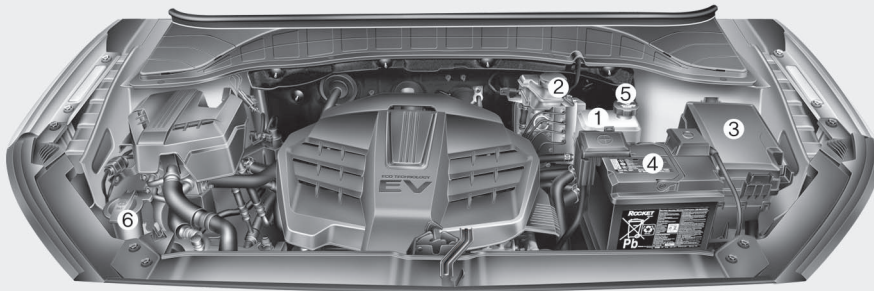


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EV DRIVE MOTOR COMPARTMENT



1. Coolant reservoir
2. Brake fluid reservoir
3. Fuse box
4. Auxiliary battery (12 volt)
5. Coolant reservoir cap
6. Windshield washer fluid reservoir

The actual motor compartment in the vehicle may differ from the illustration.

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MAINTENANCE SERVICES

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

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's Responsibility

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 Service Passport.

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

Owner Maintenance Precautions

Inadequate, incomplete or insufficient servicing may result in operational problems with your vehicle that could lead to vehicle damage, an accident, or personal injury. This chapter provides instructions only for the maintenance items that are easy to perform. Several procedures can be done only by an authorized HYUNDAI dealer with special tools.

Your vehicle should not be modified in any way. Such modifications may adversely affect the performance, safety or durability of your vehicle and may, in addition, violate conditions of the limited warranties covering the vehicle.

NOTICE

Improper owner maintenance during the warranty period may affect warranty coverage. For details, read the separate Service Passport provided with the vehicle. If you're unsure about any service or maintenance procedure, have it done by an authorized HYUNDAI dealer.

OWNER MAINTENANCE

WARNING

Performing maintenance work on a vehicle can be dangerous. 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.

ALWAYS follow these precautions for performing maintenance work:

- Park your vehicle on level ground, shift to the P (Park) position, apply the parking brake, and place the POWER button in the OFF position.
- Block the tires (front and back) to prevent the vehicle from moving.

Remove loose clothing or jewelry that can become entangled in moving parts.

- Keep flames, sparks, or smoking materials away from the battery and related components.

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 vehicle 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 charging:

- Check coolant level in the coolant reservoir.
- Check the windshield washer fluid level.
- Check for low or under-inflated tires.

WARNING

Be careful when checking your coolant level when the parts in the motor compartment are hot. This may result in coolant being blown out of the opening and cause serious burns and other injuries.

While operating your vehicle:

- Check for vibrations in the steering wheel. Notice if there is 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 decelerating with your vehicle, listen and check for unusual sounds, pulling to one side, increased brake pedal travel or "hard-to-push" brake pedal.

After driving your vehicle on a regular basis check the following

- Verify that the electronic parking brake is engaging properly.
- After you exit the vehicle check for any signs of fluid leaks under your vehicle (note that water dripping from the air conditioning system is normal).

At least monthly:

- Check coolant level in the coolant reservoir.
- Check the operation of all exterior lights, including the brake lights, turn signals and hazard warning flashers.
- Check the inflation pressures of all four tires and check to see the tire tread condition and if there are any signs of abnormal wear or damage.
- Check for loose wheel lug nuts.

At least twice a year:

- 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 headlamp alignment.
- Check the seat belts for wear and function.

At least once a year:

- Clean body and door drain holes.
- Lubricate door hinges and hood hinges.
- Lubricate door and hood locks and latches.
- Lubricate door rubber weather strips.
- Lubricate door checker.
- Check the air conditioning system.
- Inspect and lubricate reduction gear linkage and controls.
- Clean the battery and terminals.
- Check the brake fluid level.

SCHEDULED MAINTENANCE SERVICES

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.

R : Replace A : Add S : Service I : Inspect L : Lubricate r : Rotate

MAINTENANCE	Months	12	24	36	48	60	72	84	96	108	120
	Km×1 000	12	24	36	48	60	72	84	96	108	120
Cooling system		I	I	I	I	I	I	I	I	I	I
Coolant **	Standard	At first, replace at 200,000 km or 120 months after that, replace every 40,000 km or 24 months									
12V auxiliary battery condition		I	I	I	I	I	I	I	I	I	I
All electrical system		I	I	I	I	I	I	I	I	I	I
Brake lines, hoses and connections		I	I	I	I	I	I	I	I	I	I
Brake pedal		I	I	I	I	I	I	I	I	I	I
Brake fluid		I	I	I	R	I	I	I	R	I	I
Visual Brake Inspection (front discs/pads & calipers and rear disc/pads & calipers/shoes. Includes tire rotation) Brake Service (includes parking brake inspection and tire rotation)		I	S	I	S	I	S	I	S	I	S

** : When replacing or adding coolant, visit an authorized HYUNDAI dealer.

Maintenance Schedule

R : Replace A : Add S : Service I : Inspect L : Lubricate r : Rotate

MAINTENANCE	Months	12	24	36	48	60	72	84	96	108	120
	Km×1 000	12	24	36	48	60	72	84	96	108	120
Steering gear rack, linkage and boots		I	I	I	I	I	I	I	I	I	I
Driveshaft and boots		I	I	I	I	I	I	I	I	I	I
Front suspension ball joints		I	I	I	I	I	I	I	I	I	I
Bolt and nuts on chassis and body		I	I	I	I	I	I	I	I	I	I
Air conditioner refrigerant		I	I	I	I	I	I	I	I	I	I
Air conditioner compressor		I	I	I	I	I	I	I	I	I	I
Climate control air filter			R		R		R		R		R
Reduction gear fluid					I				I		

EXPLANATION OF SCHEDULED MAINTENANCE ITEMS

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.

Reduction Gear Fluid

Inspect the reduction gear 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 Fluid

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

Brake Discs, Pads, Calipers and Rotors

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

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 the vehicle 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.

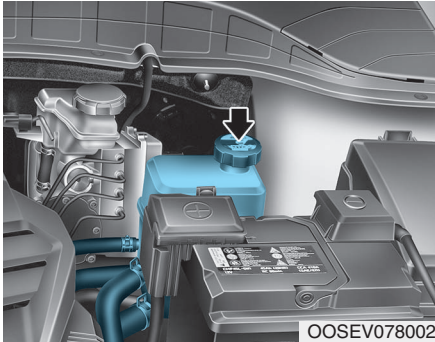
Drive Shafts and Boots

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.

COOLANT



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 the MAX and the MIN marks on the side of the coolant reservoir when the parts in the motor compartment are cool.

If the coolant level is low, have your vehicle inspected by an authorized HYUNDAI dealer. Use only designated coolant water for electric vehicles, adding other types of water or antifreeze can damage the vehicle.

⚠ WARNING

Since specific coolant water is applied for electric vehicles, replenishment of other antifreeze or water may cause problems to the vehicle.

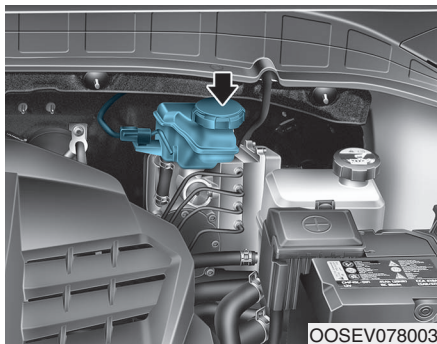
⚠ WARNING

The electric motor for the cooling fan may continue to operate or start up when the vehicle is not running and can cause serious injury. Keep hands, clothing and tools away from the rotating fan blades of the cooling fan.

The electric motor for the cooling fan is controlled by coolant temperature, refrigerant pressure and vehicle speed. As the coolant temperature decreases, the electric motor will automatically shut off. This is a normal condition.

BRAKE FLUID

Checking the Brake 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 fluid, clean the area around the reservoir cap thoroughly to prevent brake fluid contamination.

If the level is low, add the specified brake 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 checked by an authorized HYUNDAI dealer.

⚠ WARNING

If the brake system requires frequent additions of fluid this could indicate a leak in the brake system. Have the vehicle inspected by an authorized HYUNDAI dealer.

⚠ WARNING

Do not allow brake fluid to come in contact with your eyes. If brake fluid comes in contact with your eyes, flush your eyes with clean water for at least 15 minutes and get immediate medical attention.

NOTICE

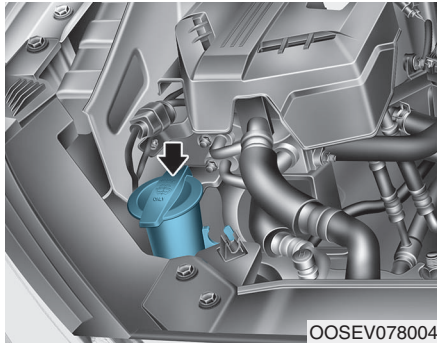
- **Do not allow brake fluid to contact the vehicle's body paint, as paint damage will result.**
- **Brake fluid, which has been exposed to open air for an extended time should NEVER be used as its quality cannot be guaranteed. It should be disposed of properly.**
- **Do not use the wrong kind of brake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

i Information

Use only the specified brake fluid (refer to "Recommended Lubricants and Capacities" in chapter 8).

WASHER FLUID

Checking the Washer Fluid Level



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

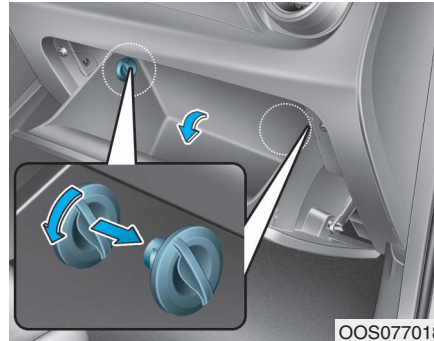
To prevent serious injury or death, take the following safety precautions when using washer fluid:

- Do not use coolant or antifreeze in the washer fluid reservoir.
Coolant can severely obscure visibility when sprayed on the windshield and may cause loss of vehicle control resulting in an accident or damage to paint and body trim.
- Do not allow sparks or flame to contact the washer fluid or the washer fluid reservoir. Washer fluid may contain alcohol and can be flammable.
- Do not drink washer fluid and avoid contact with skin. Washer fluid is harmful to humans and animals.
- Keep washer fluid away from children and animals.

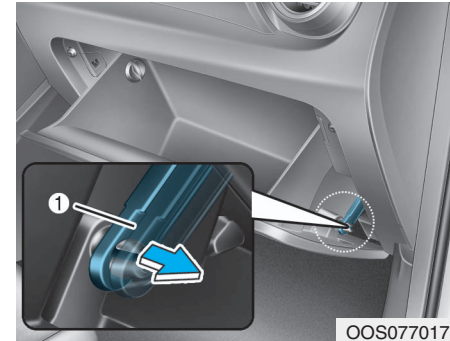
CLIMATE CONTROL AIR FILTER

Filter Inspection

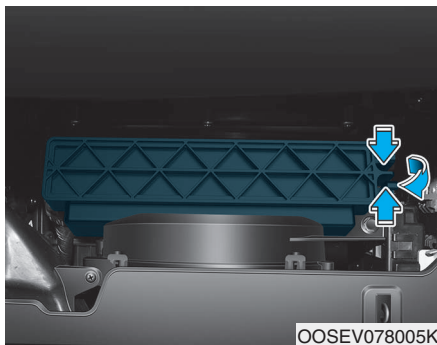
The climate control air filter should be replaced according to the Maintenance Schedule. If the vehicle is operated in severely air-polluted cities or on dusty rough roads for a long period, it should be inspected more frequently and replaced earlier. When you replace the climate control air filter,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



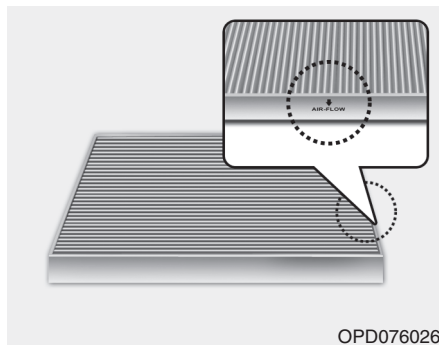
1. With the glove box open, remove the stoppers on both sides to allow the glove box to hang freely on the hinges.



2. Remove the support rod (1).



3. Press and hold the lock (1) on the right side of the cover.
4. Pull out (2) the cover.



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

NOTICE

Install a new climate control air filter in the correct direction with the arrow symbol (↓) facing downwards. Otherwise, the climate control effects may decrease, possibly with a noise.

WIPER BLADES

Blade Inspection

Contamination of either the windshield or the wiper blades with foreign matter can reduce the effectiveness of the windshield wiper functionality. 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 clean cloth dampened with washer fluid.

NOTICE

To prevent damage to the wiper blades, arms or other components, do not:

- **Use gasoline, kerosene, paint thinner, or other solvents on or near them.**
- **Attempt to move the wipers manually.**
- **Use non-specified wiper blades.**

i Information

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

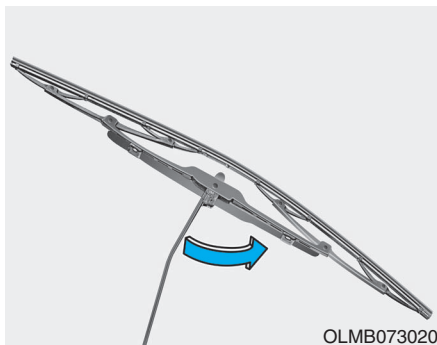
Blade Replacement

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

NOTICE

- **In order to prevent damage to the hood and the wiper arms, the wiper arms should only be lifted when in the top wiping position.**
- **Always return the wiper arms to the windshield before driving.**

Front windshield wiper blade replacement

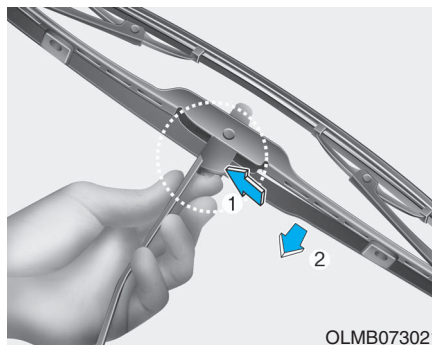


Type A

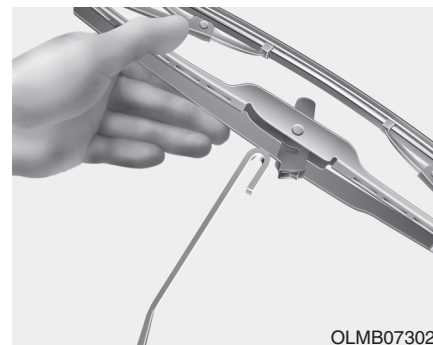
1. Raise the wiper arm and slightly rotate the wiper blade assembly to expose the plastic locking clip.

CAUTION

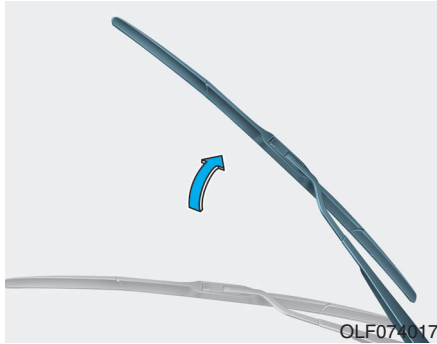
Do not allow the wiper arm to fall against the windshield, since it may chip or crack the windshield.



2. Press the clip (1) and slide the blade assembly downward (2).

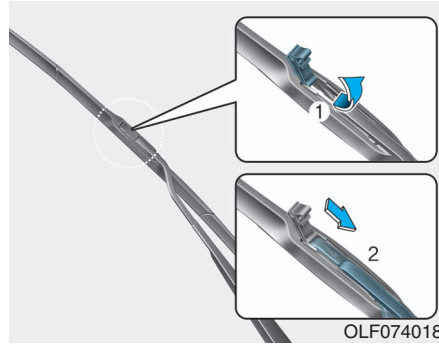


3. Lift it off the arm.
4. Install the blade assembly in the reverse order of removal.
5. Return the wiper arm on the windshield.

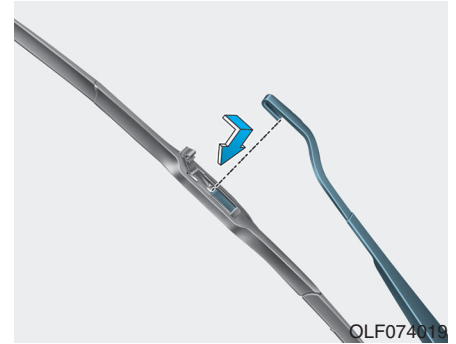


Type B

1. Raise the wiper arm.

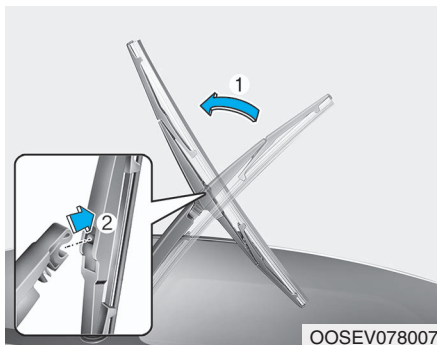


2. Lift up the wiper blade clip (1). Then pull down the blade assembly and remove it (2).

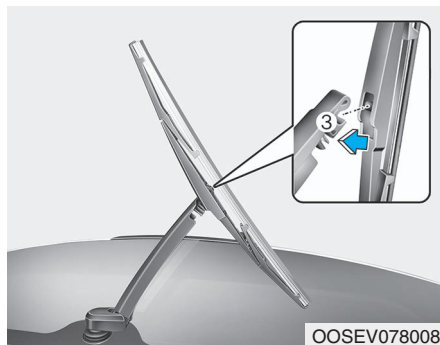


3. Install a new wiper blade assembly in the reverse order of removal.
4. Return the wiper arm on the windshield.

Rear window wiper blade replacement



1. Raise the wiper arm and then rotate the wiper blade assembly (1).
2. Pull out the wiper blade assembly (2).



3. Install the new blade assembly by inserting the center part into the slot in the wiper arm until it clicks into place (3).
4. Make sure the blade assembly is installed firmly by trying to pull it slightly.
5. Rotate back the blade assembly so that it aligns with the wiper arm.

To prevent damage to the wiper arms or other components, have the wiper blades replaced by an authorized HYUNDAI dealer.

12V AUXILIARY BATTERY

WARNING

To prevent **SERIOUS INJURY** or **DEATH** to you or bystanders, always follow these precautions when working near or handling the battery:



Always read and follow instructions carefully when handling a battery.



Wear eye protection designed to protect the eyes from acid splashes.



Keep all flames, sparks, or smoking materials away from the battery.



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




Keep batteries out of reach of children.



Batteries contain sulfuric acid which is highly corrosive. Do not allow acid to contact your eyes, skin or clothing.

If acid gets into your eyes, flush your eyes with clean water for at least 15 minutes and get immediate medical attention. If acid gets on your skin, thoroughly wash the area. If you feel pain or a burning sensation, get medical attention immediately.

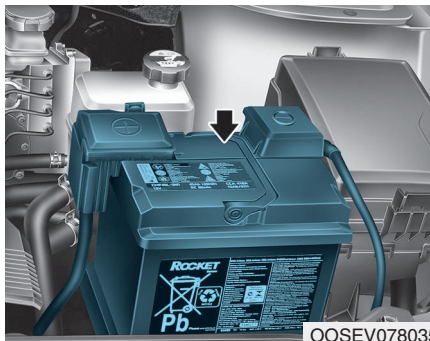
- When lifting a plastic-cased battery, excessive pressure on the case may cause battery acid to leak. Lift with a battery carrier or with your hands on opposite corners.
- Do not attempt to jump start your vehicle if your battery is frozen.
- **NEVER** attempt to recharge the battery when the vehicle's battery cables are connected to the battery.

- The electrical ignition system works with high voltage. **NEVER** touch these components with the vehicle ON ( indicator ON) or when the **POWER** button is in the ON position.

NOTICE

- When you do not use the vehicle for a long time in a low temperature area, disconnect the battery and keep it indoors.
- Always charge the battery fully to prevent battery case damage in low temperature areas.

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 acid from the battery immediately with a solution of water and baking soda.

Battery Recharging

⚠ WARNING

Always follow these instructions when recharging your vehicle's battery to avoid the risk of **SERIOUS INJURY** or **DEATH** from explosions or acid burns:

- Before performing maintenance or recharging the battery, turn off all accessories and place the **POWER** button to the **OFF** position.
- Keep all flames, sparks, or smoking materials away from the battery.
- Always work outdoors or in an area with plenty of ventilation.
- Wear eye protection when checking the battery during charging.
- The battery must be removed from the vehicle and placed in a well ventilated area.

- Watch the battery during charging, and stop or reduce the charging rate if the battery cells begin boiling violently.
- The negative battery cable must be removed first and installed last when the battery is disconnected. 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.
- Always use a genuine HYUNDAI approved battery when you replace the battery.

By jump starting

After a jump start from a good battery, drive the vehicle for 20-30 minutes before it is shutoff. The vehicle may not restart if you shut it off before the battery had a chance to adequately recharge. See "Jump Starting" in chapter 6 for more information on jump starting procedures.

***i* Information**



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

Reset Features

Some items need to be reset after the battery has been discharged or the battery has been disconnected.

- Power Windows
- Trip Computer
- Climate Control System
- Clock
- Audio System
- Sunroof

TIRES AND WHEELS

WARNING

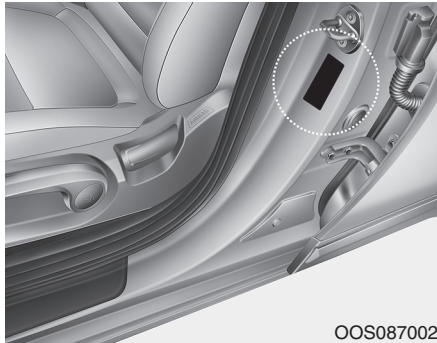
Tire failure may cause loss of vehicle control resulting in an accident. To reduce risk of **SERIOUS INJURY** or **DEATH**, take the following precautions:

- Inspect your tires monthly for proper inflation as well as wear and damage.
- 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. Always use a tire pressure gauge to measure tire pressure. Tires with too much or too little pressure wear unevenly causing poor handling.
- Check the pressure of the spare every time you check the pressure of the other tires on your vehicle.

- Replace tires that are worn, show uneven wear, or are damaged. Worn tires can cause loss of braking effectiveness, steering) control, or traction.
- **ALWAYS** replace tires with the same size as each tire that was originally supplied with this vehicle. Using tires and wheels other than the recommended sizes could cause unusual handling characteristics, poor vehicle control, or negatively affect your vehicle's Anti-Lock Brake System (ABS) resulting in a serious accident.

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.



All specifications (sizes and pressures) can be found on a label attached to the driver's side center pillar.

Recommended Cold Tire Inflation Pressures

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

Warm tires normally exceed recommended cold tire pressures by 28 to 41 kPa (4 to 6 psi). Do not release air from warm tires to adjust the pressure or the tires will be under-inflated. For recommended inflation pressure, refer to "Tire and Wheels" in chapter 8.

WARNING

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

Over-inflation or under-inflation can reduce tire life, adversely affect vehicle handling, and lead to sudden tire failure that could result in loss of vehicle control resulting in an accident.

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

 **CAUTION**

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

Check Tire Inflation Pressure

Check your tires, including the spare tire, once a month or more.

How to check

Use a good quality tire pressure gauge 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 when they are under-inflated.

Remove the valve cap from the tire valve stem. Press the tire gauge 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 pressure. Make sure to put the valve caps back on the valve stems. 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.

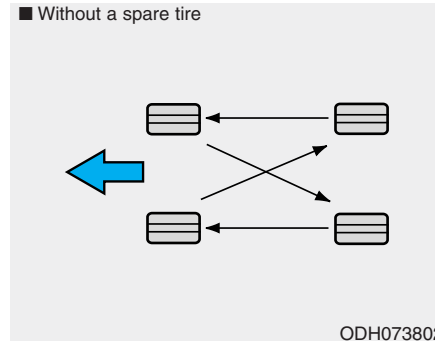
If you overfill the tire, release air by pushing on the metal stem in the center of the tire valve. Recheck the tire pressure with the tire gauge. Be sure to put the valve caps back on the valve stems. Without the valve cap, dirt or moisture could get into the valve core and cause air leakage. If a valve cap is missing, install a new one as soon as possible.

Tire Rotation

To equalize tread wear, HYUNDAI recommends that the tires be rotated every 8,000 km (5,000 miles) 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 (proper torque is 11~13 kgf·m [79~94 lbf·ft]).



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

Information

Tires that are asymmetrical or directional can only be installed on the wheel in one direction. The outside and inside of an asymmetrical tire is not easily distinguishable. Pay careful attention to the markings on the sidewalls of the tires, noting the "outside" marking and also the rotating direction before installing them on the vehicle.

WARNING

- Do not use the compact spare tire for tire rotation.
- Do not mix bias ply and radial ply tires under any circumstances. This may cause unusual handling characteristics that may cause loss of vehicle control resulting in an accident.

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.

NOTICE

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 1.6 mm (1/16 inch) 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

To reduce the risk of DEATH or SERIOUS INJURY:

- Replace tires that are worn, show uneven wear, or are damaged. Worn tires can cause loss of braking effectiveness, steering control, and traction.
- Always replace tires with the same size as each tire that was originally supplied with this vehicle. Using tires and wheels other than the recommended sizes could cause unusual handling characteristics, poor vehicle control, or negatively affect your vehicle's Anti-Lock Brake System (ABS) resulting in a serious accident.

- **Tires degrade over time, even when they are not being used. Regardless of the remaining tread, HYUNDAI recommends that tires be replaced after six (6) years of normal service.**
- **When replacing tires (or wheels), it is recommended to replace the two front or two rear tires (or wheels) as a pair. Replacing just one tire can seriously affect your vehicle's handling.**
- **Heat caused by hot climates or frequent high loading conditions can accelerate the aging process. Failure to follow this warning may cause sudden tire failure, which could lead to a loss of vehicle control resulting in an accident.**

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.

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.

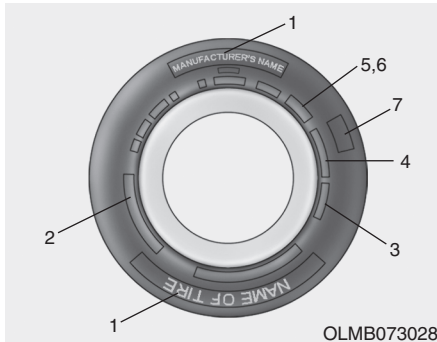
Tire Maintenance

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.)

215/55 R17 94V

215 - Tire width in millimeters.

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

R - Tire construction code (Radial).

17 - Rim diameter in inches.

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

V - 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:

7.0J x 17

7.0 - Rim width in inches.

J - Rim contour designation.

17 - 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	180 km/h (112 mph)
T	190 km/h (118 mph)
H	210 km/h (130 mph)
V	240 km/h (149 mph)
W	270 km/h (168 mph)
Y	300 km/h (186 mph)

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

Any tires that are over six 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 1419 represents that the tire was produced in the 14th week of 2019.

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 ($1\frac{1}{2}$) 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 sidewalls 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. Grades B and A represent higher levels of performance on the laboratory test wheel than the minimum required by law.

WARNING

The temperature grade for this tire is established for a tire that is properly inflated and not overloaded. Excessive speed, under-inflation, over-inflation, or excessive loading, either separately or in combination, can cause heat build-up and possible sudden tire failure. This may cause loss of vehicle control resulting in an accident.

Tire Terminology and Definitions

Air Pressure

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

Accessory Weight

This means the combined weight of optional accessories. Some examples of optional accessories are automatic transmission, 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 kilopascals (kPa) or pounds per square inch (psi) 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

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.

Light truck(LT) tire

A tire designated by its manufacturer as primarily intended for use on light-weight trucks or multipurpose passenger vehicles.

Load ratings

The maximum load that a tire is rated to carry for a given inflation 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 68 kg (150 pounds).

Occupant Distribution

Designated seating positions.

Outward Facing Sidewall

An asymmetrical tire 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.

Ply

A layer of rubber-coated parallel cords.

Pneumatic tire

A mechanical device made of rubber, chemicals, fabric and steel or other materials, that, when mounted on an automotive wheel provides the traction and contains the gas or fluid that sustains the load.

Pneumatic options weight

The combined weight of installed regular production options weighing over 2.3 kg (5 lb.) in excess of the standard items which they replace, not previously considered in curb weight or accessory weight, including heavy duty breaks, ride levelers, roof rack, heavy duty battery, and special trim.

Recommended Inflation Pressure

Vehicle manufacturer's recommended tire inflation pressure as 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 1.6 mm (1/16 inch) of tread remains.

UTQGS

Uniform Tire Quality Grading Standards is 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 68 kg (150 lbs.) 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 dividing 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 28 kPa (4 psi) 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 120 km/h (75 mph) when your vehicle is equipped with snow tires.

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 pairs of radial-ply tires should always be used as a set for the front tires and a set for the rear tires.

Longer wearing tires can be more susceptible to irregular tread wear. It is very important to follow the tire rotation interval in this chapter 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.

 **WARNING**

Do not mix bias ply and radial ply tires under any circumstances. This may cause unusual handling characteristics that may cause loss of vehicle control resulting in an accident.

FUSES

■ Blade type



Normal



Blown

■ Cartridge type

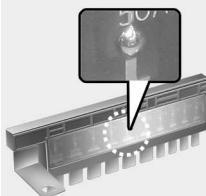


Normal

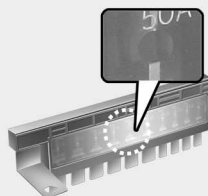


Blown

■ Multi fuse



Normal



Blown

OTM078035

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

This vehicle has 2 (or 3) fuse panels, one located in the driver's side panel bolster, the other in the motor compartment near the battery.

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 or broken.

If the electrical system does not work, first check the driver's side fuse panel. Before replacing a blown fuse, turn the vehicle and all switches off, 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.

i Information

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

⚠ WARNING

NEVER replace a fuse with anything but another fuse of the same rating.

- A higher capacity fuse could cause damage and possibly cause a fire.
- Do not install a wire or aluminum foil instead of the proper fuse - even as a temporary repair. It may cause extensive wiring damage and possibly a fire.

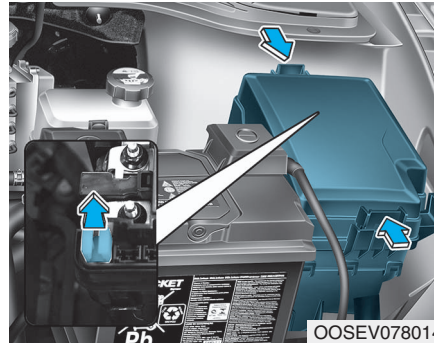
NOTICE

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

Instrument Panel Fuse Replacement



1. Turn the vehicle off.
2. Turn all other switches OFF.
3. Open the fuse panel cover.
4. Refer to the label on the inside of the fuse panel cover to locate the suspected fuse location.

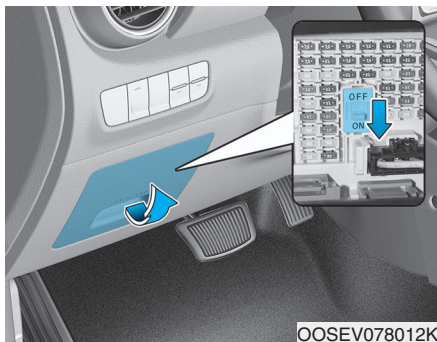


5. Pull the suspected fuse straight out. Use the removal tool provided in the motor compartment fuse panel.
6. Check the removed fuse; replace it if it is blown. Spare fuses are provided in the instrument panel fuse panels (or in the motor compartment fuse panel).
7. Push in a new fuse of the same rating, and make sure it fits tightly in the clips. If it fits loosely, consult an authorized HYUNDAI dealer.

In an emergency, if you do not have a spare fuse, use a fuse of the same rating from a circuit you may not need for operating the vehicle.

If the headlamps or other electrical components do not work and the fuses are OK, check the fuse panel in the motor compartment. If a fuse is blown, it must be replaced with the same rating.

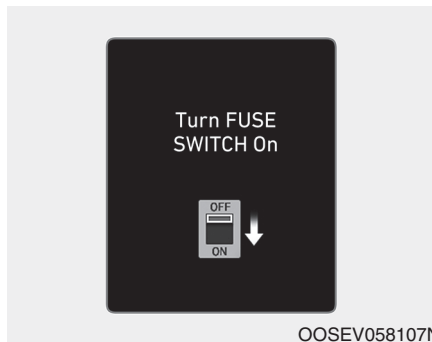
Fuse switch



Always, place the fuse switch to the ON position.

If you move the switch to the OFF position, some items such as the audio system and digital clock must be reset and the smart key may not work properly.

i Information

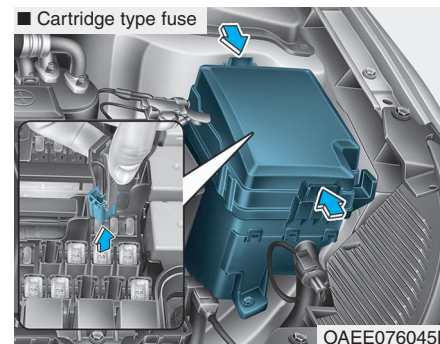
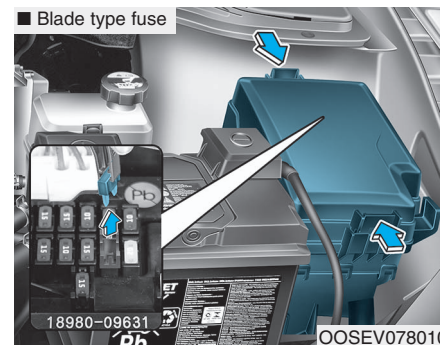


If the fuse switch is OFF, the above message will appear.

NOTICE

- Always place the fuse switch in the ON position while driving the vehicle.
- Do not move the fuse switch repeatedly. The fuse switch may be damaged.

Motor Compartment Panel Fuse Replacement



1. Turn the vehicle off.
2. Turn all other switches OFF.

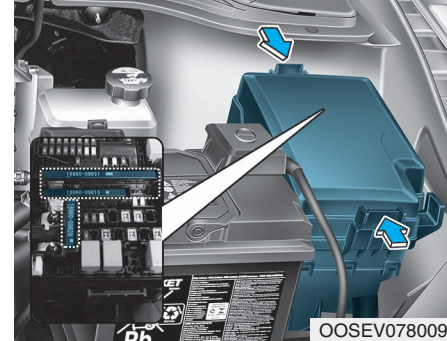
3. Remove the fuse panel cover by pressing the tap and pulling up.
4. Check the removed fuse; replace it if it is blown. To remove or insert the fuse, use the fuse puller in the motor compartment fuse panel.
5. Push in a new fuse of the same rating, and make sure it fits tightly in the clips. If it fits loosely, consult an authorized HYUNDAI dealer.

 **CAUTION**

After checking the fuse box in the motor compartment securely close the fuse box cover inside the motor compartment, until it clicks.

If the fuse box is not closed properly, water may leak in side, possibly causing a malfunction with the electrical system.

Multi fuse



If the multi fuse is blown, consult an authorized HYUNDAI dealer.

Fuse/Relay Panel Description

Instrument panel fuse panel

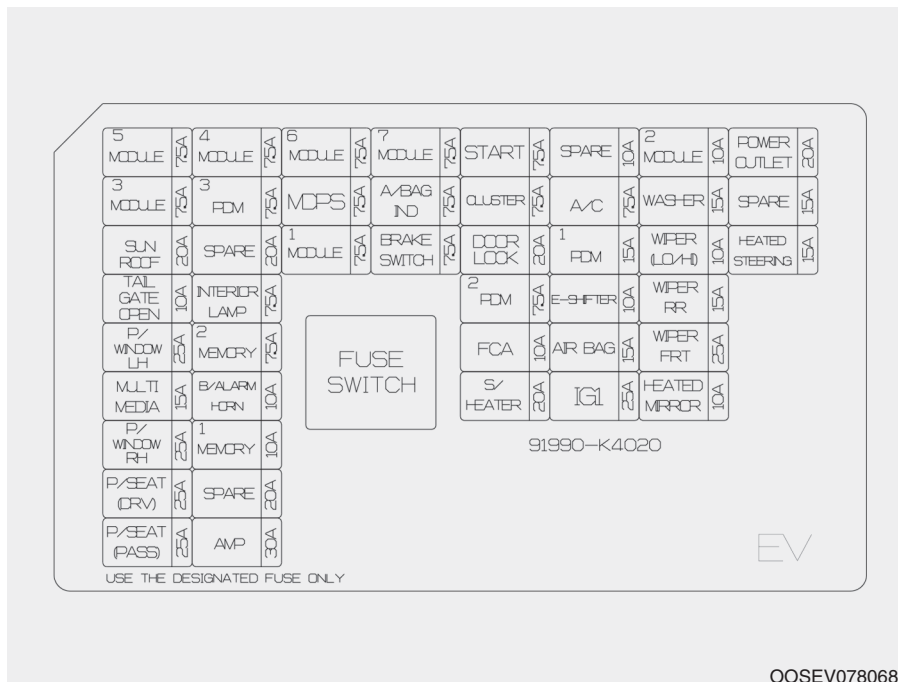


OOSEV078013K

Inside the fuse/relay box cover, you can find the fuse/relay label describing fuse/relay name and capacity.

i Information

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



OOSEV078068N

Instrument panel fuse panel

Fuse Name	Fuse Rating	Protected Component
MODULE 5	7.5A	Electro Chromic Mirror, Audio, A/V & Navigation Head Unit, Crash Pad Switch, Head Lamp LH, Front Air Ventilation Seat Module, Front Seat Warmer Module
MODULE 3	7.5A	Stop Lamp Switch, BCM
SUNROOF	20A	Sunroof Unit
TAIL GATE OPEN	10A	Tail Gate Relay
P/WINDOW LH	25A	Power Window LH Relay, Driver Safety Power Window Module
MULTI MEDIA	15A	Audio, A/V & Navigation Head Unit
P/WINDOW RH	25A	Power Window RH Relay, Passenger Safety Power Window Module
P/SEAT(DRV)	25A	Driver Seat Manual Switch, Driver Lumbar Support Switch
P/SEAT(PASS)	25A	Passenger Seat Manual Switch
MODULE 4	7.5A	Blind-Spot Collision Warning Unit LH/RH, BCM, Crash Pad Switch, Vess Unit (Speaker), Multifunction Front View Camera
PDM 3	7.5A	Smart Key Control Module
SPARE	20A	Spare

Instrument panel fuse panel

Fuse Name	Fuse Rating	Protected Component
INTERIOR LAMP	7.5A	Glove Box Lamp, Vanity Lamp LH/RH, Room Lamp, Overhead Console Lamp, Wireless Charger Unit, Luggage Lamp
MEMORY 2	7.5A	Vess Unit (Speaker), Electronic Refrigerant Reduced Pressure Valve
B/ALARM HORN	10A	Not Used
MEMORY 1	10A	A/C Control Module, Head Up Display, Instrument Cluster, BCM, Rain Sensor
SPARE	20A	Spare
AMP	30A	AMP
MODULE 6	7.5A	Smart Key Control Module, BCM
MDPS	7.5A	MDPS Unit
MODULE 1	7.5A	Active Air Flap, Hazard Switch, Data Link Connector, ICM Relay Box (Outside Mirror Folding/Unfolding Relay)
MODULE 7	7.5A	Front Air Ventilation Seat Module, Front Seat Warmer Module
A/BAG IND	7.5A	Instrument Cluster, A/C Control Module
BRAKE SWITCH	7.5A	Stop Lamp Switch, Smart Key Control Module

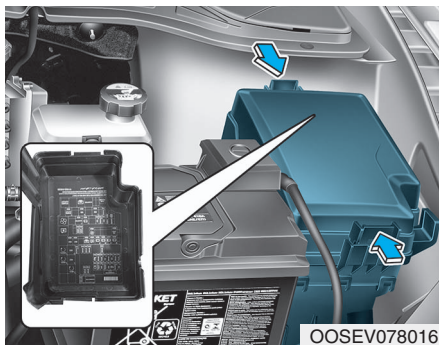
Instrument panel fuse panel

Fuse Name	Fuse Rating	Protected Component
START	7.5A	Smart Key Control Module, EPCU
CLUSTER	7.5A	Head Up Display, Instrument Cluster
DOOR LOCK	20A	Door Lock Relay, Door Unlock Relay, ICM Relay Box (Two Turn Unlock Relay)
PDM 2	7.5A	Start/Stop Button Switch
FCA	10A	Forward Collision Avoidance Assist Unit
S/HEATER	20A	Front Seat Warmer Module, Front Air Ventilation Seat Module
SPARE	20A	Spare
A/C	7.5A	A/C Control Module, Cluster Ionizer
PDM 1	15A	Smart Key Control Module
E-SHIFTER	10A	Shift Select Switch (SBW), Front Console Switch
AIR BAG	15A	SRS Control Module, Passenger Occupant Detection Sensor
IG1	25A	PCB Block(FUSE : IEB 3, EPCU 2)

Instrument panel fuse panel

Fuse Name	Fuse Rating	Protected Component
MODULE 2	10A	Wireless Charger Unit, Smart Key Control Module, BCM, Audio, A/V & Navigation Head Unit, Power Outlet #1, AMP, Power Outside Mirror Switch
WASHER	15A	Multifunction Switch
WIPER (LO/HI)	10A	BCM
WIPER RR	15A	Rear Wiper Relay, Rear Wiper Motor
WIPER FRT	25A	Front Wiper Motor, E/R Junction Block (Front Wiper(Low) Relay)
HEATED MIRROR	10A	Driver/Passenger Power Outside Mirror, A/C Control Module
POWER OUTLET	20A	Power Outlet #2
SPARE	15A	Spare
HEATED STEERING	15A	BCM

Motor compartment fuse panel

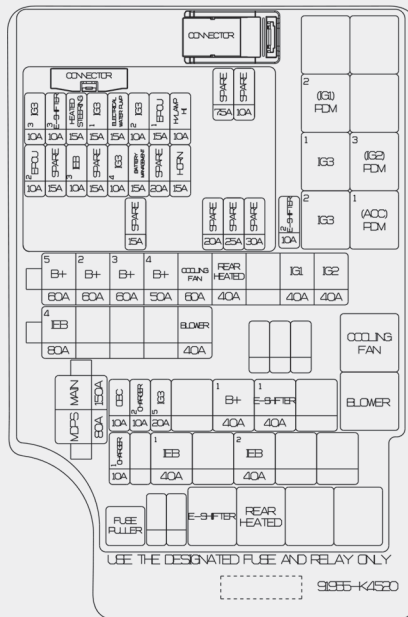


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Inside the fuse/relay box cover, you can find the fuse/relay label describing fuse/relay name and capacity.

i Information

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



OOSEV078069N

Motor compartment fuse panel

Fuse Name		Fuse Rating	Protected Component
MULTI FUSE-3	MAIN	150A	E/R Junction Block (Fuse - IEB 1, IEB 2, CHARGER 1), EPCU (LDC)
	MDPS	80A	MDPS Unit
MULTI FUSE-1	B+ 5	60A	PCB Block ((Fuse - BATTERY MANAGEMENT, HORN, EPCU 1, H/LAMP), IG3 MAIN Relay)
	B+ 2	60A	IGPM ((Fuse - S/HEATER), IPS0, IPS1, IPS2)
	B+ 3	60A	IGPM (IPS3, IPS5, IPS6, IPS7, IPS8)
	B+ 4	50A	IGPM (Fuse - P/WINDOW LH, P/WINDOW RH, TAIL GATE OPEN, SUNROOF, AMP, P/SEAT (DRV), P/SEAT (PASS))
	COOLING FAN	60A	E/R Junction Block (Cooling Fan Relay)
	REAR HEATED	40A	E/R Junction Block (Rear Heated Relay)
	IG1	40A	E/R Junction Block (PDM (IG1) 2 Relay, PDM (ACC) 1 Relay)
	IG2	40A	E/R Junction Block (PDM (IG2) 3 Relay)
MULTI FUSE-2	IEB 4	40A	Electronic Brake Control Module
	BLOWER	40A	E/R Junction Block (Blower Relay)

Motor compartment fuse panel

Fuse Name		Fuse Rating	Protected Component
FUSE	OBC	10A	OBC
	CHARGER 2	10A	ICM Relay Box (Charge Lock/Unlock Relay), CCM Unit
	IG3 5	20A	E/R Junction Block (IG3 1 Relay, IG3 2 Relay)
	B+ 1	40A	IGPM ((Fuse - BRAKE SWITCH, MODULE 1, PDM 1, PDM 2, DOOR LOCK), Leak Current Autocut Device)
	E-SHIFTER 1	40A	E/R Junction Block (Fuse - E-SHIFTER, E-Shifter Relay)
	CHARGER 1	10A	Charge Connector Door Module
	IEB 1	40A	Electronic Brake Control Module, Multipurpose Check Connector
	IEB 2	40A	Electronic Brake Control Module
PCB Block	IG3 3	10A	E/R Junction Block (Cooling Fan Relay, Blower Relay), Electronic A/C Compressor, 3Way Coolant Control Valve LH/RH
	E-SHIFTER 3	10A	SCU
	IG3 1	15A	E/R Junction Block (IG3 1 Relay, IG3 2 Relay)

Motor compartment fuse panel

Fuse Name		Fuse Rating	Protected Component
PCB Block	ELECTRICAL WATER PUMP	15A	Electronic Water Pump
	IG3 2	10A	BMU, OBC, EPCU
	EPCU 1	15A	EPCU
	H/LAMP HI	10A	Head Lamp (High) Relay
	EPCU 2	10A	EPCU
	IEB 3	10A	Electronic Brake Control Module, Multipurpose Check Connector
	IG3 4	10A	Active Air Flap, CCM Unit, Charge Connector Door Module, Air Conditioning PTC Heater, Crash Pad Switch, A/C Control Module, Audio, A/V & Navigation Head Unit, Instrument Cluster, IGPM
	BATTERY MANAGEMENT	15A	BMU
	HORN	15A	Horn Relay

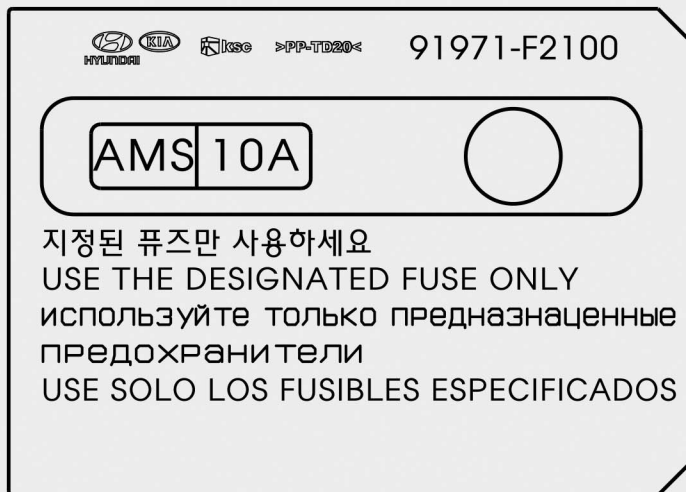
Motor compartment fuse panel (Battery terminal cover)



Inside the fuse/relay box cover, you can find the fuse/relay label describing fuse/relay name and capacity.

i Information

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



OPD076065

NOTICE

After checking the fuse panel in the motor compartment, securely install the cover. If it is not securely latched, electrical failure may occur from water contact.

LIGHT BULBS

Consult an authorized HYUNDAI dealer to replace most vehicle light bulbs. 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 for removing the headlamp assembly to get to the bulb(s).

Removing/installing the headlamp assembly can result in damage to the vehicle.

WARNING

- Prior to replacing a lamp, depress the foot brake, shift to P (Park), apply the parking brake, place the POWER button in the OFF position and take the key with you when leaving the vehicle to avoid sudden movement of the vehicle and to prevent possible electric shock.
- Be aware the bulbs may be hot and may burn your fingers.

NOTICE

Light replacement

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

NOTICE

Headlamp lens

To prevent damage, do not clean the headlamp lens with chemical solvents or strong detergents.

Information

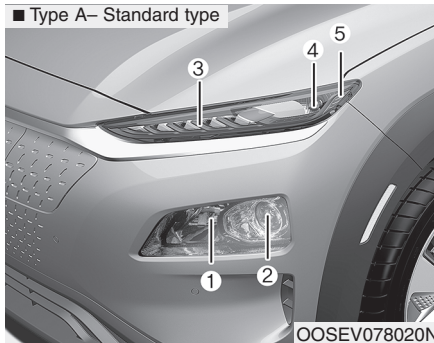
The headlamp and tail lamp lenses could appear frosty if the vehicle is washed after driving or the vehicle is driven at night in wet weather. This condition is caused by temperature difference between the lamp inside and outside and, it does not indicate a problem with your vehicle. When moisture condenses in the lamp, it will be removed after driving with the headlamp on.

The removable level may differ depending on lamp size, lamp position and environmental condition. However, if moisture is not removed, we recommend that your vehicle is inspected by an authorized HYUNDAI dealer.

Information

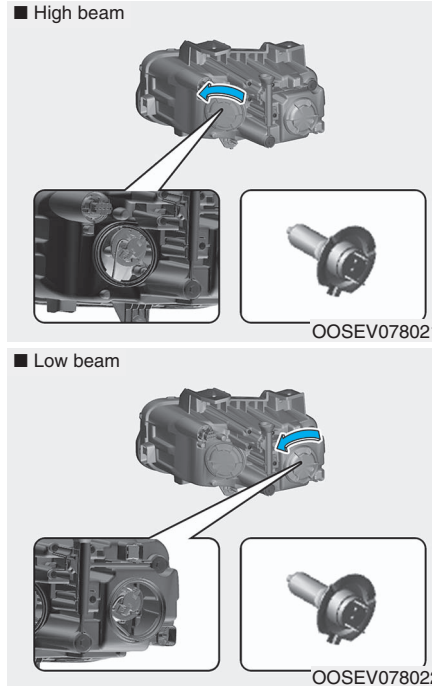
- A normally functioning lamp may flicker momentarily to stabilize the vehicle's electrical control system. However, if the lamp goes out after flickering momentarily, or continues to flicker, we recommend the system be checked by an authorized HYUNDAI dealer.
- The position lamp may not turn on when the position lamp switch is turned on, but the position lamp and headlamp switch may turn on when the headlamp switch is turned on. This may be caused by network failure or vehicle electrical control system malfunction. If this occurs, we recommend the system be checked by an authorized HYUNDAI dealer.

Headlamp, Daytime Running Light (DRL), Cornering Lamp, Parking Lamp, Turn Signal Lamp and Side Marker



- (1) Headlamp (High)
- (2) Headlamp (Low)
- (3) Daytime Running Light (DRL)/ Parking lamp
- (4) Turn signal lamp
- (5) Side marker

Headlamp



1. Open the hood.
2. Disconnect the negative battery cable.

3. Remove the headlamp bulb cover by turning it counterclockwise.
4. Remove the bulb socket from the headlamp assembly by turning it counterclockwise
5. Disconnect the headlamp bulb socket-connector.
6. Reinstall in the reverse order of removal.

i Information

The headlamp aiming should be adjusted after an accident or after the headlamp assembly is reinstalled at an authorized HYUNDAI dealer.

⚠ WARNING



Halogen bulb

- Handle halogen bulbs with care. Halogen bulbs contain pressurized gas that will produce flying pieces of glass that could cause injuries if broken.
- Wear eye protection when changing a bulb. Allow the bulb to cool down before handling it.

- 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 headlamp.
- If a bulb becomes damaged or cracked, replace it immediately and carefully dispose of it.

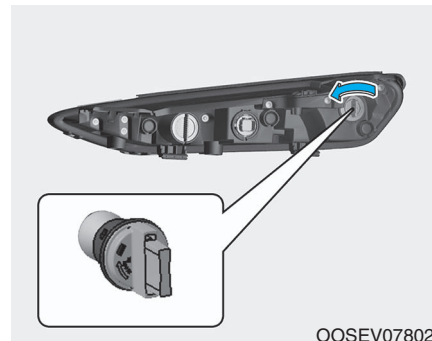
Daytime running light (DRL)/Position lamp

If the lamp (LED) does not operate, have the system checked by an authorized HYUNDAI dealer.

The LED lamps cannot be replaced as a single unit because it is an integrated unit. The LED lamps has to be replaced with the unit.

A skilled technician should check or repair the LED lamp, for it may damage related parts of the vehicle.

Turn signal lamp

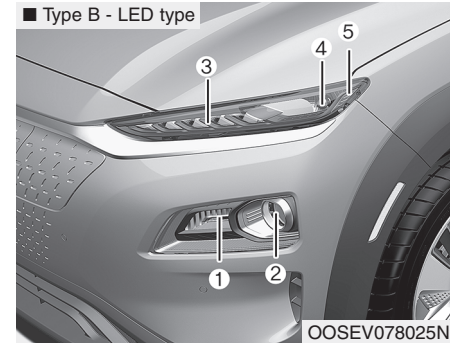


1. Open the hood.
2. Disconnect the negative battery cable.
3. Remove the socket from the assembly by turning the socket counterclockwise until the tabs on the socket align with the slots on the assembly.
4. Remove the bulb from the socket by pressing it in and rotating it counterclockwise until the tabs on the bulb align with the slots in the socket. Pull the bulb out of the socket.

5. Install 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.
7. Push the socket into the assembly and turn the socket clockwise.

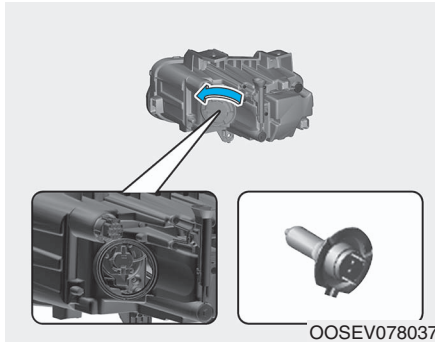
Side marker

1. Open the hood.
2. Disconnect the negative battery cable.
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 pulling out the bulb.
5. Insert a new bulb.
6. Reinstall in the reverse order of removal.



- (1) Cornering lamp
(Low beam assist)
- (2) Headlamp (Low/High)
- (3) Daytime Running Light (DRL)/
Parking lamp
- (4) Turn signal lamp
- (5) Side marker

Cornering lamp (Low beam assist)

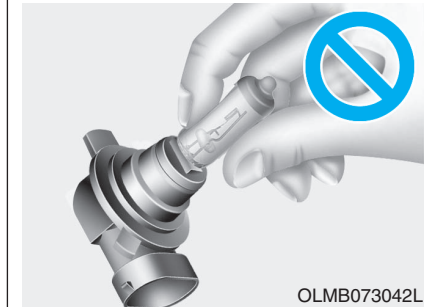


1. Open the hood.
2. Disconnect the negative battery cable.
3. Remove the headlamp bulb cover by turning it counterclockwise.
4. Remove the bulb socket from the headlamp assembly by turning it counterclockwise.
5. Disconnect the headlamp bulb socket-connector.
6. Reinstall in the reverse order of removal.

i Information

The headlamp aiming should be adjusted after an accident or after the headlamp assembly is reinstalled at an authorized HYUNDAI dealer.

⚠ WARNING



Halogen bulb

- Handle halogen bulbs with care. Halogen bulbs contain pressurized gas that will produce flying pieces of glass that could cause injuries if broken.
- Wear eye protection when changing a bulb. Allow the bulb to cool down before handling it.

- 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 headlamp.
- If a bulb becomes damaged or cracked, replace it immediately and carefully dispose of it.

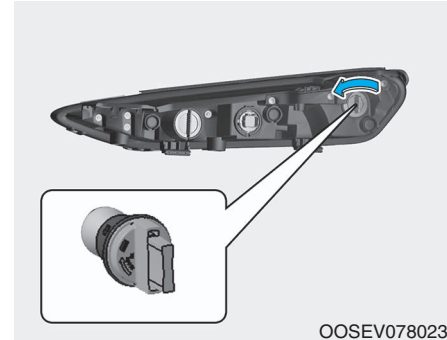
Headlamp (Low/High) and Daytime Running Light (DRL)/Position lamp

If the lamp (LED) does not operate, have the system checked by an authorized HYUNDAI dealer.

The LED lamps cannot be replaced as a single unit because it is an integrated unit. The LED lamps has to be replaced with the unit.

A skilled technician should check or repair the LED lamp, for it may damage related parts of the vehicle.

Turn signal lamp



1. Open the hood.
2. Disconnect the negative battery cable.
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. Install 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.
7. Push the socket into the assembly and turn the socket clockwise.

Side Repeater Lamp Replacement

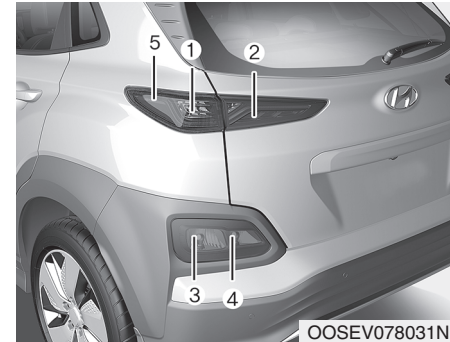


If the LED lamp (1) does not operate, have the system checked by an authorized HYUNDAI dealer.

The LED lamps cannot be replaced as a single unit because it is an integrated unit. The LED lamps has to be replaced with the unit.

A skilled technician should check or repair the LED lamp, for it may damage related parts of the vehicle.

Rear Combination Light Bulb Replacement



- (1) Stop/tail lamp
- (2) Stop/tail lamp
- (3) Turn signal lamp
- (4) Backup lamp
- (5) Side marker

Stop/tail lamp and side marker

If the lamp (LED) does not operate, have the system checked by an authorized HYUNDAI dealer.

The LED lamps cannot be replaced as a single unit because it is an integrated unit. The LED lamps has to be replaced with the unit.

A skilled technician should check or repair the LED lamp, for it may damage related parts of the vehicle.

Turn signal lamp and backup lamp

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

High Mounted Stop Lamp Bulb Replacement

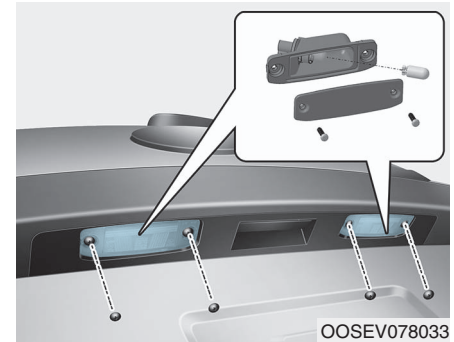


If the LED lamp (1) does not operate, have the system checked by an authorized HYUNDAI dealer.

The LED lamps cannot be replaced as a single unit because it is an integrated unit. The LED lamps has to be replaced with the unit.

A skilled technician should check or repair the LED lamp, for it may damage related parts of the vehicle.

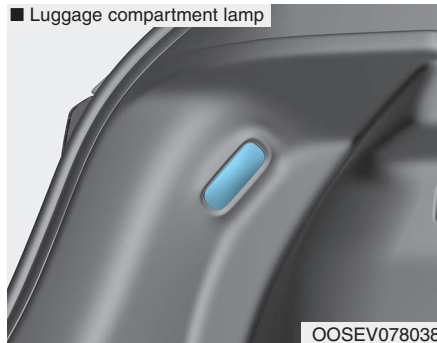
License Plate Light Bulb Replacement



1. Loosen the lens retaining screws with a cross-tip screwdriver.
2. Remove the lens.
3. Remove the socket by turning it counterclockwise.
4. Remove the bulb by pulling it straight out.
5. Install a new bulb.
6. Reinstall in the reverse order.

Interior Light Bulb Replacement

Map lamp, room lamp and luggage compartment lamp (LED type)

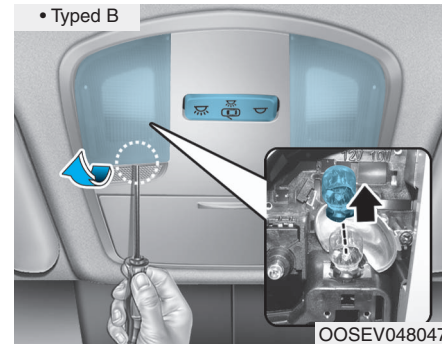
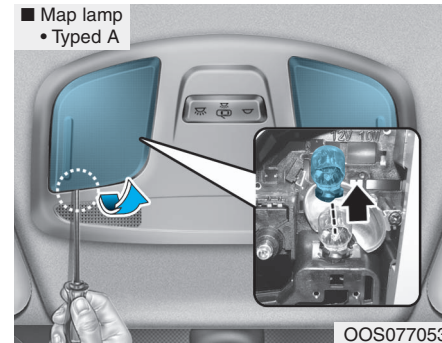


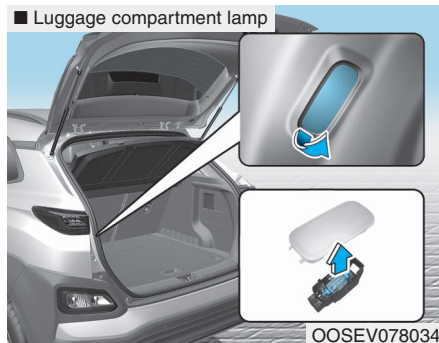
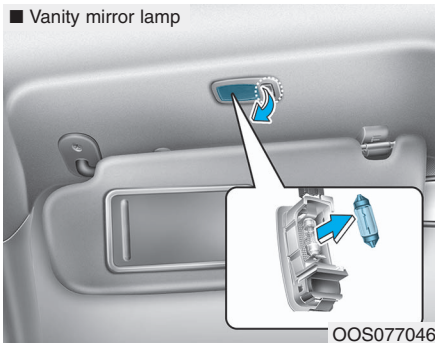
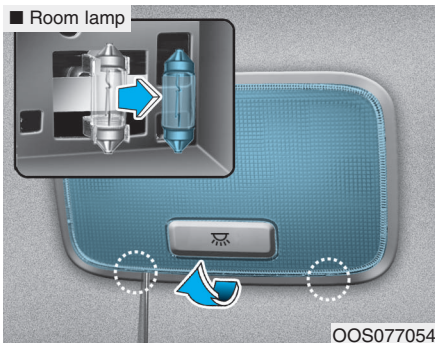
If the lamp (LED) does not operate, have the system checked by an authorized HYUNDAI dealer.

The LED lamps cannot be replaced as a single unit because it is an integrated unit. The LED lamps has to be replaced with the unit.

A skilled technician should check or repair the LED lamp, for it may damage related parts of the vehicle.

Map lamp, room lamp, vanity mirror lamp and luggage compartment lamp (Bulb type)





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

⚠ WARNING

Prior to working on the Interior Lights, ensure that the lamp is off 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 lamp housing notches and snap the lens into place.

NOTICE

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.

High-pressure washing

- When using high-pressure washers, make sure to maintain sufficient distance from the vehicle. Insufficient clearance or excessive pressure can lead to component damage or water penetration.
- Do not spray the camera, sensors or its surrounding area directly with a high pressure washer. Shock applied from high pressure water may cause the device to not operate normally.
- Do not bring the nozzle tip close to boots (rubber or plastic covers) or connectors as they may be damaged if they come into contact with high pressure water.
- Do not use any high-pressure nozzles, which induce either one-direct water stream or water swirling.

Protecting your vehicle's finish

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, should be used.

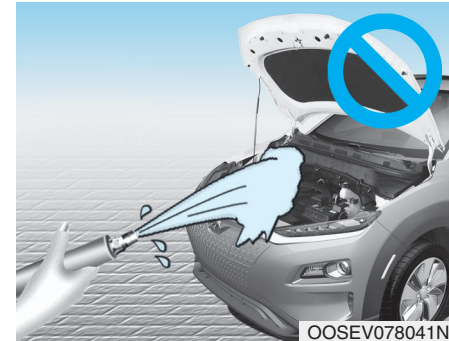
After washing, rinse the vehicle thoroughly with lukewarm or cold water. Do not allow soap to dry on the finish.

WARNING

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

NOTICE

- 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, do not clean with chemical solvents or strong detergents.
- To prevent damage to the charging door, make sure to close and lock the vehicle doors when washing (high-pressure washing, automatic car washing, etc.) the vehicle.



NOTICE

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

NOTICE

Matte paint finish vehicle (if equipped)

Automatic car wash which uses rotating brushes should not be used as this can damage the surface of your vehicle. A steam cleaner which washes the vehicle surface at high temperature may result the oil to adhere and leave stains that is difficult to remove.

Use a soft cloth (e.g. microfiber towel or sponge) when washing your vehicle and dry with a microfiber towel. When you hand wash your vehicle, you should not use a cleaner that finishes with wax. If the vehicle surface is too dirty (sand, dirt, dust, contaminant, etc.), clean the surface with water before washing the car.

Waxing

A good coat of wax provides a barrier between your paint and environmental contamination.

Keeping a good coat of wax on your vehicle will help protect it.

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.

NOTICE

- **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.**

NOTICE

Matte paint finish vehicle (if equipped)

Do not use any polish protector such as a detergent, an abrasive and a polish. In case wax is applied, remove the wax immediately using a silicon remover and if any tar or tar contaminant is on the surface use a tar remover to clean. However, be careful not to apply too much pressure on the painted area.

Repairing your vehicle's finish

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.

NOTICE

Matte paint finish vehicle (if equipped)

In case of matte paint finish vehicles, it is impossible to modify only the damaged area and repair of the whole part is necessary. If the vehicle is damaged and painting is required, we recommend that you have your vehicle maintained and repaired by an authorized HYUNDAI dealer. Take extreme care, as it is difficult to restore the quality after the repair.

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 luke-warm 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 wheel maintenance

The aluminum wheels are coated with a clear protective finish.

NOTICE

- **Do not use abrasive cleaner, polishing compound, solvent, or wire brushes on aluminum wheels.**
- **Clean the wheel when it has cooled.**
- **Use only a mild soap or neutral detergent, and rinse thoroughly with water. Also, clean the wheels after driving on salted roads.**
- **Do not wash the wheels with high-speed car wash brushes.**
- **Do not use any cleaners containing acid or alkaline detergents.**

Corrosion protection

Protecting your vehicle from corrosion

By using the most advanced design and construction practices to combat corrosion, HYUNDAI produces 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 vehicle are:

- Road salt, dirt and moisture that is allowed to accumulate underneath the vehicle.
- 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 vehicle 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 vehicle 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 vehicle.

To help prevent corrosion

Keep your car clean

The best way to prevent corrosion is to keep your vehicle clean and free of corrosive materials. Attention to the underside of the vehicle 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 vehicle at least once a month and be sure to clean the underside thoroughly when winter is over.

- When cleaning underneath the vehicle, pay 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 vehicle 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 are highly corrosive and may damage painted surfaces in just a few hours. Always remove bird droppings as soon as possible.

Interior Care

Interior general precautions

Prevent caustic solutions such as perfume and cosmetic oil, 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.

NOTICE

- **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 (if equipped)

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

Fabric (if equipped)

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.

NOTICE

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

Leather (if equipped)

• Feature of Seat Leather

- Natural leather is used in the fabrication of leather seats which may be included in your vehicle depending on trim level. Note that for leather material, each part may differ in thickness or density.

Wrinkles may appear as a natural result of stretching and shrinking depending on the temperature and humidity.

- The seat is made of stretchable fabric to improve comfort.
- The parts contacting the body are curved and the side supporting area is high which provides driving comfort and stability.
- Wrinkles may appear naturally from usage.

 **CAUTION**

- **Wrinkles or abrasions which appear naturally from usage are not covered by warranty.**
 - **Belts with metallic accessories, zippers or keys inside the back pocket may damage the seat fabric.**
 - **Make sure not to wet the seat. It may change the nature of natural leather.**
 - **Jeans or clothes which could bleach may contaminate the surface of the seat covering fabric.**
- **Caring for the leather seats**
 - Vacuum the seat periodically to remove dust and sand on the seat. It will prevent abrasion or damage of the leather and maintain its quality.
 - Wipe the natural leather seat cover often with dry or soft cloth.
 - Use of proper leather protective may prevent abrasion of the cover and helps maintain the color. Be sure to read the instructions and consult a specialist when using leather coating or protective agent.
 - Light colored (beige, cream beige) leather is easily contaminated and the stain is noticeable. Clean the seats frequently.
 - Avoid wiping with wet cloth. It may cause the surface to crack.
 - **Cleaning the leather seats**
 - Remove all contaminations instantly. Refer to instructions below for removal of each contaminant.
 - Cosmetic products (sunscreen, foundation, etc.)
Apply cleansing cream on a cloth and wipe the contaminate spot. Wipe off the cream with a wet cloth and remove water with a dry cloth.
 - Beverages (coffee, soft drink, etc.)
Apply a small amount of neutral detergent and wipe until contaminations do not smear.
 - Oil
Remove oil instantly with absorbable cloth and wipe with stain remover used only for natural leather.
 - Chewing gum
Harden the gum with ice and remove gradually.

Cleaning the seat 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 the seat belt.

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.

NOTICE

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