

8

Maintenance and Care

How to keep your Mazda in top condition.

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Maintenance and Care

Introduction

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

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
ENGINE									
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
Engine oil filter		R	R	R	R	R	R	R	R
COOLING SYSTEM									
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							
FUEL SYSTEM									
Air filter				C		R			C
Fuel lines and hoses*2					I				I
Hoses and tubes for emission*2									I
IGNITION SYSTEM									
Spark plugs		Replace every 160,000 km (100,000 miles)							
CHASSIS and BODY									
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

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
AIR CONDITIONER SYSTEM									
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.

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	
ENGINE														
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	R
Engine oil filter		R	R	R	R	R	R	R	R	R	R	R	R	R
COOLING SYSTEM														
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
FUEL SYSTEM														
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
IGNITION SYSTEM														
Spark plugs	USA	Replace every 96,000 km (60,000 miles)												
	Others*3	Replace every 160,000 km (100,000 miles)												
ELECTRICAL SYSTEM														
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
CHASSIS and BODY													
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
AIR CONDITIONER SYSTEM													
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

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.

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	
ENGINE														
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	
Engine oil filter		R	R	R	R	R	R	R	R	R	R	R	R	
COOLING SYSTEM														
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	
FUEL SYSTEM														
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	
IGNITION SYSTEM														
Spark plugs		Replace every 60,000 km												
CHASSIS and BODY														
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	
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	
Steering operation and linkages		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	
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	
Washer fluid level		I	I	I	I	I	I	I	I	I	I	I	I	

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
AIR CONDITIONER SYSTEM													
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.

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	
ENGINE															
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	
COOLING SYSTEM															
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	
FUEL SYSTEM															
Air filter			C		R		C		R		C			R	
Fuel lines and hoses									I*2						
Hoses and tubes for emission									I*2						
Fuel filter									R						
IGNITION SYSTEM															
Spark plugs		Replace every 60,000 km													
ELECTRICAL SYSTEM															
Function of all lights		I	I	I	I	I	I	I	I	I	I	I	I	I	
CHASSIS and BODY															
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	

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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
AIR CONDITIONER SYSTEM													
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

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	
ENGINE														
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	
Engine oil filter		R	R	R	R	R	R	R	R	R	R	R	R	
COOLING SYSTEM														
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	
FUEL SYSTEM														
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	
IGNITION SYSTEM														
Spark plugs		Replace every 60,000 km												
ELECTRICAL SYSTEM														
Function of all lights		I	I	I	I	I	I	I	I	I	I	I	I	
CHASSIS and BODY														
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	

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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
AIR CONDITIONER SYSTEM													
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)

Maintenance and Care
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.

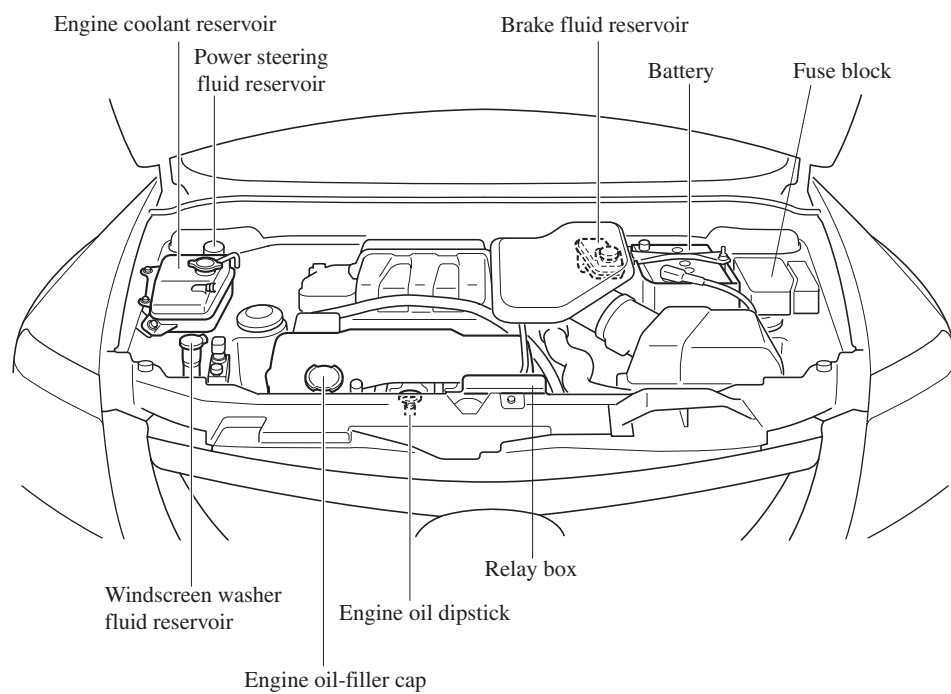
Do not leave items in the engine compartment:

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.

Maintenance and Care

Owner Maintenance

Engine Compartment Overview



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.

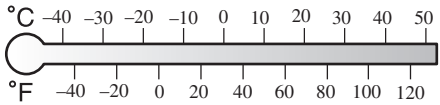
A chief contribution this type of oil makes to fuel economy is reducing the amount of fuel necessary to overcome engine friction.

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.



5W-20

Except U.S.A. and CANADA

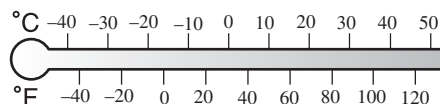


(ILSAC)

Maintenance and Care

Owner Maintenance

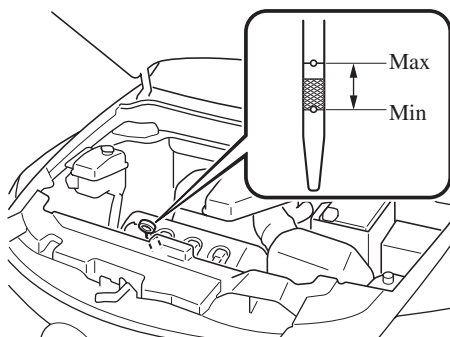
The quality designation SM, or ILSAC must be on the label.



5W-20

▼ 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.

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.

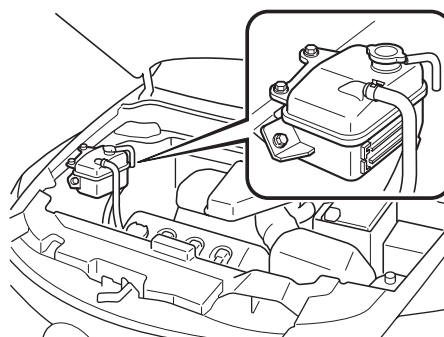
NOTE

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

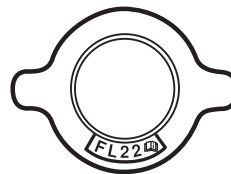
Owner Maintenance

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).



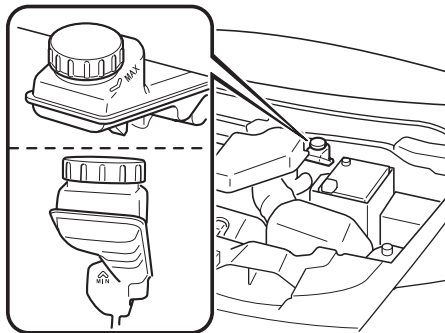
If the coolant reservoir is empty or new coolant is required frequently, consult an Authorized Mazda Dealer.

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

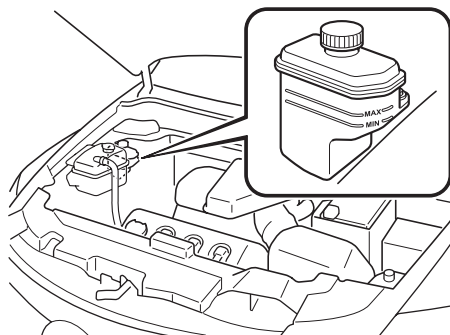
CAUTION

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:

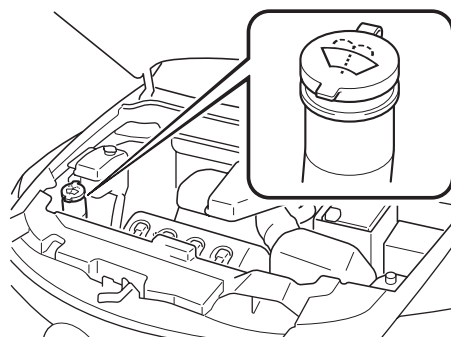
Operating your vehicle in temperatures below 4 degrees C (40 degrees F) using washer fluid without anti-freeze protection is dangerous as it could cause impaired windshield vision and result in an accident. In cold weather, always use washer fluid with anti-freeze protection.

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.

▼ Replacing Windshield Wiper Blades

When the wipers no longer clean well, the blades are probably worn or cracked. Replace them.

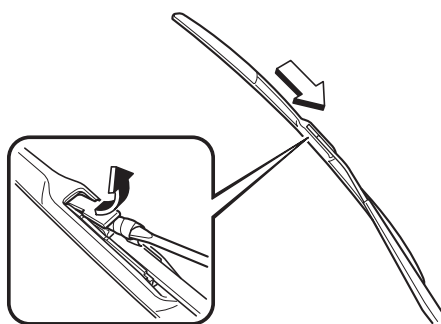
⚠ CAUTION

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.

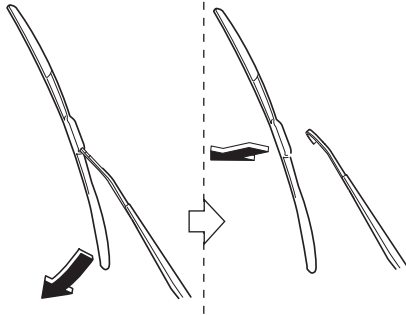


NOTE

Using a soft cloth-wrapped flathead screwdriver.

Maintenance and Care
Owner Maintenance

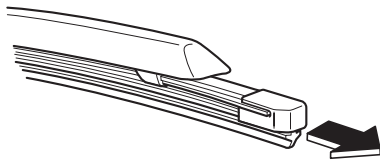
4. Tilt the blade assembly and remove it from the arm.



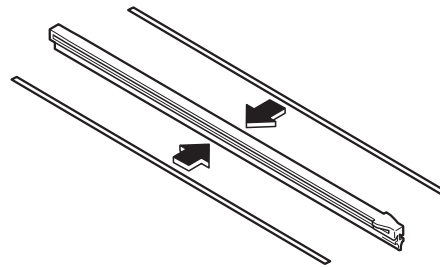
CAUTION

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.



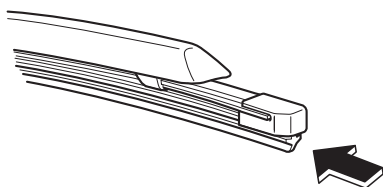
CAUTION

- 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.



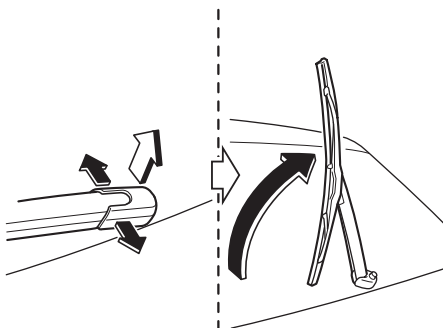
▼ Replacing Rear Window Wiper Blade

When the wiper no longer cleans well, the blade is probably worn or cracked. Replace it.

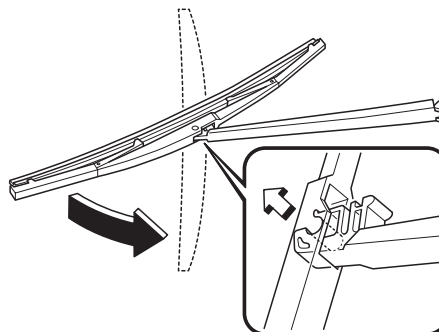
⚠ CAUTION

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.



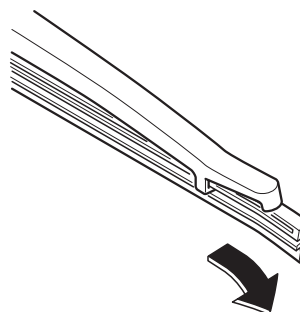
2. Firmly rotate the wiper blade to the right until it unlocks, then remove the blade.



⚠ CAUTION

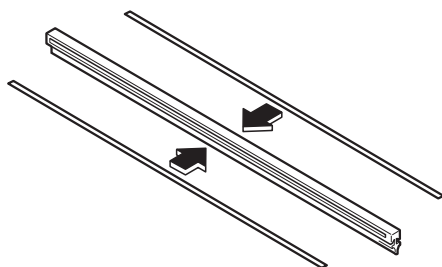
To prevent damage to the rear window let the wiper arm down easily, don't let it slap down on the rear window.

3. Pull down the blade rubber and slide it out of the blade holder.



Maintenance and Care
Owner Maintenance

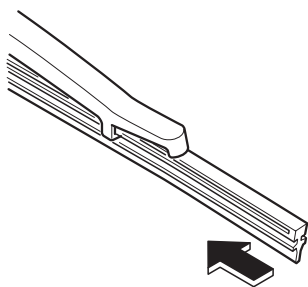
4. Remove the metal stiffeners from each blade rubber and install them in the new blade.



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:

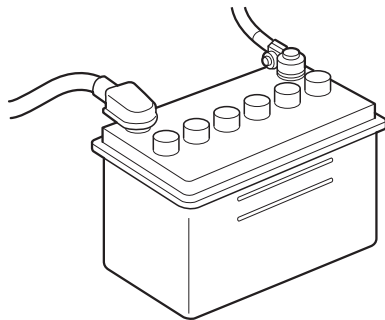
Flames and sparks near open battery cells are dangerous. Hydrogen gas, produced during normal battery operation, could ignite and cause the battery to explode. An exploding battery can cause serious burns and injuries. Keep all flames including cigarettes and sparks away from open battery cells.

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.

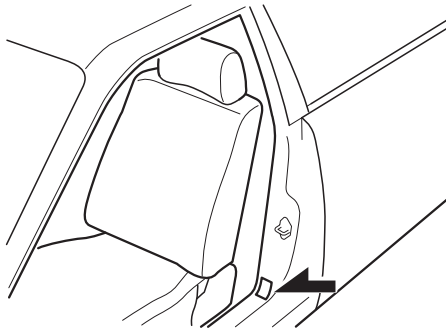
Use only a Mazda-genuine tire valve cap:

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

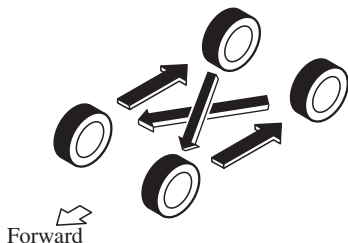
Rotate tires periodically:

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.

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

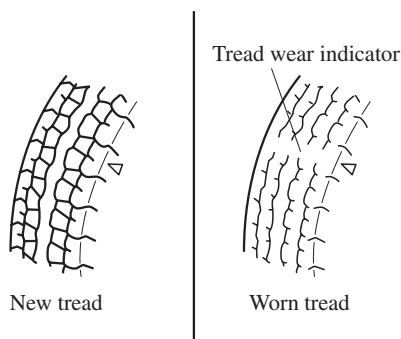
(With Tire Pressure Monitoring System)

- *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/cm² or bar, 60 psi).

(Mexico)

Maintain its pressure at 250 kPa (2.5 kgf/cm² 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

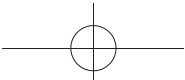
- A wrong-sized wheel may adversely affect:
 - Tire fit
 - Wheel and bearing life
 - Ground clearance
 - Snow-chain clearance
 - Speedometer calibration
 - Headlight aim
 - Bumper height
 - Tire Pressure Monitoring System
- (With Tire Pressure Monitoring System)
 - When replacing/repairing the tires 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.

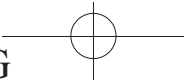
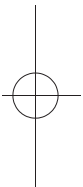
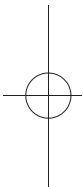
When replacing a wheel, make sure the new one is the same as the original factory wheel in diameter, rim width, and offset (inset/outset).

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.



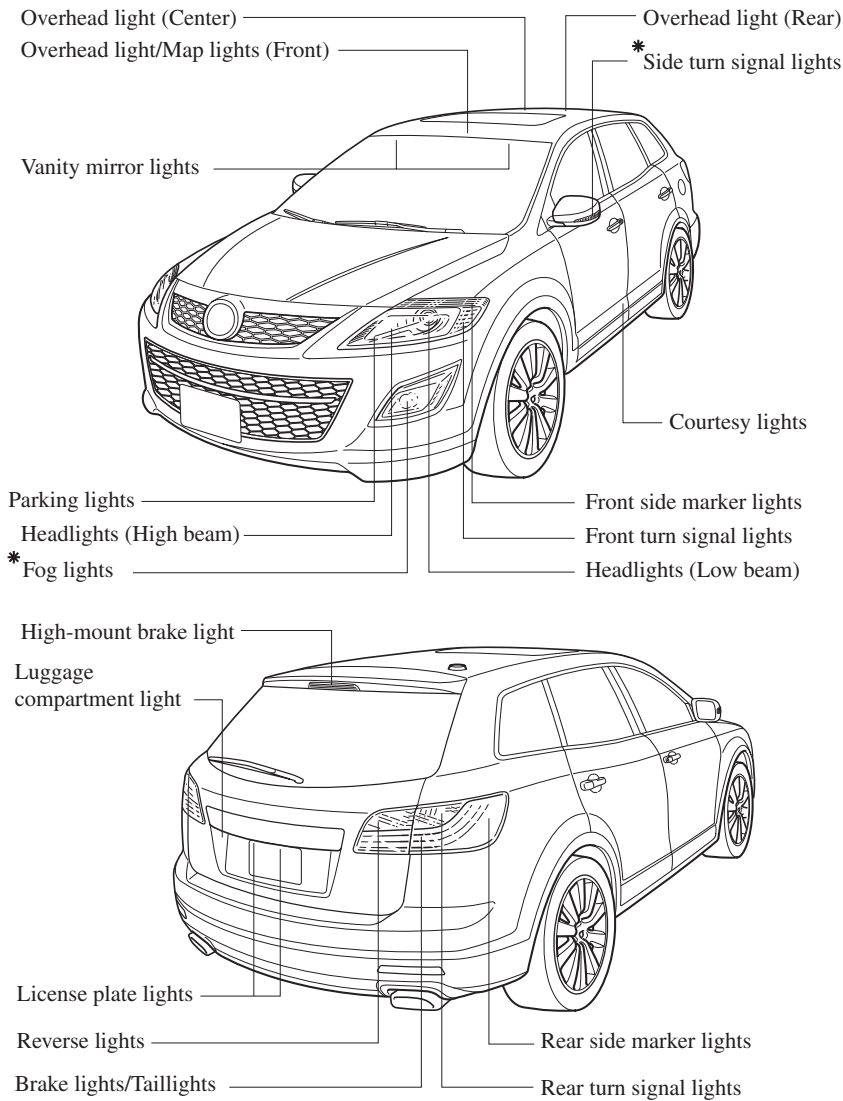
Black plate (515,1)

MEMO



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.

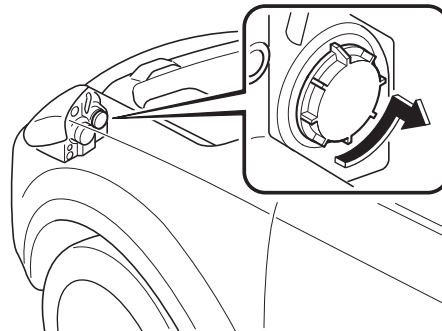
▼ Replacing Exterior Light Bulbs

Headlight bulb

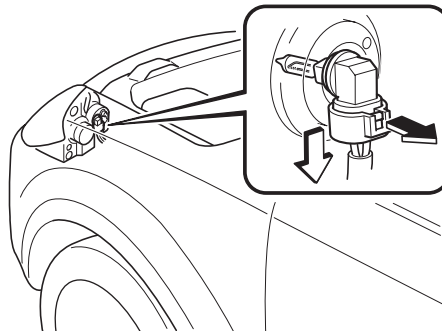
High-beam bulb

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.



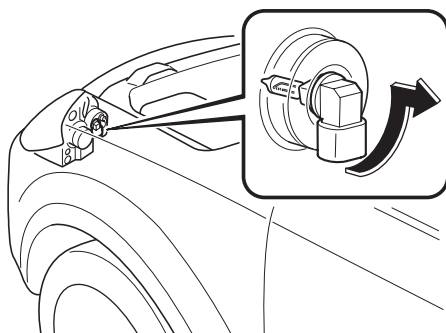
4. Disconnect the electrical connector from the bulb by pulling the tab on the connector with your finger and pulling the connector downward.



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

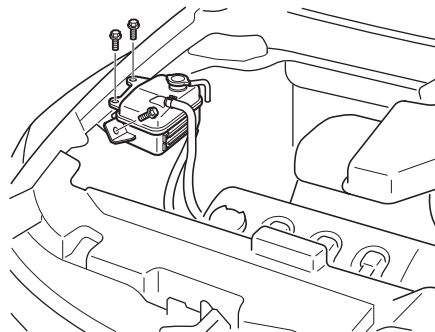
(Xenon fusion bulb)

You cannot replace the low beam bulbs by yourself. The bulbs must be replaced at an Authorized Mazda Dealer.

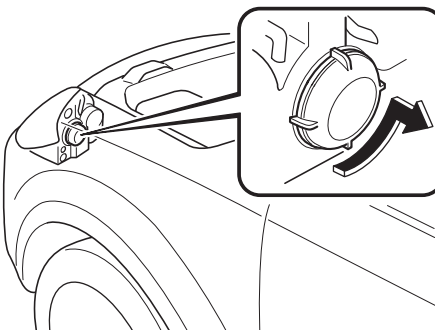
(Halogen bulbs)

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.

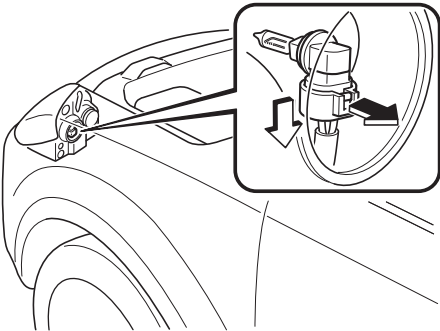


4. Turn the cover counterclockwise and remove it.

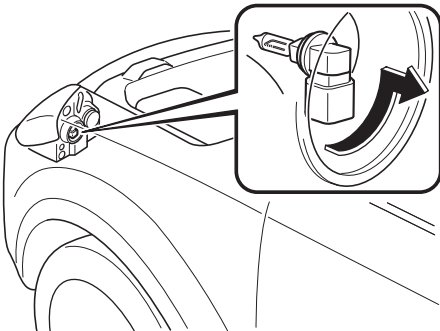


Maintenance and Care
Owner Maintenance

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.

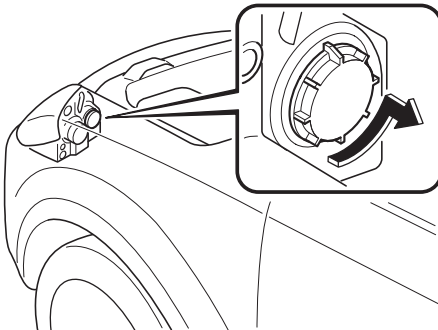
Bolt tightening torque	
N·m (kgf·m, ft·lbf)	6.9—11.8 (0.7—1.2, 5.1—8.7)

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

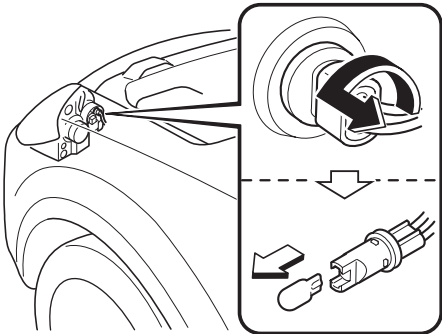
1. Make sure the ignition is switched off, and the headlight switch is off.
2. Lift the hood.
3. Turn the cover counterclockwise and remove it.



4. Turn the socket and bulb assembly counterclockwise and remove it.

Maintenance and Care
Owner Maintenance

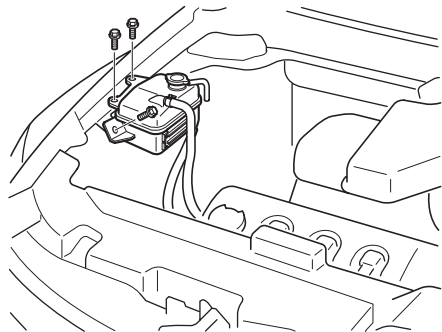
5. Remove the bulb by pushing it in slightly and turning it counterclockwise.



6. Install the new bulb in the reverse order of removal.

Front side marker lights, Front turn signal lights

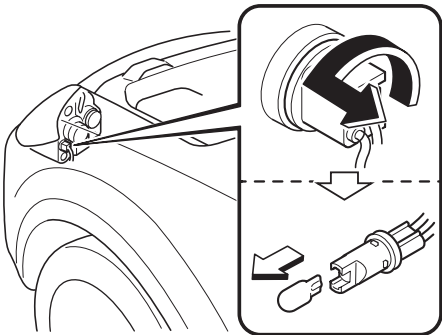
1. Make sure the headlight switch is off.
2. Lift the hood.
3. Remove the attachment bolts and the coolant reservoir before replacing the light bulb.



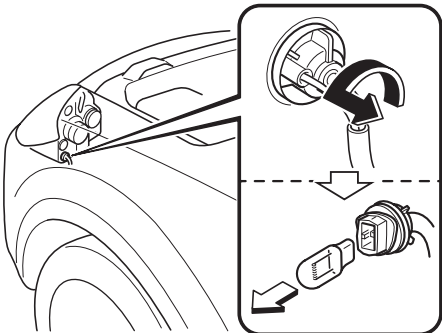
4. Turn the socket and bulb assembly counterclockwise and remove it.

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.

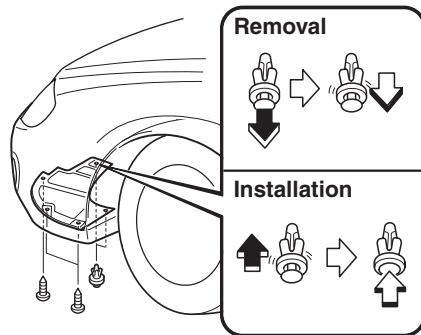
Bolt tightening torque	
N·m (kgf·m, ft·lbf)	6.9—11.8 (0.7—1.2, 5.1—8.7)

Fog lights *

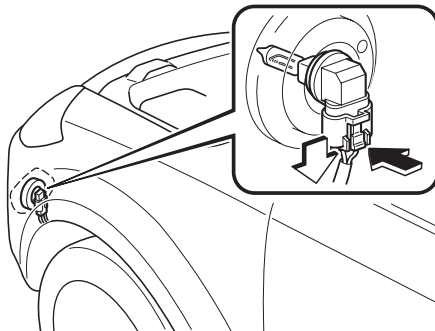
1. Make sure the headlight switch is off.

Maintenance and Care
Owner Maintenance

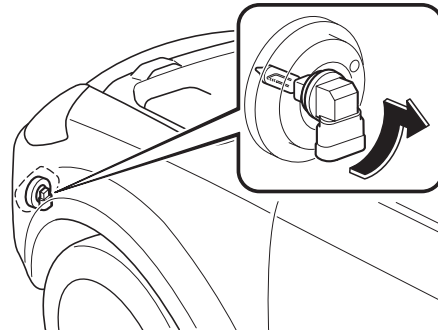
2. Turn the screws counterclockwise and remove them.
3. Turn the screws and the center section of the plastic retainers counterclockwise and remove them, then remove the mudguard.



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

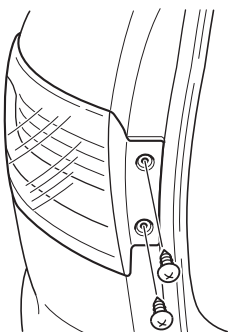
LED bulb replacement is not possible because it is built into the unit. Replace the unit.

Maintenance and Care

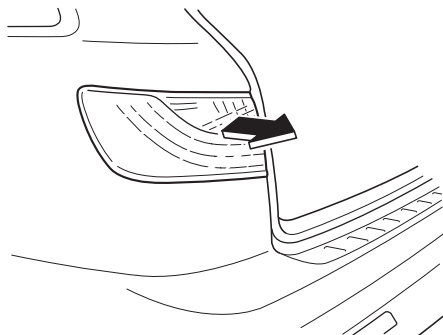
Owner Maintenance

Rear turn signal lights, Rear side-marker light

1. Turn the bolts counterclockwise and remove them.

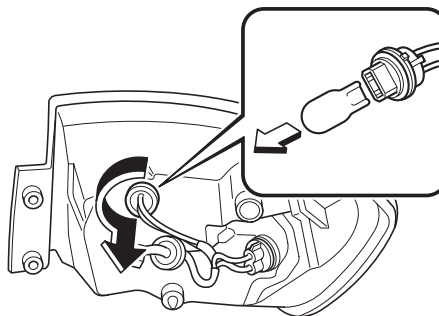


2. Pull the unit rearward to remove it.

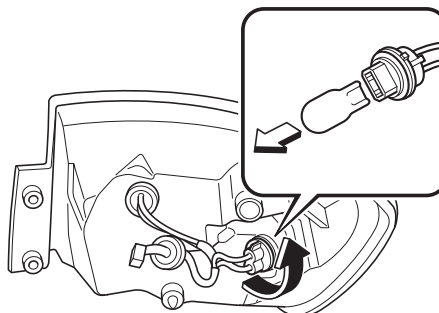


3. Turn the socket and bulb assembly counterclockwise and remove it.

Rear turn signal lights



Rear side-marker light

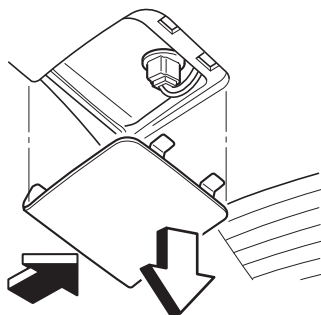


4. Disconnect the bulb from the socket.
5. Install the new bulb in the reverse order of removal.

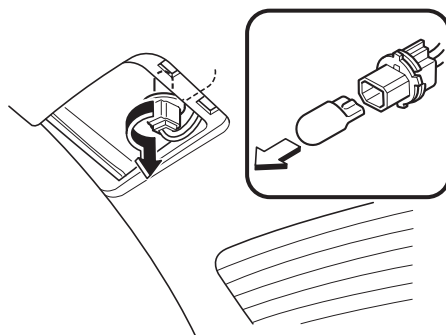
Maintenance and Care
Owner Maintenance

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.

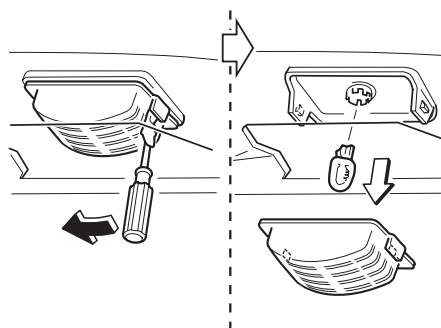
NOTE

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.



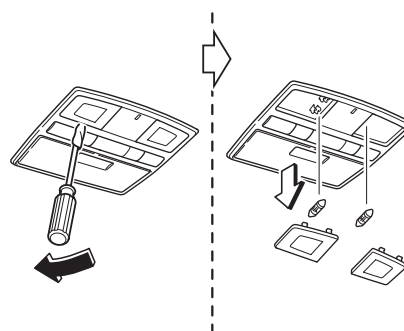
3. Install the new bulb in the reverse order of removal.

▼ 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.

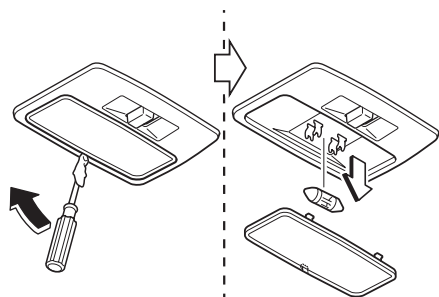
Overhead light/Map lights (Front)



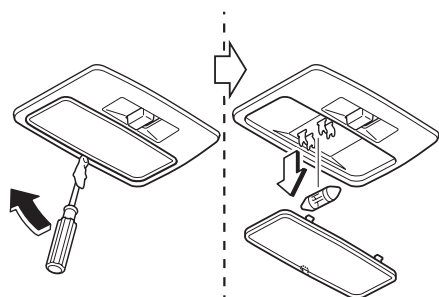
Maintenance and Care

Owner Maintenance

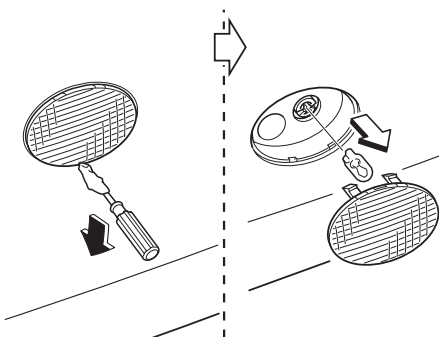
Overhead light (Center, Rear)



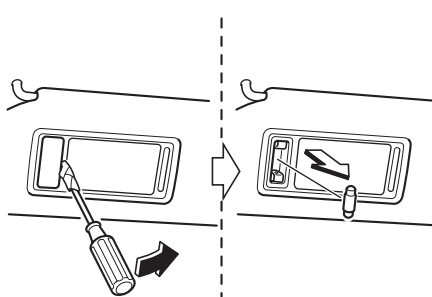
Luggage compartment light



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.

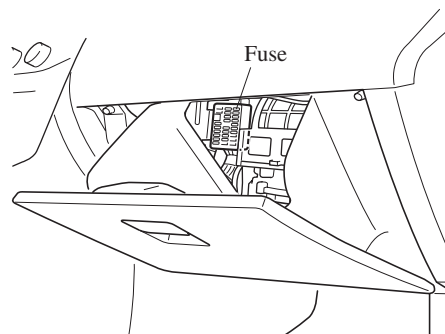
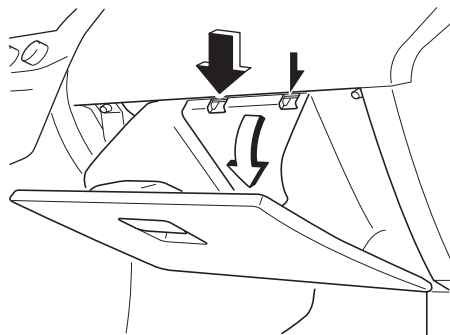
If the same fuse blows again, avoid using that system and consult an Authorized Mazda Dealer as soon as possible.

▼ Fuse Replacement

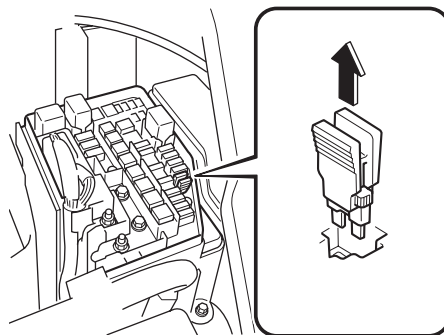
Replacing fuses located behind the glove compartment

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

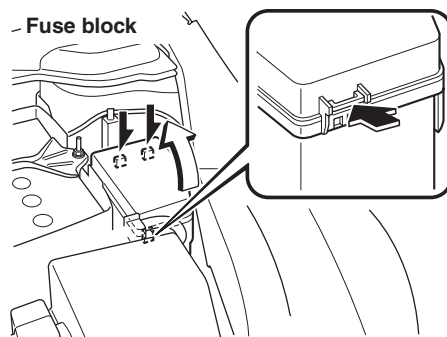
Always replace a fuse with one of the same rating. Otherwise you may damage the electric system.

7. Reinstall the cover and make sure that it is securely installed.

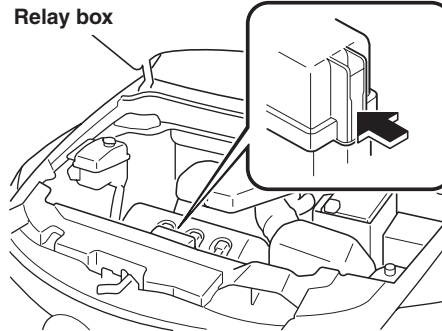
Replacing the fuses under the hood

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:

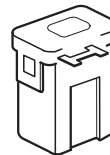
1. Make sure the ignition is switched off, and other switches are off.
2. Remove the fuse block cover or the relay box cover.



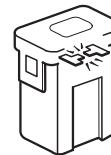
Relay box



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:

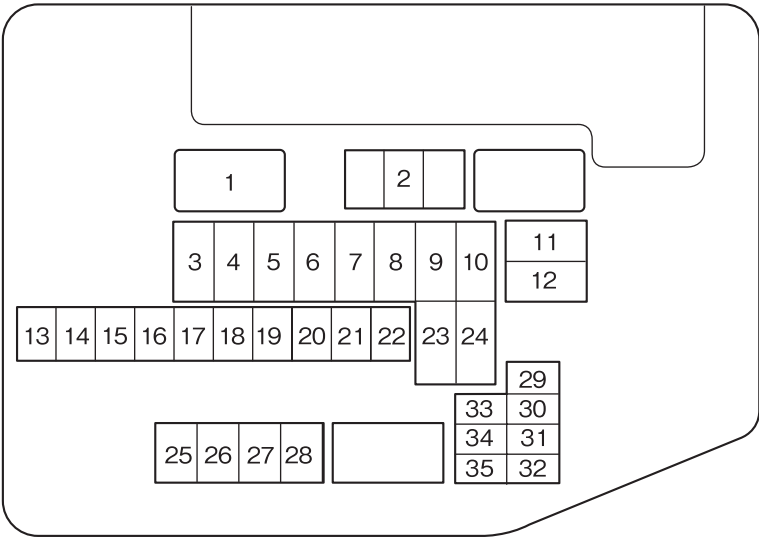
Replacing the fuse by yourself is dangerous because the MAIN fuse is a high current fuse. Incorrect replacement could cause an electrical shock or a short circuit resulting in a fire.

4. Reinstall the cover and make sure that it is securely installed.

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**

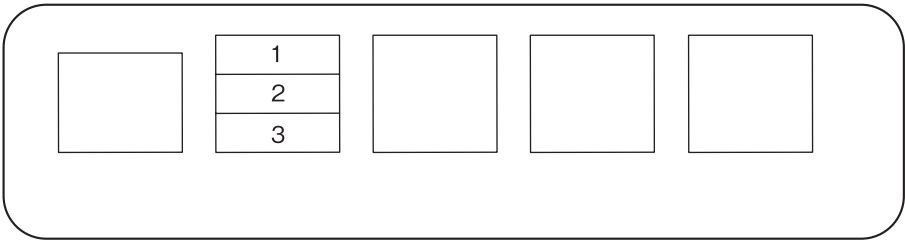
Maintenance and Care

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

Maintenance and Care
Owner Maintenance

Relay box (Engine compartment) *



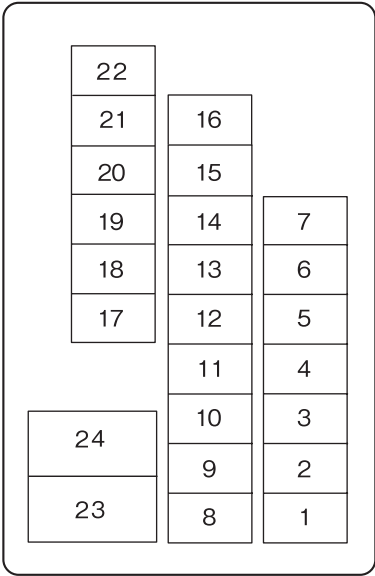
DESCRIPTION		FUSE RATING	PROTECTED COMPONENT
1	INJ	7.5 A	Engine control system
2	—	—	—
3	—	—	—

*Some models. **8-51**

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.

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.

*Some models.

Maintenance and Care

Appearance Care

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.