous - take it to an Authorized Mazda Dealer which has all the equipment to fix tires, TPMS systems and order the best replacement tire for your vehicle.*

If the warning light illuminates again even after the tire pressures are adjusted, there may be a tire puncture. Replace the punctured tire with the temporary spare tire (page 7-6).

### NOTE

*A tire pressure sensor is not installed to the temporary spare tire. The warning light will flash continuously while the temporary spare tire is being used.*

### Warning light flashes

When the warning light flashes, there may be a system malfunction. Consult an Authorized Mazda Dealer.

### ▼ KEY Warning Light (Red)/KEY Indicator Light (Green) (with Advanced Key)



This indicator has two colors.

### KEY Warning Light (Red)

#### When illuminated

- When the push button start is pressed ON, it illuminates momentarily and then turns off.
- If any malfunction occurs in the advanced keyless system, it illuminates continuously.

## Warning/Indicator Lights and Beep Sounds

### **WARNING**

**Do not drive the vehicle with the KEY warning light illuminated:**

*If the KEY warning light remains illuminated, do not continue to drive using the advanced key system. Park the vehicle in a safe place and use the auxiliary key to continue driving the vehicle. Have the vehicle inspected at an Authorized Mazda Dealer as soon as possible.*

#### **When flashing**

- Under the following conditions, the KEY warning light (red) flashes to inform the driver that the push button start will not switch to ACC even if it is pressed from off.
  - The advanced key battery is dead.
  - The advanced key is not within operational range.
  - The advanced key is placed in areas where it is difficult for the system to detect the signal (page 3-7).
  - A key from another manufacturer similar to the advanced key is in the operational range.

- Under the following conditions, the KEY warning light (red) will flash continuously when the push button start has not been pressed off to notify the driver that the advanced key has been removed. The KEY warning light (red) will stop flashing when the advanced key is back inside the vehicle:
  - The push button start has not been pressed off, the driver's door is open, and the advanced key is removed from the vehicle.
  - The push button start has not been pressed off and all the doors are closed after removing the advanced key from the vehicle.

#### **NOTE**

*Because the advanced key utilizes low-intensity radio waves, the Advanced Key Removed From Vehicle Warning may activate if the advanced key is carried together with a metal object or it is placed in a poor signal reception area.*

### **KEY Indicator Light (Green)**

#### **When illuminated**

When the brake pedal is depressed with an automatic transaxle or the clutch pedal is depressed with a manual transaxle, the system confirms that the correct advanced key is inside the vehicle, the KEY indicator light (green) illuminates, and the push button start can be pressed to ACC (page 3-10).

#### **When flashing**

When the push button start is pressed off from ON, the KEY indicator light (green) flashes for approximately 30 seconds indicating that the remaining battery power is low. Replace with a new battery before the advanced key becomes unusable.

## Warning/Indicator Lights and Beep Sounds

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Refer to Advanced Key Maintenance on page 3-6.

### **NOTE**

*The advanced key can be set so that the KEY indicator light (green) does not flash even if the battery power is low.*

*Refer to Personalization Features on page 10-8.*

### ▼ **Electronic Steering Lock Warning Light (with Advanced Key)**



The warning light remains illuminated for a few seconds after the push button start is pressed ON.

If the advanced keyless system is damaged, the warning light may flash. For vehicles with the steering wheel lock function, the steering wheel will not unlock even if the push button start is pressed, and the warning light will flash (page 3-10).

### ▼ **Security Indicator Light**



This indicator light starts flashing every 2 seconds when the ignition is switched from ON to ACC and the immobilizer system is armed.

The light stops flashing when the ignition is switched ON with the correct ignition key.

At this time, the immobilizer system is disarmed and the light illuminates for about 3 seconds and then turns off.

If the engine does not start with the correct ignition key, and the security indicator light keeps illuminating or flashing, the system may have a malfunction. Consult an Authorized Mazda Dealer.

### ▼ **Headlight High-Beam Indicator Light**



This light indicates one of two things:

- The high-beam headlights are on.
- The turn signal lever is in the flash-to-pass position.

## Warning/Indicator Lights and Beep Sounds

### ▼ Shift Position Indicator Light (Automatic Transaxle)

This indicates the selected shift position.



M-D



Gear position indicator

In manual mode, the “M” of the shift position indicator illuminates and the numeral for the selected gear displays in the gear position indicator.

### ▼ TCS/DSC Indicator Light



This indicator light stays on for a few seconds when the ignition is switched ON. If the TCS or DSC is operating, the indicator light flashes.

If the light stays on, the TCS, DSC or the brake assist system may have a malfunction and they may not operate correctly. Take your vehicle to an Authorized Mazda Dealer.

#### NOTE

- In addition to the indicator light flashing, a slight lugging sound will come from the engine. This indicates that the TCS is operating properly.
- On slippery surfaces, such as fresh snow, it will be impossible to achieve high rpm when the TCS is on.

### ▼ DSC OFF Indicator Light



This indicator light stays on for a few seconds when the ignition is switched ON.

It also illuminates when the DSC OFF switch is pressed and TCS/DSC is switched off (page 5-26).

If the light stays on when the TCS/DSC is not switched off, take your vehicle to an Authorized Mazda Dealer. The dynamic stability control may have a malfunction.



## Warning/Indicator Lights and Beep Sounds

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### NOTE

If the battery is disconnected or a fuse is replaced, the DSC will be inoperable. In this case, the DSC OFF indicator light flashes and the TCS/DSC indicator light illuminates. To make the DSC operable, do the following procedure with the battery connected.

1. Switch the ignition ON.
2. Turn the steering clockwise fully, then turn it counterclockwise fully.
3. Make sure the DSC OFF indicator and the TCS/DSC indicator turns off.

If the TCS/DSC indicator light and the DSC OFF indicator light remain illuminated even after switching the ignition from ON to OFF, and back to ON, attempt the procedure again. If this still does not resolve the issue, consult an Authorized Mazda Dealer.

### ▼ Cruise Main Indicator Light (Amber)/Cruise Set Indicator Light (Green)\*

# CRUISE

The indicator light has two colors.

#### Cruise Main Indicator Light (Amber)

The indicator light illuminates amber when the ON/OFF switch is pressed up and the cruise control system is activated.

#### Cruise Set Indicator Light (Green)

The indicator light illuminates green when a cruising speed has been set.

### ▼ BSM OFF Indicator Light\*

# BSM OFF

This indicator light illuminates for a few seconds when the ignition is switched ON.

The BSM OFF indicator light illuminates when the BSM system is turned off by pressing the BSM OFF switch. The indicator light flashes if the BSM system has a malfunction. Consult an Authorized Mazda Dealer.

### NOTE

If the vehicle is driven on a road with less traffic and few vehicles that the radar sensors can detect, the system may pause (The BSM OFF indicator light in the instrument panel flashes). However, it does not indicate a malfunction.

### ▼ Lights-On Indicator Light (Black-out meter)



This indicator light illuminates when the exterior lights and dashboard illumination are on.

## Warning/Indicator Lights and Beep Sounds

### ▼ Turn Signal/Hazard Warning Indicator Lights



When operating the turn signal lights, the left or right turn signal indicator light flashes to indicate which turn signal light is operating (page 5-65).

When operating the hazard warning lights, both turn signal indicator lights flash (page 5-72).

#### **NOTE**

*If an indicator light remains illuminated (does not flash) or if it flashes abnormally, one of the turn signal bulbs may be burned out.*

### Beep Sounds

#### ▼ Air Bag/Front Seat Belt Pretensioner System Warning Beep

If a malfunction is detected in the air bag/front seat belt pretensioner systems and the warning light, a warning beep sound will be heard for about 5 seconds every minute.

The air bag and seat belt pretensioner system warning beep sound will continue to be heard for approximately 35 minutes. Have your vehicle inspected at an Authorized Mazda Dealer as soon as possible.

#### **⚠ WARNING**

**Do not drive the vehicle with the air bag/front seat belt pretensioner system warning beep sounding:**

*Driving the vehicle with the air bag/front seat belt pretensioner system warning beep sounding is dangerous. In a collision, the air bags and the front seat belt pretensioner system will not deploy and this could result in death or serious injury.*

*Contact an Authorized Mazda Dealer to have the vehicle inspected as soon as possible.*

## Warning/Indicator Lights and Beep Sounds

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### ▼ Seat Belt Warning Beep

If the driver's seat belt is not fastened when the ignition is switched ON, a beep sound will be heard for about 6 seconds. If the driver or the front passenger's seat belt is not fastened and the vehicle is driven at a speed faster than about 20 km/h (12 mph), a beep sound will be heard again for a specified period of time. Refer to Seat Belt Warning Light/Beep on page 5-50.

### ▼ Ignition Key Reminder

If the ignition is switched off or the ignition is switched to ACC with the key inserted, a continuous beep sound will be heard when the driver's door is opened.

### ▼ Tire Inflation Pressure Warning Beep

The warning beep sound will be heard for about 3 seconds when there is any abnormality in tire inflation pressures (page 5-27).

### ▼ Advanced Keyless Warning (with Advanced Key) \*

Warning indicators for the advanced key, such as "the advanced key removed from vehicle warning", use a beep sound and warning/indicator lights in the instrument cluster.

Refer to Warning and Beep Sounds on page 3-20.

### ▼ Electronic Steering Lock Warning Beep (with Advanced Key)

If the advanced keyless function has a malfunction after the push button start is pressed, the warning beep may activate. For vehicles equipped with the steering wheel lock function, the warning beep activates if the steering wheel lock is not released.

### ▼ Blind Spot Monitoring System Warning Beep \*

A warning beep sounds when the turn signal lever is operated to signal a lane change on either side and where the vehicle may hit an approaching vehicle in an adjacent lane.

**Lighting Control**

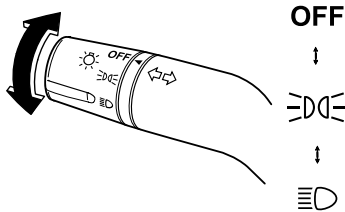
**▼ Headlights**

Turn the headlight switch to turn the headlights, other exterior lights and dashboard illumination on or off.

**NOTE**

- To prevent discharging the battery, do not leave the lights on while the engine is off unless safety requires them.
- If the light switch is left on, the lights will automatically switch off approximately 30 seconds after switching the ignition to ACC or switching the ignition off. The time setting can be changed. Refer to Personalization Features on page 10-8.

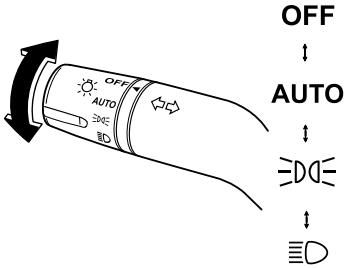
**Without AUTO position**





Switch Position	OFF	☰☱☲	☰☱☲☳
Headlights	Off	Off	On
Taillights Parking lights License lights Dashboard illumination	Off	On	On

# Switches and Controls

With AUTO position



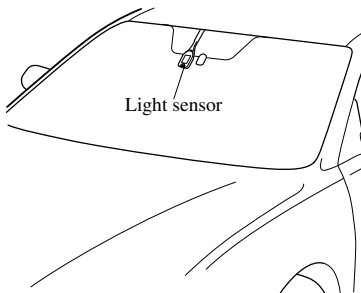
Switch Position	OFF	AUTO		
Headlights	Off	Auto	Off	On
Taillights Parking lights License lights Dashboard illumination	Off		On	On

**AUTO (Auto-light control)**

When the headlight switch is in the AUTO position and the ignition is switched ON, the light sensor senses the surrounding lightness or darkness and automatically turns the headlights, other exterior lights and dashboard illumination on or off (see chart above).

**⚠ CAUTION**

- Do not shade the light sensor by adhering a sticker or a label on the windshield. Otherwise the light sensor will not operate correctly.



- The light sensor also works as a rain sensor for the auto-wiper control. Keep hands and scrapers clear of the windshield when the wiper lever is in the AUTO position and the ignition is switched ON as fingers could be pinched or the wipers and wiper blades damaged when the wipers activate automatically. If you are going to clean the windshield, be sure the wipers are turned off completely — this is particularly important when clearing ice and snow — when it is particularly tempting to leave the engine running.

**NOTE**

- The headlights, other exterior lights and dashboard illumination may not turn off immediately even if the surrounding area becomes well-lit because the light sensor determines that it is nighttime if the surrounding area is continuously dark for several minutes such as inside long tunnels, traffic jams inside tunnels, or in indoor parking lots. In this case, the light turns off if the light switch is turned to the OFF position.
- The dashboard illumination can be adjusted by rotating the knob in the instrument cluster. Also, the day/night mode can be changed by pressing the knob. To adjust the brightness of the dashboard illumination: Refer to Dashboard Illumination on page 5-43.
- The sensitivity of the AUTO lights may be changed by an Authorized Mazda Dealer. Refer to Personalization Features on page 10-8.

## Switches and Controls

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### Xenon fusion headlight bulbs\*

The low-beam bulbs of the headlights have xenon fusion bulbs that produce a bright white beam over a wide area.

#### **! WARNING**

**Do not replace the xenon fusion bulbs yourself**

*Replacing the xenon fusion bulbs yourself is dangerous. Because the xenon fusion bulbs require high voltage, you could receive an electric shock if the bulbs are handled incorrectly. Consult an Authorized Mazda Dealer when the replacement is necessary.*

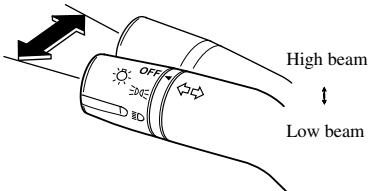
#### **NOTE**

*If the headlights flicker, or the brightness weakens, the bulb-life may be depleted and a replacement is necessary. Consult an Authorized Mazda Dealer.*

### ▼ Headlight High-Low Beam

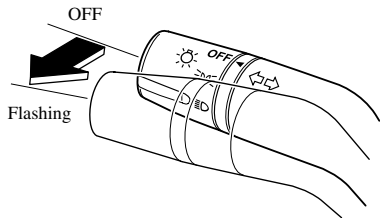
Press the lever forward to turn on the high beams.

Pull the lever back to its original position for the low beams.



### ▼ Flashing the Headlights

To flash the headlights, pull the lever fully towards you (the headlight switch does not need to be on). The lever will return to the normal position when released.

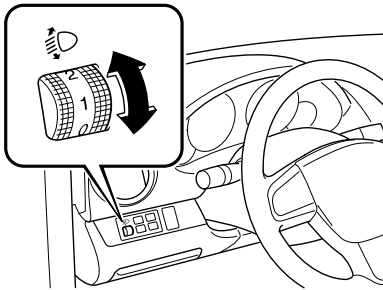


## Switches and Controls

### ▼ Headlight Leveling\*

The number of passengers and weight of cargo in the luggage compartment change the angle of the headlights.

The headlight leveling switch adjusts this angle.



Select the proper setting from the following chart.

Front seat		Rear seat	Load	Switch Position
Driver	Passenger			
×	—	—	—	0
×	×	—	—	0
×	×	×	—	1
×	×	×	×	2
×	—	—	×	3

×: Yes  
—: No

### ▼ Daytime Running Lights (Canada)

In Canada, vehicles must be driven with the headlights on during daytime operation.

For that reason, the daytime running lights automatically turn on when the ignition is switched ON.

#### **NOTE**

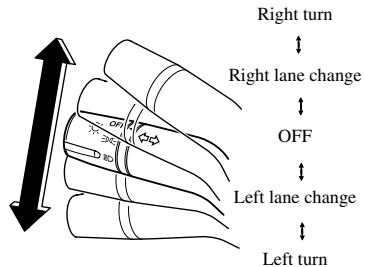
*The Daytime Running Lights turn off when the parking brake is applied.*

## Turn and Lane-Change Signals

### Turn Signals

Move the signal lever down (for a left turn) or up (for a right turn) to the stop position. The signal will self-cancel after the turn is completed.

If the indicator light continues to flash after a turn, manually return the lever to its original position.



Green indicators on the dashboard show which signal is working.

### Lane-change signals

Move the lever slightly toward the direction of the change—until the indicator flashes—and hold it there. It will return to the off position when released.





## Switches and Controls

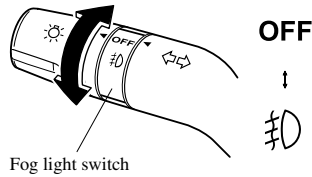
### NOTE


- If an indicator light stays on without flashing or if it flashes abnormally, one of the turn signal bulbs may be burned out.
- A personalized function is available to change the number of flashes. Refer to Personalization Features on page 10-8.
- A personalized function is available to change the turn indicator sound volume. Refer to Personalization Features on page 10-8.

### Fog Lights\*

Use this switch to turn on the fog lights. They help you to see as well as to be seen.

To turn the fog lights on, rotate the fog light switch to the  position. The headlight switch must be in the  position before turning on the fog lights.



To turn them off, rotate the fog light switch to the OFF position or turn the headlight switch to the  or OFF position.

### NOTE

- The fog lights will turn off when the headlights are set at high beam.
- **(With auto-light control)**  
If the fog light switch is in the ON position and the headlight switch is in the AUTO position, the fog lights will be turned on when the headlights, the exterior lights and dashboard illumination are automatically turned on.

## Switches and Controls

### Windshield Wipers and Washer

The ignition must be switched ON.

#### **⚠ WARNING**

**Use only windshield washer fluid or plain water in the reservoir:**

Using radiator antifreeze as washer fluid is dangerous. If sprayed on the windshield, it will dirty the windshield, affect your visibility, and could result in an accident.

**Only use windshield washer fluid mixed with anti-freeze protection in freezing weather conditions:**

Using windshield washer fluid without anti-freeze protection in freezing weather conditions is dangerous as it could freeze on the windshield and block your vision which could cause an accident. In addition, make sure the windshield is sufficiently warmed using the defroster before spraying the washer fluid.

#### **NOTE**

Because heavy ice and snow can jam the wiper blades, the wiper motor is protected from motor breakdown, overheating and possible fire by a circuit breaker. This mechanism will automatically stop operation of the blades, but only for about 5 minutes.

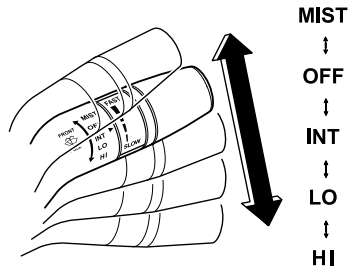
If this happens, turn off the wiper switch and park off the right-of-way, and remove the snow and ice.

After 5 minutes, turn on the switch and the blades should operate normally. If they do not resume functioning, consult an Authorized Mazda Dealer as soon as possible. Drive to the side of the road and park off the right-of-way. Wait until the weather clears before trying to drive with the wipers inoperative.

#### ▼ Windshield Wipers

Turn the wipers on by pressing the lever up or down.

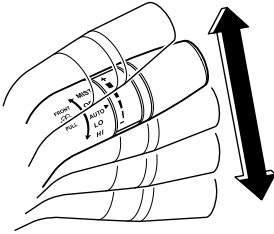
**With INT position**



Switch Position		Wiper operation
①	<b>MIST</b>	Single wipe cycle (mist)
②	<b>INT</b>	Intermittent
③	<b>LO</b>	Low speed
④	<b>HI</b>	High speed

# Switches and Controls

## With AUTO position

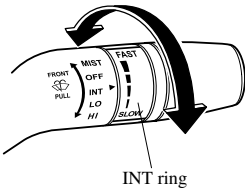


MIST  
↓  
OFF  
↓  
AUTO  
↓  
LO  
↓  
HI

Switch Position	Wiper operation
① MIST	Single wipe cycle (mist)
② AUTO	Auto control
③ LO	Low speed
④ HI	High speed

## Variable-speed intermittent wipers

Set the lever to the intermittent position and choose the interval timing by rotating the ring.



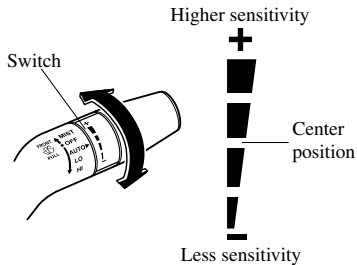
FAST  
↓  
SLOW

## AUTO (Auto-wiper control)

When the wiper lever is in the AUTO position, the rain sensor senses the amount of rainfall on the windshield and turns the wipers on or off automatically (off—intermittent—low speed—high speed).

The sensitivity of the rain sensor can be adjusted by turning the switch on the wiper lever.

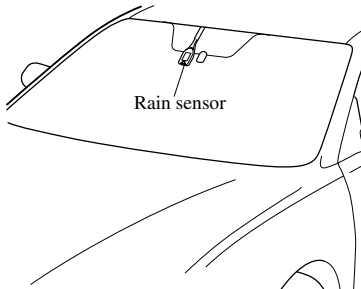
From the center position (normal), rotate the switch downward for higher sensitivity (faster response) or rotate it upward for less sensitivity (slower response).



## Switches and Controls

### **⚠ CAUTION**

- Do not shade the rain sensor by adhering a sticker or a label on the windshield. Otherwise the rain sensor will not operate correctly.



- When the wiper lever is in the AUTO position and the ignition is switched ON, the wipers may move automatically in the following cases:
  - If the windshield above the rain sensor is touched or wiped with a cloth.
  - If the windshield is struck with a hand or other object from either outside or inside the vehicle.

Keep hands and scrapers clear of the windshield when the wiper lever is in the AUTO position and the ignition is switched ON as fingers could be pinched or the wipers and wiper blades damaged when the wipers activate automatically.

If you are going to clean the windshield, be sure the wipers are turned off completely—this is particularly important when clearing ice and snow—when it is most likely that the engine is left running.

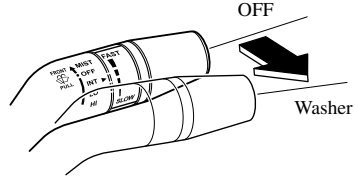
## Switches and Controls

### NOTE

- *Switching the auto-wiper lever from the OFF to the AUTO position while driving activates the windshield wipers once, after which they operate according to the rainfall amount.*
- *The auto-wiper control may not operate when the rain sensor temperature is about  $-10^{\circ}\text{C}$  ( $14^{\circ}\text{F}$ ) or lower, or about  $85^{\circ}\text{C}$  ( $185^{\circ}\text{F}$ ) or higher.*
- *If the windshield is coated with water repellent, the rain sensor may not be able to sense the amount of rainfall correctly and auto-wiper control may not operate properly.*
- *If dirt or foreign matter (Such as ice or matter containing salt water) adheres to the windshield above the rain sensor or if the windshield is iced, it could cause the wipers to move automatically. However, if the wipers cannot remove this ice, dirt or foreign matter, the auto-wiper control will stop operation. In this case, set the wiper lever to the low speed position or high speed position for manual operation, or remove the ice, dirt or foreign matter by hand to restore the auto-wiper operation.*
- *If the auto-wiper lever is left in the AUTO position, the wipers could operate automatically from the effect of strong light sources, electromagnetic waves, or infrared light because the rain sensor uses an optical sensor. It is recommended that the auto-wiper lever be switched to the OFF position other than when driving the vehicle under rainy conditions.*

### ▼ Windshield Washer

Pull the lever toward you and hold it to spray washer fluid.



### NOTE

*With the wiper lever in the OFF or intermittent position/AUTO position, the wipers will operate continuously until the lever is released.*

If the washer does not work, inspect the fluid level (page 8-26). If it's normal, consult an Authorized Mazda Dealer.

## Switches and Controls

### Rear Window Defroster

The rear window defroster clears frost, fog, and thin ice from the rear window.

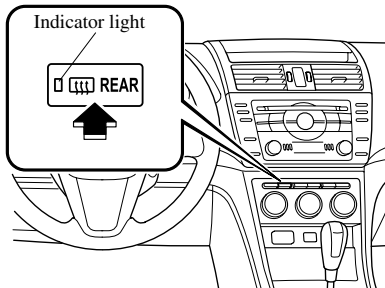
The ignition must be switched ON.

Press the switch to turn on the rear window defroster. The rear window defroster operates for about 15 minutes and turns off automatically.

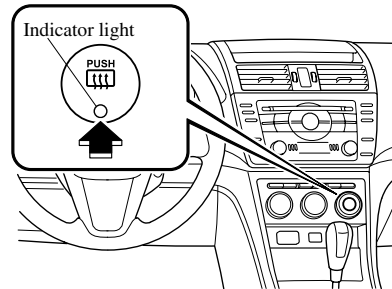
The indicator light illuminates during operation.

To turn off the rear window defroster before the 15 minutes has elapsed, press the switch again.

### Fully Automatic Type Air-Conditioning



### Manual Type Air-Conditioning



### ⚠ CAUTION

*Do not use sharp instruments or window cleaners with abrasives to clean the inside of the rear window surface. They may damage the defroster grid inside the window.*


### NOTE

*This defroster is not designed for melting snow. If there is an accumulation of snow on the rear window, remove it before using the defroster.*

### ▼ Mirror Defroster\*

To turn on the mirror defrosters, switch the ignition ON and press the rear window defroster switch (page 5-71).


### NOTE

*For vehicles equipped with mirror de-fogging equipment,  is indicated on each door mirror.*

## Switches and Controls

---

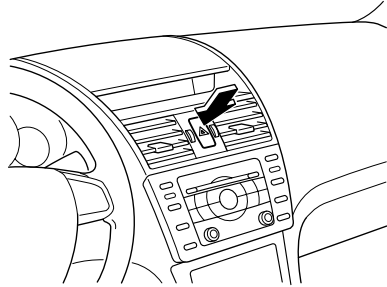
### Horn

To sound the horn, press the  mark on the steering wheel.

### Hazard Warning Flasher

The hazard warning lights should always be used when you stop on or near a roadway in an emergency.

The hazard warning lights warn other drivers that your vehicle is a traffic hazard and that they must take extreme caution when near it.



Depress the hazard warning flasher and all the turn signals will flash.

#### **NOTE**

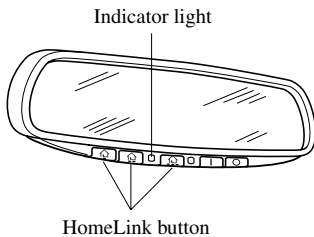
- *The turn signals do not work when the hazard warning lights are on.*
- *Check local regulations about the use of hazard warning lights while the vehicle is being towed to verify that it is not in violation of the law.*

## HomeLink Wireless Control System\*

### NOTE

*HomeLink and HomeLink house are registered trademarks of Johnson Controls.*

The HomeLink system replaces up to 3 hand-held transmitters with a single built-in component in the auto-dimming mirror. Pressing the HomeLink button on the auto-dimming mirror activates garage doors, gates and other devices surrounding your home.



### ⚠ WARNING

**Do not use the HomeLink system with any garage door opener that lacks the safety stop and reverse feature:**

*Using the HomeLink system with any garage door opener that lacks the safety stop and reverse feature as required by federal safety standards is dangerous. (This includes garage doors manufactured before April 1, 1982.)*

*Using these garage door openers can increase the risk of serious injury or death. For further information, contact HomeLink at 1-800-355-3515 or [www.homelink.com](http://www.homelink.com) or your Authorized Mazda Dealer.*

**Always check the areas surrounding garage doors and gates for people or obstructions before programming or during operation of the HomeLink system:**

*Programming or operating the HomeLink system without verifying the safety of areas surrounding garage doors and gates is dangerous and could result in an unexpected accident and serious injury if someone were to be hit.*

### ⚠ CAUTION

*HomeLink has been tested and complies with FCC and Industry Canada rules. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the device.*



## Switches and Controls

---

### NOTE

FCC ID: NZLOBIHL3

CANADA:4112A-OB1HL3

This device complies with FCC rules part 15.

Operation is subject to the following conditions:

- 1- This device may not cause any harmful interference and
- 2- This device must accept any interference that may be received including interference that may cause undesired operation.

### NOTE

The programming will not be erased even if the battery is disconnected.

### ▼ Pre-programming the HomeLink System

#### NOTE

It is recommended that a new battery be placed in the hand-held transmitter of the device being programmed to HomeLink for quicker training and accurate transmission of the radio-frequency signal.

- Verify that there is a remote control transmitter available for the device you would like to program.
- Disconnect the power to the device.

### ▼ Programming the HomeLink System

#### CAUTION

When programming a garage door opener or a gate, disconnect the power to these devices before performing programming, as continuous operation of the devices could damage the motor.

The HomeLink system provides 3 buttons which can be individually selected and programmed using the transmitters for current, on-market devices as follows:

1. Press and hold the two outer HomeLink buttons (buttons one and three) — releasing only when the indicator light begins to flash (after 20 seconds). **Do not** hold the buttons for longer than 30 seconds and **do not repeat step 1** to program a second and/or third hand-held transmitter to the remaining two HomeLink buttons.
2. Position the end of your hand-held transmitter 2.5—7.5 cm (1—3 inches) away from the HomeLink button you wish to program while keeping the indicator light in view.
3. Simultaneously press and hold both the chosen HomeLink and hand-held transmitter buttons. **Do not release the buttons until step 4 has been completed.**

#### NOTE

Some gate operators and garage door openers may require you to replace this Programming Step 3 with procedures noted in the “Gate Operator/Canadian Programming” section.

4. After the HomeLink indicator light changes from a slow to a rapidly blinking light, release both the HomeLink and hand-held transmitter buttons.

#### NOTE

If the HomeLink indicator light does not change to a rapidly blinking light, contact HomeLink at [www.homelink.com](http://www.homelink.com) or call 1-800-355-3515 for assistance.

## Switches and Controls

5. Press and hold the just-trained HomeLink button and observe the indicator light.

If the indicator light **stays on constantly**, **programming is complete** and your device should activate when the HomeLink button is pressed and released.

### NOTE

*To program the remaining two HomeLink buttons, begin with “Programming” — step 2. Do not repeat step 1.*

If the indicator light blinks **rapidly for two seconds and then turns to a constant light**, continue with **“Programming” steps 6—8** to complete the programming of a rolling code equipped device (most commonly a garage door opener).

6. At the garage door opener receiver (motor-head unit) in the garage, locate the “learn” or “smart” button. This can usually be found where the hanging antenna wire is attached to the motor-head unit.
7. Firmly press and release the “learn” or “smart” button. (The name and color of the button may vary by manufacturer.)

### NOTE

*There are 30 seconds in which to initiate step 8.*

8. Return to the vehicle and firmly **press, hold for two seconds and release** the programmed HomeLink button. Repeat the **“press/hold/release”** sequence a second time, and, depending on the brand of the garage door opener (or other rolling code equipped device), repeat this sequence a third time to complete the programming process.

HomeLink should now activate your rolling code equipped device.

### NOTE

*To program the remaining two HomeLink buttons, begin with “Programming” — step 2. Do not repeat step 1.*

For questions or comments, please contact HomeLink at [www.homelink.com](http://www.homelink.com) or 1-800-355-3515.

### ▼ Gate operator/Canadian Programming

Canadian radio-frequency laws require transmitter signals to “time-out” (or quit) after several seconds of transmission — which may not be long enough for HomeLink to pick up the signal during programming. Similar to this Canadian law, some U.S. gate operators are designed to “time-out” in the same manner.

If you live in Canada or you are having difficulties programming a gate operator by using the “Programming” procedures (regardless of where you live), **replace “Programming HomeLink” step 3** with the following:

### NOTE

*If programming a garage door opener or gate operator, it is advised to unplug the device during the “cycling” process to prevent possible overheating.*

## Switches and Controls

---

Continue to press and hold the HomeLink button while you **press and release** — **every two seconds** (“cycle”) your hand-held transmitter until the frequency signal has successfully been accepted by HomeLink. (The indicator light will flash slowly and then rapidly.)

Proceed with “Programming” step 4 to complete.

### ▼ Operating the HomeLink System



Press the programmed HomeLink button to operate a programmed device. The code will continue being transmitted for a maximum of 20 seconds.

### ▼ Reprogramming the HomeLink system

To program a device to HomeLink using a HomeLink button previously trained, follow these steps:

1. Press and hold the desired HomeLink button. **DO NOT** release the button.
2. The indicator light will begin to flash after 20 seconds. Without releasing the HomeLink button, proceed with “Programming” - step 2.

### ▼ Erasing Programmed HomeLink Buttons

To erase the existing programming from all three operating channels, press and hold the two outside buttons (  ,  ) on the auto-dimming mirror until the HomeLink indicator light begins to flash after approximately 20 seconds.

Verify that the programming has been erased when you resell the vehicle.

# 6

## Interior Comfort

Use of various features for drive comfort, including air-conditioning and audio system.

<b>Climate Control System</b> .....	<b>6-2</b>	<b>Bluetooth Hands-Free (Panel Operation)</b> .....	<b>6-123</b>
Operating Tips .....	6-2	Bluetooth Hands-Free * .....	6-123
Vent Operation .....	6-3	Basic Bluetooth Hands-Free Operation .....	6-125
Types of the Climate Control System .....	6-5	Convenient Use of the Hands-Free System .....	6-128
Manual Type .....	6-6	Hands-Free Setting .....	6-132
Fully Automatic Type .....	6-11	When Bluetooth Hands-Free Cannot be Used .....	6-134
<b>Audio System</b> .....	<b>6-16</b>	Safety Certification .....	6-135
Antenna .....	6-16	Mazda Bluetooth Hands-Free Customer Service .....	6-135
Operating Tips for Audio System .....	6-16	<b>Rear View Monitor</b> .....	<b>6-136</b>
Types of the Audio Set .....	6-25	Rear View Monitor * .....	6-136
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Safety Certification .....	6-77	Cup Holder .....	6-149
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Safety Certification .....	6-121		
Mazda Bluetooth Hands-Free Customer Service .....	6-122		

\* Some models.

## Climate Control System

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### Operating Tips

#### ▼ Operating the Climate Control System

Operate the climate control system with the engine running.

#### **NOTE**

*To prevent the battery from being discharged, do not leave the fan control dial on for a long period of time with the ignition switched ON when the engine is not running.*

#### ▼ Clearing the Air Inlet

Clear all obstructions such as leaves, snow and ice from the hood and the air inlet in the cowl grille to improve the system efficiency.

#### ▼ Foggy Windows

The windows may fog up easily in humid weather. Use the climate control system to defog the windows.

To help defog the windows, operate the air conditioner to dehumidify the air.

#### **NOTE**

*The air conditioner may be used along with the heater to dehumidify the air.*

#### ▼ Parking in Direct Sunlight

If the vehicle has been parked in direct sunlight during hot weather, open the windows to let warm air escape, then run the climate control system.

#### ▼ Not Using for a Long Period

Run the air conditioner about 10 minutes at least once a month to keep internal parts lubricated.

#### ▼ Check the Refrigerant before the Weather Gets Hot

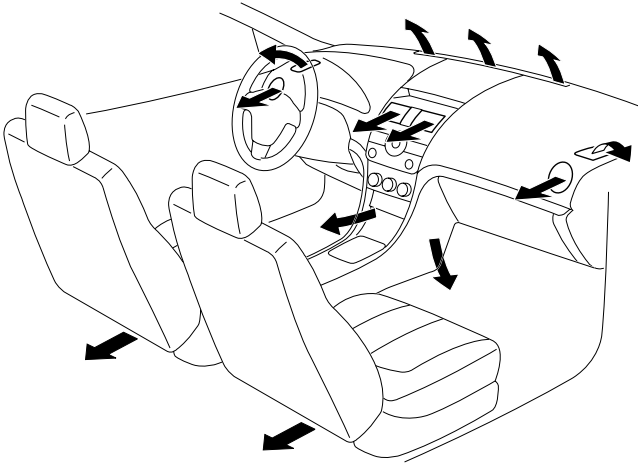
Have the air conditioner checked before the weather gets hot. Lack of refrigerant may make the air conditioner less efficient. Consult an Authorized Mazda Dealer for refrigerant inspection.

The air conditioner is filled with HFC134a (R134a), a refrigerant that will not damage the ozone layer. If the air conditioner is low on refrigerant or has a malfunction, consult an Authorized Mazda Dealer.

#### ▼ Replacement of the Cabin Air Filter

If your vehicle is equipped with an air filter for the air conditioner, it is necessary to change the filter periodically as indicated in scheduled maintenance (page 8-3). Consult an Authorized Mazda Dealer for replacement of the cabin air filter.

## Vent Operation

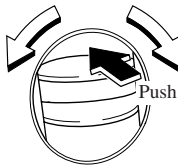


### ▼ Adjusting the Vents

#### Directing airflow

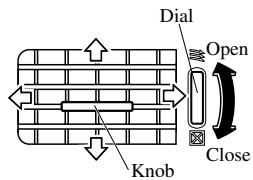
##### Side Vents

To adjust the direction of airflow, open the vents and rotate them left and right.



##### Center Vents

To adjust the direction of airflow, move the adjustment knob.



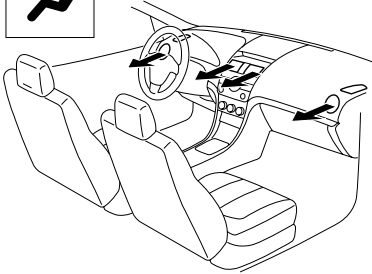
#### **NOTE**

*When using the air conditioner under humid ambient temperature conditions, the system may blow fog from the vents. This is not a sign of trouble but a result of humid air being suddenly cooled.*

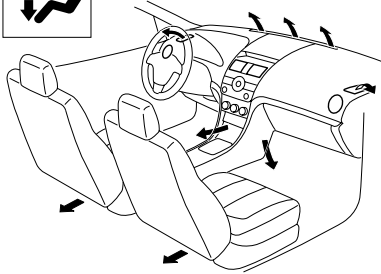
# Climate Control System

## ▼ Selecting the Airflow Mode

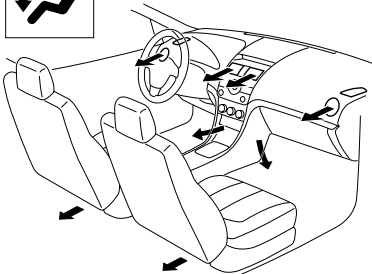
### Dashboard Vents



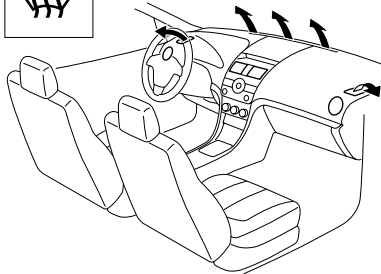
### Defroster and Floor Vents



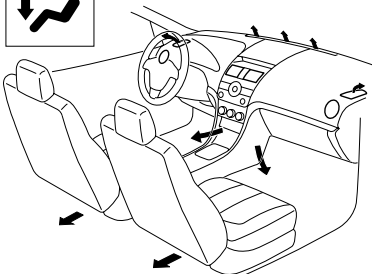
### Dashboard and Floor Vents



### Defroster Vents



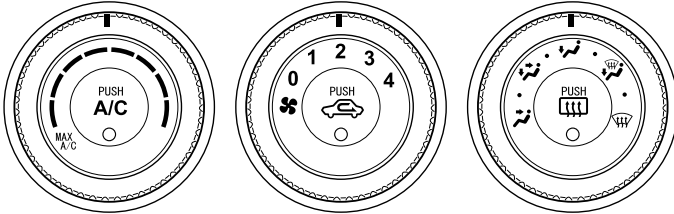
### Floor Vents



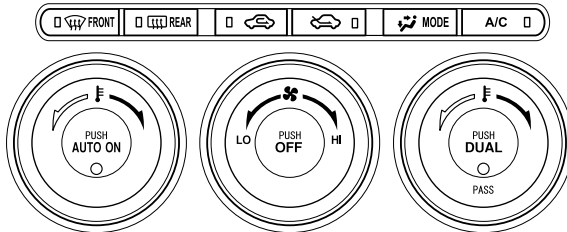
## Types of the Climate Control System

Manual type and fully automatic type climate control systems are explained separately. Check your vehicle's climate control type and read the appropriate pages.

Manual Type ..... page 6-6



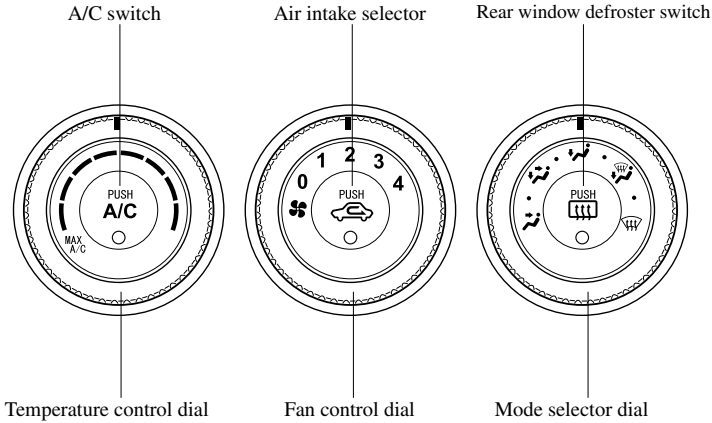
Fully Automatic Type ..... page 6-11





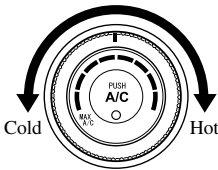
# Climate Control System

## Manual Type



### ▼ Control Switches

#### Temperature control dial



This dial controls temperature. Turn it clockwise for hot and counterclockwise for cold.

#### **MAX-A/C position**

For quick cabin cooling, rotate the temperature control dial counterclockwise to the MAX-A/C position. The A/C system automatically turns on and the air intake mode switches to the recirculation position automatically.

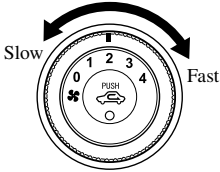
#### **NOTE**

When the mode is set to or with the fan control dial in a position other than 0 and the temperature control dial in the maximum cold position, the air intake selector switches to the recirculated air mode and the A/C turns on automatically.

If A/C is not desired, press the A/C switch to turn it off.

# Climate Control System

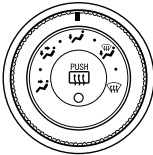
## Fan control dial



This dial allows variable fan speeds.

- 0—Fan off
- 1—Low speed
- 2—Medium low speed
- 3—Medium high speed
- 4—High speed

## Mode selector dial

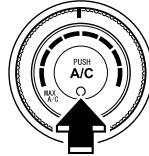


Turn the mode selector dial to select airflow mode (page 6-4).

### **NOTE**

- The mode selector dial can be set at the intermediate positions (●) between each mode. Set the dial to an intermediate position if you want to slightly adjust the airflow amount.
- For example, when the mode selector dial is at the ● position between the two floor vent positions, airflow from the floor vent is less than that of the two floor vent position.

## A/C switch



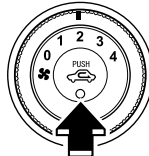
Press the A/C switch to turn the air conditioner on. The indicator light on the switch will illuminate when the fan control dial is set at position 1, 2, 3, or 4.

Press the switch once again to turn the air conditioner off.


### **NOTE**

The air conditioner may not function when the outside temperature approaches 0 °C (32 °F).

## Air intake selector



This switch controls the source of air entering the vehicle.

Press the  switch to alternate between the outside air and recirculated air modes.

It is recommended that under normal conditions the switch be kept in the outside air mode.

## Climate Control System

---

### Outside air mode (indicator light turned off)

Outside air is taken into the vehicle. Use this mode for normal ventilation and heating.

### Recirculated air mode (indicator light illuminated)

Outside air is shut off. Air within the vehicle is recirculated.


This mode can be used when driving on a dusty road or in similar conditions. It also helps to provide quicker cooling of the interior.

### **WARNING**







**Do not use the recirculated air mode in cold or rainy weather:**

*Using the recirculated air mode in cold or rainy weather is dangerous as it will cause the windows to fog up. Your vision will be hampered, which could lead to a serious accident.*


### ▼ Heating

1. Set the mode selector dial to the  position.
2. Set the temperature control dial to the hot position.
3. Set the fan control dial to the desired speed.

### NOTE

- If the windshield fogs up easily, set the mode selector dial to the  position.
- If cooler air is desired at face level, set the mode selector dial at the  position and adjust the temperature control dial to maintain maximum comfort.
- The air to the floor is warmer than air to the face (except when the temperature control dial is set at the extreme hot or cold position).
- In the  or  position, the air conditioner is automatically turned on (however, the indicator light does not illuminate) and the outside air mode is automatically selected to defrost the windshield.  
*In the  or  position, the outside air mode cannot be changed to the recirculated air mode.*


### ▼ Cooling (With Air Conditioner)

1. Set the mode selector dial to the  position.
2. Set the temperature control dial to the cold position.
3. Set the fan control dial to the desired speed.
4. Turn on the air conditioner by pressing the A/C switch.
5. Adjust the fan control dial and temperature control dial to maintain maximum comfort.


**⚠ CAUTION**

*When using the air conditioner while driving up long hills or in heavy traffic, closely monitor the temperature gauge (page 5-42). The air conditioner may cause engine overheating. If the gauge indicates overheating, turn the air conditioner off (page 7-13).*


**NOTE**

- *When maximum cooling is desired, set the temperature control dial to the extreme cold position and set the air intake selector to the recirculated air mode, then set the fan control dial to position 4.*
- *If warmer air is desired at floor level, set the mode selector dial at the  position and adjust the temperature control dial to maintain maximum comfort.*
- *The air to the floor is warmer than air to the face (except when the temperature control dial is set at the extreme hot or cold position).*


**▼ Ventilation**



1. Set the mode selector dial to the  position.
2. Set the air intake selector to the outside air mode.
3. Set the temperature control dial to the desired position.
4. Set the fan control dial to the desired speed.

**▼ Windshield Defrosting and Defogging**

1. Set the mode selector dial to the  position.
2. Set the temperature control dial to the desired position.
3. Set the fan control dial to the desired speed.

**⚠ WARNING**




**Do not defog the windshield using the  position with the temperature control set to the cold position:**



*Using the  position with the temperature control set to the cold position is dangerous as it will cause the outside of the windshield to fog up. Your vision will be hampered, which could lead to a serious accident. Set the temperature control to the hot or warm position when using the  position.*

## Climate Control System

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### **NOTE**

- For quick cabin cooling, rotate the temperature control dial counterclockwise to the MAX-A/C position. The A/C system automatically turns on and the air intake mode switches to the recirculation position automatically.
- For maximum defrosting, set the temperature control dial to the extreme hot position and the fan control dial to position 4.
- If warm air is desired at the floor, set the mode selector dial to the  position.
- In the , or  position, the air conditioner is automatically turned on (however, the indicator light does not illuminate) and the outside air mode is automatically selected to defrost the windshield.

In the  or  position, the outside air mode cannot be changed to the recirculated air mode.

### **▼ Dehumidifying (With Air Conditioner)**

Operate the air conditioner in cool or cold weather to help defog the windshield and side windows.

1. Set the mode selector dial to the desired position.
2. Set the air intake selector to the outside air mode.
3. Set the temperature control dial to the desired position.
4. Set the fan control dial to the desired speed.
5. Turn on the air conditioner by pressing the A/C switch.

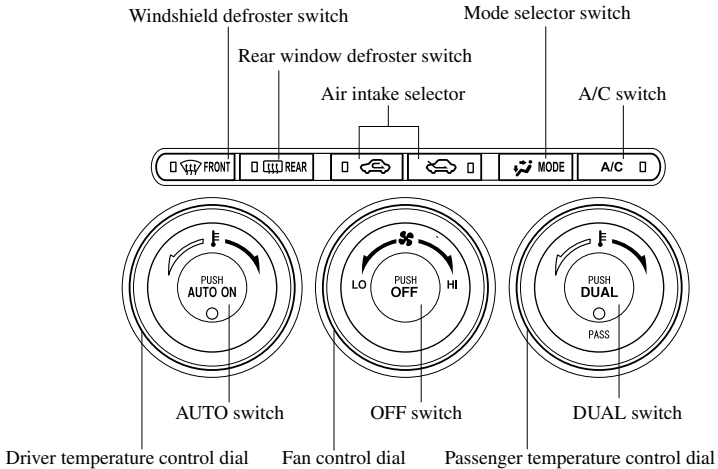
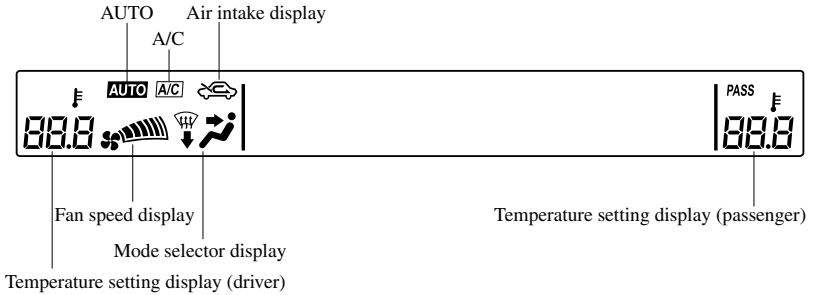
### **NOTE**

One of the functions of the air conditioner is dehumidifying the air and, to use this function, the temperature does not have to be set to cold. Therefore, set the temperature control dial to the desired position (hot or cold) and turn on the air conditioner when you want to dehumidify the cabin air.

**Fully Automatic Type**

Climate control information is displayed on the information display.

**Information display**



# Climate Control System

## ▼ Control Switches

### AUTO switch



By pressing the AUTO switch the following functions will be automatically controlled in accordance with the selected set temperature:

- Airflow temperature
- Amount of airflow
- Selection of airflow mode
- Outside/Recirculated air selection
- Air conditioner operation

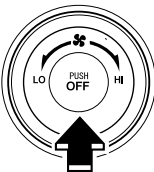
### **NOTE**

*AUTO switch indicator light*

- When on, it indicates AUTO operation, and the system will function automatically.
- If any of the following dials or switches are operated while in AUTO control, the AUTO switch indicator turns off.
  - Mode selector switch
  - Fan control dial
  - Windshield defroster switch

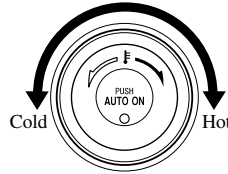
*The functions for dials and switches other than those operated in the above continue to operate in AUTO control.*

### OFF switch



Pressing the OFF switch shuts off the climate control system.

### Temperature control dial



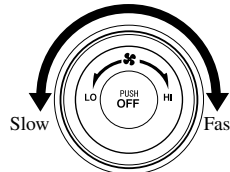
This dial controls temperature. Turn it clockwise for hot and counterclockwise for cold.

- When the DUAL switch is off: Turn the driver temperature control dial to control the temperature.
- When the DUAL switch is on: Turn the driver or front passenger temperature control dial to control the temperature.

### **NOTE**

*The system changes to the individual operation mode (DUAL switch indicator light illuminated) by turning the front passenger temperature control dial even when the DUAL switch is off, which allows individual control of the set temperature for the driver and front passenger.*

### Fan control dial



The fan has seven speeds. The selected speed will be displayed.





# Climate Control System

## Mode selector switch

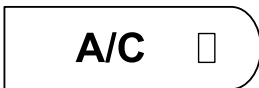


The desired airflow mode can be selected (page 6-4).

### **NOTE**

- With the airflow mode set to the  position and the temperature control dial set at a medium temperature, heated air is directed to the feet and a comparably lower air temperature will flow through the central, left and right vents.
- To set the air vent to , press the windshield defroster switch.
- In the  position, the air conditioner is automatically turned on and the outside air mode is automatically selected to defrost the windshield. In the  position, the outside air mode cannot be changed to the recirculated air mode.

## A/C switch



Pressing the A/C switch while the AUTO switch is turned on will turn off the air conditioning (cooling/dehumidifying functions). The air conditioning can be turned on and off by pressing the A/C switch while the fan control dial is on.

### **NOTE**

- The air conditioning operates when the A/C switch is pressed even if the fan is off.
- The air conditioner may not function when the outside temperature approaches 0 °C (32 °F). (Indicator light remains on even when system is off.)

## Air intake selector



Outside or recirculated air positions can be selected. Press the switch to select outside/recirculated air positions.

### **Recirculated air position** ()


Use this position when going through tunnels, driving in congested traffic (high engine exhaust areas) or when quick cooling is desired.

### **Outside air position** ()

Use this position for normal conditions and defogging.

## **⚠ WARNING**

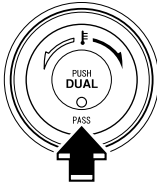
**Do not use the  position in cold or rainy weather:**

Using the  position in cold or rainy weather is dangerous as it will cause the windows to fog up. Your vision will be hampered, which could lead to a serious accident.



# Climate Control System

## DUAL switch



Use the DUAL switch to change the mode between the individual operation (driver and passenger) and interconnection (simultaneous) modes.

### **Individual operation mode (indicator light illuminated)**

The set temperature can be controlled individually for the driver and front passenger.

### **Interconnection mode (indicator light turned off)**

The set temperature for the driver and front passenger is controlled simultaneously.

### **NOTE**



*The system changes to the interconnection mode automatically if the windshield defroster switch is pressed. The system will not change to the individual operation mode by pressing the DUAL switch or turning the front passenger temperature control dial.*

## Windshield defroster switch



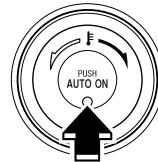
Press the switch to defrost the windshield and front door windows.

### **NOTE**

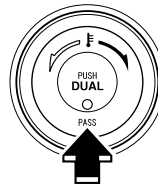
*In the  position, the air conditioner is automatically turned on and the outside air mode is automatically selected to defrost the windshield. In the  position, the outside air mode cannot be changed to the recirculated air mode.*

## **▼ Operation of Automatic Air Conditioning**

1. Press the AUTO switch. Selection of the airflow mode, air intake selector and amount of airflow will be automatically controlled.



2. Use the temperature control dial to select a desired temperature. Press the DUAL switch or turn the front passenger temperature control dial to control the set temperature individually for the driver and front passenger.



To turn off the system, press the OFF switch.

# Climate Control System

## NOTE

- Setting the temperature to the maximum high or low will not provide the desired temperature at a faster rate.
- When selecting heat, the system will restrict airflow until it has warmed to prevent cold air from blowing out of the vents.

## ▼ Windshield Defrosting and Defogging



Press the windshield defroster switch. In this position, the outside air position is automatically selected, and the air conditioner automatically turns on. The air conditioner will directly dehumidify the air to the front windshield and side windows (page 6-4). Airflow amount will be increased.

## ⚠ WARNING

Set the temperature control to the hot or warm position when defogging (☀ position):

Using the ☀ position with the temperature control set to the cold position is dangerous as it will cause the outside of the windshield to fog up. Your vision will be hampered, which could lead to a serious accident.

## NOTE

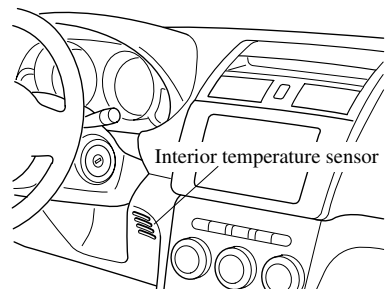
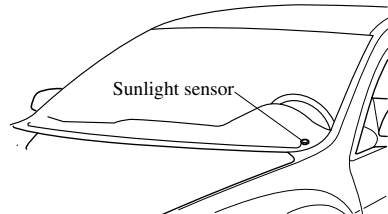
Use the temperature control dial to increase the air flow temperature and defog the windshield more quickly.

## ▼ Sunlight/Temperature Sensor

The fully automatic air conditioner function measures inside and outside temperatures, and sunlight. It then sets temperatures inside the passenger compartment accordingly.

## ⚠ CAUTION

Do not obstruct either sensor, otherwise the automatic air conditioner will not operate properly.



## Audio System

### Antenna

#### ▼ AM/FM Radio Antenna

The antenna is printed onto the window glass.

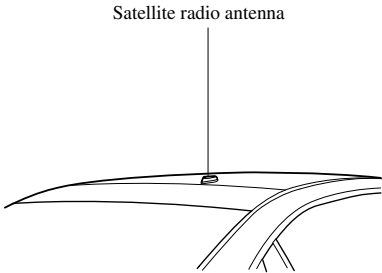
#### **CAUTION**

*When washing the inside of the window which has an antenna, use a soft cloth dampened in lukewarm water, gently wiping the antenna lines.*

*Use of glass cleaning products could damage the antenna.*

#### ▼ Satellite Radio Antenna\*

The satellite radio antenna receives SIRIUS signals.



### Operating Tips for Audio System

#### **WARNING**

**Do not adjust the audio control switches while driving the vehicle:**

*Adjusting the audio while driving the vehicle is dangerous as it could distract your attention from the vehicle operation which could lead to a serious accident. Always adjust the audio while the vehicle is stopped.*

*Even if the audio control switches are equipped on the steering wheel, learn to use the switches without looking down at them so that you can keep your maximum attention on the road while driving the vehicle.*

#### **CAUTION**

*For the purposes of safe driving, adjust the audio volume to a level that allows you to hear sounds outside of the vehicle including car horns and particularly emergency vehicle sirens.*

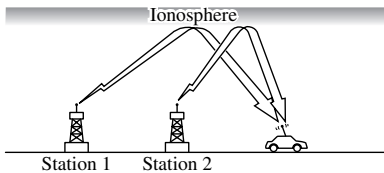
#### **NOTE**

- *To prevent the battery from being discharged, do not leave the audio system on for a long period of time when the engine is not running.*
- *If a cellular phone or CB radio is used in or near the vehicle, it could cause noise to occur from the audio system, however, this does not indicate that the system has been damaged.*

## ▼ Radio Reception

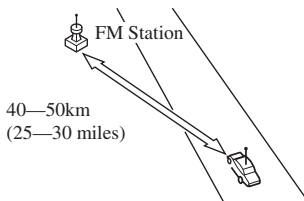
### AM characteristics

AM signals bend around such things as buildings or mountains and bounce off the ionosphere. Therefore, they can reach longer distances than FM signals. Because of this, two stations may sometimes be picked up on the same frequency at the same time.

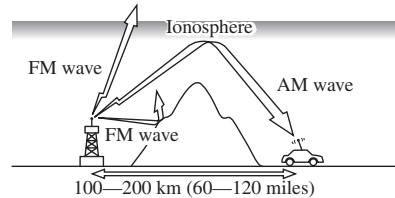


### FM characteristics

An FM broadcast range is usually about 40–50 km (25–30 miles) from the source. Because of extra coding needed to break the sound into two channels, stereo FM has even less range than monaural (non-stereo) FM.



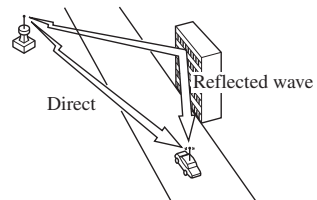
Signals from an FM transmitter are similar to beams of light because they do not bend around corners, but they do reflect. Unlike AM signals, FM signals cannot travel beyond the horizon. Therefore, FM stations cannot be received at the great distances possible with AM reception.



Atmospheric conditions can also affect FM reception. High humidity will cause poor reception. However, cloudy days may provide better reception than clear days.

### **Multipath noise**

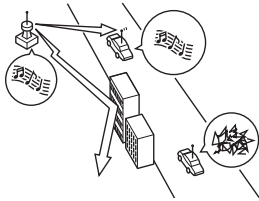
Since FM signals can be reflected by obstructions, it is possible to receive both the direct signal and the reflected signal at the same time. This causes a slight delay in reception and may be heard as a broken sound or a distortion. This problem may also be encountered when in close proximity to the transmitter.



# Audio System

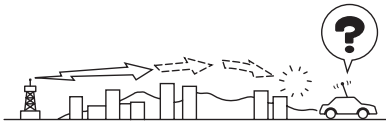
## Flutter/Skip noise

Signals from an FM transmitter move in straight lines and become weak in valleys between tall buildings, mountains, and other obstacles. When a vehicle passes through such an area, the reception conditions may change suddenly, resulting in annoying noise.



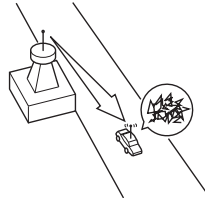
## Weak signal noise

In suburban areas, broadcast signals become weak because of distance from the transmitter. Reception in such fringe areas is characterized by sound breakup.



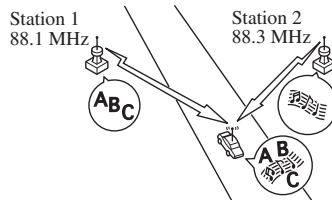
## Strong signal noise

This occurs very close to a transmitter tower. The broadcast signals are extremely strong, so the result is noise and sound breakup at the radio receiver.



## Station drift noise

When a vehicle reaches the area of two strong stations broadcasting at similar frequencies, the original station may be temporarily lost and the second station picked up. At this time there will be some noise from this disturbance.



### ▼ Operating Tips for CD Player/In-Dash CD Changer

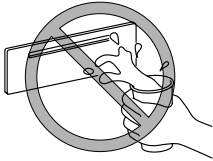
#### Condensation phenomenon

Immediately after turning on the heater when the vehicle is cold, the CD or optical components (prism and lens) in the CD player/In-dash CD changer may become clouded with condensation. At this time, the CD will eject immediately when placed in the unit. A clouded CD can be corrected simply by wiping it with a soft cloth. Clouded optical components will clear naturally in about an hour. Wait for normal operation to return before attempting to use the unit.

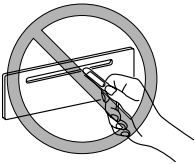
#### Handling the CD player/In-dash CD changer

The following precautions should be observed.

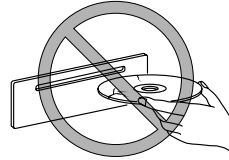
- Do not spill any liquid on the audio system.



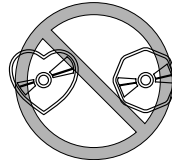
- Do not insert any objects, other than CDs, into the slot.



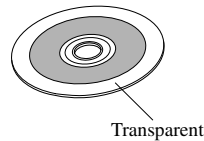
- The CD revolves at high speed within the unit. Defective (cracked or badly bent) CDs should never be used.



- Do not use non-conventional discs such as heart-shaped, octagonal discs, etc. The disc may not eject resulting in a malfunction.

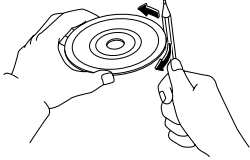


- If the memory portion of the CD is transparent or translucent, do not use the disc.

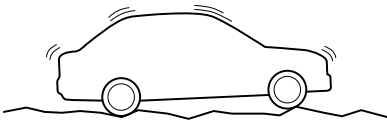


## Audio System

- A new CD may have rough edges on its inner and outer perimeters. If a disc with rough edges is used, proper setting will not be possible and the CD player/In-dash CD changer will not play the CD. In addition, the disc may not eject resulting in a malfunction. Remove the rough edges in advance by using a ball-point pen or pencil as shown below. To remove the rough edges, rub the side of the pen or pencil against the inner and outer perimeter of the CD.



- When driving over uneven surfaces, the sound may jump.



- The CD player/In-dash CD changer has been designed to play CDs bearing the identification logo as shown below. No other discs can be played.



- Use discs that have been legitimately produced. If illegally-copied discs such as pirated discs are used, the system may not operate properly.
- Be sure never to touch the signal surface when handling the CDs. Pick up a CD by grasping the outer edge or the edge of the hole and the outer edge.



- Do not stick paper or tape on the CD. Avoid scratching the reverse side (the side without a label). The disc may not eject resulting in a malfunction.
- Dust, finger smudges, and dirt can decrease the amount of light reflected from the signal surface, thus affecting sound quality. If the CD should become soiled, gently wipe it with a soft cloth from the center of the CD to the edge.

- Do not use record sprays, antistatic agents, or household spray cleaners. Volatile chemicals such as benzine and thinner can also damage the surface of the CD and must not be used. Anything that can damage, warp, or fog plastic should never be used to clean CDs.
  - Insert discs one by one. If two discs are inserted at the same time, the system may not operate properly.
  - The CD player/In-dash CD changer ejects the CD if the CD is inserted upside down. Also dirty and/or defective CDs may be ejected.
  - Do not insert cleaning discs in the CD player/In-dash CD changer.
  - Do not insert any disc with a peel-off seal affixed to it.
  - This unit may not be able to play certain CD-R/CD-RWs made using a computer or music CD recorder due to disc characteristics, scratches, smudges, dirt, etc., or due to dust or condensation on the lens inside the unit.
  - Storing CDs in the vehicle exposed to direct sunlight or high temperature may damage the CD-R/CD-RWs, and make them unplayable.
  - CD-R/CD-RW exceeding 700 MB cannot be played.
  - This unit may not be able to play certain discs made using a computer due to the application (writing software) setting used. (For details, consult the store where the application was purchased.)
  - It is possible that certain text data, such as titles, recorded on a CD-R/CD-RW may not be displayed when musical data (CD-DA) is playing.
  - The period from when a CD-RW is inserted to when it begins playing is longer than a normal CD or CD-R.
- Completely read the instruction manual and cautions for CD-R/CD-RWs.
  - Do not use discs with cellophane tape adhering, partially peeled off labels, or adhesive material exuding from the edges of the CD label. Also, do not use discs with a commercially-available CD-R label affixed. The disc may not eject resulting in a malfunction.

### ▼ Operating Tips for MP3

#### **NOTE**

*Supply of this product only conveys a license for private, non-commercial use and does not convey a license nor imply any right to use this product in any commercial (i.e. revenue-generating) real time broadcasting (terrestrial, satellite, cable and/or any other media), broadcasting/streaming via the Internet, intranets and/or other networks or in other electronic content distribution systems, such as pay-audio or audio-on-demand applications. An independent license for such use is required. For details, please visit <http://www.mp3licensing.com>.*

- This audio system handles MP3 files that have been recorded on CD-R/CD-RW/CD-ROMs. Discs that have been recorded using the following formats can be played:
  - ISO 9660 level 1
  - ISO 9660 level 2
  - Joliet extended format
  - Romeo extended format
- This unit handles MP3 files conforming to the MP3 format containing both header frames and data frames.
- This unit can play multi-session recorded discs that have up to 40 sessions.





- The maximum number of characters that can be used for file names is as follows. However, this unit will only display up to 32 characters, including the file extension (.mp3).

	Maximum number of characters in a file name (including a separator “.” and the three letters of the file extension)
ISO9660 level 1	12*
ISO9660 level 2	31*
Joliet extended format	64
Romeo extended format	128

\* English one-byte characters (capitalized only) and underbar “\_” are available.

### CAUTION

*This unit can only play MP3 files that have an MP3 file extension (.mp3) attached. Do not attach an MP3 file extension to any other type file as it could cause noise to be emitted or a malfunction in the unit.*

### About ID3 Tag display

- This unit can only display ID3 Tag album, track and artist names that have been input using Ver.1.0/1.1/2.2/2.3 formats. Any other data that may have been input cannot be displayed.
- This unit can only display English (including numerals) one-byte characters. Use only English (including numerals) one-byte characters when inputting ID3 tags. Two-byte characters and some special symbols cannot be displayed.

### Specialized glossary

#### **MP3**

Abbreviation for “MPEG Audio Layer 3”. A technical standard for audio compression as decided by an ISO (International Organization for Standardization) MPEG working group. Use of MP3 allows for audio data to be compressed to approximately a tenth of the source data size.

#### **ISO 9660**

An international standard for logical formatting of CD-ROM files and folders. It is divided into three separate levels based on differences in file naming procedures, data configuration and other characteristics.

#### **Multi-session**

A session is the complete amount of data recorded from the beginning to the end of a single period of CD-ROM, CD-R/CD-RW data recording. Multi-session refers to the existence of data from two or more sessions on a single disc.

#### **Sampling**

Refers to the process of encoding analog audio data at regular intervals and converting it to digital data. The sampling rate refers to the number of times a sample is taken in one second and is expressed in Hz units. Increasing the sampling rate improves the sound quality but also increases the data size.

## Audio System

### Bit rate

Refers to the volume of data per second, expressed in bps (bits per second). Generally, the larger the number of the transfer bit rate when compressing an MP3 file, the more information regarding musical reproduction it carries, and therefore the better the sound quality.

### Packet writing

A general term for the method, similar to that used for floppy discs or hard drives, of recording the required file in a single increment on a CD-R and similar.

### ID3 Tag

ID3 tag is a method for storing information related to the music in an MP3 file. Information such as track, artist and album name can be stored. This content can be freely edited using ID3 editing function software.

### VBR

Abbreviation for Variable Bit Rate. While CBR (Constant Bit Rate) is generally used, VBR varies the bit rate for audio compression according to compression conditions and this allows for compression with preference given to sound quality.

### ▼ Operating Tips for WMA

WMA is short for Windows Media Audio and is the audio compression format used by Microsoft.

Audio data can be created and stored at a higher compression ratio than MP3.

\* Microsoft and Windows Media are registered trademarks of Microsoft Corporation U.S. in the United States and other countries.

### Playable WMA file specification

CD-R and CD-RW including WMA files can be played with this unit. Discs which conform to the following formats can be played.

Playable WMA files are as follows:

Item		Content
Specification		Windows Media Audio Version 7.0, 8.0, 9.0
Sampling frequency	Bit rate	32kHz . . . . . 32, 40, 48 kbps
		44.1kHz . . . . . 32, 48, 64, 80, 96, 128, 160, 192, 256, 320 kbps
		48kHz . . . . . 64, 96, 128, 160, 192 kbps
VBR (Variable Bit Rate)		Supported
Channel mode		Stereo/Monaural
WMA tag		Title, artist name, album name

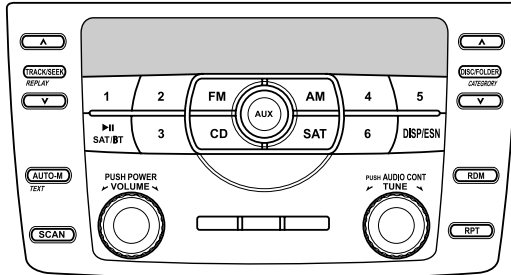
### CAUTION

*This unit plays files with the (.wma) file extension as a WMA file. Do not use the WMA file extension for files other than WMA files. It may cause noise or a malfunction.*

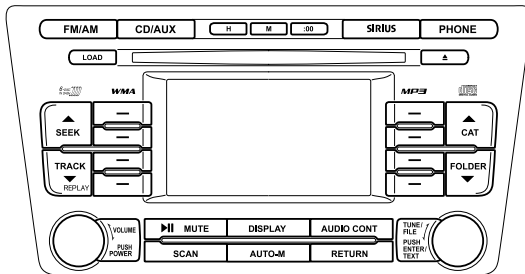
- In a WMA file, the track name, artist name and album name are recorded with data called “WMA-Tag”, and the information can be displayed.
- WMA files which do not comply with the specific standard may not be played correctly or its file and folder name may not be displayed correctly.
- The file extension may not be provided depending on the computer operating system, version, software, or settings. In this case, add the file extension “.wma” to the end of the file name, and then write the disc.

## Types of the Audio Set

Audio Set (Type A) ..... page 6-27



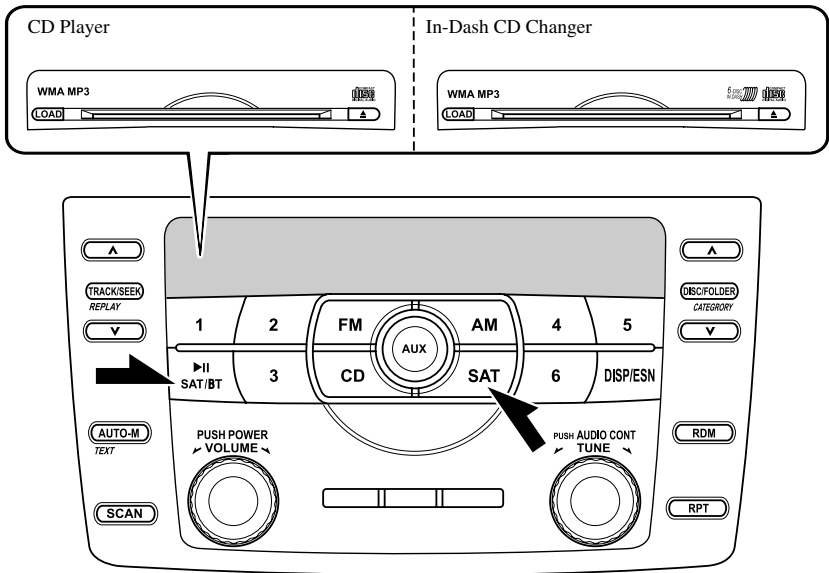
Audio Set (Type B) ..... page 6-45




# MEMO

**Audio Set (Type A)**

Audio information is displayed on the information display.



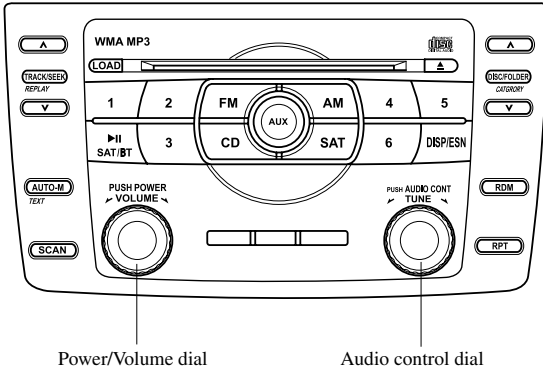
The  , SAT buttons are only functional if the vehicle is equipped with the separately purchased SIRIUS digital satellite radio unit (U.S.A. and Canada).

Power/Volume/Sound Controls .....	page 6-28
Operating the Radio .....	page 6-32
Operating the Compact Disc (CD) Player .....	page 6-34
Operating the In-Dash CD Changer .....	page 6-38
Operating the Auxiliary jack .....	page 6-42
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# Audio System

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## ▼ Power/Volume/Sound Controls



### **Power ON/OFF**

Switch the ignition to ACC or ON.

Press the power/volume dial to turn the audio system on.

Press the power/volume dial again to turn the audio system off.

### ***NOTE***

*To prevent the battery from being discharged, do not leave the audio system on for a long period of time when the engine is not running.*

### **Volume adjustment**

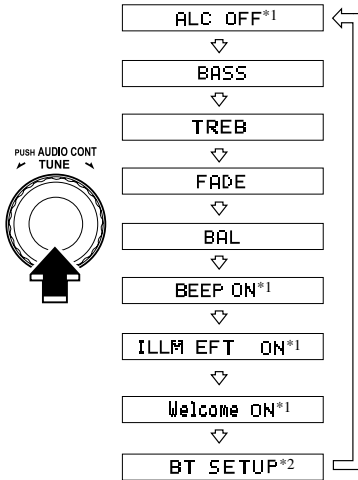
To adjust the volume, turn the power/volume dial.

Turn the power/volume dial to the right to increase volume, to the left to decrease it.

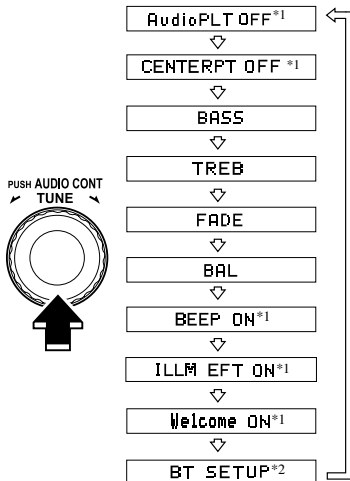
### **Audio sound adjustment**

1. Press the audio control dial to select the function. The selected function will be indicated.

**Standard audio-equipped model**



**Bose® Sound System-equipped model**



\*1 Depending on the mode selected, the indication changes.

\*2 Depending on the model, this function, may not be available.

2. Turn the audio control dial to adjust the selected functions as follows:

**Standard audio-equipped model**

Indication	Turn Left	Turn Right
ALC	Select mode	
BASS	Decrease bass	Increase bass
TREB	Decrease treble	Increase treble
FADE	Shift the sound to the front	Shift the sound to the rear
BAL	Shift the sound to the left	Shift the sound to the right
BEEP	off	on
ILLM EFT	off	on
Welcome	off	on
BT SETUP	Select mode	



## Audio System

### Bose® Sound System-equipped model

Indication	Turn Left	Turn Right
AudioPLT	off	on
CENTERPT	off	on
BASS	Decrease bass	Increase bass
TREB	Decrease treble	Increase treble
FADE	Shift the sound to the front	Shift the sound to the rear
BAL	Shift the sound to the left	Shift the sound to the right
BEEP	off	on
ILLM EFT	off	on
Welcome	off	on
BT SETUP	Select mode	

#### NOTE

- Depending on the type of audio unit, the order in which the functions appear differs.
- About 5 seconds after selecting any mode, the volume function will be automatically selected. To reset bass, treble, fade, and balance, press the audio control dial for 2 seconds. The unit will beep and “CLEAR” will be displayed.

#### Automatic Level Control (ALC) (Standard audio-equipped model)

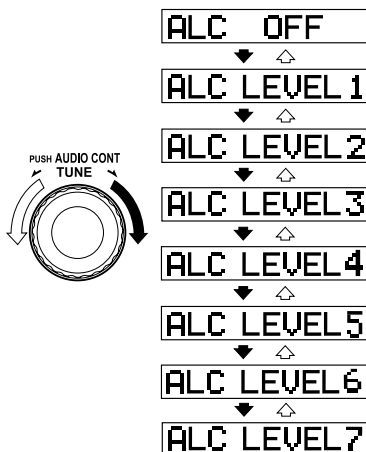
The automatic level control (ALC) is a feature that automatically adjusts audio volume and sound quality according to the vehicle speed.

The volume increases in accordance with the increase in vehicle speed, and decreases as vehicle speed decreases.

Select the desired ALC mode.

Mode	Volume change
ALC OFF	No change
ALC LEVEL 1	Minimum
ALC LEVEL 2	▼ ▲
ALC LEVEL 3	▼ ▲
ALC LEVEL 4	Medium
ALC LEVEL 5	▼ ▲
ALC LEVEL 6	▼ ▲
ALC LEVEL 7	Maximum

Turn the audio control dial to select ALC OFF or ALC LEVEL1—7 modes. The selected mode will be indicated.



**\*AudioPilot® 2 (Bose® Sound System-equipped model)**

AudioPilot® 2 automatically adjusts audio volume and sound quality in accordance with the level of noise entering the vehicle interior while driving. When AudioPilot® 2 is turned on, the system automatically calculates the conditions for optimum hearing of sound which may be difficult to hear depending on exterior noise.

\* AudioPilot® 2 is a registered trademark of Bose Corporation.

**\*Centerpoint® (Bose® Sound System-equipped model)**

Centerpoint® offers you the experience of 5.1-channel surround sound in your vehicle even with your conventional 2-channel stereo CDs.

Centerpoint® can be set on or off.

**NOTE**

- Centerpoint® operates optimally with a 2-channel stereo CD. MP3 audio files can be played, however, MP3 audio files encoded with high compression may result in poor sound quality.
- Centerpoint® is available for 2-channel stereo audio except for AM radio/FM radio/SIRIUS digital satellite radio/AUX/BT audio.

\* Centerpoint® is a registered trademark of Bose Corporation.

**BEEP setting**

The beep-sound when operating the audio system can be set on or off.

**ILLUM EFT setting (Illumination setting during operation)**

The audio system illumination during operation can be set on or off.

**Welcome mode**

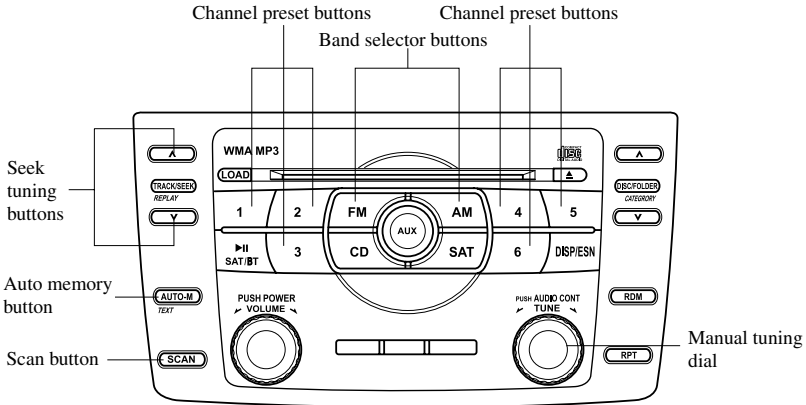
Sound is heard when the ignition is switched ON.

**BT SETUP mode\***

Music and other audio such as voice data recorded on portable audio devices and mobile phones available on the market which are equipped with the Bluetooth transmission function can be listened to via wireless transmission over the vehicle's speakers. Using the BT SETUP mode, these devices can be programmed to the Bluetooth unit or changed. For details, refer to Bluetooth audio (page 6-78).

# Audio System

## ▼ Operating the Radio



### **Radio ON**

Press a band selector button (**AM** , **FM** ) to turn the radio on.

### **Band selection**

Choose AM by pressing the AM button (**AM** ) and FM by pressing the FM button (**FM** ).

The selected mode will be indicated. If FM stereo is being received, “ST” will be displayed.

### **NOTE**

*If the FM broadcast signal becomes weak, reception automatically changes from STEREO to MONO for reduced noise, and the “ST” indicator will go out.*

### **Tuning**

The radio has the following tuning methods: Manual, Seek, Scan, Preset channel, and Auto memory tuning. The easiest way to tune stations is to set them on preset channels.

### **NOTE**

*If the power supply is interrupted (fuse blows or the battery is disconnected), the preset channels will be erased.*

### **Manual tuning**

Turning the manual tuning dial will change the frequency higher or lower.

### **Seek tuning**

Pressing the seek tuning button (A , V ) will cause the tuner to seek a higher or lower frequency automatically.

**NOTE**

*If you continue to press and hold the button, the frequency will continue changing without stopping.*

**Scan tuning**

Press the scan button (**SCAN**) to automatically sample strong stations. Scanning stops at each station for about 5 seconds. To hold a station, press the scan button (**SCAN**) again during this interval.

**Preset channel tuning**

The 6 preset channels can be used to store 6 AM and 12 FM stations.

1. To set a channel first select AM, FM1, or FM2. Tune to the desired station.
2. Depress a channel preset button for about 2 seconds until a beep sound is heard. The preset channel number and station frequency will be displayed. The station is now held in the memory.
3. Repeat this operation for the other stations and bands you want to store. To tune one in the memory, select AM, FM1, or FM2 and then press its channel preset button. The station frequency and the channel number will be displayed.

**NOTE**

*If the power supply is interrupted (fuse blows or the battery is disconnected), the preset channels will be erased.*

**Auto memory tuning**

This is especially useful when driving in an area where the local stations are not known. Additional AM/FM stations can be stored without disturbing the previously set channels.

Press and hold the auto memory button (**AUTO-M**) for about 2 seconds until a beep sound is heard; the system will automatically scan and temporarily store up to 6 stations with the strongest frequencies in each selected band in that area.

After scanning is completed, the station with the strongest frequency will be tuned and its frequency displayed.

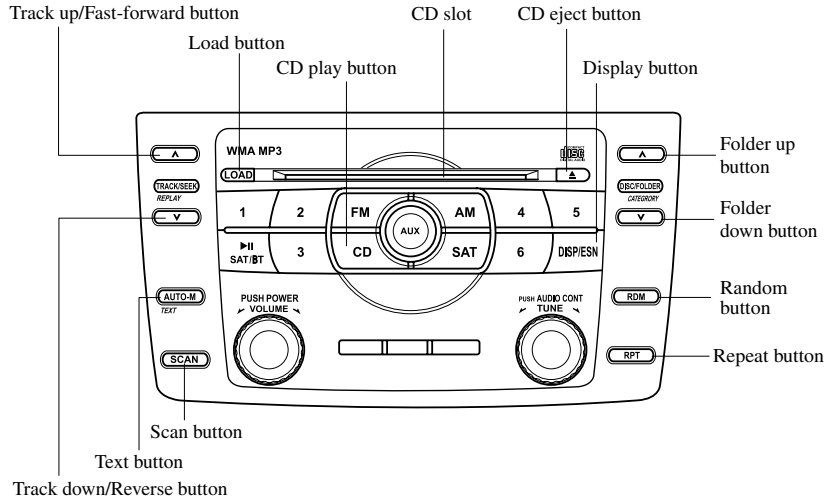
Press and release the auto memory button (**AUTO-M**) to recall stations from the auto-stored stations. One stored station will be selected each time; its frequency and channel number will be displayed.

**NOTE**

*If no stations can be tuned after scanning operations, "A" will be displayed.*

# Audio System

## ▼ Operating the Compact Disc (CD) Player



Type	Playable data
Music/MP3/WMA CD player	<ul style="list-style-type: none"> <li>• Music data (CD-DA)</li> <li>• MP3/WMA file</li> </ul>

### NOTE

If a disc has both music data (CD-DA) and MP3/WMA files, playback of the two or three file types differs depending on how the disc was recorded.

### Inserting the CD

Insert the CD into the slot, label-side up. The auto-loading mechanism will set the CD and begin play.

### NOTE

There will be a short lapse before play begins while the player reads the digital signals on the CD.

### Ejecting the CD

Press the CD eject button (▲) to eject the CD.

### Playback

Press the CD play button (CD) to start play when a CD is in the unit. If a CD is not in the unit when the CD play button (CD) is pressed, “NO DISC” will flash on and off.

### NOTE

When the load button (LOAD) is pressed, the CD will load and play even if the CD eject button (▲) had been previously pressed.

### **Fast-forward/Reverse**

Press and hold the fast-forward button (Λ) to advance through a track at high speed.

Press and hold the reverse button (∇) to reverse through a track at high speed.

### **Track search**

Press the track up button (Λ) once to skip forward to the beginning of the next track. Press the track down button (∇) once to skip back to the beginning of the current track.

### **Folder search (during MP3/WMA CD playback)**

To change to the previous folder, press the folder down button (∇), or press the folder up button (Λ) to advance to the next folder.

### **Music scan**

#### **During music CD playback**

This function scans the titles on a CD and plays 10 seconds of each song to aid you in finding a song you want to listen to.

#### **During MP3/WMA CD playback**

This function scans the titles in a folder currently being played and plays 10 seconds of each song to aid you in finding a song you want to listen to.

Press the scan button (**SCAN**) during playback to start the scan play operation (the track number will flash).

Press the scan button (**SCAN**) again to cancel scan playback.

#### ***NOTE***

*If the unit is left in scan, normal playback will resume where scan was selected.*

### **Repeat playback**

#### **During music CD playback**

1. Press the repeat button (**RPT**) during playback to play the current track repeatedly. "RPT" is displayed.
2. Press the button again to cancel the repeat playback.

#### **During MP3/WMA CD playback**

##### **(Track repeat)**

1. Press the repeat button (**RPT**) during playback to play the current track repeatedly. "TRACK RPT" is displayed.
2. To cancel the repeat playback, press the button again after 3 seconds.

##### **(Folder repeat)**

1. Press the repeat button (**RPT**) during playback, and then press the button again within 3 seconds to play the tracks in the current folder repeatedly. "FOLDER RPT" is displayed.
2. Press the button again to cancel the repeat playback.

### **Random playback**

Tracks are randomly selected and played.

#### **During music CD playback**

1. Press the random button (**RDM**) during playback to play the tracks on the CD randomly. "RDM" is displayed.
2. Press the button again to cancel the random playback.

# Audio System

## During MP3/WMA CD playback

### (Folder random)

1. Press the random button (**RDM**) during playback to play the tracks in the folder randomly. "FOLDER RDM" is displayed.
2. To cancel the random playback, press the button again after 3 seconds.

### (CD random)

1. Press the random button (**RDM**) during playback, and then press the button again within 3 seconds to play the tracks on the CD randomly. "DISC RDM" is displayed.
2. Press the button again to cancel the random playback.

### Switching the display

For files with a file name and other information that have been input, the display switches between display of the file name and other information each time the display button (**DISP**) is pressed during playback.

### Music CD

Track number/Elapsed time



Track name

Album name

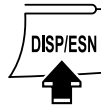
Artist name

## MP3/WMA CD

File number/Elapsed time

Folder number/File number

File name



Folder name

Album name (ID3 Tag)

Song name (ID3 Tag)

Artist name (ID3 Tag)

### **NOTE**

- The information viewable in the display is only CD information (such as artist name, song title) which has been recorded to the CD.
- The system can only display one-byte alphabetic characters. If two-byte or other types of characters have been recorded to the CD, they may not display correctly.

### Display scroll

Only 8 characters (File name) or 12 characters (Except file name) can be displayed at one time. To display the rest of the characters of a long title, press the text button (**TEXT**). The display scrolls the next 12 characters. Press the text button (**TEXT**) again after the last 12 characters have been displayed to return to the beginning of the title.

**NOTE**

*The displayable number of characters is limited. If the number of characters, including the file extension (.mp3/.wma), exceeds 32 characters, it may not be fully displayed.*

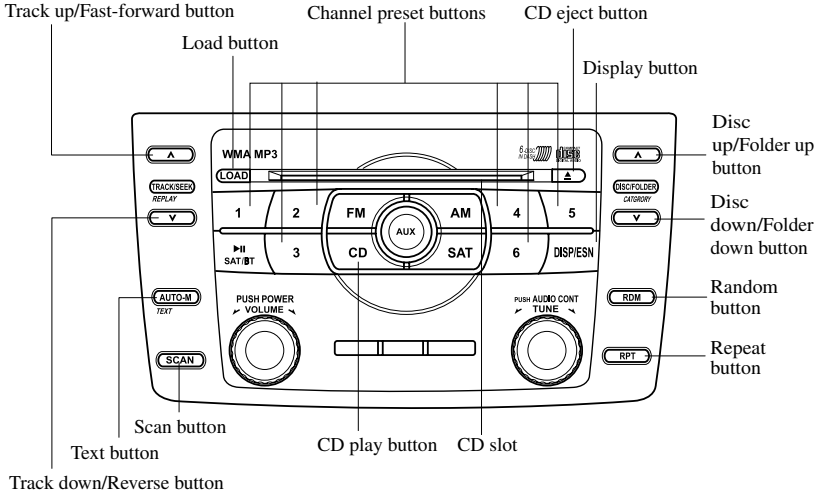
**Message display**

If “CHECK CD” is displayed, it means that there is some CD malfunction. Check the CD for damage, dirt, or smudges, and then properly reinsert. If the message appears again, take the unit to an Authorized Mazda Dealer for service.



# Audio System

## ▼ Operating the In-Dash CD Changer



Type	Playable data
Music/MP3/WMA CD player	<ul style="list-style-type: none"> <li>• Music data (CD-DA)</li> <li>• MP3/WMA file</li> </ul>

### NOTE

If a disc has both music data (CD-DA) and MP3/WMA files, playback of the two or three file types differs depending on how the disc was recorded.

### Inserting the CD

The CD must be label-side up when inserting. The auto-loading mechanism will set the CD and begin play.

### NOTE

There will be a short lapse before play begins while the player reads the digital signals on the CD.

### Normal insertion

1. Press the load button (LOAD).
2. When "IN" is displayed, insert the CD.

### Inserting CDs into desired tray number

1. Press and hold the load button (LOAD) for about 2 seconds until a beep sound is heard.
2. Press the channel preset button for the desired tray number while "WAIT" is displayed.
3. When "IN" is displayed, insert the CD.

### NOTE

The CD cannot be inserted to the desired tray number if the number is already occupied.

### **Multiple insertion**

1. Press and hold the load button (**LOAD**) for about 2 seconds until a beep sound is heard.
2. When “IN” is displayed, insert the CD.
3. When “IN” is displayed again, insert the next CD.

#### **NOTE**

*The first-inserted CD will be played automatically when:*

- No other CD is inserted within 15 seconds after “IN” is displayed.
- The CD trays are full.

### **Ejecting the CD**

#### **Normal ejection**

1. Press the CD eject button (**▲**). The disc number and “DISC OUT” will be displayed.
2. Pull out the CD.

#### **NOTE**

*When the CD is ejected during play, the next CD will be played automatically.*

#### **Ejecting CDs from desired tray number**

1. Press and hold the CD eject button (**▲**) for about 2 seconds until a beep sound is heard.  
The “DISC OUT” display flashes.
2. Press the channel preset button for the desired CD number for less than 5 seconds after the beep sound is heard.
3. Pull out the CD.

### **Multiple ejection**

1. Press and hold the CD eject button (**▲**) for about 2 seconds until a beep sound is heard.  
The “DISC OUT” display flashes.
2. Press the CD eject button (**▲**) again for less than 5 seconds after the beep sound is heard.

#### **NOTE**

*If the button is not pressed and about 5 seconds have elapsed while “DISC OUT” is flashing, CDs are automatically ejected.*

3. Pull out the CD, then the next CD will be ejected.

#### **NOTE**

- CDs will be ejected starting with the one with the lowest number.
- All CDs in the tray will be ejected continuously.
- CDs can be ejected when the ignition is switched off: Press and hold the CD eject button (**▲**) for about 2 seconds and all CDs will eject.

### **Playback**

Press the CD play button (**CD**) to start play when a CD is in the unit.  
If a CD is not in the unit when the CD play button (**CD**) is pressed, “NO DISC” will flash on and off.

### **Fast-forward/Reverse**

Press and hold the fast-forward button (**Λ**) to advance through a track at high speed.

Press and hold the reverse button (**∇**) to reverse through a track at high speed.

### **Track search**

Press the track up button (**Λ**) once to skip forward to the beginning of the next track.

## Audio System

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Press the track down button (V) once to skip back to the beginning of the current track.

### **Disc search**

#### **During music CD playback**

To change the disc, press the DISC button (Λ or V) during playback.

#### **During MP3/WMA CD playback**

To change the disc, press the DISC button (Λ or V) for 1.5 seconds or more during playback.

### **Folder search (during MP3/WMA CD playback)**

To change to the previous folder, press the folder down button (V) for less than 1.5 seconds, or press the folder up button (Λ) for less than 1.5 seconds to advance to the next folder.

### **Music scan**

#### **During music CD playback**

This function scans the titles on a CD and plays 10 seconds of each song to aid you in finding a song you want to listen to.

#### **During MP3/WMA CD playback**

This function scans the titles in a folder currently being played and plays 10 seconds of each song to aid you in finding a song you want to listen to.

Press the scan button (SCAN) during playback to start the scan play operation (the track number will flash).

Press the scan button (SCAN) again to cancel scan playback.

### ***NOTE***

*If the unit is left in scan, normal playback will resume where scan was selected.*

### **Repeat playback**

#### **During music CD playback**

1. Press the repeat button (RPT) during playback to play the current track repeatedly. "RPT" is displayed.
2. Press the button again to cancel the repeat playback.

#### **During MP3/WMA CD playback**

##### **(Track repeat)**

1. Press the repeat button (RPT) during playback to play the current track repeatedly. "TRACK RPT" is displayed.
2. To cancel the repeat playback, press the button again after 3 seconds.

##### **(Folder repeat)**

1. Press the repeat button (RPT) during playback, and then press the button again within 3 seconds to play the tracks in the current folder repeatedly. "FOLDER RPT" is displayed.
2. Press the button again to cancel the repeat playback.

### **Random playback**

Tracks are randomly selected and played.

#### **During music CD playback**

1. Press the random button (RDM) during playback to play the tracks in the CD randomly. "RDM" is displayed.
2. Press the button again to cancel the random playback.

**During MP3/WMA CD playback  
(Folder random)**

1. Press the random button (**RDM**) during playback to play the tracks in the folder randomly. "FOLDER RDM" is displayed.
2. To cancel the random playback, press the button again after 3 seconds.


**(CD random)**

1. Press the random button (**RDM**) during playback, and then press the button again within 3 seconds to play the tracks on the CD randomly. "DISC RDM" is displayed.
2. Press the button again to cancel the random playback.

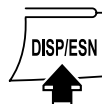
**Switching the display**

For files with a file name and other information that have been input, the display switches between display of the file name and other information each time the display button (**DISP**) is pressed during playback.

**Music CD**

	Disc number/Track number/Elapsed time
	Disc tray number
	Track name
	Album name
	Artist name

**MP3/WMA CD**

	Disc number/File number/Elapsed time
	Disc tray number
	Disc number/Folder number/File number
	File name
	Folder name
	Album name (ID3 Tag)
	Song name (ID3 Tag)
	Artist name (ID3 Tag)

***NOTE***

- *The information viewable in the display is only CD information (such as artist name, song title) which has been recorded to the CD.*
- *The system can only display one-byte alphabetic characters. If two-byte or other types of characters have been recorded to the CD, they may not display correctly.*

**Display scroll**

Only 8 characters (File name) or 12 characters (Except file name) can be displayed at one time. To display the rest of the characters of a long title, press the text button (**TEXT**). The display scrolls the next 12 characters. Press the text button (**TEXT**) again after the last 12 characters have been displayed to return to the beginning of the title.

## Audio System

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### **NOTE**

*The displayable number of characters is limited. If the number of characters, including the file extension (.mp3/.wma), exceeds 32 characters, it may not be fully displayed.*

### **Message display**

If “CHECK CD” is displayed, it means that there is some CD malfunction. Check the CD for damage, dirt, or smudges, and then properly reinsert. If the message appears again, take the unit to an Authorized Mazda Dealer for service.

### **▼ Operating the Auxiliary jack**

You can connect portable audio units, such as an MP3 player or similar products on the market, to the auxiliary jack to listen to music or audio over the vehicle's speakers. Refer to Auxiliary Input (page 6-74).

### ▼ Error Indications

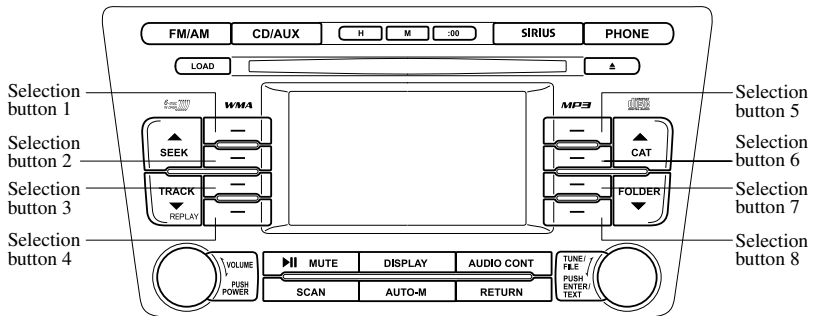
If you see an error indication on the display, find the cause in the chart. If you cannot clear the error indication, take the vehicle to an Authorized Mazda Dealer.

Indication	Cause	Solution
CHECK CD	CD is inserted upside down	Insert the CD properly. If the error indication continues to display, consult an Authorized Mazda Dealer.
	CD is defective	Insert another CD properly. If the error indication continues to display, consult an Authorized Mazda Dealer.

# MEMO

## Audio Set (Type B)

Functions and information available for the selected mode are displayed on the left and right of the audio unit screen. To select and operate a desired function, or select information, press the corresponding selection button 1—8.

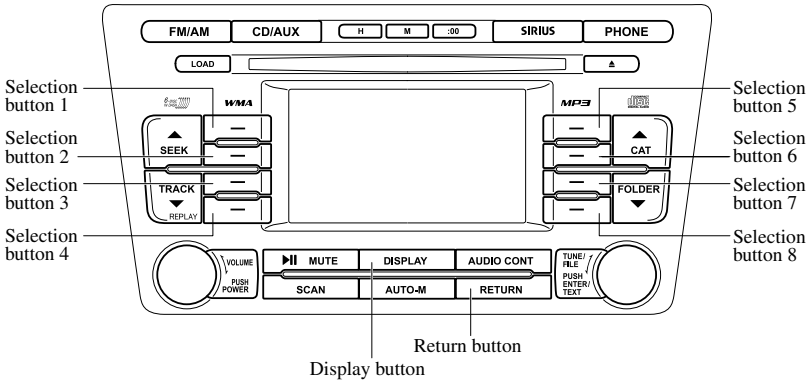


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Operating the Satellite Radio .....	page 6-56
Operating the In-Dash CD Changer .....	page 6-66
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# Audio System

## ▼ Screen Adjustments and Other Settings



Press the display button (**DISPLAY**) to display the tone adjustment screen.  
Press the display button (**DISPLAY**) again or the return button (**RETURN**) to return to the previous screen.\*

### **Next page display\***

Press selection button 1.

### **Previous page display\***

Press selection button 5.

### **Initialization**

Returns all the adjusted screen adjustment settings and language settings to their initial setting.

Press selection button 8.

### **Brightness adjustment**

#### **Increase brightness**

Press selection button 6.

#### **Decrease brightness**

Press selection button 2.

### **Contrast adjustment**

#### **Higher contrast**

Press selection button 7.

#### **Lower contrast**

Press selection button 3.

### **Tint adjustment\***

#### **Green tint enhancement**

Press selection button 6.

#### **Red tint enhancement**

Press selection button 2.

### **Color adjustment\***

#### **To deepen a color**

Press selection button 7.

#### **To fade color**

Press selection button 3.

\* Adjustment is available depending on the display.

#### ***NOTE***

*Continuous adjustment of the brightness, contrast, tint, and color can be done by long-pressing the selection button for the adjustment item.*

### **Daytime/Night screen**

When the headlights are on, daytime mode can also be selected (if a brighter screen is needed at night). This selection can only be done when the headlights are on.

The screen can be returned to the daytime screen while the headlights or running lights are on by pressing the dashboard illumination knob.

### **Language setting**

The displayed language can be changed to one of the three available languages.

Press selection button 5 to display the language setting screen.

#### **English display**

Press selection button 2.

#### **French display**

Press selection button 3.

#### **Spanish display**

Press selection button 4.

#### ***NOTE***

*A language setting is unavailable for the satellite radio. English is constantly displayed.*

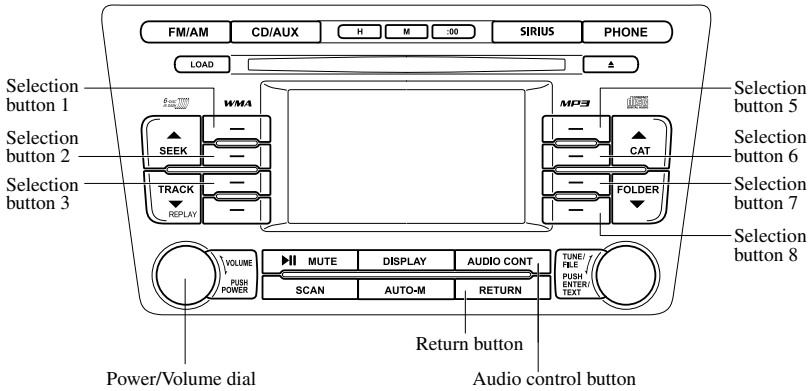
### **Screen display off**

Press selection button 4.

Press the display button (**DISPLAY**) or the return button (**RETURN**) to return to the previously selected mode's screen.

# Audio System

## ▼ Power/Volume/Sound Controls



### **Power ON/OFF**

Switch the ignition to ACC or ON.

Press the power/volume dial to turn the audio system on.

Press the power/volume dial again to turn the audio system off.

### **NOTE**

*To prevent the battery from being discharged, do not leave the audio system on for a long period of time when the engine is not running.*

### **Volume adjustment**

To adjust the volume, turn the power/volume dial.

Turn the power/volume dial to the right to increase volume, to the left to decrease it.

### **Audio sound adjustment**

When the audio control button (AUDIO CONT) is pressed, the audio settings screen is displayed.

Press the audio control button (AUDIO CONT) or the return button (RETURN) to return to the previous screen.

### **Next page display**

Press selection button 1.

### **Previous page display**

Press selection button 5.

### **Initialization**

Returns all of the audio setting items to their initial setting.

Press selection button 8.

Setting item	Setting value	
Bass	Down	Up
Treble	Down	Up
Fader	Rear	Front
Balance	Left	Right
Beep	Off	On
AudioPilot® 2	Off	On
Centerpoint®	Off	On
Welcome	Off	On

### **Bass (low pitch sound)**

#### **Low pitch enhancement**

Press selection button 6.

#### **Low pitch attenuation**

Press selection button 2.

### **Treble (treble sound)**

#### **Treble enhancement**

Press selection button 7.

#### **Treble attenuation**

Press selection button 3.

### **Fader (front/back volume balance)**

#### **Rear speaker volume reduction**

Press selection button 6.

#### **Front speaker volume reduction**

Press selection button 2.

### **Balance (left/right volume balance)**

#### **Left side volume reduction**

Press selection button 7.

#### **Right side volume reduction**

Press selection button 3.

### **NOTE**

*Continuous adjustment of the bass, treble, fader, and balance can be done by long-pressing the selection button for each adjustment item.*

### **Beep setting**

The beep-sound when operating the audio system can be set on or off.

#### **Beep on**

Press selection button 6.

#### **Beep off**

Press selection button 2.

### **\*AudioPilot® 2**

AudioPilot® 2 automatically adjusts audio volume and sound quality in accordance with the level of noise entering the vehicle interior while driving. When AudioPilot® 2 is turned on, the system automatically calculates the conditions for optimum hearing of sound which may be difficult to hear depending on exterior noise. AudioPilot® 2 can be set on or off.

#### **AudioPilot® 2 on**

Press selection button 7.

#### **AudioPilot® 2 off**

Press selection button 3.

\* AudioPilot® 2 is a registered trademark of Bose Corporation.

### **\*Centerpoint®**

Centerpoint® offers you the experience of 5.1-channel surround sound in your vehicle even with your conventional 2-channel stereo CDs.

Centerpoint® can be set on or off.

#### **Centerpoint® on**

Press selection button 6.

## Audio System

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### Centerpoint<sup>®</sup> off

Press selection button 2.

#### **NOTE**

- Centerpoint<sup>®</sup> operates optimally with a 2-channel stereo CD. MP3 audio files can be played, however, MP3 audio files encoded with high compression may result in poor sound quality.
- Centerpoint<sup>®</sup> is available for 2-channel stereo audio except for AM radio/FM radio/SIRIUS digital satellite radio/AUX/BT audio.

\* Centerpoint<sup>®</sup> is a registered trademark of Bose Corporation.

### **Welcome mode**

Sound is heard when the ignition is switched on.

The Welcome mode can be set on or off.

### **Welcome on**

Press selection button 7.

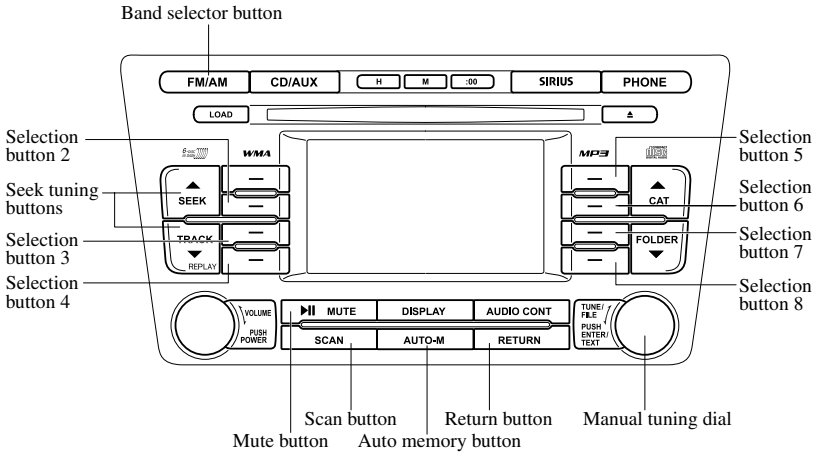
### **Welcome off**

Press selection button 3.

# MEMO

# Audio System

## ▼ Operating the Radio



### **Radio ON**

Press a band selector button (**FM/AM**) to turn the radio on.

### **Band selection**

Successively pressing the band selector button (**FM/AM**) switches the bands as follows: FM1 → FM2 → AM.

The selected mode will be indicated. If FM stereo is being received, “ST” will be displayed.

### **NOTE**

*If the FM broadcast signal becomes weak, reception automatically changes from STEREO to MONO for reduced noise, and the “ST” indicator will no longer display.*

### **Tuning**

The radio has the following tuning methods: Manual, Seek, Scan, Preset channel, and Auto memory tuning. The easiest way to tune stations is to set them on preset channels.

### **NOTE**

*If the power supply is interrupted (fuse blows or the battery is disconnected), the preset channels will be erased.*

### **Manual tuning**

Turning the manual tuning dial will change the frequency higher or lower.

### **Seek tuning**

Pressing the seek tuning button (**▲**, **▼**) will cause the tuner to seek a higher or lower frequency automatically.

**NOTE**

*If you continue to press and hold the seek tuning button (▲, ▼), the frequency will continue changing without stopping.*

**Scan tuning**

Press the scan button (**SCAN**) to automatically sample stations with the strongest frequencies. Scanning stops at each station for about five seconds. To hold a station, press the scan button (**SCAN**) again during this interval.

**Preset channel tuning**

The six preset channels can be used to store six AM and twelve FM stations.

1. To set a channel, first select AM, FM1, or FM2. Tune to the desired station.
2. Press and hold selection button 2, 3, 4, 6, 7, or 8. The station frequency will be displayed. The station is now held in the memory.
3. Repeat this operation for the other stations and bands you want to store. To tune into one stored in the memory, select AM, FM1, or FM2 and then press its selection button. The station frequency will be displayed.

**NOTE**

*If the power supply is interrupted (fuse blows or the battery is disconnected), the preset channels will be erased.*

**Auto memory tuning**

This is especially useful when driving in an area where the local stations are unknown. Additional AM/FM stations can be stored without disturbing the previously set channels.

Press and hold the auto memory button (**AUTO-M**). The system will automatically scan and temporarily store up to six stations with the strongest frequencies in each selected band in that area.

After scanning is completed, the radio tunes into the station with the strongest frequency, and its frequency is displayed. Press the auto memory button (**AUTO-M**) to recall stations from the auto-stored stations. One stored station will be selected each time, and its frequency will be displayed.

**NOTE**

- *If any of the following operations is performed, auto-memory mode is cleared and the normal display appears.*
  - *Band selector button (FM/AM) is pressed*
  - *Manual tuning dial is turned*
  - *Seek tuning button (▲, ▼) is pressed*
  - *Return button (RETURN) is pressed*
- *If the radio is unable to tune into any station after the scanning operation is completed, "No Channel" will be displayed.*

**Mute**

Press the mute button (**MUTE**) once to mute the audio. Press it again to resume audio output.

**Radio Data System (RDS)**

**Radio text information display**

A maximum of 64 characters of radio text information sent from a broadcasting station is displayed in the audio display.

Press selection button 5.



## Audio System

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### **NOTE**

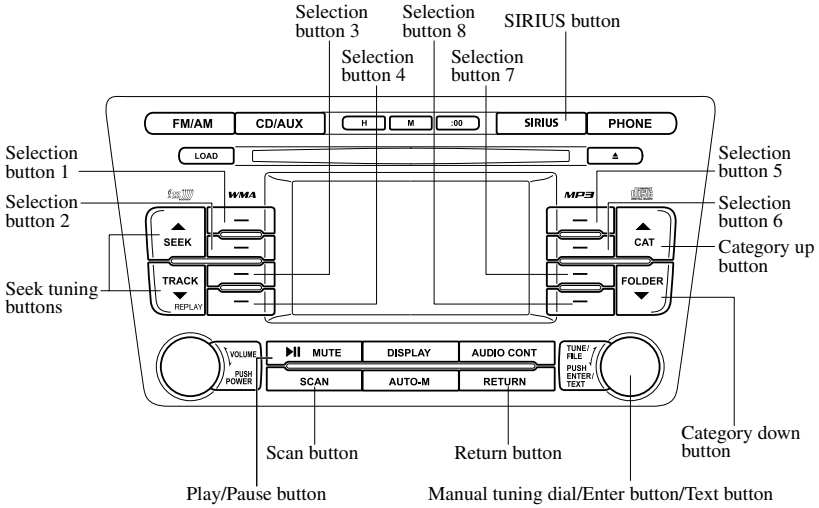
*If any of the following operations is performed, the radio text information display is cleared and the normal display appears.*

- *Return button (RETURN ) is pressed*
- *Band selector button (FM/AM ) is pressed*
- *Manual tuning dial is turned*
- *Seek tuning button (▲ , ▼ ) is pressed*

# MEMO

# Audio System

## ▼ Operating the Satellite Radio \*



**NOTE**

*This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:*

- *Increase the separation between the equipment and tuner.*
- *Connect the equipment into an outlet on a circuit different from that to which the tuner is connected.*
- *Consult the dealer or an experienced radio/TV technician for help.*

**What is satellite radio?**

With over 130 channels, SIRIUS Satellite Radio brings you more of what you love. Get 69 channels of 100 % commercial-free music, plus all your favorite sports, news, talk and entertainment. Everything worth listening to is now on SIRIUS.

**100 % Commercial-free Music**—With music from every genre, artist-dedicated channels, live performances and more, SIRIUS is the home of 100 % commercial-free music.

**Live Sports Play-by-Play & Expert Talk**—Hear every NFL game, every NASCAR<sup>®</sup> race and college sports coverage from over 150 schools. Plus 24/7 sports talk with channels like SIRIUS NFL Radio, SIRIUS NASCAR Radio and more.

**Exclusive Entertainment and Talk**—The biggest names, compelling talk, hilarious comedy. Hear Howard Stern, Martha Stewart, Jamie Foxx, Blue Collar Comedy, Playboy Radio, political talk and more.

**World-class News**—Stay informed with FOX, CNN, CNBC, NPR<sup>®</sup>, BBC and more.

Plus local traffic and weather.

**Family & Kids**—Entertain the entire family with Radio Disney, Kids Place Live, Laugh USA and more.

Sign up for SIRIUS Radio today! For more information, visit [www.sirius.com](http://www.sirius.com). Satellite radio can be subscribed to and received in the United States (Except Alaska and Hawaii) and Canada.

**How to Activate Satellite Radio**

You must call SIRIUS to activate your service. Activation is free and takes only a few minutes.

## Audio System

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SIRIUS service uses an ID code to identify your radio. This code is needed to activate SIRIUS service, and report any problems.

To activate you SIRIUS radio tuner, call a SIRIUS customer service specialist at 1-888-539-7474 or you can visit SIRIUS online at [www.sirius.com](http://www.sirius.com).

Please have the following information ready:

- SIRIUS ID (12-digit electronic serial no., or ESN\*)
- Valid credit card information (may not be required at initial sign-up)

Be sure you are parked outside with a clear view of open sky, you will be instructed to turn on your radio (in SIRIUS mode and tuned to channel 184). Activation typically takes only 2—5 minutes.

\* ESN: Electronic Serial Number

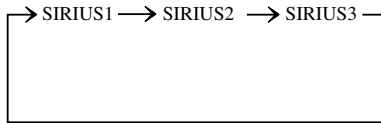
### **SIRIUS operation**

All operations of the satellite radio are conducted by means of the audio unit.

### **SIRIUS radio mode selection**

When the SIRIUS button (**SIRIUS**) is pressed during ACC ON, it will play the last SIRIUS channel in use before the mode was switched over to another mode or the power was turned off.

When the SIRIUS button (**SIRIUS**) is pressed in a mode other than the SIRIUS mode, the last channel in use will be received. Every time the SIRIUS button (**SIRIUS**) is pressed, the bank changes in the order shown below.



### ***NOTE***

*SIRIUS1, SIRIUS2 and SIRIUS3: six stations can be stored in each bank for convenient access to your favorite stations.*

### **Operation in the initial state**

It may take some time to start up the equipment when it is in the initial state, when there is a change in the user's subscription condition, or when the SIRIUS channel map is changed.

“Updating channels XXX% complete” is displayed when the SIRIUS channel map is changed. If the “Updating channels XXX% complete” display is not available, “Updating channels” is displayed. If the unit is initialized or the user contract content is changed, “Updating channels. Subscription Updated.” is displayed. Updating could take as long as a few minutes depending on the geographical area. When the unit is in an initialized state, channel 184 is displayed after the display indicates “Updating channels XXX% complete”. If the SIRIUS channel map or the user contract content is changed, the channel prior to the change is displayed after “Updating channels XXX% complete” is displayed. After the initialization display, it may take as long as ten seconds or more to receive channel 184.

#### **NOTE**

*Do not perform the following operation while “Updating” is displayed. Otherwise, the updating procedure will be canceled.*

- *Turning off the audio power*
- *Switching to other modes*
- *Switching the ignition off*

When the SIRIUS mode is switched to another mode, or when the power is turned off, the present channel which is being received is stored as the last channel.

#### **Channel selection**

Turning the manual tuning dial allows you to select the desired receiving channel.

#### **Channel up**

Turn the manual tuning dial clockwise.

#### **Channel down**

Turn the manual tuning dial counterclockwise.

#### **Unsubscribed channel**

When a selected station has not been subscribed to, the display indicates the following:

“Call 888-539-7474”

“To Subscribe”

#### **NOTE**

*When the subscription contract is canceled, all of the channels including channel 184 appear as unsubscribed.*

#### **Invalid channel**

When a selected channel is not broadcasting, “Invalid” is displayed.

#### **NOTE**

*If the last channel selected has become unavailable because of a channel update the above indication is displayed until any button is pressed.*

#### **Preset channel programming**

1. Turn the manual tuning dial and select the desired channel.
2. Press and hold selection button 2, 3, 4, 6, 7, or 8.

#### **NOTE**

*Six stations can be stored in each bank, SIRIUS1, SIRIUS2 and SIRIUS3 for convenient access to your favorite stations.*

#### **Preset channel call-up**

Press selection button 2, 3, 4, 6, 7, or 8.

#### **NOTE**

*In the initial setting, all channels are preset to 184.*

#### **Category change**

Press the category button (▲, ▼) and select the desired category.

## Audio System

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### Category up

Press the category up button (▲).

### Category down

Press the category down button (▼).

Every time the category up button (▲) is pressed, the category is changed over in the order shown below.

At this time, the lowest (smallest-number) channel within the category indicated is received.

When the highest (or lowest) category is reached, the category is changed over in the order shown below.

Highest category → Lowest category → XXX category

### Category set (Category lock)

Press selection button 1 to lock the category of the channel being received.

Press selection button 1 again to clear the lock.

### NOTE

*A category can be set only when a channel which belongs to a category is being received.*

### Channel selection within a category

To select a radio station in a set category, turn the manual tuning dial.

### NOTE

- *The channel number needs to be indicated in the display to use the manual tuning dial for this function.*
- *To select a radio station other than one in a set category, turn the manual tuning dial.*

### Scan tuning

Press the scan button (SCAN) to automatically sample stations. Scanning stops at each station for about five seconds. To hold a station, press the scan button (SCAN) again during this interval.

### NOTE

- *Unsubscribed channels, invalid channels, parental lock channels and channel 0 are not subject to the scan, therefore these channels will skip automatically.*
- *If a category is set, scan channels in the category. If a category is not set, scan all channels.*

### Channel number, channel name, category name, artist name, song titles and information display

The information regarding the channel which is currently being received is displayed.

### NOTE

- *If the entire title cannot be displayed, "...” is added at the end to the part of the title which can be displayed.*
- *If a channel other than a parental-locked channel is received, channel name, category name, artist name, song title, and information are displayed.*

### (Channel number display)

The channel number for the channel currently being received is displayed.

### (Channel name display)

- The channel name for the channel currently being received is displayed.
- A channel name may have a full title and an abbreviated title. In this case, the full title is displayed. If the channel only has an abbreviated title, it is displayed.
- If there is no channel name, "No Ch Name" is displayed.

### (Category name display)

- The category name for the channel currently being received is displayed.

- A category name may have a full title and an abbreviated title. In this case, the full title is displayed. If the category only has an abbreviated title, it is displayed.
- If there is no category name, “No Category” is displayed.

#### **(Artist name display)**

- The artist name for the channel currently being received is displayed.
- If there is no artist name, “No Artist” is displayed.

#### **(Song title display)**

- The song title for the channel currently being received is displayed.
- If there is no song title, “No Song” is displayed.

#### **(Information display)**

- The information for the channel currently being received is displayed.
- If there is no information, “No Information” is displayed.

#### **Display scroll**

If each title cannot be fully displayed at one time, press the text button (**TEXT**) to display the rest of the characters.

If the last character of the title is displayed, press the text button (**TEXT**) to return the beginning of the title.

#### **Instant replay**

This function allows you to rewind and replay the program that you were previously or are currently listening to. Press the Play/Pause button (**▶||**). When the seek tuning button (**▼**) is pressed, playback starts from the beginning of the current program. When the seek tuning button (**▼**) is pressed twice, playback starts from the beginning of the previous program.

Press and hold the seek tuning button (**▼**) to reverse the program while the button is being pressed.

When the seek tuning button (**▲**) is pressed, playback starts from the beginning of the next program.

When the seek tuning button (**▲**) is pressed while the last program is being played, the instant replay mode is canceled.

Press and hold the seek tuning button (**▲**) to fast-forward the program while the button is being pressed. When pressing and holding the button until the end of the program, the instant replay mode is canceled.

When the Play/Pause button (**▶||**) is pressed again, playback is paused, or playback starts if it has been paused.

#### **Instant replay (PAUSE)**

If the Play/Pause button (**▶||**) is pressed while the instant replay mode is off, instant replay mode is turned on in a paused condition (PAUSE). Press the Play/Pause button (**▶||**) again to resume playback from the point at which it was paused.

#### **Displaying the SIRIUS ID (ESN)**

##### **Method 1**

Turn the manual tuning dial and select channel 0 to display the twelve-digit Electronic Serial Number (ESN) for the SIRIUS tuner.

##### **Method 2**

1. Press selection button 5 to display the settings screen.
2. Press selection button 5 again to display the twelve-digit Electronic Serial Number (ESN) for the SIRIUS tuner.



## Audio System

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### (If the SIRIUS ID (ESN) for the tuner does not display)

If “ESN Fail” is displayed, contact an Authorized Mazda Dealer.

### Parental lock

Parental lock, parental unlock, parental lock ID change, and parental lock ID reset can be set.

### **NOTE**

- Press the return button (RETURN ) during all the settings to return to the previous display.
- Turn the manual tuning dial during the ID code or master code input to select “CLR”, and then press the enter button (ENTER ) to delete an input number.
- If there is no input for ten seconds during the ID code or master code input, the system returns to the settings screen.
- If only a four-digit ID code or master code is input, “OK” can be selected.
- If the registered ID code has been forgotten, reset the code in “Parental-lock ID reset” to [0000].

### **Parental lock**

If a channel is locked, the channel is muted.

### **(Channel locking)**

1. Turn the manual tuning dial to select the desired channel.

### **(Registered ID code input preparation)**

2. Press selection button 5 to display the settings screen.
3. Press selection button 1 to display the parental lock settings screen.
4. “Enter Pin” and “- - -” are displayed, and input of the registered ID code is possible.

### **(Registered ID code input)**

5. Turn the manual tuning dial to select a number and press the enter button (ENTER ) to input the number.

### **(Registered ID code input confirmation)**

6. After inputting the four digits, turn the manual tuning dial and select “OK”, and then press the enter button (ENTER ) to confirm the four digits.
7. If the four digits match the registered ID code, “Parental lock” appears and mute is turned on. If they do not match the registered ID code, “Error” appears and then the display returns to “- - -”.

### **Parental unlock**

Channels locked using the parental lock function can be unlocked.

### **(Channel unlocking)**

1. Select a channel to be unlocked by turning the manual tuning dial.

### **(Registered ID code input preparation)**

2. Press selection button 5 to display the settings screen.
3. Press selection button 2 to display the parental unlock screen.
4. “Enter Pin” and “- - -” are displayed, and input of the registered ID code is possible.

### **(Registered ID code input)**

5. Turn the manual tuning dial to select a number and press the enter button (ENTER ) to input the number.

**(Registered ID code input confirmation)**

6. After inputting the four digits, turn the manual tuning dial and select “OK”, and then press the enter button (ENTER) to confirm the four digits.
7. If the four digits match the registered ID code, “Parental unlock” appears and mute is canceled.  
If they do not match the registered ID code, “Error” appears and then the display returns to “- - - -”.

**Parental-lock ID change**

When changing the ID code, the new ID code is input after the previous one is input first.

**(Registered ID code input preparation)**

1. Press selection button 5 to display the settings screen.
2. Press selection button 3 to display the ID code change screen.
3. “Enter Pin” and “- - - -” are displayed, and input of the registered ID code is possible.

**(Registered ID code input)**

4. Turn the manual tuning dial to select a number and press the enter button (ENTER) to input the number.

**(Registered ID code input confirmation)**

5. After inputting the four digits, turn the manual tuning dial and select “OK”, and then press the enter button (ENTER) to confirm the four digits.

6. If the four digits match the registered ID code, “Enter Pin” and “- - - -” are displayed.  
If they do not match the registered ID code, “Error” appears and then the display returns to “- - - -”.

**(New ID code input)**

7. Turn the manual tuning dial to select a number and press the enter button (ENTER) to input the number.

**(New ID code input confirmation)**

8. After inputting the four digits, turn the manual tuning dial and select “OK”, and then press the enter button (ENTER) to confirm the four digits.
9. “Pin Changed” appears to indicate that the new ID code input has been completed.
10. The display returns to its normal display.

**NOTE**

*Channels locked before changing the ID code remain after changing the ID code. To unlock a channel, input the changed ID code.*

**Parental-lock ID reset**

If the registered ID code has been forgotten, reset the ID code to the default [0000] code.

**(Master code input preparation)**

1. Press selection button 5 to display the settings screen.
2. Press selection button 4 to display the ID code initial screen.
3. “Enter Pin” and “- - - -” are displayed, and input of the registered ID code is possible.

## Audio System

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### (Master code input)

4. Turn the manual tuning dial to select a number and then press the enter button (ENTER ) to input the number.

### **NOTE**

#### *Master code:*

*The Master Code is used to initialize or re-initialize the ID code in the event that the code is not set to [0000] and/or the personalized ID code is not known. The initialization process resets the ID code to [0000]. The master code can potentially defeat the intent of the security of the parental lock if it is located by persons not authorized by the owner to access certain channels.*

*SIRIUS Satellite Radio Master Code: [0913]*

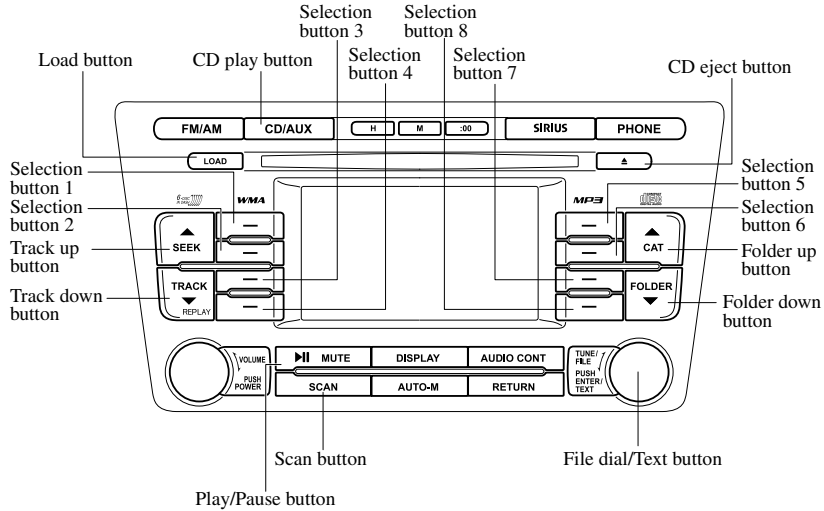
### (Master code input confirmation)

5. After inputting the four digits, turn the manual tuning dial and select “OK”, and then press the enter button (ENTER ) to confirm the four digits.
6. If the four digits match the master code, “Pin Cleared” appears.  
If they do not match the master code, “Error” appears and the display returns to “- - - -”.
7. The ID code returns to the default [0000] code.

# MEMO

# Audio System

## ▼ Operating the In-Dash CD Changer



Type	Playable data
Music/MP3/WMA CD player	<ul style="list-style-type: none"> <li>• Music data (CD-DA)</li> <li>• MP3/WMA file</li> </ul>

**NOTE**

If a disc has both music data (CD-DA) and MP3/WMA files, playback of the two or three file types differs depending on how the disc was recorded.

**Inserting the CD**

The CD must be label-side up when inserting. The auto-loading mechanism will set the CD and begin play.

**NOTE**

The CD will begin playback automatically after insertion. A CD cannot be inserted while the display reads "Please Wait". There will be a short lapse before play begins while the player reads the digital signals on the CD.

**Normal CD insertion**

1. Press the load button (LOAD).
2. When "Please Insert a Disc" is displayed, insert the CD.

**Inserting CDs into desired tray number**

1. Press and hold the load button (LOAD).
2. Press the selection button for the desired tray number while "Please Wait" is displayed.
3. When "Please Insert a Disc" is displayed, insert the CD.

**NOTE**

The CD cannot be inserted to the desired tray number if the number is already occupied.

### **Multiple CD insertion**

1. Press and hold the load button (**LOAD** ).
2. Press the load button (**LOAD** ) again.  
When “Please Insert a Disc” is displayed, insert the CD.
3. When “Please Insert a Disc” is displayed again, insert the next CD.

#### **NOTE**

*The first-inserted CD will be played automatically when:*

- No other CD is inserted within 15 seconds after “Please Insert a Disc” is displayed.
- The CD trays are full.

### **Ejecting CDs**

#### **Normal ejection**

1. Press the CD eject button (**▲** ).  
“Disc Ejecting” will be displayed.
2. Remove the CD.

#### **NOTE**

*When the CD is ejected during play, the next CD will be played automatically.*

#### **Ejecting CDs from desired tray number**

1. Press and hold the CD eject button (**▲** )
2. Press the selection button for the desired tray number while “Disc Ejecting” is displayed.
3. Remove the CD.

#### **Multiple CD ejection**

1. Press and hold the CD eject button (**▲** ).
2. Press the CD eject button (**▲** ) again.

#### **NOTE**

*If the button is not pressed and about five seconds have elapsed while “Disc Ejecting” is displaying, CDs are automatically ejected.*

3. Remove the CD, then the next CD will be ejected.

#### **NOTE**

- CDs will be ejected starting from the one in the tray with the lowest number.
- All CDs in the trays will be ejected continuously.
- CDs can be ejected when the ignition is switched off. Press and hold the CD eject button (**▲** ) to eject all CDs.

### **Playback**

Press the CD play button (**CD/AUX** ) to start play when a CD is in the unit.

If the CD play button (**CD/AUX** ) is pressed when a CD is not inserted and an external device is not connected, “No Disc” is displayed.

All of the following information is displayed during playback.

#### **Music CD**

The track number, elapsed time, album name, artist name, and song name are displayed.

#### **MP3/WMA CD**

The folder number, track number, elapsed time, folder name, album name, artist name, and song name are displayed.

## Audio System

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### **NOTE**

If the entire title cannot be displayed, "... " is added at the end to the part of the title which can be displayed.

If title information is not available, "NO TITLE" is displayed.

If there are any undisplayable characters in the title, "-----" is displayed.

Some CDs cannot display information.

### **Pause**

Press the Play/Pause button (▶||). Press the button again to resume playback.

### **Fast-forward/Reverse**

#### **Fast-forward**

Press and hold the track up button (▲).

#### **Reverse**

Press and hold the track down button (▼).

### **Track search**

#### **Track up**

Press the track up button (▲) or turn the file dial clockwise.

#### **Track down**

Press the track down button (▼) or turn the file dial counterclockwise.

### **Disc search**

Press the selection button for the desired tray number.

### **Folder search (during MP3/WMA CD playback)**

#### **Folder up**

Press the folder up button (▲).

#### **Folder down**

Press the folder down button (▼).

### **NOTE**

Press and hold the (▲) or (▼) button to continuously move up or down through the folders.

### **Music scan**

#### **During music CD playback**

This function scans the titles on a CD and plays ten seconds of each song to aid you in finding a song you want to listen to.

#### **During MP3/WMA CD playback**

This function scans the titles in a folder currently being played and plays ten seconds of each song to aid you in finding a song you want to listen to.

Press the scan button (SCAN) during playback to start the scan play operation. Press the scan button (SCAN) again to cancel scan playback.

### **NOTE**

If the unit is left in scan, normal playback will resume where scan was selected.

### **Repeat playback**

#### **During music CD playback**

1. Press selection button 1 during playback to play the current track repeatedly. "Repeat Track" is displayed.
2. Press selection button 1 again to cancel the repeat playback.

#### **During MP3/WMA CD playback**

##### **(Track repeat)**

1. Press selection button 1 during playback to play the current track repeatedly. "Repeat Track" is displayed.

2. Press selection button 1 twice to cancel the repeat playback.

#### **(Folder repeat)**

1. Press selection button 1 twice during playback to play the tracks in the current folder repeatedly.  
“Repeat Folder” is displayed.
2. Press selection button 1 again to cancel the repeat playback.

#### **Random playback**

Tracks are randomly selected and played.

#### **During music CD playback**

1. Press selection button 5 during playback to play the tracks in the CD randomly. “Random Disc” is displayed.
2. Press selection button 5 again to cancel the random playback.

#### **During MP3/WMA CD playback**

##### **(Folder random)**

1. Press selection button 5 during playback to play the tracks in the folder randomly. “Random Folder” is displayed.
2. Press selection button 5 twice to cancel the random playback.

##### **(All random)**

1. Press selection button 5 twice during playback to play the tracks on the CD randomly. “Random All” is displayed.
2. Press selection button 5 again to cancel the random playback.

#### **Display scroll**

If each title cannot be fully displayed at one time, press the text button (**TEXT**) to display the rest of the characters.

If the last character of the title is displayed, press the text button (**TEXT**) to return the beginning of the title.

#### **Message display**

If “Check Disc” is displayed, it means that there is a CD malfunction. Check the CD for damage, dirt, or smudges, and then properly reinsert. If the message appears again, take the unit to an Authorized Mazda Dealer for service.

#### **▼ Operating the Auxiliary Jack**

You can connect portable audio units or similar products on the market to the auxiliary jack to listen to music or audio over the vehicle's speakers, refer to Auxiliary Input (page 6-74).



## Audio System

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### ▼ Error Indications

If you see an error indication on the display, find the cause in the chart. If you cannot clear the error indication, take the vehicle to an Authorized Mazda Dealer.

Indication	Cause	Solution
Acquiring Signal	Depending on the surrounding conditions (such as large trees, buildings, or tunnels) and special weather conditions, SIRIUS radio reception may be diminished or temporarily interrupted.	Improve reception by moving away from possible obstructions. If the error indication continues to display, consult an Authorized Mazda Dealer.
Antenna Fail	Satellite radio antenna malfunction	Check the satellite radio antenna, antenna cable and DLP antenna connector. If the error indication continues to display, consult an Authorized Mazda Dealer.
Check Disc	CD is inserted upside down	Insert the CD properly. If the error indication continues to display, consult an Authorized Mazda Dealer.
	CD is defective	Insert another CD properly. If the error indication continues to display, consult an Authorized Mazda Dealer.

### NOTE

*If a broken DLP\* unit is replaced with a new unit, cancel the license for the broken unit and make sure to carry out new registration for the replaced unit. If the license for the broken unit is not canceled, you will be charged a reception fee for both units.*

\* DLP: Down Link Processor (SATELLITE RADIO Module)

## Audio Control Switch Operation

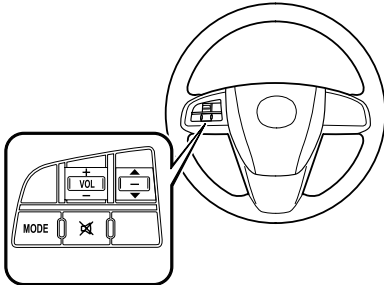
When the audio unit is turned on, operation of the audio unit from the steering wheel is possible.

### NOTE

Because the audio unit will be turned off under the following conditions, the switches will be inoperable.

- When the ignition is switched off.
- When the power button on the audio unit is pressed and the audio unit is turned off.
- When the CD being played is ejected and the audio unit is turned off.

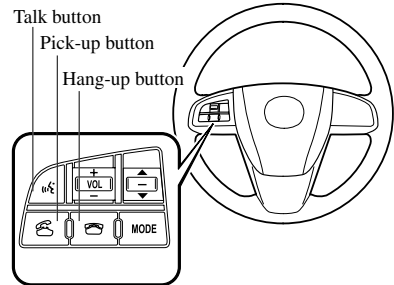
### Without Bluetooth Hands-Free and navigation system



### With Bluetooth Hands-Free only/ Bluetooth Hands-Free and navigation system

Use the talk button, pick-up button, and hang-up button for navigation system sound operation.

For details, refer to the separate manual “NAVIGATION SYSTEM Owner’s Manual”.



### NOTE

- The talk button, pick-up button, and hang-up button are operable with the audio unit turned off.
- Mazda has installed this system to prevent distraction while driving the vehicle and using audio controls on the dashboard. Always make safe driving your first priority.

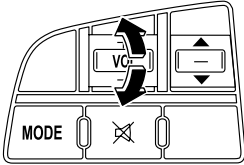
### ▼ Adjusting the Volume

To increase the volume, press up the volume switch.

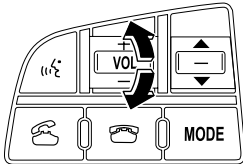
To decrease the volume, press down the volume switch.

# Audio System

## Without Bluetooth Hands-Free and navigation system



## With Bluetooth Hands-Free only/ Bluetooth Hands-Free and navigation system



### ▼ Changing the Source

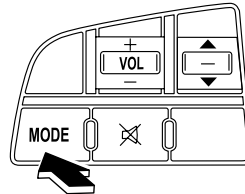
#### (Type A)

Press the mode switch (**MODE**) to change the audio source (FM1 radio → FM2 radio → AM radio → CD player or CD changer → AUX → BT audio → cyclical).

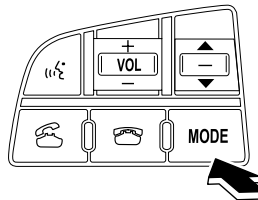
#### (Type B)

Press the mode switch (**MODE**) to change the audio source (FM1 radio → FM2 radio → AM radio → CD changer → SIRIUS1 → SIRIUS2 → SIRIUS3 → AUX → BT audio → cyclical).

#### Without Bluetooth Hands-Free and navigation system



#### With Bluetooth Hands-Free only/ Bluetooth Hands-Free and navigation system



**NOTE**

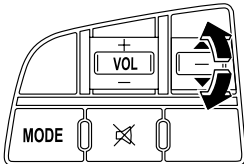
CD, CD changer, SIRIUS digital satellite radio, and BT audio modes cannot be selected in the following cases:

- SIRIUS digital satellite radio unit, or BT audio unit is not equipped on the audio system.
- CD has not been inserted.

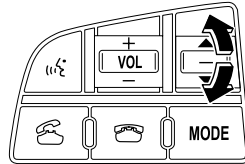
The AUX mode is locked out unless you connect a commercially available portable audio unit (such as an MP3 player) to the auxiliary jack. Connect a portable audio unit or similar product on the market to the auxiliary jack to listen to music or audio over the vehicle's speakers. Change the audio source to AUX mode (page 6-74).

**▼ Seek Switch**

**Without Bluetooth Hands-Free and navigation system**



**With Bluetooth Hands-Free only/  
Bluetooth Hands-Free and navigation  
system**



**When listening to the radio or SIRIUS digital satellite radio**

Press the seek switch up or down. The radio switches to the next/previous stored station in the order that it was stored (1—6).

**(Radio)**

Press and hold the seek switch in the up or down position to seek all usable stations at a higher or lower frequency whether programmed or not.

**(SIRIUS digital satellite radio)**

Press and hold the seek switch in the up or down position to seek all usable stations at a higher or lower channel whether programmed or not.

**When playing a CD or BT audio**

Press up the seek switch to skip to the next track.

Press down the seek switch to repeat the current track.

Press and hold the seek switch in the up or down position to continuously switch the tracks up or down.

## Audio System

### ▼ Mute Switch \*

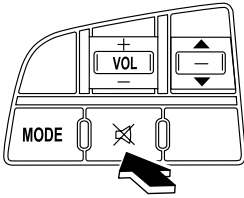
Press the mute switch (⊗) once to mute audio, press it again to resume audio output.

#### **NOTE**

*If the ignition is switched off with the audio muted, the mute will be canceled.*

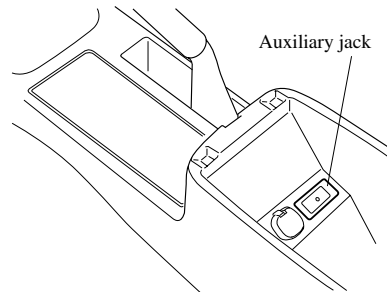
*Therefore, when the engine is restarted, the audio is not muted. To mute the audio again, press the mute switch (⊗).*

### Without Bluetooth Hands-Free and navigation system



### AUX Mode (Auxiliary input)

You can connect portable audio units, such as an MP3 player or similar products on the market, to the auxiliary jack to listen to music or audio over the vehicle's speakers.



### **! WARNING**

**Do not adjust the portable audio unit or a similar product while driving the vehicle:**

*Adjusting the portable audio unit or a similar product while driving the vehicle is dangerous as it could distract your attention from the vehicle operation which could lead to a serious accident. Always adjust the portable audio unit or a similar product while the vehicle is stopped.*

**⚠ CAUTION**

- Close the lid when the auxiliary jack is not in use to prevent foreign objects and liquids from penetrating the auxiliary jack.
- Depending on the portable audio device, noise may occur when using the device with it connected to the accessory socket equipped on the vehicle. (If noise occurs, do not use the accessory socket.)

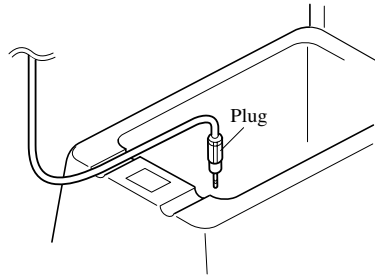
**NOTE**

- Before using the auxiliary jack, read the manufacturer's instructions for the product being connected.
- Use a commercially-available, non-impedance (3.5  $\Phi$ ) stereo mini plug for connecting the portable audio unit to the auxiliary jack. Before using the auxiliary jack, read the manufacturer's instructions for connecting a portable audio unit to the auxiliary jack.
- To prevent discharging of the battery, do not use the auxiliary input for long periods with the engine off or idling.
- Noise may occur depending on the product connected to the auxiliary jack.
- With regard to connecting a portable audio or similar device to a power source, use the battery for the device, not the accessory socket.

**Connecting the auxiliary jack**

1. Open the console lid.

2. Pass the connection plug cord through the cutout of the console and insert the plug into the auxiliary jack.



**⚠ WARNING**

**Do not allow the connection plug cord to get tangled with the parking brake or the shift lever:**

Allowing the plug cord to become tangled with the parking brake or the shift lever is dangerous as it could interfere with driving, resulting in an accident.

**⚠ CAUTION**

**Do not place objects or apply force to the auxiliary jack with the plug connected.**

**NOTE**

- Insert the plug to the auxiliary jack securely.
- Insert or remove the plug with the plug perpendicular to the auxiliary jack hole.
- Insert or remove the plug by holding its base.

**To listen to a portable audio unit**

1. Switch the ignition to ACC or ON.
2. Press the power/volume dial to turn the audio system on.

# Audio System

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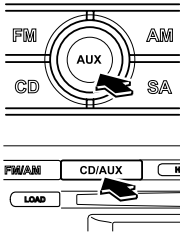
### 3. (Type A)

Press the AUX button (AUX) of the audio unit or the mode switch (MODE) of the audio control switches on the steering wheel to change to the AUX mode.

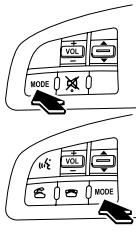
### (Type B)

Press the AUX button (CD/AUX) of the audio unit or the mode switch (MODE) of the audio control switches on the steering wheel to change to the AUX mode.

#### Audio Unit



#### Audio Control Switches



### NOTE

- Set the volume of the portable audio unit to the maximum within the range that the sound does not become distorted, then adjust the volume using the power/volume dial of the audio unit or the up/down switch of the audio control switch.
- Audio adjustments other than audio volume can only be done using the portable audio device.
- If the connection plug is pulled out from the auxiliary jack while in AUX mode, noise may occur.

## Safety Certification

This CD player is made and tested to meet exacting safety standards. It meets FCC requirements and complies with safety performance standards of the U.S. Department of Health and Human Services.

### **CAUTION**

- *This CD player should not be adjusted or repaired by anyone except qualified service personnel.  
If servicing is required, contact an Authorized Mazda Dealer.*
- *Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous laser exposure. Never operate the CD player with the top case of the unit removed.*
- *Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.*

### **NOTE**

*For CD player section:*

*This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.*

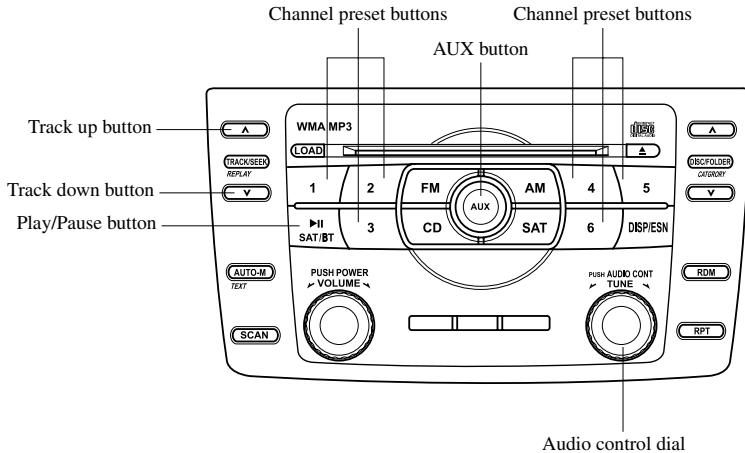
### **NOTE**

*This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.*



# Bluetooth Audio (Type A)

## Bluetooth Audio (Type A) \*



### ▼ What is Bluetooth Audio?

#### Bluetooth audio outline

By programming portable audio devices equipped with the Bluetooth communication function to the vehicle's Bluetooth unit, you can listen to music or audio recorded on these audio devices from the vehicle's speakers. Bluetooth audio devices do not need to be plugged into the auxiliary jack.

After programming, operate the audio system's control panel or the navigation system to play/stop the music or audio.

#### **CAUTION**

- Always program audio devices to the Bluetooth audio system while the vehicle is stopped.

## Bluetooth Audio (Type A)

- *Because only specified Bluetooth audio devices can be used, consult an Authorized Mazda Dealer when purchasing or changing devices. Bluetooth audio devices which correspond to specified Bluetooth versions and profiles can be Bluetooth-connected to the vehicle's Bluetooth unit. However, even among these devices are ones which cannot be Bluetooth-connected or have limited functionality. Each device to be used with the vehicle's Bluetooth unit needs to be checked individually for compatibility. Consult an Authorized Mazda Dealer concerning device compatibility.*

➤ **U.S.A.**

Phone: 800-430-0153  
 Web: [www.MazdaUSA.com/bluetooth](http://www.MazdaUSA.com/bluetooth)

➤ **Canada**

Phone: 800-430-0153  
 Web: [www.mazdahandsfree.ca](http://www.mazdahandsfree.ca)

➤ **Mexico**

Center of Attention to Client (CAC)  
 Phone: 01-800-01-MAZDA  
 Web: [www.MazdaUSA.com/bluetooth](http://www.MazdaUSA.com/bluetooth)

### Applicable Bluetooth specification

Ver. 2.0 or higher

### Audio profile

- A2DP (Advanced Audio Distribution Profile) Ver. 1.0
- AVRCP (Audio/Video Remote Control Profile) Ver. 1.0

A2DP is a profile which transmits only audio to the Bluetooth unit. If your Bluetooth audio device corresponds only to A2DP, but not AVRCP, you cannot operate it using the control panel of the vehicle's audio or navigation systems. In this case, the Bluetooth audio device can be operated by controlling the device itself, the same as when a portable audio system without the Bluetooth communication function is connected to the AUX terminal.

Function	A2DP	A2DP+AVRCP
Playback	No	Yes
Pause	No	Yes
File (Track) up/down	No	Yes

Yes: Available

No: Not available



Bluetooth is the registered trademark of Bluetooth SIG, Inc.

## Bluetooth Audio (Type A)

### NOTE

- It may not be possible to play a Bluetooth audio device if it is placed anywhere transmission is compromised, such as inside a metal container or the trunk. Move the Bluetooth audio device to a location where transmission is possible.
- Battery consumption of Bluetooth audio devices is higher while Bluetooth-connected.
- If a non-Bluetooth device is to be used, a commercially-available Bluetooth adapter is required. When playing an audio device with a Bluetooth adapter installed, programming of the audio device may not be possible or audio may not be heard from the vehicle speakers if the connection of the adapter and the device is poor. If this happens, check if the Bluetooth adapter is properly connected.

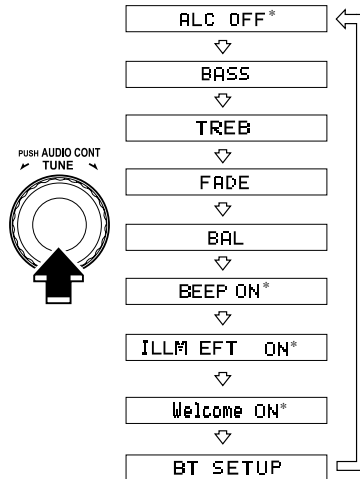
### ▼ Bluetooth Audio Preparation

#### Bluetooth audio device set-up

Bluetooth audio programming, changes, deletions, and display of programmed device information can be performed.

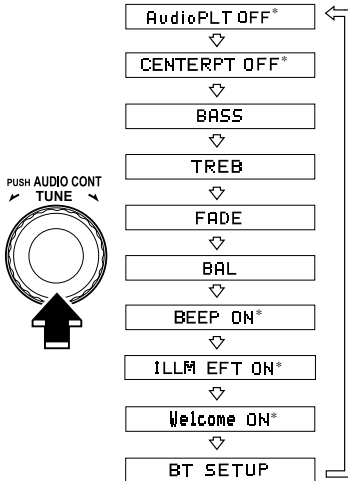
1. The mode changes as follows each time the audio control dial is pressed. Select "BT SETUP".

#### Standard audio-equipped model



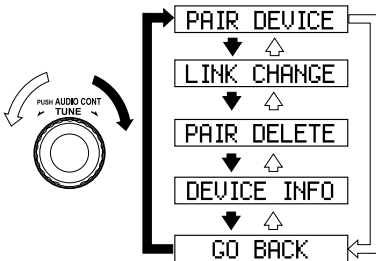
# Bluetooth Audio (Type A)

## Bose® Sound System-equipped model



\* Depending on the mode selected, the indication changes.

- Turn the audio control dial and select a desired mode.



Display	Mode	Function
PAIR DEVICE	Pairing program mode	Bluetooth audio device programming
LINK CHANGE	Link change mode	Changing link to Bluetooth audio device
PAIR DELETE	Pairing deletion mode	Deleting link to Bluetooth audio device
DEVICE INFO	Device information display mode	Displaying vehicle's Bluetooth unit information

- Press the audio control dial to determine the mode.

### Bluetooth audio device programming

Any Bluetooth audio device must be programmed to the vehicle's Bluetooth unit before it can be listened to over the vehicle's speakers.

A maximum of seven devices including Bluetooth audio devices and hands-free mobile phones can be programmed to one vehicle.

## Bluetooth Audio (Type A)

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### NOTE

- Always perform Bluetooth audio device programming while the vehicle is stopped.
- If a Bluetooth device has already been programmed to the vehicle as a hands-free mobile phone, it does not need to be programmed again when using the device as a Bluetooth audio device. Conversely, it does not need to be programmed again as a hands-free mobile phone if it has already been programmed as a Bluetooth audio device.
- Look around to be sure other likely Bluetooth audio devices are not in range when you start to program. If in doubt, move your car to another location. The transmission range of a Bluetooth audio device is about 10 m (32 ft). Therefore, if there is another Bluetooth audio device within a 10 m (32 ft) radius of the vehicle, the device may be identified and programmed instead.
- Device registration can also be done using voice recognition (page 6-101).

Concerning the operation of a Bluetooth audio device itself, refer to its instruction manual.

Some Bluetooth audio devices have PIN codes (four digits). Refer to the audio device's instruction manual because the programming procedure differs depending on whether it has a PIN code or not.

### **Programming a Bluetooth audio device which has a four-digit PIN code**

1. Using the audio control dial, select the pairing program mode "PAIR DEVICE" in the "BT SETUP" mode. (Refer to "Bluetooth audio device set-up" for details.)

2. Press the audio control dial to determine the mode.  
After "ENTER PIN" is displayed on the information display for three seconds, "PIN 0000" is displayed and the PIN code can be input.
3. Input the PIN code of your Bluetooth audio device by pressing channel preset buttons 1 to 4 while "PIN 0000" is displayed.  
Press channel preset button 1 to input the first digit, 2 for the second, 3 for the third, and 4 for the fourth. For example, if the PIN code were "4213", press channel preset button 1 four times (1, 2, 3, 4), button 2 twice (1, 2), button 3 once (1), and button 4 three times (1, 2, 3). If the "PIN 0000" display disappears before finishing the PIN code input, repeat the procedure from Step 1.

### NOTE

Some devices accept only a particular pairing code (Usually, "0000" or "1234").

If pairing cannot be completed, refer to the owner's manual of your mobile device, and try those numbers if necessary.

4. Press the audio control dial while the input PIN code is displayed.  
"PAIRING" flashes on the display.
5. Operate the Bluetooth audio device and set it to the program mode while "PAIRING" is flashing.
6. When the programming is completed, "♪" and "PAIR SUCCESS" are displayed after about 10-30 seconds, after which "PAIR SUCCESS" continues to be displayed for three seconds, and then the unit returns to the normal display.

## Bluetooth Audio (Type A)

### NOTE

- Some Bluetooth audio devices need a certain amount of time before the “🎵” symbol is displayed.
- If the programming failed, “Err” flashes for three seconds then it returns to “PAIR DEVICE”.
- Programming cannot be performed while the vehicle is moving. If you attempt to perform programming while the vehicle is moving, “PAIR DISABLE” is displayed and it returns to “PAIR DEVICE”.
- If seven Bluetooth audio devices have already been programmed to the vehicle, programming cannot be performed and “MEMORY FULL” is displayed. Delete one programmed device to program another one.

### **Programming a Bluetooth audio device which does not have a four-digit PIN code**

1. Using the audio control dial, select the pairing program mode “PAIR DEVICE” in the “BT SETUP” mode. (Refer to “Bluetooth audio set up” for details.)
2. Press the audio control dial to determine the mode.  
After “ENTER PIN” is displayed on the information display for three seconds, “PIN 0000” is displayed and the PIN code can be input.
3. Press the audio control dial while “PIN 0000” is displayed.  
“PAIRING” flashes on the display.
4. Operate the Bluetooth audio device and set it to the program mode while “PAIRING” is flashing.
5. As the Bluetooth audio device requires a PIN code, input “0000”.

6. When the programming is completed, “🎵” and “PAIR SUCCESS” are displayed after about 10-30 seconds, after which “PAIR SUCCESS” continues to be displayed for three seconds, and then the unit returns to the normal display.

### NOTE

- If pairing cannot be completed, try “1234” instead. Refer to the owner's manual of your mobile device for the right PIN code.
- Some Bluetooth audio devices need a certain amount of time before the “🎵” symbol is displayed.
- If the programming failed, “Err” flashes for three seconds then it returns to “PAIR DEVICE”.
- Programming cannot be performed while the vehicle is moving. If you attempt to perform programming while the vehicle is moving, “PAIR DISABLE” is displayed and it returns to “PAIR DEVICE”.
- If seven Bluetooth audio devices have already been programmed to the vehicle, programming cannot be performed and “MEMORY FULL” is displayed. Delete one programmed device to program another one.

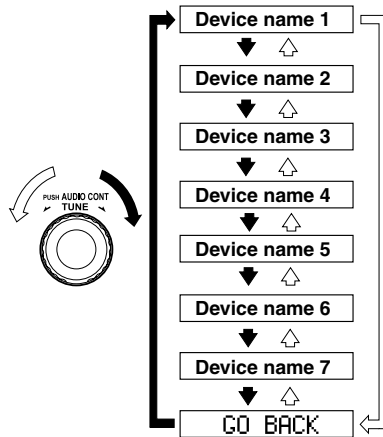
## Bluetooth Audio (Type A)

### Changing the link to a Bluetooth audio device

If several devices have been programmed, the Bluetooth unit links the device last programmed. If you would like to link a different programmed device, it is necessary to change the link. The order of device priority after the link has been changed is maintained even when the ignition is switched off.

1. Using the audio control dial, select the link change mode “LINK CHANGE” in the “BT SETUP” mode. (Refer to “Bluetooth audio device set-up” for details.)
2. Press the audio control dial to determine the mode.
3. The name of the currently linked Bluetooth audio device is displayed. If no Bluetooth audio device is currently linked, the name of the first device among the programmed devices is displayed.

4. Turn the audio control dial to select the name of the device you would like to link.



5. Press the audio control dial to select the device you would like to link. The “🎵” symbol disappears, and “PAIRING” flashes in the display.

### **NOTE**

*When “GO BACK” is selected and the audio control dial is pressed, the display returns to “LINK CHANGE”.*

6. If the link to the desired device is successful, the “🎵” symbol is displayed again, together with “LINK CHANGED”. “LINK CHANGED” is displayed for three seconds, then it returns to the normal display.

## Bluetooth Audio (Type A)

### NOTE

- Some Bluetooth audio devices need a certain amount of time before the “🎵” symbol is displayed.
- If a hands-free type mobile phone has been the most recently programmed device, the Bluetooth unit links this device. If you would like to use a Bluetooth audio type device which has been previously programmed to the Bluetooth unit, the link must be changed to this device.
- If an error occurs while trying to link a device, “Err” flashes in the display for three seconds, and the display returns to “LINK CHANGE”. If this occurs, check the programming status of the Bluetooth audio device and the location of the device in the vehicle (not in the trunk or a metal-type box), and then try the link operation again.
- Device selection can also be done using voice recognition (page 6-113).

### How to confirm the device currently linked

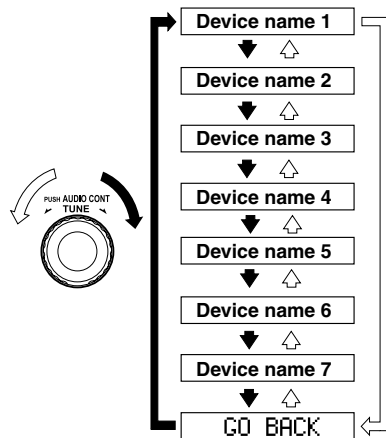
Switch to the link-change mode. (Refer to “Changing the link to a Bluetooth audio device”)

The device name displayed first is the device which is currently linked.

### Deleting the link to a Bluetooth audio device

1. Using the audio control dial, select the pairing delete mode “PAIR DELETE” in the “BT SETUP” mode. (Refer to “Bluetooth audio device set-up” for details.)
2. Press the audio control dial to determine the mode.
3. The name of the first device among the programmed devices is displayed.

4. Rotate the audio control dial and select the name of the programmed device you would like to delete.



### NOTE

Only the names of programmed devices can be displayed. If only one device is programmed, only the name for this device is displayed.

5. If a selection other than “GO BACK” is made and the audio control dial is pressed, “SURE ? NO” is displayed.
6. Rotate the audio control dial clockwise and switch the display to “SURE ? YES”.

### NOTE

The display changes as follows depending on whether the audio control dial is rotated clockwise or counterclockwise.

- Clockwise: “SURE ? YES” displayed
- Counterclockwise: “SURE ? NO” displayed



## Bluetooth Audio (Type A)

- Press the audio control dial to delete the selected device.

### NOTE

Select "GO BACK" and press the audio control dial to return to the "PAIR DELETE" display.

- "PAIR DELETED" is displayed for three seconds after the deletion is completed, and then it returns to the normal display.

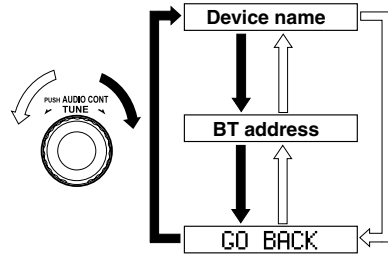
### NOTE

If an error occurs while trying to delete the programmed device, "Err" flashes in the display for three seconds and the display returns to "LINK DELETE".

### Bluetooth audio device information display

- Using the audio control dial, select the pair device information display mode "DEVICE INFO" in the "BT SETUP" mode. (Refer to "Bluetooth audio device set-up" for details.)
- Press the audio control dial to determine the mode.
- The name of the Bluetooth unit device is displayed.

- Rotate the audio control dial to select the information for the Bluetooth unit which you would like to view.



### NOTE

When "GO BACK" is selected and the audio control dial is pressed, the display returns to "DEVICE INFO".

## ▼ How to Use the Bluetooth Audio System

### Switching to Bluetooth audio mode

To listen to music or voice audio recorded to a Bluetooth audio device, switch to the Bluetooth audio mode to operate the audio device using the audio system or navigation system control panels. Any Bluetooth audio device must be programmed to the vehicle's Bluetooth unit before it can be used. (Refer to "Bluetooth audio device programming")

- Switch the ignition to ACC or ON.
- Turn on the Bluetooth audio device's power.  
Make sure that the "🎵" symbol is displayed in the information display. The symbol is not displayed if an unprogrammed Bluetooth audio device is being used or the vehicle's Bluetooth unit has a malfunction.

**NOTE**

Some Bluetooth audio devices need a certain amount of time before the “🎵” symbol is displayed.

3. Press the AUX button (**AUX**) to switch the Bluetooth audio mode to “BT”.
4. The audio recorded to the Bluetooth audio device begins playback.

**NOTE**

- If the Bluetooth audio device does not begin playback, press the Play/Pause button (▶||).
- If the mode is switched from Bluetooth audio mode to another mode (radio mode), audio playback from the Bluetooth audio device stops.
- If a call is received on a hands-free mobile phone during playback from the Bluetooth audio device, the playback is stopped. Playback from the Bluetooth audio device resumes after the call ends.

**Playback**

1. To listen to a Bluetooth audio device over the vehicle's speaker system, switch the mode to Bluetooth audio mode. (Refer to “Switching to Bluetooth audio mode”)
2. To stop playback, press the Play/Pause button (▶||).
3. Press the button again to resume playback.

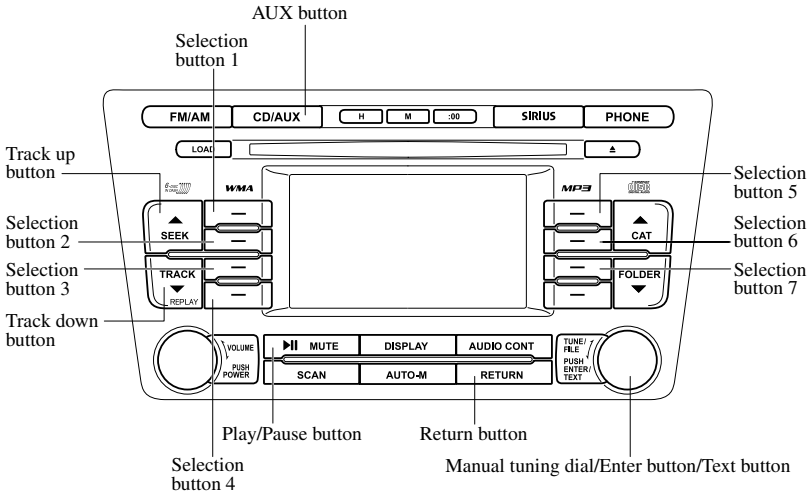
**Selecting a file (track)**

Short-press the track down button (▼):  
Selects the beginning of the current file (track).

Short-press the track up button (▲):  
Selects the next file (track).

# Bluetooth Audio (Type B)

## Bluetooth Audio (Type B) \*



### ▼ What is Bluetooth Audio?

#### Bluetooth audio outline

By programming portable audio devices equipped with the Bluetooth communication function to the vehicle's Bluetooth unit, you can listen to music or audio recorded on these audio devices from the vehicle's speakers. Bluetooth audio devices do not need to be plugged into the auxiliary jack.

After programming, operate the audio system's control panel to play/stop the music or audio.

#### **CAUTION**

- Always program audio devices to the Bluetooth audio system while the vehicle is stopped.

## Bluetooth Audio (Type B)

➤ *Because only specified Bluetooth audio devices can be used, consult an Authorized Mazda Dealer when purchasing or changing devices. Bluetooth audio devices which correspond to specified Bluetooth versions and profiles can be Bluetooth-connected to the vehicle's Bluetooth unit. However, even among these devices are ones which cannot be Bluetooth-connected or have limited functionality. Each device to be used with the vehicle's Bluetooth unit needs to be checked individually for compatibility. Consult an Authorized Mazda Dealer concerning device compatibility.*

➤ **U.S.A.**

Phone: 800-430-0153

Web: [www.MazdaUSA.com/bluetooth](http://www.MazdaUSA.com/bluetooth)

➤ **Canada**

Phone: 800-430-0153

Web: [www.mazdahandsfree.ca](http://www.mazdahandsfree.ca)

➤ **Mexico**

Center of Attention to Client (CAC)

Phone: 01-800-01-MAZDA

Web: [www.MazdaUSA.com/bluetooth](http://www.MazdaUSA.com/bluetooth)

### Applicable Bluetooth specification

Ver. 2.0 or higher

### Audio profile

- A2DP (Advanced Audio Distribution Profile) Ver. 1.0
- AVRCP (Audio/Video Remote Control Profile) Ver. 1.0/1.3

A2DP is a profile which transmits only audio to the Bluetooth unit. If your Bluetooth audio device corresponds only to A2DP, but not AVRCP, you cannot operate it using the control panel of the vehicle's audio system. In this case, the Bluetooth audio device can be operated by controlling the device itself, the same as when a portable audio system without the Bluetooth communication function is connected to the AUX terminal.

Function	A2DP	A2DP-AVRCP	
		Ver. 1.0	Ver. 1.3
Playback	No	Yes	Yes
Pause	No	Yes	Yes
File (Track) up/down	No	Yes	Yes
Reverse	No	No	Yes
Fast-forward	No	No	Yes
Text display	No	No	Yes

Yes: Available

No: Not available

### NOTE

- *The system may not operate normally depending on the Bluetooth audio device.*
- *To make sure that your Bluetooth audio device is Ver. 1.0 or 1.3, refer to the Owner's Manual for the Bluetooth audio device.*



## Bluetooth Audio (Type B)

---

Bluetooth is the registered trademark of Bluetooth SIG, Inc.

### **NOTE**

- *It may not be possible to play a Bluetooth audio device if it is placed in a location where transmission is compromised, such as inside a metal container or the trunk. Move the Bluetooth audio device to a location where transmission is possible.*
- *The battery consumption of Bluetooth audio devices is higher while Bluetooth-connected.*
- *If a non-Bluetooth device is to be used, a commercially-available Bluetooth adapter is required. When playing an audio device with a Bluetooth adapter installed, programming of the audio device may not be possible or audio may not be heard from the vehicle speakers if the connection of the adapter and the device is poor. If this happens, check whether the Bluetooth adapter is properly connected.*

### ▼ **Bluetooth Audio Preparation**

#### **Bluetooth audio device set-up**

Bluetooth audio programming, changes, deletions, and display of programmed device information can be performed.

#### **Bluetooth audio device programming**

Any Bluetooth audio device must be programmed to the vehicle's Bluetooth unit before it can be listened to over the vehicle's speakers.

A maximum of seven devices including Bluetooth audio devices and hands-free mobile phones can be programmed to one vehicle.

### **NOTE**

- *Always perform Bluetooth audio device programming while the vehicle is stopped.*
- *Programming cannot be performed while the vehicle is moving. If you attempt to perform programming while the vehicle is moving, "Pairing prohibited" is displayed.*
- *A total of seven devices can be programmed to one vehicle. If you require an additional device to be programmed to a vehicle with seven devices already programmed, delete one of the programmed devices before programming the latest one.*
- *If a Bluetooth device has already been programmed to the vehicle as a hands-free mobile phone, it does not need to be programmed again when using the device as a Bluetooth audio device. Conversely, it does not need to be programmed again as a hands-free mobile phone if it has already been programmed as a Bluetooth audio device.*
- *Look around to be sure other likely Bluetooth audio devices are not in range when you start to program. If in doubt, move your car to another location. The transmission range of a Bluetooth audio device is about 10 m (32 ft). Therefore, if there is another Bluetooth audio device within a 10 m (32 ft) radius of the vehicle, the device may be identified and programmed instead.*
- *Device registration can also be done using voice recognition (page 6-101).*

Concerning the operation of a Bluetooth audio device itself, refer to its instruction manual.

Some Bluetooth audio devices have PIN codes (four digits). Refer to the audio device's instruction manual because the programming procedure differs depending on whether it has a PIN code or not.

## Bluetooth Audio (Type B)

### Programming a Bluetooth audio device which has a PIN code (four digits)

1. Press selection button 2 to display the Bluetooth audio setting menu screen.
2. Press selection button 2 again to display the pairing program screen.
3. “Enter Pin:0000” and “Rotate/Press TUNE dial to change code. Select “OK” when complete.” are displayed for input of the PIN code.
4. Turn the manual tuning dial to select the specified number for the Bluetooth audio device and press the enter button (ENTER) to input the number.

#### NOTE

*Some devices accept only a particular pairing code (Usually, “0000” or “1234”).*


*If pairing cannot be completed, refer to the owner's manual of your mobile device, and try those numbers if necessary.*

5. After inputting the four digits, turn the manual tuning dial and select “OK”, and then press the enter button (ENTER) to set the four digits and display “Pairing is in progress. Please start pairing procedure on your Bluetooth device. Use the PIN “xxxx”.”.

#### NOTE


*Press the return button (RETURN) to return to the pairing program screen.*

6. Operate the Bluetooth audio device and set it to the program mode while “Pairing is in progress. Please start pairing procedure on your Bluetooth device. Use the PIN “xxxx”.” is displayed.

7. When the pairing programming is completed, a “” symbol and “Pairing complete” are displayed, and then the display returns to the normal display.

If an error occurs during program pairing, “Error” is displayed and the display returns to the pairing program screen.

#### NOTE

*Some Bluetooth audio devices need a certain amount of time before the “” symbol is displayed.*

### Programming a Bluetooth audio device which does not have a PIN code (four digits)

1. Press selection button 2 to display the Bluetooth audio setting menu screen.
2. Press selection button 2 again to display the pairing program screen.
3. “Enter Pin:0000” and “Rotate/Press TUNE dial to change code. Select “OK” when complete.” are displayed for input of the PIN code.
4. Turn the manual tuning dial and select “OK”, and then press the enter button (ENTER) to set the four digits and display “Pairing is in progress. Please start pairing procedure on your Bluetooth device. Use the PIN “0000”.”.

#### NOTE

*Press the return button (RETURN) to return to the pairing program screen.*

## Bluetooth Audio (Type B)

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5. Operate the Bluetooth audio device and set it to the program mode while “Pairing is in progress. Please start pairing procedure on your Bluetooth device. Use the PIN “0000”.” is displayed.
6. The Bluetooth audio device will request input of a PIN code. Input “0000”.
7. When the pairing programming is completed, a “🎵” symbol and “Pairing complete” are displayed, and then it returns to the normal display. If an error occurs during program pairing, “Error” is displayed and the display returns to the pairing program screen.

### NOTE

- If pairing cannot be completed, try “1234” instead. Refer to the owner’s manual of your mobile device for the right PIN code.
- Some Bluetooth audio devices need a certain amount of time before the “🎵” symbol is displayed.

### Changing the link to a Bluetooth audio device

If several devices have been programmed, the Bluetooth unit links the device last programmed. If you would like to link a different programmed device, it is necessary to change the link. The order of device priority after the link has been changed is maintained even when the ignition is switched off.

### NOTE

- If a hands-free type mobile phone has been the most recently programmed device, the Bluetooth unit links this device. If you would like to use a Bluetooth audio type device which has been previously programmed to the Bluetooth unit, the link must be changed to this device.
- If the device name cannot be displayed, “...” is added at the end to the part of the title which can be displayed.

### Changing the link to only a Bluetooth audio device

1. Press selection button 2 to display the Bluetooth audio setting menu screen.
2. Press selection button 3 to display the link change screen and the current pairing programming device name.
3. Press selection button 1, 2, 3, 4, 5, 6, or 7 to select the name of the device you would like to change. The “🎵” symbol disappears, and the device name and “Connection is in progress.” are displayed.

### NOTE

Press the return button (RETURN) to return to the link change screen.

4. When the link change is completed, a “🎵” symbol and “Link Changed” are displayed, and then it returns to the normal display. If an error occurs while trying to link a device, “Error” is displayed and the display returns to the link change screen.

## Bluetooth Audio (Type B)

### NOTE

- Some Bluetooth audio devices need a certain amount of time before the “🎵” symbol is displayed.
- If a link change error occurs, check the programming status of the Bluetooth audio device and the location of the device in the vehicle (not in the trunk or a metal-type box), and then try the link operation again.

### Changing the link to a Bluetooth Hands-Free and Bluetooth audio device

1. Press selection button 2 to display the Bluetooth audio setting menu screen.
2. Press selection button 3 to display the link change screen and the current pairing programming device name.
3. Press selection button 1, 2, 3, 4, 5, 6, or 7 to select the name of the device you would like to change.
4. The device name and “Please Select Device” are displayed.
5. Press selection button 3 to select “Audio”. The “🎵” symbol disappears, and then “Connection is in progress.” is displayed.

### NOTE

Press the return button (RETURN) to return to the link change screen.

6. When the link change is completed, a “🎵” symbol and “Link Changed” are displayed, and then it returns to the normal display.  
If an error occurs while trying to change the link, “Error” is displayed, and then it returns to the link change screen.

### NOTE

- Some Bluetooth audio devices need a certain amount of time before the “🎵” symbol is displayed.
- If a link change error occurs, check the programming status of the Bluetooth audio device and the location of the device in the vehicle (not in the trunk or a metal-type box), and then try the link operation again.

### Deleting the link to a Bluetooth audio device

### NOTE

If the device name and Bluetooth address cannot be displayed, “...” is added at the end to the part of the title which can be displayed.

1. Press selection button 2 to display the Bluetooth audio setting menu screen.
2. Press selection button 4 to display the pair link deletion screen and the current pairing programming device name.
3. Press selection button 1, 2, 3, 4, 5, 6, or 7 to select the name of the device you would like to delete.
4. The link delete confirmation screen is displayed, and then “Delete select device?”, the device name, and the Bluetooth address are displayed.
5. Press selection button 1 to delete the selected device.

### NOTE

Press the return button (RETURN) to return to the previous display.



## Bluetooth Audio (Type B)

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6. When the link deletion is completed, “Deleted” is displayed, and then it returns to the normal display.  
If an error occurs while trying to delete the link, “Error” is displayed, and then it returns to the link deletion screen.

### **NOTE**

*If a device is deleted while it is being linked, linking to other devices will not be possible.*

### **Bluetooth audio device information display**

1. Press selection button 2 to display the Bluetooth audio setting menu screen.
2. Press selection button 6 to display the device information display screen.  
If the device information is available, the device name and Bluetooth address are displayed, and then it returns to the Bluetooth audio setting menu screen.  
If the device information is not available, “Failed to obtain device information.” is displayed, and then it returns to the Bluetooth audio setting menu screen.

### **NOTE**

*If the device name and Bluetooth address cannot be displayed, “...” is added at the end to the part of the title which can be displayed.*

### **▼ How to Use the Bluetooth Audio System**

#### **Switching to Bluetooth audio mode**

To listen to music or voice audio recorded to a Bluetooth audio device, switch to the Bluetooth audio mode to operate the audio device using the audio system control panel.

Any Bluetooth audio device must be programmed to the vehicle's Bluetooth unit before it can be used. (Refer to “Bluetooth audio device programming”)

1. Switch the ignition to ACC or ON.
2. Turn on the Bluetooth audio device's power.  
Make sure that the “🎵” symbol is displayed in the audio unit screen.  
The symbol is not displayed if an unprogrammed Bluetooth audio device is being used or the vehicle's Bluetooth unit has a malfunction.

### **NOTE**

*Some Bluetooth audio devices need a certain amount of time before the “🎵” symbol is displayed.*

3. Press the AUX button (CD/AUX ) to switch the Bluetooth audio mode.
4. The audio recorded to the Bluetooth audio device begins playback.

## Bluetooth Audio (Type B)

### **NOTE**

- If the Bluetooth audio device does not begin playback, press the Play/Pause button (▶||).
- If the mode is switched from Bluetooth audio mode to another mode (radio mode), audio playback from the Bluetooth audio device stops.
- If a call is received on a hands-free mobile phone during playback from the Bluetooth audio device, the playback is stopped. Playback from the Bluetooth audio device resumes after the call ends.

### **Playback**

Press the AUX button (CD/AUX ) to switch the Bluetooth audio mode and start playback.

### **NOTE**

If the Bluetooth audio device does not begin playback, press the Play/Pause button (▶||).

### **If the current device is lower than AVRCP Ver. 1.3:**

“Bluetooth-Audio” is displayed.

### **If the current device is AVRCP Ver. 1.3:**

“Bluetooth-Audio”, track number, elapsed time, album name, artist name, and song name are displayed.

### **NOTE**

- If the entire title cannot be displayed, “...” is added at the end to the part of the title which can be displayed.
- If title information is not available, “NO TITLE” is displayed.
- If there are any undisplayable characters in the title, “- - - - -” is displayed.

### **Pause**

Press the Play/Pause button (▶||). Press the button again to resume playback.

### **File (track) search**

#### **File (track) up**

Press the track up button (▲) or turn the file dial clockwise.

#### **File (track) down**

Press the track down button (▼) or turn the file dial counterclockwise.

### **Fast-forward/Reverse (only AVRCP Ver. 1.3)**

#### **Fast-forward**

Press and hold the track up button (▲).

#### **Reverse**

Press and hold the track down button (▼).

### **Display scroll**

If each title cannot be fully displayed at one time, press the text button (TEXT) to display the rest of the characters. If the last character of the title is displayed, press the text button (TEXT) to return the beginning of the title.

## Bluetooth Hands-Free (Voice Recognition)

### Bluetooth Hands-Free \*

#### ▼ What is Bluetooth Hands-Free?

#### Bluetooth Hands-Free Outline

By connecting a Bluetooth equipped device (Mobile phone) to the hands-free unit equipped on the vehicle, making and receiving calls are possible using the talk button, pick-up button and hang-up button located on the steering wheel, and saying the voice commands.

#### **⚠ WARNING**

**Perform phonebook registration related operations while the vehicle is parked:**

*Performing phonebook registration while driving the vehicle could be a distraction to your driving and result in an accident. In addition, a mistake in performing the phonebook operation could result in the loss of important data.*

#### Bluetooth equipped device (Mobile phone)

A Bluetooth equipped device (Mobile phone) communicates with the hands-free unit equipped on the vehicle using radio transmission (Bluetooth).

For example, if the device (Mobile phone) is placed in a coat pocket, the phone calls can be made through your mobile service without taking out and handling the device (Mobile phone).

#### **⚠ CAUTION**

*The types of devices (Mobile phone) which can be connected to the hands-free unit are limited. Therefore, before purchasing or changing your device (Mobile phone) model, consult Mazda Bluetooth Hands-Free Customer Service or visit [www.MazdaUSA.com/bluetooth](http://www.MazdaUSA.com/bluetooth) for a complete list of compatible phones. Devices (Mobile phone) which can be connected to the hands-free system need to be compliant with Bluetooth specifications and the appropriate profile. However, even among these Bluetooth devices (Mobile phone) are some which will not connect with your Mazda or will have limited function. Therefore, consult Mazda Bluetooth Hands-Free Customer Service for information regarding device (Mobile phone) compatibility:*

- U.S.A.  
Phone: 800-430-0153  
Web: [www.MazdaUSA.com/bluetooth](http://www.MazdaUSA.com/bluetooth)
- Canada  
Phone: 800-430-0153  
Web: [www.mazdahandfree.ca](http://www.mazdahandfree.ca)
- Mexico  
Center of Attention to Client (CAC)  
Phone: 01-800-01-MAZDA  
Web: [www.MazdaUSA.com/bluetooth](http://www.MazdaUSA.com/bluetooth)

#### **Applicable Bluetooth specification**

Ver. 2.0 or higher

#### **Response profile**

- HFP (Hands Free Profile) Ver. 1.5
- DUN (Dial-up Networking Profile) Ver. 1.1
- PBAP (Phone Book Access Profile) Ver. 1.0

## Bluetooth Hands-Free (Voice Recognition)

- A2DP (Advanced Audio Distribution Profile) Ver. 1.0
- AVRCP (Audio/Video Remote Control Profile) Ver. 1.0/1.3
- OPP (Object Push Profile) Ver. 1.1



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### NOTE

- *The Bluetooth Hands-Free system is operable several seconds after the ignition is switched to ACC or ON (requires less than 15 seconds).*
- *If the ignition is switched off during a hands-free call, the line is transferred to the device (Mobile phone) automatically.*
- *If the device (Mobile phone) is in a location where radio reception is difficult such as a metal container or in the trunk, the call may not be connected using Bluetooth. If communication is not possible, change the location of the device (Mobile phone).*

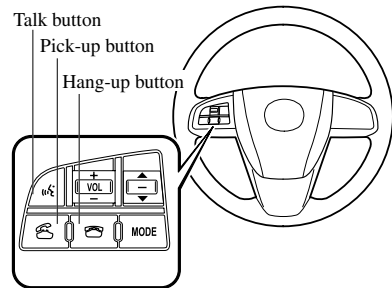
### ▼ Component Parts

Bluetooth Hands-Free consists of the following items:

- Talk button
- Pick-up button
- Hang-up button
- Information display (Type A/ Navigation system)
- Microphone
- Audio unit/Navigation system

### Talk button, Pick-Up button and Hang-Up button

Basic functions of Bluetooth Hands-Free can be used for such things as making calls or hanging up using the talk button, pick-up button and hang-up button on the steering wheel.



### Talk button operations

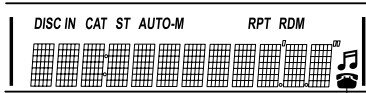
A short press or a long press of the talk button is used to operate the system as follows:

- Short press (Press the button less than 0.7 sec.)
- Long press (Press the button 0.7 sec. or more.)

## Bluetooth Hands-Free (Voice Recognition)

### Information display (Type A/ Navigation system)

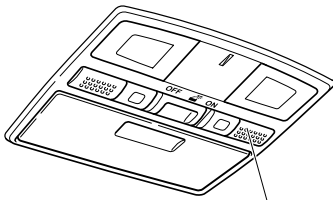
When available, the information display shows telephone numbers, Bluetooth Hands-Free messages, and operation status.



Bluetooth phone connected

### Microphone

The microphone is used for speaking voice commands or exchanging conversation.



Microphone

### Audio unit/Navigation system

The audio unit or navigation system is used for adjusting the volume.

### ▼Voice

To prevent the deterioration in voice recognition rate and voice quality, the following points must be observed:

- It is not necessary to face the microphone or approach it. Speak the voice commands while maintaining a safe driving position.
- Close the windows and/or the moonroof to reduce loud noises from outside the vehicle, or turn down the airflow of the climate control system while Bluetooth Hands-Free is being used. Voice recognition may not function correctly or voice quality may deteriorate under the following conditions.
  - A passenger is speaking.
  - Driving with the window and/or the moonroof open.
  - Driving on bumpy roads.
  - Noise outside of the vehicle is loud. (Construction sites, inside tunnels, excess oncoming traffic, or heavy rain.)
  - Operation noise from turn signals, wipers, or the horn is heard.
  - A/C airflow is strong or wind is blowing on the microphone.
  - There is noise coming from cargo loaded in the vehicle.
- Voice commands may not be recognized depending on the voice. If the voice commands are not recognized correctly, repeat the commands in a louder voice, at a natural pace, as if speaking to another person.
- Dialects or different wording other than hands-free prompts cannot be recognized by voice recognition. Speak in the wording specified by the voice commands.

## Bluetooth Hands-Free (Voice Recognition)

### **NOTE**

If the voice recognition performance is not satisfactory, refer to “Voice Recognition Learning Function (Speaker Enrollment)” (page 6-118).

Please be aware that the voice recognition may still make an error despite following the above points.

### ▼ **Function Restrictions While Using Bluetooth Hands-Free**

Some functions are limited while Bluetooth Hands-Free is being used. They include:

- Beep sound and voice guidance related to the audio unit and navigation system are not heard.
- Beep sound related to the A/C operation is not heard.
- The navigation system's voice recognition command does not function.

### ▼ **How to Use This Section**

Descriptions in the text are as follows:

**Say:** Voice commands to be spoken by you.

**Prompt:** Voice guidance output from the speaker.

### **NOTE**

Say voice commands after the beep sound [Beep] is heard.

Example)

**Say:** [Beep] “Dial”

**Prompt:** “Number, please”

**Say:** [Beep] “XXXXXXXXXXXX (Ex. “555-1234”) (Telephone number)”

### **Bluetooth Hands-Free Activation Method**

Press the pick-up button (with/without navigation system) or talk button with a short press (without navigation system) or a long press (with navigation system).

### **NOTE**

For vehicles with the navigation system, you can also press the talk button with a short press and say: [Beep] “Telephone” or “Phone”.

The hands-free system is activated. Functions of the hands-free telephone, such as making and receiving calls, can be used after the activation. (For details on the telephone functions, refer to “Basic Bluetooth Hands-Free Operation” or “Convenient Use of the Hands-Free System”.)

### **NOTE**

For vehicles with a navigation system, the system operates by speaking the voice recognition command of the navigation system after pressing the talk button with a short press. For voice recognition details with the navigation system, refer to the separate “NAVIGATION SYSTEM Owner's Manual”.

### **Tutorial**

The tutorial explains how to use Bluetooth Hands-Free.

To activate the tutorial, do the following:

1. Press the pick-up button (with/without navigation system) or talk button with a short press (without navigation system) or a long press (with navigation system).

## Bluetooth Hands-Free (Voice Recognition)

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### **NOTE**

*For vehicles with the navigation system, you can also press the talk button with a short press and say: [Beep] “Telephone” or “Phone”.*

2. **Say:** [Beep] “Tutorial”
3. Follow the prompts to receive the appropriate voice guidance instructions.

### **▼ Useful Commands at Anytime, Convenient Operations**

#### **Help function use**

The help function informs the user of all the available voice commands under the current conditions.

1. Press the talk button with a short press.
2. **Say:** [Beep] “Help”
3. Follow the prompts to receive the appropriate voice guidance instructions.

#### **Cancel**

The Bluetooth Hands-Free system transitions to standby status if the following operation is performed while the system is activating.

Press the hang-up button, or the talk button with a long press.

#### **Returning to previous operation**

This command is for returning to the previous operation while in the voice recognition mode.

**Say:** [Beep] “Go Back”

#### **Voice guidance interrupt operation**

Voice guidance can be skipped by pressing the talk button with a short press while it is being heard. A new voice input command can then be spoken by the user.

#### **Voice recognition mode cancel**

If you want to cancel the voice recognition mode during a call, the voice recognition mode can be canceled without having to end the call.

Press the talk button with a long press.

## Bluetooth Hands-Free (Voice Recognition)

### Basic Bluetooth Hands-Free Operation

#### ▼ Bluetooth Hands-Free Preparation

##### Language setting

The available languages are English, Spanish, and Canadian French. If the language setting is changed, all of the voice guidance and voice input commands are done in the selected language.

##### **NOTE**

- *If the language setting is changed, device registration is maintained. Phonebook records are not cleared, but each language has a separate phonebook. Therefore, entries created in one language will need to be re-entered in the phonebook of the new language.*
- *Do these steps before you start driving. These less used functions are too distracting to undertake while driving until you are fully familiar with the system.*

##### **Method 1**

1. Press the pick-up button (with/without navigation system) or talk button with a short press (without navigation system) or a long press (with navigation system).

##### **NOTE**

*For vehicles with the navigation system, you can also press the talk button with a short press and say: [Beep] "Telephone" or "Phone".*

2. **Say:** [Beep] "Setup"
3. **Prompt:** "Select one of the following: Pairing options, confirmation prompts, language, passcode, select phone or select music player."

4. **Say:** [Beep] "Language"
5. **Prompt:** "Select a language: English, French, or Spanish."
6. **Say:** [Beep] "French" (Speak the desired language: "English", "French" or "Spanish")

##### **NOTE**

*Other language settings can also be made while in the current setting by saying the name of the language in the native pronunciation.*

7. **Prompt:** "French (Desired language) selected. Is this correct?"
8. **Say:** [Beep] "Yes"
9. **Prompt:** "Please wait. Switching to French phonebook. French selected." (Spoken in the newly selected language).

##### **Method 2**

1. Press the pick-up button (with/without navigation system) or talk button with a short press (without navigation system) or a long press (with navigation system).

##### **NOTE**

*For vehicles with the navigation system, you can also press the talk button with a short press and say: [Beep] "Telephone" or "Phone".*

2. **Say:** [Beep] "French" (Say the desired language: "English", "French", or "Spanish".) (Change the desired language by saying the language name.)

##### **NOTE**

*Other language settings can also be made while in the current setting by saying the name of the language in the native pronunciation.*



## Bluetooth Hands-Free (Voice Recognition)

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3. **Prompt:** “Would you like to change the language to French (Desired language)?”
4. **Say:** [Beep] “Yes”
5. **Prompt:** “Please wait. Switching to French phonebook. French selected.” (Spoken in the newly selected language).

### Pairing code setting

The 4-digit pairing code setting for registration of your cell phone (pairing) can be set beforehand.

#### **NOTE**

*The initial setting value is “0000”.*

1. Press the pick-up button (with/without navigation system) or talk button with a short press (without navigation system) or a long press (with navigation system).

#### **NOTE**

*For vehicles with the navigation system, you can also press the talk button with a short press and say: [Beep] “Telephone” or “Phone”.*

2. **Say:** [Beep] “Setup”
3. **Prompt:** “Select one of the following: Pairing options, confirmation prompts, language, passcode, select phone or select music player.”
4. **Say:** [Beep] “Pairing options”
5. **Prompt:** “Available options are: Pair, Edit, Delete, List, or Set Pairing Code.”
6. **Say:** [Beep] “Set pairing code”
7. **Prompt:** “Your current pairing code is XXXX. Do you want to change it to a different pairing code?”

8. **Say:** [Beep] “Yes”
9. **Prompt:** “Please say a 4-digit pairing code.”
10. **Say:** [Beep] “YYYY”
11. **Prompt:** “YYYY is this correct?”
12. **Say:** [Beep] “Yes” or “No”
13. If “Yes”, go to Step 14. If “No”, the procedure returns to Step 9.
14. **Prompt:** “Your new pairing code is YYYY. Use this pairing code when pairing devices to the Hands free system. Do you want to pair a device now?”
15. **Say:** [Beep] “Yes” or “No”
16. If “Yes”, the system switches to the device registration mode. If “No”, the system returns to standby status.

### Device programming (Pairing)

To use Bluetooth Hands-Free, the device equipped with Bluetooth has to be programmed to the hands-free unit using the following procedure.

A maximum of seven devices including hands-free mobile phones and Bluetooth audio devices can be programmed to one vehicle.

## Bluetooth Hands-Free (Voice Recognition)

### NOTE

- A device can be programmed only when the vehicle is parked. If the vehicle starts to move, the pairing procedure will end. Programming is dangerous while driving - pair up your device before you start driving. Park the car in a safe place before programming.
- If a Bluetooth device has already been programmed to the vehicle as a Bluetooth audio device, it does not need to be programmed again when using the device as a hands-free mobile phone. Conversely, it does not need to be programmed again as a Bluetooth audio device if it has already been programmed as a hands-free mobile phone.
- Since the communication range of a Bluetooth equipped device is about 10 meters (32 ft), if a device is placed within a 10-meter (32 ft) radius of the vehicle, it may be detected/programmed unintentionally while another device is being programmed.

1. Activate the Bluetooth application of the device.

### NOTE

For the operation of the device, refer to its instruction manual.

2. Press the pick-up button (with/without navigation system) or talk button with a short press (without navigation system) or a long press (with navigation system).

### NOTE

For vehicles with the navigation system, you can also press the talk button with a short press and say: [Beep] "Telephone" or "Phone".

3. **Say:** [Beep] "Setup"

4. **Prompt:** "Select one of the following: Pairing options, confirmation prompts, language, passcode, select phone or select music player."
5. **Say:** [Beep] "Pairing options"
6. **Prompt:** "Available options are: Pair, Edit, Delete, List, or Set Pairing Code."
7. **Say:** [Beep] "Pair"
8. **Prompt:** "Start the pairing process on your Bluetooth device. Your pairing code is 0000 (XXXX). Input this code on your Bluetooth device when prompted on the device. See device manual for instructions."
9. Using the device, perform a search for the Bluetooth device (Peripheral device).

### NOTE

For the operation of the device, refer to its instruction manual.

10. Select "Mazda" from the device list searched by the device.
11. Input the 4-digit pairing code to the device.
12. **Prompt:** "Please say the name of the device after the beep."
13. **Say:** [Beep] "XXXX - -" (Speak a "device tag", an arbitrary name for the device.)  
Example: "Stan's device."

### NOTE

Speak a programmed "device tag" within 10 seconds.

If more than two devices are to be programmed, they cannot be programmed with the same or similar "device tag".

## Bluetooth Hands-Free (Voice Recognition)

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14. **Prompt:** “XXXXXXX - - - (Ex. “Stan’s device”) (Device tag). Is this correct?”
15. **Say:** [Beep] “Yes”
16. **Prompt:** “Pairing complete”

After a device is registered, the system automatically identifies the device. By activating Bluetooth Hands-Free again, or by activating Bluetooth Hands-Free first after switching the ignition from OFF to ACC, the system reads out a voice guidance, “XXXXXXX - - - (Ex. “Stan’s device”) (Device tag) is connected”.

### NOTE

- *Device registration can also be done by operating the audio unit or panel buttons on the navigation unit.*
  - **(Type A)**  
*Refer to “Bluetooth Audio Preparation” (page 6-80).*
  - **(Type B)**  
*Refer to “Bluetooth Audio Preparation” (page 6-90).*
  - **(Navigation system)**  
*Refer to the separate manual “NAVIGATION SYSTEM Owner’s Manual”*
- *Depending on the device, the registration status may be lost after a certain period of time. If this occurs, repeat the entire process from Step 1.*

### ▼ Making a Call Using a Telephone Number

#### NOTE

*Practice this while parked until you are confident you can do it while driving in a non-taxing road situation. If you are not completely comfortable, make all calls from a safe parking position, and move out only when fully under control and you can devote your eyes and mind to driving.*

1. Press the pick-up button (with/without navigation system) or talk button with a short press (without navigation system) or a long press (with navigation system).

#### NOTE

*For vehicles with the navigation system, you can also press the talk button with a short press and say: [Beep] “Telephone” or “Phone”.*

2. **Say:** [Beep] “Dial”
3. **Prompt:** “Number, please”
4. **Say:** [Beep] “XXXXXXXXXXXXX (Telephone number)”
5. **Prompt:** “XXXXXXXXXXXXX. (Telephone number) After the beep, continue to add numbers, or say Go-Back to re-enter the last entered numbers, or press the Pick-Up button to execute dialing.”

## Bluetooth Hands-Free (Voice Recognition)

### 6. (Dialing)

Press the pick-up button or say “Dial”, then go to Step 7.

#### (Adding/inputting telephone number)

Say, “XXXX” (desired telephone number), then go to Step 5.

#### (Telephone number correction)

Say, “Go Back”. The prompt replies, “Go Back. The last entered numbers have been removed.”. Then go back to Step 3.

### 7. Prompt: “Dialing”

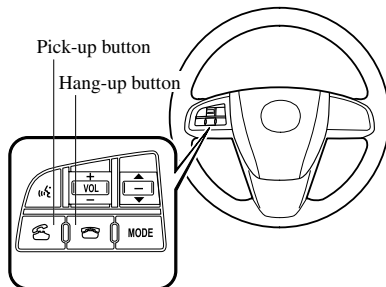
#### NOTE

The “Dial” command and a telephone number can be combined.

Ex. In Step 2, say, “Dial 123-4567”, then, Steps 3 and 4 can be skipped.

### ▼ Receiving an Incoming Call

1. **Prompt:** “Incoming call, press the pickup button to answer”.
2. To accept the call, press the pick-up button.  
To reject the call, press the hang-up button.



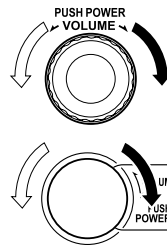
### ▼ Hanging Up a Call

Press the hang-up button during the call. A beep sound will confirm that call is ended.

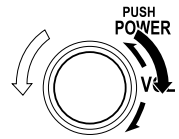
### ▼ Volume Adjustment

The power/volume dial of the audio unit or navigation system is used to adjust the volume. Turn the dial to the right to increase volume, to the left to decrease it.

#### Audio unit



#### Navigation system



#### NOTE

- The volume can also be adjusted using the volume button on the steering wheel.
- The music volume of the audio unit and the navigation system cannot be adjusted while Bluetooth Hands-Free is being used.

## Bluetooth Hands-Free (Voice Recognition)

### Convenient Use of the Hands-Free System

#### ▼ Phonebook Usage

##### Phonebook registration

Phone numbers can be registered to the Bluetooth Hands-Free phonebook.

##### **NOTE**

*Do this function only when parked. It is too distracting to attempt while driving and you may make too many errors to be effective.*

1. Press the pick-up button (with/without navigation system) or talk button with a short press (without navigation system) or a long press (with navigation system).

##### **NOTE**

*For vehicles with the navigation system, you can also press the talk button with a short press and say: [Beep] "Telephone" or "Phone".*

2. **Say:** [Beep] "Phonebook"
3. **Prompt:** "Select one of the following: New entry, edit, list names, delete, erase all or import contact."
4. **Say:** [Beep] "New entry"
5. **Prompt:** "Name please."
6. **Say:** [Beep] "XXXXX... (Ex. "Mary's phone")" (Say a voice tag for the name registered.)
7. **Prompt:** "Adding XXXXX... (Ex. "Mary's phone") (Registered voice tag). Is this correct?"
8. **Say:** [Beep] "Yes"
9. **Prompt:** "Home, Work, Mobile, or Other?"

10. **Say:** [Beep] "Mobile" (Say "Home", "Work", "Mobile", or "Other", for the desired location to be registered.)
11. **Prompt:** "Mobile (Location to be registered). Is this correct?"
12. **Say:** [Beep] "Yes"
13. **Prompt:** "Number, please."
14. **Say:** [Beep] "XXXXXXXXXXXX" (Say the phone number to be registered.)
15. **Prompt:** "XXXXXXXXXXXX" (Phone number registration). After the beep, continue to add numbers, or say Go-Back to re-enter the last entered numbers, or press the Pick-Up button to save the number."
16. **(Registration)**  
Press the pick-up button or say "Enter", then go to Step 17.  
**(Adding/inputting telephone number)**  
Say, "XXXX" (desired telephone number), then go to Step 15.  
**(Telephone number correction)**  
Say, "Go Back". The prompt replies, "Go Back. The last entered numbers have been removed." Then go back to Step 13.
17. **Prompt:** "Number saved. Would you like to add another number for this entry?"
18. **Say:** [Beep] "Yes" or "No".
19. If "Yes", an additional phone number registration can be made for the same entry.  
If "No", the system returns to standby status.

## Bluetooth Hands-Free (Voice Recognition)

### Import contact

Phonebook data from your device (Mobile phone) can be sent and registered to your Bluetooth Hands-Free phonebook using Bluetooth.

1. Press the pick-up button (with/without navigation system) or talk button with a short press (without navigation system) or a long press (with navigation system).

### NOTE

*For vehicles with the navigation system, you can also press the talk button with a short press and say: [Beep] "Telephone" or "Phone".*

2. **Say:** [Beep] "Phonebook"
3. **Prompt:** "Select one of the following: New entry, edit, list names, delete, erase all or import contact."
4. **Say:** [Beep] "Import contact"
5. **Prompt:** "The hands free System is ready to receive a contact from a phone. Only a home, a work, and a mobile number can be imported. This process requires operation of a mobile phone. Refer to the phone's manual for more information."
6. Device (Mobile phone) operation: Select one entry from the phonebook and send it using Bluetooth.
7. **Prompt:** "X (Number of locations which include data) numbers have been imported. What name would you like to use for these numbers?"
8. **Say:** [Beep] "XXXXXX... (Ex. "Mary's phone")" (Say a voice tag for the name registered.)

9. **Prompt:** "Adding XXXXX... (Ex. "Mary's phone") (Voice tag). Is this correct?"

10. **Say:** [Beep] "Yes"

11. **Prompt:** "Number saved. Would you like to import another contact?"

12. **Say:** [Beep] "Yes" or "No"

13. If "Yes", the procedure proceeds to Step 5.

If "No", the system returns to standby status.

### Making calls using the phonebook

Telephone calls can be made by saying the name of a person (voice tag) whose phone number has been registered in Bluetooth Hands-Free in advance. For the phonebook setting method, refer to (page 6-110).

1. Press the pick-up button (with/without navigation system) or talk button with a short press (without navigation system) or a long press (with navigation system).

### NOTE

*For vehicles with the navigation system, you can also press the talk button with a short press and say: [Beep] "Telephone" or "Phone".*

2. **Say:** [Beep] "Call"

3. **Prompt:** "Name please."

4. **Say:** [Beep] "XXXXXX... (Ex. "John's phone")" (Say a voice tag registered in the phonebook.)

## Bluetooth Hands-Free (Voice Recognition)

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5. **Prompt:** “Calling XXXXX... (Ex. “John’s phone”) XXXX (Ex. “at home”). Is this correct?” (Voice tag and phone number location registered in phonebook).
6. **Say:** [Beep] “Yes”
7. **Prompt:** “Dialing”

### **NOTE**

The “Call” command and the voice tag can be combined.

Ex. In Step 2, say, “Call John’s phone”, then, Steps 3 and 4 can be skipped.

### ▼ Redialing Function

Redialing the number of the person previously dialed using the phone is possible.

1. Press the pick-up button (with/without navigation system) or talk button with a short press (without navigation system) or a long press (with navigation system).

### **NOTE**

For vehicles with the navigation system, you can also press the talk button with a short press and say: [Beep] “Telephone” or “Phone”.

2. **Say:** [Beep] “Redial”
3. **Prompt:** “Dialing”

### ▼ Emergency Calls

A call can be made to the emergency phone number (911: U.S.A/Canada, 066: Mexico) using the voice input command. It may not function properly in some areas in Mexico.

1. Press the pick-up button (with/without navigation system) or talk button with a short press (without navigation system) or a long press (with navigation system).

### **NOTE**

For vehicles with the navigation system, you can also press the talk button with a short press and say: [Beep] “Telephone” or “Phone”.

2. **Say:** [Beep] “Emergency”
3. - USA/Canada vehicles - **Prompt:** “Dialing “911”, is this correct?”  
- Mexico vehicles - **Prompt:** “Dialing “066”, is this correct?”
4. **Say:** [Beep] “Yes”
5. **Prompt:** “Dialing”

### ▼ Refusing an Incoming Call

For incoming call refusal, refer to “Receiving an incoming call” (page 6-105).

### ▼ Mute

The microphone can be muted during a call.

1. Press the talk button with a short press.
2. **Say:** [Beep] “Mute”
3. **Prompt:** “Microphone muted”

## Bluetooth Hands-Free (Voice Recognition)

### **Canceling mute**

1. Press the talk button with a short press.
2. **Say:** [Beep] “Mute off”
3. **Prompt:** “Microphone unmuted”

### **▼ Transferring a Call**

#### **Transferring a call from Hands-Free to a device (Mobile phone)**

Communication between the hands-free unit and a device (Mobile phone) is canceled, and the line can be switched to a standard call using a device (Mobile phone).

1. Press the talk button with a short press.
2. **Say:** [Beep] “Transfer call”
3. **Prompt:** “Transferred call to phone”

#### **Transferring a call from a device (Mobile phone) to Hands-Free**

Communication between devices (Mobile phone) can be switched to Bluetooth Hands-Free.

1. Press the talk button with a short press.
2. **Say:** [Beep] “Transfer call”
3. **Prompt:** “Transferred call to Hands Free system”

### **▼ Multi-Call Functions**

#### **Call waiting**

A call can be interrupted to receive an incoming call from a third party.

#### **Call interrupt**

A call can be switched to a new incoming call.

### **Method 1**

1. Press the pick-up button.
2. **Prompt:** “Swapping calls.”

### **Method 2**

1. Press the talk button with a short press.
2. **Say:** [Beep] “Swap calls”
3. **Prompt:** “Swapping calls”

### ***NOTE***

- *To refuse an incoming call, press the hang-up button.*
- *After receiving a new incoming call, the previous call is placed on hold.*

### **Switching calls**

Switching back to the previous call can also be done.

### **Method 1**

1. Press the pick-up button.
2. **Prompt:** “Swapping calls.”

### **Method 2**

1. Press the talk button with a short press.
2. **Say:** [Beep] “Swap calls”
3. **Prompt:** “Swapping calls”

### **Three-way call function**

1. Press the talk button with a short press.
2. **Say:** [Beep] “Join calls”
3. **Prompt:** “Joining calls”

### **Making a call using a telephone number**

1. Press the talk button with a short press.
2. **Say:** [Beep] “Dial”
3. **Prompt:** “Number, please”



## Bluetooth Hands-Free (Voice Recognition)

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4. **Say:** [Beep] “XXXXXXXXXXXXX  
(Telephone number)”
5. **Prompt:** “XXXXXXXXXXXXX.  
(Telephone number) After the beep,  
continue to add numbers, or say Go-  
Back to re-enter the last entered  
numbers, or press the Pick-Up button  
to execute dialing.”
6. **(Dialing)**  
Press the pick-up button or say “Dial”,  
then go to Step 7.  
**(Adding/inputting telephone  
number)**  
Say, “XXXX” (desired telephone  
number), then go to Step 5.  
**(Telephone number correction)**  
Say, “Go Back”. The prompt replies,  
“Go Back. The last entered numbers  
have been removed.”. Then go back to  
Step 3.
7. **Prompt:** “Dialing”

### **Making calls using the phonebook**

1. Press the talk button with a short press.
2. **Say:** [Beep] “Call”
3. **Prompt:** “Name please.”
4. **Say:** [Beep] “XXXXX... (Ex. “John's  
phone”)” (Say a voice tag registered in  
the phonebook.)
5. **Prompt:** “Calling XXXXX... (Ex.  
“John's phone”) XXXX (Ex. “at  
home”). Is this correct?” (Voice tag and  
phone number location registered in  
phonebook.)
6. **Say:** [Beep] “Yes”
7. **Prompt:** “Dialing”

### **Redialing function**

1. Press the talk button with a short press.

2. **Say:** [Beep] “Redial”
3. **Prompt:** “Dialing”

### **Ending the current call**

Press the hang-up button during the call.

## ▼ Phonebook Settings

### **Editing phonebook**

The data registered to the Bluetooth  
Hands-Free phonebook can be edited.

#### ***NOTE***

*Do this function only when parked. It is too  
distracting to attempt while driving and you  
may make too many errors to be effective.*

1. Press the pick-up button (with/without  
navigation system) or talk button with  
a short press (without navigation  
system) or a long press (with  
navigation system).

#### ***NOTE***

*For vehicles with the navigation system, you  
can also press the talk button with a short  
press and say: [Beep] “Telephone” or  
“Phone”.*

2. **Say:** [Beep] “Phonebook”
3. **Prompt:** “Select one of the following:  
New entry, edit, list names, delete,  
erase all or import contact.”
4. **Say:** [Beep] “Edit”
5. **Prompt:** “Please say the name of the  
entry you would like to edit or say,  
“List names”.”
6. **Say:** [Beep] “XXXXX... (Ex. “Mary's  
phone”)” (Say the voice tag for the  
registered name to be edited in the  
phonebook.)

## Bluetooth Hands-Free (Voice Recognition)

7. **Prompt:** “Home, Work, Mobile, or Other?”
8. **Say:** [Beep] “Home” (Say the registered location to be edited: “Home”, “Work”, “Mobile”, or “Other”).
9. **Prompt:** “XXXXXX... (Ex. “Mary’s phone”) (Registered voice tag) XXXXX (Ex. “Home”) (Registered location). Is this correct?”
10. **Say:** [Beep] “Yes”
11. **Prompt:** “The current number is XXXXXXXXXXXXX (Ex. “555-1234”) (Currently registered number). New number, please.”

### **NOTE**

*If there was no previous phone number registered to a location (Ex. “Work”), the prompt will only read out “Number, please”.*

12. **Say:** [Beep] “XXXXXXXXXXXXX (Ex. “555-5678”)” (Say the new phone number to be registered.)
13. **Prompt:** “XXXXXXXXX (Telephone number) After the beep, continue to add numbers, or say Go-Back to re-enter the last entered numbers, or press the Pick-Up button to save the number.”
14. **(Number Change)**  
Press the pick-up button.  
**(Telephone number correction)**  
Say, “Go Back”. The prompt replies, “The last entered numbers have been removed.”. Then, go back to Step 12.
15. **Prompt:** “Number changed.”

### **Phonebook data deletion**

#### **Erasing individual phonebook data**

Individual data registered to the Bluetooth Hands-Free phonebook can be cleared.

### **NOTE**

*Do this function only when parked. It is too distracting to attempt while driving and you may make too many errors to be effective.*

1. Press the pick-up button (with/without navigation system) or talk button with a short press (without navigation system) or a long press (with navigation system).

### **NOTE**

*For vehicles with the navigation system, you can also press the talk button with a short press and say: [Beep] “Telephone” or “Phone”.*

2. **Say:** [Beep] “Phonebook”
3. **Prompt:** “Select one of the following: New entry, edit, list names, delete, erase all or import contact.”
4. **Say:** [Beep] “Delete”
5. **Prompt:** “Please say the name of the entry you would like to delete or say, “List names”.”
6. **Say:** [Beep] “XXXXXX... (Ex. “John’s phone”)” (Say the registered voice tag to be deleted from the phonebook.)
7. **Prompt:** “Deleting XXXXXX... (Ex. “John’s phone”) (Registered voice tag) Home (Registered location). Is this correct?”
8. **Say:** [Beep] “Yes”
9. **Prompt:** “XXXXXX... (Ex. “John’s phone”) (Registered voice tag) Home (Registered location) deleted.”

## Bluetooth Hands-Free (Voice Recognition)

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### Complete deletion of the phonebook data

All data registered to the Bluetooth Hands-Free phonebook can be erased.

#### **NOTE**

*Do this function only when parked. It is too distracting to attempt while driving and you may make too many errors to be effective.*

1. Press the pick-up button (with/without navigation system) or talk button with a short press (without navigation system) or a long press (with navigation system).

#### **NOTE**

*For vehicles with the navigation system, you can also press the talk button with a short press and say: [Beep] "Telephone" or "Phone".*

2. **Say:** [Beep] "Phonebook"
3. **Prompt:** "Select one of the following: New entry, edit, list names, delete, erase all or import contact."
4. **Say:** [Beep] "Erase all"
5. **Prompt:** "Are you sure you want to erase everything from your Hands Free system phonebook?"
6. **Say:** [Beep] "Yes"
7. **Prompt:** "You are about to delete everything from your Hands Free system phonebook. Do you want to continue?"
8. **Say:** [Beep] "Yes"
9. **Prompt:** "Please wait, erasing the Hands Free system phonebook."
10. **Prompt:** "Hands-Free system phonebook erased."

### Read-out of names registered to the Bluetooth Hands-Free phonebook

Bluetooth Hands-Free can read out the list of names registered to its phonebook.

1. Press the pick-up button (with/without navigation system) or talk button with a short press (without navigation system) or a long press (with navigation system).

#### **NOTE**

*For vehicles with the navigation system, you can also press the talk button with a short press and say: [Beep] "Telephone" or "Phone".*

2. **Say:** [Beep] "Phonebook"
3. **Prompt:** "Select one of the following: New entry, edit, list names, delete, erase all or import contact."
4. **Say:** [Beep] "List names"
5. **Prompt:** "XXXXX..., XXXXX..., XXXXX... (Ex. "John's phone", Mary's phone, Bill's phone)" (Voice guidance reads out the voice tags registered to the phonebook.)

Press the talk button with a short press during the read-out at the desired name, and then say one of the following voice commands to execute it.

- "Continue": Continues the list read-out.
- "Call": Calls the registered phonebook data when the talk button is short-pressed.
- "Edit": Edits the registered phonebook data when the talk button is short-pressed.
- "Delete": Deletes the registered phonebook data when the talk button is short-pressed.

## Bluetooth Hands-Free (Voice Recognition)

- “Previous”: Returns to the previous phonebook data in read-out when the talk button is short-pressed.
6. **Prompt:** “End of list, would you like to start from the beginning?”
  7. **Say:** [Beep] “No”

### ▼DTMF (Dual Tone Multi-Frequency Signal) Transmission

This function is used when transmitting DTMF via the user's voice. The receiver of a DTMF transmission is generally a home telephone answering machine or a company's automated guidance call center (When you send tone signals back according to the voice guidance recording).

1. Press the talk button with a short press.
2. **Say:** [Beep] “XXXX... send” (Say DTMF code)
3. **Prompt:** “Sending XXXX... (DTMF code)”

## Hands-Free Setting

### ▼ Device

#### Device registration

For the registration of a Bluetooth equipped device to Bluetooth Hands-Free, refer to “Bluetooth Hands-Free Preparation” (page 6-101).

#### Registered device read-out

Bluetooth Hands-Free can read-out the devices registered to its system.

#### **NOTE**

*Do this function only when parked. It is too distracting to attempt while driving and you may make too many errors to be effective.*

1. Press the pick-up button (with/without navigation system) or talk button with a short press (without navigation system) or a long press (with navigation system).

#### **NOTE**

*For vehicles with the navigation system, you can also press the talk button with a short press and say: [Beep] “Telephone” or “Phone”.*

2. **Say:** [Beep] “Setup”
3. **Prompt:** “Select one of the following: Pairing options, confirmation prompts, language, passcode, select phone or select music player.”
4. **Say:** [Beep] “Pairing options”
5. **Prompt:** “Available options are: Pair, Edit, Delete, List, or Set Pairing Code.”
6. **Say:** [Beep] “List”

## Bluetooth Hands-Free (Voice Recognition)

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7. **Prompt:** “XXXXXX..., XXXXX..., XXXXX... (Ex. Device A, device B, device C)” (The voice guidance reads out the device tags registered to the hands-free system.)

Press the talk button with a short press during the read-out at the desired device, and then say one of the following voice commands to execute it.

- “Select phone”: Selects device (Mobile phone) when the talk button is short-pressed.
  - “Select music player”: Selects device (Music player) when the talk button is short-pressed.
  - “Edit”: Edits device when the talk button is short-pressed.
  - “Continue”: Continues the list read-out.
  - “Delete”: Deletes the registered device when the talk button is short-pressed.
  - “Previous”: Returns to the previous device in read-out when the talk button is short-pressed.
8. **Prompt:** “End of list, would you like to start from the beginning?”

9. **Say:** [Beep] “No”

### Device selection

If several devices have been programmed, the Bluetooth unit links the device last connected. If you would like to link a different programmed device, it is necessary to change the link. The order of device priority after the link has been changed is maintained even when the ignition is switched off.

### Hands-free phone

1. Press the pick-up button (with/without navigation system) or talk button with a short press (without navigation system) or a long press (with navigation system).

#### **NOTE**

*For vehicles with the navigation system, you can also press the talk button with a short press and say: [Beep] “Telephone” or “Phone”.*

2. **Say:** [Beep] “Setup”
3. **Prompt:** “Select one of the following: Pairing options, confirmation prompts, language, passcode, select phone or select music player.”
4. **Say:** [Beep] “Select phone”
5. **Prompt:** “Please say the name of the device you would like to select. Available devices are XXXXX... (Ex. device A), XXXXX... (Ex. device B), XXXXX... (Ex. device C). Which device please?”
6. **Say:** [Beep] “XXXXX... (Ex. Device B)”
7. **Prompt:** “XXXXX... (Ex. Device B). Is this correct?”
8. **Say:** [Beep] “Yes” or “No”
9. If “Yes”, go to Step 10. If “No”, the procedure returns to Step 5.
10. **Prompt:** “XXXXX... (Ex. Device B) selected.”

## Bluetooth Hands-Free (Voice Recognition)

### Music player

1. Press the pick-up button (with/without navigation system) or talk button with a short press (without navigation system) or a long press (with navigation system).

#### NOTE

For vehicles with the navigation system, you can also press the talk button with a short press and say: [Beep] “Telephone” or “Phone”.

2. **Say:** [Beep] “Setup”
3. **Prompt:** “Select one of the following: Pairing options, confirmation prompts, language, passcode, select phone or select music player.”
4. **Say:** [Beep] “Select music player”
5. **Prompt:** “Please say the name of the device you would like to select. Available devices are XXXXX... (Ex. device A), XXXXX... (Ex. device B), XXXXX... (Ex. device C). Which device please?”
6. **Say:** [Beep] “XXXXXX... (Ex. Device B)”
7. **Prompt:** “XXXXXX... (Ex. Device B). Is this correct?”
8. **Say:** [Beep] “Yes” or “No”
9. If “Yes”, go to Step 10. If “No”, the procedure returns to Step 5.
10. **Prompt:** “XXXXXX... (Ex. Device B) selected.”

#### NOTE

- **(Type A)**  
Device (Music player) selection can also be done by operating the panel button (page 6-80).
- **(Type B)**  
Device (Music player) selection can also be done by operating the panel button (page 6-90).

### **Registered device (Mobile phone) deletion**

Registered devices (Mobile phone) can be deleted individually or collectively.

#### NOTE

Do this function only when parked. It is too distracting to attempt while driving and you may make too many errors to be effective.

1. Press the pick-up button (with/without navigation system) or talk button with a short press (without navigation system) or a long press (with navigation system).

#### NOTE

For vehicles with the navigation system, you can also press the talk button with a short press and say: [Beep] “Telephone” or “Phone”.

2. **Say:** [Beep] “Setup”
3. **Prompt:** “Select one of the following: Pairing options, confirmation prompts, language, passcode, select phone or select music player.”
4. **Say:** [Beep] “Pairing options”
5. **Prompt:** “Available options are: Pair, Edit, Delete, List, or Set Pairing Code.”

#### NOTE

A registered device (Mobile phone) can be deleted using the registration list.

## Bluetooth Hands-Free (Voice Recognition)

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6. **Say:** [Beep] “Delete”
7. **Prompt:** “Please say the name of the device you would like to delete. Available devices are XXXXX... (Ex. device A), XXXXX... (Ex. device B), XXXXX... (Ex. device C), or all. Which device please?”
8. **Say:** [Beep] “X” (Say the number of the device to be deleted.)

### **NOTE**

*Say “All” to delete all devices (Mobile phone).*

9. **Prompt:** “Deleting XXXXX... (Ex. device B...) (Registered device tag). Is this correct?”
10. **Say:** [Beep] “Yes”
11. **Prompt:** “Deleted”

### **Registered device editing**

1. Press the pick-up button (with/without navigation system) or talk button with a short press (without navigation system) or a long press (with navigation system).

### **NOTE**

*For vehicles with the navigation system, you can also press the talk button with a short press and say: [Beep] “Telephone” or “Phone”.*

2. **Say:** [Beep] “Setup”
3. **Prompt:** “Select one of the following: Pairing options, confirmation prompts, language, passcode, select phone or select music player.”
4. **Say:** [Beep] “Pairing options”
5. **Prompt:** “Available options are: Pair, Edit, Delete, List, or Set Pairing Code.”
6. **Say:** [Beep] “Edit”

7. **Prompt:** “Please say the name of the device you would like to edit. Available devices are XXXXX... (Ex. device A), XXXXX... (Ex. device B), XXXXX... (Ex. device C). Which device please?”
8. **Say:** [Beep] “X” (Say the number of the device to be edited.)
9. **Prompt:** “New name please?”
10. **Say:** [Beep] “XXXXX... (Ex. device C)” (Speak a “device tag”, an arbitrary name for the device.)
11. **Prompt:** “XXXXX... (Ex. device C) (Device tag), is this correct?”
12. **Say:** [Beep] “Yes”
13. **Prompt:** “New name saved.”

### **▼ Security Setting**

If a passcode is set, the system cannot be activated unless the passcode is input.

### **NOTE**

*Do this function only when parked. It is too distracting to attempt while driving and you may make too many errors to be effective.*

### **Passcode setting**

1. Press the pick-up button (with/without navigation system) or talk button with a short press (without navigation system) or a long press (with navigation system).

### **NOTE**

*For vehicles with the navigation system, you can also press the talk button with a short press and say: [Beep] “Telephone” or “Phone”.*

2. **Say:** [Beep] “Setup”

## Bluetooth Hands-Free (Voice Recognition)

3. **Prompt:** “Select one of the following: Pairing options, confirmation prompts, language, passcode, select phone or select music player.”
4. **Say:** [Beep] “Passcode”
5. **Prompt:** “Passcode is disabled. Would you like to enable it?”
6. **Say:** [Beep] “Yes”
7. **Prompt:** “Please say a 4-digit passcode. Remember this passcode. It will be required to use this system.”
8. **Say:** [Beep] “XXXX” (Say a desired 4-digit passcode, “PCode”.)
9. **Prompt:** “Passcode XXXX (Passcode, PCode). Is this correct?”
10. **Say:** [Beep] “Yes”
11. **Prompt:** “Passcode is enabled.”

### Using Bluetooth Hands-Free with a passcode

1. Press the pick-up button (with/without navigation system) or talk button with a short press (without navigation system) or a long press (with navigation system).

#### **NOTE**

*For vehicles with the navigation system, you can also press the talk button with a short press and say: [Beep] “Telephone” or “Phone”.*

2. **Prompt:** “Hands-Free system is locked. State the passcode to continue.”
3. **Say:** [Beep] “XXXX” (Say the set passcode “PCode”.)

4. If the correct passcode is input, voice guidance “XXXXXXX... (Ex. “Mary’s device) (Device tag) is connected” is announced.  
If the passcode is incorrect, voice guidance “XXXX (4-digit passcode, Pcode) incorrect passcode, please try again” is announced.

### Canceling the passcode

#### **NOTE**

*Do this function only when parked. It is too distracting to attempt while driving and you may make too many errors to be effective.*

1. Press the pick-up button (with/without navigation system) or talk button with a short press (without navigation system) or a long press (with navigation system).

#### **NOTE**

*For vehicles with the navigation system, you can also press the talk button with a short press and say: [Beep] “Telephone” or “Phone”.*

2. **Say:** [Beep] “Setup”
3. **Prompt:** “Select one of the following: Pairing options, confirmation prompts, language, passcode, select phone or select music player.”
4. **Say:** [Beep] “Passcode”
5. **Prompt:** “Passcode is enabled. Would you like to disable it?”
6. **Say:** [Beep] “Yes”
7. **Prompt:** “Passcode is disabled.”



## Bluetooth Hands-Free (Voice Recognition)

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### **Confirmation Prompts**

The confirmation prompt confirms the command content to the user before advancing to the operation requested by the user. When this function is turned on, the system reads out the voice input command previously received and confirms whether the command is correct before advancing to the command execution.

When the confirmation prompt function is turned on:

(Ex. "Calling John's device. Is this correct?")

When the confirmation prompt function is turned off:

(Ex. "Calling John's device.")

### **NOTE**

*If the confirmation prompt function is turned off when making an emergency call, the system reads out and confirms the command before executing it.*

1. Press the pick-up button (with/without navigation system) or talk button with a short press (without navigation system) or a long press (with navigation system).

### **NOTE**

*For vehicles with the navigation system, you can also press the talk button with a short press and say: [Beep] "Telephone" or "Phone".*

2. **Say:** [Beep] "Setup"
3. **Prompt:** "Select one of the following: Pairing options, confirmation prompts, language, passcode, select phone or select music player."
4. **Say:** [Beep] "Confirmation prompts"

5. **Prompt:** "Confirmation prompts are on/off. Would you like to turn confirmation prompts off/on?"

6. **Say:** [Beep] "Yes"

7. **Prompt:** "Confirmation prompts are off/on."

### **▼ Voice Recognition Learning Function (Speaker Enrollment)**

The voice recognition learning function enables voice recognition appropriate to the characteristics of the user's voice.

If the recognition of the voice input commands to the system is not adequate, this function can largely improve the system's voice recognition of the user. If your voice can be recognized sufficiently without using this function, you may not realize the added benefit of the function.

To register your voice, the voice input command list must be read out. Read out the list when the vehicle is parked.

Perform the registration in as quiet a place as possible (page 6-98).

The registration must be performed completely. The required time is a few minutes. The user needs to be seated in the driver's seat with the voice input command list for voice recognition learning open to the page indicated below.

### **When voice recognition learning is done for the first time**

1. Press the pick-up button (with/without navigation system) or talk button with a short press (without navigation system) or a long press (with navigation system).

## Bluetooth Hands-Free (Voice Recognition)

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### NOTE

For vehicles with the navigation system, you can also press the talk button with a short press and say: [Beep] “Telephone” or “Phone”.

2. **Say:** [Beep] “Voice training”
3. **Prompt:** “This operation must be performed in a quiet environment while the vehicle is stopped. See the owner’s manual for the list of required training phrases. Press and release the talk button when you are ready to begin. Press the hangup button to cancel at any time.”
4. Press the talk button with a short press.
5. The voice guidance reads out the voice input command number (refer to the voice input command list for voice recognition learning). (Ex. “Please read phrase 1”)
6. **Say:** [Beep] “0123456789” (Say the voice input command for voice recognition learning (1 to 8) according to the voice guidance.)
7. **Prompt:** “Speaker enrollment is complete.”

### NOTE

If an error occurred in the voice recognition learning, re-learning can be done by pressing the talk button with a short press.

### Voice recognition re-learning

If voice recognition learning has already been done.

1. Press the pick-up button (with/without navigation system) or talk button with a short press (without navigation system) or a long press (with navigation system).

### NOTE

For vehicles with the navigation system, you can also press the talk button with a short press and say: [Beep] “Telephone” or “Phone”.

2. **Say:** [Beep] “Voice training”
3. **Prompt:** “Enrollment is enabled/disabled. Would you like to disable/enable or retrain?”
4. **Say:** [Beep] “Retrain”
5. **Prompt:** “This operation must be performed in a quiet environment while the vehicle is stopped. See the owner’s manual for the list of required training phrases. Press and release the talk button when you are ready to begin. Press the hangup button to cancel at any time.”
6. Press the talk button with a short press.
7. The voice guidance reads out the voice input command number (refer to the voice input command list for voice recognition learning). (Ex. “Please read phrase 1”)
8. **Say:** [Beep] “0123456789” (Say the voice input command for voice recognition learning (1 to 8) according to the voice guidance.)
9. **Prompt:** “Speaker enrollment is complete.”

### NOTE

If an error occurred in the voice recognition learning, re-learning can be done by pressing the talk button with a short press.

## Bluetooth Hands-Free (Voice Recognition)

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### Voice input command list for voice recognition learning

When reading out, the following points must be observed:

- Read out the numbers one at a time correctly and naturally.  
(For example, “1234” must be read out “one, two, three, four”, not “twelve, thirty four”.)
- Do not read out parentheses. “(” and hyphens “-” are used for separating numbers in a phone number.

Ex.

“(888) 555-1212” must be spoken “Eight, eight, eight, five, five, five, one, two, one, two.”

Phrase	Command
1	0123456789
2	(888) 555-1212
3	Call
4	Dial
5	Setup
6	Cancel
7	Continue
8	Help

### NOTE

- The applicable phrase appears in the display.
- After user voice registration is completed, voice guidance “Speaker enrollment is complete” is announced.

### Voice recognition learning on/off

1. Press the pick-up button (with/without navigation system) or talk button with a short press (without navigation system) or a long press (with navigation system).

### NOTE

For vehicles with the navigation system, you can also press the talk button with a short press and say: [Beep] “Telephone” or “Phone”.

2. **Say:** [Beep] “Voice training”
3. **Prompt:** “Enrollment is enabled/disabled. Would you like to disable/enable or retrain?”
4. **Say:** [Beep] “Disable” or “Enable”
5. When “Disable” is spoken, the voice recognition learning is turned off. When “Enable” is spoken, the voice recognition learning is turned on.
6. **Prompt:** “Speaker Enrollment is disabled/enabled.”

## Bluetooth Hands-Free (Voice Recognition)

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### When Bluetooth Hands-Free Cannot be Used

Bluetooth Hands-Free cannot be used under the following conditions:

- The device is outside of the communication area.
- The device has a malfunction.
- The device is not connected to the hands-free unit equipped on the vehicle.
- The device's battery is weak.
- The device is turned off.
- The device is placed where radio reception is difficult.
- The ignition is switched off.

### Safety Certification

FCC ID: CB2MBLUEC09 IC:279B-MBLUEC09

This device complies with Part 15 of the FCC Rules and with RSS-210 of Industry Canada. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) This device must accept any interference received, including interference that may cause undesired operation.

### WARNING

*Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.*

The term "IC: " before the radio certification number only signifies that Industry Canada technical specifications were met.

The antenna used for this transmitter must not be co-located or operating in conjunction with any other antenna or transmitter. End-users and installers must be provided with installation instructions and transmitter operating conditions for satisfying RF exposure compliance.

## **Bluetooth Hands-Free (Voice Recognition)**

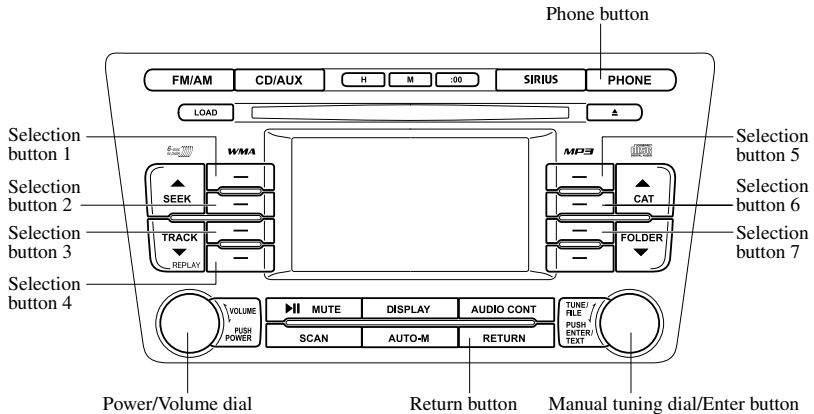
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### **Mazda Bluetooth Hands-Free Customer Service**

- U.S.A.  
Phone: 800-430-0153 (Toll-free)  
[www.MazdaUSA.com/bluetooth](http://www.MazdaUSA.com/bluetooth)
- Canada  
Phone: 800-430-0153 (Toll-free)  
[www.mazdahandsfree.ca](http://www.mazdahandsfree.ca)
- Mexico  
Center of Attention to Client (CAC)  
Phone: 01-800-01-MAZDA (Toll-free)  
[www.MazdaUSA.com/bluetooth](http://www.MazdaUSA.com/bluetooth)

## Bluetooth Hands-Free (Panel Operation)

### Bluetooth Hands-Free \*



### ▼ What is Bluetooth Hands-Free?

#### Bluetooth Hands-Free Outline

By connecting a Bluetooth equipped device (Mobile phone) to the hands-free unit equipped on the vehicle, making and receiving calls are possible using the audio unit, and the pick-up and hang-up buttons located on the steering wheel.

### **⚠ WARNING**

**Perform phonebook registration related operations while the vehicle is parked:**

*Performing phonebook registration while driving the vehicle could be a distraction to your driving and result in an accident. In addition, a mistake in performing the phonebook operation could result in the loss of important data.*

### Bluetooth equipped device (Mobile phone)

A Bluetooth equipped device (Mobile phone) communicates with the hands-free unit equipped on the vehicle using radio transmission (Bluetooth).

For example, if the device (Mobile phone) is placed in a coat pocket, the phone calls can be made through your mobile service without taking out and handling the device (Mobile phone).

## Bluetooth Hands-Free (Panel Operation)

### **CAUTION**

The types of devices (Mobile phone) which can be connected to the hands-free unit are limited.

Therefore, before purchasing or changing your device (Mobile phone) model, consult Mazda Bluetooth Hands-Free Customer Service or visit [www.MazdaUSA.com/bluetooth](http://www.MazdaUSA.com/bluetooth) for a complete list of compatible phones. Devices (Mobile phone) which can be connected to the hands-free system need to be compliant with Bluetooth specifications and the appropriate profile. However, even among these Bluetooth devices (Mobile phone) are some which will not connect with your Mazda or will have limited function. Therefore, consult Mazda Bluetooth Hands-Free Customer Service for information regarding device (Mobile phone) compatibility:

➤ U.S.A.

Phone: 800-430-0153

Web: [www.MazdaUSA.com/bluetooth](http://www.MazdaUSA.com/bluetooth)

➤ Canada

Phone: 800-430-0153

Web: [www.mazdahandsfree.ca](http://www.mazdahandsfree.ca)

➤ Mexico

Center of Attention to Client (CAC)

Phone: 01-800-01-MAZDA

Web: [www.MazdaUSA.com/bluetooth](http://www.MazdaUSA.com/bluetooth)

### Applicable Bluetooth specification

Ver. 2.0 or higher

### Response profile

- HFP (Hands Free Profile) Ver. 1.5
- DUN (Dial-up Networking Profile) Ver. 1.1
- PBAP (Phone Book Access Profile) Ver. 1.0

- A2DP (Advanced Audio Distribution Profile) Ver. 1.0
- AVRCP (Audio/Video Remote Control Profile) Ver. 1.0/1.3
- OPP (Object Push Profile) Ver. 1.1



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### NOTE

- The Bluetooth Hands-Free system is operable several seconds after the ignition is switched to ACC or ON (requires less than 15 seconds).
- If the ignition is switched off during a hands-free call, the line is transferred to the device (Mobile phone) automatically.
- If the device (Mobile phone) is in a location where radio reception is difficult such as a metal container or in the trunk, the call may not be connected using Bluetooth. If communication is not possible, change the location of the device (Mobile phone).

### ▼ Component Parts

Bluetooth Hands-Free consists of the following items:

- Audio unit
- Pick-up button
- Hang-up button

## Bluetooth Hands-Free (Panel Operation)

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### **Audio unit**

The audio unit can be used for Bluetooth Hands-Free activation, making calls, hanging up, device programming, device selection, device deletion, device information display, import contact, and volume adjustment.

### **Pick-up button and Hang-up button**

Basic functions of Bluetooth Hands-Free can be used for such things as making calls or hanging up using the pick-up button and hang-up button on the steering wheel.

### **▼ How to Use This Section**

#### **Bluetooth Hands-Free activation method**

Press the phone button (**PHONE**).

The hands-free system is activated. Functions of the hands-free telephone, such as making and receiving calls, can be used after the activation. (For details on the telephone functions, refer to “Basic Bluetooth Hands-Free Operation” or “Convenient Use of the Hands-Free System”.)

## **Basic Bluetooth Hands-Free Operation**

### **▼ Bluetooth Hands-Free Preparation**

#### **Device programming (Pairing)**

To use Bluetooth Hands-Free, the device equipped with Bluetooth has to be programmed to the hands-free unit using the following procedure.

A maximum of seven devices including hands-free mobile phones and Bluetooth audio devices can be programmed to one vehicle.



## Bluetooth Hands-Free (Panel Operation)

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### NOTE

- A device can be programmed only when the vehicle is parked. If the vehicle starts to move, the pairing procedure will end. Programming is dangerous while driving - pair up your device before you start driving. Park the car in a safe place before programming.
- A total of seven devices can be programmed to one vehicle. If you require an additional device to be programmed to a vehicle with seven devices already programmed, delete one of the programmed devices before programming the latest one.
- If a Bluetooth device has already been programmed to the vehicle as a Bluetooth audio device, it does not need to be programmed again when using the device as a hands-free mobile phone. Conversely, it does not need to be programmed again as a Bluetooth audio device if it has already been programmed as a hands-free mobile phone.
- Since the communication range of a Bluetooth equipped device is about 10 meters (32 ft), if a device is placed within a 10-meter (32 ft) radius of the vehicle, it may be detected/programmed unintentionally while another device is being programmed.
- Device registration can also be done by operating the audio unit. Refer to "Bluetooth Audio Preparation" (page 6-90).
- Device registration can also be done using voice recognition (page 6-101).
- Depending on the device, the registration status may be lost after a certain period of time. If this occurs, repeat the entire process from Step 1.

### Programming a Bluetooth Hands-Free device which has a PIN code (four digits)

1. Press selection button 6 to display the Bluetooth Hands-Free setting menu screen.
2. Press selection button 2 to display the pairing program screen.
3. "Enter Pin:0000" and "Rotate/Press TUNE dial to change code. Select "OK" when complete." are displayed for input of the PIN code.
4. Turn the manual tuning dial to select the specified number for the Bluetooth Hands-Free device and press the enter button (**ENTER**) to input the number.


### NOTE

- Some devices accept only a particular pairing code (Usually, "0000" or "1234").
  - If pairing cannot be completed, refer to the owner's manual of your mobile device, and try those numbers if necessary.
5. After inputting the four digits, turn the manual tuning dial and select "OK", and then press the enter button (**ENTER**) to set the four digits and display "Pairing is in progress. Please start pairing procedure on your Bluetooth device. Use the PIN "xxxx".".

### NOTE

Press the return button (**RETURN**) to return to the pairing program screen.

## Bluetooth Hands-Free (Panel Operation)


6. Operate the Bluetooth Hands-Free device while  
 “Pairing is in progress. Please start pairing procedure on your Bluetooth device. Use the PIN “xxxx”.” is displayed and set it to the program mode.
7. When the pairing programming is completed, a “” symbol and “Pairing complete” are displayed, and then the display returns to the normal display.  
 If an error occurs during program pairing, “Error” is displayed and the display returns to the pairing program screen.

### Programming a Bluetooth Hands-Free device which does not have a PIN code (four digits)

1. Press selection button 6 to display the Bluetooth Hands-Free setting menu screen.
2. Press selection button 2 to display the pairing program screen.
3. “Enter Pin:0000” and “Rotate/Press TUNE dial to change code. Select “OK” when complete.” are displayed for input of the PIN code.
4. Turn the manual tuning dial and select “OK”, and then press the enter button (ENTER ) to set the four digits and display  
 “Pairing is in progress. Please start pairing procedure on your Bluetooth device. Use the PIN “0000”.”.

#### NOTE

Press the return button (RETURN ) to return to the pairing program screen.

5. Operate the Bluetooth Hands-Free device while  
 “Pairing is in progress. Please start pairing procedure on your Bluetooth device. Use the PIN “0000”.” is displayed and set it to the program mode.
6. The Bluetooth Hands-Free device will request input of a PIN code. Input “0000”.
7. When the pairing programming is completed, a “” symbol and “Pairing complete” are displayed, and then the display returns to the normal display.  
 If an error occurs during program pairing, “Error” is displayed and the display returns to the pairing program screen.

#### NOTE

If pairing cannot be completed, try “1234” instead. Refer to the owner's manual of your mobile device for the right PIN code.

### ▼ Making a Call Using a Telephone Number

#### NOTE

Practice this while parked until you are confident you can do it while driving in a non-taxing road situation. If you are not completely comfortable, make all calls from a safe parking position, and move out only when fully under control and you can devote your eyes and mind to driving.

## Bluetooth Hands-Free (Panel Operation)

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1. Turn the manual tuning dial to select a number and then press the enter button (ENTER) to input the number.
2. After inputting the telephone number, press selection button 1 or the pick-up button of the audio control switch to make a call.

### ▼ Receiving an Incoming Call

#### Receiving an incoming call

Press selection button 1 or the pick-up button of the audio control switch.

#### Refusing an incoming call

Press selection button 5 or the hang-up button of the audio control switch.

### ▼ Hanging Up a Call

Press selection button 5 or the hang-up button of the audio control switch during a call.

### ▼ Volume Adjustment

The power/volume dial of the audio unit is used to adjust the volume.

#### Increasing volume

Turn the power/volume dial clockwise.

#### Decreasing volume

Turn the power/volume dial counterclockwise.

#### **NOTE**

- The volume can be adjusted using the volume switch of the audio control switch.
- The music volume of the audio unit cannot be adjusted while Bluetooth Hands-Free is being used.

## Convenient Use of the Hands-Free System

### ▼ Phonebook Usage

#### **NOTE**

*Do this function only when parked. It is too distracting to attempt while driving and you may make too many errors to be effective.*

#### Import contact

Phonebook data from your device (Mobile phone) can be sent and registered to your Bluetooth Hands-Free phonebook using Bluetooth.

#### **NOTE**

*When the import begins, the previous phonebook data is deleted. The previous phonebook data remains deleted even if the operation is canceled during the import.*

1. Press selection button 7 to display the Bluetooth Hands-Free phonebook import screen.  
“It takes time to import.” is displayed.
2. Press selection button 1 and select “Start” to start import.  
“Importing” is displayed.

#### **NOTE**

*If you want to cancel the import, press selection button 2 and select “Cancel”. The phonebook data being imported is deleted.*

3. When import is completed, the Bluetooth Hands-Free phonebook screen is displayed.

#### Phonebook data deletion

1. Press selection button 7 to display the Bluetooth Hands-Free phonebook import screen.  
“It takes time to import.” is displayed.

## Bluetooth Hands-Free (Panel Operation)

2. Press selection button 1 and select “Start” to start import. “Importing” is displayed.
3. Before the import is completed, press selection button 2 and select “Cancel”. The phonebook data is deleted, and the screen returns to the normal display after “Importing has been cancelled.” is displayed.

### **Making calls using the phonebook**

1. Press selection button 2 to display the Bluetooth Hands-Free phonebook screen.
2. Turn the manual tuning dial to select a list and then press the enter button (ENTER) to display the Bluetooth Hands-Free phonebook screen containing the detailed information recorded.

#### **NOTE**

Press each selection button to display the alphabetical sequence for the selection button selected.

- Each time the selection button is pressed a letter is displayed in alphabetical order. (Ex. selection button 1:  $A \rightarrow B \rightarrow C \rightarrow A$ )
  - Each time selection button 8 is pressed, the display shows the last four letters of the alphabet (W, X, Y, Z), followed by symbols, and then numerals.
3. Press selection button 1, 2, 3, or 4 to make a call.

### **Voice tag addition**

1. Press selection button 2 to display the Bluetooth Hands-Free phonebook screen.

2. Turn the manual tuning dial to select a list and then press the enter button (ENTER) to display the Bluetooth Hands-Free phonebook screen containing the detailed information recorded.

#### **NOTE**

Press each selection button to display the alphabetical sequence for the selection button selected.

- Each time the selection button is pressed a letter is displayed in alphabetical order. (Ex. selection button 1:  $A \rightarrow B \rightarrow C \rightarrow A$ )
  - Each time selection button 8 is pressed, the display shows the last four letters of the alphabet (W, X, Y, Z), followed by symbols, and then numerals.
3. Press selection button 5 to display “Voice Tag will be recorded in phonebook. After completion, this Voice Tag will be available with “Call” command.”.

#### **NOTE**

- Descriptions in the text are as follows:
  - **Say:** Voice commands to be spoken by you.
  - **Prompt:** Voice guidance output from the speaker.
- Say voice commands after the beep sound [Beep] is heard.

#### **4. Prompt:**

“Adding a voice tag allows you to access a contact using the CALL command. After the beep, say the name you would like to use for this contact.”

#### **NOTE**

If you want to cancel a voice tag registration, press selection button 1.

## Bluetooth Hands-Free (Panel Operation)

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5. **Say:** [Beep] XXXXXX... (Ex. “Mary’s phone”)” (Say a voice tag for the name registered.)
6. **Prompt:** “Adding XXXXXX... (Ex. “Mary’s phone”)” (Registered voice tag). Is this correct?”
7. **Say:** [Beep] “Yes”
8. When a voice tag registration is completed, the display returns to the Hands-Free phonebook screen.

### ▼ Mute

The microphone can be muted during a call.

Press selection button 3.

### ▼ Transferring a Call

#### Transferring a call from Hands-Free to a device (Mobile phone)

Press selection button 2.

### ▼ Outgoing Call Records

A maximum of six outgoing call records are displayed.

Making phone calls using the outgoing call record or deleting one or all outgoing call records is possible.

#### Making a call using the outgoing call record

1. Press selection button 3 to display the outgoing call record screen.
2. Press the desired selection button of the outgoing call record.  
The content of the outgoing call record is displayed.

3. Press selection button 1 or the pick-up button of the audio control switch to make a call.

#### Deleting one outgoing call record

1. Press selection button 3 to display the outgoing call record screen.
2. Press the desired selection button of the outgoing call record.  
The content of the outgoing call record is displayed.
3. Press selection button 2 to display “Delete recent outgoing call?”.
4. Press selection button 1 to delete the outgoing call record.

#### **NOTE**

*Press the return button (RETURN) to return to the previous display.*

#### Deleting all the outgoing call records

1. Press selection button 3 to display the outgoing call record screen.
2. Press selection button 5 to display “Delete all recent outgoing calls?”.
3. Press selection button 1 to delete all outgoing call records.

#### **NOTE**

*Press the return button (RETURN) to return to the previous display.*

### ▼ Incoming Call Records

A maximum of six incoming call records are displayed.

Making phone calls using the incoming call record or deleting one or all incoming call records is possible.

## Bluetooth Hands-Free (Panel Operation)

---

### **Making a call using the incoming call record**

1. Press selection button 4 to display the incoming call record screen.
2. Press the desired selection button of the incoming call record.  
The content of the incoming call record is displayed.
3. Press selection button 1 or the pick-up button of the audio control switch to make a call.

### **Deleting one incoming call record**

1. Press selection button 4 to display the incoming call record screen.
2. Press the desired selection button of the incoming call record.  
The content of the incoming call record is displayed.
3. Press selection button 2 to display “Delete recent incoming call?”.
4. Press selection button 1 to delete the incoming call record.

#### **NOTE**

Press the return button (RETURN ) to return to the previous display.

### **Deleting all the incoming call records**

1. Press selection button 4 to display the incoming call record screen.
2. Press selection button 5 to display “Delete all recent incoming calls?”.
3. Press selection button 1 to delete all the incoming call records.

#### **NOTE**

Press the return button (RETURN ) to return to the previous display.

### **▼DTMF (Dual Tone Multi-Frequency Signal) Transmission**

This function is used when transmitting DTMF via the audio control panel's manual tuning dial.

The receiver of a DTMF transmission is generally a home telephone answering machine or a company's automated guidance call center.

1. Press selection button 4 after connecting to a home device or service to display the tone transmission screen.
2. Turn the manual tuning dial to select a number or symbol and then press the enter button (ENTER ) to transmit the code.

#### **NOTE**

If the DTMF code has two or more digits or symbols, each one must be transmitted individually.

## Bluetooth Hands-Free (Panel Operation)

---

### Hands-Free Setting

#### ▼ Device

##### Device registration

For the registration of a Bluetooth equipped device to Bluetooth Hands-Free, refer to “Bluetooth Hands-Free Preparation” (page 6-125).

##### Device selection

If several devices have been programmed, the Bluetooth unit links the device last programmed. If you would like to link a different programmed device, it is necessary to change the link. The order of device priority after the link has been changed is maintained even when the ignition is switched off.

##### **NOTE**

*If the device name cannot be displayed, “...” is added at the end to the part of the title which can be displayed.*

##### **Changing the link to only a Bluetooth Hands-Free device**

1. Press selection button 6 to display the Bluetooth Hands-Free setting menu screen.
2. Press selection button 3 to display the link change screen and the current pairing programming device name.
3. Press selection button 1, 2, 3, 4, 5, 6, or 7 to select the name of the device you would like to change.  
The “☎” symbol disappears, and the device name and “Connection is in progress.” are displayed.

##### **NOTE**

*Press the return button (RETURN) to return to the link change screen.*

4. When the link change is completed, a “☎” symbol and “Link Changed” are displayed, and then it returns to the normal display.  
If an error occurs while trying to link a device, “Error” is displayed and the display returns to the link change screen.

##### **NOTE**

*If a link error occurs, check the programming status of the Bluetooth Hands-Free device and the location of the device in the vehicle (not in the trunk or a metal-type box), and then try the link operation again.*

##### **Changing the link to a Bluetooth Hands-Free and Bluetooth audio device**

1. Press selection button 6 to display the Bluetooth Hands-Free setting menu screen.
2. Press selection button 3 to display the link change screen and the present pairing programming device name.
3. Press selection button 1, 2, 3, 4, 5, 6, or 7 to select the name of the device you would like to change.
4. The device name and “Please Select Device” are displayed.
5. Press selection button 2 to select “Phone”. The “☎” symbol disappears, and then “Connection is in progress.” is displayed.

##### **NOTE**

*Press the return button (RETURN) to return to the link change screen.*

## Bluetooth Hands-Free (Panel Operation)

6. When the link change is completed, a “☎” symbol and “Link Changed” are displayed, and then it returns to the normal display.

If an error occurs while trying to change the link, “Error” is displayed, and then it returns to the link change screen.

### NOTE

- If a link error occurs, check the programming status of the Bluetooth Hands-Free device and the location of the device in the vehicle (not in the trunk or a metal-type box), and then try the link operation again.
- Device (Music player) selection can also be done by operating the panel button (page 6-90).

### **Registered device (Mobile phone) deletion**

An individually registered device can be cleared.

### NOTE

- Do this function only when parked. It is too distracting to attempt while driving and you may make too many errors to be effective.
- If the device name and Bluetooth address cannot be displayed, “...” is added at the end to the part of the title which can be displayed.

1. Press selection button 6 to display the Bluetooth Hands-Free setting menu screen.
2. Press selection button 4 to display the pair link deletion screen and the current pairing programming device name.
3. Press selection button 1, 2, 3, 4, 5, 6, or 7 to select the name of the device you would like to change.

4. The link delete confirmation screen is displayed, and then “Delete select device?”, the device name, and the Bluetooth address are displayed.

5. Press selection button 1 to delete the selected device.

### NOTE

Press the return button (RETURN) to return to the previous display.

6. When the link deletion is completed, “Deleted” is displayed, and then it returns to the normal display. If an error occurs while trying to delete the link, “Error” is displayed, and then it returns to the link deletion screen.

### NOTE

If a device is deleted while it is being linked, linking to other devices will not be possible.

### **Bluetooth Hands-Free device information display**

1. Press selection button 6 to display the Bluetooth Hands-Free setting menu screen.
2. Press selection button 6 to display the device information display screen. If the device information is available, the device name and Bluetooth address are displayed, and then it returns to the Bluetooth Hands-Free setting menu screen. If the device information is not available, “Failed to obtain device information.” is displayed, and then it returns to the Bluetooth Hands-Free setting menu screen.



## Bluetooth Hands-Free (Panel Operation)

---

### **NOTE**

*If the device name and Bluetooth address cannot be displayed, "... " is added at the end to the part of the title which can be displayed.*

### **When Bluetooth Hands-Free Cannot be Used**

Bluetooth Hands-Free cannot be used under the following conditions:

- The device is outside of the communication area.
- The device has a malfunction.
- The device is not connected to the hands-free unit equipped on the vehicle.
- The device's battery is weak.
- The device is turned off.
- The device is placed where radio reception is difficult.
- The ignition is switched off.

## Bluetooth Hands-Free (Panel Operation)

### Safety Certification

FCC ID: CB2MBLUEC09 IC:279B-MBLUEC09

This device complies with Part 15 of the FCC Rules and with RSS-210 of Industry Canada. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) This device must accept any interference received, including interference that may cause undesired operation.

### WARNING

*Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.*

The term "IC:" before the radio certification number only signifies that Industry Canada technical specifications were met.

The antenna used for this transmitter must not be co-located or operating in conjunction with any other antenna or transmitter. End-users and installers must be provided with installation instructions and transmitter operating conditions for satisfying RF exposure compliance.

### Mazda Bluetooth Hands-Free Customer Service

- U.S.A.  
Phone: 800-430-0153 (Toll-free)  
[www.MazdaUSA.com/bluetooth](http://www.MazdaUSA.com/bluetooth)
- Canada  
Phone: 800-430-0153 (Toll-free)  
[www.mazdahandsfree.ca](http://www.mazdahandsfree.ca)
- Mexico  
Center of Attention to Client (CAC)  
Phone: 01-800-01-MAZDA (Toll-free)  
[www.MazdaUSA.com/bluetooth](http://www.MazdaUSA.com/bluetooth)

## Rear View Monitor

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### Rear View Monitor\*

The rear view monitor is a visual assist system when reversing the vehicle that provides images from the rear of the vehicle.

#### **WARNING**

*The rear view monitor is only a visual assist device when reversing the vehicle. The images on the screen may be different from the actual conditions. Always drive carefully confirming the safety of the rear and the surrounding conditions by looking directly with your eyes. Reversing the vehicle by only looking at the screen may cause an accident or a collision with an object.*

#### **CAUTION**

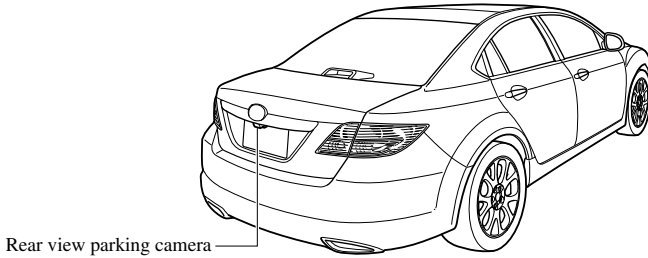
- *Do not use the rear view monitor if the trunk is not fully closed. Using the rear view monitor under such a condition is dangerous and could result in injury or vehicle damage or both.*
- *When the display is cold, images may course across the monitor or the screen and may be dimmer than usual, which could cause difficulty in confirming the surrounding conditions of the vehicle. Always drive carefully confirming the safety of the rear and the surrounding conditions by looking directly with your eyes.*
- *Do not apply excessive force to the camera. The camera position and angle may deviate.*
- *Do not disassemble, modify, or remove it as it may no longer be waterproof.*
- *The camera cover is made of plastic. Do not apply degreasing agents, organic solvents, wax, or glass coating agents to the camera cover. If any are spilled on the cover, wipe off with a soft cloth immediately.*
- *Do not rub the cover excessively, or polish it using an abrasive compound or a hard brush. The cover may be damaged affecting the image.*

#### **NOTE**

- *If water, snow, or mud is stuck on the camera lens, wipe it off using a soft cloth. If it cannot be wiped off, use a mild detergent.*
- *If the camera temperature changes rapidly, such as by pouring hot water on it under cold temperature conditions, the rear view monitor may not operate correctly.*
- *If the vehicle's front, side, or rear has been involved in a collision, the alignment of the rear view parking camera (location, installation angle) may have deviated. Always consult an Authorized Mazda Dealer to have the vehicle inspected.*

#### **(Navigation system)**

- *The screen may not change to the camera image while the navigation system is being activated immediately after the vehicle battery has been connected. If this occurs, activate the rear-view monitor camera again soon after the navigation system.*

**▼ Rear View Parking Camera Location****▼ Switching to the Rear View Monitor Display**

Shift the shift lever to R with the ignition switched to ACC or ON to switch the display to the rear view monitor display.

***NOTE***

*When the shift lever is shifted from R to another shift lever position, the screen returns to the previous display.*

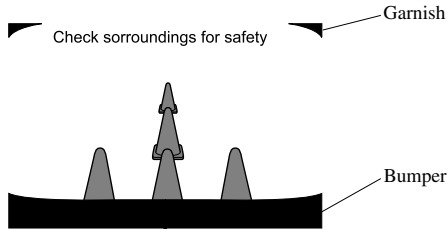
## Rear View Monitor

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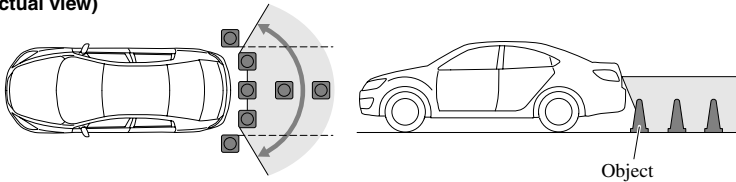
### ▼ Displayable Range on the Screen

The images on the screen may be different from the actual conditions.

#### (Screen display)



#### (Actual view)



### NOTE

- The displayable range varies depending on the vehicle and road conditions.
- The displayable range is limited. Objects under the bumper or around the bumper ends cannot be displayed.
- The distance appearing in the displayed image is different from the actual distance because the rear view parking camera is equipped with a specific lens.
- Some optionally installed vehicle accessories may be picked up by the camera. Do not install any optional parts that can interfere with the camera view, such as illuminating parts or parts made of reflective material.
- It may be difficult to see the display under the following conditions, however, it does not indicate a malfunction.
  - In darkened areas.
  - When the temperature around the lens is high/low.
  - When the camera is wet such as on a rainy day or during periods of high humidity.
  - When foreign material such as mud is stuck around the camera.
  - When the camera lens reflects sunlight or headlight beams.
- If the camera picks up high-intensity light such as sunlight reflected off the vehicle body, a bright belt (light line) may appear on the display. (Smear phenomenon)
- Image display may be delayed if the temperature around the camera is low.

### ▼ Rear View Monitor Operation

The operation of the rear view monitor when reversing the vehicle varies depending on the traffic, road, and vehicle conditions. The amount of steering and the timing also varies depending on conditions, so confirm the surrounding conditions directly with your eyes and steer the vehicle in accordance with the conditions.

Be well aware of the above cautions prior to using the rear view monitor.

#### **NOTE**

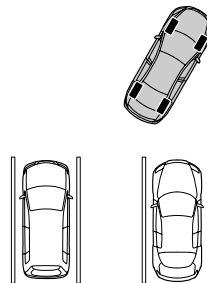
*Images displayed on the monitor from the rear view parking camera are reversed images (mirror images).*

1. Shift the shift lever to R to switch the display to the rear view monitor display.
2. Confirming the surrounding conditions, reverse the vehicle.

**(Screen display)**



**(Actual view)**



3. When the shift lever is shifted from R to another shift lever position, the screen returns to the previous display.

#### **NOTE**

*Because there may be a difference between the displayed image, such as indicated below, and the actual conditions when parking, always verify the safety at the rear of the vehicle and the surrounding area directly with your eyes.*

## Rear View Monitor

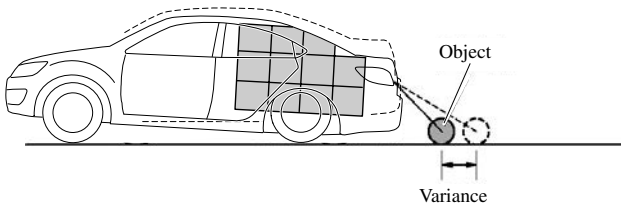
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### ▼ Variance Between Actual Road Conditions and Displayed Image

Some variance occurs between the actual road and the displayed road. Such variance in distance perspective could lead to an accident. Note the following conditions that may cause a variance in distance perspective.

#### When the vehicle is tilted due to the weight of passengers and load

When the vehicle rear is lowered, the object displayed on the screen appears farther than the actual distance.



**When there is a steep grade behind the vehicle**

When there is a steep upgrade (downgrade) behind the vehicle, the object displayed on the screen appears farther (downgrade: closer) than the actual distance.

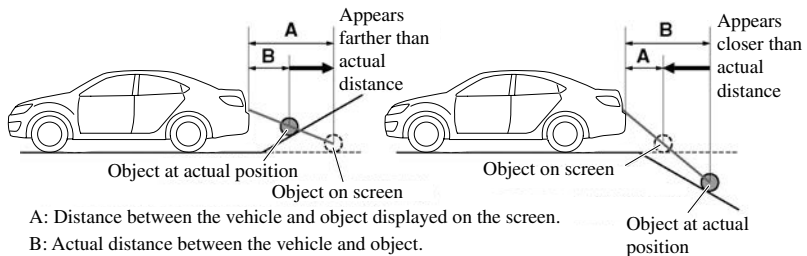
**▼ Image Quality Adjustment**

Image quality adjustment can be done while the shift lever is in reverse (R) and the rear view monitor is displayed. For detailed information, refer to the audio section or the screen adjustment related information in the “NAVIGATION SYSTEM Owner's Manual”.

While the shift lever is in reverse (R), always check the vehicle's surroundings adequately before performing the image quality adjustment.

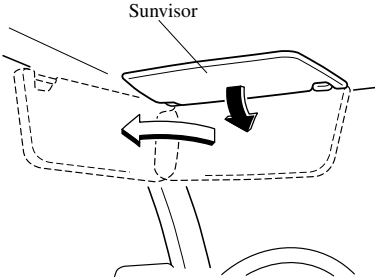


## Interior Equipment

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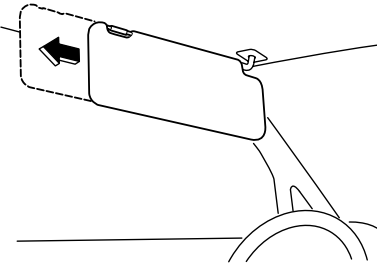
### Sunvisors

When you need a sunvisor, lower it for use in front or swing it to the side.



### ▼ Side Extension Sunvisors

The visor extender extends the sunvisor's range of sun shading.  
To use, pull it out.



### ⚠ CAUTION

*When moving the sunvisor, retract the visor extender to its original position. Otherwise, the visor extender could hit the rearview mirror, headliner, or overhead console.*

### ▼ Vanity Mirrors

To use the vanity mirror, lower the sunvisor.

The vanity mirror light will illuminate when you open the cover.

## Interior Lights

### ▼ Illuminated Entry System

When the illuminated entry system operates, the overhead light (switch is in the DOOR position), the courtesy lights and the ground illumination light turn on for:

- About 30 seconds after the driver's door is unlocked and the ignition key is removed (without advanced key) or the ignition is switched off (with advanced key).
- About 15 seconds after all doors are closed.

#### (With Advanced key)

About 5 seconds after all doors are closed when the advanced key is outside of the vehicle.

- About 15 seconds after the ignition is switched off (LOCK) and the ignition key removed (without advanced key) with all doors closed.

The light also turns off when:

- The ignition is switched ON and all doors are closed.
- The driver's door is locked.

### NOTE

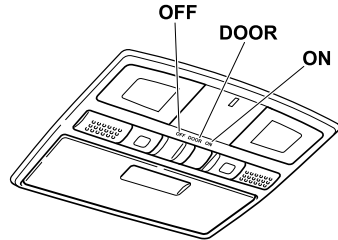
#### • Battery saver

*If any door is left opened, the light turns off after about 30 minutes to save the battery. The light turns on again when the ignition is switched ON, or when any door is opened after all doors have been closed.*

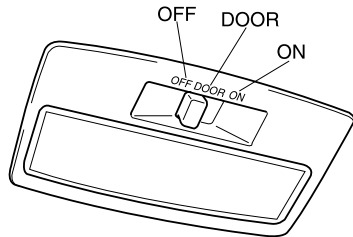
- The operation of the illuminated entry system can be changed.  
Refer to Personalization Features on page 10-8.

### ▼ Overhead Lights

#### Front



#### Rear



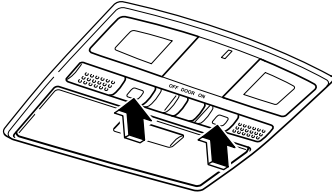
Switch Position	Overhead Lights
OFF	Light off
DOOR	<ul style="list-style-type: none"> <li>• Light is on when any door is open</li> <li>• Light is on or off when the illuminated entry system is on</li> </ul>
ON	Light on

## Interior Equipment

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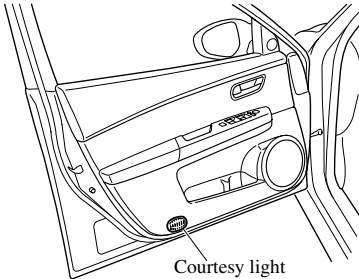
### ▼ Map Lights

The map lights are switched on or off by pressing the switches.







### ▼ Courtesy Lights

Turns on when any door is open or the illuminated entry system is on.



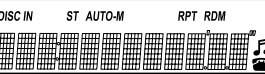



## Information Display

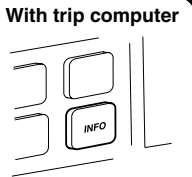
**With multi information display**

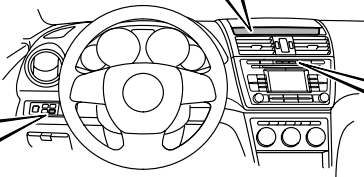
			
Climate control display	Clock	Trip computer	Climate control display

**Without multi information display**

			
Climate control display	Trip computer/clock display	Audio/hands-free display	Climate control display

**With trip computer**





**With trip computer**

H	M	CLOCK
---	---	-------

**Without trip computer/With multi information display**

H	M	:00
---	---	-----

### ▼ Information Display Functions

The information display has the following functions:

- Clock\*
- Climate Control Display (Fully Automatic Type Air Conditioning System)
- Audio Display\*
- Trip Computer\*
- Bluetooth Hands-Free Display\* Refer to Bluetooth Hands-Free on page 6-96.

## Interior Equipment

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### ▼ Clock

#### **NOTE**

When the trip computer is being displayed, press the **CLOCK** button to change the display to the time.

When the ignition is switched to ACC or ON, the time is displayed.



#### **Without navigation system**

##### **Time setting**

1. Switch the ignition to ACC or ON.
2. Adjust the time using the time setting buttons (**H**, **M**).  
The hours advance while the time setting button (**H**) is pressed.  
The minutes advance while the time setting button (**M**) is pressed.

##### **Time resetting (Without trip computer type only)**

1. Switch the ignition to ACC or ON.
2. Press and hold the :00 button for 1.5 seconds or more. The displayed time flashes.
3. When the button is released, the time will be reset as follows:

(Example)

12:01—12:29→12:00

12:30—12:59→1:00

#### **NOTE**

When the button is released, the seconds will start at “00”.

#### **With navigation system**

Refer to the separate manual “NAVIGATION SYSTEM”.

#### **NOTE**

Minutes and seconds are adjusted by the GPS, however, it is necessary to adjust hours under the following conditions:

- Driving across different time zones
- Daylight saving time start and end

### ▼ Climate Control Display (Fully Automatic Type)

The climate control system status is displayed. To operate the climate control system, refer to “Climate Control System” (page 6-2).

### ▼ Audio Display

The audio system status is displayed. To operate the audio system, refer to “Audio System” (page 6-16).

### ▼ Trip Computer\*

The trip computer can display the following:

- The current fuel economy.
- The average fuel economy.
- The approximate distance you can travel on the available fuel.
- The average vehicle speed.

Switch the ignition ON.

Press the INFO switch to change the display mode.

**NOTE**

When the time is being displayed, press the INFO switch to change the display to the trip computer.

If you have any problems with your trip computer, consult an Authorized Mazda Dealer.

**Current fuel economy mode**

This mode displays the current fuel economy by calculating the amount of fuel consumption and the distance traveled.

Current fuel economy will be calculated and displayed every 2 seconds.

When this mode is selected, CONSUM CUR will be displayed.  
U.S.A.

CONSUM CUR  
mpg  
22.4

**CANADA**

CONSUM CUR  
L/100km  
10.5

When you've slowed to about 5 km/h (3 mph), — L/100 km (—mpg) will be displayed.

**Average fuel economy mode**

This mode displays the average fuel economy by calculating the total fuel consumption and the total traveled distance since purchasing the vehicle, re-connecting the battery after disconnection, or resetting the data. The average fuel economy is calculated and displayed every minute.

When this mode is selected, CONSUM AV will be displayed.  
U.S.A.

CONSUM AV  
mpg  
22.4

## Interior Equipment

---

### CANADA

**CONSUM AV**  
**L/100km**

**10.5**

To clear the data being displayed, press the INFO switch for more than 1.5 second.

After pressing the INFO switch, — L/ 100 km (— mpg) will be displayed for about 1 minute before the fuel economy is recalculated and displayed.

#### Distance-to-empty mode

This mode displays the approximate distance you can travel on the remaining fuel based on the fuel economy.

The distance-to-empty will be calculated and displayed every second.

When this mode is selected, REMNG will be displayed.

U.S.A.

**REMNG**  
**mile**  
**100**

### CANADA

**REMNG**  
**km**

**160**

#### **NOTE**

- *Even though the distance-to-empty display may indicate a sufficient amount of remaining mileage before refueling is required, refuel as soon as possible if the fuel gauge needle nears E or the low fuel warning light illuminates.*
- *The display won't change unless you add more than approximately 20 L (5.3 gal) of fuel.*

#### Average vehicle speed mode

This mode displays the average vehicle speed by calculating the distance and the time traveled since connecting the battery or resetting the data.

Average vehicle speed will be calculated and displayed every 10 seconds.

When this mode is selected, AV will be displayed.

U.S.A.

AV  
mile/h

25

CANADA

AV  
km /h

40

To clear the data being displayed, press the INFO switch for more than 1.5 second. After pressing the INFO switch, — km/h (— mile/h) will be displayed for about 1 minute before the vehicle speed is recalculated and displayed.

## Cup Holder

### ⚠ WARNING

*Never use a cup holder to hold hot liquids while the vehicle is moving:*

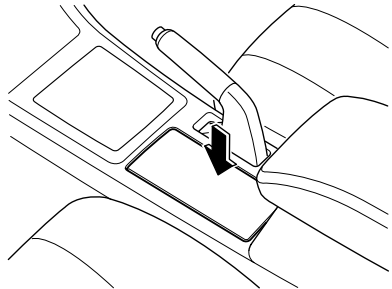
*Using a cup holder to hold hot liquids while the vehicle is moving is dangerous. If the contents spill, you could be scalded.*

### ⚠ CAUTION

*To reduce the possibility of injury in an accident or a sudden stop, keep the cup holders closed when they are not in use, or when using them for storage.*

#### ▼ Front

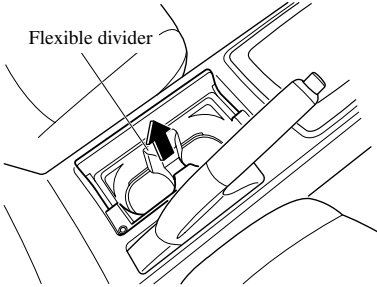
To use the cup holder, open the center console by pressing the lower center part of its cover.





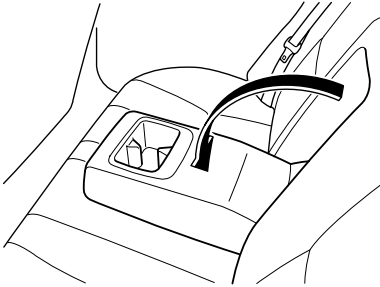
## Interior Equipment

To fit small items in the cup holder, remove the flexible divider.



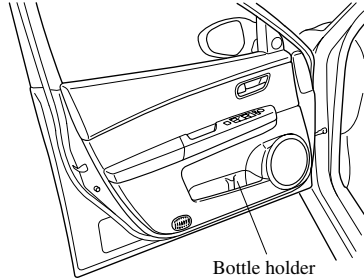
### ▼Rear\*

The rear cup holder is on the rear center armrest.



## Bottle Holder

Bottle holders are on the inside of the front doors.



### ▲ CAUTION

*Do not use the bottle holders for containers without caps. The contents may spill when the door is opened or closed.*

## Storage Compartments

### ⚠ WARNING

Keep storage boxes closed when driving:

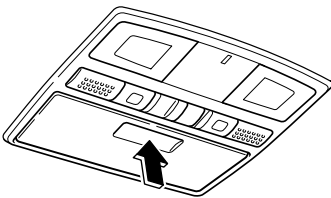
*Driving with the storage boxes open is dangerous. To reduce the possibility of injury in an accident or a sudden stop, keep the storage boxes closed when driving.*

### ⚠ CAUTION

*Do not leave lighters or eyeglasses in the storage boxes while parked under the sun. A lighter could explode or the plastic material in eyeglasses could deform and crack from high temperature.*

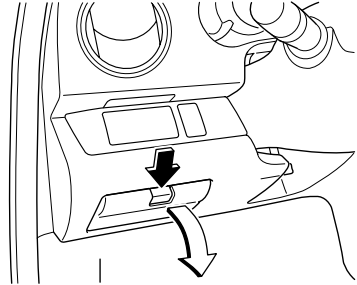
### ▼ Overhead Console

This console box is designed to store a garage door opener or other accessories. Push and release to open.



### ▼ Storage Pocket

To open, push the release catch down and pull the lid downward.

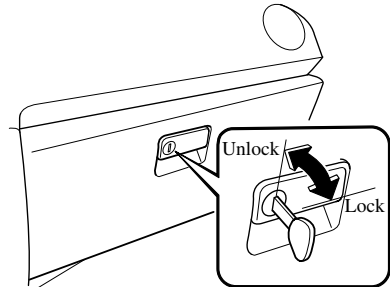


### ▼ Glove Compartment

To open the glove compartment, pull the latch toward you.

Insert the key (auxiliary key\*) and turn it clockwise to lock, counterclockwise to unlock.

\* Advanced key equipped vehicle

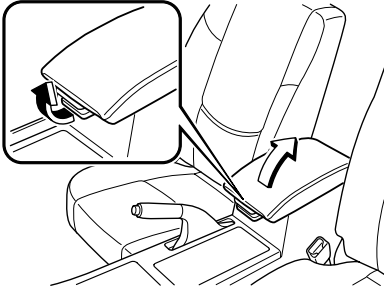


To close the glove compartment, firmly press in the center of the glove compartment lid.

## Interior Equipment

### ▼ Center Console

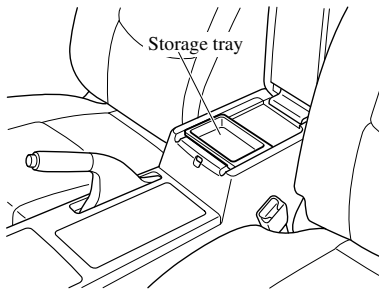
To open, pull the lower release handle.



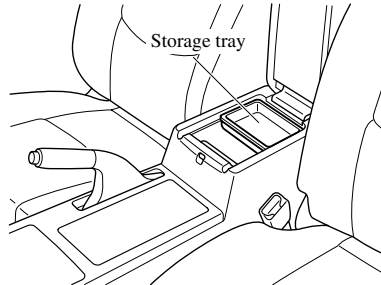
### Storage tray\*

The storage tray can be installed to the front/back side of the center console.

### Installing to the front side



### Installing to the back side

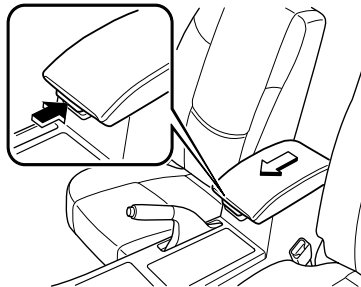


### Using the armrest\*

#### **CAUTION**

- *When sliding the armrest, be careful not to hit a drink cup placed in a cup holder and spill its contents. Remove cups or other drink containers from the cup holders before pulling out the armrest.*
- *Before opening the center console, store the armrest first. Otherwise, the armrest or center console may be damaged.*

Press the button to slide the armrest forward.



To retract the armrest, slide it completely to the rear.



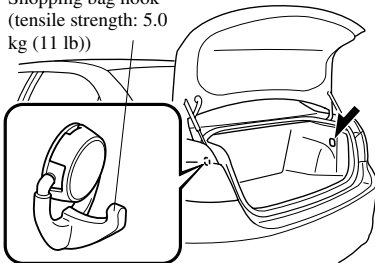
### ▼ Shopping Bag Hook

The shopping bag hook can be used for hanging shopping bags.

#### ▲ CAUTION

*Do not hang excessive weight on the shopping bag hook as it could be damaged.*

Shopping bag hook  
(tensile strength: 5.0  
kg (11 lb))



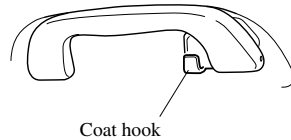
### ▼ Rear Coat Hooks

#### ▲ WARNING

**Never hang heavy or sharp objects on the assist grips and coat hooks:**

*Hanging heavy or sharp-ended objects such as a coat hanger from the assist grips or coat hooks is dangerous as they can fly off and hit an occupant in the cabin if a curtain air bag was to deploy, which could result in serious injury or death.*

Always hang clothes on the coat hooks and the assist grips without hangers.



## Interior Equipment

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### Accessory Sockets

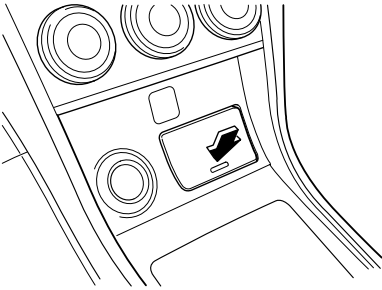
Only use genuine Mazda accessories or the equivalent requiring no greater than 120 W (DC 12 V, 10 A).

#### Front

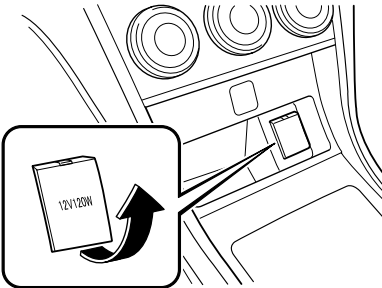
The ignition must be switched to ACC or ON.

#### With Advanced Key

To use, press the cover and open it.

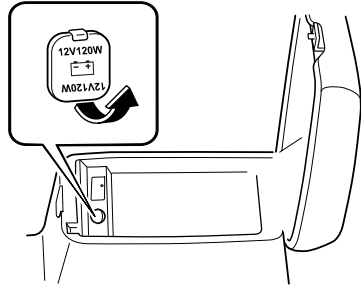


#### Without Advanced Key



### Center Console

The accessory sockets can be used regardless of whether the ignition is on or off.



### **CAUTION**

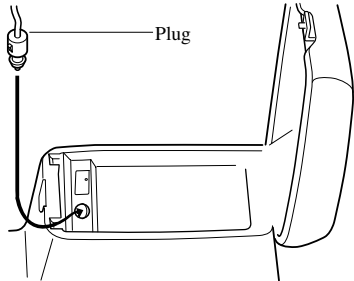
- To prevent accessory socket damage or electrical failure, pay attention to the following:
  - Do not use accessories that require more than 120 W (DC 12 V, 10 A).
  - Do not use accessories that are not genuine Mazda accessories or the equivalent.
  - Close the cover when the accessory socket is not in use to prevent foreign objects and liquids from getting into the accessory socket.
  - Correctly insert the plug into the accessory socket.
  - Do not insert the cigarette lighter into the accessory socket.
- Noise may occur on the audio playback depending on the device connected to the accessory socket.
- Depending on the device connected to the accessory socket, the vehicle's electrical system may be affected, which could cause the warning light to illuminate. Disconnect the connected device and make sure that the problem is resolved. If the problem is resolved, disconnect the device from the socket and switch the ignition off. If the problem is not resolved, consult an Authorized Mazda Dealer.

### **NOTE**

To prevent discharging of the battery, do not use the socket for long periods with the engine off or idling.

### **Connecting the accessory socket**

1. Open the lid.
2. Pass the connection plug cord through the cutout of the console and insert the plug into the accessory socket.





# 7

## In Case of an Emergency

Helpful information on what to do in an emergency.

<b>Parking in an Emergency .....</b>	<b>7-2</b>
Parking in an Emergency .....	7-2
<b>Flat Tire .....</b>	<b>7-3</b>
Spare Tire and Tool Storage .....	7-3
Changing a Flat Tire .....	7-6
<b>Overheating .....</b>	<b>7-13</b>
Overheating .....	7-13
<b>Emergency Starting .....</b>	<b>7-15</b>
Starting a Flooded Engine .....	7-15
Jump-Starting .....	7-16
Push-Starting .....	7-18
<b>Emergency Towing .....</b>	<b>7-19</b>
Towing Description .....	7-19
Recreational Towing .....	7-20



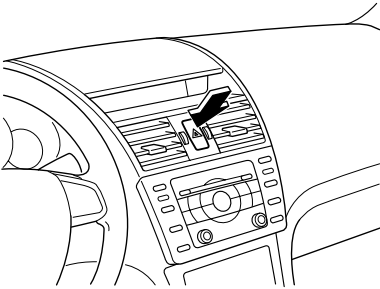
## Parking in an Emergency

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### Parking in an Emergency

The hazard warning lights should always be used when you stop on or near a roadway in an emergency.

The hazard warning lights warn other drivers that your vehicle is a traffic hazard and that they must take extreme caution when near it.



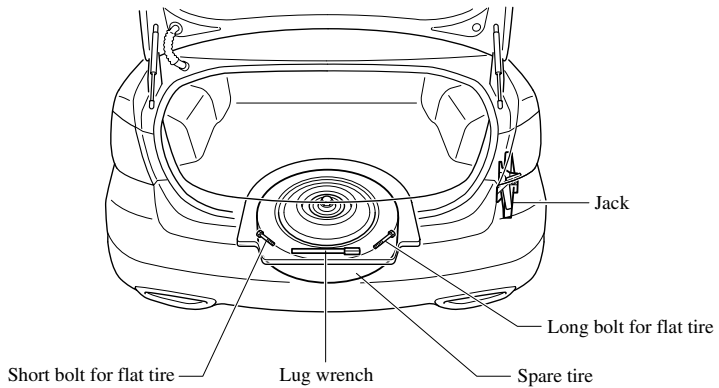
Depress the hazard warning flasher and all the turn signals will flash.

#### **NOTE**

- *The turn signals do not work when the hazard warning lights are on.*
- *Check local regulations about the use of hazard warning lights while the vehicle is being towed to verify that it is not in violation of the law.*

## Spare Tire and Tool Storage

Spare tire and tools are stored in the locations illustrated in the diagram.

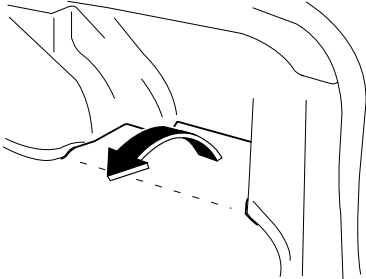


# Flat Tire

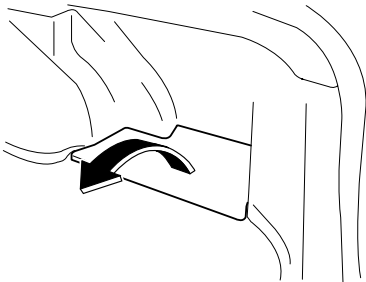
## ▼ Jack

### To remove the jack

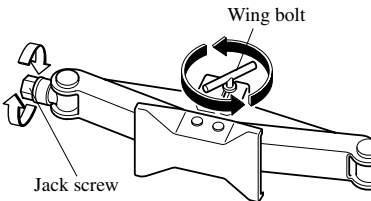
1. Open the trunk mat.



2. Remove the jack container lid.

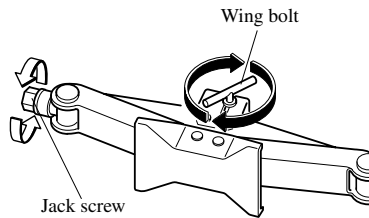


3. Turn the wing bolt and jack screw counterclockwise.



### To secure the jack

1. Insert the wing bolt into the jack with the jack screw pointing front and turn the wing bolt clockwise to temporarily tighten it.
2. Turn the jack screw in the direction shown in the figure.



3. Turn the wing bolt completely to secure the jack.

### ***NOTE***

*If the jack is not completely secured, it could rattle while driving. Make sure the jack screw is sufficiently tightened.*

### **Maintenance**

- Always keep the jack clean.
- Make sure the moving parts are kept free from dirt or rust.
- Make sure the screw thread is adequately lubricated.

**▼ Spare Tire**

Your Mazda has a temporary spare tire. The temporary spare tire is lighter and smaller than a conventional tire, and is designed only for emergency use and should be used only for VERY short periods. Temporary spare tires should NEVER be used for long drives or extended periods.

**⚠ WARNING**

**Do not install the temporary spare tire on the front wheels (driving wheels):**

*Driving with the temporary spare tire on one of the front driving wheels is dangerous. Handling will be affected. You could lose control of the vehicle, especially on ice or snow bound roads, and have an accident. Move a regular tire to the front wheel and install the temporary spare tire to the rear.*

**⚠ CAUTION**

- *When using the temporary spare tire, driving stability may decrease compared to when using only the conventional tire. Drive carefully.*
- *To avoid damage to the temporary spare tire or to the vehicle, observe the following precautions:*
  - *Do not exceed 80 km/h (50 mph).*
  - *Avoid driving over obstacles. Also, do not drive through an automatic car wash. This tire's diameter is smaller than a conventional tire, so the ground clearance is reduced about 7 mm (0.3 in).*
  - *Do not use tire chains on any type of tire, including the spare tire.*
  - *Do not use your temporary spare tire on any other vehicle, it has been designed only for your Mazda.*
  - *Use only one temporary spare tire on your vehicle at the same time.*

**NOTE**

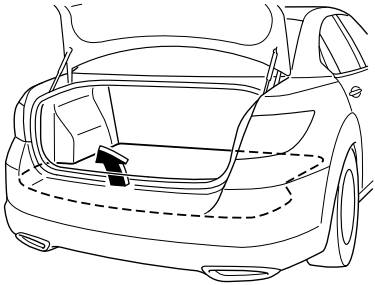
**(With Tire Pressure Monitoring System)**

*A tire pressure sensor is not installed to the temporary spare tire. The warning light will flash continuously while the temporary spare tire is being used (page 5-29).*

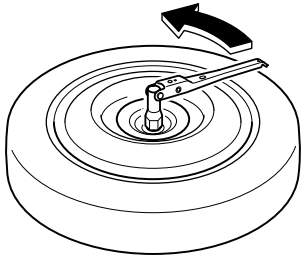
## Flat Tire

### To remove the spare tire

1. Remove the trunk mat, and if a trunk board is equipped remove it also.



2. Turn the tire hold-down bolt counterclockwise using the lug wrench.



### To secure the spare tire

Perform the removal procedure in reverse.

## Changing a Flat Tire

### **NOTE**

*If the following occurs while driving, it could indicate a flat tire.*

- *Steering becomes difficult.*
- *The vehicle begins to vibrate excessively.*
- *The vehicle pulls in one direction.*

If you have a flat tire, drive slowly to a level spot that is well off the road and out of the way of traffic to change the tire. Stopping in traffic or on the shoulder of a busy road is dangerous.

### **⚠ WARNING**

**Be sure to follow the directions for changing a tire:**

*Changing a tire is dangerous if not done properly. The vehicle can slip off the jack and seriously injure someone. No person should place any portion of their body under a vehicle that is supported by a jack.*

**Never allow anyone inside a vehicle supported by a jack:**

*Allowing someone to remain in a vehicle supported by a jack is dangerous. The occupant could cause the vehicle to fall resulting in serious injury.*

### **⚠ CAUTION**

**(With Tire Pressure Monitoring System)**

*The wheels equipped on your Mazda are specially designed for installation of the tire pressure sensors. Do not use non-genuine wheels, otherwise it may not be possible to install the tire pressure sensors.*

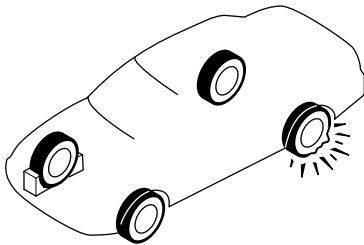
**NOTE**

- Make sure the jack is well lubricated before using it.

**(With Tire Pressure Monitoring System)**

- Be sure to register the tire pressure sensor ID signal code whenever tires or wheels are changed (page 5-31).

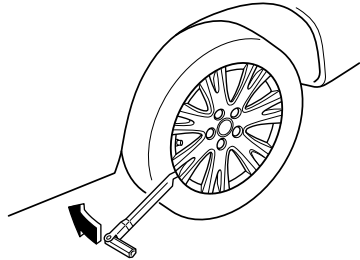
1. Park on a level surface off the right-of-way and firmly set the parking brake.
2. Put a vehicle with an automatic transaxle in Park (P), a manual transaxle in Reverse (R) or 1, and turn off the engine.
3. Turn on the hazard warning flasher.
4. Have everyone get out of the vehicle and away from the vehicle and traffic.
5. Remove the jack, tool, and spare tire (page 7-3).
6. Block the wheel diagonally opposite the flat tire. When blocking a wheel, place a tire block both in front and behind the tire.

**NOTE**

When blocking a tire, use rocks or wood blocks of sufficient size if possible to hold the tire in place.

**▼ Removing a Flat Tire**

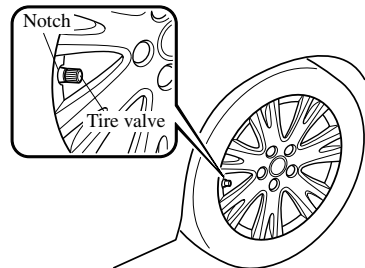
1. If your vehicle is equipped with a wheel cover, pry off the wheel cover with the beveled end of the lug wrench.

**NOTE**

Force the end of the lug wrench firmly between wheel and cover, or removal will be difficult.

**⚠ CAUTION**

Align the notch on the wheel cover with the valve stem when installing it.

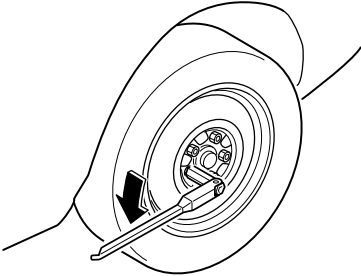


Damage could occur during installation if the wheel cover is not properly aligned.

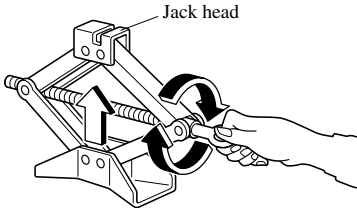
# Flat Tire

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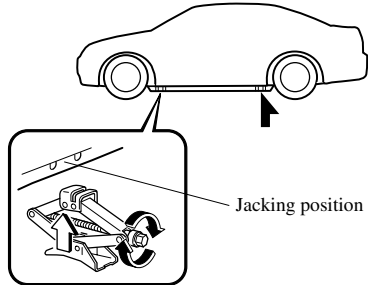
2. Loosen the lug nuts by turning them counterclockwise one turn each, but do not remove any lug nuts until the tire has been raised off the ground.



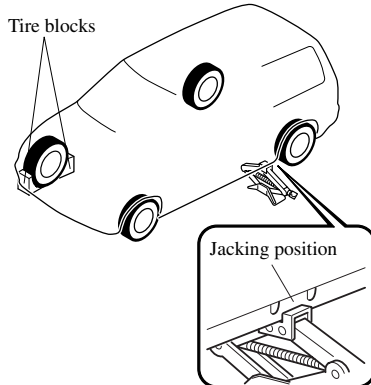
3. Place the jack on the ground.
4. Turn the jack screw in the direction shown in the figure and adjust the jack head so that it is close to the jack-up position.



5. Place the jack under the jack-up position closest to the tire being changed with the jack head squarely under the jack-up point.



6. Continue raising the jack head gradually by rotating the screw with your hand until the jack head is inserted into the jack-up position.



**⚠ WARNING**

**Use only the front and rear jacking positions recommended in this manual:**

*Attempting to jack the vehicle in positions other than those recommended in this manual is dangerous. The vehicle could slip off the jack and seriously injure or even kill someone. Use only the front and rear jacking positions recommended in this manual.*

**Do not jack up the vehicle in a position other than the designated jack-up position or place any objects on or under the jack:**

*Jacking up the vehicle in a position other than the designated jack-up position or placing objects on or under the jack is dangerous as it could deform the vehicle body or the vehicle could fall off the jack resulting in an accident.*

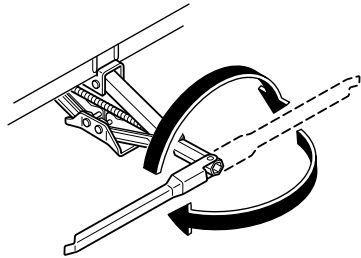
**Use only the jack provided with your Mazda:**

*Using a jack that is not designed for your Mazda is dangerous. The vehicle could slip off the jack and seriously injure someone.*

**Never place objects under the jack:**

*Jacking the vehicle with an object under the jack is dangerous. The jack could slip and someone could be seriously injured by the jack or the falling vehicle.*

- Turn the lug wrench clockwise and raise the vehicle high enough so that the spare tire can be installed. Before removing the lug nuts, make sure your Mazda is firmly in position and that it cannot slip or move.

**⚠ WARNING**

**Do not jack up the vehicle higher than is necessary:**

*Jacking up the vehicle higher than is necessary is dangerous as it could destabilize the vehicle resulting in an accident.*

**Do not start the engine or shake the vehicle while it is jacked up:**

*Starting the engine or shaking the vehicle while it is jacked up is dangerous as it could cause the vehicle to fall off the jack resulting in an accident.*

**Never go under the vehicle while it is jacked up:**

*Going under the vehicle while it is jacked up is dangerous as it could result in death or serious injury if the vehicle were to fall off the jack.*

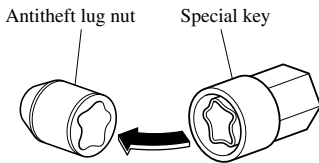
- Remove the lug nuts by turning them counterclockwise; then remove the wheel and center cap.



## Flat Tire

### ▼ Locking Lug Nuts\*

If your vehicle has optional anti-theft wheel lug nuts, one on each wheel will lock the tires and you must use a special key to unlock them. This key is attached to the lug wrench and is stored with the spare tire. Register them with the lock manufacturer by filling out the card provided in the glove box and mailing it in the accompanying envelope. If you lose this key, consult an Authorized Mazda Dealer or use the lock manufacturer's order form, which is with the registration card.



### To remove an anti-theft lug nut

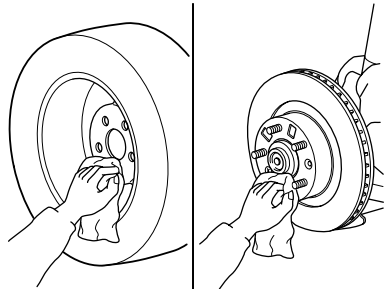
1. Obtain the key for the anti-theft lug nut.
2. Place the key on top of the nut, and be sure to hold the key square to it. If you hold the key at an angle, you may damage both key and nut. Don't use a power impact wrench.
3. Place the lug wrench on top of the key and apply pressure. Turn the wrench counterclockwise.

### To install the nut

1. Place the key on top of the nut, and be sure to hold the key square to it. If you hold the key at an angle, you may damage both key and nut. Don't use a power impact wrench.
2. Place the lug wrench on top of the key, apply pressure, and turn it clockwise.

### ▼ Mounting the Spare Tire

1. Remove dirt and grime from the mounting surfaces of the wheel and hub, including the hub bolts, with a cloth.



### **⚠ WARNING**

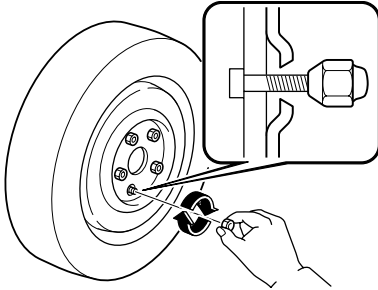
***Make sure the mounting surfaces of the wheel, hub and lug nuts are clean before changing or replacing tires:***

*When changing or replacing a tire, not removing dirt and grime from the mounting surfaces of the wheel, hub and hub bolts is dangerous. The lug nuts could loosen while driving and cause the tire to come off, resulting in an accident.*

2. Mount the spare tire.

## Flat Tire

3. Install the lug nuts with the beveled edge inward; tighten them by hand.

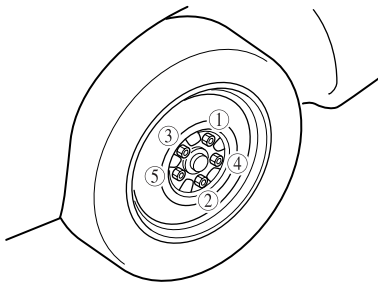


### ⚠ WARNING

**Do not apply oil or grease to lug nuts and bolts and do not tighten the lug nuts beyond the recommended tightening torque:**

*Applying oil or grease to lug nuts and bolts is dangerous. The lug nuts could loosen while driving and cause the tire to come off, resulting in an accident. In addition, lug nuts and bolts could be damaged if tightened more than necessary.*

4. Turn the lug wrench counterclockwise and lower the vehicle. Use the lug wrench to tighten the nuts in the order shown.



If you are unsure of how tight the nuts should be, have them inspected at an Authorized Mazda Dealer.

#### Nut tightening torque

N·m (kgf·m, ft·lbf)	88—118 (9.0—12, 65—87)
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### ⚠ WARNING

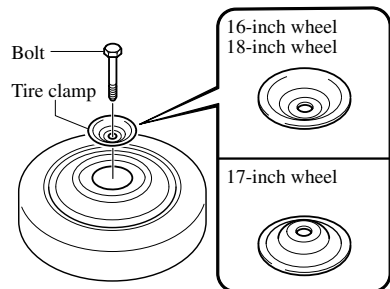
**Always securely and correctly tighten the lug nuts:**

*Improperly or loosely tightened lug nuts are dangerous. The wheel could wobble or come off. This could result in loss of vehicle control and cause a serious accident.*

**Be sure to reinstall the same nuts you removed or replace them with metric nuts of the same configuration:**

*Because the wheel studs and lug nuts on your Mazda have metric threads, using a non-metric nut is dangerous. On a metric stud, it would not secure the wheel and would damage the stud, which could cause the wheel to slip off and cause an accident.*

5. Remove the center cap by tapping it with the lug wrench.
6. Store the damaged tire, using the tire hold-down bolt to hold it in place.



## Flat Tire

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Bolt type	Wheel size
Short bolt	16-inch wheel
Long bolt	17-inch wheel, 18-inch wheel

7. Remove the tire blocks and store the tools and jack.
8. Check the inflation pressure. Refer to the specification charts on page 10-7.
9. Have the flat tire repaired or replaced as soon as possible.

### **WARNING**

**Do not drive with any tires that have incorrect air pressure:**

*Driving on tires with incorrect air pressure is dangerous. Tires with incorrect pressure could affect handling and result in an accident. When you check the regular tires' air pressure, check the spare tire, too.*

### **NOTE**

**(With Tire Pressure Monitoring System)**

*A tire pressure sensor is not installed to the temporary spare tire. The warning light will flash continuously while the temporary spare tire is being used (page 5-29).*

### **NOTE**


*To prevent the jack and tool from rattling, store them properly.*

## Overheating

If the temperature gauge indicates overheating, the vehicle loses power, or you hear a loud knocking or pinging noise, the engine is probably too hot.

### **WARNING**



 **Switch the ignition to off and make sure the fan is not running before attempting to work near the cooling fan:**

*Working near the cooling fan when it is running is dangerous. The fan could continue running indefinitely even if the engine has stopped and the engine compartment temperature is high. You could be hit by the fan and seriously injured.*



**Do not remove either cooling system caps when the engine and radiator are hot:**

*When the engine and radiator are hot, scalding coolant and steam may shoot out under pressure and cause serious injury.*

**Open the hood ONLY after steam is no longer escaping from the engine:**

*Steam from an overheated engine is dangerous. The escaping steam could seriously burn you.*

If the temperature gauge indicates overheating:

1. Drive safely to the side of the road and park off the right-of-way.

2. Put a vehicle with an automatic transaxle in park (P), a manual transaxle in neutral.
3. Apply the parking brake.
4. Turn off the air conditioner.
5. Check whether coolant or steam is escaping from under the hood or from the engine compartment.

### **If steam is coming from the engine compartment:**

Do not go near the front of the vehicle. Stop the engine.

Wait until the steam dissipates, then open the hood and start the engine.

### **If neither coolant nor steam is escaping:**

Open the hood and idle the engine until it cools.

### **CAUTION**

*If the cooling fan does not operate while the engine is running, the engine temperature will increase. Stop the engine and call an Authorized Mazda Dealer.*

6. Make sure the cooling fan is operating, then turn off the engine after the temperature has decreased.
7. When cool, check the coolant reservoir level.  
If it's low, look for coolant leaks from the radiator and hoses.

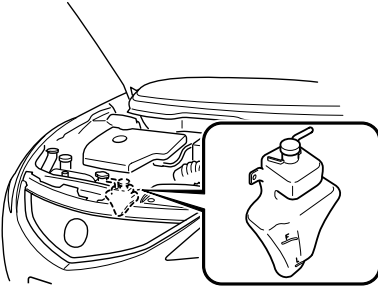
### **If you find a leak or other damage, or if coolant is still leaking:**

Stop the engine and call an Authorized Mazda Dealer.

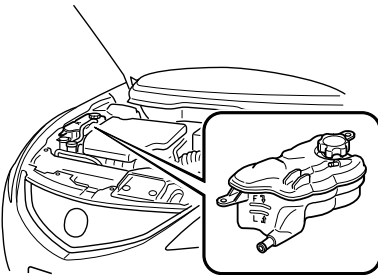
# Overheating

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## 2.5-liter engine



## 3.7-liter engine



**If you find no problems, the engine is cool, and no leaks are obvious:**

Carefully add coolant as required (page 8-22).

**⚠ CAUTION**

*If the engine continues to overheat or frequently overheats, have the cooling system inspected. The engine could be seriously damaged unless repairs are made. Consult an Authorized Mazda Dealer.*

## Starting a Flooded Engine

### Except 3.7-liter engine

If the engine fails to start, it may be flooded (excessive fuel in the engine).

Follow this procedure:

#### **(Without Advanced Keyless Entry & Push Button Start System)**

1. If the engine does not start within five seconds on the first try, switch the ignition off, wait ten seconds and try again.
2. Depress the accelerator all the way and hold it there.
3. Switch the ignition to START and hold it there—for up to ten seconds. If the engine starts, release the key and accelerator immediately because the engine will suddenly rev up.
4. If the engine fails to start, crank it without depressing the accelerator—for up to ten seconds.

#### **(With Advanced Keyless Entry & Push Button Start System)**

1. If the engine does not start within five seconds on the first try, wait ten seconds and try again.
2. Depress the accelerator all the way and hold it there.
3. Depress the clutch pedal then press the push button start. If the engine starts, release the key and accelerator immediately because the engine will suddenly rev up.
4. If the engine fails to start, crank it without depressing the accelerator.

If the engine still does not start using the above procedure, have your vehicle inspected by an Authorized Mazda Dealer.

## Emergency Starting

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### Jump-Starting

Jump-starting is dangerous if done incorrectly. So follow the procedure carefully. If you feel unsure about jump-starting, we strongly recommend that you have a competent service technician do the work.

#### **WARNING**



##### **Follow These Precautions Carefully:**

To ensure safe and correct handling of the battery, read the following precautions carefully before using the battery or inspecting it.



##### **Always wear eye protection when working near the battery:**

Working without eye protection is dangerous. Battery fluid contains **SULFURIC ACID** which could cause blindness if splashed into your eyes. Also, hydrogen gas produced during normal battery operation, could ignite and cause the battery to explode.



##### **Wear eye protection and protective gloves to prevent contact with battery fluid:**

Spilled battery fluid is dangerous.

Battery fluid contains **SULFURIC ACID** which could cause serious injuries if it gets in eyes, skin or clothing. If this happens, immediately flush your eyes with water for 15 minutes or wash your skin thoroughly and get medical attention.



##### **Always keep batteries out of the reach of children:**

Allowing children to play near batteries is dangerous. Battery fluid could cause serious injuries if it gets in the eyes or on the skin.



##### **Do not allow the positive (+) terminal to contact any other metal object that could cause sparks:**

Flames and sparks near open battery cells are dangerous. Hydrogen gas, produced during normal battery operation, could ignite and cause the battery to explode. An exploding battery can cause serious burns and injuries. When working near a battery, do not allow metal tools to contact the positive (+) or negative (-) terminal of the battery.

## Emergency Starting



**Keep all flames, including cigarettes, and sparks away from open battery cells:**

Flames and sparks near open battery cells are dangerous. Hydrogen gas, produced during normal battery operation, could ignite and cause the battery to explode. An exploding battery can cause serious burns and injuries.

**Do not jump-start a frozen battery or one with a low fluid level:**

Jump-starting a frozen battery or one with a low fluid level is dangerous. It may rupture or explode, causing serious injury.

**Connect the negative cable to a good ground point away from the battery:**

Connecting the end of the second jumper cable to the negative (–) terminal of the discharged battery is dangerous.

A spark could cause the gas around the battery to explode and injure someone.

**Route the jumper cables away from parts that will be moving:**

Connecting a jumper cable near or to moving parts (cooling fans, belts) is dangerous. The cable could get caught when the engine starts and cause serious injury.

### CAUTION

Use only a 12 V booster system. You can damage a 12 V starter, ignition system, and other electrical parts beyond repair with a 24 V power supply (two 12 V batteries in series or a 24 V motor generator set).

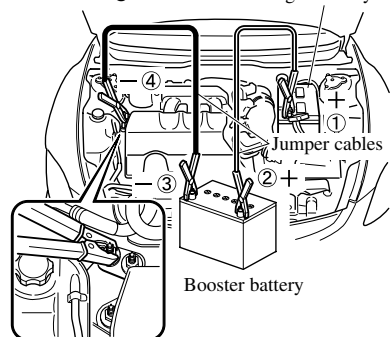
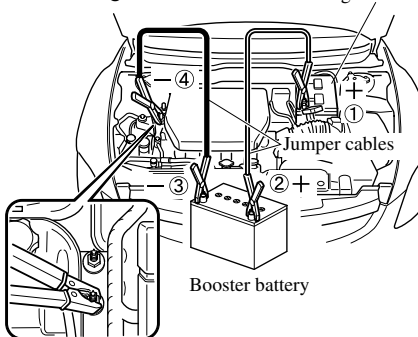
Connect cables in numerical order and disconnect in reverse order.

**2.5-liter engine**

Discharged battery

**3.7-liter engine**

Discharged battery





## Emergency Starting

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1. Make sure the booster battery is 12 V and that its negative terminal is grounded.
2. If the booster battery is in another vehicle, don't allow both vehicles to touch. Turn off the engine of the vehicle with the booster battery and all unnecessary electrical loads in both vehicles.
3. Connect the jumper cables in the exact sequence as in the illustration.
  - Connect one end of a cable to the positive terminal on the discharged battery (1).
  - Attach the other end to the positive terminal on the booster battery (2).
  - Connect one end of the other cable to the negative terminal of the booster battery (3).
  - Connect the other end to the ground point indicated in the illustration away from the discharged battery (4).
4. Start the engine of the booster vehicle and run it a few minutes. Then start the engine of the other vehicle.
5. When finished, carefully disconnect the cables in the reverse order described in the illustration.

### Push-Starting

Do not push-start your Mazda.

#### **WARNING**

**Never tow a vehicle to start it:**

*Towing a vehicle to start it is dangerous. The vehicle being towed could surge forward when its engine starts, causing the two vehicles to collide. The occupants could be injured.*

#### **CAUTION**

*Do not push-start a vehicle that has a manual transaxle. It can damage the emission control system.*

#### **NOTE**

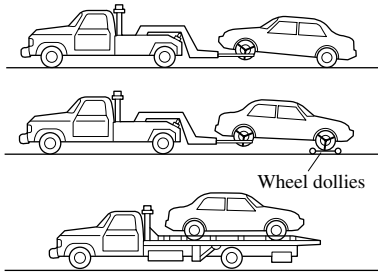
*You can't start a vehicle with an automatic transaxle by pushing it.*

### Towing Description

We recommend that towing be done only by an Authorized Mazda Dealer or a commercial tow-truck service.

Proper lifting and towing are necessary to prevent damage to the vehicle. Government and local laws must be followed.

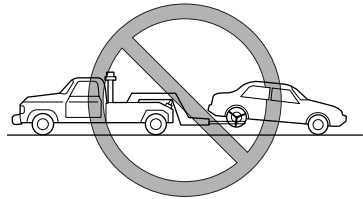
A towed vehicle usually should have its drive wheels (front wheels) off the ground. If excessive damage or other conditions prevent this, use wheel dollies.



When towing with the rear wheels on the ground, release the parking brake.

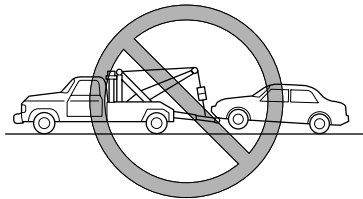
### **CAUTION**

*Do not tow the vehicle pointed backward with driving wheels on the ground. This may cause internal damage to the transaxle.*



### **CAUTION**

*Do not tow with sling-type equipment. This could damage your vehicle. Use wheel-lift or flatbed equipment.*



## Emergency Towing

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### Recreational Towing

An example of “recreational towing” is towing your vehicle behind a motorhome. The transaxle is not designed for towing this vehicle on all 4 wheels.

When doing recreational towing refer to “Towing Description” (page 7-19) and carefully follow the instructions.

# 8

## Maintenance and Care

How to keep your Mazda in top condition.

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## Introduction

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### Introduction

Be extremely careful and prevent injury to yourself and others or damage to your vehicle when using this manual for inspection and maintenance.

If you are unsure about any procedure it describes, we strongly urge you to have a reliable and qualified service shop perform the work, preferably an Authorized Mazda Dealer.

Factory-trained Mazda technicians and genuine Mazda parts are best for your vehicle. Without this expertise and the parts that have been designed and made especially for your Mazda, inadequate, incomplete, and insufficient servicing may result in problems. This could lead to vehicle damage or an accident and injuries.

For expert advice and quality service, consult an Authorized Mazda Dealer.

The owner should retain evidence that proper maintenance has been performed as prescribed.

Claims against the warranty resulting from lack of maintenance, as opposed to defective materials or authorized Mazda workmanship, will not be honored.

Any auto repair shop using parts equivalent to your Mazda's original equipment may perform maintenance. **But we recommend that it always be done by an Authorized Mazda Dealer using genuine Mazda parts.**

**Scheduled Maintenance (USA, Canada, and Puerto Rico)**

Follow Schedule 1 if the vehicle is operated mainly where none of the following conditions apply.

- Repeated short-distance driving
- Driving in dusty conditions
- Driving with extended use of brakes
- Driving in areas where salt or other corrosive materials are used
- Driving on rough or muddy roads
- Extended periods of idling or low-speed operation
- Driving for long periods in cold temperatures or extremely humid climates
- Driving in extremely hot conditions
- Driving in mountainous conditions continually

If any do apply, follow Schedule 2 (Canada and Puerto Rico residents follow Schedule 2).

**NOTE**

*After the prescribed period, continue to follow the described maintenance at the recommended intervals.*

# Scheduled Maintenance

## ▼ Schedule 1

Maintenance Interval	Number of months or kilometers (miles), whichever comes first									
	Months	6	12	18	24	30	36	42	48	
	×1000 km	12	24	36	48	60	72	84	96	
	×1000 miles	7.5	15	22.5	30	37.5	45	52.5	60	
<b>ENGINE</b>										
Engine valve clearance (for 2.5-liter engine)	Audibly inspect every 120,000 km (75,000 miles), if noisy, adjust									
Drive belts	2.5-liter engine					I				
	3.7-liter engine	Inspect every 168,000 km (105,000 miles) Replace every 240,000 km (150,000 miles)								
Engine oil	R	R	R	R	R	R	R	R	R	
Engine oil filter	R	R	R	R	R	R	R	R	R	
<b>COOLING SYSTEM</b>										
Engine coolant	FL22 type* <sup>1</sup>	Replace at first 192,000 km (120,000 miles) or 10 years; after that, every 96,000 km (60,000 miles) or 5 years								
	Others	Replace at first 96,000 km (60,000 miles) or 4 years; after that, every 2 years								
<b>FUEL SYSTEM</b>										
Air filter	2.5-liter engine					R				
	3.7-liter engine			C		R			C	
Fuel lines and hoses* <sup>2</sup>					I				I	
Hoses and tubes for emission* <sup>2</sup>									I	
<b>IGNITION SYSTEM</b>										
Spark plugs	2.5-liter engine	Replace every 120,000 km (75,000 miles)								
	3.7-liter engine	Replace every 160,000 km (100,000 miles)								
<b>CHASSIS and BODY</b>										
Brake lines, hoses and connections					I				I	
Disc brakes			I		I		I		I	
Tire (Rotation)	Rotate every 12,000 km (7,500 miles)									
Steering operation and linkages					I				I	
Front and rear suspension, ball joints and wheel bearing axial play					I				I	
Driveshaft dust boots					I				I	
Bolts and nuts on chassis and body					T				T	
Exhaust system and heat shields	Inspect every 72,000 km (45,000 miles) or 5 years									
All locks and hinges	L	L	L	L	L	L	L	L	L	

## Scheduled Maintenance

Maintenance Interval	Number of months or kilometers (miles), whichever comes first								
	Months	6	12	18	24	30	36	42	48
	×1000 km	12	24	36	48	60	72	84	96
	×1000 miles	7.5	15	22.5	30	37.5	45	52.5	60
<b>AIR CONDITIONER SYSTEM</b>									
Cabin air filter					Replace every 40,000 km (25,000 miles) or 2 years				

**Chart symbols:**

**I:** Inspect: Inspect and clean, repair, adjust, fill up, or replace if necessary.

**R:** Replace

**C:** Clean

**L:** Lubricate

**T:** Tighten

**Remarks:**

- \*1 Use FL22 type coolant in vehicles with the inscription “FL22” on the radiator cap itself or the surrounding area. Use FL22 when replacing the coolant.
- \*2 According to state/provincial and federal regulations, failure to perform maintenance on these items will not void your emissions warranties. However, Mazda recommends that all maintenance services be performed at the recommended time or mileage/kilometer period to ensure long-term reliability.



# Scheduled Maintenance

## ▼ Schedule 2

Maintenance Interval	Number of months or kilometers (miles), whichever comes first													
	Months	4	8	12	16	20	24	28	32	36	40	44	48	
	×1000 km	8	16	24	32	40	48	56	64	72	80	88	96	
	×1000 miles	5	10	15	20	25	30	35	40	45	50	55	60	
<b>ENGINE</b>														
Engine valve clearance (for 2.5-liter engine)	Audibly inspect every 120,000 km (75,000 miles), if noisy, adjust													
Drive belts	2.5-liter engine							I						
	3.7-liter engine	Inspect every 160,000 km (100,000 miles) Replace every 240,000 km (150,000 miles)												
Engine oil	Puerto Rico	Replace every 5,000 km (3,000 miles) or 3 months												
	Others	R	R	R	R	R	R	R	R	R	R	R	R	R
Engine oil filter		R	R	R	R	R	R	R	R	R	R	R	R	R
<b>COOLING SYSTEM</b>														
Engine coolant	FL22 type* <sup>1</sup>	Replace at first 192,000 km (120,000 miles) or 10 years ;after that, every 96,000 km (60,000 miles) or 5 years												
	Others	Replace at first 96,000 km (60,000 miles) or 4 years; after that, every 2 years												
Engine coolant level		I	I	I	I	I	I	I	I	I	I	I	I	I
<b>FUEL SYSTEM</b>														
Air filter (for 2.5-liter engine)	Puerto Rico						R							R
	Others							R						
Air filter (for 3.7-liter engine)	Puerto Rico			C			R			C				R
	Others				C			R					C	
Fuel lines and hoses* <sup>2</sup>							I							I
Hoses and tubes for emission* <sup>2</sup>														I
<b>IGNITION SYSTEM</b>														
Spark plugs (for 2.5-liter engine)	USA	Replace every 96,000 km (60,000 miles)												
	Others* <sup>3</sup>	Replace every 120,000 km (75,000 miles)												
Spark plugs (for 3.7-liter engine)	USA	Replace every 96,000 km (60,000 miles)												
	Others* <sup>3</sup>	Replace every 160,000 km (100,000 miles)												
<b>ELECTRICAL SYSTEM</b>														
Function of all lights		I	I	I	I	I	I	I	I	I	I	I	I	I

## Scheduled Maintenance

Maintenance Interval	Number of months or kilometers (miles), whichever comes first												
	Months	4	8	12	16	20	24	28	32	36	40	44	48
	×1000 km	8	16	24	32	40	48	56	64	72	80	88	96
	×1000 miles	5	10	15	20	25	30	35	40	45	50	55	60
<b>CHASSIS and BODY</b>													
Brake lines, hoses and connections								I					I
Brake fluid level	I	I	I	I	I	I	I	I	I	I	I	I	I
Disc brakes			I				I			I			I
Tire (Rotation)	Rotate every 8,000 km (5,000 miles)												
Tire inflation pressure and tire wear	I	I	I	I	I	I	I	I	I	I	I	I	I
Steering operation and linkages							I						I
Power steering fluid level	I	I	I	I	I	I	I	I	I	I	I	I	I
Front and rear suspension, ball joints and wheel bearing axial play							I						I
Driveshaft dust boots							I						I
Bolts and nuts on chassis and body							T						T
Exhaust system and heat shields	Inspect every 72,000 km (45,000 miles) or 5 years												
All locks and hinges	L	L	L	L	L	L	L	L	L	L	L	L	L
Washer fluid level	I	I	I	I	I	I	I	I	I	I	I	I	I
<b>AIR CONDITIONER SYSTEM</b>													
Cabin air filter	Replace every 40,000 km (25,000 miles) or 2 years												

### Chart symbols:

**I:** Inspect: Inspect and clean, repair, adjust, fill up, or replace if necessary.

**R:** Replace

**C:** Clean

**L:** Lubricate

**T:** Tighten

### Remarks:

- \*1 Use FL22 type coolant in vehicles with the inscription “FL22” on the radiator cap itself or the surrounding area. Use FL22 when replacing the coolant.
- \*2 According to state/provincial and federal regulations, failure to perform maintenance on these items will not void your emissions warranties. However, Mazda recommends that all maintenance services be performed at the recommended time or mileage/kilometer period to ensure long-term reliability.
- \*3 If the vehicle is operated primarily under any of the following conditions, replace the spark plugs at every 96,000 km (60,000 miles) or shorter.
  - a) Repeated short-distance driving
  - b) Extended periods of idling or low-speed operation
  - c) Driving for long periods in cold temperatures or extremely humid climates

## Scheduled Maintenance

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### Scheduled Maintenance (Mexico)

Follow Schedule 1 if the vehicle is operated mainly where none of the following conditions apply.

- Repeated short-distance driving
- Driving in dusty conditions
- Driving with extended use of brakes
- Driving in areas where salt or other corrosive materials are used
- Driving on rough or muddy roads
- Extended periods of idling or low-speed operation
- Driving for long periods in cold temperatures or extremely humid climates
- Driving in extremely hot conditions
- Driving in mountainous conditions continually

If any do apply, follow Schedule 2.

**NOTE**

*After the prescribed period, continue to follow the described maintenance at the recommended intervals.*

## Scheduled Maintenance

### ▼ Schedule 1

Maintenance Interval	Number of months or kilometers, whichever comes first												
	Months	6	12	18	24	30	36	42	48	54	60	66	72
	×1000 km	10	20	30	40	50	60	70	80	90	100	110	120
<b>ENGINE</b>													
Engine valve clearance (for 2.5-liter engine)	Audibly inspect every 120,000 km, if noisy, adjust												
Drive belts	2.5-liter engine				I				I				I
	3.7-liter engine	Inspect every 40,000 km or 2 years											
Engine oil	Replace every 240,000 km												
Engine oil filter	R	R	R	R	R	R	R	R	R	R	R	R	R
<b>COOLING SYSTEM</b>													
Cooling system					I				I				I
Engine coolant	FL22 type*1	Replace at first 190,000 km or 10 years; after that, every 60,000 km or 3 years											
	Others				R				R				R
<b>FUEL SYSTEM</b>													
Air filter		R		R		R		R		R		R	
Fuel lines and hoses				I*2				I*2					I
Hoses and tubes for emission				I*2				I*2					I
Fuel filter				R				R					R
<b>IGNITION SYSTEM</b>													
Spark plugs	Replace every 60,000 km												
<b>CHASSIS and BODY</b>													
Brake lines, hoses and connections		I		I		I		I		I		I	
Brake fluid level	I	I	I		I	I	I		I	I	I		
Brake fluid				R				R					R
Disc brakes	I	I	I	I	I	I	I	I	I	I	I	I	I
Tire (Rotation)	Rotate every 10,000 km												
Tire inflation pressure and tire wear	I	I	I	I	I	I	I	I	I	I	I	I	I
Steering operation and linkages	I	I	I	I	I	I	I	I	I	I	I	I	I
Power steering fluid level	I	I	I	I	I	I	I	I	I	I	I	I	I
Front and rear suspension, ball joints and wheel bearing axial play		I		I		I		I		I		I	
Driveshaft dust boots		I		I		I		I		I		I	
Bolts and nuts on chassis and body		T		T		T		T		T		T	
Exhaust system and heat shields		I		I		I		I		I		I	
All locks and hinges	L	L	L	L	L	L	L	L	L	L	L	L	L
Washer fluid level	I	I	I	I	I	I	I	I	I	I	I	I	I

# Scheduled Maintenance

Maintenance Interval	Number of months or kilometers, whichever comes first												
	Months	6	12	18	24	30	36	42	48	54	60	66	72
	×1000 km	10	20	30	40	50	60	70	80	90	100	110	120
<b>AIR CONDITIONER SYSTEM</b>													
Cabin air filter					R				R				R

**Chart symbols:**

- I: Inspect: Inspect and clean, repair, adjust, fill up, or replace if necessary.
- R: Replace
- L: Lubricate
- T: Tighten

**Remarks:**

- \*1 Use FL22 type coolant in vehicles with the inscription “FL22” on the radiator cap itself or the surrounding area. Use FL22 when replacing the coolant.
- \*2 According to state/provincial and federal regulations, failure to perform maintenance on these items will not void your emissions warranties. However, Mazda recommends that all maintenance services be performed at the recommended time or kilometer period to ensure long-term reliability.

## Scheduled Maintenance

### ▼ Schedule 2

Maintenance Interval	Number of months or kilometers, whichever comes first												
	Months	3	6	9	12	15	18	21	24	27	30	33	36
	×1000 km	5	10	15	20	25	30	35	40	45	50	55	60
<b>ENGINE</b>													
Engine valve clearance (for 2.5-liter engine)	Audibly inspect every 120,000 km, if noisy, adjust												
Drive belts	2.5-liter engine									I			
	3.7-liter engine	Inspect every 40,000 km or 2 years											
	Replace every 240,000 km												
Engine oil	R	R	R	R	R	R	R	R	R	R	R	R	R
Engine oil filter	R	R	R	R	R	R	R	R	R	R	R	R	R
<b>COOLING SYSTEM</b>													
Cooling system										I			
Engine coolant	FL22 type* <sup>1</sup>	Replace at first 190,000 km or 10 years; after that, every 60,000 km or 3 years											
	Others									R			
Engine coolant level	I	I	I	I	I	I	I	I	I	I	I	I	I
<b>FUEL SYSTEM</b>													
Air filter		C		R		C		R		C		R	
Fuel lines and hoses									I* <sup>2</sup>				
Hoses and tubes for emission									I* <sup>2</sup>				
Fuel filter									R				
<b>IGNITION SYSTEM</b>													
Spark plugs	Replace every 60,000 km												
<b>ELECTRICAL SYSTEM</b>													
Function of all lights	I	I	I	I	I	I	I	I	I	I	I	I	I

# Scheduled Maintenance

Maintenance Interval	Number of months or kilometers, whichever comes first													
	Months	3	6	9	12	15	18	21	24	27	30	33	36	
	×1000 km	5	10	15	20	25	30	35	40	45	50	55	60	
<b>CHASSIS and BODY</b>														
Brake lines, hoses and connections					I					I				I
Brake fluid level			I		I		I					I		I
Brake fluid									R					
Disc brakes			I		I		I			I		I		I
Tire (Rotation)	Rotate every 10,000 km													
Tire inflation pressure and tire wear			I		I		I		I		I		I	
Steering operation and linkages			I		I		I		I		I		I	
Power steering fluid level			I		I		I		I		I		I	
Front and rear suspension, ball joints and wheel bearing axial play					I				I					I
Driveshaft dust boots					I				I					I
Bolts and nuts on chassis and body					T				T					T
Exhaust system and heat shields					I				I					I
All locks and hinges			L		L		L		L		L		L	
Washer fluid level			I		I		I		I		I		I	
<b>AIR CONDITIONER SYSTEM</b>														
Cabin air filter							R						R	

**Chart symbols:**

**I:** Inspect: Inspect and clean, repair, adjust, fill up, or replace if necessary.

**R:** Replace

**C:** Clean

**L:** Lubricate

**T:** Tighten

**Remarks:**

- \*1 Use FL22 type coolant in vehicles with the inscription “FL22” on the radiator cap itself or the surrounding area. Use FL22 when replacing the coolant.
- \*2 According to state/provincial and federal regulations, failure to perform maintenance on these items will not void your emissions warranties. However, Mazda recommends that all maintenance services be performed at the recommended time or kilometer period to ensure long-term reliability.

## Scheduled Maintenance

(Cont.)

Maintenance Interval	Number of months or kilometers, whichever comes first													
	Months	39	42	45	48	51	54	57	60	63	66	69	72	
	×1000 km	65	70	75	80	85	90	95	100	105	110	115	120	
<b>ENGINE</b>														
Engine valve clearance (for 2.5-liter engine)	Audibly inspect every 120,000 km, if noisy, adjust													
Drive belts	2.5-liter engine				I									I
	3.7-liter engine	Inspect every 40,000 km or 2 years												
		Replace every 240,000 km												
Engine oil	R	R	R	R	R	R	R	R	R	R	R	R	R	R
Engine oil filter	R	R	R	R	R	R	R	R	R	R	R	R	R	R
<b>COOLING SYSTEM</b>														
Cooling system					I									I
Engine coolant	FL22 type *1	Replace at first 190,000 km or 10 years; after that, every 60,000 km or 3 years												
	Others				R									R
Engine coolant level	I	I	I	I	I	I	I	I	I	I	I	I	I	I
<b>FUEL SYSTEM</b>														
Air filter		C		R		C		R		C		R		R
Fuel lines and hoses				I <sup>2</sup>										I
Hoses and tubes for emission				I <sup>2</sup>										I
Fuel filter				R										R
<b>IGNITION SYSTEM</b>														
Spark plugs	Replace every 60,000 km													
<b>ELECTRICAL SYSTEM</b>														
Function of all lights	I	I	I	I	I	I	I	I	I	I	I	I	I	I



## Scheduled Maintenance

Maintenance Interval	Number of months or kilometers, whichever comes first														
	Months	39	42	45	48	51	54	57	60	63	66	69	72		
	×1000 km	65	70	75	80	85	90	95	100	105	110	115	120		
<b>CHASSIS and BODY</b>															
Brake lines, hoses and connections					I				I					I	
Brake fluid level		I					I		I			I			
Brake fluid					R									R	
Disc brakes		I			I		I		I			I		I	
Tire (Rotation)		Rotate every 10,000 km													
Tire inflation pressure and tire wear		I			I		I		I			I		I	
Steering operation and linkages		I			I		I		I			I		I	
Power steering fluid level		I			I		I		I			I		I	
Front and rear suspension, ball joints and wheel bearing axial play					I				I					I	
Driveshaft dust boots					I				I					I	
Bolts and nuts on chassis and body					T				T					T	
Exhaust system and heat shields					I				I					I	
All locks and hinges		L			L		L		L			L		L	
Washer fluid level		I			I		I		I			I		I	
<b>AIR CONDITIONER SYSTEM</b>															
Cabin air filter					R				R					R	

### Chart symbols:

**I:** Inspect: Inspect and clean, repair, adjust, fill up, or replace if necessary.

**R:** Replace

**C:** Clean

**L:** Lubricate

**T:** Tighten

### Remarks:

- \*1 Use FL22 type coolant in vehicles with the inscription "FL22" on the radiator cap itself or the surrounding area. Use FL22 when replacing the coolant.
- \*2 According to state/provincial and federal regulations, failure to perform maintenance on these items will not void your emissions warranties. However, Mazda recommends that all maintenance services be performed at the recommended time or kilometer period to ensure long-term reliability.

## Owner Maintenance Schedule

The owner or a qualified service technician should make these vehicle inspections at the indicated intervals to ensure safe and dependable operation.

Bring any problem to the attention of an Authorized Mazda Dealer or qualified service technician as soon as possible.

### ▼ When Refueling

- Brake and clutch fluid level (page 8-24)
- Engine coolant level (page 8-22)
- Engine oil level (page 8-21)
- Washer fluid level (page 8-26)

### ▼ At Least Monthly

Tire inflation pressures (page 8-32)

### ▼ At Least Twice a Year (For Example, Every Spring and Fall)

- Power steering fluid level (page 8-25)

You can do the following scheduled maintenance items if you have some mechanical ability and a few basic tools and if you closely follow the directions in this manual.

- Engine coolant (page 8-22)
- Engine oil (page 8-19)

## Owner Maintenance

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### Owner Maintenance Precautions

Improper or incomplete service may result in problems. This section gives instructions only for items that are easy to perform.

As explained in the Introduction (page 8-2), several procedures can be done only by a qualified service technician with special tools.

Improper owner maintenance during the warranty period may affect warranty coverage. For details, read the separate Mazda Warranty statement provided with the vehicle. If you're unsure about any servicing or maintenance procedure, have it done by an Authorized Mazda Dealer.

There are strict environmental laws regarding the disposal of waste oil and fluids. Please dispose of your waste properly and with due regard to the environment.

We recommend that you entrust the oil and fluid changes of your vehicle to an Authorized Mazda Dealer.

**⚠ WARNING**

**Do not perform maintenance work if you lack sufficient knowledge and experience or the proper tools and equipment to do the work. Have maintenance work done by a qualified technician:**

*Performing maintenance work on a vehicle is dangerous if not done properly. You can be seriously injured while performing some maintenance procedures.*

**If you must run the engine while working under the hood, make certain that you remove all jewelry (especially rings, bracelets, watches, and necklaces) and all neckties, scarves, and similar loose clothing before getting near the engine or cooling fan which may turn on unexpectedly:**

*Working under the hood with the engine running is dangerous. It becomes even more dangerous when you wear jewelry or loose clothing.*

*Either can become entangled in moving parts and result in injury.*



**Switch the ignition to off and make sure the fan is not running before attempting to work near the cooling fan:**

*Working near the cooling fan when it is running is dangerous. The fan could continue running indefinitely even if the engine has stopped and the engine compartment temperature is high. You could be hit by the fan and seriously injured.*

**Do not leave items in the engine compartment:**

*After you have finished checking or doing servicing in the engine compartment, do not forget and leave items such as tools or rags in the engine compartment.*

*Tools or other items left in the engine compartment could cause engine damage or a fire leading to an unexpected accident.*

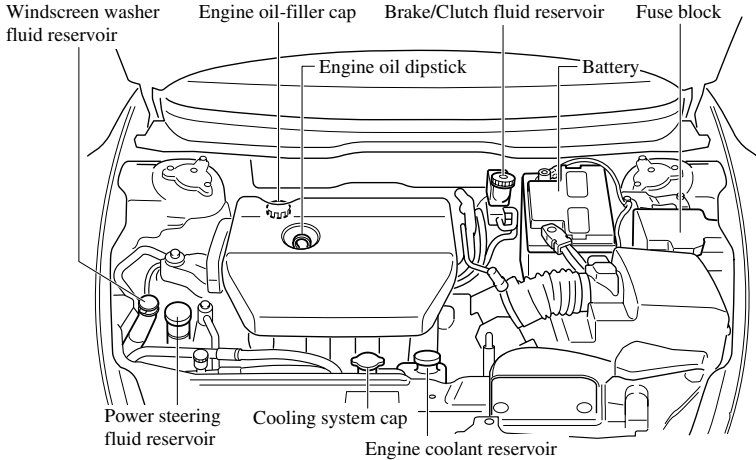
**NOTE**

*Once the engine coolant exceeds a preset temperature, an electrical cooling fan turns on. It will continue running for about 10 minutes after the ignition is switched off.*

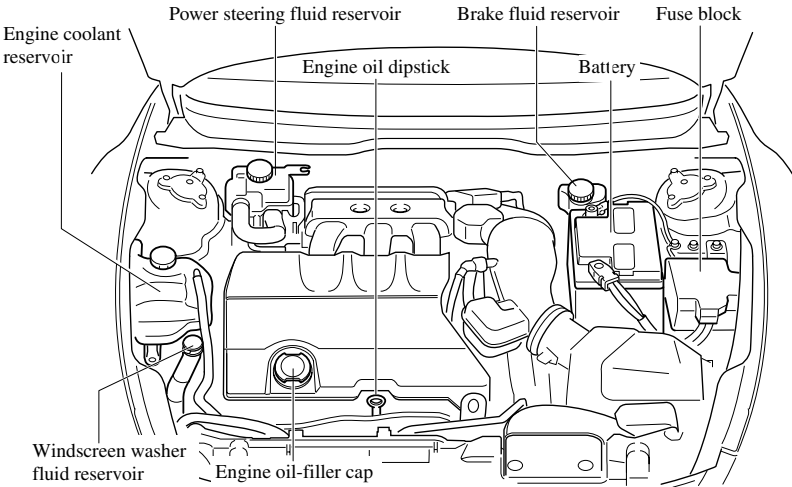
# Owner Maintenance

## Engine Compartment Overview

### 2.5-liter engine



### 3.7-liter engine



## Owner Maintenance

### Engine Oil

#### NOTE

*Changing the engine oil should be done by an Authorized Mazda Dealer.*

#### ▼ Recommended Oil

**Use SAE 0W-20 engine oil (2.5-liter engine).**

Oil container labels provide important information.

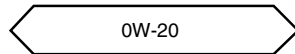
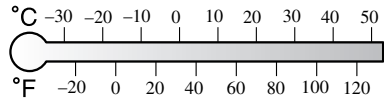
A chief contribution this type of oil makes to fuel economy is reducing the amount of fuel necessary to overcome engine friction.

#### U.S.A. and CANADA



(ILSAC)

Only use oils “Certified For Gasoline Engines” by the American Petroleum Institute (API). An oil with this trademark symbol conforms to the current engine and emission system protection standards and fuel economy requirements of the International Lubricant Standardization and Approval Committee (ILSAC), comprised of U.S. and Japanese automobile manufacturers.



#### Except U.S.A. and CANADA



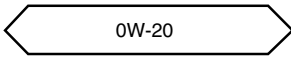
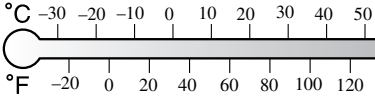
(ILSAC)

#### **(Mexico)**

Use SAE 0W-20 engine oil. If SAE 0W-20 engine oil is not available, use SAE 5W-20, 5W-30 engine oil.

## Owner Maintenance

The quality designation SM, or ILSAC must be on the label.



### Use SAE 5W-20 engine oil (3.7-liter engine).

Oil container labels provide important information.

A chief contribution this type of oil makes to fuel economy is reducing the amount of fuel necessary to overcome engine friction.

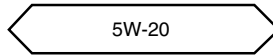
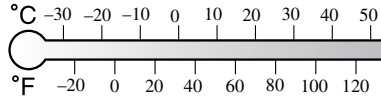
Mazda recommends Mazda Genuine Parts and Castrol (U.S.A and Mexico). For optimal engine performance, there are certain types of engine oils and filters suitable for your vehicle. Please consult an Authorized Mazda Dealer.

### U.S.A. and CANADA



(ILSAC)

Only use oils "Certified For Gasoline Engines" by the American Petroleum Institute (API). An oil with this trademark symbol conforms to the current engine and emission system protection standards and fuel economy requirements of the International Lubricant Standardization and Approval Committee (ILSAC), comprised of U.S. and Japanese automobile manufacturers.



### Except U.S.A. and CANADA

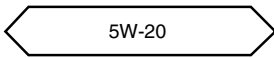
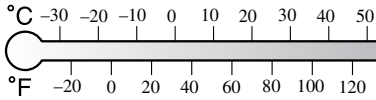


(ILSAC)

### (Mexico)

Use SAE 5W-20 engine oil. If SAE 5W-20 engine oil is not available, use SAE 10W-30, 10W-40, 5W-40 engine oil.

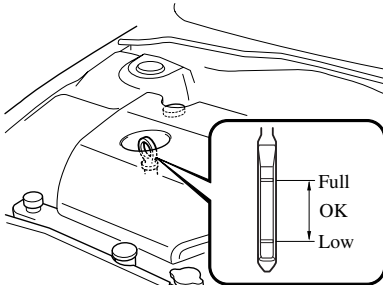
The quality designation SM, or ILSAC must be on the label.



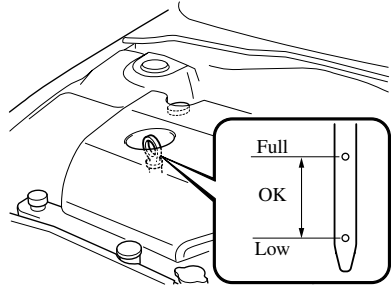
### ▼ Inspecting Engine Oil Level

1. Be sure the vehicle is on a level surface.
2. Warm up the engine to normal operating temperature.
3. Turn it off and wait at least 5 minutes for the oil to return to the oil pan.
4. Pull out the dipstick, wipe it clean, and reinsert it fully.

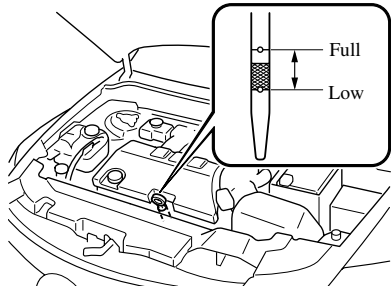
#### 2.5-liter engine (Type A)



#### 2.5-liter engine (Type B)



#### 3.7-liter engine



#### 5. 2.5-liter engine

Pull it out again and examine the level. The level is normal if it is between Low and Full.

If it is near or below Low, add enough oil to bring the level to Full.

#### 3.7-liter engine

Pull it out again and examine the level. The level is normal if it is between Low and Full. If it is below Low, add oil to raise the level within the hatching zone.

### **CAUTION**

*Do not add engine oil over Full. This may cause engine damage.*



## Owner Maintenance

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6. Make sure the O-ring on the dipstick is positioned properly before reinserting the dipstick.

### Engine Coolant

#### ▼ Inspecting Coolant Level

#### WARNING

**Do not use a match or live flame in the engine compartment. DO NOT ADD COOLANT WHEN THE ENGINE IS HOT:**

*A hot engine is dangerous. If the engine has been running, parts of the engine compartment can become very hot. You could be burned. Carefully inspect the engine coolant in the coolant reservoir, but do not open it.*



**Switch the ignition to off and make sure the fan is not running before attempting to work near the cooling fan:**

*Working near the cooling fan when it is running is dangerous. The fan could continue running indefinitely even if the engine has stopped and the engine compartment temperature is high. You could be hit by the fan and seriously injured.*



**Do not remove the cooling system cap when the engine and radiator are hot:**

*When the engine and radiator are hot, scalding coolant and steam may shoot out under pressure and cause serious injury.*

#### **NOTE**

*Changing the coolant should be done by an Authorized Mazda Dealer.*

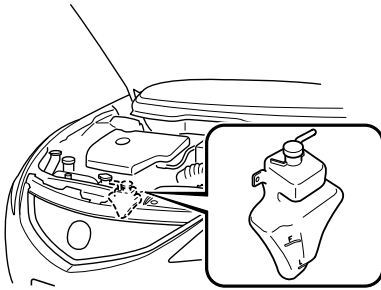
## Owner Maintenance

Inspect the antifreeze protection and coolant level in the coolant reservoir at least once a year—at the beginning of the winter season—and before traveling where temperatures may drop below freezing.

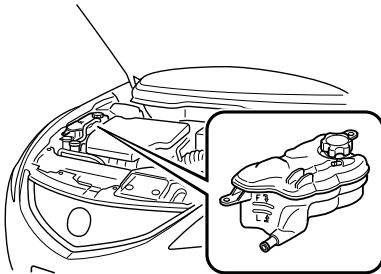
Inspect the condition and connections of all cooling system and heater hoses. Replace any that are swollen or deteriorated.

The coolant should be at full in the radiator and between the FULL or F and LOW or L marks on the coolant reservoir when the engine is cool.

### 2.5-liter engine



### 3.7-liter engine



If it's at or near LOW or L, add enough coolant to the coolant reservoir to provide freezing and corrosion protection and to bring the level to FULL or F.

### **CAUTION**

- *Radiator coolant will damage paint. Rinse it off quickly if spilled.*
- *Use only soft (demineralized) water in the coolant mixture. Water that contains minerals will cut down on the coolant's effectiveness.*
- *Don't add only water. Always add a proper coolant mixture.*
- *The engine has aluminum parts and must be protected by an ethylene-glycol-based coolant to prevent corrosion and freezing.*
- *DO NOT USE coolants Containing Alcohol, methanol, Borate or Silicate. These coolants could damage the cooling system.*
- *DO NOT MIX alcohol or methanol with the coolant. This could damage the cooling system.*
- *Don't use a solution that contains more than 60% antifreeze. This would reduce effectiveness.*

If the coolant reservoir is empty or new coolant is required frequently, consult an Authorized Mazda Dealer.

## Owner Maintenance

### Brake/Clutch Fluid

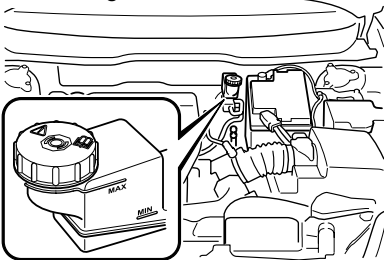
#### ▼ Inspecting Brake/Clutch Fluid Level

The brakes and clutch draw fluid from the same reservoir.

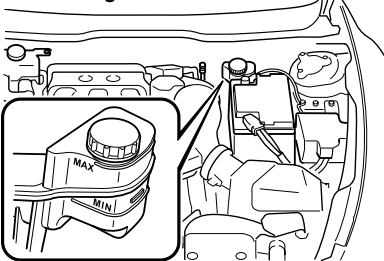
Inspect the fluid level in the reservoir regularly. It should be kept at MAX.

The level normally drops with accumulated distance, a condition associated with wear of brake and clutch linings. If it is excessively low, have the brake/clutch system inspected by an Authorized Mazda Dealer.

#### 2.5-liter engine



#### 3.7-liter engine



#### ▼ Adding Brake/Clutch Fluid

#### ⚠ WARNING

**Be careful not to spill brake fluid on yourself or on the engine:**

*Spilled brake fluid is dangerous. If it gets in your eyes, they could be seriously injured. If this happens, immediately flush your eyes with water and get medical attention. Brake fluid spilled on a hot engine could cause a fire.*

**If the brake/clutch fluid level is low, have the brakes and clutch inspected:**

*Low brake/clutch fluid levels are dangerous. Low levels could signal brake lining wear or a brake system leak. Your brakes could fail and cause an accident.*

If the fluid level is low, add fluid until it reaches MAX.

Before adding fluid, thoroughly clean the area around the cap.

#### ⚠ CAUTION

- Brake and clutch fluid will damage painted surfaces. If brake or clutch fluid does get on a painted surface, wash it off with water immediately.
- Using nonspecified brake and clutch fluids (page 10-4) will damage the systems. Mixing different fluids will also damage them.

*If the brake/clutch system frequently requires new fluid, consult an Authorized Mazda Dealer.*

## Power Steering Fluid

### ▼ Inspecting Power Steering Fluid Level

#### **CAUTION**

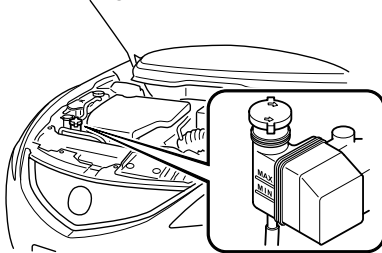
*To avoid damage to the power steering pump, don't operate the vehicle for long periods when the power steering fluid level is low.*

#### **NOTE**

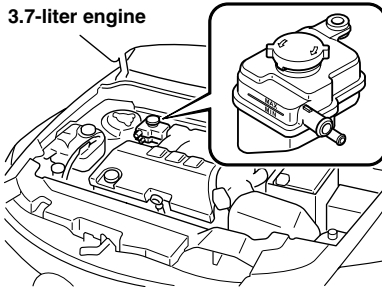
*Use specified power steering fluid (page 10-4).*

Inspect the fluid level in the reservoir at each engine oil change with the engine off and cold. Add fluid if necessary; it does not require periodic changing.

#### 2.5-liter engine



#### 3.7-liter engine



The level must be kept between MIN and MAX.

Visually examine the lines and hoses for leaks and damage.

If new fluid is required frequently, consult an Authorized Mazda Dealer.

## Owner Maintenance

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### Washer Fluid

#### ▼ Inspecting Washer Fluid Level

#### **⚠ WARNING**

**Use only windshield washer fluid or plain water in the reservoir:**

*Using radiator antifreeze as washer fluid is dangerous. If sprayed on the windshield, it will dirty the windshield, affect your visibility, and could result in an accident.*

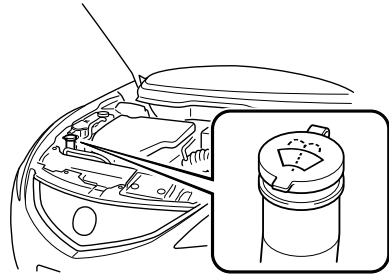
#### **Using Washer Fluid Without Anti-freeze Protection in Cold Weather:**

*Operating your vehicle in temperatures below 4 degrees C (40 degrees F) using washer fluid without anti-freeze protection is dangerous as it could cause impaired windshield vision and result in an accident. In cold weather, always use washer fluid with anti-freeze protection.*

#### **NOTE**

*State or local regulations may restrict the use of volatile organic compounds (VOCs), which are commonly used as anti-freeze agents in washer fluid. A washer fluid with limited VOC content should be used only if it provides adequate freeze resistance for all regions and climates in which the vehicle will be operated.*

Inspect fluid level in the washer fluid reservoir; add fluid if necessary.



Use plain water if washer fluid is unavailable.  
But use only washer fluid in cold weather to prevent it from freezing.

## Body Lubrication

All moving points of the body, such as door and hood hinges and locks, should be lubricated each time the engine oil is changed. Use a nonfreezing lubricant on locks during cold weather.

Make sure the hood's secondary latch keeps the hood from opening when the primary latch is released.

## Wiper Blades

### CAUTION

- *Hot waxes applied by automatic car washers have been known to affect the wiper's ability to clean windows.*
- *To prevent damage to the wiper blades, do not use gasoline, kerosene, paint thinner, or other solvents on or near them.*
- *When the wiper lever is in the AUTO position and the ignition is switched ON, the wipers may move automatically in the following cases:*
  - *If the windshield above the rain sensor is touched.*
  - *If the windshield above the rain sensor is wiped with a cloth.*
  - *If the windshield is struck with a hand or other object.*
  - *If the rain sensor is struck with a hand or other object from inside the vehicle.*

*Be careful not to pinch hands or fingers as it may cause injury, or damage the wipers. When washing or servicing your Mazda, make sure the wiper lever is in the OFF position.*

Contamination of either the windshield or the blades with foreign matter can reduce wiper effectiveness. Common sources are insects, tree sap, and hot wax treatments used by some commercial car washes.

If the blades are not wiping properly, clean the window and blades with a good cleaner or mild detergent; then rinse thoroughly with clean water. Repeat if necessary.

# Owner Maintenance

## ▼ Replacing Windshield Wiper Blades

When the wipers no longer clean well, the blades are probably worn or cracked. Replace them.

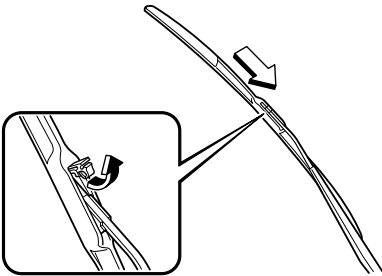
### ⚠ CAUTION

To prevent damage to the wiper arms and other components, don't try to sweep the wiper arm by hand.

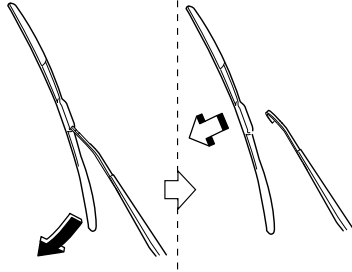
### NOTE

To prevent damage to the wiper arm blades when raising both the driver and passenger side wiper arms, raise the driver side wiper arm first. Conversely, when setting down the wiper arms, set the passenger side wiper arm down first.

1. Raise the wiper arm.
2. Open the clip and slide the blade assembly in the direction of the arrow.



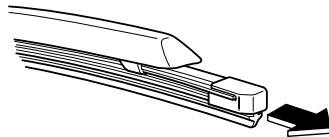
3. Tilt the blade assembly and remove it from the arm.



### ⚠ CAUTION

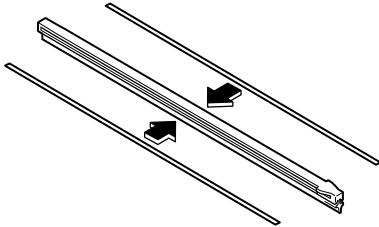
To prevent damage to the windshield let the wiper arm down easily, don't let it slap down on the windshield.

4. Pull down the blade rubber and slide it out of blade holder.



## Owner Maintenance

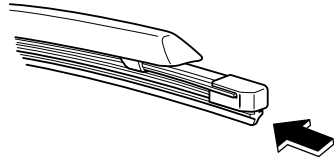
5. Remove the metal stiffeners from each blade rubber and install them in the new blade.



### **CAUTION**

- *Don't bend or discard the stiffeners. You need to use them again.*
- *If the metal stiffeners are switched, the blade's wiping efficiency could be reduced. So don't use the driver's side metal stiffeners on the passenger's side, or vice versa.*
- *Be sure to reinstall the metal stiffeners in the new blade rubber so that the curve is the same as it was in the old blade rubber.*

6. Carefully insert the new blade rubber. Then install the blade assembly in the reverse order of removal.





### Battery

#### **⚠ WARNING**

**Wash hands after handling the battery and related accessories:**

*Battery posts, terminals and related accessories contain lead and lead compounds, chemicals known to the State of California to cause cancer and reproductive harm.*

**Always wear eye protection when working near the battery:**

*Working without eye protection is dangerous. Battery fluid contains SULFURIC ACID which could cause blindness if splashed into your eyes. Also, hydrogen gas produced during normal battery operation, could ignite and cause the battery to explode.*

**Wear eye protection and protective gloves to prevent contact with battery fluid:**

*Spilled battery fluid is dangerous.*

*Battery fluid contains SULFURIC ACID which could cause serious injuries if it gets in eyes, or on the skin or clothing. If this happens, immediately flush your eyes with water for 15 minutes or wash your skin thoroughly and get medical attention.*

**Always keep batteries out of the reach of children:**

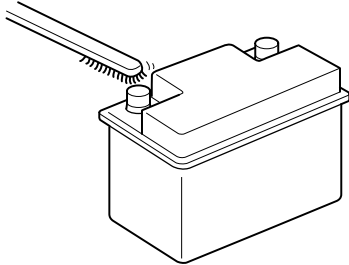
*Allowing children to play near batteries is dangerous. Battery fluid could cause serious injuries if it gets in the eyes or on the skin.*

**Keep flames and sparks away from open battery cells and do not allow metal tools to contact the positive (+) or negative (–) terminal of the battery when working near a battery. Do not allow the positive (+) terminal to contact the vehicle body:**

*Flames and sparks near open battery cells are dangerous. Hydrogen gas, produced during normal battery operation, could ignite and cause the battery to explode. An exploding battery can cause serious burns and injuries. Keep all flames including cigarettes and sparks away from open battery cells.*

**Keep all flames, including cigarettes, and sparks away from open battery cells:**

*Flames and sparks near open battery cells are dangerous. Hydrogen gas, produced during normal battery operation, could ignite and cause the battery to explode. An exploding battery can cause serious burns and injuries.*

**▼ Battery Maintenance**

To get the best service from a battery:

- Keep it securely mounted.
- Keep the top clean and dry.
- Keep terminals and connections clean, tight, and coated with petroleum jelly or terminal grease.
- Rinse off spilled electrolyte immediately with a solution of water and baking soda.
- If the vehicle will not be used for an extended time, disconnect the battery cables and charge the battery every six weeks.

**Tires**

For reasons of proper performance, safety, and better fuel economy, always maintain recommended tire inflation pressures and stay within the recommended load limits and weight distribution.

**⚠ WARNING****Using Different Tire Types:**

*Driving your vehicle with different types of tires is dangerous. It could cause poor handling and poor braking; leading to loss of control. Except for the limited use of the temporary spare tire, use only the same type tires (radial, bias-belted, bias-type) on all four wheels.*

**Using Wrong-Sized Tires:**

*Using any other tire size than what is specified for your Mazda (page 10-7) is dangerous. It could seriously affect ride, handling, ground clearance, tire clearance, and speedometer calibration. This could cause you to have an accident. Use only tires that are the correct size specified for your Mazda.*

## Owner Maintenance

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### ▼ Tire Inflation Pressure

#### **⚠ WARNING**

**Always inflate the tires to the correct pressure:**

*Overinflation or underinflation of tires is dangerous. Adverse handling or unexpected tire failure could result in a serious accident.*

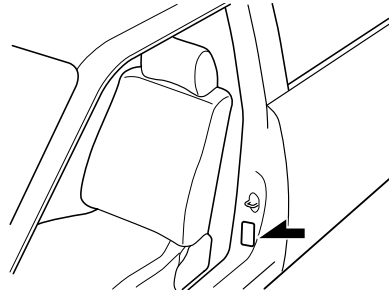
*Refer to specification charts on page 10-7.*

**Use only a Mazda-genuine tire valve cap:**

*Use of a non-genuine part is dangerous as the correct tire air pressure cannot be maintained if the tire valve becomes damaged. If the vehicle is driven under this condition, the tire air pressure will decrease which could result in a serious accident. Do not use any part for the tire valve cap that is not a Mazda-genuine part.*

The Tire Pressure Monitoring System does not alleviate the need to check the tire condition every day, including whether the tires all look inflated properly. Inspect all tire pressure monthly (including the spare) when the tires are cold. Maintain recommended pressures for the best ride, handling, and minimum tire wear.

When checking the tire pressures, use of a digital tire pressure gauge is recommended.



Refer to the specification charts (page 10-7).

## Owner Maintenance

### NOTE

- Always check tire pressure when tires are cold.
- Warm tires normally exceed recommended pressures. Don't release air from warm tires to adjust the pressure.
- Underinflation can cause reduced fuel economy, uneven and accelerated tire wear, and poor sealing of the tire bead, which will deform the wheel and cause separation of tire from rim.
- Overinflation can produce a harsh ride, uneven and accelerated tire wear, and a greater possibility of damage from road hazards.

Keep your tire pressure at the correct levels. If one frequently needs inflating, have it inspected.

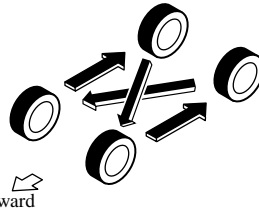
### ▼ Tire Rotation

#### **⚠ WARNING**

#### **Rotate tires periodically:**

Irregular tire wear is dangerous. To equalize tread wear for maintaining good performance in handling and braking, rotate the tires according to the scheduled maintenance charts. Refer to Scheduled Maintenance on page 8-3.

During rotation, inspect them for correct balance.



Do not include (TEMPORARY USE ONLY) spare tire in rotation.

Also, inspect them for uneven wear and damage. Abnormal wear is usually caused by one or a combination of the following:

- Incorrect tire pressure
- Improper wheel alignment
- Out-of-balance wheel
- Severe braking

After rotation, inflate all tire pressures to specification (page 10-7) and inspect the lug nuts for tightness.

#### **⚠ CAUTION**

Rotate unidirectional tires and radial tires that have an asymmetrical tread pattern or studs only from front to rear, not from side to side. Tire performance will be reduced if rotated from side to side.

## Owner Maintenance

### ▼ Replacing a Tire

#### **⚠ WARNING**

**Always use tires that are in good condition:**

*Driving with worn tires is dangerous. Reduced braking, steering, and traction could result in an accident.*

**Replace all four tires at the same time:**

*Replacing just one tire is dangerous. It could cause poor handling and poor braking resulting in loss of vehicle control. Mazda strongly recommends that you replace all four tires at the same time.*

#### **⚠ CAUTION**

**(With Tire Pressure Monitoring System)**

*When replacing/repairing the tires or wheels or both, have the work done by an Authorized Mazda Dealer, or the tire pressure sensors may be damaged.*

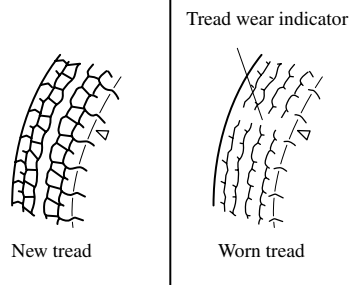
#### **NOTE**

**(With Tire Pressure Monitoring System)**

- *When tires with steel wire reinforcement in the sidewalls are used, the system may not function correctly even with a genuine wheel. Refer to System Error Activation on page 5-31.*
- *Be sure to install the tire pressure sensors whenever tires or wheels are replaced. Refer to Tires and Wheels on page 5-31.*

If a tire wears evenly, a wear indicator will appear as a solid band across the tread.

Replace the tire when this happens.



You should replace the tire before the band crosses the entire tread.

#### **NOTE**

*Tires degrade over time, even when they are not being used on the road. It is recommended that tires generally be replaced when they are 6 years or older. Heat caused by hot climates or frequent high loading conditions can accelerate the aging process. You should replace the spare tire when you replace the other road tires due to the aging of the spare tire. The period in which the tire was manufactured (both week and year) is indicated by a 4-digit number. Refer to The tire labeling on page 9-22.*

### ▼ Temporary Spare Tire

Inspect the temporary spare tire at least monthly to make sure it's properly inflated and stored.

#### **NOTE**

*The temporary spare tire condition gradually deteriorates even if it has not been used.*

The temporary spare tire is easier to handle because of its construction which is lighter and smaller than a conventional tire. This tire should be used only for an emergency and only for a short distance.

Use the temporary spare tire only until the conventional tire is repaired, which should be as soon as possible.

Maintain its pressure at 420 kPa (4.2 kgf/cm<sup>2</sup> or bar, 60 psi).

### CAUTION

- Do not use your temporary spare tire rim with a snow tire or a conventional tire. Neither will properly fit and could damage both tire and rim.
- The temporary spare tire has a tread life of less than 5,000 km (3,000 miles). The tread life may be shorter depending on driving conditions.
- The temporary spare tire is for limited use, however, if the tread wear solid-band indicator appears, replace the tire with the same type of temporary spare (page 8-34).

### NOTE

Tires degrade over time, even when they are not being used on the road. It is recommended that tires generally be replaced when they are 6 years or older. Heat caused by hot climates or frequent high loading conditions can accelerate the aging process. You should replace the spare tire when you replace the other road tires due to the aging of the spare tire. The period in which the tire was manufactured (both week and year) is indicated by a 4-digit number. Refer to The tire labeling on page 9-22.

### ▼ Replacing a Wheel

#### WARNING

**Always use wheels of the correct size on your vehicle:**

*Using a wrong-sized wheel is dangerous. Braking and handling could be affected, leading to loss of control and an accident.*

#### CAUTION

- A wrong-sized wheel may adversely affect:
  - Tire fit
  - Wheel and bearing life
  - Ground clearance
  - Speedometer calibration
  - Headlight aim
  - Bumper height
  - Tire Pressure Monitoring System
- (With Tire Pressure Monitoring System)
  - When replacing/repairing the tires or wheels or both, have the work done by an Authorized Mazda Dealer, or the tire pressure sensors may be damaged.
  - The wheels equipped on your Mazda are specially designed for installation of the tire pressure sensors. Do not use non-genuine wheels, otherwise it may not be possible to install the tire pressure sensors.

### NOTE

Be sure to install the tire pressure sensors whenever tires or wheels are replaced. Refer to Tires and Wheels on page 5-31.

## Owner Maintenance

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When replacing a wheel, make sure the new one is the same as the original factory wheel in diameter, rim width, and offset (inset/outset).

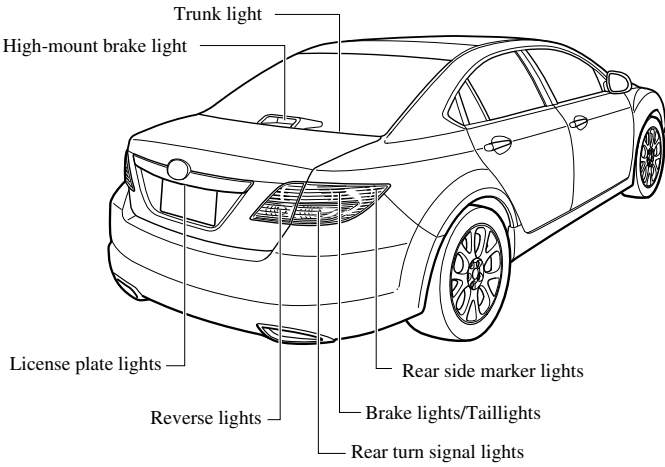
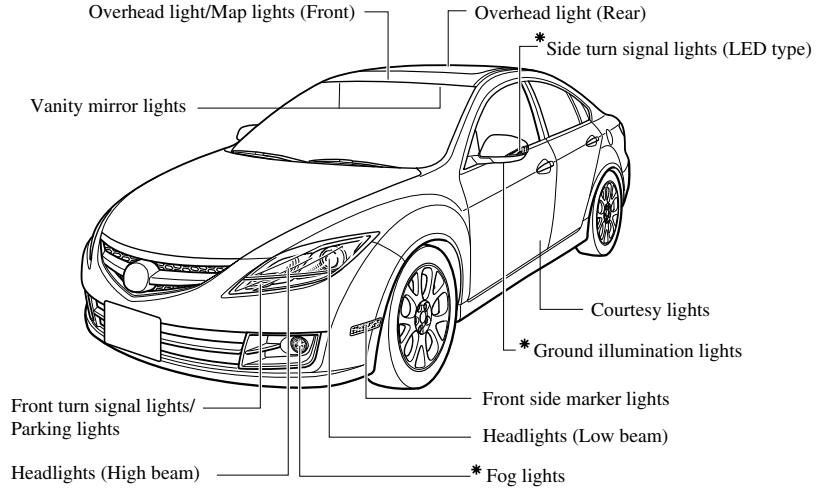
Proper tire balancing provides the best riding comfort and helps reduce tread wear. Out-of-balance tires can cause vibration and uneven wear, such as cupping and flat spots.

# MEMO



# Owner Maintenance

## Light Bulbs



\*Some models.

**⚠ WARNING**

**Do not replace the xenon fusion bulbs yourself:**

*Replacing the xenon fusion bulbs yourself is dangerous. Because the xenon fusion bulbs require high voltage, you could receive an electric shock if the bulbs are handled incorrectly. Consult an Authorized Mazda Dealer when the replacement is necessary.*

**Never touch the glass portion of a halogen bulb with your bare hands and always wear eye protection when handling or working around the bulbs:**

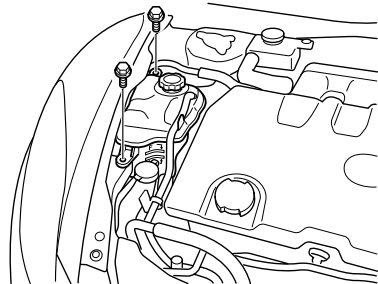
*When a halogen bulb breaks, it is dangerous. These bulbs contain pressurized gas. If one is broken, it will explode and serious injuries could be caused by the flying glass. If the glass portion is touched with bare hands, body oil could cause the bulb to overheat and explode when lit.*

**Always keep halogen bulbs out of the reach of children:**

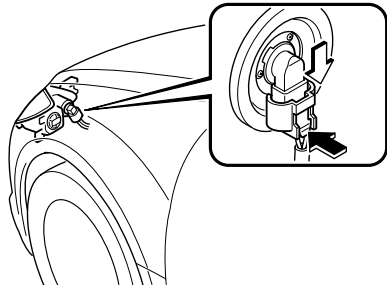
*Playing with a halogen bulb is dangerous. Serious injuries could be caused by dropping a halogen bulb or breaking it some other way.*

**▼ Replacing Exterior Light Bulbs****Replacing a headlight bulb****High-beam bulb**

1. Make sure the ignition is switched off, and the headlight switch is off.
2. **(3.7-liter engine)**  
Remove the attachment bolts and set the coolant reservoir aside before replacing the right bulb.

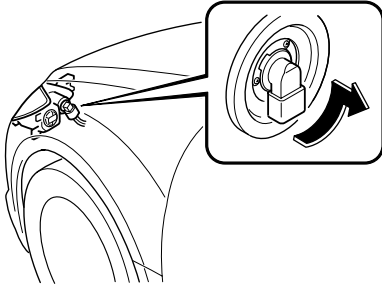


3. Disconnect the electrical connector from the bulb by pressing the tab on the connector with your finger and pulling the connector downward.



# Owner Maintenance

- Turn the socket and bulb assembly to remove it. Carefully remove the bulb from its socket in the reflector by gently pulling it straight backward out of the socket.



- Install the new bulb in the reverse order of removal.
- (3.7-liter engine)**  
Install the coolant reservoir. If you are unsure of how tight the bolts should be, have them inspected at an Authorized Mazda Dealer.

Bolt tightening torque	
N·m (kgf·m, ft·lbf)	7.8—10.8 (0.8—1.1, 5.8—8.0)

### NOTE

- To replace the bulb, contact an Authorized Mazda Dealer.
- If the halogen bulb is accidentally touched, it should be cleaned with rubbing alcohol before being used.
- Use the protective cover and carton for the replacement bulb to dispose of the old bulb promptly and out of the reach of children.

### Low-beam bulb

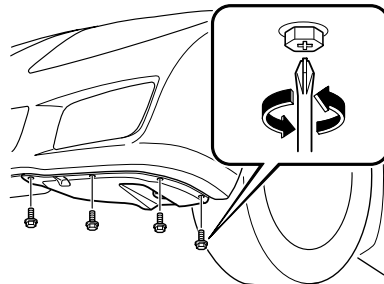
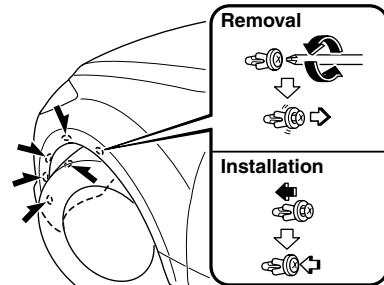
#### (Xenon fusion bulb)

You cannot replace the low beam bulbs by yourself.

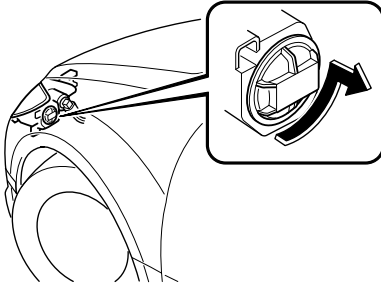
The bulbs must be replaced at an Authorized Mazda Dealer.

#### (Halogen bulbs)

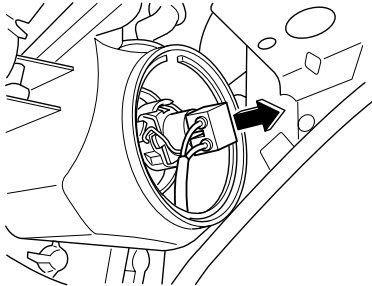
- If you are changing the right headlight bulb, start the engine, turn the steering wheel all the way to the right, and turn off engine. If you are changing the left headlight bulb, turn the steering wheel to the left.
- Make sure the ignition is switched off, and the headlight switch is off.
- Turn the screws and the center section of the plastic retainers counterclockwise and remove them, then partially peel back the mudguard.



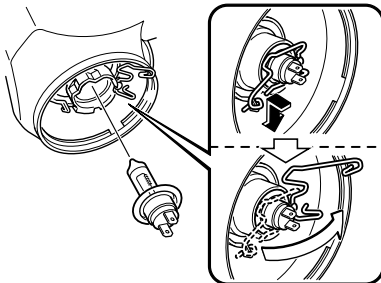
4. Turn the cover counterclockwise and remove it.



5. Detach the electrical connector from the bulb by pulling it to the rear.



6. Unhook the bulb retaining spring.



7. Swing the retaining spring out and away to free the headlight bulb.

8. Carefully remove the headlight bulb from the socket by pulling it straight back.

9. Replace the bulb.

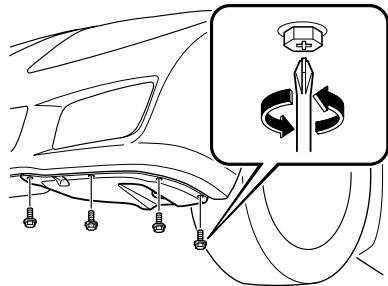
10. Install the new bulb in the reverse order of removal.

**NOTE**

- To replace the bulb, contact an Authorized Mazda Dealer.
- If the halogen bulb is accidentally touched, it should be cleaned with rubbing alcohol before being used.
- Use the protective cover and carton for the replacement bulb to dispose of the old bulb promptly and out of the reach of children.

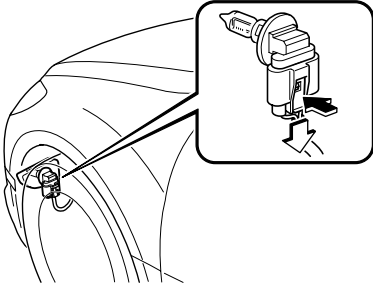
**Fog light bulbs\***

1. Make sure the ignition is switched off, and the headlight switch is off.
2. Turn the screws and the center section counterclockwise and remove them, then partially peel back the mudguard.

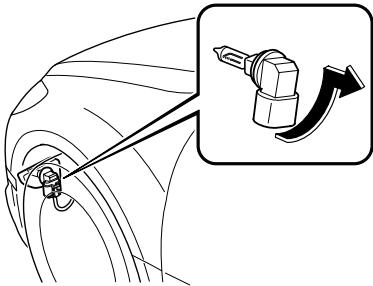


# Owner Maintenance

3. Disconnect the electrical connector from the bulb by pressing the tab on the connector with your finger and pulling the connector downward.



4. Turn the socket and bulb assembly to remove it. Carefully remove the bulb from its socket in the reflector by gently pulling it straight backward out of the socket.



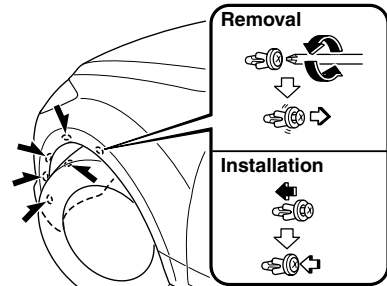
5. Install the new bulb in the reverse order of removal.

## NOTE

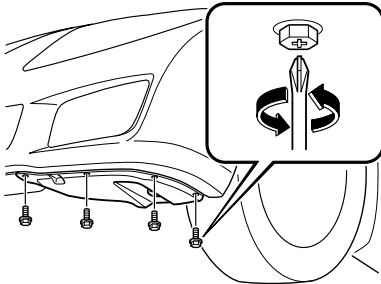
- To replace the bulb, contact an Authorized Mazda Dealer.
- If the halogen bulb is accidentally touched, it should be cleaned with rubbing alcohol before being used.
- Use the protective cover and carton for the replacement bulb to dispose of the old bulb promptly and out of the reach of children.

## Front side marker lights

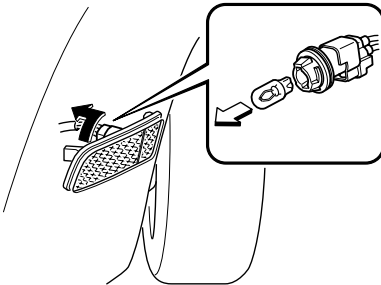
1. If you are changing the right side-maker light, start the engine, turn the steering wheel all the way to the right, and turn off the engine. If you are changing the left side-maker light, turn the steering wheel to the left.
2. Make sure the ignition is switched off, and the headlight switch is off.
3. Turn the screws and the center section of the plastic retainers counterclockwise and remove them, then partially peel back the mudguard.



## Owner Maintenance



4. Turn the socket and bulb assembly counterclockwise and remove it.
5. Disconnect the bulb from the socket.

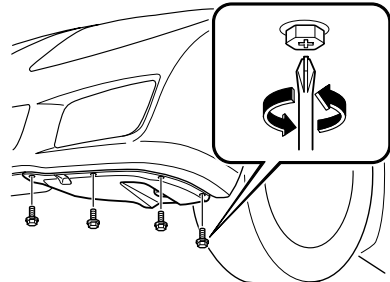
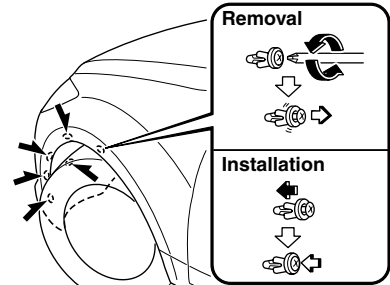


6. Install the new side turn signal unit in the reverse order of removal.

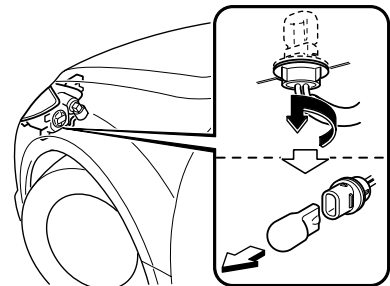
### **Front turn signal lights/Parking lights**

1. If you are changing the right headlight bulb, start the engine, turn the steering wheel all the way to the right, and turn off engine. If you are changing the left headlight bulb, turn the steering wheel to the left.
2. Make sure the ignition is switched off, and the headlight switch is off.

3. Turn the bolt, the screws and the center section of the plastic retainers counterclockwise and remove them, then partially peel back the mudguard.



4. Turn the socket and bulb assembly counterclockwise and remove it.
5. Disconnect the bulb from the socket.



# Owner Maintenance

6. Install the new bulb in the reverse order of removal.

### Side turn signal lights \*, High-mount brake light, Ground illumination lights \*

Due to the complexity and difficulty of the procedure, the bulbs must be replaced by an Authorized Mazda Dealer.

### Brake lights/Taillights (Rear side marker lights)

#### LED type

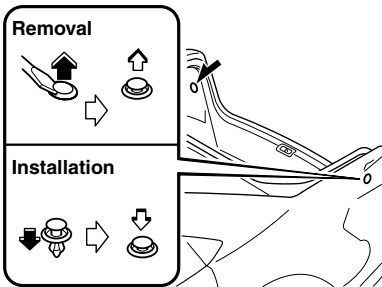
Due to the complexity and difficulty of the procedure, the LED bulbs must be replaced by an Authorized Mazda Dealer.

#### NOTE

LED bulb replacement is not possible because it is built into the unit. Replace the unit.

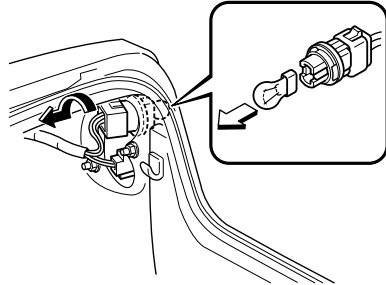
#### Bulb type

1. Pull the center section of the plastic retainer and remove the retainers and partially open the trunk side trim.



2. Turn the socket and bulb assembly counterclockwise and remove it.

3. Disconnect the bulb from the socket.



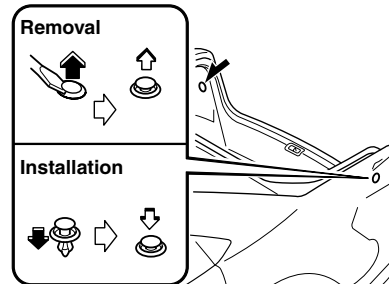
4. Install the new bulb in the reverse order of removal.

#### NOTE

To replace the bulb, contact an Authorized Mazda Dealer.

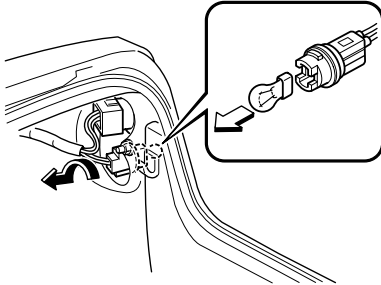
### Rear turn signal lights

1. Pull the center section of the plastic retainer and remove the retainers and partially open the trunk side trim.



2. Turn the socket and bulb assembly counterclockwise and remove it.

3. Disconnect the bulb from the socket.



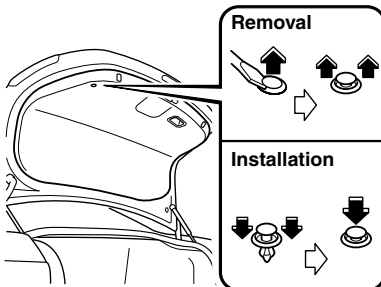
4. Install the new bulb in the reverse order of removal.

**NOTE**

To replace the bulb, contact an Authorized Mazda Dealer.

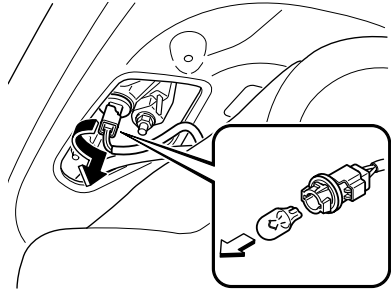
**Reverse lights**

1. Pull the center section of the plastic retainer and remove the retainers, then partially peel back the trunk rear trim.



2. Turn the socket and bulb assembly counterclockwise and remove it.

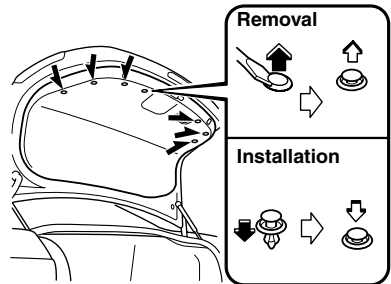
3. Disconnect the bulb from the socket.



4. Install the new bulb in the reverse order of removal.

**License plate lights**

1. Pull the center section of the plastic retainer and remove the retainers, then partially peel back the trunk rear trim.

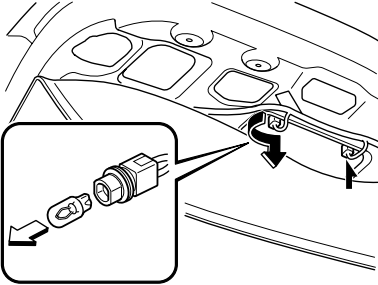


2. Turn the socket and bulb assembly counterclockwise and remove it.



# Owner Maintenance

3. Disconnect the bulb from the socket.



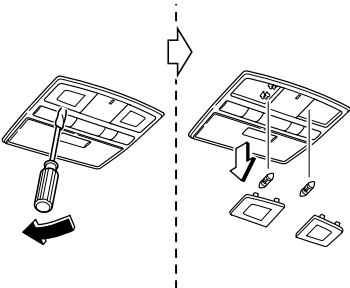
4. Install the new bulb in the reverse order of removal.

## ▼ Replacing Interior Light Bulbs

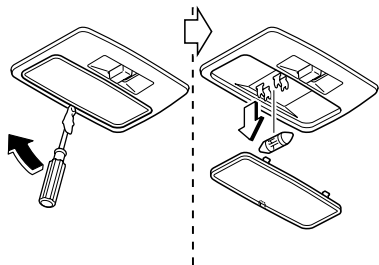
Overhead light/Map lights (Front).  
Overhead light (Rear). Courtesy lights.  
Vanity mirror lights

1. Wrap a small flathead screwdriver with a soft cloth to prevent damage to the lens and remove the lens by carefully prying on the edge of the lens with the flathead screwdriver.
2. Disconnect the bulb by pulling it out.

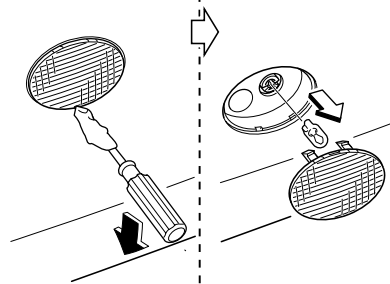
### Overhead light/Map lights (Front)



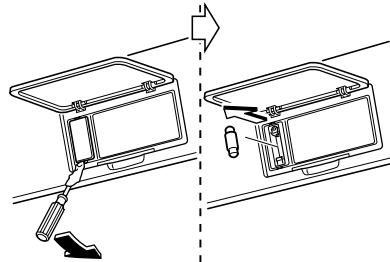
### Overhead light (Rear)



### Courtesy lights



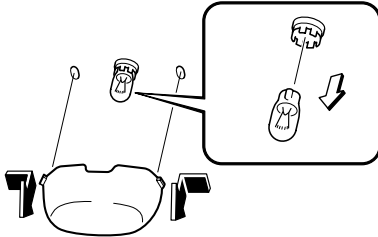
### Vanity mirror lights



3. Install the new bulb in the reverse order of removal.

**Trunk light**

1. Press both sides of the lens cap to remove it.
2. Disconnect the bulb by pulling it out.



3. Install the new bulb in the reverse order of removal.

**Fuses**

Your vehicle's electrical system is protected by fuses.

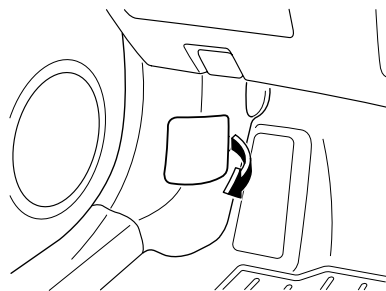
If any lights, accessories, or controls don't work, inspect the appropriate circuit protector. If a fuse has blown, the inside element will be melted.

If the same fuse blows again, avoid using that system and consult an Authorized Mazda Dealer as soon as possible.

**▼ Fuse Replacement****Replacing the fuses on the driver's side kick-panel**

If the electrical system does not work, first inspect the fuses on the driver's side kick-panel.

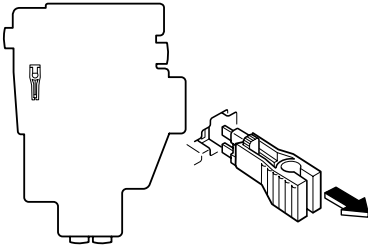
1. Make sure the ignition is switched off, and other switches are off.
2. Open the fuse panel cover by sliding the cover straight back toward you.

**⚠ CAUTION**

*Pulling the cover off sideways may break the retaining tabs off.*

## Owner Maintenance

3. Pull the fuse straight out with the fuse puller provided on the fuse block located in the engine compartment.



4. Inspect the fuse and replace it if it's blown.



Normal



Blown

5. Insert a new fuse of the same amperage rating, and make sure it fits tightly. If it does not fit tightly, have an expert install it. We recommend an Authorized Mazda Dealer. If you have no spare fuses, borrow one of the same rating from a circuit not essential to vehicle operation, such as the AUDIO or CIGAR circuit.

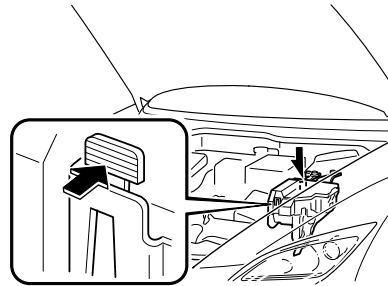
### CAUTION

*Always replace a fuse with one of the same rating. Otherwise you may damage the electric system.*

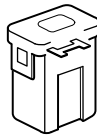
### Replacing the fuses under the hood

If the headlights or other electrical components do not work and the fuses in the cabin are normal, inspect the fuse block under the hood. If a fuse is blown, it must be replaced. Follow these steps:

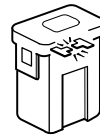
1. Make sure the ignition is switched off, and other switches are off.
2. Remove the fuse block cover.



3. If any fuse but the MAIN fuse is blown, replace it with a new one of the same amperage rating.

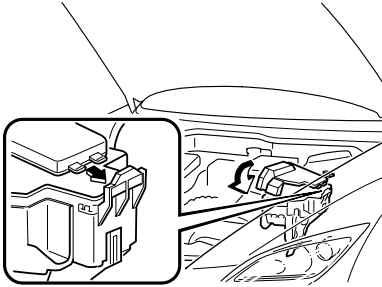


Normal



Blown

4. Install the right side of the fuse block cover first as shown the figure.

**⚠ WARNING**

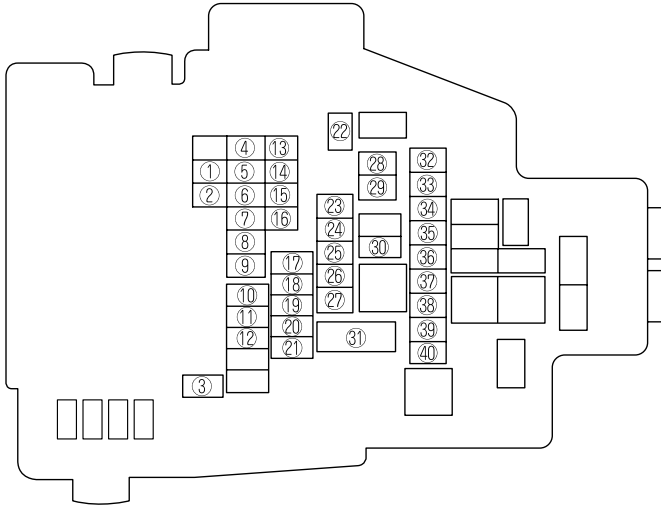
***Do not replace the main fuse by yourself. Have an Authorized Mazda Dealer perform the replacement:***

*Replacing the fuse by yourself is dangerous because the MAIN fuse is a high current fuse. Incorrect replacement could cause an electrical shock or a short circuit resulting in a fire.*

# Owner Maintenance

## ▼ Fuse Panel Description

### Fuse block (Engine compartment)



DESCRIPTION		FUSE RATING	PROTECTED COMPONENT
1	M.DEF	10 A	Mirror defroster*
2	ST SIG	5 A	Starter sig
3	ABS SOL	30 A	DSC
4	P.WIND (P)	—	—
5	P.SEAT (P)	30 A	Power seat*
6	SUN ROOF	15 A	Moonroof*
7	TAIL	15 A	BCM, Tail lamp
8	P.OUTLET (R)	15 A	Accessory sockets
9	AUDIO	30 A	Audio system (Bose® Sound System-equipped model)
10	ABS MOTOR	60 A	DSC
11	P.WIND (D)	40 A	Power window
12	DEFOG	40 A	Rear window defroster
13	SEAT HEAT	20 A	Seat heat*
14	A/C	10 A	Air conditioner
15	FOG	15 A	Fog lights*
16	BLOWER 2	—	—
17	FAN	60 A	Cooling fan

**Owner Maintenance**

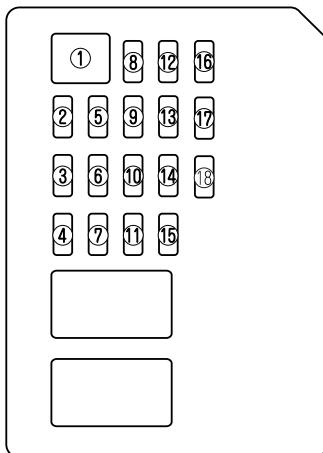
DESCRIPTION		FUSE RATING	PROTECTED COMPONENT
18	P.SEAT (D)	30 A	Power seat *
19	BTN	30 A	For protection of various circuits
20	IG KEY2	40 A	Starting system
21	BLOWER	40 A	Blower motor
22	FUEL PUMP	25 A	Fuel pump
23	ENGINE2	15 A	Engine control system *
24	EGI INJ	15 A	Injector
25	PCM	10 A	Engine control system
26	ENGINE	10 A <sup>*1</sup>	Engine control system
		20 A <sup>*2</sup>	
27	IG	20 A	For protection of various circuits *
28	TCM	20 A	TCM *
29	ESCL	10 A	Electronic steering lock *
30	IG KEY1	40 A	For protection of various circuits
31	MAIN	125 A	For protection of all circuits
32	DRL	20 A	DRL *
33	HAZARD	10 A	Hazard warning flashers
34	ENG+B	10 A	PCM
35	STOP	10 A	Brake lights
36	HORN	15 A	Horn
37	HEAD HI RH	15 A	Headlight-high beam (Right) *
38	HEAD LO RH	10 A	Headlight-low beam (Right)
39	HEAD HI LH	15 A	Headlight-high beam (Left) *
40	HEAD LO LH	10 A	Headlight-low beam (Left)

\*1 2.5-liter engine

\*2 3.7-liter engine

# Owner Maintenance

## Fuse block (Passenger's side)



DESCRIPTION		FUSE RATING	PROTECTED COMPONENT
1	P.WIND	30 A	Power window
2	METER IG	15 A	For protection of various circuits
3	ILLUMI	7.5 A	BCM, Illumination
4	MIRROR	5 A	Power control mirror
5	SAS	5 A	Air bag, DSC
6	—	—	—
7	INT, LOCK/SHIFT	5 A	AT shift *
8	—	—	—
9	HEGO	5 A	Engine control system *
10	A/C	10 A	Air conditioner
11	P.OUTLET/CIGAR	15 A	Power outlet
12	D.LOOK	25 A	BCM, Door lock motor
13	ENGINE IG	15 A	Engine control system
14	WIPER	25 A	Windshield wiper and washer
15	ROOM	15 A	Interior lights
16	SPARE	20 A	—
17	SPARE	10 A	—
18	SPARE	—	—

## How to Minimize Environmental Paint Damage

The paintwork on your Mazda represents the latest technical developments in composition and methods of application.

Environmental hazards, however, can harm the paint's protective properties, if proper care is not taken.

Here are some examples of possible damage, with tips on how to prevent them.

### ▼ Etching Caused by Acid Rain or Industrial Fallout

#### Occurrence

Industrial pollutants and vehicle emissions drift into the air and mix with rain or dew to form acids. These acids can settle on a vehicle's finish. As the water evaporates, the acid becomes concentrated and can damage the finish.

And the longer the acid remains on the surface, the greater the chance is for damage.

#### Prevention

It is necessary to wash and wax your vehicle to preserve its finish according to the instructions in this section. These steps should be taken immediately after you suspect that acid rain has settled on your vehicle's finish.

### ▼ Damage Caused by Bird Dropping, Insects, or Tree Sap

#### Occurrence

Bird droppings contain acids. If these aren't removed they can eat away the clear and color base coat of the vehicle's paintwork.

When insects stick to the paint surface and decompose, corrosive compounds form. These can erode the clear and color base coat of the vehicle's paintwork if they are not removed.

Tree sap will harden and adhere permanently to the paint finish. If you scratch the sap off while it is hard, some vehicle paint could come off with it.

#### Prevention

It is necessary to have your Mazda washed and waxed to preserve its finish according to the instructions in this section. This should be done as soon as possible.

Bird droppings can be removed with a soft sponge and water. If you are traveling and these are not available, a moistened tissue may also take care of the problem. The cleaned area should be waxed according to the instructions in this section.

Insects and tree sap are best removed with a soft sponge and water or a commercially available chemical cleaner.

Another method is to cover the affected area with dampened newspaper for one to two hours. After removing the newspaper, rinse off the loosened debris with water.



## Appearance Care

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### ▼ Water Marks

#### Occurrence

Rain, fog, dew, and even tap water can contain harmful minerals such as salt and lime. If moisture containing these minerals settles on the vehicle and evaporates, the minerals will concentrate and harden to form white rings. The rings can damage your vehicle's finish.

#### Prevention

It is necessary to wash and wax your vehicle to preserve its finish according to the instructions in this section. These steps should be taken immediately after you find water marks on your vehicle's finish.

### ▼ Paint Chipping

#### Occurrence

Paint chipping occurs when gravel thrown in the air by another vehicle's tires hits your vehicle.

#### How to avoid paint chipping

Keeping a safe distance between you and the vehicle ahead reduces the chances of having your paint chipped by flying gravel.

#### **NOTE**

- *The paint chipping zone varies with the speed of the vehicle. For example, when traveling at 90 km/h (56 mph), the paint chipping zone is 50 m (164 ft).*
- *In low temperatures a vehicle's finish hardens. This increases the chance of paint chipping.*
- *Chipped paint can lead to rust forming on your Mazda. Before this happens, repair the damage by using Mazda touch-up paint according to the instructions in this section. Failure to repair the affected area could lead to serious rusting and expensive repairs.*

## Exterior Care

Follow **all** label and container directions when using a chemical cleaner or polish. Read all warnings and cautions.

### ▼ Maintaining the Finish

#### Washing

#### **⚠ CAUTION**

*When the wiper lever is in the AUTO position and the ignition is switched ON, the wipers may move automatically in the following cases:*

- *If the windshield above the rain sensor is touched or wiped with a cloth.*
- *If the windshield is struck with a hand or other object from either outside or inside the vehicle.*

*Keep hands and scrapers clear of the windshield when the wiper lever is in the AUTO position and the ignition is switched ON as fingers could be pinched or the wipers and wiper blades damaged when the wipers activate automatically.*

*If you are going to clean the windshield, be sure the wipers are turned off completely—this is particularly important when clearing ice and snow—when it is most likely that the engine is left running.*

To help protect the finish from rust and deterioration, wash your Mazda thoroughly and frequently, at least once a month, with lukewarm or cold water.

If the vehicle is washed improperly, the paint surface could be scratched. Here are some examples of how scratching could occur.

Scratches occur on the paint surface when:

- The vehicle is washed without first rinsing off dirt and other foreign matter.
- The vehicle is washed with a rough, dry, or dirty cloth.
- The vehicle is washed at a car wash that uses brushes that are dirty or too stiff.
- Cleansers or wax containing abrasives are used.

#### **NOTE**

- *Mazda is not responsible for scratches caused by automatic car washes or improper washing.*
- *Scratches are more noticeable on vehicles with darker paint finishes.*

To minimize scratches on the vehicle's paint finish:

- Rinse off any dirt or other foreign matter using lukewarm or cold water before washing.
- Use plenty of lukewarm or cold water and a soft cloth when washing the vehicle. Do not use a nylon cloth.
- Rub gently when washing or drying the vehicle.
- Take your vehicle only to a car wash that keeps its brushes well maintained.
- Do not use abrasive cleansers or wax that contain abrasives.

#### **⚠ CAUTION**

*Do not use steel wool, abrasive cleaners, or strong detergents containing highly alkaline or caustic agents on chrome-plated or anodized aluminum parts. This may damage the protective coating; also, cleaners and detergents may discolor or deteriorate the paint.*

## Appearance Care

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Pay special attention to removing salt, dirt, mud, and other foreign material from the underside of the fenders, and make sure the drain holes in the lower edges of the doors and rocker panels are clean.

Insects, tar, tree sap, bird droppings, industrial fallout, and similar deposits can damage the finish if not removed immediately. When prompt washing with plain water is ineffective, use a mild soap made for use on vehicles.

Thoroughly rinse off all soap with lukewarm or cold water. Do not allow soap to dry on the finish.

After washing the vehicle, dry it with a clean chamois to prevent water spots from forming.

### **WARNING**

***Dry off brakes that have become wet by driving slowly, releasing the accelerator pedal and lightly applying the brakes several times until the brake performance returns to normal:***

*Driving with wet brakes is dangerous. Increased stopping distance or the vehicle pulling to one side when braking could result in a serious accident. Light braking will indicate whether the brakes have been affected.*

### **When using a high water pressure car wash**

High water temperature and high water pressure car washers are available depending on the type of car wash machine. If the car washer nozzle is put too close to the vehicle, the force of the spray could damage or deform the molding, affect the sealability of parts, and allow water to penetrate the interior. Keep a sufficient space (30 cm or more) between the nozzle and the vehicle. In addition, do not spend too much time spraying the same area of the vehicle, and be very careful when spraying between gaps in doors and around windows.

### **Waxing**

Your vehicle needs to be waxed when water no longer beads on the finish. Always wash and dry the vehicle before waxing it. In addition to the vehicle body, wax the metal trim to maintain its luster.

1. Use wax which contains no abrasives. Waxes containing abrasive will remove paint and could damage bright metal parts.
2. Use a good grade of natural wax for metallic, mica, and solid colors.
3. When waxing, coat evenly with the sponge supplied or a soft cloth.
4. Wipe off the wax with a soft cloth.

### ***NOTE***

*A spot remover to remove oil, tar, and similar materials will usually also take off the wax. Rewax these areas even if the rest of the vehicle does not need it.*

### ▼ Repairing Damage to the Finish

Deep scratches or chips on the finish should be repaired promptly. Exposed metal quickly rusts and can lead to major repairs.

#### CAUTION

*If your Mazda is damaged and needs metal parts repaired or replaced, make sure the body shop applies anti-corrosion materials to all parts, both repaired and new. This will prevent them from rusting.*

### ▼ Bright-Metal Maintenance

- Use tar remover to remove road tar and insects. Never do this with a knife or similar tool.
- To prevent corrosion on bright-metal surfaces, apply wax or chrome preservative and rub it to a high luster.
- During cold weather or in coastal areas, cover bright-metal parts with a coating of wax or preservative heavier than usual. It would also help to coat them with noncorrosive petroleum jelly or some other protective compound.

#### CAUTION

*Don't use steel wool, abrasive cleaners, or strong detergents containing highly alkaline or caustic agents on chrome-plated or anodized aluminum parts. This may result in damage to the protective coating and cause discoloration or paint deterioration.*

### ▼ Underbody Maintenance

Road chemicals and salt used for ice and snow removal and solvents used for dust control may collect on the underbody. If not removed, they will speed up rusting and deterioration of such underbody parts as fuel lines, frame, floor pan, and exhaust system, even though these parts may be coated with anti-corrosive material.

Thoroughly flush the underbody and wheel housings with lukewarm or cold water at the end of each winter. Try also to do this every month.

Pay special attention to these areas because they easily hide mud and dirt. **It will do more harm than good to wet down the road grime without removing it.**

The lower edges of doors, rocker panels, and frame members have drain holes that should not be clogged. Water trapped there will cause rusting.

#### WARNING

***Dry wet brakes by driving very slowly and applying the brakes lightly until brake performance is normal:***

*Driving with wet brakes is dangerous. Increased stopping distance or the vehicle pulling to one side when braking could result in a serious accident. Light braking will indicate whether the brakes have been affected.*

## Appearance Care

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### ▼ Aluminum Wheel Maintenance\*

A protective coating is provided over the aluminum wheels. Special care is needed to protect this coating.

#### CAUTION

*Do not use any detergent other than mild detergent. Before using any detergent, verify the ingredients. Otherwise, the product could discolor or stain the aluminum wheels.*

#### NOTE

- *Do not use a wire brush or any abrasive cleaner, polishing compound, or solvent on aluminum wheels. They may damage the coating.*
- *Always use a sponge or soft cloth to clean the wheels.  
Rinse the wheels thoroughly with lukewarm or cold water. Also, be sure to clean the wheels after driving on dusty or salted roads to help prevent corrosion.*
- *Avoid washing your vehicle in an automatic car wash that uses high-speed or hard brushes.*
- *If your aluminum wheels lose luster, wax the wheels.*

#### **(With Tire Pressure Monitoring System)**

*Check special requirements for Tire Pressure Monitoring System.*

*Refer to Tires and Wheels on page 5-31.*

### ▼ Plastic Part Maintenance

- When cleaning the plastic lenses of the lights, do not use gasoline, kerosene, rectified spirit, paint, thinner, highly acidic detergents, or strongly alkaline detergents. Otherwise, these chemical agents can discolor or damage the surfaces resulting in a significant loss in functionality. If plastic parts become inadvertently exposed to any of these chemical agents, flush with water immediately.
- If plastic parts such as the bumpers become inadvertently exposed to chemical agents or fluids such as gasoline, oil, engine coolant, or battery fluid, it could cause discoloration, staining, or paint peeling. Wipe off any such chemical agents or fluids using a soft cloth immediately.
- High water temperature and high water pressure car washers are available depending on the type of high pressure car washer device. If the car washer nozzle is put too close to the vehicle or aimed at one area for an extended period of time, it could deform plastic parts or damage the paint.
- Do not use wax containing compounds (polish). Otherwise, it could result in paint damage.
- In addition, do not use an electrical or air tool to apply wax. Otherwise, the frictional heat generated could result in deformation of plastic parts or paint damage.

## Interior Care

### ▼ Dashboard Precautions

Prevent caustic solutions such as perfume and cosmetic oils from contacting the dashboard. They'll damage and discolor it. If these solutions get on the dashboard, wipe them off immediately.

### **⚠ CAUTION**

*Do not use glazing agents. Glazing agents contain ingredients which may cause discoloration, wrinkling, cracks and peeling.*

### ▼ Cleaning the Upholstery and Interior Trim

#### Vinyl

Remove dust and loose dirt from vinyl with a whisk broom or vacuum cleaner. Clean vinyl with a leather-and-vinyl cleaner.

#### Leather\*

Remove dust and sand first using a vacuum cleaner or other means, then wipe dirt off using a soft cloth with a leather cleaner or a soft cloth soaked in mild soap.

Wipe off the remaining cleaner or soap using a cloth soaked in clean water and wrung out well.

Remove moisture with a dry, soft cloth and allow the leather to further dry in a well-ventilated, shaded area. If the leather gets wet such as from rain, also remove moisture and dry it as soon as possible.

### **NOTE**

- *Because genuine leather is a natural material, its surface is not uniform and it may have natural scars, scratches, and wrinkles.*
- *To maintain the quality for as long as possible, periodical maintenance, about twice a year, is recommended.*
- *Sand and dust on the seat surface may damage the overcoat of the genuine leather surfaces and accelerate wear.*
- *Greasy soiling on genuine leather may cause molding and stains.*
- *Rubbing hard with a stiff brush or cloth may cause damage.*
- *Do not wipe the leather using alcohol, chlorine bleach, or organic solvents such as thinner, benzene, or gasoline. Otherwise, it may cause discoloration or stains.*
- *If the seats get wet, promptly remove moisture with a dry cloth. Remaining moisture on the surface may cause deterioration such as hardening and shrinkage.*
- *Exposure to direct sunlight for long periods may cause deterioration and shrinkage. When parking the car under direct sunlight for long periods, shade the interior using sunshades.*
- *Do not leave vinyl products on the seats for long periods as they may affect the leather quality and coloring. If the cabin temperature becomes hot, the vinyl may deteriorate and adhere to the genuine leather.*

### Fabric

Remove dust and loose dirt from fabric with a whisk broom or vacuum cleaner. Clean it with a mild soap solution good for upholstery and carpets. Remove fresh spots immediately with a fabric spot cleaner.

## Appearance Care

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To keep the fabric looking clean and fresh, take care of it. Otherwise its color will be affected, it can be stained easily, and its fire-resistance may be reduced.

### CAUTION

*Use only recommended cleaners and procedures. Others may affect appearance and fire-resistance.*

### ▼ Cleaning the Lap/Shoulder Belt Webbing

Clean the webbing with a mild soap solution recommended for upholstery or carpets. Follow instructions. Don't bleach or dye the webbing; this may weaken it.

After cleaning the belts, thoroughly dry the belt webbing and make sure there is no remaining moisture before retracting them.

### WARNING

***Have an Authorized Mazda Dealer replace damaged seat belts immediately:***

*Using damaged seat belts is dangerous. In a collision, damaged belts cannot provide adequate protection.*

### ▼ Cleaning the Window Interiors

If the windows become covered with an oily, greasy, or waxy film, clean them with glass cleaner. Follow the directions on the container.

### CAUTION

- *Do not scrape or scratch the inside of the window glass. It could damage the thermal filaments and the antenna lines.*
- *When washing the inside of the window glass, use a soft cloth dampened in lukewarm water, gently wiping the thermal filaments and the antenna lines. Use of glass cleaning products could damage the thermal filaments and the antenna lines.*

# 9

## Customer Information and Reporting Safety Defects

Important consumer information including warranties and add-on equipment.

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## Customer Assistance

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### Customer Assistance (U.S.A.)

Your complete and permanent satisfaction is our business. We are here to serve you. All Authorized Mazda Dealers have the knowledge and the tools to keep your Mazda vehicle in top condition.

If you have any questions or recommendations for improvement regarding the service of your Mazda vehicle or servicing by Mazda Dealer personnel, we recommend that you take the following steps:

#### ▼STEP 1: Contact Your Mazda Dealer

Discuss the matter with an Authorized Mazda Dealer. This is the quickest and best way to address the issue. If your concern has not been resolved by the CUSTOMER RELATIONS, SALES, SERVICE, or PARTS MANAGER, then please contact the GENERAL MANAGER of the dealership or the OWNER.

#### ▼STEP 2: Contact Mazda North American Operations

If for any reason you feel the need for further assistance after contacting your dealership management, you can reach Mazda North American Operations by one of the following ways.

Log on: at [www.mazdaUSA.com](http://www.mazdaUSA.com)

Answers to many questions, including how to locate or contact a local Mazda dealership in the U.S., can be found here.

E-mail: click on "Contact Us" located on the "Inside Mazda" tab, or at the bottom of the page at [www.mazdaUSA.com](http://www.mazdaUSA.com)

By phone at: 1 (800) 222-5500

By letter at:

Attn: Customer Assistance  
Mazda North American Operations  
7755 Irvine Center Drive  
Irvine, CA 92618-2922  
P.O. Box 19734  
Irvine, CA 92623-9734

In order to serve you efficiently and effectively, please help us by providing the following information:

1. Your name, address, and telephone number

2. Year and model of vehicle
3. Vehicle Identification Number (17 digits, noted on your registration or title or located on the upper driver's side corner of the dash)
4. Purchase date and current mileage
5. Your dealer's name and location
6. Your question(s)

If you live outside the U.S.A., please contact your nearest Mazda Distributor.

**▼ STEP 3: Contact Better Business Bureau (BBB)**

Mazda North American Operations realizes that mutual agreement on some issues may not be possible. As a final step to ensure that your concerns are being fairly considered, Mazda North American Operations has agreed to participate in a dispute settlement program administered by the Better Business Bureau (BBB) system, at no cost to you the consumer.

BBB AUTO LINE works with consumers and the manufacturer in an attempt to reach a mutually acceptable resolution of any warranty related concerns. If the BBB is not able to facilitate a settlement they will provide an informal hearing before an arbitrator.

You are required to resort to BBB AUTO LINE before exercising rights or seeking remedies under the Federal Magnuson-Moss Warranty Act, 15 U.S.C. § 2301 et seq. To the extent permitted by the applicable state “Lemon Law”, you are also required to resort to BBB AUTO LINE before exercising any rights or seeking remedies under the “Lemon Law”. If you choose to seek remedies that are not created by the Magnuson-Moss Warranty Act or the applicable state “Lemon Law”, you are not required to first use BBB AUTO LINE.

The whole process normally takes 40 days or less. The arbitration decision is not binding on you or Mazda unless you accept the decision. For more information about BBB AUTO LINE, including current eligibility standards, please call 1-800-955-5100 or visit the BBB website at [www.lemonlaw.bbb.org](http://www.lemonlaw.bbb.org).

Being truly committed to customer satisfaction is more than a phrase with Mazda. We hope to satisfy every customer directly, but if there is ever a question about our decision, Mazda believes in providing a fast, fair and free method such as the BBB AUTO LINE to ensure Mazda delivers on our commitment to do the right thing for our customers!

## Customer Assistance

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### ▼ California Customers

1. Mazda North American Operations participates in BBB AUTO LINE, a mediation/arbitration program administered by the Council of Better Business Bureaus [4200 Wilson Boulevard, Arlington, Virginia 22203] through local Better Business Bureaus. BBB AUTO LINE and Mazda have been certified by the Arbitration Certification Program of the California Department of Consumer Affairs.
2. If you have a problem arising under a Mazda written warranty, we encourage you to bring it to our attention. If we are unable to resolve it, you may file a claim with BBB AUTO LINE. Claims must be filed with BBB AUTO LINE within six (6) months after the expiration of the warranty.
3. To file a claim with BBB AUTO LINE, call 1-800-955-5100. There is no charge for the call.
4. In order to file a claim with BBB AUTO LINE, you will have to provide your name and address, the brand name and vehicle identification number (VIN) of your vehicle, and a statement of the nature of your problem or complaint. You will also be asked to provide: the approximate date of your acquisition of the vehicle, the vehicle's current mileage, the approximate date and mileage at the time any problem(s) were first brought to the attention of Mazda or one of our dealers, and a statement of the relief you are seeking.
5. BBB AUTO LINE staff may try to help resolve your dispute through mediation. If mediation is not successful, or if you do not wish to participate in mediation, claims within the program's jurisdiction may be presented to an arbitrator at an informal hearing. The arbitrator's decision should ordinarily be issued within 40 days from the time your complaint is filed; there may be a delay of 7 days if you did not first contact Mazda about your problem, or a delay of up to 30 days if the arbitrator requests an inspection/report by an impartial technical expert or further investigation and report by BBB AUTO LINE.
6. You are required to use BBB AUTO LINE before asserting in court any rights or remedies conferred by California Civil Code Section 1793.22. You are also required to use BBB AUTO LINE before exercising rights or seeking remedies created by Title I of the Magnuson-Moss Warranty Act, 15 U.S.C. sec. 2301 et seq. If you choose to seek redress by pursuing rights and remedies not created by California Civil Code Section 1793.22 or Title I of the Magnuson-Moss Warranty Act, resort to BBB AUTO LINE is not required by those statutes.

## Customer Assistance

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7. California Civil Code Section 1793.2 (d) requires that, if Mazda or its representative is unable to repair a new motor vehicle to conform to the vehicle's applicable express warranty after a reasonable number of attempts, Mazda may be required to replace or repurchase the vehicle. California Civil Code Section 1793.22 (b) creates a presumption that Mazda has had a reasonable number of attempts to conform the vehicle to its applicable express warranties if, within 18 months from delivery to the buyer or 18,000 miles on the vehicle's odometer, whichever occurs first, one or more of the following occurs:
- The same nonconformity [a failure to conform to the written warranty that substantially impairs the use, value or safety of the vehicle] results in a condition that is likely to cause death or serious bodily injury if the vehicle is driven **AND** the nonconformity has been subject to repair two or more times by Mazda or its agents **AND** the buyer or lessee has directly notified Mazda of the need for the repair of the nonconformity; OR
  - The same nonconformity has been subject to repair 4 or more times by Mazda or its agents **AND** the buyer has notified Mazda of the need for the repair of the nonconformity; OR
  - The vehicle is out of service by reason of repair of nonconformities by Mazda or its agents for a cumulative total of more than 30 calendar days after delivery of the vehicle to the buyer.

**NOTICE TO Mazda AS REQUIRED ABOVE SHALL BE SENT TO THE FOLLOWING ADDRESS:**

Mazda North American Operations  
7755 Irvine Center Drive  
Irvine, CA 92618  
ATTN: Customer Mediation

8. The following remedies may be sought in BBB AUTO LINE: repairs, reimbursement for money paid to repair a vehicle or other expenses incurred as result of a vehicle nonconformity, repurchase or replacement of your vehicle, and compensation for damages and remedies available under Mazda's written warranty or applicable law.
9. The following remedies may **not** be sought in BBB AUTO LINE: punitive or multiple damages, attorneys' fees, or consequential damages other than as provided in California Civil Code Section 1794 (a) and (b).
10. You may reject the decision issued by a BBB AUTO LINE arbitrator. If you reject the decision, you will be free to pursue further legal action. The arbitrator's decision and any findings will be admissible in a court action.
11. If you accept the arbitrator's decision, Mazda will be bound by the decision, and will comply with the decision within a reasonable time not to exceed 30 days after we receive notice of your acceptance of the decision.
12. Please call BBB AUTO LINE at 1-800-955-5100 for further details about the program.

## Customer Assistance

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### Customer Assistance (Canada)

#### ▼ Satisfaction Review Process

Your complete and permanent satisfaction is of primary concern to Mazda. All Authorized Mazda Dealers have both the knowledge and tools to keep your Mazda in top condition. In our experience, any questions, problems, or complaints regarding the operation of your Mazda or any other general service transactions are most effectively resolved by your dealer. If the cause of your dissatisfaction cannot adequately be addressed by normal dealership procedures, we recommend that you take the following steps:

#### ▼ STEP 1: Contact the Mazda Dealer

Discuss the matter with a member of dealership management. If the Service Manager has already reviewed your concerns, contact the owner of the dealership or its General Manager.

#### ▼ STEP 2: Contact the Mazda Regional Office

If you feel that you still require assistance, ask the dealer Service Manager to arrange for you to meet the local Mazda Service Representative. If more expedient, contact Mazda Canada Inc. Regional Office nearest you for such arrangements. Regional Office address and phone numbers are shown (page 9-8).

#### ▼ STEP 3: Contact the Mazda Customer Relations Department

If still not substantially satisfied, contact the Customer Relations Department, Mazda Canada Inc., 55 Vogell Road, Richmond Hill, Ontario, L4B 3K5 Canada TEL: 1 (800) 263-4680.

Provide the Department with the following information:

1. Your name, address and telephone number
2. Year and model of vehicle
3. Vehicle Identification Number (VIN). Refer to the "Vehicle Identification Labels" page of section 10 of this manual for the location of the VIN.
4. Purchase date
5. Present odometer reading
6. Your dealer's name and location
7. The nature of your problem and/or cause of dissatisfaction

The Department, in cooperation with the local Mazda Service Representative, will review the case to determine if everything possible has been done to ensure your satisfaction.

Please recognize that the resolution of service problems in most cases requires the use of your Mazda dealer's service facilities, personnel and equipment. We urge you to follow the above three steps in sequence for most effective results.

### ▼ **Mediation/Arbitration Program**

Occasionally a customer concern cannot be resolved through Mazda's Customer Satisfaction Program. If after exhausting the procedures in this manual your concern is still not resolved, you have another option.

Mazda Canada Inc. participates in an arbitration program administered by the Canadian Motor Vehicle Arbitration Plan (CAMVAP). CAMVAP will advise you about how your concern may be reviewed and resolved by an independent third party through binding arbitration.

Your complete satisfaction is the goal of Mazda Canada Inc. and our dealers. Mazda's participation in CAMVAP makes a valuable contribution to our achieving that goal. There is no charge for using CAMVAP. CAMVAP results are fast, fair and final as the award is binding on both you and Mazda Canada Inc.

### ▼ **Canadian Motor Vehicle Arbitration Plan (CAMVAP)**

If a specific item of concern arises, where a solution cannot be reached between an owner, Mazda, and/or one of its dealers (that all parties cannot agree upon), the owner may wish to use the services offered by the Canadian Motor Vehicle Arbitration Plan (CAMVAP).

CAMVAP uses the services of Provincial Administrators to assist consumers in scheduling and preparing for their arbitration hearings. However, before you can proceed with CAMVAP you must follow your Mazda dispute resolution process as outlined previously.

## Customer Assistance

CAMVAP is fully implemented in all provinces and territories. Consumers wishing to obtain further information about the Program should contact the Provincial Administrator at 1 (800) 207-0685, or by contacting the Canadian Motor Vehicle Arbitration Plan Office at:

Canadian Motor Vehicle Arbitration Plan  
 235 Yorkland Boulevard, suite 300  
 North York, Ontario  
 M2J 4Y8  
<http://camvap.ca>

Provincial Administrators may be reached locally as listed below:

Province/Territory	CAMVAP Number
British Columbia & Yukon Territories	1 (800) 207-0685
Alberta & Northwest Territories	1 (800) 207-0685
Saskatchewan	1 (800) 207-0685
Manitoba	1 (800) 207-0685
Ontario	1 (800) 207-0685
Atlantic Canada	1 (800) 207-0685
Quebec	1 (800) 207-0685

### ▼ Regional Offices

REGIONAL OFFICES	AREAS COVERED
MAZDA CANADA INC. WESTERN REGION 8171 ACKROYD ROAD SUITE 2000 RICHMOND B.C. V6X 3K1 (604) 303-5670	ALBERTA, BRITISH COLUMBIA, MANITOBA, SASKATCHEWAN, YUKON
MAZDA CANADA INC. CENTRAL/ATLANTIC REGION 55 VOGELL ROAD, RICHMOND HILL, ONTARIO, L4B 3K5 (905) 787-7000	ONTARIO
MAZDA CANADA INC. QUEBEC REGION 6111 ROUTE TRANS CANADIENNE POINTE CLAIRE, QUEBEC H9R 5A5 (514) 694-6390	QUEBEC, NEW BRUNSWICK, NOVA SCOTIA, PRINCE EDWARD ISLAND, NEWFOUNDLAND

## **Customer Assistance (Puerto Rico)**

Your complete and permanent satisfaction is our business. That is why all Authorized Mazda Dealers have the knowledge and the tools to keep your Mazda vehicle in top condition.

If you have any questions or recommendations for improvement regarding the service of your Mazda vehicle or servicing by Mazda Dealer personnel, we recommend that you take the following steps:

### **▼ STEP 1**

Discuss the matter with an Authorized Mazda Dealer. This is the quickest and best way to address the issue. If your concern has not been resolved by the CUSTOMER RELATIONS, SALES, SERVICE, or PARTS MANAGER, then please contact the GENERAL MANAGER of the dealership or the OWNER.

### **▼ STEP 2**

If, after following STEP 1, you feel the need for further assistance, please contact your area's Mazda representative (Indicated on the next page).

Please help us by providing the following information:

1. Your name, address, and telephone number
2. Year and model of vehicle
3. Vehicle Identification Number (17 digits, noted on your registration or title or located on the upper driver's side corner of the dash)
4. Purchase date and current mileage
5. Your dealer's name and location
6. Your question(s)



## Customer Assistance

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### Customer Assistance (Mexico)

Your complete and permanent satisfaction is our business. We are here to serve you. All Authorized Mazda Dealers have the knowledge and the tools to keep your Mazda vehicle in top condition.

If you have any questions or recommendations for improvement regarding the service of your Mazda vehicle or servicing by Mazda Dealer personnel, we recommend that you take the following steps:

#### ▼STEP 1: Contact Your Mazda Dealer

Discuss the matter with an Authorized Mazda Dealer. This is the quickest and best way to address the issue.

- If your concern has not been resolved by the CUSTOMER RELATIONS, SALES, SERVICE, or PARTS MANAGER, then please contact the GENERAL MANAGER of the dealership or the OWNER.
- If it becomes necessary to have the components or wiring system for the supplementary restraint system modified to accommodate a person with certain medical conditions in accordance with a certified physician, go to STEP2.

#### ▼STEP 2: Contact Mazda Motor de Mexico

If for any reason you feel the need for further assistance after contacting your dealership management and it becomes necessary to have the components or wiring system for the supplementary restraint system modified to accommodate a person with certain medical conditions in accordance with a certified physician, you can reach Mazda Motor de Mexico by one of the following ways.

Log on: at [www.MazdaMexico.com.mx](http://www.MazdaMexico.com.mx)

Answers to many questions, including how to locate or contact a local Mazda dealership in Mexico, can be found here.

E-mail: click on “Contactanos” at the top of the page at [www.MazdaMexico.com.mx](http://www.MazdaMexico.com.mx)

By phone at: 1 (866) 315 0220

By letter at:

Attn: Customer Assistance  
Mazda North American Operations  
7755 Irvine Center Drive  
Irvine, CA 92618-2922  
P.O. Box 19734  
Irvine, CA 92623-9734

## Customer Assistance

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In order to serve you efficiently and effectively, please help us by providing the following information:

1. Your name, address, and telephone number
2. Year and model of vehicle
3. Vehicle Identification Number (17 digits, noted on your registration or title or located on the upper driver's side corner of the dash)
4. Purchase date and current mileage
5. Your dealer's name and location
6. Your question(s)

## Mazda Importer/Distributors

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### Importer/Distributor

#### ▼ U.S.A.

##### **Mazda North American Operations**

7755 Irvine Center Drive  
Irvine, CA 92618-2922 U.S.A.  
P.O. Box 19734  
Irvine, CA 92623-9734 U.S.A.  
TEL: 1 (800) 222-5500 (in U.S.A.)  
(949) 727-1990 (outside U.S.A.)

### Distributor in Each Area

#### ▼ CANADA

##### **Mazda Canada Inc.**

55 Vogell Road, Richmond Hill,  
Ontario, L4B 3K5 Canada  
TEL: 1 (800) 263-4680 (in Canada)  
(905) 787-7000 (outside Canada)

#### ▼ PUERTO RICO/U.S. Virgin Islands

##### **Plaza Motors Corp. (Mazda de Puerto Rico)**

P.O. Box 362722, San Juan, Puerto Rico  
00936-2722  
TEL: (787) 641-9300

#### ▼ MEXICO

##### **Mazda Motor de Mexico**

Mario Pani # 150, PB Col. Lomas de  
Santa Fe Mexico, D.F. C.P. 05300 Del.  
Cuajimalpa  
TEL: Center of Attention to Clients:  
01 (800) 016 2932. in Mexico

#### ▼ GUAM

##### **Triple J Motors**

157 South Marine Drive, Tamuning,  
GUAM 96911 USA  
P.O. Box 6066 Tamuning, Guam 96931  
TEL: (671) 649-6555

#### ▼ SAIPAN

##### **Pacific International Marianas, Inc. (d.b.a. Midway Motors)**

P.O. Box 887 Saipan, MP 96950  
TEL: (670) 234-7524

## Mazda Importer/Distributors

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**Triple J Saipan, Inc.**

**(d.b.a. Triple J Motors)**

P.O. Box 500487 Saipan, MP 96950-0487

TEL: (670) 234-7133/3051

**▼ AMERICAN SAMOA**

**Polynesia Motors, Inc.**

P.O. Box 1120, Pago Pago, American  
Samoa 96799

TEL: (684) 699-9347

## Warranty

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### Warranties for Your Mazda

- New Vehicle Limited Warranty
- Distributor Major Component Limited Warranty (Canada only)
- Safety Restraint System Limited Warranty
- Anti-perforation Limited Warranty
- Federal Emission Control Warranty (U.S.A. only)
  - Emission Defect Warranty
  - Emission Performance Warranty
- California Emission Control Warranty (U.S.A. only)
- Emission Control Warranty (Canada only)
- Replacement Parts and Accessories Limited Warranty
- Tire Warranty

**NOTE**

*Detailed warranty information is provided with your Mazda.*

## Outside the United States

Government regulations in the United States require that automobiles meet specific emission regulations and safety standards. Therefore, vehicles built for use in the United States may differ from those sold in other countries.

The differences may make it difficult or even impossible for your vehicle to receive satisfactory servicing in other countries. We strongly recommend that you NOT take your Mazda outside the United States. However, in the event that you are moving to Canada permanently, Mazda vehicles built for use in the United States could be eligible for exportation to Canada with specific vehicle modifications to comply with the Canadian Motor Vehicle Safety Standards (CMVSS).

### **NOTE**

*The above is applicable for a permanent import/export situation and not related to travelers on vacation.*

You may have the following problems if you do take your vehicle outside of the United States:

- Recommended fuel may be unavailable. Any kind of leaded fuel or low-octane fuel will affect vehicle performance and damage the emission controls and engine.
- Proper repair facilities, tools, testing equipment, and replacement parts may not be available.

Please refer to your Manufacturer's Warranty Booklet for more information.

## Warranty

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### Outside Canada

Government regulations in Canada require that automobiles meet specific emission regulations and safety regulations. Therefore, vehicles built for use in Canada may differ from those sold in other countries.

The differences may make it difficult or even impossible for your vehicle to receive satisfactory servicing in other countries. We strongly recommend that you NOT take your Mazda outside Canada. However, in the event that you are moving to the United States permanently, Mazda vehicles built for use in Canada could be eligible for exportation to the United States with specific vehicle modifications to comply with the United States Federal Motor Vehicle Safety Standards (FMVSS).

**NOTE**

*The above is applicable for a permanent import/export situation and not related to travelers on vacation.*

You may have the following problems if you do take your vehicle outside of Canada:

- Recommended fuel may be unavailable. Any kind of leaded fuel or low-octane fuel will affect vehicle performance and damage the emission controls and engine.
- Proper repair facilities, tools, testing equipment, and replacement parts may not be available.

Please refer to your Manufacturer's Warranty Booklet for more information.

## **Registering Your Vehicle in A Foreign Country (Except United States and Canada)**

Registering your vehicle in a foreign country may be problematic depending on whether it meets the specific emission and safety standards of the country in which the vehicle will be driven. Consequently, your vehicle may require modifications at personal expense in order to meet the regulations.

In addition, you should be aware of the following issues:

Satisfactory vehicle servicing may be difficult or impossible in another country.

The fuel specified for your vehicle may be unavailable.

Parts, servicing techniques, and tools necessary to maintain and repair your vehicle may be unavailable.

There might not be an Authorized Mazda Dealer in the country you plan to take your vehicle.

The Mazda warranty is valid only in certain countries.



## Warranty

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### Add-On Non-Genuine Parts and Accessories

Non-genuine parts and accessories for Mazda vehicles can be found in stores. These may fit your vehicle, but they are not approved by Mazda for use with Mazda vehicles. When you install non-genuine parts or accessories, they could affect your vehicle's performance or safety systems; the Mazda warranty doesn't cover this. Before you install any non-genuine parts or accessories, consult an Authorized Mazda Dealer.

#### **WARNING**

***Always consult an Authorized Mazda Dealer before you install non-genuine parts or accessories:***

*Installation of non-genuine parts or accessories is dangerous. Improperly designed parts or accessories could seriously affect your vehicle's performance or safety systems. This could cause you to have an accident or increase your chances of injuries in an accident.*

***Be very careful in choosing and installing add-on electrical equipment, such as mobile telephones, two-way radios, stereo systems, and car alarm systems:***

*Incorrectly choosing or installing improper add-on equipment or choosing an improper installer is dangerous. Essential systems could be damaged, causing engine stalling, air-bag (SRS) activation, ABS/TCS/DSC inactivation, or a fire in the vehicle.*

Mazda assumes no responsibility for death, injury, or expenses that may result from the installation of add-on non-genuine parts or accessories.

## Cell Phones Warning

### **WARNING**

***Please comply with the legal regulations concerning the use of communication equipment in vehicles in your State or Province:***

*Use of any electrical devices such as cell phones, computers, portable radios, vehicle navigation or other devices by the driver while the vehicle is moving is dangerous. Dialing a number on a cell phone while driving also ties-up the driver's hands. Use of these devices will cause the driver to be distracted and could lead to a serious accident. If a passenger is unable to use the device, pull off the right-of-way to a safe area before use. If use of a cell phone is necessary despite this warning, use a hands-free system to at least leave the hands free to drive the vehicle. Never use a cell phone or other electrical devices while the vehicle is moving and, instead, concentrate on the full-time job of driving.*

## Uniform Tire Quality Grading System (UTQGS)

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### Uniform Tire Quality Grading System (UTQGS)

This information relates to the tire grading system developed by the U.S. National Highway Traffic Safety Administration for grading tires by tread wear, traction, and temperature performance.

#### ▼ Tread Wear

The tread wear grade is a comparative rating based on the wear rate of the tire when tested under controlled conditions on a specified government test course.

For example, a tire graded 150 would wear one-and-a-half times as well on the government course as a tire graded 100.

The relative performance of tires depends upon the actual conditions of their use, however, and may depart significantly from the norm because of variations in driving habits, service practices and differences in road characteristics and climate.

#### ▼ Traction-AA, A, B, C

The traction grades, from highest to lowest, are AA, A, B, and C. These grades represent the tire's ability to stop on wet pavement as measured under controlled conditions on specified government test surfaces of asphalt and concrete. A tire marked C may have poor traction performance.

#### WARNING

*The traction grade assigned to this tire is based on braking (straight ahead) traction tests and does not include acceleration cornering (turning), hydroplaning, or peak traction characteristics.*

#### ▼ Temperature-A, B, C

The temperature grades A (the highest), B, and C, represent the tire's resistance to the generation of heat and its ability to dissipate heat when tested under controlled conditions on a specified indoor laboratory test wheel.

Sustained high temperature can cause the material of the tire to degenerate and reduce tire life, and excessive temperatures can lead to sudden tire failure.

Grade C corresponds to a level of performance which all passenger vehicle tires must meet under the Federal Motor Vehicle Safety Standard No. 109. Grades B and A represent higher levels of performance on the laboratory test wheel than the minimum required by law.

## Uniform Tire Quality Grading System (UTQGS)

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### **⚠ WARNING**

**Keep your vehicle's tires properly inflated and not overloaded:**

*Driving with improperly inflated or overloaded tires is dangerous. Excessive speed, underinflation, or excessive loading, either separately or in combination, can cause heat buildup and possible tire failure. The temperature grade for this tire is established for a tire that is properly inflated and not overloaded.*

These grades will be added to the sidewalls of passenger vehicle tires over the next several years according to a schedule established by the NHTSA and the tire manufacturers.

The grade of tires available as standard or optional equipment on Mazda vehicles may vary with respect to grade.

**ALL PASSENGER VEHICLE TIRES MUST CONFORM TO THESE GRADES AND TO ALL OTHER FEDERAL TIRE-SAFETY REQUIREMENTS.**

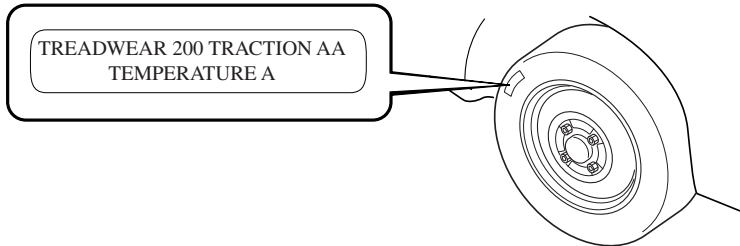
### ▼ Uniform Tire Quality Grading

Quality grades can be found where applicable on the tire sidewall between tread shoulder and maximum section width.

For example:

**Treadwear 200 Traction AA Temperature A**

**UTQGS MARK (example)**



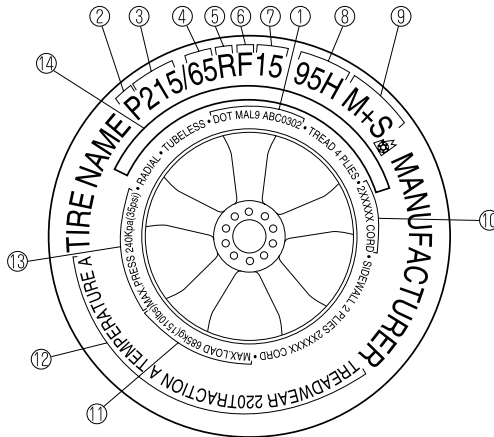
# Tire Information (U.S.A.)

## Tire Labeling

Federal law requires tire manufacturers to place standardized information on the sidewall of all tires. This information identifies and describes the fundamental characteristics of the tire and also provides a tire identification number for safety standard certification and in case of a recall.

### ▼ Information on Passenger Vehicle Tires

Please refer to the sample below.



1. TIN: U.S. DOT tire identification number
2. Passenger car tire
3. Nominal width of tire in millimeters
4. Ratio of height to width (aspect ratio)
5. Radial
6. Run-flat tire
7. Rim diameter code
8. Load index & speed symbol
9. Severe snow conditions
10. Tire ply composition and materials used

## Tire Information (U.S.A.)

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11. Max. load rating
12. Tread wear, traction and temperature grades
13. Max. permissible inflation pressure
14. SAFETY WARNING

P215/65R15 95H is an example of a tire size and load index rating. Here is an explanation of the various components of that tire size and load index rating. Note that the tire size and load index rating may be different from the example.

### **P**

Indicates a tire that may be installed on cars, SUVs, minivans and light trucks as designated by the Tire and Rim Association (T&RA).

### **NOTE**

*If your tire size does not begin with a letter this may mean it is designated by either ETRTO (European Tire and Rim Technical Organization) or JATMA (Japan Tire Manufacturing Association).*

### **215**

“215” is the nominal width of the tire in millimeters. This three-digit number gives the width in millimeters of the tire from sidewall edge to sidewall edge. In general, the larger the number, the wider the tire.

### **65**

“65” is the aspect ratio. This two-digit number indicates the tire's ratio of height to width.

### **R**

“R” is the tire construction symbol. R indicates “Radial ply construction”.

### **15**

“15” is the wheel rim diameter in inches.

### **95**

“95” is the Load Index. This two-or three-digit number indicates how much weight each tire can support.

## Tire Information (U.S.A.)

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### H

“H” is the speed rating. The speed rating denotes the maximum speed for which the use of the tire is rated.

Letter Rating	Speed Rating
Q	99 mph
R	106 mph
S	112 mph
T	118 mph
U	124 mph
H	130 mph
V	149 mph
W	168 <sup>*</sup> mph
Y	186 <sup>*</sup> mph

\* For tires with a maximum speed capability over 149 mph, tire manufacturers sometimes use the letters ZR. For tires with a maximum speed capability over 186 mph, tire manufacturers always use the letters ZR.

### **M+ S or M/S: Mud and Snow**

AT: All Terrain.

AS: All Season. The “M+ S” or “M/S” indicates that the tire has some functional use in mud and snow.

### **U.S. DOT Tire Identification Number (TIN)**

This begins with the letters “DOT” which indicates the tire meets all federal standards. The next two numbers or letters are the plant code where it was manufactured, and the last four numbers represent the week and year the tire was manufactured. For example, the numbers 457 means the 45<sup>th</sup> week of 1997. After 2000 the numbers go to four digits. For example, the number 2102 means the 21<sup>th</sup> week of 2002. The other numbers are marketing codes used at the manufacturer's discretion. This information is used to contact consumers if a tire defect requires a recall.

### **Tire Ply Composition and Materials Used**

The number of plies indicates the number of layers of rubber-coated fabric in the tire. In general, the greater the number of plies, the more weight a tire can support. Tire manufacturers also must indicate the tire materials, which include steel, nylon, polyester, and other.

### **Maximum Load Rating**

This number indicates the maximum load in kilograms and pounds that can be carried by the tire.

### **Maximum Permissible Inflation Pressure**

This number is the greatest amount of air pressure that should ever be put in the tire under normal driving conditions.

## Tire Information (U.S.A.)

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### **Tread Wear, Traction and Temperature Grades**

**Tread wear:** The tread wear grade is a comparative rating based on the wear rate of the tire when tested under controlled conditions on a specified government test course. For example, a tire graded 150 would wear one and one-half (1 1/2) times as well on the government course as a tire graded 100.

**Traction:** The traction grades, from highest to lowest are AA, A, B, and C. The grades represent the tire's ability to stop on wet pavement as measured under controlled conditions on specified government test surfaces of asphalt and concrete. A tire marked C may have poor traction performance.

**Temperature:** The temperature grades are A (the highest), B and C, representing the tire's resistance to the generation of heat and its ability to dissipate heat when tested under controlled conditions on a specified indoor laboratory test wheel.

### **Snow Tires**

In some heavy snow areas, local governments may require true snow tires, those with very deeply cut tread. These tires should only be used in pairs or placed on all four wheels. Make sure you purchase snow tires that are the same size and construction type as the other tires on your vehicle.

### **SAFETY WARNING**

The following safety warning appears on the tire's sidewall.

SERIOUS INJURY MAY RESULT FROM:

- EXPLOSION OF TIRE/RIM ASSEMBLY DUE TO IMPROPER MOUNTING-MATCH TIRE DIAMETER TO RIM DIAMETER; NEVER EXCEED 40 psi (275 kPa) TO SEAT BEADS-ONLY SPECIALLY TRAINED PERSONS SHOULD MOUNT TIRES.
- TIRE FAILURE DUE TO UNDER-INFLATION/OVERLOADING/DAMAGE-FOLLOW OWNER'S MANUAL AND PLACARD IN VEHICLE-FREQUENTLY CHECK INFLATION PRESSURE AND INSPECT FOR DAMAGE.

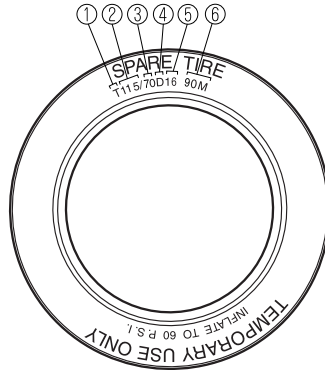


## Tire Information (U.S.A.)

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### ▼ Information on Temporary Tires

Please refer to the sample below.



1. Temporary tires
2. Nominal width of tire in millimeters
3. Ratio of height to width (aspect ratio)
4. Diagonal
5. Rim diameter code
6. Load index & speed symbol

T115/70D 16 90M is an example of a tire size and load index rating. Here is an explanation of the various components of that tire size and load index rating. Note that the tire size and load index rating may be different from the example.

### **T**

Indicates a tire that may be installed on cars, SUVs, minivans and light trucks as designated by the Tire and Rim Association (T&RA).

### **115**

“115” is the nominal width of the tire in millimeters. This three-digit number gives the width in millimeters of the tire from sidewall edge to sidewall edge. In general, the larger the number, the wider the tire.

**Tire Information (U.S.A.)**

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**70**

“70” is the aspect ratio. This two-digit number indicates the tire's ratio of height to width.

**D**

“D” is the tire construction symbol. D indicates “diagonal ply construction”.

**16**

“16” is the wheel rim diameter in inches.

**90**

“90” is the Load Index. This two-or three-digit number indicates how much weight each tire can support.

**M**

“M” is the speed rating. The speed rating denotes the maximum speed for which the use of the tire is rated.

Letter Rating	Speed Rating
M	81 mph

## Tire Information (U.S.A.)

### Location of the Tire Label (Placard)

You will find the tire label containing tire inflation pressure by tire size and other important information on the driver's side B-pillar or on the edge of the driver's door frame.

#### SAMPLE

TIRE AND LOADING INFORMATION RENSEIGNEMENTS SUR LES PNEUS ET LE CHARGEMENT				
SEATING CAPACITY NOMBRE DE PLACES		TOTAL 5	FRONT AVANT 2	REAR ARRIÈRE 3
The combined weight of occupants and cargo should never exceed <b>xxx</b> kg or <b>xxx</b> lbs.* Le poids total des occupants et du chargement ne doit jamais dépasser <b>xxx</b> kg ou <b>xxx</b> lb.*				
TIRE PNEU	SIZE DIMENSIONS	COLD TIRE PRESSURE PRESSION DES PNEUS À FROID	SEE OWNER'S MANUAL FOR ADDITIONAL INFORMATION	
FRONT AVANT	P195/70R14	200 kPa, 29 psi	VOIR LE MANUEL DE L'USAGER POUR PLUS DE RENSEIGNEMENTS (XXX)	
REAR ARRIÈRE	P195/70R14	200 kPa, 29 psi		
SPARE DE SECOURS	T125/70D15	420 kPa, 60 psi		

#### ▼ Recommended Tire Inflation Pressure

On the tire label you will find the recommended tire inflation pressure in both kPa and psi for the tires installed as original equipment on the vehicle. It is very important that the inflation pressure of the tires on your vehicle is maintained at the recommended pressure. You should check the tire pressure regularly to insure that the proper inflation pressure is maintained.

Refer to Tires on page 10-7.

#### NOTE

*Tire pressures listed on the vehicle placard or tire information label indicate the recommended cold tire inflation pressure, measured when the tires are cold, after the vehicle has been parked for at least 3 hours. As you drive, the temperature in the tire warms up, increasing the tire pressure.*

**⚠ WARNING**

**Always check the tire inflation pressures on a regular basis according to the recommended tire inflation pressure on the tire label and in conjunction with the information in this owner's manual:**

*Driving your vehicle with under-inflated tires is dangerous.*

*Under-inflation is the most common cause of failures in any kind of tire and may result in severe cracking, tread separation or "blowout", with unexpected loss of vehicle control and increased risk of injury. Under-inflation increases sidewall flexing and rolling resistance, resulting in heat buildup and internal damage to the tire. It results in unnecessary tire stress, irregular wear, loss of control and accidents. A tire can lose up to half of its air pressure and not appear to be flat!*

*It is impossible to determine whether or not tires are properly inflated just by looking at them.*

**▼ Checking Tire Pressure**

1. When you check the air pressure, make sure the tires are cold —meaning they are not hot from driving even a mile.
2. Remove the cap from the valve on one tire.
3. Firmly press a tire gauge onto the valve.
4. Add air to achieve recommended air pressure.
5. If you overfill the tire, release air by pushing on the metal stem in the center of the valve. Then recheck the pressure with your tire gauge.
6. Replace the valve cap.
7. Repeat with each tire, including the spare.

**NOTE**

*Some spare tires require higher inflation pressure.*

8. Visually inspect the tires to make sure there are no nails or other objects embedded that could poke a hole in the tire and cause an air leak.
9. Check the sidewalls to make sure there are no gouges, cuts, bulges, cracks or other irregularities.

**NOTE**

*Warm tires normally exceed recommended pressures. Don't release air from warm tires to adjust the pressure.*

*Under-inflation can cause serious failures and accidents.*

*Over-inflation can produce a harsh ride and the greater possibility of damage from road hazards.*

## Tire Information (U.S.A.)

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### ▼ Glossary of Terms

**Tire Placard:** A label indicating the OE tire sizes, recommended inflation pressure, and the maximum weight the vehicle can carry.

**Tire Identification Number (TIN):** A number on the sidewall of each tire providing information about the tire brand and manufacturing plant, tire size, and date of manufacture.

**Inflation Pressure:** A measure of the amount of air in a tire.

**kPa:** Kilopascal, the metric unit for air pressure.

**psi:** Pounds per square inch, the English unit for air pressure.

**B-pillar:** The structural member at the side of the vehicle behind the front door.

**Original Equipment (OE):** Describes components originally equipped on the vehicle.

**Vehicle Load Limit:** The maximum value of the combination weight of occupants and cargo.

**Bead Area of the Tire:** Area of the tire next to the rim.

**Sidewall Area of the Tire:** Area between the bead area and the tread.

**Tread Area of the Tire:** Area on the perimeter of the tire that contacts the road when it's mounted on the vehicle.

**Seating capacity** means the total allowable number of vehicle occupants. Seating capacity is described on the tire label.

**Production options weight** is the combination weight of installed regular production options weighing over 2.3 kilograms in excess of the standard items which they replace, and not previously considered in the curb weight or accessory weight, including heavy duty brakes, ride levelers, roof rack, heavy duty battery, and special trim.

**Rim** is the metal support (wheel) for a tire or a tire and tube assembly upon which the tire beads are seated.

## Tire Maintenance

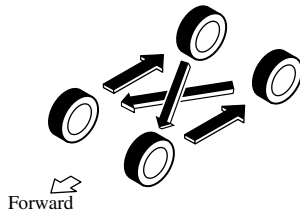
Improper or inadequate vehicle maintenance can cause tires to wear abnormally. Here are some important maintenance points:

### ▼ Tire Inflation Pressure

Inspect all tire pressure monthly (including the spare) when the tires are cold. Maintain recommended pressures for the best ride, top handling, and minimum tire wear. Use the pressures specified on the vehicle tire information placard or tire label for optimum service.

### ▼ Tire Rotation

To equalize tread wear, rotate the tires every 12,000 km (7,500 miles) or sooner if irregular wear develops. During rotation, inspect them for correct balance.



Do not include (TEMPORARY USE ONLY)  
spare tire in rotation.

Inspect the tires for uneven wear and damage. Abnormal wear is usually caused by one or a combination of the following:

- Incorrect tire pressure
- Improper wheel alignment
- Out-of-balance wheel
- Severe braking

After rotation, inflate all tire pressures to specification (page 10-7) and inspect the lug nuts for tightness.

### **CAUTION**

*Rotate unidirectional tires and radial tires that have an asymmetrical tread pattern or studs only from front to rear, not from side to side. Tire performance will be weakened if rotated from side to side.*

## Tire Information (U.S.A.)

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### ▼ Replacing a Tire

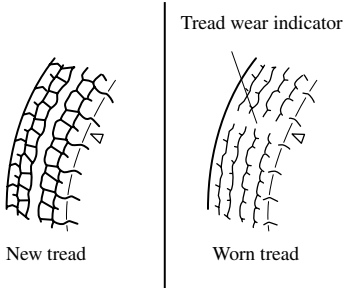
#### **⚠ WARNING**

**Always use tires that are in good condition:**

*Driving with worn tires is dangerous. Reduced braking, steering, and traction could result in an accident.*

If a tire wears evenly, a wear indicator will appear as a solid band across the tread.

Replace the tire when this happens.



You should replace the tire before the band crosses the entire tread.

#### **NOTE**

*Tires degrade over time, even when they are not being used on the road. It is recommended that tires generally be replaced when they are 6 years or older. Heat caused by hot climates or frequent high loading conditions can accelerate the aging process. You should replace the spare tire when you replace the other road tires due to the aging of the spare tire. The period in which the tire was manufactured (both week and year) is indicated by a 4-digit number.*

*Refer to The tire labeling on page 9-22.*

### ▼ Safety Practices

The way you drive has a great deal to do with your tire mileage and safety. So cultivate good driving habits for your own benefit.

- Observe posted speed limits
- Avoid fast starts, stops and turns
- Avoid potholes and objects on the road
- Do not run over curbs or hit the tire against the curb when parking

## Tire Information (U.S.A.)

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 **CAUTION**

*If you feel a sudden vibration or ride disturbance while driving or you suspect your tire or vehicle has been damaged, immediately reduce your speed. Drive with caution until you can safely pull off the road. Stop and inspect the tire for damage. If the tire is under-inflated or damaged, deflate it, remove the tire and rim and replace it with your spare tire. If you cannot detect a cause, have the vehicle towed to the nearest vehicle or tire dealer to have the vehicle inspected.*



## Tire Information (U.S.A.)

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### Vehicle Loading

#### **WARNING**

**Do not tow a trailer with this vehicle:**

*Towing a trailer with this vehicle is dangerous because it has not been designed to tow a trailer and doing so will affect the drive system which could result in vehicle damage.*

This section will guide you in the proper loading of your vehicle, to keep your loaded vehicle weight within its design rating capability. Properly loading your vehicle will provide maximum return of vehicle design performance. Before loading your vehicle, familiarize yourself with the following terms for determining your vehicle's weight ratings, from the vehicle's Safety Certification Label and Tire and Load Information Label:

#### **WARNING**

**Overloaded Vehicle:**

*Overloading a vehicle is dangerous. The results of overloading can have serious consequences in terms of passenger safety. Too much weight on a vehicle's suspension system can cause spring or shock absorber failure, brake failure, handling or steering problems, irregular tire wear, tire failure or other damage. Overloading makes a vehicle harder to drive and control. It also increases the distance required for stopping. In cases of serious overloading, brakes can fail completely, particularly on steep grades. The load a tire will carry safely is a combination of the size of the tire, its load range, and corresponding inflation pressure.*

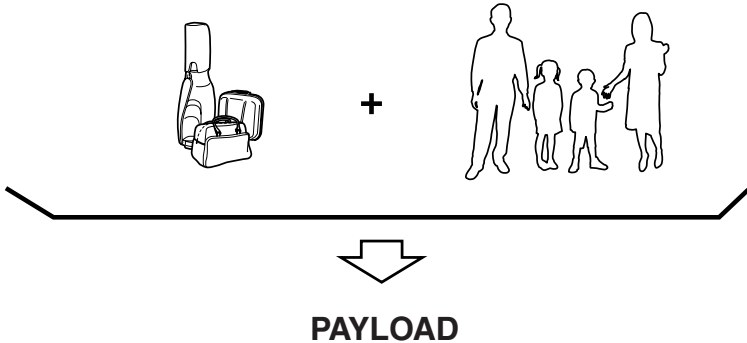
*Never overload the vehicle and always observe the vehicle's weight ratings from the vehicle's Safety Certification and Tire and Load Information labels.*

## Tire Information (U.S.A.)

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**Base Curb Weight** is the weight of the vehicle including a full tank of fuel and all standard equipment. It does not include passengers, cargo, or optional equipment.


**Vehicle Curb Weight** is the weight of your new vehicle when you picked it up from your dealer plus any aftermarket equipment.



**Payload** is the combination weight of cargo and passengers that the vehicle is designed to carry. The maximum payload for your vehicle can be found on the Tire and Load Information label on the driver's door frame or door pillar. Look for "THE COMBINATION WEIGHT OF OCCUPANTS AND CARGO SHOULD NEVER EXCEED XXX kg or XXX lbs" for your maximum payload. The payload listed on the tire label is the maximum payload for the vehicle as built by the assembly plant. If any aftermarket or dealer installed equipment has been installed on the vehicle, the weight of the equipment must be subtracted from the payload listed on the tire label in order to be accurate.

# Tire Information (U.S.A.)

SAMPLE



**TIRE AND LOADING INFORMATION**  
**RENSEIGNEMENTS SUR LES PNEUS ET LE CHARGEMENT**

SEATING CAPACITY NOMBRE DE PLACES	TOTAL 5	FRONT AVANT 2	REAR ARRIÈRE 3
--------------------------------------	---------	------------------	-------------------

The combined weight of occupants and cargo should never exceed xxx kg or lbs.\*  
 Le poids total des occupants et du chargement ne doit jamais dépasser xxx kg ou xxx lb.\*

TIRE PNEU	SIZE DIMENSIONS	COLD TIRE PRESSURE PRESSION DES PNEUS À FROID	SEE OWNER'S MANUAL FOR ADDITIONAL INFORMATION
FRONT AVANT	P195/70R14	200 kPa, 29 psi	VOIR LE MANUEL DE L'USAGER POUR PLUS DE RENSEIGNEMENTS
REAR ARRIÈRE	P195/70R14	200 kPa, 29 psi	
SPARE DE SECOURS	T125/70D15	420 kPa, 60 psi	

(XXX)



**CARGO**

**Cargo Weight** includes all weight added to the Base Curb Weight, including cargo and optional equipment.

The cargo weight limit decreases depending on the number of vehicle occupants. The cargo weight limit can be calculated by subtracting the total weight of the vehicle occupants from the “combination weight of occupants and cargo should never exceed” value on the tire label.

## Tire Information (U.S.A.)

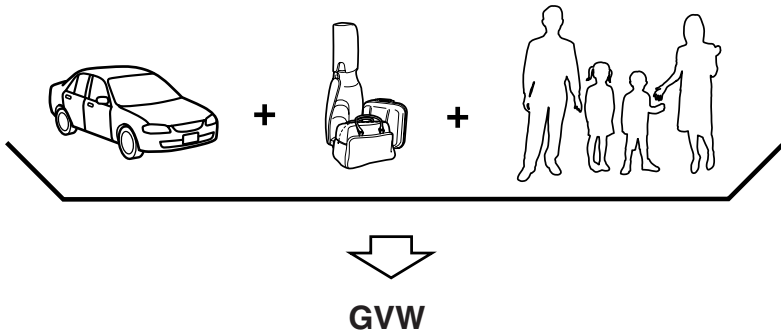
Examples: Based on a single occupant weight of 68 kg (150 lbs), and a value of 385 kg (849 lbs) for the “combination weight of occupants and cargo should never exceed”:  
The cargo weight limit with one occupant is 385 kg (849 lbs) – 68 kg (150 lbs) = 317 kg (699 lbs)

The cargo weight limit with two occupants is 385 kg (849 lbs) – (68 × 2) kg ((150 × 2) lbs) = 249 kg (549 lbs)

If the weight of the occupant increases, the cargo weight limit decreases by that much.

**GAW (Gross Axle Weight)** is the total weight placed on each axle (front and rear) - including vehicle curb weight and all payload.

**GAWR (Gross Axle Weight Rating)** is the maximum allowable weight that can be carried by a single axle (front or rear). **These numbers are shown on the Safety Compliance Certification Label located on the driver's door frame or door pillar. The total load on each axle must never exceed its GAWR.**



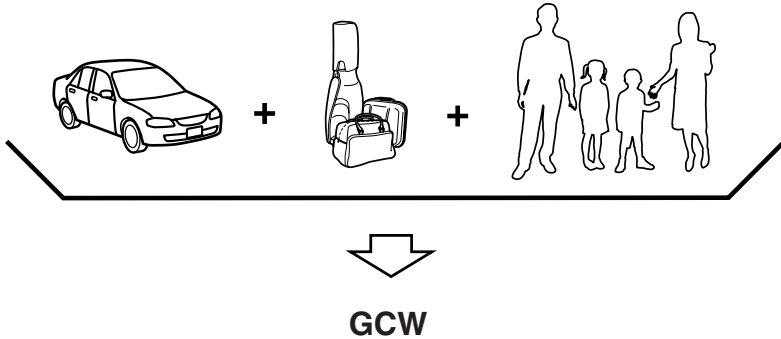
**GVW (Gross Vehicle Weight)** is the Vehicle Curb Weight + cargo + passengers.

**GVWR (Gross Vehicle Weight Rating)** is the maximum allowable weight of the fully loaded vehicle (including all options, equipment, passengers and cargo). **The GVWR is shown on the Safety Compliance Certification Label located on the driver's door frame or door pillar. The GVW must never exceed the GVWR.**



## Tire Information (U.S.A.)

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**GCW (Gross Combination Weight)** is the weight of the loaded vehicle (GVW).

**GCWR (Gross Combination Weight Rating)** is the maximum allowable weight of the vehicle - including all cargo and passengers - that the vehicle can handle without risking damage. **The GCW must never exceed the GCWR.**

### **⚠ WARNING**

**Exceeding GVWR or GAWR Specifications:**

*Exceeding the GVWR or the GAWR specified on the certification label is dangerous. Exceeding any vehicle rating limitation could result in a serious accident, injury, or damage to the vehicle.*

*Do not use replacement tires with lower load carrying capacities than the originals because they may lower the vehicle's GVWR and GAWR limitations. Replacement tires with a higher limit than the originals do not increase the GVWR and GAWR limitations.*

*Never exceed the GVWR or the GAWR specified on the certification label.*

## Tire Information (U.S.A.)

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### Steps for Determining the Correct Load Limit:

Steps for Determining Correct Load Limit:

- (1) Locate the statement “The combined weight of occupants and cargo should never exceed XXX kg or XXX lbs” on your vehicle's placard.
- (2) Determine the combined weight of the driver and passengers that will be riding in your vehicle.
- (3) Subtract the combined weight of the driver and passengers from XXX kg or XXX lbs.
- (4) The resulting figure equals the available amount of cargo and luggage load capacity. For example, if the “XXX” amount equals 1400 lbs. and there will be five 150 lb passengers in your vehicle, the amount of available cargo and luggage load capacity is 650 lbs. ( $1400 - 750 (5 \times 150) = 650$  lbs.)
- (5) Determine the combined weight of luggage and cargo being loaded on the vehicle. That weight may not safely exceed the available cargo and luggage load capacity calculated in Step 4.
- (6) If your vehicle will be towing a trailer, the load from your trailer will be transferred to your vehicle. Consult this manual to determine how this reduces the available cargo and luggage load capacity of your vehicle.

## Reporting Safety Defects

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### Reporting Safety Defects (U.S.A.)

If you believe that your vehicle has a defect which could cause a crash or could cause injury or death, you should immediately inform the National Highway Traffic Safety Administration (NHTSA) in addition to notifying Mazda Motor Corporation (Your Mazda Importer/Distributor).

If NHTSA receives similar complaints, it may open an investigation, and if it finds that a safety defect exists in a group of vehicles, it may order a recall and remedy campaign. However, NHTSA cannot become involved in individual problems between you, your dealer, or Mazda Motor Corporation (Your Mazda Importer/Distributor).

To contact NHTSA, you may call the Vehicle Safety Hotline toll-free at 1-888-327-4236 (TTY:1-800-424-9153) ; go to <http://www.safercar.gov>; or write to: Administrator, NHTSA, 1200 New Jersey Avenue, SE., Washington, DC, 20590. You can also obtain other information about motor vehicle safety from <http://www.safercar.gov>.

**NOTE**

*If you live in the U.S.A., all correspondence to Mazda Motor Corporation should be forwarded to:*

*Mazda North American Operations*

*7755 Irvine Center Drive*

*Irvine, California 92618-2922*

*or*

*P.O. Box 19734*

*Irvine, CA 92623-9734*

*Customer Assistance Center or toll free at 1 (800) 222-5500*

*If you live outside of the U.S.A., please contact the nearest Mazda Distributor shown (page 9-12) in this booklet.*



## Reporting Safety Defects

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### Reporting Safety Defects (Canada)

Canadian customers who wish to report a safety-related defect to Transport Canada, Defect Investigations and Recalls, may telephone the toll free hotline 1-800-333-0510, or contact Transport Canada by mail at: Transport Canada, ASFAD, Place de Ville Tower C, 330 Sparks Street, Ottawa ON K1A 0N5.

For additional road safety information, please visit the Road Safety website at:  
<http://www.tc.gc.ca/roadsafety/menu.htm>

## Service Publications

Factory-authorized Mazda service publications are available for owners who wish to do some of their own maintenance and repair.

When requesting any of our publications through an Authorized Mazda Dealer, refer to the chart below.

If they do not have what you need in stock, they can order it for you.

<b>PUBLICATION ORDER NUMBER</b>	<b>PUBLICATION DESCRIPTION</b>
9999-95-063B-11	2011 WORKSHOP MANUAL (English)
9999-MX-063B-11	2011 WORKSHOP MANUAL (Spanish)
9999-95-039G-11	2011 WIRING DIAGRAM (English)
9999-MX-039G-11	2011 WIRING DIAGRAM (Spanish)
9999-95-078C-11 (U.S.A. only)	2011 OWNER'S MANUAL
9999-EC-078C-11 (Canada only)	2011 OWNER'S MANUAL
9999-PR-078C-11 (Puerto Rico, Mexico only)	2011 OWNER'S MANUAL
9999-95-101F-11	2011 SERVICE HIGHLIGHTS
9999-95-078C-11NAV (U.S.A. only)	2011 NAVIGATION SYSTEM OWNER'S MANUAL
9999-EC-078C-11NAV (Canada only)	2011 NAVIGATION SYSTEM OWNER'S MANUAL
9999-PR-078C-11NAV (Puerto Rico, Mexico only)	2011 NAVIGATION SYSTEM OWNER'S MANUAL

### ▼ WORKSHOP MANUAL:

Covers recommended maintenance and repair procedures of the drive train, body and chassis.

### ▼ WIRING DIAGRAM:

Provides electrical schematics as well as component location for the entire electrical system.

### ▼ OWNER'S MANUAL:

This booklet contains information regarding the proper care and operation of your vehicle. This is not a technician's manual.

### ▼ SERVICE HIGHLIGHTS:

Provides description and operation of the many systems of your Mazda.

## **Service Publications**

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### **▼ NAVIGATION SYSTEM OWNER'S MANUAL:**

This booklet contains information regarding the proper operation and use of the navigation system. This is not a technician's manual.

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# 10 Specifications

Technical information about your Mazda.

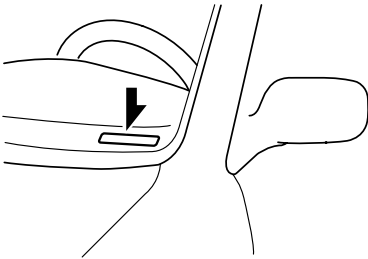
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# Identification Numbers

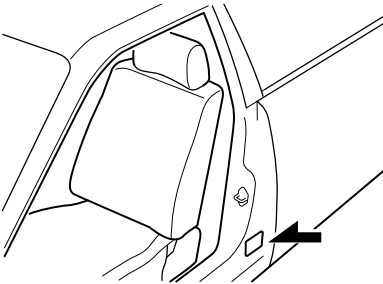
## Vehicle Information Labels

### ▼ Vehicle Identification Number

The vehicle identification number legally identifies your vehicle. The number is on a plate attached to the left top side of the dashboard. This plate can easily be seen through the windshield.



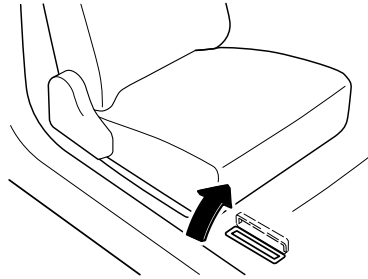
### ▼ Motor Vehicle Safety Standard Label



### ▼ Chassis Number

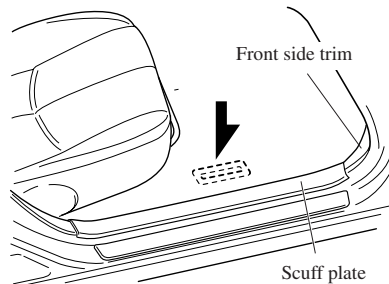
#### Type A (With cover)

Open the cover shown in the figure to check the chassis number.



#### Type B (Without cover)

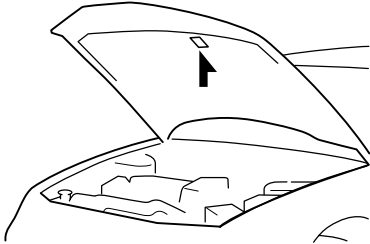
The chassis number is indicated in the position under the floor mat shown in the figure.



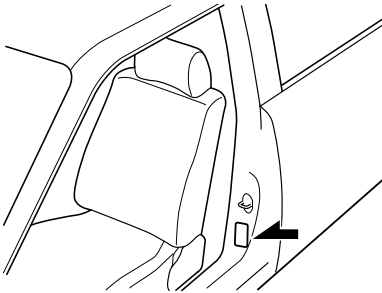
To confirm the number, consult an Authorized Mazda Dealer because the scuff plate and front side trim must be removed. The chassis number is also indicated on the dashboard. Refer to Vehicle Identification Number on page 10-2.

# Identification Numbers

## ▼ Vehicle Emission Control Information Label

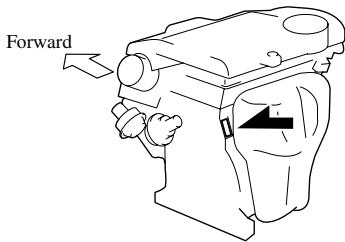


## ▼ Tire Pressure Label

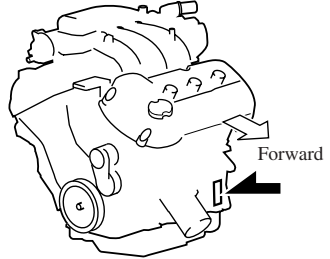


## ▼ Engine Number

2.5-liter engine



3.7-liter engine



# Specifications

## Specifications

### ▼ Engine

Item	Specification	
	2.5-liter engine	3.7-liter engine
Type	DOHC-16V in-line, 4-cylinder	DOHC-24V 60°V, 6-cylinder
Bore×Stroke	89.0 × 100 mm (3.50 × 3.94 in)	95.5 × 86.7 mm (3.75 × 3.41 in)
Displacement	2,488 ml (2,488 cc, 151.8 cu in)	3,726 ml (3,726 cc, 227.4 cu in)
Compression ratio	9.7	10.3

### ▼ Electrical System

Item		Classification
Battery		12V-46AH/5HR
Spark-plug number	2.5-liter engine	LFG1 18 110*1
	3.7-liter engine	L3Y2 18 110
Spark-plug gap	2.5-liter engine	1.25—1.35 mm (0.049—0.053 in)
	3.7-liter engine	1.29—1.45 mm (0.051—0.057 in)

\*1 ex factory

### CAUTION

*When cleaning the iridium plugs, do not use a wire brush.*

*(2.5-liter engine) The fine particulate coating on the iridium alloy and platinum tips could be damaged.*

*(3.7-liter engine) The fine particulate coating on the platinum alloy could be damaged.*

### ▼ Lubricant Quality

Lubricant		Classification	
Engine oil		Refer to the recommended SAE viscosity numbers on page 8-19.	
Manual transaxle oil	Any temperature	API Service	GL-4 or GL-5
		SAE	75W-90
	Above 10 °C (50 °F)	API Service	GL-4 or GL-5
		SAE	80W-90
Automatic transaxle fluid	2.5-liter engine	Mazda Genuine ATF M-V	
	3.7-liter engine	Mazda Genuine JWS3309	
Power steering fluid		Mazda Genuine ATF M-V	
Brake/Clutch fluid		SAE J1703 or FMVSS116 DOT-3	

# Specifications

## ▼ Capacities

(Approximate Quantities)

Item		Capacity	
Engine oil	2.5-liter engine	With oil filter replacement	5.0 L (5.3 US qt, 4.4 Imp qt)
		Without oil filter replacement	4.6 L (4.9 US qt, 4.0 Imp qt)
	3.7-liter engine	With oil filter replacement	5.2 L (5.5 US qt, 4.6 Imp qt)
		Without oil filter replacement	4.7 L (5.0 US qt, 4.1 Imp qt)
Coolant	2.5-liter engine	9.4 L (9.9 US qt, 8.3 Imp qt)	
	3.7-liter engine	9.8 L (10 US qt, 8.6 Imp qt)	
Manual transaxle oil		2.85 L (3.01 US qt, 2.51 Imp qt)	
Automatic transaxle fluid	2.5-liter engine	8.14 L (8.60 US qt, 7.16 Imp qt)	
	3.7-liter engine	6.6 L (7.0 US qt, 5.8 Imp qt)	
Fuel tank		70.0 L (18.5 US gal, 15.4 Imp gal)	

Check oil and fluid levels with dipsticks or reservoir gauges.

## ▼ Dimensions

Item		Specification
Overall length	Without license plate holder	4,920 mm (193.7 in)
	With license plate holder	4,940 mm (194.5 in)
Overall width		1,840 mm (72.4 in)
Overall height		1,470 mm (57.9 in)
Front tread	16-inch	1,595 mm (62.8 in)
	17-inch	1,595 mm (62.8 in)
	18-inch	1,585 mm (62.4 in)
Rear tread	16-inch	1,595 mm (62.8 in)
	17-inch	1,595 mm (62.8 in)
	18-inch	1,585 mm (62.4 in)
Wheelbase		2,790 mm (109.8 in)

## ▼ Weights

### 2.5-liter engine

#### Manual transaxle

Item		Weight
GVWR (Gross Vehicle Weight Rating)		1,969 kg (4,340 lb)
GAWR (Gross Axle Weight Rating)	Front	1,037 kg (2,286 lb)
	Rear	935 kg (2,062 lb)



# Specifications

## Automatic transaxle

Item		Weight
GVWR (Gross Vehicle Weight Rating)		1,996 kg (4,400 lb)
GAWR (Gross Axle Weight Rating)	Front	1,066 kg (2,350 lb)
	Rear	934 kg (2,059 lb)

## 3.7-liter engine

Item		Weight
GVWR (Gross Vehicle Weight Rating)		2,082 kg (4,590 lb)
GAWR (Gross Axle Weight Rating)	Front	1,140 kg (2,513 lb)
	Rear	943 kg (2,079 lb)

## ▼ Air Conditioner

Item	Classification
Refrigerant Type	HFC134a (R-134a)

## ▼ Light Bulbs

### Exterior light

Light bulb			Category	
			Wattage	ECE R (SAE)
Headlights	High beam		60	HB3 (#9005)
	Low beam	Halogen	55	H7 (H7)
		Xenon fusion	35	D2S (D2S)
Front turn signal lights/Parking lights			28/8	— (#7444NA)
Fog lights *			55	H11 (H11)
Front side-marker lights			4.9	— (#168)
Side turn signal lights (Integrated with outside mirrors) *			LED* <sup>1</sup>	— (—)
High-mount brake light			LED* <sup>1</sup>	— (—)
Rear turn signal lights			26.9	— (#3757A)
Brake lights/Tailights (Rear side-marker lights)			26.9/6.7	— (#3057A)
			LED* <sup>1</sup>	— (—)
Reverse lights			17.9	W16W (#921)
License plate lights			4.8	— (194)
Ground illumination light *	Retractable outside mirrors		5.0	— (—)
	Non-retractable outside mirrors		5.5	— (—)

\*1 LED is the abbreviation for Light Emitting Diode.

## Specifications

### Interior light

Light bulb	Category	
	Wattage	ECE R
Trunk light	3	—
Overhead light/Map lights (Front)	8	—
Overhead light (Rear)	10	—
Courtesy lights	5	W5W
Vanity mirror lights	2.1	—

### ▼ Tires

#### NOTE

- *The tires have been optimally matched with the chassis of your vehicle.  
When replacing tires, Mazda recommends that you replace tires of the same type originally fitted to your vehicle. For details, contact an Authorized Mazda Dealer.*
- *When changing tires extra care must be taken to be sure the TPMS is working. (page 5-27)*

Check the tire pressure label for tire size and inflation pressure.

Refer to Tire Inflation Pressure on page 8-32.

#### Standard tire

Tire size	Inflation pressure	
	Front	Rear
P205/65R16 94H	220 kPa (32 psi)	220 kPa (32 psi)
P215/55R17 93V	220 kPa (32 psi)	220 kPa (32 psi)
P235/45R18 94W	220 kPa (32 psi)	220 kPa (32 psi)

#### Temporary spare tire

Tire size	Inflation pressure
T115/70D16 92M	420 kPa (60 psi)

### ▼ Fuses

Refer to the fuse rating on page 8-47.

# Personalization Features

## Personalization Features

The following “Personalization Features” are available. These settings can only be changed by an Authorized Mazda Dealer.

Setting	Function	Initial Setting	After Setting Change
Auto headlight on/off	The headlight illumination on/off timing based on surrounding lightness/darkness can be changed	Standard (Illuminates under average levels of darkness)	Earlier/ Somewhat earlier/ Somewhat later/ Later
Auto headlight off	The time required for headlights to turn off after ignition is switched off can be changed	30 seconds	0/60/120 seconds
Turn indicator	The beep volume level can be changed	High	Low
Blind spot warning	The warning beep function can be changed	Activated	Deactivated
Illumination entry	The time required for the interior lamp to turn off automatically after all doors are closed can be changed	15 seconds	7.5/30/60 seconds
	The function allowing the interior lamp to illuminate automatically when ignition is switched off can be changed	Activated	Deactivated
	The function allowing the interior lamp to illuminate automatically when doors are unlocked can be changed	Activated	Deactivated
	The time required for the interior lamp to turn off automatically can be changed (prevents battery depletion when a door is open/ajar)	30 minutes	10 minutes
Smart turn	The function allowing the turn signal lights to flash three times with a momentary turn switch operation (when changing lanes) can be deactivated	Deactivated	Activated
Keyless entry	The unlocking method using the retractable key can be changed	Press × 2	Press × 1
	The time required for the doors to relock automatically after unlocking with the transmitter can be changed	30 seconds	60/90 seconds
	The function allowing the horn to sound automatically when the doors are locked by pressing the transmitter two times consecutively can be changed	Activated	Deactivated

## Personalization Features

Setting	Function	Initial Setting	After Setting Change
Advanced keyless entry	The function to automatically lock the doors when leaving the vehicle while carrying the key can be activated	Deactivated	Activated
	The advanced key's remaining battery level warning light in the instrument cluster can be deactivated	Activated	Deactivated
	The volume of the answer-back beep during keyless entry system operation can be adjusted	High	Low/Deactivated
	The volume of the warning beep for the advanced keyless entry system can be adjusted	High	Low
	Chooses whether permission is given to open trunk when advanced keys are both inside trunk or outside vehicle	Permitted	Not permitted
	Deactivates function that allows power supply to turn off automatically when the ignition has been switched to ACC for a long period of time	Activated	Deactivated
	Selects a transition pattern in which the ignition position can be switched when pressing the push button start	ON → Off	ON → ACC → Off
	Deactivates the advanced key function	Activated	Deactivated
Selects the door unlocking method using the door handle sensor and/or the request switch	Touch the handle, and only the driver's door unlocks	Touch the handle, and all doors unlock	

# Personalization Features

The following “Personalization Features” can be changed the vehicle owner.

Setting	Function	Initial Setting	After Setting Change
Welcome sound	Deactivates welcome sound function 6-28	Activated	Deactivated
Auto lock/unlock	Changes the auto lock/unlock function setting for all the doors according to the vehicle speed, the vehicle power supply condition, and the selector lever position Refer to Power Door Locks on page 3-32.	All the doors and the liftgate lock automatically when the vehicle speed is about 20 km/h (12 mph) or more. All the doors and the liftgate unlock when the ignition is switched from ON to ACC or Off.	The auto door-lock function is disabled
			All the doors and the liftgate lock automatically when the vehicle speed is about 20 km/h (12 mph) or more
			When the ignition is switched ON and the shift lever is shifted from park (P) to any other gear position, all the doors and the liftgate lock automatically.
			When the ignition is switched ON and the shift lever is shifted from park (P) to any other gear position, all the doors and the liftgate lock automatically. When the shift lever is shifted to park (P) while the ignition is switched ON, all the doors and the liftgate unlock automatically.



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**UNITED STATES DISTRICT COURT, CENTRAL DISTRICT OF CALIFORNIA  
CIVIL COVER SHEET**

**I. (a) PLAINTIFFS** ( Check box if you are representing yourself  )  
 TERRY SONNEVELDT, ESTHER WRIGHT SCHNEIDER, SHANNON PROVEN, MICHAEL BIBBO, ALAN MESHBERG, BRIAN HUME, AMIE LEVASSEUR, JEAN LEVASSEUR, CHRISTOPHER LACASSE, BETH PICKERD, DAN PICKERD, TIM HALWAS, ERIN MATHENY, LEWIS DELVECCHIO, and JON SOWARDS

**DEFENDANTS** ( Check box if you are representing yourself  )  
 MAZDA MOTOR OF AMERICA, INC. D/B/A MAZDA NORTH AMERICAN OPERATIONS and MAZDA MOTOR CORPORATION

(b) County of Residence of First Listed Plaintiff Grand Traverse County of Residence of First Listed Defendant Orange  
 (EXCEPT IN U.S. PLAINTIFF CASES) (IN U.S. PLAINTIFF CASES ONLY)

(c) Attorneys (Firm Name, Address and Telephone Number) If you are representing yourself, provide the same information.  
 KIESEL LAW LLP  
 Jeffrey A. Koncius, Esq.  
 8648 Wilshire Boulevard, Beverly Hills, CA 90211  
 Telephone: (310) 854-4444 / Fax: (310) 854-0812

**II. BASIS OF JURISDICTION** (Place an X in one box only.)

1. U.S. Government Plaintiff

2. U.S. Government Defendant

3. Federal Question (U.S. Government Not a Party)

4. Diversity (Indicate Citizenship of Parties in Item III)

**III. CITIZENSHIP OF PRINCIPAL PARTIES**-For Diversity Cases Only  
 (Place an X in one box for plaintiff and one for defendant)

Citizen of This State	PTF <input type="checkbox"/> 1	DEF <input type="checkbox"/> 1	Incorporated or Principal Place of Business in this State	PTF <input type="checkbox"/> 4	DEF <input checked="" type="checkbox"/> 4
Citizen of Another State	<input checked="" type="checkbox"/> 2	<input type="checkbox"/> 2	Incorporated and Principal Place of Business in Another State	<input type="checkbox"/> 5	<input type="checkbox"/> 5
Citizen or Subject of a Foreign Country	<input type="checkbox"/> 3	<input type="checkbox"/> 3	Foreign Nation	<input type="checkbox"/> 6	<input type="checkbox"/> 6

**IV. ORIGIN** (Place an X in one box only.)

1. Original Proceeding

2. Removed from State Court

3. Remanded from Appellate Court

4. Reinstated or Reopened

5. Transferred from Another District (Specify)

6. Multidistrict Litigation - Transfer

8. Multidistrict Litigation - Direct File

**V. REQUESTED IN COMPLAINT: JURY DEMAND:**  Yes  No (Check "Yes" only if demanded in complaint.)

**CLASS ACTION under F.R.Cv.P. 23:**  Yes  No **MONEY DEMANDED IN COMPLAINT:** \$ \_\_\_\_\_

**VI. CAUSE OF ACTION** (Cite the U.S. Civil Statute under which you are filing and write a brief statement of cause. Do not cite jurisdictional statutes unless diversity.)  
 28 U.S.C. § 1332(d)(2)

**VII. NATURE OF SUIT** (Place an X in one box only.)

OTHER STATUTES	CONTRACT	REAL PROPERTY CONT.	IMMIGRATION	PRISONER PETITIONS	PROPERTY RIGHTS
<input type="checkbox"/> 375 False Claims Act	<input type="checkbox"/> 110 Insurance	<input type="checkbox"/> 240 Torts to Land	<input type="checkbox"/> 462 Naturalization Application	<b>Habeas Corpus:</b>	<input type="checkbox"/> 820 Copyrights
<input type="checkbox"/> 376 Qui Tam (31 USC 3729(a))	<input type="checkbox"/> 120 Marine	<input type="checkbox"/> 245 Tort Product Liability	<input type="checkbox"/> 465 Other Immigration Actions	<input type="checkbox"/> 463 Alien Detainee	<input type="checkbox"/> 830 Patent
<input type="checkbox"/> 400 State Reapportionment	<input type="checkbox"/> 130 Miller Act	<input type="checkbox"/> 290 All Other Real Property	<b>TORTS</b>	<input type="checkbox"/> 510 Motions to Vacate Sentence	<input type="checkbox"/> 835 Patent - Abbreviated New Drug Application
<input type="checkbox"/> 410 Antitrust	<input type="checkbox"/> 140 Negotiable Instrument	<b>TORTS</b>	<b>PERSONAL PROPERTY</b>	<input type="checkbox"/> 530 General	<input type="checkbox"/> 840 Trademark
<input type="checkbox"/> 430 Banks and Banking	<input type="checkbox"/> 150 Recovery of Overpayment & Enforcement of Judgment	<b>PERSONAL INJURY</b>	<input checked="" type="checkbox"/> 370 Other Fraud	<input type="checkbox"/> 535 Death Penalty	<b>SOCIAL SECURITY</b>
<input type="checkbox"/> 450 Commerce/ICC Rates/Etc.	<input type="checkbox"/> 151 Medicare Act	<input type="checkbox"/> 310 Airplane	<input type="checkbox"/> 371 Truth in Lending	<b>Other:</b>	<input type="checkbox"/> 861 HIA (1395ff)
<input type="checkbox"/> 460 Deportation	<input type="checkbox"/> 152 Recovery of Defaulted Student Loan (Excl. Vet.)	<input type="checkbox"/> 315 Airplane Product Liability	<input type="checkbox"/> 380 Other Personal Property Damage	<input type="checkbox"/> 540 Mandamus/Other	<input type="checkbox"/> 862 Black Lung (923)
<input type="checkbox"/> 470 Racketeer Influenced & Corrupt Org.	<input type="checkbox"/> 153 Recovery of Overpayment of Vet. Benefits	<input type="checkbox"/> 320 Assault, Libel & Slander	<input type="checkbox"/> 385 Property Damage Product Liability	<input type="checkbox"/> 550 Civil Rights	<input type="checkbox"/> 863 DIWC/DIWW (405 (g))
<input type="checkbox"/> 480 Consumer Credit	<input type="checkbox"/> 160 Stockholders' Suits	<input type="checkbox"/> 330 Fed. Employers' Liability	<b>BANKRUPTCY</b>	<input type="checkbox"/> 555 Prison Condition	<input type="checkbox"/> 864 SSID Title XVI
<input type="checkbox"/> 490 Cable/Sat TV	<input type="checkbox"/> 190 Other Contract	<input type="checkbox"/> 340 Marine	<input type="checkbox"/> 422 Appeal 28 USC 158	<input type="checkbox"/> 560 Civil Detainee Conditions of Confinement	<input type="checkbox"/> 865 RSI (405 (g))
<input type="checkbox"/> 850 Securities/Commodities/Exchange	<input type="checkbox"/> 195 Contract Product Liability	<input type="checkbox"/> 345 Marine Product Liability	<input type="checkbox"/> 423 Withdrawal 28 USC 157	<b>FORFEITURE/PENALTY</b>	<b>FEDERAL TAX SUITS</b>
<input type="checkbox"/> 890 Other Statutory Actions	<input type="checkbox"/> 196 Franchise	<input type="checkbox"/> 350 Motor Vehicle	<b>CIVIL RIGHTS</b>	<input type="checkbox"/> 625 Drug Related Seizure of Property 21 USC 881	<input type="checkbox"/> 870 Taxes (U.S. Plaintiff or Defendant)
<input type="checkbox"/> 891 Agricultural Acts	<b>REAL PROPERTY</b>	<input type="checkbox"/> 355 Motor Vehicle Product Liability	<input type="checkbox"/> 440 Other Civil Rights	<input type="checkbox"/> 690 Other	<input type="checkbox"/> 871 IRS-Third Party 26 USC 7609
<input type="checkbox"/> 893 Environmental Matters	<input type="checkbox"/> 210 Land Condemnation	<input type="checkbox"/> 360 Other Personal Injury	<input type="checkbox"/> 441 Voting	<b>LABOR</b>	
<input type="checkbox"/> 895 Freedom of Info. Act	<input type="checkbox"/> 220 Foreclosure	<input type="checkbox"/> 362 Personal Injury-Med Malpractice	<input type="checkbox"/> 442 Employment	<input type="checkbox"/> 710 Fair Labor Standards Act	
<input type="checkbox"/> 896 Arbitration	<input type="checkbox"/> 230 Rent Lease & Ejectment	<input type="checkbox"/> 365 Personal Injury-Product Liability	<input type="checkbox"/> 443 Housing/Accommodations	<input type="checkbox"/> 720 Labor/Mgmt. Relations	
<input type="checkbox"/> 899 Admin. Procedures Act/Review of Appeal of Agency Decision		<input type="checkbox"/> 367 Health Care/Pharmaceutical Personal Injury Product Liability	<input type="checkbox"/> 445 American with Disabilities-Employment	<input type="checkbox"/> 740 Railway Labor Act	
<input type="checkbox"/> 950 Constitutionality of State Statutes		<input type="checkbox"/> 368 Asbestos Personal Injury Product Liability	<input type="checkbox"/> 446 American with Disabilities-Other	<input type="checkbox"/> 751 Family and Medical Leave Act	
		<input type="checkbox"/> 448 Education	<input type="checkbox"/> 448 Education	<input type="checkbox"/> 790 Other Labor Litigation	
				<input type="checkbox"/> 791 Employee Ret. Inc. Security Act	

**UNITED STATES DISTRICT COURT, CENTRAL DISTRICT OF CALIFORNIA  
CIVIL COVER SHEET**

**VIII. VENUE:** Your answers to the questions below will determine the division of the Court to which this case will be initially assigned. This initial assignment is subject to change, in accordance with the Court's General Orders, upon review by the Court of your Complaint or Notice of Removal.

<b>QUESTION A: Was this case removed from state court?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No  If "no," skip to Question B. If "yes," check the box to the right that applies, enter the corresponding division in response to Question E, below, and continue from there.	STATE CASE WAS PENDING IN THE COUNTY OF: <input type="checkbox"/> Los Angeles, Ventura, Santa Barbara, or San Luis Obispo <input type="checkbox"/> Orange <input type="checkbox"/> Riverside or San Bernardino	INITIAL DIVISION IN CACD IS: Western Southern Eastern
--	---	--

<b>QUESTION B: Is the United States, or one of its agencies or employees, a PLAINTIFF in this action?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No  If "no," skip to Question C. If "yes," answer Question B.1, at right.	<b>B.1.</b> Do 50% or more of the defendants who reside in the district reside in Orange Co.?  <i>check one of the boxes to the right</i> →	<input type="checkbox"/> YES. Your case will initially be assigned to the Southern Division. Enter "Southern" in response to Question E, below, and continue from there.  <input type="checkbox"/> NO. Continue to Question B.2.
<b>B.2.</b> Do 50% or more of the defendants who reside in the district reside in Riverside and/or San Bernardino Counties? (Consider the two counties together.)  <i>check one of the boxes to the right</i> →	<input type="checkbox"/> YES. Your case will initially be assigned to the Eastern Division. Enter "Eastern" in response to Question E, below, and continue from there.  <input type="checkbox"/> NO. Your case will initially be assigned to the Western Division. Enter "Western" in response to Question E, below, and continue from there.	

<b>QUESTION C: Is the United States, or one of its agencies or employees, a DEFENDANT in this action?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No  If "no," skip to Question D. If "yes," answer Question C.1, at right.	<b>C.1.</b> Do 50% or more of the plaintiffs who reside in the district reside in Orange Co.?  <i>check one of the boxes to the right</i> →	<input type="checkbox"/> YES. Your case will initially be assigned to the Southern Division. Enter "Southern" in response to Question E, below, and continue from there.  <input type="checkbox"/> NO. Continue to Question C.2.
<b>C.2.</b> Do 50% or more of the plaintiffs who reside in the district reside in Riverside and/or San Bernardino Counties? (Consider the two counties together.)  <i>check one of the boxes to the right</i> →	<input type="checkbox"/> YES. Your case will initially be assigned to the Eastern Division. Enter "Eastern" in response to Question E, below, and continue from there.  <input type="checkbox"/> NO. Your case will initially be assigned to the Western Division. Enter "Western" in response to Question E, below, and continue from there.	

<b>QUESTION D: Location of plaintiffs and defendants?</b>	<b>A.</b> Orange County	<b>B.</b> Riverside or San Bernardino County	<b>C.</b> Los Angeles, Ventura, Santa Barbara, or San Luis Obispo County
Indicate the location(s) in which 50% or more of <i>plaintiffs who reside in this district</i> reside. (Check up to two boxes, or leave blank if none of these choices apply.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Indicate the location(s) in which 50% or more of <i>defendants who reside in this district</i> reside. (Check up to two boxes, or leave blank if none of these choices apply.)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

<b>D.1. Is there at least one answer in Column A?</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No  If "yes," your case will initially be assigned to the SOUTHERN DIVISION.  Enter "Southern" in response to Question E, below, and continue from there.  If "no," go to question D2 to the right. →	<b>D.2. Is there at least one answer in Column B?</b> <input type="checkbox"/> Yes <input type="checkbox"/> No  If "yes," your case will initially be assigned to the EASTERN DIVISION.  Enter "Eastern" in response to Question E, below.  If "no," your case will be assigned to the WESTERN DIVISION.  Enter "Western" in response to Question E, below. ↓
---	--

<b>QUESTION E: Initial Division?</b>	INITIAL DIVISION IN CACD
Enter the initial division determined by Question A, B, C, or D above: →	SOUTHERN

<b>QUESTION F: Northern Counties?</b>
Do 50% or more of plaintiffs or defendants in this district reside in Ventura, Santa Barbara, or San Luis Obispo counties? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

**UNITED STATES DISTRICT COURT, CENTRAL DISTRICT OF CALIFORNIA  
CIVIL COVER SHEET**

**IX(a). IDENTICAL CASES:** Has this action been previously filed **in this court**?  NO  YES

If yes, list case number(s): \_\_\_\_\_

**IX(b). RELATED CASES:** Is this case related (as defined below) to any civil or criminal case(s) previously filed **in this court**?  NO  YES

If yes, list case number(s): \_\_\_\_\_

**Civil cases** are related when they (check all that apply):

- A. Arise from the same or a closely related transaction, happening, or event;
- B. Call for determination of the same or substantially related or similar questions of law and fact; or
- C. For other reasons would entail substantial duplication of labor if heard by different judges.

Note: That cases may involve the same patent, trademark, or copyright is not, in itself, sufficient to deem cases related.

**A civil forfeiture case and a criminal case** are related when they (check all that apply):

- A. Arise from the same or a closely related transaction, happening, or event;
- B. Call for determination of the same or substantially related or similar questions of law and fact; or
- C. Involve one or more defendants from the criminal case in common and would entail substantial duplication of labor if heard by different judges.

**X. SIGNATURE OF ATTORNEY (OR SELF-REPRESENTED LITIGANT):** /s/ Jeffrey A. Koncius DATE: June 28, 2019

**Notice to Counsel/Parties:** The submission of this Civil Cover Sheet is required by Local Rule 3-1. This Form CV-71 and the information contained herein neither replaces nor supplements the filing and service of pleadings or other papers as required by law, except as provided by local rules of court. For more detailed instructions, see separate instruction sheet (CV-071A).

Key to Statistical codes relating to Social Security Cases:

Nature of Suit Code	Abbreviation	Substantive Statement of Cause of Action
861	HIA	All claims for health insurance benefits (Medicare) under Title 18, Part A, of the Social Security Act, as amended. Also, include claims by hospitals, skilled nursing facilities, etc., for certification as providers of services under the program. (42 U.S.C. 1935FF(b))
862	BL	All claims for "Black Lung" benefits under Title 4, Part B, of the Federal Coal Mine Health and Safety Act of 1969. (30 U.S.C. 923)
863	DIWC	All claims filed by insured workers for disability insurance benefits under Title 2 of the Social Security Act, as amended; plus all claims filed for child's insurance benefits based on disability. (42 U.S.C. 405 (g))
863	DIWW	All claims filed for widows or widowers insurance benefits based on disability under Title 2 of the Social Security Act, as amended. (42 U.S.C. 405 (g))
864	SSID	All claims for supplemental security income payments based upon disability filed under Title 16 of the Social Security Act, as amended.
865	RSI	All claims for retirement (old age) and survivors benefits under Title 2 of the Social Security Act, as amended. (42 U.S.C. 405 (g))



AO 440 (Rev. 06/12) Summons in a Civil Action

UNITED STATES DISTRICT COURT

for the

Central District of California

TERRY SONNEVELDT, ESTHER WRIGHT SCHNEIDER, SHANNON PROVEN, MICHAEL BIBBO, ALAN MESHBERG, BRIAN HUME, AMIE LEVASSEUR, JEAN LEVASSEUR, CHRISTOPHER LACASSE, BETH PICKERD, DAN PICKERD, TIM HALWAS, ERIN MATHENY, LEWIS DELVECCHIO, and JON SOWARDS, on behalf of themselves and all others similarly situated,

Plaintiff(s)

v.

Civil Action No. 8:19-cv-1298

MAZDA MOTOR OF AMERICA, INC. D/B/A MAZDA NORTH AMERICAN OPERATIONS and MAZDA MOTOR CORPORATION,

Defendant(s)

SUMMONS IN A CIVIL ACTION

To: (Defendant's name and address) MAZDA MOTOR OF AMERICA, INC. D/B/A MAZDA NORTH AMERICAN OPERATIONS 200 SPECTRUM CTR DR, STE 100, IRVINE, CA 92618

Mazda Motor Corporation 3-1 Shinchi, Fuchu-cho, Aki-gun, Hiroshima 730-8670 Japan

A lawsuit has been filed against you.

Within 21 days after service of this summons on you (not counting the day you received it) — or 60 days if you are the United States or a United States agency, or an officer or employee of the United States described in Fed. R. Civ. P. 12 (a)(2) or (3) — you must serve on the plaintiff an answer to the attached complaint or a motion under Rule 12 of the Federal Rules of Civil Procedure. The answer or motion must be served on the plaintiff or plaintiff's attorney, whose name and address are:

Jeffrey A. Koncius KIESEL LAW LLP 8648 Wilshire Boulevard Beverly Hills, California 90211-2910

If you fail to respond, judgment by default will be entered against you for the relief demanded in the complaint. You also must file your answer or motion with the court.

CLERK OF COURT

Date: \_\_\_\_\_

Signature of Clerk or Deputy Clerk

Civil Action No. 8:19-cv-1298

**PROOF OF SERVICE**

*(This section should not be filed with the court unless required by Fed. R. Civ. P. 4 (l))*

This summons for *(name of individual and title, if any)* \_\_\_\_\_  
was received by me on *(date)* \_\_\_\_\_.

I personally served the summons on the individual at *(place)* \_\_\_\_\_  
\_\_\_\_\_ on *(date)* \_\_\_\_\_; or

I left the summons at the individual's residence or usual place of abode with *(name)* \_\_\_\_\_  
\_\_\_\_\_, a person of suitable age and discretion who resides there,  
on *(date)* \_\_\_\_\_, and mailed a copy to the individual's last known address; or

I served the summons on *(name of individual)* \_\_\_\_\_, who is  
designated by law to accept service of process on behalf of *(name of organization)* \_\_\_\_\_  
\_\_\_\_\_ on *(date)* \_\_\_\_\_; or

I returned the summons unexecuted because \_\_\_\_\_; or

Other *(specify)*:

My fees are \$ \_\_\_\_\_ for travel and \$ \_\_\_\_\_ for services, for a total of \$ \_\_\_\_\_ 0.00 \_\_\_\_\_.

I declare under penalty of perjury that this information is true.

Date: \_\_\_\_\_

\_\_\_\_\_  
*Server's signature*

\_\_\_\_\_  
*Printed name and title*

\_\_\_\_\_  
*Server's address*

Additional information regarding attempted service, etc:

1 Paul R. Kiesel, State Bar No. 119854  
kiesel@kiesel.law  
2 Jeffrey A Koncius, State Bar No. 189803  
koncius@kiesel.law  
3 Cherisse H. Cleofe, State Bar No. 290152  
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4 **KIESEL LAW LLP**  
8648 Wilshire Boulevard  
5 Beverly Hills, CA 90211-2910  
Tel.: (310) 854-4444  
6 Fax: (310) 854-0812

7 Attorneys for Plaintiffs and the Proposed Classes  
8 *(Additional Attorneys Listed on Signature Page)*

9  
10 **UNITED STATES DISTRICT COURT**  
11 **CENTRAL DISTRICT OF CALIFORNIA**

12 TERRY SONNEVELDT, ESTHER  
13 WRIGHT SCHNEIDER, SHANNON  
14 PROVEN, MICHAEL BIBBO, ALAN  
MESHBERG, BRIAN HUME, AMIE  
15 LEVASSEUR, JEAN LEVASSEUR,  
16 CHRISTOPHER LACASSE, BETH  
PICKERD, DAN PICKERD, TIM  
17 HALWAS, ERIN MATHENY, LEWIS  
18 DELVECCHIO, and JON SOWARDS,  
on behalf of themselves and all others  
19 similarly situated,

20  
21 Plaintiffs,

22 v.

23 MAZDA MOTOR OF AMERICA, INC.  
24 D/B/A MAZDA NORTH AMERICAN  
OPERATIONS and MAZDA MOTOR  
25 CORPORATION,

26  
27 Defendants.  
28

Case No. 8:19-cv-1298

CLASS ACTION

**DECLARATION OF TERRY  
SONNEVELDT PURSUANT TO  
CALIFORNIA CIVIL CODE  
SECTION 1780(d)**

1 I, Terry Sonneveldt, declare:

2 1. I am a named Plaintiff in this action. The following is based upon my  
3 personal knowledge and if called upon as a witness to testify in this matter, I could  
4 and would testify competently thereto.

5 2. I make this Declaration pursuant to California Civil Code section  
6 1780(d) so as to state facts showing that this action has been commenced in the  
7 proper county for the trial of this action.

8 3. On or around October 2018, I purchased a used 2012 Mazda CX-9 from  
9 Used Car Factory in Traverse City, Michigan. I continue to own the 2012 Mazda  
10 CX-9.

11 4. Based upon information provided to me by my counsel, it is my belief  
12 that Defendant Mazda Motor of America, Inc. d/b/a Mazda North American  
13 Operations maintains its principal place of business at 200 Spectrum Center Drive,  
14 Suite 100, Irvine, California 92618. The information provided to me is from the  
15 California Secretary of State website (<https://businesssearch.sos.ca.gov/CBS/Detail>).

16 I declare under penalty of perjury, under the laws of the United States of  
17 America that the foregoing is true and correct.

18 Executed this date: \_\_\_\_\_

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\_\_\_\_\_  
Terry Sonneveldt

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commenced in the proper county for the trial of this action.

- On or around October 2018, I purchased a used 2012 Mazda CX-9 from Used Car Factory in Traverse City, Michigan. I continue to own the 2012 Mazda CX-9.
- Based upon information provided to me by my counsel, it is my belief that Defendant Mazda Motor of America, Inc. d/b/a Mazda North American Operations maintains its principal place of business at 200 Spectrum Center Drive, Suite 100, Irvine, California 92618. The information provided to me is from the California Secretary of State website (<https://businesssearch.sos.ca.gov/CBS/Detail>).

I declare under penalty of perjury, under the laws of the United States of America that the foregoing is true and correct.

Executed this date: June 20, 2019

  
Terry Sonneveldt

NAME, ADDRESS, AND TELEPHONE NUMBER OF ATTORNEY(S)  
 OR OF PARTY APPEARING IN PRO PER  
 Paul R. Kiesel (SBN 119854)  
 Jeffrey A. Koncius (SBN 189803)  
 Cherisse H. Cleofe (SBN 290152)  
 KIESEL LAW LLP  
 8648 Wilshire Boulevard  
 Beverly Hills, CA 90211-2910  
 Tel: (310) 854-4444 / Fax: (310) 854-0812

ATTORNEY(S) FOR: Plaintiffs

**UNITED STATES DISTRICT COURT  
 CENTRAL DISTRICT OF CALIFORNIA**

TERRY SONNEVELDT, et al.  <p style="text-align: right;">Plaintiff(s),</p>	CASE NUMBER:  <p style="text-align: center;">8:19-cv-1298</p>
v. MAZDA MOTOR OF AMERICA, INC. D/B/A MAZDA NORTH AMERICAN OPERATIONS and MAZDA MOTOR CORPORATION  <p style="text-align: right;">Defendant(s)</p>	<p style="text-align: center;"><b>CERTIFICATION AND NOTICE                  OF INTERESTED PARTIES                  (Local Rule 7.1-1)</b></p>

TO: THE COURT AND ALL PARTIES OF RECORD:

The undersigned, counsel of record for Plaintiffs  
 or party appearing in pro per, certifies that the following listed party (or parties) may have a pecuniary interest in  
 the outcome of this case. These representations are made to enable the Court to evaluate possible disqualification  
 or recusal.

(List the names of all such parties and identify their connection and interest. Use additional sheet if necessary.)

PARTY	CONNECTION / INTEREST
1. TERRY SONNEVELDT	1. Plaintiff
2. ESTHER WRIGHT SCHNEIDER	2. Plaintiff
3. SHANNON PROVEN	3. Plaintiff
4. MICHAEL BIBBO	4. Plaintiff
5. ALAN MESHBERG	5. Plaintiff
6. BRIAN HUME	6. Plaintiff
7. AMIE LEVASSEUR	7. Plaintiff
8. JEAN LEVASSEUR	8. Plaintiff
9. CHRISTOPHER LACASSE	9. Plaintiff
10. BETH PICKERD	10. Plaintiff
11. DAN PICKERD	11. Plaintiff
12. TIM HALWAS	12. Plaintiff
13. ERIN MATHENY	13. Plaintiff

(continued on next page)

June 28, 2019  
 \_\_\_\_\_  
 Date

/s/ Jeffrey A. Koncius  
 \_\_\_\_\_  
 Signature

Attorney of record for (or name of party appearing in pro per):

Plaintiffs  
 \_\_\_\_\_

1 *Sonneveldt, et al. v. Mazda Motor of America, Inc., et al.*, Case No 8:19-cv-1298

2 **ATTACHMENT TO**  
3 **CERTIFICATION AND NOTICE OF INTERESTED PARTIES**  
4 **(Local Rule 7.1-1)**

<b>PARTY</b>	<b>CONNECTION/INTEREST</b>
6 14. LEWIS DELVECCHIO	Plaintiff
7 15. JON SOWARDS	Plaintiff
8 16. MAZDA MOTOR OF 9 AMERICA, INC. D/B/A MAZDA 10 NORTH AMERICAN 11 OPERATIONS	Defendant
12 17. MAZDA MOTOR 13 CORPORATION	Defendant

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