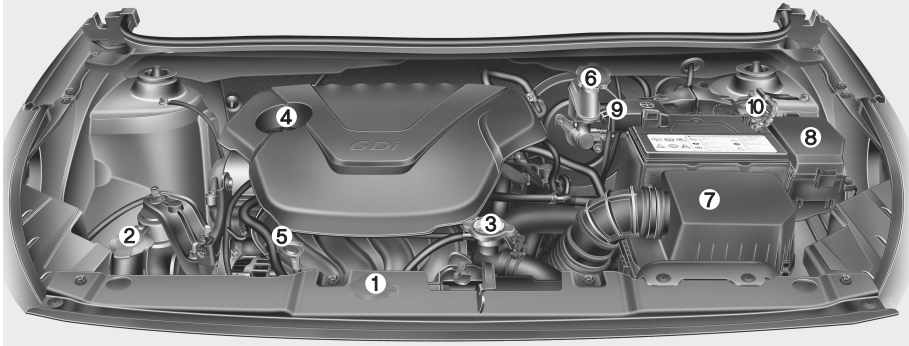
Maintenance 7

ENGINE COMPARTMENT



1. Engine coolant reservoir
2. Windshield washer fluid reservoir
3. Radiator cap
4. Engine oil filler cap
5. Engine oil dipstick
6. Brake/clutch fluid reservoir
7. Air cleaner
8. Fuse box
9. Positive battery terminal
10. Negative battery terminal

* : if equipped

* The actual engine room in the vehicle may differ from the illustration.

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MAINTENANCE SERVICES

You should exercise the utmost care to prevent damage to your vehicle and injury to yourself whenever performing any maintenance or inspection procedures.

Should you have any doubts concerning the inspection or servicing of your vehicle, we strongly recommend that you have an authorized HYUNDAI dealer perform this work.

An authorized HYUNDAI dealer has factory-trained technicians and genuine HYUNDAI parts to service your vehicle properly. For expert advice and quality service, see an authorized HYUNDAI dealer.

Inadequate, incomplete or insufficient servicing may result in operational problems with your vehicle that could lead to vehicle damage, an accident, or personal injury.

Owner's responsibility

✻ NOTICE

Maintenance Service and Record Retention are the owner's responsibility.

You should retain documents that show proper maintenance has been performed on your vehicle in accordance with the scheduled maintenance service charts shown on the following pages. You need this information to establish your compliance with the servicing and maintenance requirements of your vehicle warranties.

Detailed warranty information is provided in your Owner's Handbook & Warranty Information booklet.

Repairs and adjustments required as a result of improper maintenance or a lack of required maintenance are not covered.

We recommend you have your vehicle maintained and repaired by an authorized HYUNDAI dealer. An authorized HYUNDAI dealer meets HYUNDAI's high service quality standards and receives technical support from HYUNDAI in order to provide you with a high level of service satisfaction.

Owner maintenance precautions

Improper or incomplete service may result in problems. This section gives instructions only for the maintenance items that are easy to perform.

As explained earlier in this section, several procedures can be done only by an authorized HYUNDAI dealer with special tools.

✻ NOTICE

Improper owner maintenance during the warranty period may affect warranty coverage. For details, read the separate Owner's Handbook & Warranty Information booklet provided with the vehicle. If you're unsure about any servicing or maintenance procedure, have it done by an authorized HYUNDAI dealer.

⚠ WARNING - Maintenance work

- **Performing maintenance work on a vehicle can be dangerous. You can be seriously injured while performing some maintenance procedures. If you lack sufficient knowledge and experience or the proper tools and equipment to do the work, have it done by an authorized HYUNDAI dealer.**
- **Working under the hood with the engine running is dangerous. It becomes even more dangerous when you wear jewelry or loose clothing. These can become entangled in moving parts and result in injury. Therefore, 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 fans.**

OWNER MAINTENANCE

The following lists are vehicle checks and inspections that should be performed by the owner or an authorized HYUNDAI dealer at the frequencies indicated to help ensure safe, dependable operation of your vehicle.

Any adverse conditions should be brought to the attention of your dealer as soon as possible.

These Owner Maintenance Checks are generally not covered by warranties and you may be charged for labor, parts and lubricants used.

Owner maintenance schedule

When you stop for fuel:

- Check the engine oil level.
- Check coolant level in coolant reservoir.
- Check the windshield washer fluid level.
- Look for low or under-inflated tires.
- Check the radiator and condenser.

  Check if the front of the radiator and condenser are clean and not blocked with leaves, dirt or insects etc.

  If any of the above parts are extremely dirty or you are not sure of their condition, take your vehicle to an authorized HYUNDAI dealer.

⚠ WARNING

Be careful when checking your engine coolant level when the engine is hot. Scalding hot coolant and steam may blow out under pressure. This could cause burns or other serious injury.

While operating your vehicle:

- Note any changes in the sound of the exhaust or any smell of exhaust fumes in the vehicle.
- Check for vibrations in the steering wheel. Notice any increased steering effort or looseness in the steering wheel, or change in its straight-ahead position.
- Notice if your vehicle constantly turns slightly or "pulls" to one side when traveling on smooth, level road.
- When stopping, listen and check for unusual sounds, pulling to one side, increased brake pedal travel or "hard-to-push" brake pedal.
- If any slipping or changes in the operation of your transaxle occurs, check the transaxle fluid level.
- Check automatic transaxle P (Park) function.
- Check parking brake.
- Check for fluid leaks under your vehicle (water dripping from the air conditioning system during or after use is normal).

At least monthly:

- Check coolant level in the engine coolant reservoir.
- Check the operation of all exterior lights, including the stoplights, turn signals and hazard warning flashers.
- Check the inflation pressures of all tires including the spare (if equipped).

At least twice a year (i.e., every Spring and Fall):

- Check radiator, heater and air conditioning hoses for leaks or damage.
- Check windshield washer spray and wiper operation. Clean wiper blades with clean cloth dampened with washer fluid.
- Check headlight alignment.
- Check muffler, exhaust pipes, shields and clamps.
- Check the lap/shoulder belts for wear and function.
- Check for worn tires and loose wheel lug nuts.

At least once a year:

- Clean body and door drain holes.
- Lubricate door hinges and checks, and hood hinges.
- Lubricate door and hood locks and latches.
- Lubricate door rubber weatherstrips.
- Check the air conditioning system.
- Inspect and lubricate automatic transaxle linkage and controls.
- Clean battery and terminals.
- Check the brake fluid level.

SCHEDULED MAINTENANCE SERVICE

Follow Normal Maintenance Schedule if the vehicle is usually operated where none of the following conditions apply. If any of the following conditions apply, follow Maintenance Under Severe Usage Conditions.

- Repeated short distance driving.
- Driving in dusty conditions or sandy areas.
- Extensive use of brakes.
- Driving in areas where salt or other corrosive materials are being used.
- Driving on rough or muddy roads.
- Driving in mountainous areas.
- Extended periods of idling or low speed operation.
- Driving for a prolonged period in cold temperatures and/or extremely humid climates.
- More than 50% driving in heavy city traffic during hot weather above 90°F (32°C).

If your vehicle is operated under the above conditions, you should inspect, replace or refill more frequently than the following Normal Maintenance Schedule. After 120 months or 150,000 miles (240,000 km) continue to follow the prescribed maintenance intervals.

NORMAL MAINTENANCE SCHEDULE

The following maintenance services must be performed to ensure good emission control and performance. Keep receipts for all vehicle emission services to protect your warranty. Where both mileage and time are shown, the frequency of service is determined by whichever occurs first.

7,500 miles (12,000 km) or 6 months

- ❑ Rotate tires
- ❑ Inspect battery condition
- ❑ Inspect air cleaner filter
- ❑ Inspect vacuum hose
- ❑ Replace engine oil and filter
  (7,500 miles (12,000 km) or 12 months)
- ❑ Add fuel additive *1
  (7,500 miles (12,000 km) or 12 months)

15,000 miles (24,000 km) or 12 months

- ❑ Rotate tires
- ❑ Inspect battery condition
- ❑ Inspect air cleaner filter
- ❑ Inspect vacuum hose
- ❑ Inspect air conditioning refrigerant
- ❑ Inspect brake hoses and lines
- ❑ Inspect drive shafts and boots
- ❑ Inspect exhaust pipe and muffler
- ❑ Inspect front brake disc/pads, calipers
- ❑ Inspect rear brake disc/pads (if equipped)

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- ❑ Inspect rear brake drums/linings (if equipped)
- ❑ Inspect steering gear box, linkage & boots/lower arm ball joint, upper arm ball joint
- ❑ Inspect suspension mounting bolts
- ❑ Replace climate control air filter (for evaporator and blower unit)
- ❑ Replace engine oil and filter
  (15,000 miles (24,000 km) or 24 months)
- ❑ Add fuel additive *1
  (15,000 miles (24,000 km) or 24 months)

*1 : If TOP TIER Detergent Gasoline is not available, one bottle of additive is recommended. Additives are available from your authorized HYUNDAI dealer along with information on how to use them. Do not mix other additives.

❉ Inspect : Inspect and if necessary, adjust, correct, clean or replace.

NORMAL MAINTENANCE SCHEDULE (CONT.)

22,500 miles (36,000 km) or 18 months

- ❑ Rotate tires
- ❑ Inspect battery condition
- ❑ Inspect air cleaner filter
- ❑ Inspect vacuum hose
- ❑ Replace engine oil and filter (22,500 miles (36,000 km) or 36 months)
- ❑ Add fuel additive *1 (22,500 miles (36,000 km) or 36 months)

30,000 miles (48,000 km) or 24 months

- ❑ Rotate tires
- ❑ Inspect battery condition
- ❑ Inspect vacuum hose
- ❑ Inspect air conditioning refrigerant
- ❑ Inspect brake hoses and lines
- ❑ Inspect drive shafts and boots
- ❑ Inspect exhaust pipe and muffler
- ❑ Inspect front brake disc/pads, calipers
- ❑ Inspect rear brake disc/pads (if equipped)
- ❑ Inspect rear brake drums/linings (if equipped)
- ❑ Inspect steering gear box, linkage & boots/lower arm ball joint, upper arm ball joint
- ❑ Inspect suspension mounting bolts

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- ❑ Inspect brake/clutch (if equipped) fluid
- ❑ Inspect fuel filter *2
- ❑ Inspect fuel lines, fuel hoses and connections
- ❑ Inspect fuel tank air filter (if equipped) *2
- ❑ Inspect parking brake
- ❑ Inspect vapor hose and fuel filler cap
- ❑ Replace climate control air filter (for evaporator and blower unit)
- ❑ Replace air cleaner filter
- ❑ Replace engine oil and filter (30,000 miles (48,000 km) or 48 months)
- ❑ Add fuel additive *1 (30,000 miles (48,000 km) or 48 months)

*1 : If TOP TIER Detergent Gasoline is not available, one bottle of additive is recommended. Additives are available from your authorized HYUNDAI dealer along with information on how to use them. Do not mix other additives.

*2 : Fuel filter & Fuel tank air filter are considered to be maintenance free but periodic inspection is recommended for this maintenance schedule depends on fuel quality. If there are some important safety matters like fuel flow restriction, surging, loss of power, hard starting problem etc, replace the fuel filter immediately regardless of maintenance schedule and consult an authorized HYUNDAI dealer for details.

❉ Inspect : Inspect and if necessary, adjust, correct, clean or replace.

NORMAL MAINTENANCE SCHEDULE (CONT.)

37,500 miles (60,000 km) or 30 months

- ❑ Rotate tires
- ❑ Inspect battery condition
- ❑ Inspect air cleaner filter
- ❑ Inspect vacuum hose
- ❑ Inspect manual transaxle fluid (if equipped)
- ❑ Replace engine oil and filter (37,500 miles (60,000 km) or 60 months)
- ❑ Add fuel additive *1 (37,500 miles (60,000 km) or 60 months)

45,000 miles (72,000 km) or 36 months

- ❑ Rotate tires
- ❑ Inspect battery condition
- ❑ Inspect air cleaner filter
- ❑ Inspect vacuum hose
- ❑ Inspect air conditioning refrigerant
- ❑ Inspect brake hoses and lines
- ❑ Inspect drive shafts and boots
- ❑ Inspect exhaust pipe and muffler
- ❑ Inspect front brake disc/pads, calipers
- ❑ Inspect rear brake disc/pads (if equipped)
- ❑ Inspect rear brake drums/linings (if equipped)
- ❑ Inspect steering gear box, linkage & boots/lower arm ball joint, upper arm ball joint
- ❑ Inspect suspension mounting bolts
- ❑ Replace climate control air filter (for evaporator and blower unit)
- ❑ Replace engine oil and filter (45,000 miles (72,000 km) or 72 months)
- ❑ Add fuel additive *1 (45,000 miles (72,000 km) or 72 months)

*1 : If TOP TIER Detergent Gasoline is not available, one bottle of additive is recommended. Additives are available from your authorized HYUNDAI dealer along with information on how to use them. Do not mix other additives.

❉ Inspect : Inspect and if necessary, adjust, correct, clean or replace.

NORMAL MAINTENANCE SCHEDULE (CONT.)

52,500 miles (84,000 km) or 42 months

- ❑ Rotate tires
- ❑ Inspect battery condition
- ❑ Inspect air cleaner filter
- ❑ Inspect vacuum hose
- ❑ Replace engine oil and filter (52,500 miles (84,000 km) or 84 months)
- ❑ Add fuel additive *1 (52,500 miles (84,000 km) or 84 months)

60,000 miles (96,000 km) or 48 months

- ❑ Rotate tires
- ❑ Inspect battery condition
- ❑ Inspect vacuum hose
- ❑ Inspect air conditioning refrigerant
- ❑ Inspect brake hoses and lines
- ❑ Inspect drive shafts and boots
- ❑ Inspect exhaust pipe and muffler
- ❑ Inspect front brake disc/pads, calipers
- ❑ Inspect rear brake disc/pads (if equipped)
- ❑ Inspect rear brake drums/linings (if equipped)
- ❑ Inspect steering gear box, linkage & boots/lower arm ball joint, upper arm ball joint
- ❑ Inspect suspension mounting bolts
- ❑ Inspect brake/clutch (if equipped) fluid

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- ❑ Inspect fuel filter *2
- ❑ Inspect fuel lines, fuel hoses and connections
- ❑ Inspect fuel tank air filter (if equipped) *2
- ❑ Inspect parking brake
- ❑ Inspect vapor hose and fuel filler cap
- ❑ Inspect drive belts *3 (First, 60,000 miles (96,000 km) or 72 months after every 15,000 miles (24,000 km) or 24 months)
- ❑ Inspect valve clearance (Every 60,000 miles (96,000 km) or 72 months)
- ❑ Replace climate control air filter (for evaporator and blower unit)
- ❑ Replace air cleaner filter
- ❑ Replace engine oil and filter (60,000 miles (96,000 km) or 96 months)
- ❑ Add fuel additive *1 (60,000 miles (96,000 km) or 96 months)

*1 : If TOP TIER Detergent Gasoline is not available, one bottle of additive is recommended. Additives are available from your authorized HYUNDAI dealer along with information on how to use them. Do not mix other additives.

*2 : Fuel filter & Fuel tank air filter are considered to be maintenance free but periodic inspection is recommended for this maintenance schedule depends on fuel quality. If there are some important safety matters like fuel flow restriction, surging, loss of power, hard starting problem etc, replace the fuel filter immediately regardless of maintenance schedule and consult an authorized HYUNDAI dealer for details.

*3 : The drive belt should be replaced when cracks occur or tension is reduced excessively.

❉ Inspect : Inspect and if necessary, adjust, correct, clean or replace.

NORMAL MAINTENANCE SCHEDULE (CONT.)

67,500 miles (108,000 km) or 54 months

- ❑ Rotate tires
- ❑ Inspect battery condition
- ❑ Inspect air cleaner filter
- ❑ Inspect vacuum hose
- ❑ Replace engine oil and filter (67,500 miles (108,000 km) or 108 months)
- ❑ Add fuel additive *1 (67,500 miles (108,000 km) or 108 months)

75,000 miles (120,000 km) or 60 months

- ❑ Rotate tires
- ❑ Inspect battery condition
- ❑ Inspect air cleaner filter
- ❑ Inspect vacuum hose
- ❑ Inspect air conditioning refrigerant
- ❑ Inspect brake hoses and lines
- ❑ Inspect drive shafts and boots
- ❑ Inspect exhaust pipe and muffler
- ❑ Inspect front brake disc/pads, calipers
- ❑ Inspect rear brake disc/pads (if equipped)
- ❑ Inspect rear brake drums/linings (if equipped)
- ❑ Inspect steering gear box, linkage & boots/lower arm ball joint, upper arm ball joint
- ❑ Inspect suspension mounting bolts

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- ❑ Inspect manual transaxle fluid (if equipped)
- ❑ Inspect drive belts *3 (First, 60,000 miles (96,000 km) or 72 months after every 15,000 miles (24,000 km) or 24 months)
- ❑ Replace climate control air filter (for evaporator and blower unit)
- ❑ Replace engine oil and filter (75,000 miles (120,000 km) or 120 months)
- ❑ Add fuel additive *1 (75,000 miles (120,000 km) or 120 months)

*1 : If TOP TIER Detergent Gasoline is not available, one bottle of additive is recommended. Additives are available from your authorized HYUNDAI dealer along with information on how to use them. Do not mix other additives.

*3 : The drive belt should be replaced when cracks occur or tension is reduced excessively.

❉ Inspect : Inspect and if necessary, adjust, correct, clean or replace.

NORMAL MAINTENANCE SCHEDULE (CONT.)

82,500 miles (132,000 km) or 66 months

- ❑ Rotate tires
- ❑ Inspect battery condition
- ❑ Inspect air cleaner filter
- ❑ Inspect vacuum hose
- ❑ Replace engine oil and filter (82,500 miles (132,000 km) or 132 months)
- ❑ Add fuel additive *1 (82,500 miles (132,000 km) or 132 months)

90,000 miles (144,000 km) or 72 months

- ❑ Rotate tires
- ❑ Inspect battery condition
- ❑ Inspect vacuum hose
- ❑ Inspect air conditioning refrigerant
- ❑ Inspect brake hoses and lines
- ❑ Inspect drive shafts and boots
- ❑ Inspect exhaust pipe and muffler
- ❑ Inspect front brake disc/pads, calipers
- ❑ Inspect rear brake disc/pads (if equipped)
- ❑ Inspect rear brake drums/linings (if equipped)
- ❑ Inspect steering gear box, linkage & boots/lower arm ball joint, upper arm ball joint
- ❑ Inspect suspension mounting bolts
- ❑ Inspect brake/clutch (if equipped) fluid

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- ❑ Inspect fuel filter *2
- ❑ Inspect fuel lines, fuel hoses and connections
- ❑ Inspect fuel tank air filter (if equipped) *2
- ❑ Inspect parking brake
- ❑ Inspect vapor hose and fuel filler cap
- ❑ Inspect drive belts *3 (First, 60,000 miles (96,000 km) or 72 months after every 15,000 miles (24,000 km) or 24 months)
- ❑ Replace climate control air filter (for evaporator and blower unit)
- ❑ Replace air cleaner filter
- ❑ Replace engine oil and filter (90,000 miles (144,000 km) or 144 months)
- ❑ Add fuel additive *1 (90,000 miles (144,000 km) or 144 months)

*1 : If TOP TIER Detergent Gasoline is not available, one bottle of additive is recommended. Additives are available from your authorized HYUNDAI dealer along with information on how to use them. Do not mix other additives.

*2 : Fuel filter & Fuel tank air filter are considered to be maintenance free but periodic inspection is recommended for this maintenance schedule depends on fuel quality. If there are some important safety matters like fuel flow restriction, surging, loss of power, hard starting problem etc, replace the fuel filter immediately regardless of maintenance schedule and consult an authorized HYUNDAI dealer for details.

*3 : The drive belt should be replaced when cracks occur or tension is reduced excessively.

❉ Inspect : Inspect and if necessary, adjust, correct, clean or replace.

NORMAL MAINTENANCE SCHEDULE (CONT.)

97,500 miles (156,000 km) or 78 months

- ❑ Rotate tires
- ❑ Inspect battery condition
- ❑ Inspect air cleaner filter
- ❑ Inspect vacuum hose
- ❑ Replace spark plugs (iridium plated, every 97,500 miles)
- ❑ Replace engine oil and filter (97,500 miles (156,000 km) or 156 months)
- ❑ Add fuel additive *1 (97,500 miles (156,000 km) or 156 months)

105,000 miles (168,000 km) or 84 months

- ❑ Rotate tires
- ❑ Inspect battery condition
- ❑ Inspect air cleaner filter
- ❑ Inspect vacuum hose
- ❑ Inspect air conditioning refrigerant
- ❑ Inspect brake hoses and lines
- ❑ Inspect drive shafts and boots
- ❑ Inspect exhaust pipe and muffler
- ❑ Inspect front brake disc/pads, calipers
- ❑ Inspect rear brake disc/pads (if equipped)
- ❑ Inspect rear brake drums/linings (if equipped)
- ❑ Inspect steering gear box, linkage & boots/lower arm ball joint, upper arm ball joint
- ❑ Inspect suspension mounting bolts

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- ❑ Inspect drive belts *3 (First, 60,000 miles (96,000 km) or 72 months after every 15,000 miles (24,000 km) or 24 months)
- ❑ Replace climate control air filter (for evaporator and blower unit)
- ❑ Replace engine oil and filter (105,000 miles (168,000 km) or 168 months)
- ❑ Add fuel additive *1 (105,000 miles (168,000 km) or 168 months)

*1 : If TOP TIER Detergent Gasoline is not available, one bottle of additive is recommended. Additives are available from your authorized HYUNDAI dealer along with information on how to use them. Do not mix other additives.

*3 : The drive belt should be replaced when cracks occur or tension is reduced excessively.

❉ Inspect : Inspect and if necessary, adjust, correct, clean or replace.

NORMAL MAINTENANCE SCHEDULE (CONT.)

112,500 miles (180,000 km) or 90 months

- ❑ Rotate tires
- ❑ Inspect battery condition
- ❑ Inspect air cleaner filter
- ❑ Inspect vacuum hose
- ❑ Inspect manual transaxle fluid (if equipped)
- ❑ Replace engine oil and filter (112,500 miles (180,000 km) or 180 months)
- ❑ Add fuel additive *1 (112,500 miles (180,000 km) or 180 months)

120,000 miles (192,000 km) or 96 months

- ❑ Rotate tires
- ❑ Inspect battery condition
- ❑ Inspect vacuum hose
- ❑ Inspect air conditioning refrigerant
- ❑ Inspect brake hoses and lines
- ❑ Inspect drive shafts and boots
- ❑ Inspect exhaust pipe and muffler
- ❑ Inspect front brake disc/pads, calipers
- ❑ Inspect rear brake disc/pads (if equipped)
- ❑ Inspect rear brake drums/linings (if equipped)
- ❑ Inspect steering gear box, linkage & boots/lower arm ball joint, upper arm ball joint
- ❑ Inspect suspension mounting bolts
- ❑ Inspect brake/clutch (if equipped) fluid
- ❑ Inspect fuel filter *2

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- ❑ Inspect fuel lines, fuel hoses and connections
- ❑ Inspect fuel tank air filter (if equipped) *2
- ❑ Inspect parking brake
- ❑ Inspect vapor hose and fuel filler cap
- ❑ Inspect drive belts *3 (First, 60,000 miles (96,000 km) or 72 months after every 15,000 miles (24,000 km) or 24 months)
- ❑ Inspect valve clearance (Every 60,000 miles (96,000 km) or 72 months)
- ❑ Replace climate control air filter (for evaporator and blower unit)
- ❑ Replace air cleaner filter
- ❑ Replace engine oil and filter (120,000 miles (192,000 km) or 192 months)
- ❑ Replace coolant (First, 120,000 miles (192,000 km) or 120 months after every 30,000 miles (48,000 km) or 24 months)
- ❑ Add fuel additive *1 (120,000 miles (192,000 km) or 192 months)

*1 : If TOP TIER Detergent Gasoline is not available, one bottle of additive is recommended. Additives are available from your authorized HYUNDAI dealer along with information on how to use them. Do not mix other additives.

*2 : Fuel filter & Fuel tank air filter are considered to be maintenance free but periodic inspection is recommended for this maintenance schedule depends on fuel quality. If there are some important safety matters like fuel flow restriction, surging, loss of power, hard starting problem etc, replace the fuel filter immediately regardless of maintenance schedule and consult an authorized HYUNDAI dealer for details.

*3 : The drive belt should be replaced when cracks occur or tension is reduced excessively.

❉ Inspect : Inspect and if necessary, adjust, correct, clean or replace.

NORMAL MAINTENANCE SCHEDULE (CONT.)

127,500 miles (204,000 km) or 102 months

- ❑ Rotate tires
- ❑ Inspect battery condition
- ❑ Inspect air cleaner filter
- ❑ Inspect vacuum hose
- ❑ Replace engine oil and filter (127,500 miles (204,000 km) or 204 months)
- ❑ Add fuel additive *1 (127,500 miles (204,000 km) or 204 months)

135,000 miles (216,000 km) or 108 months

- ❑ Rotate tires
- ❑ Inspect battery condition
- ❑ Inspect air cleaner filter
- ❑ Inspect vacuum hose
- ❑ Inspect air conditioning refrigerant
- ❑ Inspect brake hoses and lines
- ❑ Inspect drive shafts and boots
- ❑ Inspect exhaust pipe and muffler
- ❑ Inspect front brake disc/pads, calipers
- ❑ Inspect rear brake disc/pads (if equipped)
- ❑ Inspect rear brake drums/linings (if equipped)
- ❑ Inspect steering gear box, linkage & boots/lower arm ball joint, upper arm ball joint
- ❑ Inspect suspension mounting bolts

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- ❑ Inspect drive belts *3 (First, 60,000 miles (96,000 km) or 72 months after every 15,000 miles (24,000 km) or 24 months)
- ❑ Replace climate control air filter (for evaporator and blower unit)
- ❑ Replace engine oil and filter (135,000 miles (216,000 km) or 216 months)
- ❑ Add fuel additive *1 (135,000 miles (216,000 km) or 216 months)

*1 : If TOP TIER Detergent Gasoline is not available, one bottle of additive is recommended. Additives are available from your authorized HYUNDAI dealer along with information on how to use them. Do not mix other additives.

*3 : The drive belt should be replaced when cracks occur or tension is reduced excessively.

❉ Inspect : Inspect and if necessary, adjust, correct, clean or replace.

NORMAL MAINTENANCE SCHEDULE (CONT.)

142,500 miles (228,000 km) or 114 months

- ❑ Rotate tires
- ❑ Inspect battery condition
- ❑ Inspect air cleaner filter
- ❑ Inspect vacuum hose
- ❑ Replace engine oil and filter (142,500 miles (228,000 km) or 228 months)
- ❑ Add fuel additive *1 (142,500 miles (228,000 km) or 228 months)

150,000 miles (240,000 km) or 120 months

- ❑ Rotate tires
- ❑ Inspect battery condition
- ❑ Inspect vacuum hose
- ❑ Inspect air conditioning refrigerant
- ❑ Inspect brake hoses and lines
- ❑ Inspect drive shafts and boots
- ❑ Inspect exhaust pipe and muffler
- ❑ Inspect front brake disc/pads, calipers
- ❑ Inspect rear brake disc/pads (if equipped)
- ❑ Inspect rear brake drums/linings (if equipped)
- ❑ Inspect steering gear box, linkage & boots/lower arm ball joint, upper arm ball joint
- ❑ Inspect suspension mounting bolts
- ❑ Inspect brake/clutch (if equipped) fluid
- ❑ Inspect fuel filter *2

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- ❑ Inspect fuel lines, fuel hoses and connections
- ❑ Inspect fuel tank air filter (if equipped) *2
- ❑ Inspect parking brake
- ❑ Inspect vapor hose and fuel filler cap
- ❑ Inspect manual transaxle fluid (if equipped)
- ❑ Inspect drive belts *3 (First, 60,000 miles (96,000 km) or 72 months after every 15,000 miles (24,000 km) or 24 months)
- ❑ Replace climate control air filter (for evaporator and blower unit)
- ❑ Replace air cleaner filter
- ❑ Replace engine oil and filter (150,000 miles (240,000 km) or 240 months)
- ❑ Replace coolant (First, 120,000 miles (192,000 km) or 120 months after every 30,000 miles (48,000 km) or 24 months)
- ❑ Add fuel additive *1 (150,000 miles (240,000 km) or 240 months)

*1 : If TOP TIER Detergent Gasoline is not available, one bottle of additive is recommended. Additives are available from your authorized HYUNDAI dealer along with information on how to use them. Do not mix other additives.

*2 : Fuel filter & Fuel tank air filter are considered to be maintenance free but periodic inspection is recommended for this maintenance schedule depends on fuel quality. If there are some important safety matters like fuel flow restriction, surging, loss of power, hard starting problem etc, replace the fuel filter immediately regardless of maintenance schedule and consult an authorized HYUNDAI dealer for details.

*3 : The drive belt should be replaced when cracks occur or tension is reduced excessively.

❉ Inspect : Inspect and if necessary, adjust, correct, clean or replace.

NORMAL MAINTENANCE SCHEDULE (CONT.)

No check, No service required
❑ Automatic transaxle fluid (if equipped)

MAINTENANCE UNDER SEVERE USAGE CONDITIONS

The following items must be serviced more frequently on cars normally used under severe driving conditions. Refer to the chart below for the appropriate maintenance intervals.

R : Replace I : Inspect and, after inspection, clean, adjust, repair or replace if necessary

MAINTENANCE ITEM	MAINTENANCE OPERATION	MAINTENANCE INTERVALS	DRIVING CONDITION
ENGINE OIL AND FILTER	R	EVERY 3,750 MILES (6,000 KM) OR 6 MONTHS	A, B, C, D, E, F, G, H, I, J, K
AIR CLEANER FILTER	R	MORE FREQUENTLY	C, E
SPARK PLUGS	R	MORE FREQUENTLY	B, H
AUTOMATIC TRANSAXLE FLUID	R	EVERY 60,000 MILES (96,000 KM)	A, C, E, F, G, I
MANUAL TRANSAXLE FLUID	R	EVERY 75,000 MILES (120,000 KM)	C, D, E, F, G, H, I
FRONT BRAKE DISC/PADS, CALIPERS	I	MORE FREQUENTLY	C, D, G, H
REAR BRAKE DISC/PADS	I	MORE FREQUENTLY	C, D, G, F
REAR BRAKE DRUMS/LININGS	I	MORE FREQUENTLY	C, D, G, F
PARKING BRAKE	I	MORE FREQUENTLY	C, D, G, H
STEERING GEAR BOX, LINKAGE & BOOTS/ LOWER ARM BALL JOINT, UPPER ARM BALL JOINT	I	MORE FREQUENTLY	C, D, E, F, G, H, I
DRIVE SHAFTS AND BOOTS	I	EVERY 7,500 MILES (12,000 KM) OR 6 MONTHS	C, D, E, F, G, H, I
CLIMATE CONTROL AIR FILTER (FOR EVAPORATOR AND BLOWER UNIT)	R	MORE FREQUENTLY	C, E

SEVERE DRIVING CONDITIONS

A - Repeatedly driving short distance of less than 5 miles (8 km) in normal temperature or less than 10 miles (16 km) in freezing temperature
B - Extensive engine idling or low speed driving for long distances
C - Driving on rough, dusty, muddy, unpaved, graveled or salt- spread roads
D - Driving in areas using salt or other corrosive materials or in very cold weather
E - Driving in sandy areas
F - Driving in heavy traffic area over 90°F (32°C)
G - Driving on uphill, downhill, or mountain road
H - Towing a Trailer, or using a camper, or roof rack
I - Driving as a patrol car, taxi, other commercial use or vehicle towing
J - Driving over 106 mph (170 km/h)
K - Frequently driving in stop-and-go conditions

EXPLANATION OF SCHEDULED MAINTENANCE ITEMS

Engine oil and filter

The engine oil and filter should be changed at the intervals specified in the maintenance schedule. If the car is being driven in severe conditions, more frequent oil and filter changes are required.

Drive belts

Inspect all drive belts for evidence of cuts, cracks, excessive wear or oil saturation and replace if necessary. Drive belts should be checked periodically for proper tension and adjusted as necessary.

Fuel filter

A clogged filter can limit the speed at which the vehicle may be driven, damage the emission system and cause multiple issues such as hard starting. If an excessive amount of foreign matter accumulates in the fuel tank, the filter may require replacement more frequently.

After installing a new filter, run the engine for several minutes, and check for leaks at the connections. Fuel filters should be installed by an authorized HYUNDAI dealer.

Fuel lines, fuel hoses and connections

Check the fuel lines, fuel hoses and connections for leakage and damage. Have an authorized HYUNDAI dealer replace any damaged or leaking parts immediately.

Vapor hose and fuel filler cap

The vapor hose and fuel filler cap should be inspected at those intervals specified in the maintenance schedule. Make sure that a new vapor hose or fuel filler cap is correctly replaced.

Vacuum crankcase ventilation hoses

Inspect the surface of hoses for evidence of heat and/or mechanical damage. Hard and brittle rubber, cracking, tears, cuts, abrasions, and excessive swelling indicate deterioration. Particular attention should be paid to examine those hose surfaces nearest to high heat sources, such as the exhaust manifold.

Inspect the hose routing to assure that the hoses do not come in contact with any heat source, sharp edges or moving component which might cause heat damage or mechanical wear.

Inspect all hose connections, such as clamps and couplings, to make sure they are secure, and that no leaks are present. Hoses should be replaced immediately if there is any evidence of deterioration or damage.

Air cleaner filter

A Genuine HYUNDAI air cleaner filter is recommended when the filter is replaced.

Spark plugs

Make sure to install new spark plugs of the correct heat range.

Cooling system

Check cooling system components, such as radiator, coolant reservoir, hoses and connections for leakage and damage. Replace any damaged parts.

Coolant

The coolant should be changed at the intervals specified in the maintenance schedule.

Automatic transaxle fluid (if equipped)

Automatic transaxle fluid should not be checked under normal usage conditions.

But in severe conditions, the fluid should be changed at an authorized HYUNDAI dealer in accordance to the scheduled maintenance at the beginning of this chapter.

✻ NOTICE

Automatic transaxle fluid color is basically red.

As the vehicle is driven, the automatic transaxle fluid will begin to look darker. It is normal condition and you should not judge the need to replace the fluid based upon the changed color.

⚠ CAUTION

The use of a non-specified fluid could result in transaxle malfunction and failure.

Use only specified automatic transaxle fluid. (Refer to "Recommended lubricants and capacities" in section 8.)

Manual transaxle fluid (if equipped)

Inspect the manual transaxle fluid according to the maintenance schedule.

Brake hoses and lines

Visually check for proper installation, chafing, cracks, deterioration and any leakage. Replace any deteriorated or damaged parts immediately.

Brake/clutch fluid

Check brake fluid level in the brake fluid reservoir. The level should be between "MIN" and "MAX" marks on the side of the reservoir. Use only hydraulic brake fluid conforming to DOT 3 or DOT 4 specification.

Valve clearance

Inspect excessive valve noise and/or engine vibration and adjust if necessary. An authorized HYUNDAI dealer should perform the operation.

Parking brake

Inspect the parking brake system including the parking brake pedal and cables.

Brake discs, pads, calipers and rotors

Check the pads for excessive wear, discs for run out and wear, and calipers for fluid leakage.

Exhaust pipe and muffler

Visually inspect the exhaust pipes, muffler and hangers for cracks, deterioration, or damage. Start the engine and listen carefully for any exhaust gas leakage. Tighten connections or replace parts as necessary.

Suspension mounting bolts

Check the suspension connections for looseness or damage. Retighten to the specified torque.

Steering gear box, linkage & boots/lower arm ball joint

With the vehicle stopped and engine off, check for excessive free-play in the steering wheel.

Check the linkage for bends or damage. Check the dust boots and ball joints for deterioration, cracks, or damage. Replace any damaged parts.

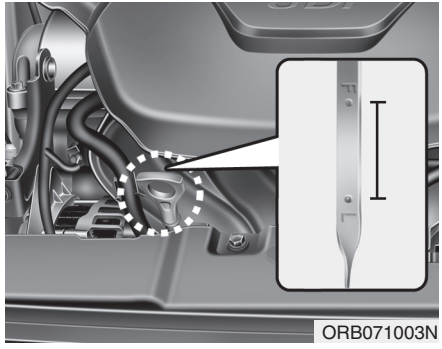
Drive shafts and boots

Check the drive shafts, boots and clamps for cracks, deterioration, or damage. Replace any damaged parts and, if necessary, repack the grease.

Air conditioning refrigerant

Check the air conditioning lines and connections for leakage and damage.

ENGINE OIL



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Checking the engine oil level

1. Be sure the vehicle is on level ground.
2. Start the engine and allow it to reach normal operating temperature.
3. Turn the engine off and wait for a few minutes (about 5 minutes) for the oil to return to the oil pan.
4. Pull the dipstick out, wipe it clean, and re-insert it fully.

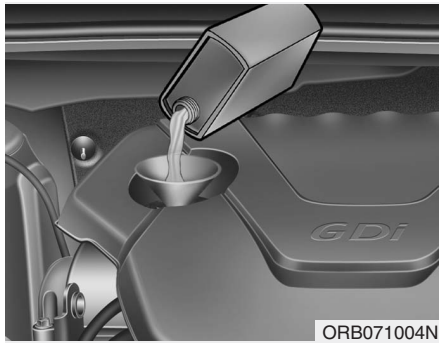
⚠ WARNING - Radiator hose

Be very careful not to touch the radiator hose when checking or adding the engine oil as it may be hot enough to burn you.

5. Pull the dipstick out again and check the level. The level should be between F and L.

⚠ CAUTION

- ***Do not overfill with engine oil. Engine damage may result.***
- ***Do not spill engine oil, when adding or changing engine oil. If you spill engine oil in the engine room, wipe it off immediately.***



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If it is near or at L, add enough oil to bring the level to F. **Do not overfill.**

Use a funnel to help prevent oil from being spilled on engine components.

Use only the specified engine oil. (Refer to "Recommended lubricants and capacities" in section 8.)

Changing the engine oil and filter

Have engine oil and filter changed by an authorized HYUNDAI dealer according to the Maintenance Schedule at the beginning of this section.

⚠ CALIFORNIA PROPOSITION 65 WARNING

Engine oil contains chemicals known to the State of California to cause cancer, birth defects, and reproductive harm.

Used engine oil may cause irritation or cancer of the skin if left in contact with the skin for prolonged periods of time. Used engine oil contains chemicals that have caused cancer in laboratory animals. Always protect your skin by washing your hands thoroughly with soap and warm water as soon as possible after handling used oil.

ENGINE COOLANT

The high-pressure cooling system has a reservoir filled with year-round antifreeze coolant. The reservoir is filled at the factory.

Check the antifreeze protection and coolant level at least once a year, at the beginning of the winter season, and before traveling to a colder climate.

Checking the coolant level

⚠ WARNING

Removing radiator cap

- **Never attempt to remove the radiator cap while the engine is operating or hot. Doing so might lead to cooling system and engine damage and could result in serious personal injury from escaping hot coolant or steam.**
- **Turn the engine off and wait until it cools down. Use extreme care when removing the radiator cap. Wrap a thick towel around it, and turn it counterclockwise slowly to the first stop. Step back while the pressure is released from the cooling system. When you are sure all the pressure has been released, press down on the cap, using a thick towel, and continue turning counterclockwise to remove it.**

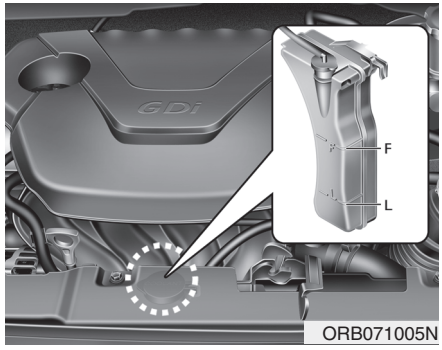
(Continued)

(Continued)

- **Even if the engine is not operating, do not remove the radiator cap or the drain plug while the engine and radiator are hot. Hot coolant and steam may still blow out under pressure, causing serious injury.**

⚠ WARNING

The electric motor (cooling fan) is controlled by engine coolant temperature, refrigerant pressure and vehicle speed. It may sometimes operate even when the engine is not running. Use extreme caution when working near the blades of the cooling fan so that you are not injured by a rotating fan blades. As the engine coolant temperature decreases, the electric motor will automatically shut off. This is a normal condition. If your vehicle is equipped with GDI, the electric motor (cooling fan) may operate until you disconnect the negative battery cable.



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Check the condition and connections of all cooling system hoses and heater hoses. Replace any swollen or deteriorated hoses.

The coolant level should be filled between F and L marks on the side of the coolant reservoir when the engine is cool.

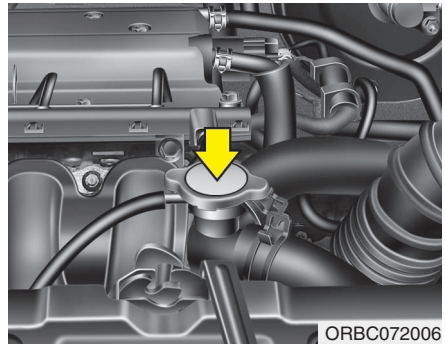
If the coolant level is low, add enough distilled (deionized) or soft water to provide protection against freezing and corrosion. Bring the level to F, but do not overfill. If frequent additions are required, see an authorized HYUNDAI dealer for a cooling system inspection.

Recommended engine coolant

- When adding coolant, use only deionized water or soft water for your vehicle and never mix hard water in the coolant filled at the factory. An improper coolant mixture can result in serious malfunction or engine damage.
- The engine in your vehicle has aluminum engine parts and must be protected by an ethylene-glycol-based coolant to prevent corrosion and freezing.
- DO NOT USE alcohol or methanol coolant or mix them with the specified coolant.
- Do not use a solution that contains more than 60% antifreeze or less than 35% antifreeze, which would reduce the effectiveness of the solution.

For mixture percentage, refer to the following table.

Ambient Temperature	Mixture Percentage (volume)	
	Antifreeze	Water
5°F (-15°C)	35	65
-13°F (-25°C)	40	60
-31°F (-35°C)	50	50
-49°F (-45°C)	60	40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⚠ WARNING

Radiator cap

Do not remove the radiator cap when the engine and radiator are hot. Scalding hot coolant and steam may blow out under pressure causing serious injury.

Changing the coolant

Have coolant changed by an authorized HYUNDAI dealer according to the Maintenance Schedule at the beginning of this section.

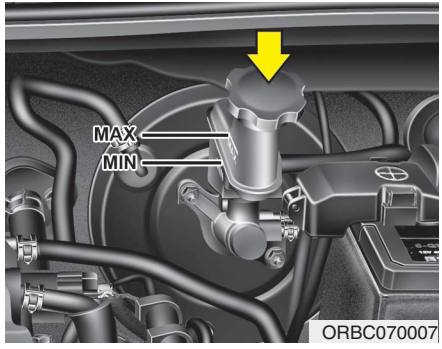
⚠ CAUTION

Put a thick cloth or fabric around the radiator cap before refilling the coolant in order to prevent the coolant from overflowing into engine parts such as generator.

⚠ WARNING - Coolant

- **Do not use radiator coolant or antifreeze in the washer fluid reservoir.**
- **Radiator coolant can severely obscure visibility when sprayed on the windshield and may cause loss of vehicle control or damage to paint and body trim.**

BRAKE/CLUTCH FLUID



Checking the brake/clutch fluid level

Check the fluid level in the reservoir periodically. The fluid level should be between MAX and MIN marks on the side of the reservoir.

Before removing the reservoir cap and adding brake/clutch fluid, clean the area around the reservoir cap thoroughly to prevent brake/clutch fluid contamination.

If the level is low, add fluid to the MAX level. The level will fall with accumulated mileage. This is a normal condition associated with the wear of the brake linings. If the fluid level is excessively low, have the brake system or clutch (if equipped) checked by an authorized HYUNDAI dealer.

Use only the specified brake fluid. (Refer to "Recommended lubricants or capacities" in section 8.)

Never mix different types of fluid.

⚠ WARNING - Loss of brake/clutch fluid

In the event the brake system requires frequent additions of fluid, the vehicle should be inspected by an authorized HYUNDAI dealer.

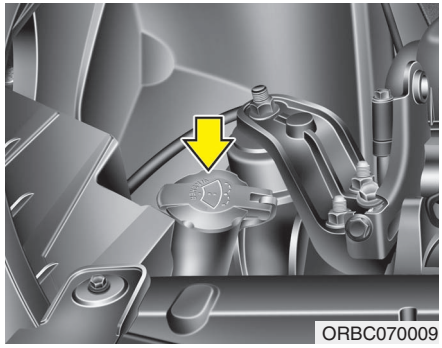
⚠ WARNING - Brake/clutch fluid

When changing and adding brake fluid, handle it carefully. Do not let it come in contact with your eyes. If brake fluid should come in contact with your eyes, immediately flush them with a large quantity of fresh tap water. Have your eyes examined by a doctor as soon as possible.

⚠ CAUTION

Do not allow brake fluid to contact the vehicle's body paint, as paint damage will result. Brake fluid, which has been exposed to open air for an extended time should never be used as its quality cannot be guaranteed. It should be disposed of properly. Don't put in the wrong kind of fluid. A few drops of mineral-based oil, such as engine oil, in your brake system can damage brake system parts.

WASHER FLUID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Checking the washer fluid level

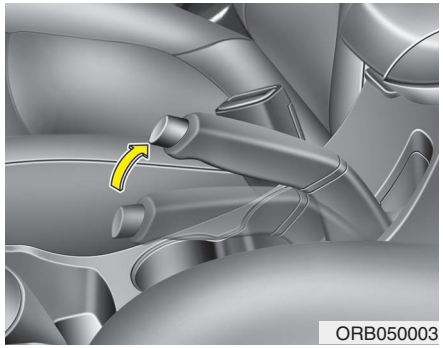
The reservoir is translucent so that you can check the level with a quick visual inspection.

Check the fluid level in the washer fluid reservoir and add fluid if necessary. Plain water may be used if washer fluid is not available. However, use washer solvent with antifreeze characteristics in cold climates to prevent freezing.

⚠ WARNING - Coolant

- **Do not use radiator coolant or antifreeze in the washer fluid reservoir.**
- **Radiator coolant can severely obscure visibility when sprayed on the windshield and may cause loss of vehicle control or damage to paint and body trim.**
- **Windshield washer fluid agents contain some amounts of alcohol and can be flammable under certain circumstances. Do not allow sparks or flame to contact the washer fluid or the washer fluid reservoir. Damage to the vehicle or occupants could occur.**
- **Windshield washer fluid is poisonous to humans and animals. Do not drink and avoid contacting windshield washer fluid. Serious injury or death could occur.**

PARKING BRAKE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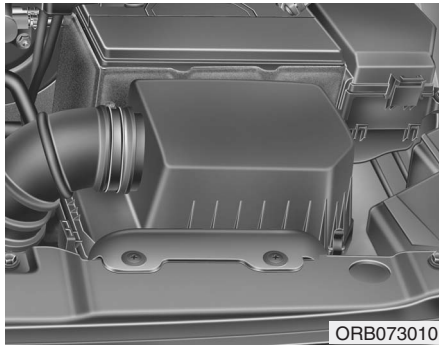
Checking the parking brake

Check the stroke of the parking brake by counting the number of “clicks” heard while fully applying it from the released position. Also, the parking brake alone should securely hold the vehicle on a fairly steep grade. If the stroke is more or less than specified, have the parking brake adjusted by an authorized HYUNDAI dealer.

Stroke : 6~8 “clicks” at a force of 44 lbs (20 kg, 196 N).

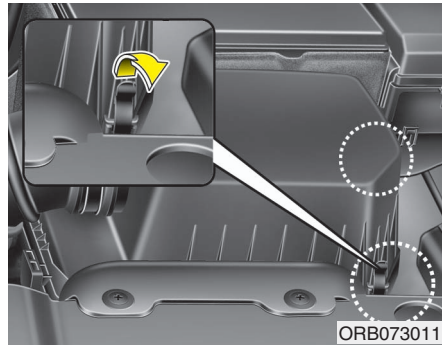
AIR CLEANER



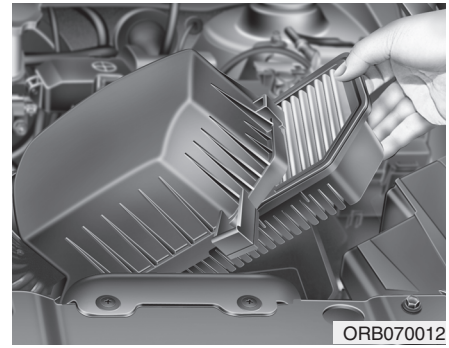
Filter replacement

It must be replaced when necessary, and should not be cleaned and reused.

You can clean the filter when inspecting the air cleaner element.



1. Loosen the air cleaner cover attaching clips and open the cover.



2. Wipe the inside of the air cleaner.
3. Replace the air cleaner filter.
4. Lock the cover with the cover attaching clips.

Replace the filter according to the Maintenance Schedule.

If the vehicle is operated in extremely dusty or sandy areas, replace the element more often than the usual recommended intervals. (Refer to "Maintenance under severe usage conditions" in this section.)

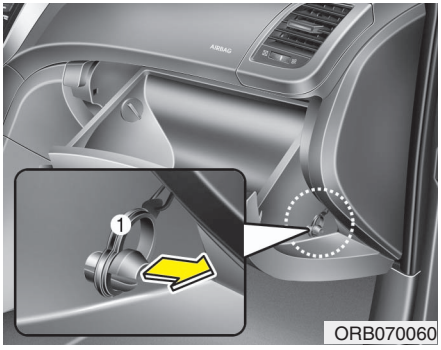
⚠ CAUTION

- ***Do not drive with the air cleaner removed; this will result in excessive engine wear.***
- ***When removing the air cleaner filter, be careful that dust or dirt does not enter the air intake, or damage may result.***
- ***Use a HYUNDAI genuine part. Use of non-genuine parts could damage the air flow sensor and engine.***

CLIMATE CONTROL AIR FILTER

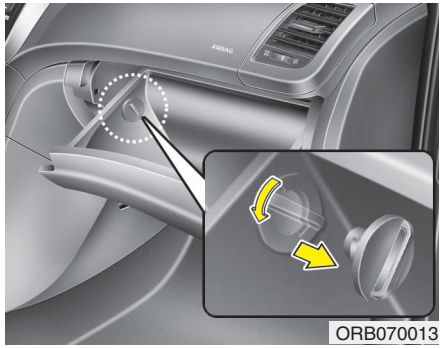
Filter inspection

The climate control air filter should be replaced according to the Maintenance Schedule. If the vehicle is operated in severely air-polluted cities or on dusty rough roads for a long period, it should be inspected more frequently and replaced earlier. When you replace the climate control air filter, replace it performing the following procedure, and be careful to avoid damaging other components.

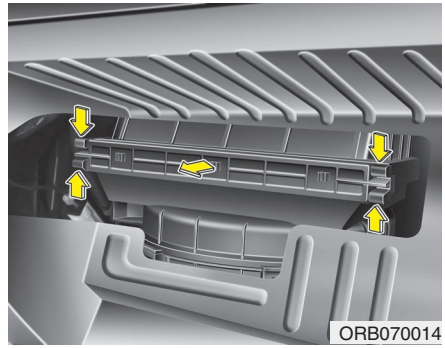


Filter replacement

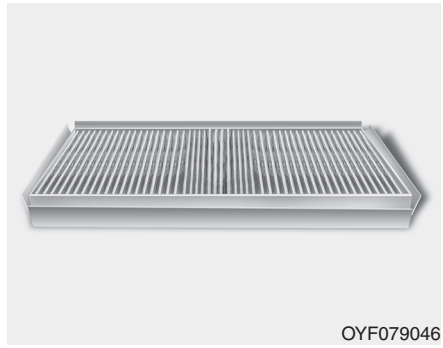
1. Open the glove box and remove the support strap (1).



2. With the glove box open, remove the stoppers by turning them counter-clockwise on both sides.



3. Remove the climate control air filter cover while pressing the lock of the cover.

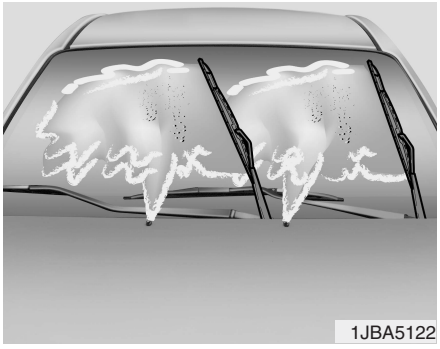


4. Replace the climate control air filter.
5. Reassemble in the reverse order of disassembly.

✻ NOTICE

When replacing the climate control air filter install it properly. Otherwise, the system may produce noise and the effectiveness of the filter may be reduced.

WIPER BLADES



Blade inspection

✻ NOTICE

Commercial hot waxes applied by automatic car washes have been known to make the windshield difficult to clean.

Contamination of either the windshield or the wiper blades with foreign matter can reduce the effectiveness of the windshield wipers. Common sources of contamination are insects, tree sap, and hot wax treatments used by some commercial car washes. If the blades are not wiping properly, clean both the window and the blades with a good cleaner or mild detergent, and rinse thoroughly with clean water.

⚠ CAUTION

To prevent damage to the wiper blades, do not use gasoline, kerosene, paint thinner, or other solvents on or near them.

Blade replacement

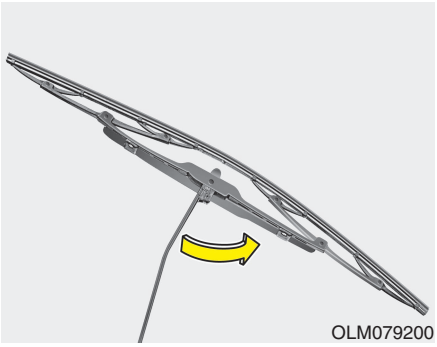
When the wipers no longer clean adequately, the blades may be worn or cracked, and require replacement.

⚠ CAUTION

To prevent damage to the wiper arms or other components, do not attempt to move the wipers manually.

⚠ CAUTION

The use of a non-specified wiper blade could result in wiper malfunction and failure.



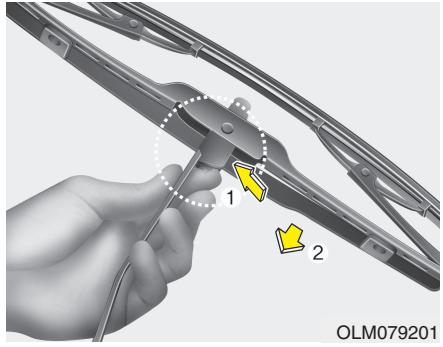
Front windshield wiper blade

Type A

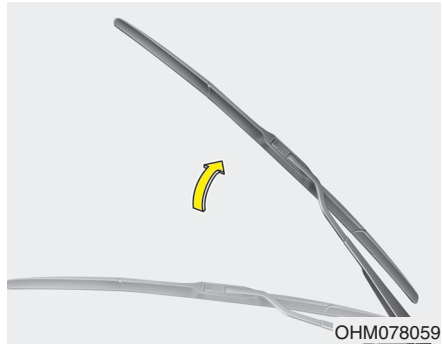
1. Raise the wiper arm and turn the wiper blade assembly to expose the plastic locking clip.

⚠ CAUTION

Do not allow the wiper arm to fall against the windshield, since it may chip or crack the windshield.



2. Compress the clip and slide the blade assembly downward.
3. Lift it off the arm.
4. Install the blade assembly in the reverse order of removal.



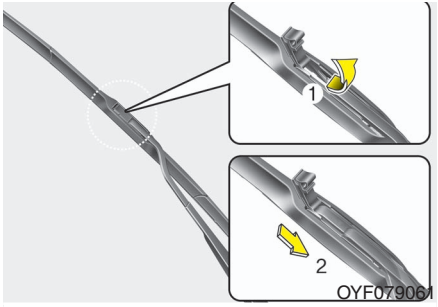
Front windshield wiper blade

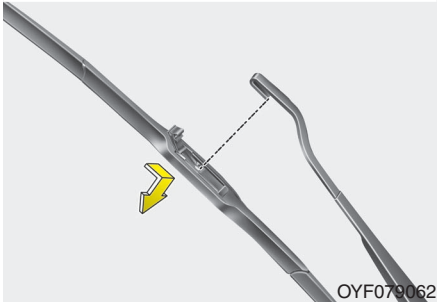
Type B

1. Raise the wiper arm.

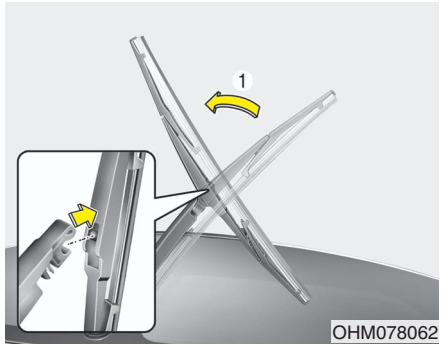
⚠ CAUTION

Do not allow the wiper arm to fall against the windshield, since it may chip or crack the windshield.



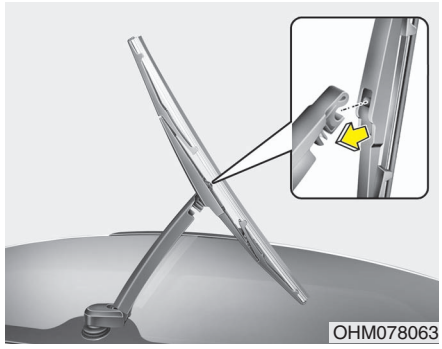


2. Lift up the wiper blade clip. Then pull down the blade assembly and remove it.
3. Install the new blade assembly in the reverse order of removal.



Rear window wiper blade (if equipped)

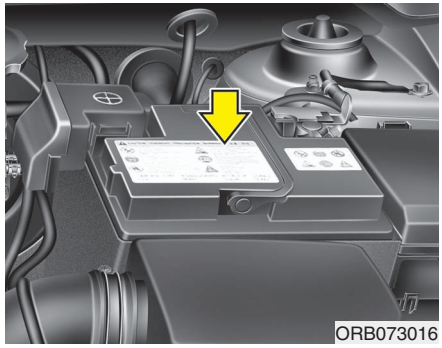
1. Raise the wiper arm and pull out the wiper blade assembly.



2. Install the new blade assembly by inserting the center part into the slot in the wiper arm until it clicks into place.
3. Make sure the blade assembly is installed firmly by trying to pull it slightly.

To prevent damage to the wiper arms or other components, have an authorized HYUNDAI dealer replace the wiper blade.

BATTERY



For best battery service

- Keep the battery securely mounted.
- Keep the battery top clean and dry.
- Keep the terminals and connections clean, tight, and coated with petroleum jelly or terminal grease.
- Rinse any spilled electrolyte from the battery immediately with a solution of water and baking soda.
- If the vehicle is not going to be used for an extended time, disconnect the battery cables.

⚠ WARNING - Battery dangers

Always read the following instructions carefully when handling a battery.

Keep lighted cigarettes and all other flames or sparks away from the battery.

Hydrogen, a highly combustible gas, is always present in battery cells and may explode if ignited.

Keep batteries out of the reach of children because batteries contain highly corrosive SULFURIC ACID. Do not allow battery acid to contact your skin, eyes, clothing or paint finish.

If any electrolyte gets into your eyes, flush your eyes with clean water for at least 15 minutes and get immediate medical attention.

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If electrolyte gets on your skin, thoroughly wash the contacted area. If you feel a pain or a burning sensation, get medical attention immediately.

Wear eye protection when charging or working near a battery. Always provide ventilation when working in an enclosed space.

An inappropriately disposed battery can be harmful to the environment and human health. Dispose the battery according to your local law(s) or regulation.

The battery contains lead. Do not dispose of it after use. Please return the battery to an authorized HYUNDAI dealer to be recycled.

- **When lifting a plastic-cased battery, excessive pressure on the case may cause battery acid to leak, resulting in personal injury. Lift with a battery carrier or with your hands on opposite corners.**

(Continued)

(Continued)

- **Never attempt to recharge the battery when the battery cables are connected.**
- **The electrical ignition system works with high voltage. Never touch these components with the engine running or the ignition switched on.**

Failure to follow the above warnings can result in serious bodily injury or death.

⚠ CALIFORNIA PROPOSITION 65 WARNING

Battery posts, terminals, and related accessories contain lead and lead compounds, chemicals known to the State of California to cause cancer, birth defects and reproductive harm. Batteries also contain other chemicals known to the State of California to cause cancer. Wash hands after handling.

⚠ CAUTION

- ***When you don't use the vehicle for a long time in low temperature area, separate the battery and keep it indoors.***
- ***Always charge the battery fully to prevent battery case damage in low temperature area.***
- ***If you connect unauthorized electronic devices to the battery, the battery may be discharged. Never use unauthorized devices.***
- ***Make sure the battery cap is closed. If the battery cap is not closed securely, it can malfunction because the electric components are exposed to moisture.***

⚠ WARNING

Separating the battery from the vehicle should be done by an authorized HYUNDAI dealer.

Battery recharging

Your vehicle has a maintenance-free, calcium-based battery.

If the battery becomes discharged in a short time (because, for example the headlights or interior lights were left on while vehicle was not in use) jump start the vehicle from another battery and run the engine at least 20 minutes at idle before driving. Do not turn off the engine for 30 minutes total of idle and/or driving as the battery may not have sufficient recharge to start.

⚠ WARNING - Recharging battery

When recharging the battery, observe the following precautions:

- **The battery must be removed from the vehicle and placed in an area with good ventilation.**
- **Do not allow cigarettes, sparks, or flame near the battery.**
- **Watch the battery during charging, and stop or reduce the charging rate if the battery cells begin gassing (boiling) violently or if the temperature of the electrolyte of any cell exceeds 120°F (49°C).**
- **Wear eye protection when checking the battery during charging.**
- **Disconnect the battery charger in the following order.**

1. **Turn off the battery charger main switch.**
2. **Unhook the negative clamp from the negative battery terminal.**
3. **Unhook the positive clamp from the positive battery terminal.**

⚠ WARNING

- **Before performing maintenance or recharging the battery, turn off all accessories and stop the engine.**
- **The negative battery cable must be removed first and installed last when the battery is disconnected.**
- **Operation related to the battery should be done by an authorized HYUNDAI dealer.**

Reset items

Items should be reset after the battery has been discharged or the battery has been disconnected.

- Sunroof (See section 4)
- Trip computer (See section 4)
- Climate control system (See section 4)
- Clock (See section 4)
- Audio (See section 4)

TIRES AND WHEELS

Tire care

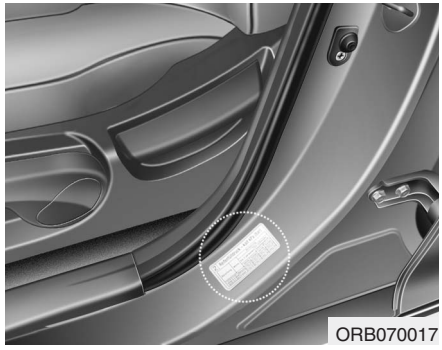
For proper maintenance, safety, and maximum fuel economy, you must always maintain recommended tire inflation pressures and stay within the load limits and weight distribution recommended for your vehicle.

Recommended cold tire inflation pressures

All tire pressures (including the spare) should be checked when the tires are cold. “Cold Tires” mean the vehicle has not been driven for at least three hours or driven less than one mile (1.6 km).

Recommended pressures must be maintained for the best ride, vehicle handling, and minimum tire wear.

For recommended inflation pressure, refer to “Tire and wheels” in section 8.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All specifications (sizes and pressures) can be found on a label attached to the driver’s side center pillar.

⚠ WARNING - Tire underinflation

Severe underinflation can lead to severe heat build-up, causing blowouts, tread separation and other tire failures that can result in the loss of vehicle control leading to severe injury or death. This risk is much higher on hot days and when driving for long periods at high speeds.

⚠ CAUTION

- ***Underinflation also results in excessive wear, poor handling and reduced fuel economy. Wheel deformation also is possible. Keep your tire pressures at the proper levels. If a tire frequently needs refilling, have it checked by an authorized HYUNDAI dealer.***
- ***Overinflation produces a harsh ride, excessive wear at the center of the tire tread, and a greater possibility of damage from road hazards.***

⚠ CAUTION

- ***Warm tires normally exceed recommended cold tire pressures by 4 to 6 psi (28 to 41 kPa). Do not release air from warm tires to adjust the pressure or the tires will be underinflated.***
- ***Be sure to reinstall the tire inflation valve caps. Without the valve cap, dirt or moisture could get into the valve core and cause air leakage. If a valve cap is missing, install a new one as soon as possible.***

⚠ WARNING - Tire Inflation

Overinflation or underinflation can reduce tire life, adversely affect vehicle handling, and lead to sudden tire failure. This could result in loss of vehicle control and potential injury.

⚠ CAUTION - Tire pressure

Always observe the following:

- ***Check tire pressure when the tires are cold. (After vehicle has been parked for at least three hours or hasn't been driven more than one mile (1.6 km) since startup.)***
- ***Check the pressure of your spare tire each time you check the pressure of other tires.***
- ***Never overload your vehicle. Be careful not to overload a vehicle luggage rack if your vehicle is equipped with one.***
- ***Worn, old tires can cause accidents. If your tread is badly worn, or if your tires have been damaged, replace them.***

Checking tire inflation pressure

Check your tires once a month or more.

Also, check the tire pressure of the spare tire.

How to check

Use a good quality gage to check tire pressure. You can not tell if your tires are properly inflated simply by looking at them. Radial tires may look properly inflated even when they're underinflated.

Check the tire's inflation pressure when the tires are cold. - "Cold" means your vehicle has been sitting for at least three hours or driven no more than 1 mile (1.6 km).

Remove the valve cap from the tire valve stem. Press the tire gage firmly onto the valve to get a pressure measurement. If the cold tire inflation pressure matches the recommended pressure on the tire and loading information label, no further adjustment is necessary. If the pressure is low, add air until you reach the recommended amount.

If you overfill the tire, release air by pushing on the metal stem in the center of the tire valve. Recheck the tire pressure with the tire gage. Be sure to put the valve caps back on the valve stems. They help prevent leaks by keeping out dirt and moisture.

⚠ WARNING

- **Inspect your tires frequently for proper inflation as well as wear and damage. Always use a tire pressure gauge.**
- **Tires with too much or too little pressure wear unevenly causing poor handling, loss of vehicle control, and sudden tire failure leading to accidents, injuries, and even death. The recommended cold tire pressure for your vehicle can be found in this manual and on the tire label located on the driver's side center pillar.**
- **Worn tires can cause accidents. Replace tires that are worn, show uneven wear, or are damaged.**
- **Remember to check the pressure of your spare tire. HYUNDAI recommends that you check the spare every time you check the pressure of the other tires on your vehicle.**

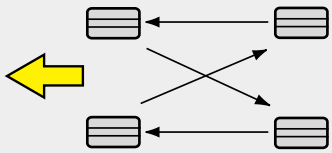
Tire rotation

To equalize tread wear, it is recommended that the tires be rotated every 7,500 miles (12,000 km) or sooner if irregular wear develops.

During rotation, check the tires for correct balance.

When rotating tires, check for uneven wear and damage. Abnormal wear is usually caused by incorrect tire pressure, improper wheel alignment, out-of-balance wheels, severe braking or severe cornering. Look for bumps or bulges in the tread or side of tire. Replace the tire if you find either of these conditions. Replace the tire if fabric or cord is visible. After rotation, be sure to bring the front and rear tire pressures to specification and check lug nut tightness.

Without a spare tire



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Disc brake pads should be inspected for wear whenever tires are rotated.

✻ NOTICE

Rotate radial tires that have an asymmetric tread pattern only from front to rear and not from right to left.

⚠ WARNING

- **Do not use the compact spare tire (if equipped) for tire rotation.**
- **Do not mix bias ply and radial ply tires under any circumstances. This may cause unusual handling characteristics that could result in death, severe injury, or property damage.**

Wheel alignment and tire balance

The wheels on your vehicle were aligned and balanced carefully at the factory to give you the longest tire life and best overall performance.

In most cases, you will not need to have your wheels aligned again. However, if you notice unusual tire wear or your vehicle pulling one way or the other, the alignment may need to be reset.

If you notice your vehicle vibrating when driving on a smooth road, your wheels may need to be rebalanced.

⚠ CAUTION

Improper wheel weights can damage your vehicle's aluminum wheels. Use only approved wheel weights.

Tire replacement

If the tire is worn evenly, a tread wear indicator will appear as a solid band across the tread. This shows there is less than 1/16 inch (1.6 mm) of tread left on the tire. Replace the tire when this happens.

Do not wait for the band to appear across the entire tread before replacing the tire.

⚠ WARNING - Replacing tires

To reduce the chance or serious or fatal injuries from an accident caused by tire failure or loss of vehicle control:

- **Replace tires that are worn, show uneven wear, or are damaged. Worn tires can cause loss of braking effectiveness, steering control, and traction.**
- **Do not drive your vehicle with too little or too much pressure in your tires. This can lead to uneven wear and tire failure.**
- **When replacing tires, never mix radial and bias-ply tires on the same car. You must replace all tires (including the spare) if moving from radial to bias-ply tires.**

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- **Using tires and wheel other than the recommended sizes could cause unusual handling characteristics and poor vehicle control, resulting in a serious accident.**
- **Wheels that do not meet HYUNDAI's specifications may fit poorly and result in damage to the vehicle or unusual handling and poor vehicle control.**
- **The ABS works by comparing the speed of the wheels. Tire size can affect wheel speed. When replacing tires, all 4 tires must use the same size originally supplied with the vehicle. Using tires of a different size can cause the ABS (Anti-lock Brake System) and ESC (Electronic Stability Control) to work irregularly.**

Compact spare tire replacement (if equipped)

A compact spare tire has a shorter tread life than a regular size tire. Replace it when you can see the tread wear indicator bars on the tire. The replacement compact spare tire should be the same size and design tire as the one provided with your new vehicle and should be mounted on the same compact spare tire wheel. The compact spare tire is not designed to be mounted on a regular size wheel, and the compact spare tire wheel is not designed for mounting a regular size tire.

Wheel replacement

When replacing the metal wheels for any reason, make sure the new wheels are equivalent to the original factory units in diameter, rim width and offset.

⚠ WARNING

A wheel that is not the correct size may adversely affect wheel and bearing life, braking and stopping abilities, handling characteristics, ground clearance, body-to-tire clearance, snow chain clearance, speedometer and odometer calibration, headlight aim and bumper height.

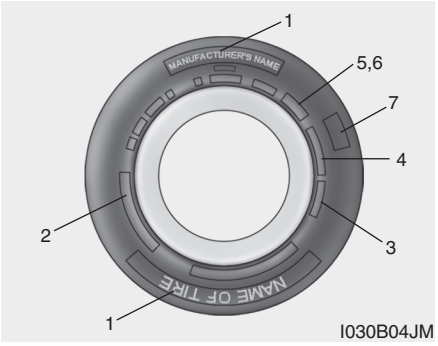
Tire traction

Tire traction can be reduced if you drive on worn tires, tires that are improperly inflated or on slippery road surfaces. Tires should be replaced when tread wear indicators appear. To reduce the possibility of losing control, slow down whenever there is rain, snow or ice on the road.

Tire maintenance

In addition to proper inflation, correct wheel alignment helps to decrease tire wear. If you find a tire is worn unevenly, have your dealer check the wheel alignment.

When you have new tires installed, make sure they are balanced. This will increase vehicle ride comfort and tire life. Additionally, a tire should always be rebalanced if it is removed from the wheel.



Tire sidewall labeling

This information identifies and describes the fundamental characteristics of the tire and also provides the tire identification number (TIN) for safety standard certification. The TIN can be used to identify the tire in case of a recall.

1. Manufacturer or brand name

Manufacturer or Brand name is shown.

2. Tire size designation

A tire's sidewall is marked with a tire size designation. You will need this information when selecting replacement tires for your car. The following explains what the letters and numbers in the tire size designation mean.

Example tire size designation:

(These numbers are provided as an example only; your tire size designator could vary depending on your vehicle.)

P195/50R16 84H

P - Applicable vehicle type (tires marked with the prefix "P" are intended for use on passenger cars or light trucks; however, not all tires have this marking).

195 - Tire width in millimeters.

50 - Aspect ratio. The tire's section height as a percentage of its width.

R - Tire construction code (Radial).

16 - Rim diameter in inches.

84 - Load Index, a numerical code associated with the maximum load the tire can carry.

H - Speed Rating Symbol. See the speed rating chart in this section for additional information.

Wheel size designation

Wheels are also marked with important information that you need if you ever have to replace one. The following explains what the letters and numbers in the wheel size designation mean.

Example wheel size designation:

6.0JX16

6.0 - Rim width in inches.

J - Rim contour designation.

16 - Rim diameter in inches.

Tire speed ratings

The chart below lists many of the different speed ratings currently being used for passenger car tires. The speed rating is part of the tire size designation on the sidewall of the tire. This symbol corresponds to that tire's designed maximum safe operating speed.

Speed Rating Symbol	Maximum Speed
S	112 mph (180 km/h)
T	118 mph (190 km/h)
H	130 mph (210 km/h)
V	149 mph (240 km/h)
Z	Above 149 mph (240 km/h)

3. Checking tire life (TIN : Tire Identification Number)

Any tires that are over 6 years old, based on the manufacturing date, (including the spare tire) should be replaced by new ones. You can find the manufacturing date on the tire sidewall (possibly on the inside of the wheel), displaying the DOT Code. The DOT Code is a series of numbers on a tire consisting of numbers and English letters. The manufacturing date is designated by the last four digits (characters) of the DOT code.

DOT : XXXX XXXX OOOO

The front part of the DOT means a plant code number, tire size and tread pattern and the last four numbers indicate week and year manufactured.

For example:

DOT XXXX XXXX 1613 represents that the tire was produced in the 16th week of 2013.

⚠ WARNING - Tire age

Tires degrade over time, even when they are not being used.

Regardless of the remaining tread, it is recommended that tires generally be replaced after six (6) years of normal service. Heat caused by hot climates or frequent high loading conditions can accelerate the aging process. Failure to follow this warning can result in sudden tire failure, which could lead to a loss of control and an accident involving serious injury or death.

4. Tire ply composition and material

The number of layers or plies of rubber-coated fabric in the tire. Tire manufacturers also must indicate the materials in the tire, which include steel, nylon, polyester, and others. The letter "R" means radial ply construction; the letter "D" means diagonal or bias ply construction; and the letter "B" means belted-bias ply construction.

5. Maximum permissible inflation pressure

This number is the greatest amount of air pressure that should be put in the tire. Do not exceed the maximum permissible inflation pressure. Refer to the Tire and Loading Information label for recommended inflation pressure.

6. Maximum load rating

This number indicates the maximum load in kilograms and pounds that can be carried by the tire. When replacing the tires on the vehicle, always use a tire that has the same load rating as the factory installed tire.

7. Uniform tire quality grading

Quality grades can be found where applicable on the tire sidewall between tread shoulder and maximum section width.

For example: TREAD wear 200

TRACTION AA

TEMPERATURE A

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 (1½) 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 due to variations in driving habits, service practices and differences in road characteristics and climate.

These grades are molded on the side-walls of passenger vehicle tires. The tires available as standard or optional equipment on your vehicle may vary with respect to grade.

Traction - AA, A, B & C

The traction grades, from highest to lowest, are AA, A, B and C. Those 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 straight-ahead braking traction tests, and does not include acceleration, cornering, hydroplaning, or peak traction characteristics.

Temperature -A, B & C

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.

Sustained high temperature can cause the material of the tire to degenerate and reduce tire life, and excessive temperature can lead to sudden tire failure. The grade C corresponds to a level of performance which all passenger car 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.

⚠ WARNING - Tire temperature

The temperature grade for this tire is established for a tire that is properly inflated and not overloaded. Excessive speed, underinflation, or excessive loading, either separately or in combination, can cause heat build-up and possible sudden tire failure. This can cause loss of vehicle control and serious injury or death.

Low aspect ratio tire (if equipped)

Low aspect ratio tires, whose aspect ratio is lower than 50, are provided for sporty looks.

Because the low aspect ratio tires are optimized for handling and braking, it may be more uncomfortable to ride in and there is more noise compare with normal tires.

⚠ CAUTION

Because the sidewall of the low aspect ratio tire is shorter than the normal, the wheel and tire of the low aspect ratio tire is easier to be damaged. So, follow the instructions below.

- ***When driving on a rough road or off road, drive cautiously because tires and wheels may be damaged. And after driving, inspect tires and wheels.***
- ***When passing over a pothole, speed bump, manhole, or curb stone, drive slowly so that the tires and wheels are not damaged.***

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- ***If the tire is impacted, inspect the tire condition or contact an authorized HYUNDAI dealer.***
- ***To prevent damage to the tire, inspect the tire condition and pressure every 1,800miles (3,000km).***

⚠ CAUTION

- ***It is not easy to recognize the tire damage with your own eyes. But if there is the slightest hint of tire damage, even though you cannot see the tire damage with your own eyes, have the tire checked or replaced because the tire damage may cause air leakage from the tire.***
- ***If the tire is damaged by driving on a rough road, off road, pothole, manhole, or curb stone, it will not be covered by the warranty.***
- ***You can find out the tire information on the tire sidewall.***

Tire terminology and definitions

Air Pressure: The amount of air inside the tire pressing outward on the tire. Air pressure is expressed in pounds per square inch (psi) or kilopascal (kPa).

Accessory Weight: This means the combined weight of optional accessories. Some examples of optional accessories are, automatic transaxle, power seats, and air conditioning.

Aspect Ratio: The relationship of a tire's height to its width.

Belt: A rubber coated layer of cords that is located between the plies and the tread. Cords may be made from steel or other reinforcing materials.

Bead: The tire bead contains steel wires wrapped by steel cords that hold the tire onto the rim.

Bias Ply Tire: A pneumatic tire in which the plies are laid at alternate angles less than 90 degrees to the centerline of the tread.

Cold Tire Pressure: The amount of air pressure in a tire, measured in pounds per square inch (psi) or kilopascals (kPa) before a tire has built up heat from driving.

Curb Weight: This means the weight of a motor vehicle with standard and optional equipment including the maximum capacity of fuel, oil and coolant, but without passengers and cargo.

DOT Markings: A code molded into the sidewall of a tire signifying that the tire is in compliance with the U.S. Department of Transportation motor vehicle safety standards. The DOT code includes the Tire Identification Number (TIN), an alphanumeric designator which can also identify the tire manufacturer, production plant, brand and date of production.

GVWR: Gross Vehicle Weight Rating

GAWR FRT: Gross Axle Weight Rating for the Front Axle.

GAWR RR: Gross Axle Weight Rating for the Rear axle.

Intended Outboard Sidewall: The side of an asymmetrical tire, that must always face outward when mounted on a vehicle.

Kilopascal (kPa): The metric unit for air pressure.

Load Index: An assigned number ranging from 1 to 279 that corresponds to the load carrying capacity of a tire.

Maximum Inflation Pressure: The maximum air pressure to which a cold tire may be inflated. The maximum air pressure is molded onto the sidewall.

Maximum Load Rating: The load rating for a tire at the maximum permissible inflation pressure for that tire.

Maximum Loaded Vehicle Weight: The sum of curb weight; accessory weight; vehicle capacity weight; and production options weight.

Normal Occupant Weight: The number of occupants a vehicle is designed to seat multiplied by 150 pounds (68 kg).

Occupant Distribution: Designated seating positions.

Outward Facing Sidewall: The side of a asymmetrical tire that has a particular side that faces outward when mounted on a vehicle. The outward facing sidewall bears white lettering or bears manufacturer, brand, and/or model name molding that is higher or deeper than the same moldings on the inner facing sidewall.

Passenger (P-Metric) Tire: A tire used on passenger cars and some light duty trucks and multipurpose vehicles.

Recommended Inflation Pressure: Vehicle manufacturer's recommended tire inflation pressure and shown on the tire placard.

Radial Ply Tire: A pneumatic tire in which the ply cords that extend to the beads are laid at 90 degrees to the centerline of the tread.

Rim: A metal support for a tire and upon which the tire beads are seated.

Sidewall: The portion of a tire between the tread and the bead.

Speed Rating: An alphanumeric code assigned to a tire indicating the maximum speed at which a tire can operate.

Traction: The friction between the tire and the road surface. The amount of grip provided.

Tread: The portion of a tire that comes into contact with the road.

Treadwear Indicators: Narrow bands, sometimes called "wear bars," that show across the tread of a tire when only 2/32 inch of tread remains.

UTQGS: Uniform Tire Quality Grading Standards, a tire information system that provides consumers with ratings for a tire's traction, temperature and treadwear. Ratings are determined by tire manufacturers using government testing procedures. The ratings are molded into the sidewall of the tire.

Vehicle Capacity Weight: The number of designated seating positions multiplied by 150 lbs. (68 kg) plus the rated cargo and luggage load.

Vehicle Maximum Load on the Tire: Load on an individual tire due to curb and accessory weight plus maximum occupant and cargo weight.

Vehicle Normal Load on the Tire: Load on an individual tire that is determined by distributing to each axle its share of the curb weight, accessory weight, and normal occupant weight and dviding by 2.

Vehicle Placard: A label permanently attached to a vehicle showing the original equipment tire size and recommended inflation pressure.

All season tires

HYUNDAI specifies all season tires on some models to provide good performance for use all year round, including snowy and icy road conditions. All season tires are identified by ALL SEASON and/or M+S (Mud and Snow) on the tire sidewall. Snow tires have better snow traction than all season tires and may be more appropriate in some areas.

Summer tires

HYUNDAI specifies summer tires on some models to provide superior performance on dry roads. Summer tire performance is substantially reduced in snow and ice. Summer tires do not have the tire traction rating M+S (Mud and Snow) on the tire side wall. if you plan to operate your vehicle in snowy or icy conditions. HYUNDAI recommends the use of snow tires or all season tires on all four wheels.

Snow tires

If you equip your car with snow tires, they should be the same size and have the same load capacity as the original tires. Snow tires should be installed on all four wheels; otherwise, poor handling may result.

Snow tires should carry 4 psi (28 kPa) more air pressure than the pressure recommended for the standard tires on the tire label on the driver's side of the center pillar, or up to the maximum pressure shown on the tire sidewall, whichever is less.

Do not drive faster than 75 mph (120 km/h) when your car is equipped with snow tires.

Tire chains

Tire chains, if necessary, should be installed on the front wheels.

Be sure that the chains are installed in accordance with the manufacturer's instructions.

To minimize tire and chain wear, do not continue to use tire chains when they are no longer needed.

⚠ CAUTION

Since the sidewalls of radial tires are thinner, they can be damaged by mounting some types of snow chains on them.

Therefore, the use of snow tires is recommended instead of snow chains.

⚠ WARNING - Snow or ice

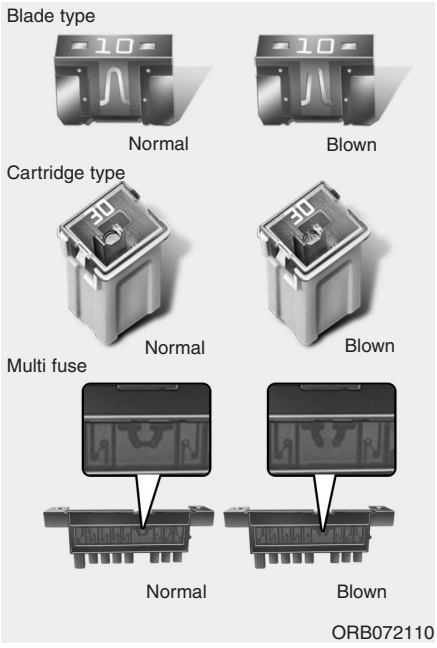
- **When driving on roads covered with snow or ice, drive at less than 20 mph (30 km/h).**
- **Use the SAE "S" class or wire chains.**
- **If you hear noise caused by chains contacting the body, retighten the chain to avoid contact with the vehicle body.**
- **To prevent body damage, retighten the chains after driving 0.3~0.6 miles (0.5~1.0 km).**
- **Do not use tire chains on vehicles equipped with aluminum wheels. In unavoidable circumstance, use a wire type chain.**
- **Use wire chains less than 0.59 inches (15 mm) to prevent damage to the chain's connection.**

Radial-ply tires

Radial-ply tires provide improved tread life, road hazard resistance and smoother high speed ride. The radial-ply tires used on this vehicle are of belted construction, and are selected to complement the ride and handling characteristics of your vehicle. Radial-ply tires have the same load carrying capacity, as bias-ply or bias belted tires of the same size, and use the same recommended inflation pressure. Mixing of radial-ply tires with bias-ply or bias belted tires is not recommended. Any combinations of radial-ply and bias-ply or bias belted tires when used on the same vehicle will seriously deteriorate vehicle handling. The best rule to follow is: Identical radial-ply tires should always be used as a set of four.

Longer wearing tires can be more susceptible to irregular tread wear. It is very important to follow the tire rotation interval shown in this section to achieve the tread life potential of these tires. Cuts and punctures in radial-ply tires are repairable only in the tread area, because of sidewall flexing. Consult your tire dealer for radial-ply tire repairs.

FUSES



A vehicle's electrical system is protected from electrical overload damage by fuses.

This vehicle has 2 fuse panels, one located in the driver's side panel bolster, the other in the engine compartment.

If any of your vehicle's lights, accessories, or controls do not work, check the appropriate circuit fuse. If a fuse has blown, the element inside the fuse will be melted.

If the electrical system does not work, first check the driver's side fuse panel.

Before replacing a blown fuse, move to safe place, turn off the engine and all electric devices, and then disconnect the negative battery cable.

Always replace a blown fuse with one of the same rating.

If the replacement fuse blows, this indicates an electrical problem. Avoid using the system involved and immediately consult an authorized HYUNDAI dealer.

Three kinds of fuses are used: blade type for lower amperage rating, cartridge type, and multi fuse for higher amperage ratings.

⚠ WARNING - Fuse replacement

- **Never replace a fuse with anything but another fuse of the same rating.**
- **A higher capacity fuse could cause damage and possibly a fire.**
- **Never install a wire or aluminum foil instead of the proper fuse - even as a temporary repair. It may cause extensive wiring damage and a possible fire.**

⚠ CAUTION

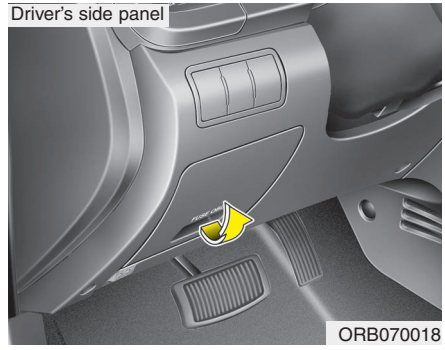
Do not use a screwdriver or any other metal object to remove fuses because it may cause a short circuit and damage the system.

✻ NOTICE

The actual fuse/relay panel label may differ from equipped items.

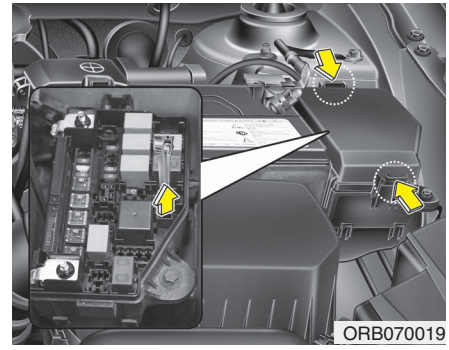
⚠ CAUTION

- ***When replacing a blown fuse or relay with a new one, make sure the new fuse or relay fits tightly into the clips. The incomplete fastening fuse or relay may cause the vehicle wiring and electric systems damage and a possible fire.***
- ***Do not remove fuses, relays and terminals fastened with bolts or nuts. The fuses, relays and terminals may be fastened incompletely, and it may cause a possible fire. If fuses, relays and terminals fastened with bolts or nuts are blown, consult an authorized HYUNDAI dealer.***
- ***Do not input any other objects except fuses or relays into fuse/relay terminals such as a driver or wiring. It may cause contact failure and system malfunction.***



Instrument panel fuse replacement

1. Turn the ignition switch and all other switches off.
2. Open the fuse panel cover.

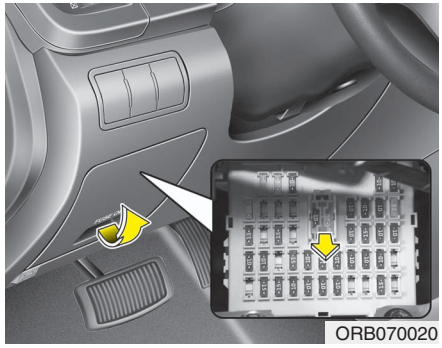


3. Pull the suspected fuse straight out. Use the removal tool provided in the engine compartment fuse panel.
4. Check the removed fuse; replace it if it is blown.
5. Push in a new fuse of the same rating, and make sure it fits tightly in the clips.

If it fits loosely, consult an authorized HYUNDAI dealer.

If you do not have a spare, use a fuse of the same rating from a circuit you may not need for operating the vehicle, such as the cigarette lighter fuse.

If the headlights or other electrical components do not work and the fuses are OK, check the fuse panel in the engine compartment. If a fuse is blown, it must be replaced.


ORB070020

Memory fuse

Your vehicle is equipped with a memory fuse to prevent battery discharge if your vehicle is parked without being operated for prolonged periods. Use the following procedures before parking the vehicle for prolonged periods.

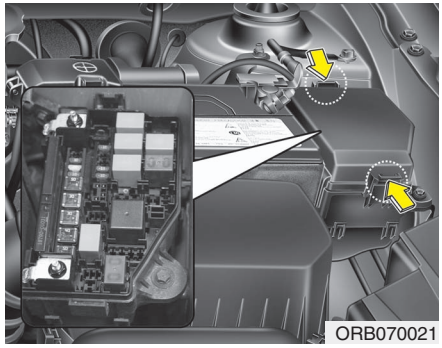
1. Turn off the engine.
2. Turn off the headlights and tail lights.
3. Open the driver's side panel cover and pull up the memory fuse.

⚠ CAUTION

- ***Do not pull up the memory fuse and always place the memory fuse in the original position while driving the vehicle.***
- ***Do not pull up the memory fuse repeatedly. The memory fuse may be worn out.***

✻ NOTICE

- **If the memory fuse is pulled up from the fuse panel, the warning chime, audio, clock and interior lamps, etc., will not operate. Some items must be reset after replacement. Refer to "Battery" in this section.**
- **Even though the memory fuse is pulled up, the battery can still be discharged by operation of the headlights or other electrical devices.**
- **If you need to park your vehicle for prolonged periods more than 1 month, pull up the memory fuse to prevent the battery being discharged.**

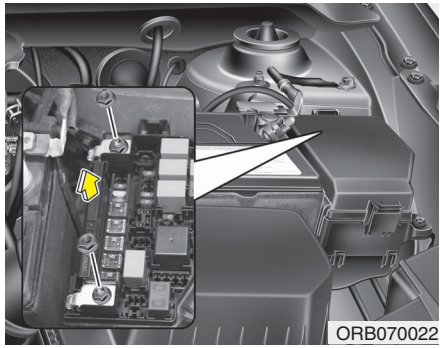

ORB070021

Engine compartment fuse replacement

1. Turn the ignition switch and all other switches off.
2. Remove the fuse panel cover by pressing the tab and pulling up.
3. Check the removed fuse; replace it if it is blown. To remove or insert the fuse, use the fuse puller in the engine compartment fuse panel.
4. Push in a new fuse of the same rating, and make sure it fits tightly in the clips. If it fits loosely, consult an authorized HYUNDAI dealer.

⚠ CAUTION

After checking the fuse panel in the engine compartment, securely install the fuse panel cover. If not, electrical failures may occur from water contact.


ORB070022

Multi fuse

If the multi fuse is blown, replace the fuse with a new one of the same rating when the ignition switch and all other switches are off.

⚠ CAUTION

- ***Before removing the multi fuse, disconnect the (-) terminal of battery.***
- ***Do not disassemble or assemble the multi fuse fastened with bolts or nuts. The fuse may be fastened incompletely, and it may cause a possible fire. If the multi fuse is blown, consult an authorized HYUNDAI dealer.***

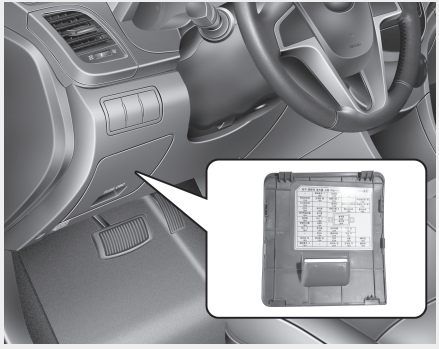
Fuse/relay panel description

Inside the fuse/relay panel covers, you can find the fuse/relay label describing fuse/relay name and capacity.

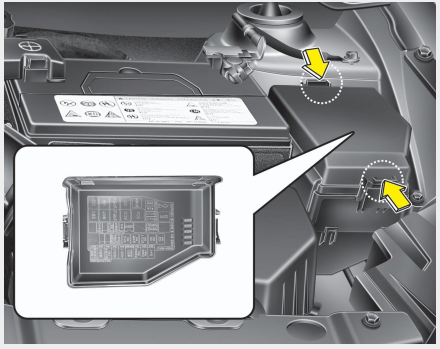
✻ NOTICE

Not all fuse panel descriptions in this manual may be applicable to your vehicle. It is accurate at the time of printing. When you inspect the fuse panel in your vehicle, refer to the fuse panel label.

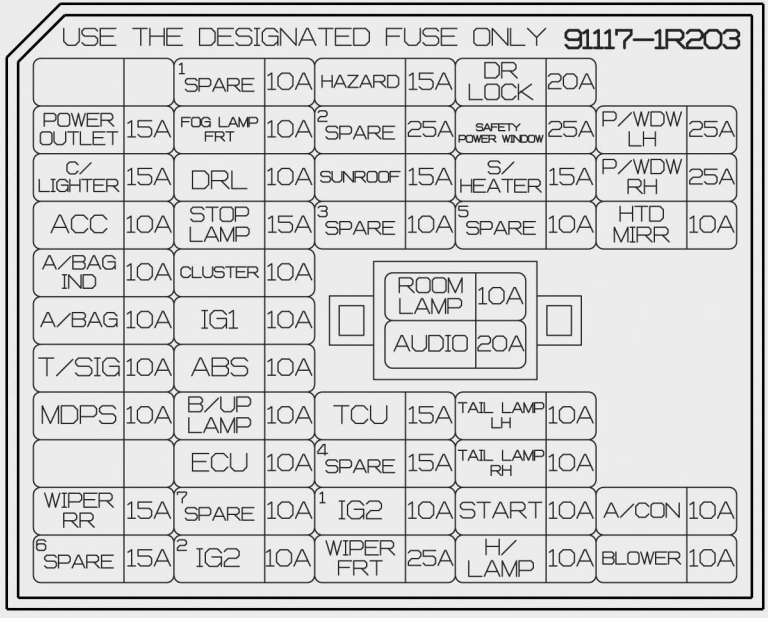
■ Driver's side panel



■ Engine compartment



ORB070023/ORB070024

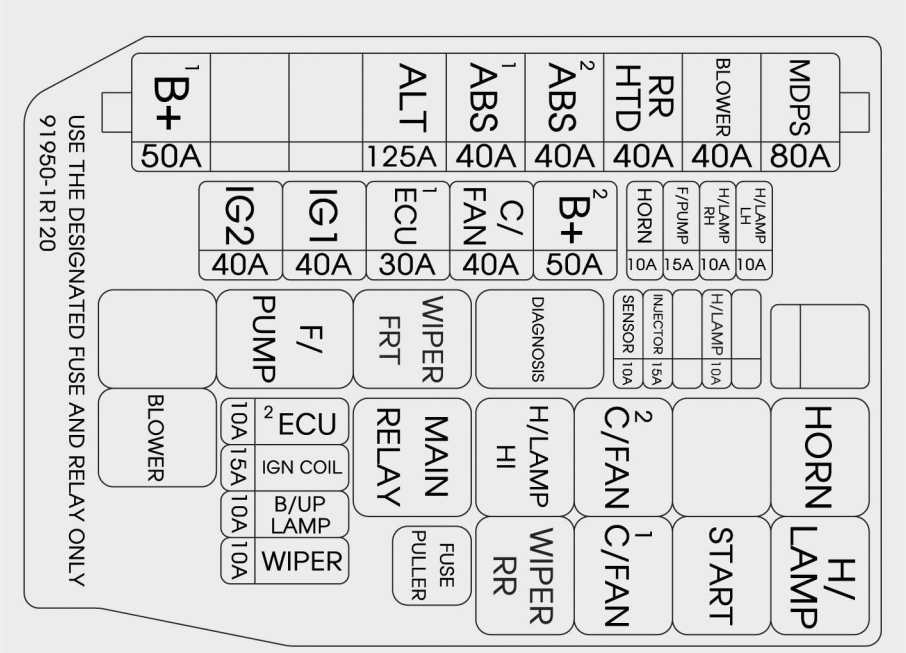

USE THE DESIGNATED FUSE ONLY 91117-1R203
SPARE 10A
HAZARD 15A
DR LOCK 20A
POWER OUTLET 15A
FOG LAMP FRT 10A
SPARE 25A
SAFETY POWER WINDOW 25A
P/WDW LH 25A
C/LIGHTER 15A
DRL 10A
SUNROOF 15A
S/HEATER 15A
P/WDW RH 25A
ACC 10A
STOP LAMP 15A
SPARE 10A
SPARE 10A
HTD MIRR 10A
A/BAG IND 10A
CLUSTER 10A
ROOM LAMP 10A
A/BAG 10A
IG1 10A
AUDIO 20A
T/SIG 10A
ABS 10A
MDPS 10A
B/UP LAMP 10A
TCU 15A
TAIL LAMP LH 10A
ECU 10A
SPARE 15A
TAIL LAMP RH 10A
WIPER RR 15A
SPARE 10A
IG2 10A
START 10A
A/CON 10A
SPARE 15A
IG2 10A
WIPER FRT 25A
H/LAMP 10A
BLOWER 10A

ORB074074A

Instrument panel (Driver's side fuse panel)

Description	Fuse rating	Protected component
POWER OUTLET	15A	Cigarette Lighter & Power Outlet (Power Outlet)
C/LIGHTER	15A	Cigarette Lighter & Power Outlet (Cigarette Lighter)
ACC	10A	Audio, Power Outside Mirror Switch
A/BAG IND	10A	Instrument Cluster (Air Bag IND.)
A/BAG	10A	SRS Control Module, Telltale, Passenger Occupant Detection Sensor
T/SIG	10A	Hazard Switch
MDPS	10A	EPS Control Module
WIPER RR	15A	Multifunction Switch (Wiper), Rear Wiper Motor
[6]SPARE	15A	Not Used
[1]SPARE	10A	Not Used
FOG LAMP FRT	10A	Front Fog Lamp Relay
DRL	10A	DRL (Daytime Running Light) Relay
STOP LAMP	15A	Stop Lamp Switch, Battery Sensor, Stop Lamp Relay, E/R Fuse & Relay Box (HAC Relay), Data Link Connector
CLUSTER	10A	Instrument Cluster (MICOM, IND.), BCM
IG1	10A	Stop Lamp Switch, ECO Switch, Driver/Passenger Seat Heater Module, Tire Pressure Monitoring Module, ATM Shift Lever Switch ILL. EPS Control Module, Rheostat
ABS	10A	ABS Control Module, ESC Control Module, ESC Off Switch, E/R Fuse & Relay Box (Multipurpose Check Connector, HAC Relay)
B/UP LAMP	10A	Back-Up Lamp Switch
ECU	10A	ECM, PCM
[7]SPARE	10A	Not Used
[2]IG2	10A	A/C Control Module, BCM, SMK Unit, Wiper Control Unit
HAZARD	15A	Hazard Relay, Hazard Switch
[3]SPARE	25A	Not Used
SUNROOF	15A	Sunroof Motor

Description	Fuse rating	Protected component
[3]SPARE	10A	Not Used
TCU	15A	Vehicle Speed Sensor, Transaxle Range Switch
[4]SPARE	15A	Not used
[1]IG2	10A	Power Window Relay, A/C Control Module, Instrument Cluster (MICOM), BCM, Sunroof Motor, E/R Fuse & Relay Box (Blower Relay)
WIPER FRT	25A	Multifunction Switch (Wiper), Front Wiper Motor
DR LOCK	20A	Door Lock/Unlock Relay, Two Turn Unlock Relay, Driver Door Lock Actuator
SAFETY POWER WINDOW	25A	Safety Power Window Module
S/HEATER	15A	Driver/Passenger Seat Heater Module
[5]SPARE	10A	Not Used
ROOM LP 1	10A	Instrument Cluster (IND.,ILL.), Tire Pressure Monitoring Module, BCM, A/C Control Module, Luggage Room Lamp, Trunk Room Lamp, Center Room Lamp, Overhead Console Lamp, Map Lamp
AUDIO	20A	Audio
TAIL LAMP LH	10A	Rear Combination Lamp LH, Head Lamp LH, Front Turn Signal Lamp LH, License Lamp LH/RH (4Door), License Lamp (5Door)
TAIL LAMP RH	10A	Head Lamp RH, Rear Combination Lamp RH, Rheostat, Audio, Front Turn Signal Lamp RH, Hazard Switch, Instrument Cluster (ILL.+), AUX & USB Jack, ESC Off Switch, A/C Switch, ECO Switch, Multifunction Switch (Remote Control), A/C Control Module, Rear Defogger Switch, Front Deicer Switch, ATM Shift Lever Switch ILL.
START	10A	Transaxle Range Switch, Ignition Lock Switch
H/LAMP	10A	Instrument Cluster, Engine Compartment Fuse & Relay Box (Head Lamp Relay)
P/WDW LH	25A	Power Window Main Switch, Rear Power Window Switch LH
P/WDW RH	25A	Power Window Main Switch, Rear Power Window Switch RH, Passenger Power Window Switch
HTD MIRR	10A	ECM, PCM, Rear Defogger Switch, Driver Power Outside Mirror, Passenger Power Outside Mirror
A/CON	10A	A/C Control Module (Auto A/C)
BLOWER	10A	ECM, PCM, Blower Switch, Blower Resistor, A/C Control Module (Manual A/C)


MDPS 80A
BLOWER 40A
RR HTD 40A
2 ABS 40A
1 ABS 40A
ALT 125A
1 B+ 50A
H/LAMP LH 10A
H/LAMP RH 10A
F/PUMP 15A
HORN 10A
2 B+ 50A
C/ FAN 40A
1 ECU 30A
IG1 40A
IG2 40A
H/LAMP 10A
INJECTOR 15A
SENSOR 10A
HORN
H/ LAMP
START
2 C/FAN
1 C/FAN
H/LAMP HI
WIPER RR
DIAGNOSIS
MAIN RELAY
WIPER FRT
F/ PUMP
BLOWER
FUSE PULLER
2 ECU 10A
IGN COIL 15A
B/UP LAMP 10A
WIPER 10A
USE THE DESIGNATED FUSE AND RELAY ONLY
91950-1R120

ORB074075A

Engine compartment main fuse panel

Description		Fuse rating	Protected component
MULTI FUSE	MDPS	80A	EPS Control Module
	BLOWER	40A	Blower Relay
	RR HTD	40A	I/P Junction Box (Rear Defogger Relay)
	ABS 2	40A	ABS Control Module, ESC Control Module
	ABS 1	40A	ABS Control Module, ESC Control Module, Multipurpose Check Connector
	ALT	125A	Alternator, E/R Fuse & Relay Box (Multi Fuse : ABS 1, ABS 2, MDPS, RR HTD, BLOWER, Fuse : A/CON)
	B+1	50A	I/P Junction Box (Power Connector Fuse : ROOM LP 1, AUDIO, Fuse : FOG LP FRT, ROOM LP 2, STOP LP, Relay : Tail Lamp)
FUSE	IG2	40A	Start Relay, Ignition Switch
	IG1	40A	Ignition Switch
	ECU 1	30A	Fuse : ECU 2, Engine Control Relay
	C/FAN	40A	Cooling Fan (High) Relay, Cooling Fan (Low) Relay
	B+2	50A	I/P Junction Box (Fuse : S/HEATER, SUNROOF, DR LOCK, HAZARD, Relay : Power Window)
	HORN	10A	Horn Relay
	F/PUMP	15A	Fuel Pump Relay
	H/LAMP RH	10A	Head Lamp RH
	H/LAMP LH	10A	Head Lamp LH
	INJECTOR	15A	ECM, PCM, Oil Control Valve #1/#2, Oxygen Sensor (Up)/(Down), Fuel Pump Relay
	SENSOR	10A	ECM, PCM, Canister Purge Control Solenoid Valve, Variable Intake Solenoid Valve, Canister Close Valve, Immobilizer Module, A/CON Relay, Cooling Fan (High) Relay, Cooling Fan (Low) Relay
	ECU 2	10A	ECM, PCM
	IGN COIL	15A	Ignition Coil #1 ~ #4, Condenser
	B/UP LAMP	10A	PCM, Transaxle Range Switch, Instrument Cluster, Rear Combination Lamp LH/RH, ATM Shift Lever Switch ILL.
	WIPER	10A	ECM, PCM, Multifunction Switch (Wiper), Front Wiper Motor

LIGHT BULBS

⚠ WARNING - Working on the lights

Prior to working on the light, firmly apply the parking brake, ensure that the ignition switch is turned to the LOCK position and turn off the lights to avoid sudden movement of the vehicle and burning your fingers or receiving an electric shock.

Use only bulbs of the specified wattage.

⚠ CAUTION

Be sure to replace the burned-out bulb with one of the same wattage rating. Otherwise, it may cause damage to the fuse or electrical wiring system.

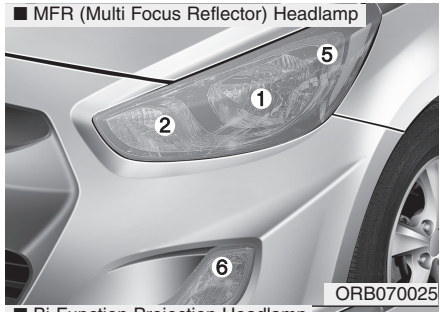
⚠ CAUTION

- ***If you don't have necessary tools, the correct bulbs and the expertise, consult an authorized HYUNDAI dealer. In many cases, it is difficult to replace vehicle light bulbs because other parts of the vehicle must be removed before you can get to the bulb. This is especially true if you have to remove the headlight assembly to get to the bulb(s).***
  Removing/installing the headlight assembly can result in damage to the vehicle.
- ***Do not install additional bulbs or LED type bulbs. If you install that, the lamp may not be operated properly and fuse box or electrical wiring system may have problem.***

✻ NOTICE

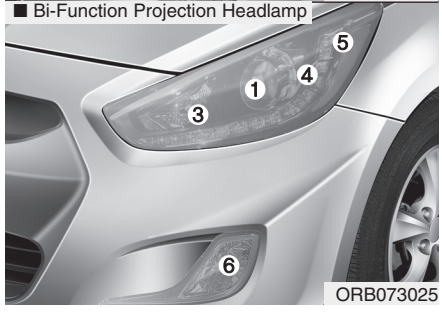
After heavy, driving rain or washing, headlight and taillight lenses could appear frosty. This condition is caused by the temperature difference between the lamp inside and outside. This is similar to the condensation on your windows inside your vehicle during the rain and doesn't indicate a problem with your vehicle. If the water leaks into the lamp bulb circuitry, have the vehicle checked by an authorized HYUNDAI dealer.

■ MFR (Multi Focus Reflector) Headlamp



ORB070025

■ Bi-Function Projection Headlamp

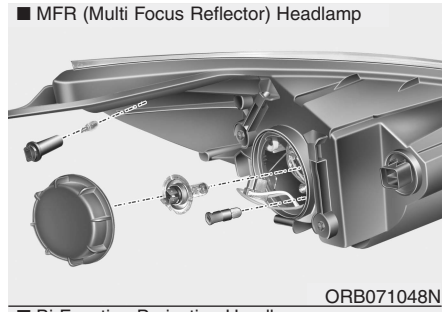


ORB073025

Headlight, position light, turn signal light, side marker light and front fog light bulb replacement

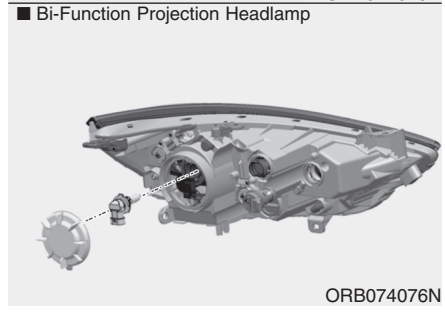
(1) Headlight (High/Low)
(2) Front turn signal light / Position light
(3) Front turn signal light
(4) Position light
(5) Side marker
(6) Front fog light (if equipped)

■ MFR (Multi Focus Reflector) Headlamp



ORB071048N

■ Bi-Function Projection Headlamp



ORB074076N

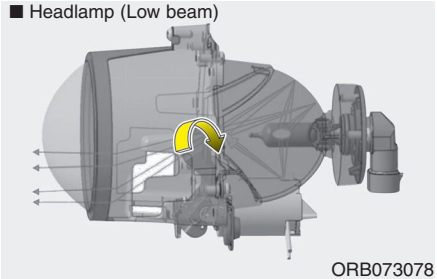
Headlight /
Side marker (Bulb type only)

1. Open the hood.
2. Remove the headlight bulb cover by turning it counterclockwise.
3. Disconnect the headlight bulb socket-connector.
4. Unsnap the headlight bulb retaining wire by depressing the end and pushing it upward.
5. Remove the bulb from the headlight assembly.
6. Install a new headlight bulb and snap the headlight bulb retaining wire into position by aligning the wire with the groove on the bulb.
7. Connect the headlight bulb socket-connector.
8. Install the headlight bulb cover by turning it clockwise.

✻ NOTICE

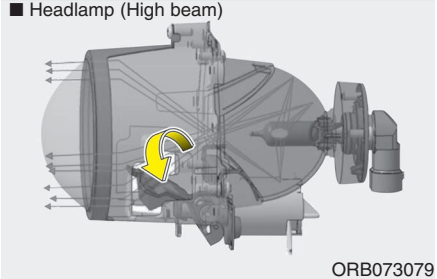
Always have the headlight aiming adjusted after an accident or the headlight assembly is reinstalled at an authorized HYUNDAI dealer.

■ Headlamp (Low beam)



ORB073078

■ Headlamp (High beam)

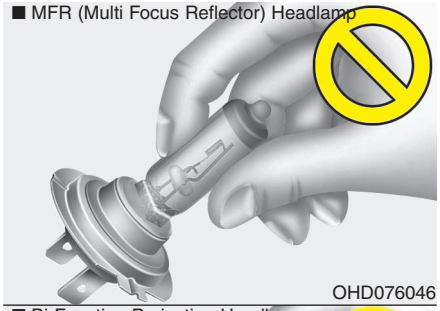


ORB073079

✻ NOTICE - Bi-Function Projection Headlamp

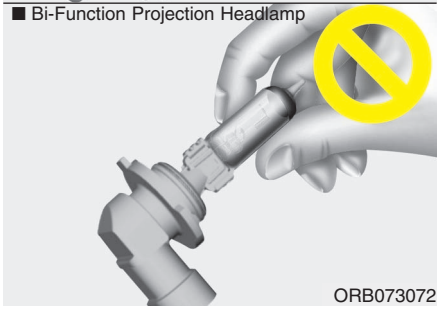
This headlamp is bi-function type that switches the low beam to high or the high beam to low using solenoid system. So, sound may be heard when the headlamp switches the low beam to high or the high beam to low and it does not indicate malfunction of the headlamp.

■ MFR (Multi Focus Reflector) Headlamp



OHD076046

■ Bi-Function Projection Headlamp



ORB073072

⚠ WARNING - Halogen bulbs

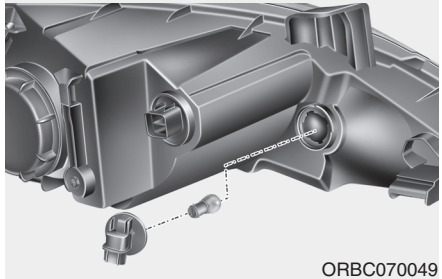
- **Halogen bulbs contain pressurized gas that will produce flying pieces of glass if broken.**

(Continued)

(Continued)

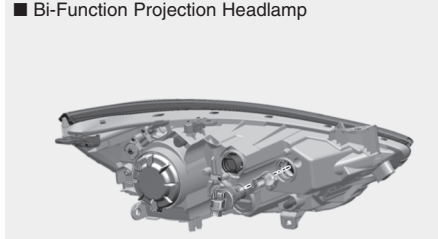
- **Always handle them carefully, and avoid scratches and abrasions. If the bulbs are lit, avoid contact with liquids. Never touch the glass with bare hands. Residual oil may cause the bulb to overheat and burst when lit. A bulb should be operated only when installed in a headlight.**
- **If a bulb becomes damaged or cracked, replace it immediately and carefully dispose of it.**
- **Wear eye protection when changing a bulb. Allow the bulb to cool down before handling it.**

■ MFR (Multi Focus Reflector) Headlamp



ORBC070049

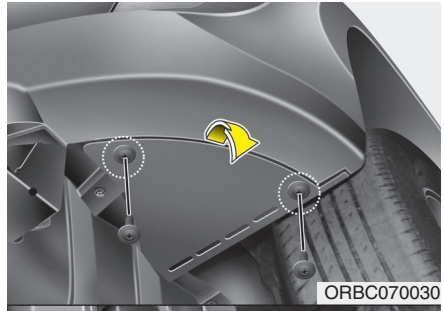
■ Bi-Function Projection Headlamp



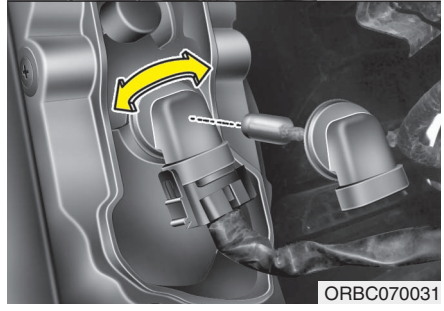
ORB074077N

Turn signal light / Position light (Bulb type only)

1. Turn off the engine and open the hood.
2. Remove the socket from the assembly by turning the socket counterclockwise until the tabs on the socket align with the slots on the assembly.
3. Remove the bulb from the socket by pressing it in and rotating it counter-clockwise until the tabs on the bulb align with the slots in the socket. Pull the bulb out of the socket
4. Insert a new bulb by inserting it into the socket and rotating it until it locks into place.
5. Install the socket in the assembly by aligning the tabs on the socket with the slots in the assembly. Push the socket into the assembly and turn the socket clockwise.



ORBC070030

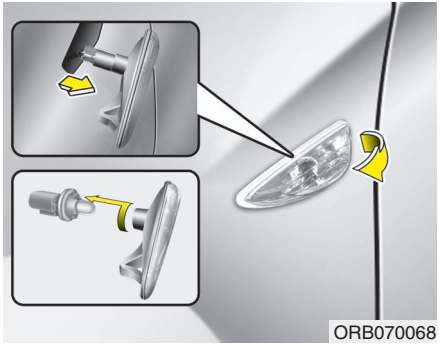


ORBC070031

Front fog light bulbs (if equipped)

1. Remove the front bumper under cover.
2. Reach your hand into the back of the front bumper.
3. Disconnect the power connector from the socket.

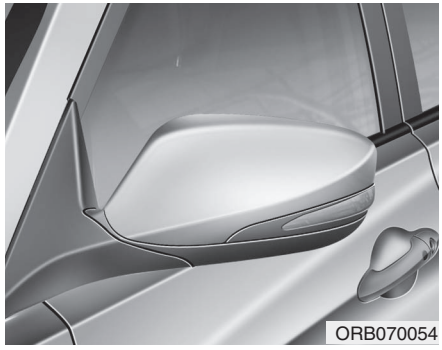
4. Remove the bulb-socket from the housing by turning the socket counter clockwise until the tabs on the socket align with the slots on the housing.
5. Install the new bulb-socket into the housing by aligning the tabs on the socket with the slots in the housing. Push the socket into the housing and turn the socket clockwise.
6. Connect the power connector to the socket.
7. Reinstall the front bumper under cover.



Side repeater light bulb replacement (if equipped)

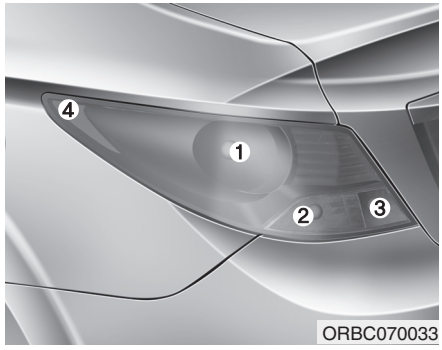
Type A

1. Remove the light assembly from the vehicle by prying the lens and pulling the assembly out.
2. Disconnect the bulb electrical connector.
3. Separate the socket and the lens parts by turning the socket counterclockwise until the tabs on the socket align with the slots on the lens part.
4. Remove the bulb by pulling it straight out.
5. Insert a new bulb in the socket.
6. Reassemble the socket and the lens part.
7. Connect the bulb electrical connector.
8. Reinstall the light assembly to the body of the vehicle.


ORB070054

Type B

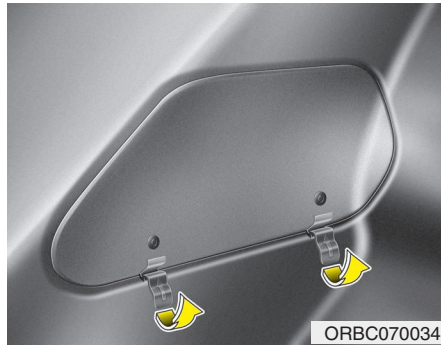
If the light bulb does not operate, have the vehicle checked by an authorized HYUNDAI dealer.



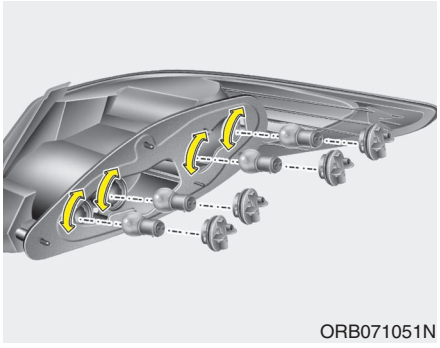
ORBC070033

Rear combination light bulb replacement (4 Door)

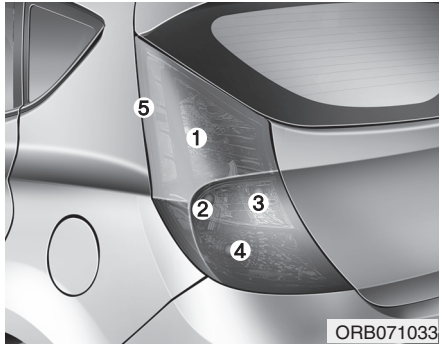
(1) Stop and tail light
(2) Rear turn signal light
(3) Back-up light
(4) Side marker


ORBC070034

1. Open the trunk lid.
2. Remove the service cover by pulling out the service cover.


ORB071051N

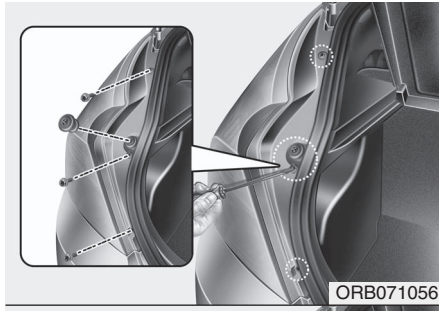
3. Remove the socket from the assembly by turning the socket counterclockwise until the tabs on the socket align with the slots on the assembly.
4. Remove the bulb from the socket by pressing it in and rotating it counterclockwise until the tabs on the bulb align with the slots in the socket. Pull the bulb out of the socket.
5. Insert a new bulb by inserting it into the socket and rotating it until it locks into place.
6. Install the socket in the assembly by aligning the tabs on the socket with the slots in the assembly. Push the socket into the assembly and turn the socket clockwise.
7. Install the service cover by putting it into the service hole.



ORB071033

Rear combination light bulb replacement (5 Door)

(1) Tail light
(2) Rear turn signal light
(3) Back-up light
(4) Stop and tail light
(5) Side marker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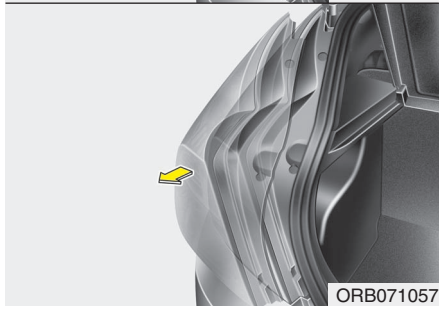
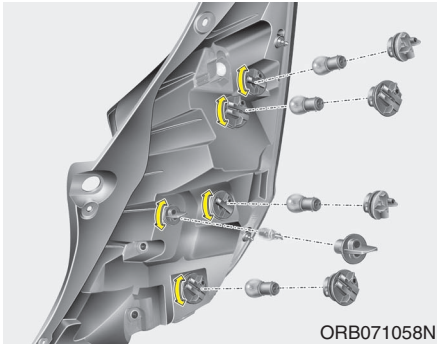
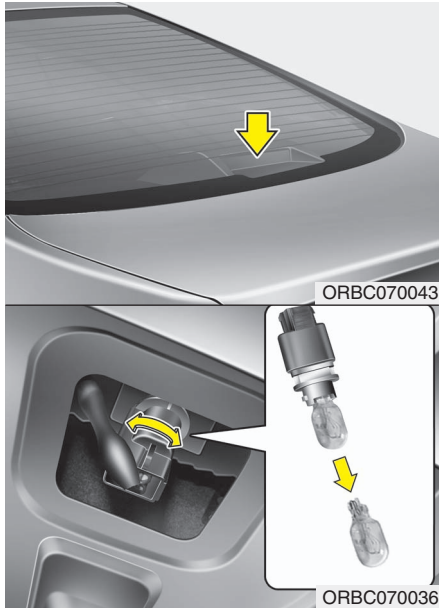

ORB071057

1. Open the tailgate.
2. Loosen the light assembly retaining screws with a cross-tip screwdriver.
3. Remove the rear combination light assembly from the body of the vehicle.


ORB071058N

4. Remove the socket from the assembly by turning the socket counterclockwise until the tabs on the socket align with the slots on the assembly.
5. Remove the bulb from the socket by pressing it in and rotating it counterclockwise until the tabs on the bulb align with the slots in the socket. Pull the bulb out of the socket.
6. Insert a new bulb by inserting it into the socket and rotating it until it locks into place.
7. Install the socket in the assembly by aligning the tabs on the socket with the slots in the assembly. Push the socket into the assembly and turn the socket clockwise.
8. Reinstall the light assembly to the body of the vehicle.
9. Tighten the screws.

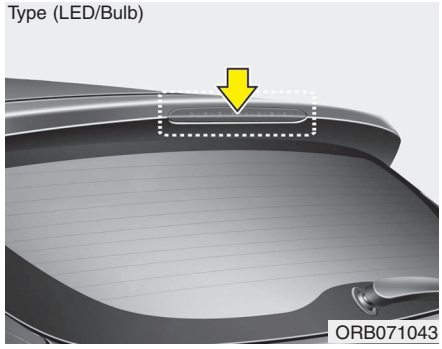

ORBC070043
ORBC070036

High mounted stop light bulb replacement (if equipped)

▶ 4 Door

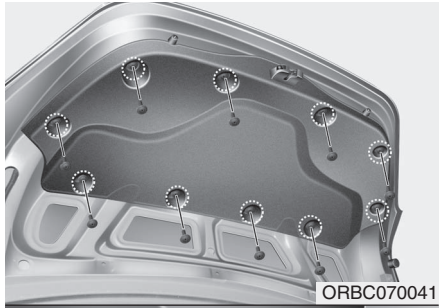
1. Open the trunk lid.
2. Remove the socket by turning it counterclockwise.
3. Replace the bulb from the socket.
4. Install the socket by turning it clockwise.

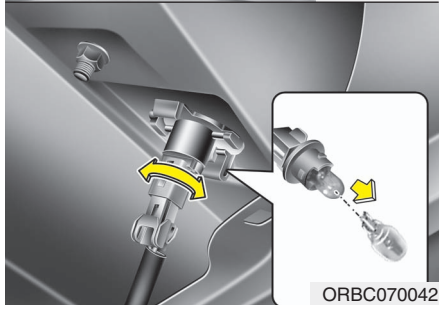
Type (LED/Bulb)



▶ 5 Door

If the light is not operating, have the vehicle checked by an authorized HYUNDAI dealer.

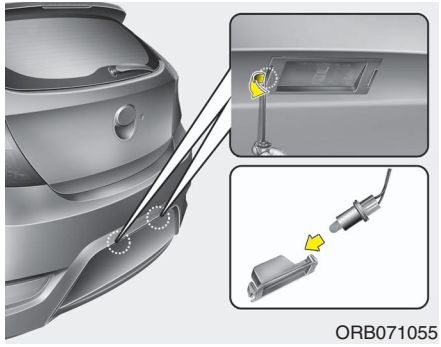




License plate light bulb replacement

▶ 4 Door

1. Remove the trunk trim.
2. Remove the socket by turning it counterclockwise.
3. Remove the bulb by pulling it straight out.
4. Install a new bulb.
5. Install the socket by turning it clockwise.
6. Install the trunk trim.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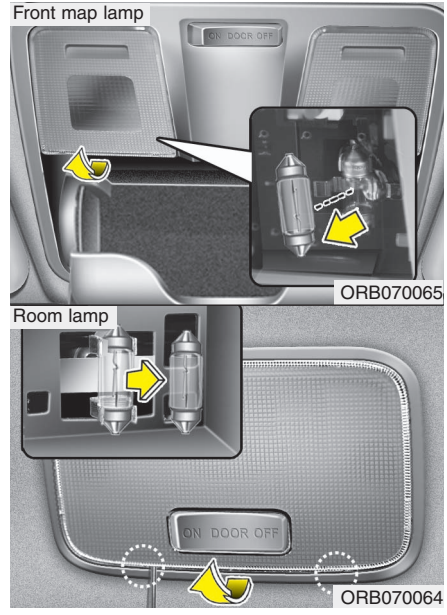
▶ **5 Door**

1. Using a flat-blade screwdriver, remove the light assembly from the vehicle by prying the lens gently.
2. Remove the socket from the lens.
3. Remove the bulb by pulling it straight out.
4. Install a new bulb in the socket and install the socket to the lens.
5. Reinstall the lens securely.

⚠ CAUTION

Use care not to dirty or damage lens, lens tab, and plastic housings.



Interior light bulb replacement

1. Using a flat-blade screwdriver, gently pry the lens from the interior light housing.
2. Remove the bulb by pulling it straight out.

⚠ WARNING

Prior to working on the Interior Lights, ensure that the "OFF" button is depressed to avoid burning your fingers or receiving an electric shock.

3. Install a new bulb in the socket.
4. Align the lens tabs with the interior light housing notches and snap the lens into place.
5. If the map lamp and room lamp are not operating, have the vehicle checked by an authorized HYUNDAI dealer.

⚠ CAUTION

Use care not to dirty or damage lens, lens tab, and plastic housings.

APPEARANCE CARE

Exterior care

Exterior general caution

It is very important to follow the label directions when using any chemical cleaner or polish. Read all warning and caution statements that appear on the label.

Finish maintenance

Washing

To help protect your vehicle's finish from rust and deterioration, wash it thoroughly and frequently at least once a month with lukewarm or cold water.

If you use your vehicle for off-road driving, you should wash it after each off-road trip. Pay special attention to the removal of any accumulation of salt, dirt, mud, and other foreign materials. Make sure the drain holes in the lower edges of the doors and rocker panels are kept clear and clean.

Insects, tar, tree sap, bird droppings, industrial pollution and similar deposits can damage your vehicle's finish if not removed immediately.

Even prompt washing with plain water may not completely remove all these deposits. A mild soap, safe for use on painted surfaces, may be used.

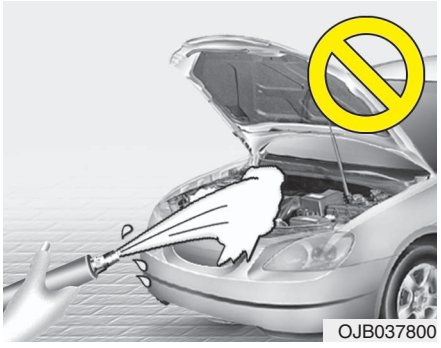
After washing, rinse the vehicle thoroughly with lukewarm or cold water. Do not allow soap to dry on the finish.

⚠ CAUTION

- ***Do not use strong soap, chemical detergents or hot water, and do not wash the vehicle in direct sunlight or when the body of the vehicle is warm.***
- ***Be careful when washing the side windows of your vehicle.***
  Especially, with high-pressure water, water may leak through the windows and wet the interior.
- ***To prevent damage to the plastic parts and lamps, do not clean with chemical solvents or strong detergents.***

⚠ WARNING - Wet brakes

After washing the vehicle, test the brakes while driving slowly to see if they have been affected by water. If braking performance is impaired, dry the brakes by applying them lightly while maintaining a slow forward speed.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⚠ CAUTION

- ***Water washing in the engine compartment including high pressure water washing may cause the failure of electrical circuits or engine and related components located in the engine compartment.***
- ***Never allow water or other liquids to come in contact with electrical/electronic components and air duct inside the vehicle as this may damage them.***

Waxing

Wax the vehicle when water will no longer bead on the paint.

Always wash and dry the vehicle before waxing. Use a good quality liquid or paste wax, and follow the manufacturer's instructions. Wax all metal trim to protect it and to maintain its luster.

Removing oil, tar, and similar materials with a spot remover will usually strip the wax from the finish. Be sure to re-wax these areas even if the rest of the vehicle does not yet need waxing.

⚠ CAUTION

- ***Wiping dust or dirt off the body with a dry cloth will scratch the finish.***
- ***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 result in damage to the protective coating and cause discoloration or paint deterioration.***

Finish damage repair

Deep scratches or stone chips in the painted surface must be repaired promptly. Exposed metal will quickly rust and may develop into a major repair expense.

✻ NOTICE

If your vehicle is damaged and requires any metal repair or replacement, be sure the body shop applies anti-corrosion materials to the parts repaired or replaced.

Bright-metal maintenance

- To remove road tar and insects, use a tar remover, not a scraper or other sharp object.
- To protect the surfaces of bright-metal parts from corrosion, apply a coating of wax or chrome preservative and rub to a high luster.
- During winter weather or in coastal areas, cover the bright metal parts with a heavier coating of wax or preservative. If necessary, coat the parts with non-corrosive petroleum jelly or other protective compound.

Underbody maintenance

Corrosive materials used for ice and snow removal and dust control may collect on the underbody. If these materials are not removed, accelerated rusting can occur on underbody parts such as the fuel lines, frame, floor pan and exhaust system, even though they have been treated with rust protection.

Thoroughly flush the vehicle underbody and wheel openings with lukewarm or cold water once a month, after off-road driving and at the end of each winter. Pay special attention to these areas because it is difficult to see all the 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 allowed to clog with dirt; trapped water in these areas can cause rusting.

⚠ WARNING

After washing the vehicle, test the brakes while driving slowly to see if they have been affected by water. If braking performance is impaired, dry the brakes by applying them lightly while maintaining a slow forward speed.

Aluminum or chrome wheel maintenance

The aluminum or chrome wheels are coated with a clear protective finish.

- Do not use any abrasive cleaner, polishing compound, solvent, or wire brushes on aluminum or chrome wheels. They may scratch or damage the finish.
- Clean the wheel when it has cooled.
- Use only a mild soap or neutral detergent, and rinse thoroughly with water. Also, be sure to clean the wheels after driving on salted roads. This helps prevent corrosion.
- Avoid washing the wheels with high-speed car wash brushes.
- Do not use any alkaline or acid detergent. It may damage and corrode the aluminum or chrome wheels coated with a clear protective finish.

Corrosion protection

Protecting your vehicle from corrosion

By using the most advanced design and construction practices to combat corrosion, we produce cars of the highest quality. However, this is only part of the job. To achieve the long-term corrosion resistance your vehicle can deliver, the owner's cooperation and assistance is also required.

Common causes of corrosion

The most common causes of corrosion on your car are:

- Road salt, dirt and moisture that is allowed to accumulate underneath the car.
- Removal of paint or protective coatings by stones, gravel, abrasion or minor scrapes and dents which leave unprotected metal exposed to corrosion.

High-corrosion areas

If you live in an area where your car is regularly exposed to corrosive materials, corrosion protection is particularly important. Some of the common causes of accelerated corrosion are road salts, dust control chemicals, ocean air and industrial pollution.

Moisture breeds corrosion

Moisture creates the conditions in which corrosion is most likely to occur. For example, corrosion is accelerated by high humidity, particularly when temperatures are just above freezing. In such conditions, the corrosive material is kept in contact with the car surfaces by moisture that is slow to evaporate.

Mud is particularly corrosive because it is slow to dry and holds moisture in contact with the vehicle. Although the mud appears to be dry, it can still retain the moisture and promote corrosion.

High temperatures can also accelerate corrosion of parts that are not properly ventilated so the moisture can be dispersed. For all these reasons, it is particularly important to keep your car clean and free of mud or accumulations of other materials. This applies not only to the visible surfaces but particularly to the underside of the car.

To help prevent corrosion

You can help prevent corrosion from getting started by observing the following:

Keep your car clean

The best way to prevent corrosion is to keep your car clean and free of corrosive materials. Attention to the underside of the car is particularly important.

- If you live in a high-corrosion area — where road salts are used, near the ocean, areas with industrial pollution, acid rain, etc.—, you should take extra care to prevent corrosion. In winter, hose off the underside of your car at least once a month and be sure to clean the underside thoroughly when winter is over.

- When cleaning underneath the car, give particular attention to the components under the fenders and other areas that are hidden from view. Do a thorough job; just dampening the accumulated mud rather than washing it away will accelerate corrosion rather than prevent it. Water under high pressure and steam are particularly effective in removing accumulated mud and corrosive materials.
- When cleaning lower door panels, rocker panels and frame members, be sure that drain holes are kept open so that moisture can escape and not be trapped inside to accelerate corrosion.

Keep your garage dry

Don't park your car in a damp, poorly ventilated garage. This creates a favorable environment for corrosion. This is particularly true if you wash your car in the garage or drive it into the garage when it is still wet or covered with snow, ice or mud. Even a heated garage can contribute to corrosion unless it is well ventilated so moisture is dispersed.

Keep paint and trim in good condition

Scratches or chips in the finish should be covered with "touch-up" paint as soon as possible to reduce the possibility of corrosion. If bare metal is showing through, the attention of a qualified body and paint shop is recommended.

Bird droppings : Bird droppings are highly corrosive and may damage painted surfaces in just a few hours. Always remove bird droppings as soon as possible.

Don't neglect the interior

Moisture can collect under the floor mats and carpeting to cause corrosion. Check under the mats periodically to be sure the carpeting is dry. Use particular care if you carry fertilizers, cleaning materials or chemicals in the car.

These should be carried only in proper containers and any spills or leaks should be cleaned up, flushed with clean water and thoroughly dried.

Interior care

Interior general precautions

Prevent chemicals such as perfume, cosmetic oil, sun cream, hand cleaner, and air freshener from contacting the interior parts because they may cause damage or discoloration. If they do contact the interior parts, wipe them off immediately. See the instructions for the proper way to clean vinyl.

⚠ CAUTION

- ***Never allow water or other liquids to come in contact with electrical/electronic components inside the vehicle as this may damage them.***
- ***When cleaning leather products (steering wheel, seats etc.), use neutral detergents or low alcohol content solutions. If you use high alcohol content solutions or acid/alkaline detergents, the color of the leather may fade or the surface may get stripped off.***

Cleaning the upholstery and interior trim

Vinyl

Remove dust and loose dirt from vinyl with a whisk broom or vacuum cleaner. Clean vinyl surfaces with a vinyl cleaner.

Fabric

Remove dust and loose dirt from fabric with a whisk broom or vacuum cleaner. Clean with a mild soap solution recommended for upholstery or carpets. Remove fresh spots immediately with a fabric spot cleaner. If fresh spots do not receive immediate attention, the fabric can be stained and its color can be affected. Also, its fire-resistant properties can be reduced if the material is not properly maintained.

⚠ CAUTION

Using anything but recommended cleaners and procedures may affect the fabric's appearance and fire-resistant properties.

Cleaning the lap/shoulder belt webbing

Clean the belt webbing with any mild soap solution recommended for cleaning upholstery or carpet. Follow the instructions provided with the soap. Do not bleach or re-dye the webbing because this may weaken it.

Cleaning the interior window glass

If the interior glass surfaces of the vehicle become fogged (that is, covered with an oily, greasy or waxy film), they should be cleaned with glass cleaner. Follow the directions on the glass cleaner container.

⚠ CAUTION

Do not scrape or scratch the inside of the rear window. This may result in damage to the rear window defroster grid.

EMISSION CONTROL SYSTEM

The emission control system of your vehicle is covered by a written limited warranty. Please see the warranty information contained in the Owner's Handbook & Warranty Information booklet in your vehicle.

Your vehicle is equipped with an emission control system to meet all applicable emission regulations.

There are three emission control systems, as follows.

(1) Crankcase emission control system
(2) Evaporative emission control system
(3) Exhaust emission control system

In order to assure the proper function of the emission control systems, it is recommended that you have your car inspected and maintained by an authorized HYUNDAI dealer in accordance with the maintenance schedule in this manual.

Caution for the Inspection and Maintenance Test (With Electronic Stability Control (ESC) system)

- **To prevent the vehicle from misfiring during dynamometer testing, turn the Electronic Stability Control (ESC) system off by pressing the ESC switch.**
- **After dynamometer testing is completed, turn the ESC system back on by pressing the ESC switch again.**

1. Crankcase emission control system

The positive crankcase ventilation system is employed to prevent air pollution caused by blow-by gases being emitted from the crankcase. This system supplies fresh filtered air to the crankcase through the air intake hose. Inside the crankcase, the fresh air mixes with blow-by gases, which then pass through the PCV valve into the induction system.

2. Evaporative emission control (including ORVR: Onboard Refueling Vapor Recovery) system

The Evaporative Emission Control System is designed to prevent fuel vapors from escaping into the atmosphere.

(The ORVR system is designed to allow the vapors from the fuel tank to be loaded into a canister while refueling at the gas station, preventing the escape of fuel vapors into the atmosphere.)

Canister

Fuel vapors generated inside the fuel tank are absorbed and stored in the onboard canister. When the engine is running, the fuel vapors absorbed in the canister are drawn into the surge tank through the purge control solenoid valve.

Purge Control Solenoid Valve (PCSV)

The purge control solenoid valve is controlled by the Engine Control Module (ECM); when the engine coolant temperature is low during idling, the PCSV closes so that evaporated fuel is not taken into the engine. After the engine warms-up during ordinary driving, the PCSV opens to introduce evaporated fuel to the engine.

3. Exhaust emission control system

The Exhaust Emission Control System is a highly effective system which controls exhaust emissions while maintaining good vehicle performance.

Vehicle modifications

- This vehicle should not be modified. Modification of your vehicle could affect its performance, safety or durability and may even violate governmental safety and emissions regulations.

  In addition, damage or performance problems resulting from any modification may not be covered under warranty.
- If you use unauthorized electronic devices, it may cause the vehicle to operate abnormally, wire damage, battery discharge and fire. For your safety, do not use unauthorized electronic devices.

Engine exhaust gas precautions (carbon monoxide)

- Carbon monoxide can be present with other exhaust fumes. Therefore, if you smell exhaust fumes of any kind inside your vehicle, have it inspected and repaired immediately. If you ever suspect exhaust fumes are coming into your vehicle, drive it only with all the windows fully open. Have your vehicle checked and repaired immediately.

⚠ WARNING - Exhaust

Engine exhaust gases contain carbon monoxide (CO). Though colorless and odorless, it is dangerous and could be lethal if inhaled. Follow the instructions on this page to avoid CO poisoning.

⚠ CALIFORNIA PROPOSITION 65 WARNING

Engine exhaust and a wide variety of automobile components and parts, including components found in the interior furnishings in a vehicle, contain or emit chemicals known to the State of California to cause cancer and birth defects and reproductive harm. In addition, certain fluids contained in vehicles and certain products of component wear contain or emit chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

- Do not operate the engine in confined or closed areas (such as garages) any more than what is necessary to move the vehicle in or out of the area.
- When the vehicle is stopped in an open area for more than a short time with the engine running, adjust the ventilation system (as needed) to draw outside air into the vehicle.
- Never sit in a parked or stopped vehicle for any extended time with the engine running.
- When the engine stalls or fails to start, excessive attempts to restart the engine may cause damage to the emission control system.

Operating precautions for catalytic converters (if equipped)

⚠ WARNING - Fire

- **A hot exhaust system can ignite flammable items under your vehicle. Do not park, idle, or drive the vehicle over or near flammable objects, such as grass, vegetation, paper, leaves, etc.**
- **The exhaust system and catalytic system are very hot while the engine is running or immediately after the engine is turned off. Keep away from the exhaust system and catalytic, you may get burned. Also, do not remove the heat sink around the exhaust system, do not seal the bottom of the vehicle or do not coat the vehicle for corrosion control. It may present a fire risk under certain conditions.**

Your vehicle is equipped with a catalytic converter emission control device.

Therefore, the following precautions must be observed:

- Use only UNLEADED FUEL for gasoline engines.
- Do not operate the vehicle when there are signs of engine malfunction, such as misfire or a noticeable loss of performance.
- Do not misuse or abuse the engine. Examples of misuse are coasting with the ignition off and descending steep grades in gear with the ignition off.
- Do not operate the engine at high idle speed for extended periods (5 minutes or more).
- Do not modify or tamper with any part of the engine or emission control system. All inspections and adjustments must be made by an authorized HYUNDAI dealer.
- Avoid driving with a extremely low fuel level. Running out of fuel could cause the engine to misfire, damaging the catalytic converter.

Failure to observe these precautions could result in damage to the catalytic converter and to your vehicle. Additionally, such actions could void your warranties.

CALIFORNIA PERCHLORATE NOTICE

Perchlorate Material-special handling may apply, See www.dtsc.ca.gov/hazardouswaste/perchlorate.

Notice to California Vehicle Dismantlers:

Perchlorate containing materials, such as air bag inflators, seatbelt pretensioners and keyless remote entry batteries, must be disposed of according to Title 22 California Code of Regulations Section 67384.10 (a).