Kia, THE COMPANY

Thank you for becoming the owner of a new Kia vehicle.
As a global car manufacturer focused on building high-quality, value for money prices, Kia Motors is dedicated to providing you with a customer service experience that exceeds your expectations.

All information contained in this Owner's Manual is accurate at the time of publication. However, Kia reserves the right to make changes at any time so that our policy of continual product improvement can be carried out.

This manual applies to all Kia models and includes descriptions and explanations of optional as well as standard equipment. As a result, you may encounter material in this manual that is not applicable to your specific Kia vehicle.

Drive safely and enjoy your Kia!

Thank you for choosing a Kia vehicle.

When you require service, remember that your Kia Dealer knows your vehicle best. Your dealer has factory-trained technicians, recommended special tools, genuine Kia replacement parts and is dedicated to your complete satisfaction.

Because subsequent owners require this important information as well, this publication should remain with the vehicle if it is sold.

This manual will familiarize you with operational, maintenance and safety information about your new vehicle. It is supplemented by a Warranty and Consumer Information manual that provides important information on all warranties regarding your vehicle.

We urge you to read these publications carefully and follow the recommendations to help assure enjoyable and safe operation of your new vehicle.

Kia offers a great variety of options, components and features for its various models. Therefore, some of the equipment described in this manual, along with the various illustrations, may not be applicable to your particular vehicle.

The information and specifications provided in this manual were accurate at the time of printing. Kia reserves the right to discontinue or change specifications or design at any time without notice and without incurring any obligation. If you have questions, always check with your Kia dealer.

We assure you of our continuing interest in your motoring pleasure and satisfaction in your Kia vehicle.

© 2011 Kia Canada, Inc.

All rights reserved. May not be reproduced or translated in whole or in part without the written consent of Kia Canada, Inc.

Printed in Korea

TABLE OF CONTENTS

Introduction	1
Your vehicle at a glance	2
Safety features of your vehicle	3
Features of your vehicle	4
Driving your vehicle	5
What to do in an emergency	6
Maintenance	7
Specifications, Consumer information, Reporting safety defects	8
Index	I

Introduction 1

How to use this manual / 1-2
Fuel requirements / 1-3
HEV powertrain / 1-5
Indicator symbols on the instrument cluster / 1-6

HOW TO USE THIS MANUAL

We want to help you get the greatest possible driving pleasure from your vehicle. Your Owner's Manual can assist you in many ways. We strongly recommend that you read the entire manual. In order to minimize the chance of death or injury, you must read the WARNING and CAUTION sections in the manual.

Illustrations complement the words in this manual to best explain how to enjoy your vehicle. By reading your manual, you will learn about features, important safety information, and driving tips under various road conditions.

The general layout of the manual is provided in the Table of Contents. Use the index when looking for a specific area or subject; it has an alphabetical listing of all information in your manual.

Sections: This manual has eight sections plus an index. Each section begins with a brief list of contents so you can tell at a glance if that section has the information you want.

You will find various types of safety instructions in this manual. These instructions were prepared to enhance your personal safety. Carefully read and follow ALL procedures and recommendations provided in these instructions.

⚠ WARNING

A WARNING indicates a situation in which harm, serious bodily injury or death could result if the warning is ignored.

⚠ CAUTION

A CAUTION indicates a situation in which damage to your vehicle could result if the caution is ignored.

✻ NOTICE

A NOTICE indicates interesting or helpful information is being provided.

FUEL REQUIREMENTS

Your new Kia vehicle is designed to use only unleaded fuel having a pump octane number ((R+M)/2) of 87 (Research Octane Number 91) or higher.

Your new vehicle is designed to obtain maximum performance with UNLEADED FUEL, as well as minimize exhaust emissions and spark plug fouling.

Never add any fuel system cleaning agents to the fuel tank other than what has been specified. (Consult an authorized Kia dealer for details.)

⚠ WARNING - Refueling

- **Do not "top off" after the nozzle automatically shuts off. Attempts to force more fuel into the tank can cause fuel overflow onto you and the ground causing a risk of fire.**
- **Always check that the fuel cap is installed securely to prevent fuel spillage in the event of an accident.**

✻ NOTICE

Tighten the cap until it clicks one time, otherwise the fuel cap open warning indicator light will illuminate.

Gasoline containing alcohol and methanol

Gasohol, a mixture of gasoline and ethanol (also known as grain alcohol), and gasoline or gasohol containing methanol (also known as wood alcohol) are being marketed along with or instead of leaded or unleaded gasoline.

Do not use gasohol containing more than 10% ethanol, and do not use gasoline or gasohol containing any methanol. Either of these fuels may cause drivability problems and damage to the fuel system.

Discontinue using gasohol of any kind if drivability problems occur.

Vehicle damage or drivability problems may not be covered by the manufacturer's warranty if they result from the use of:

1. Gasohol containing more than 10% ethanol.
2. Gasoline or gasohol containing methanol.
3. Leaded fuel or leaded gasohol.

"E85" fuel is an alternative fuel comprised of 85 percent ethanol and 15 percent gasoline, and is manufactured exclusively for use in Flexible Fuel Vehicles. "E85" is not compatible with your vehicle. Use of "E85" may result in poor engine performance and damage to your vehicle's engine and fuel system. Kia recommends that customers do not use fuel with an ethanol content exceeding 10 percent.

✻ NOTICE

Your New Vehicle Limited Warranty does not cover damage to the fuel system or any performance problems caused by the use of "E85" fuel.

Do not use methanol

Fuels containing methanol (wood alcohol) should not be used in your vehicle. This type of fuel can reduce vehicle performance and damage components of the fuel system.

✻ NOTICE

Your New Vehicle Limited Warranty may not cover damage to the fuel system and any performance problems that are caused by the use of fuels containing methanol.

Fuel Additives

Kia recommends that you use good quality gasolines treated with detergent additives such as TOP TIER Detergent Gasoline, which help prevent deposit formation in the engine. These gasolines will help the engine run cleaner and enhance performance of the Emission Control System. For more information on TOP TIER Detergent Gasoline, please go to the website (www.toptiergas.com).

For customers who do not use TOP Tier Detergent Gasoline regularly, and have problems starting or the engine does not run smoothly, additives that you can buy separately may be added to the gasoline. If TOP TIER Detergent Gasoline is not available, one bottle of additive added to the fuel tank at every 12,000 km (7,500 miles) or every engine oil change is recommended. Additives are available from your authorized Kia dealer along with information on how to use them. Do not mix other additives.

Operation in foreign countries

If you are going to drive your vehicle in another country, be sure to:

- Observe all regulations regarding registration and insurance.
- Determine that acceptable fuel is available.

HEV POWERTRAIN

By following a few simple precautions for the first 1,000 km (600 miles) you may add to the performance, economy and life of your vehicle.

- Do not race the engine.
- Avoid hard stops, except in emergencies, to allow the brakes to seat properly.
- Don't tow a trailer during the first 2,000 km (1,200 miles) of operation.

INDICATOR SYMBOLS ON THE INSTRUMENT CLUSTER


Door ajar warning light


Trunk lid open warning light


Seat belt warning light


High beam indicator


Turn signal indicator


Front fog light indicator*


ESC indicator/ESC malfunction indicator



ESC OFF indicator



ABS warning light



Parking brake & Brake fluid warning light


Engine oil pressure warning light


12V charging system warning light


Malfunction indicator


Air bag warning light



Cruise indicator*



Cruise SET indicator*


Engine coolant temperature warning light


Low fuel level warning light



Electronic power steering (EPS) system warning light*


Shift pattern indicator


Low Tire Pressure Telltale/TPMS Tire Pressure monitoring system/Malfunction indicator



Active ECO


Immobilizer indicator



EV (Electronic Vehicle) MODE



Vehicle ready indicator


Service indicator

* : if equipped

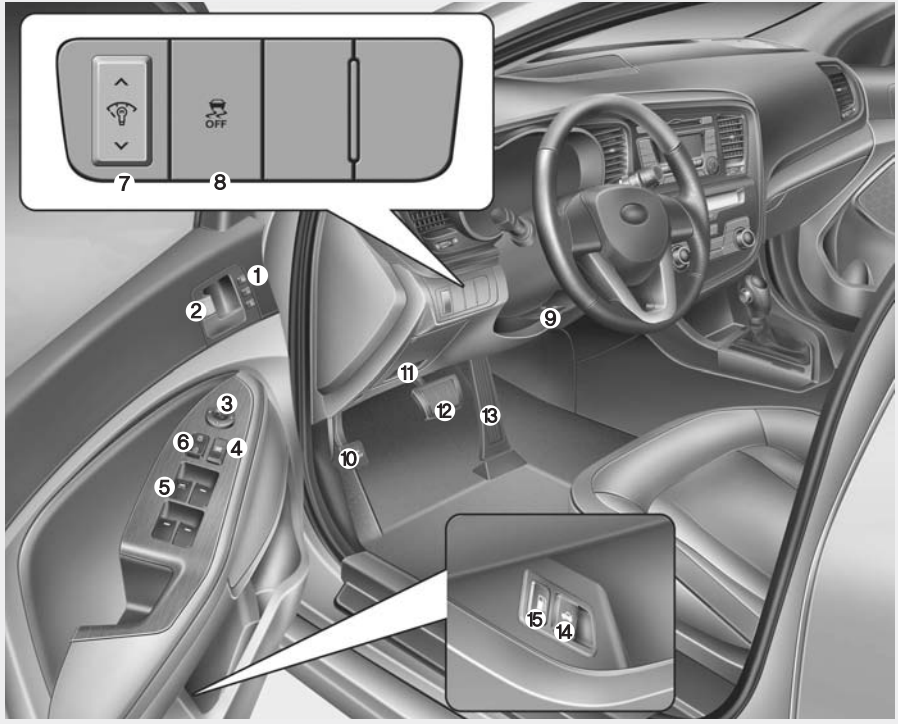
❈ For more detailed explanations, refer to “Instrument cluster” in section 4.

Your vehicle at a glance

2

Interior overview / 2-2
Instrument panel overview / 2-3
Engine compartment / 2-4

INTERIOR OVERVIEW



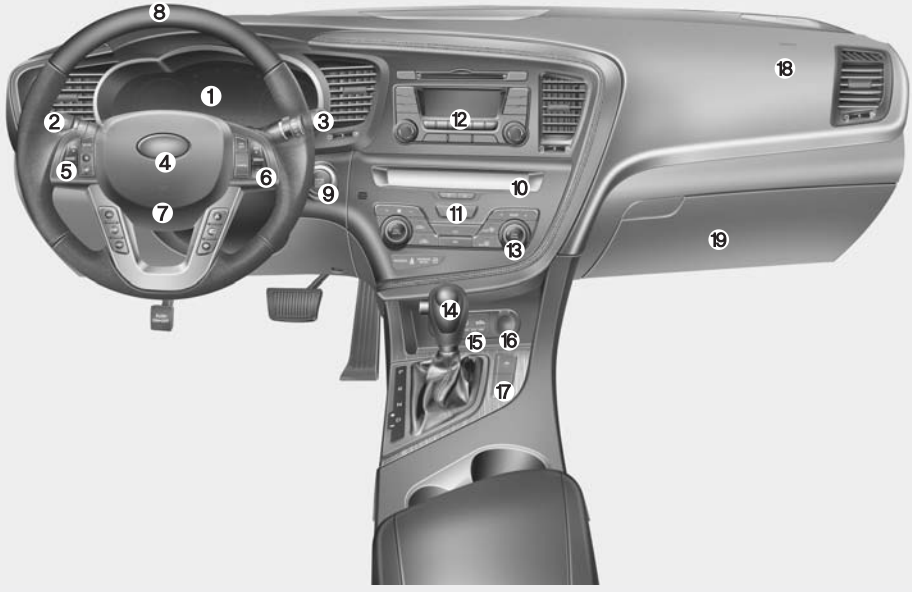
1. Driver position memory system*.....4-32
2. Door lock/unlock button 4-13
3. Outside rearview mirror control switch*.....4-44
4. Power window lock button* 4-23
5. Power window switches*.....4-20
6. Central door lock switch* 4-14
7. Instrument panel illumination control knob*.....4-47
8. ESC OFF button 5-20
9. Steering wheel tilt lever* 4-35
10. Hood release lever 4-24
11. Fuse box 7-52
12. Brake pedal.....5-14
13. Accelerator pedal.....5-7
14. Trunk lid release button.....4-17
15. Fuel filler lid release button.....4-25

* : if equipped

❈ The actual interior in the vehicle may differ from the illustration

OTF010001N

INSTRUMENT PANEL OVERVIEW



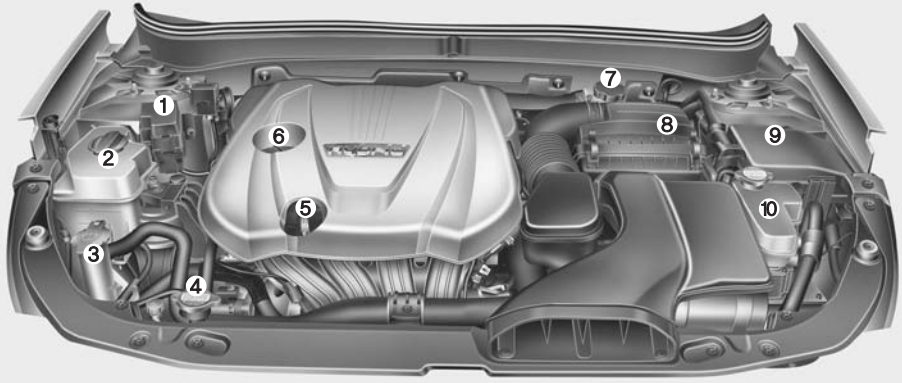
1. Instrument cluster 4-47
2. Light control / Turn signals.....4-87
3. Wiper/Washer 4-90
4. Horn 4-35
5. Steering wheel audio control*.....4-118
6. Auto cruise control*.....5-27
7. Driver's air bag.....3-45
8. Steering wheel.....4-34
9. ENGINE START/STOP button 5-5
10. Digital clock.....4-115
11. Hazard 4-80
12. Audio* 4-117
13. Climate control system 4-97
14. Shift lever.....5-9
15. Aux, USB and iPod port* 4-119
16. Power outlet*.....4-114
17. Seat warmer* 3-9
18. Passenger's air bag 3-45
19. Glove box.....4-111

* : if equipped

❉ The actual instrument panel in the vehicle may differ from the illustration

OTF010002N

ENGINE COMPARTMENT



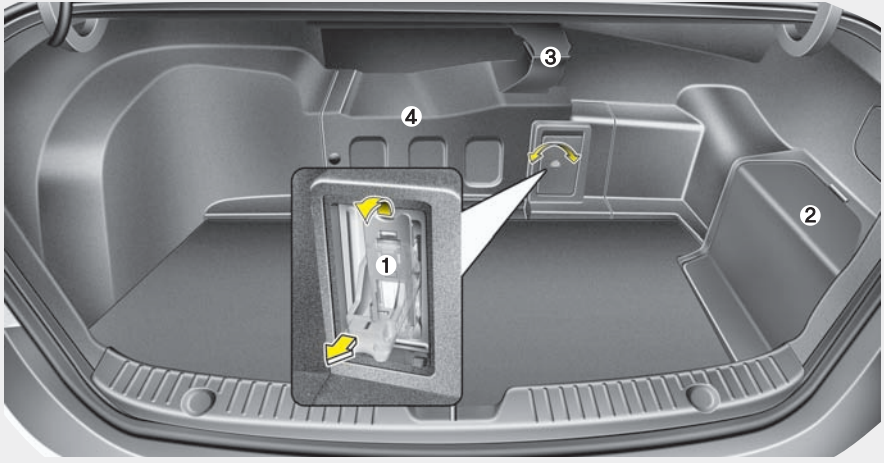
1. Sub relay box 7-55
2. Engine coolant reservoir 7-24
3. Windshield washer fluid reservoir 7-29
4. Radiator cap 7-26
5. Engine oil dipstick 7-22
6. Engine oil filler cap 7-22
7. Brake fluid reservoir 7-28
8. Air cleaner 7-30
9. Fuse box 7-52
10. Inverter coolant reservoir 7-24

* : if equipped

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

OYFH071001

TRUNK OVERVIEW



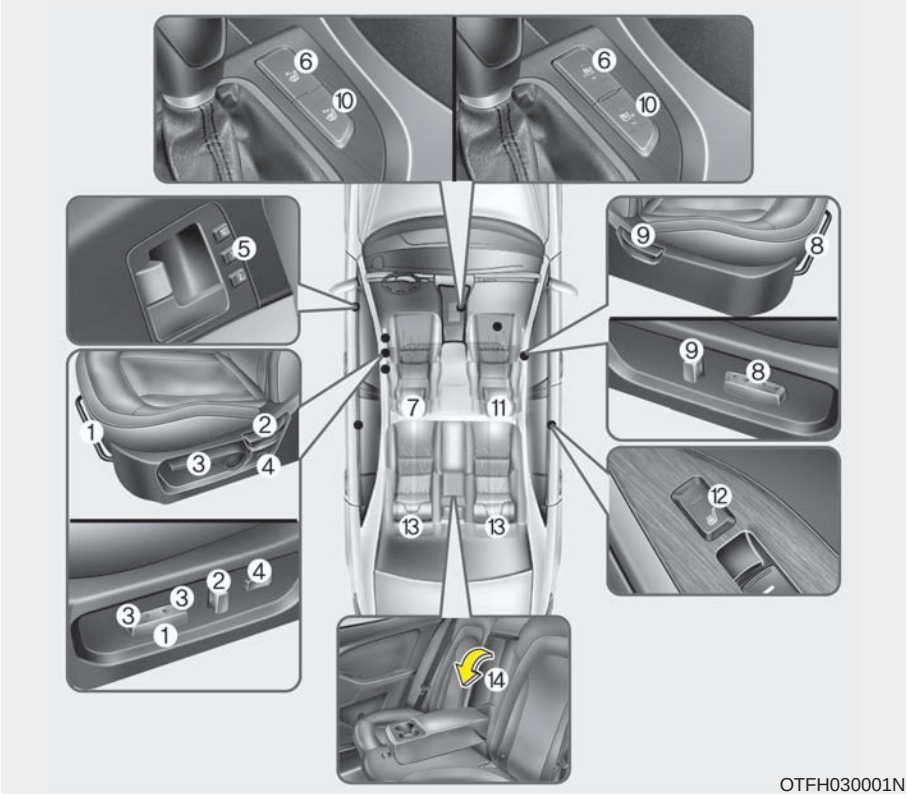
1. Service plug.....H12
2. Battery cover.....7-35
3. Cooling duct H13
4. High voltage battery H9

OTFH021007N

Seat / 3-2
Seat belts / 3-16
Child restraint system / 3-26
Airbag-advanced supplemental restraint system / 3-34

Safety features of your vehicle 3

SEAT



OTFH030001N

Driver's seat

(1) Seat adjustment, forward / backward
(2) Seatback recliner
(3) Seat adjustment, height
(4) Lumbar support
(5) Driver position memory system*
(6) Seat warmer switch*
(7) Headrest

Front passenger's seat

(8) Seat adjustment, forward / backward
(9) Seatback recliner
(10) Seat warmer switch*
(11) Headrest

Rear seat

(12) Seat warmer*
(13) Headrest
(14) Armrest
* : if equipped

⚠ WARNING - Loose objects

Do not place anything in the driver's foot well or under the front seats. Loose objects in the driver's foot area could interfere with the operation of the foot pedals.

⚠ WARNING - Uprighting seat

Do not press the release lever on a manual seatback without holding and controlling the seatback. The seatback will spring upright possibly impacting you or other passengers.

⚠ WARNING - Driver responsibility for passengers

The driver must advise the passenger to keep the seatback in an upright position whenever the vehicle is in motion. If a seat is reclined during an accident, the restraint system's ability to restrain will be greatly reduced.

⚠ WARNING - Seat cushion

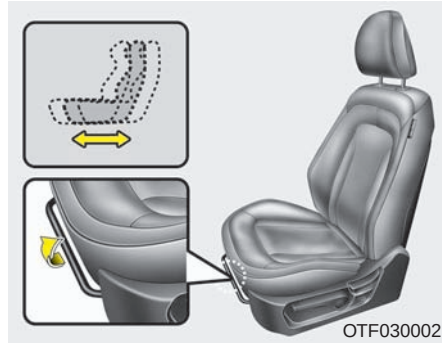
Occupants should never sit on seat cushions. The passenger's hips may slide under the lap portion of the seat belt during an accident or a sudden stop.

⚠ WARNING - Driver's seat

- **Never attempt to adjust the seat while the vehicle is moving of your vehicle. This could result in loss of control of your vehicle.**
- **Do not allow anything to interfere with the normal position of the seatback. Storing items against a seatback or in any other way interfering with proper locking of a seatback.**
- **Sit as far back as possible from the steering wheel while still maintaining comfortable control of your vehicle. A distance of at least 10" from your chest to the steering wheel is recommended. Failure to do so can result in airbag inflation injuries to the driver.**

⚠ WARNING - Seat adjustment

- **Do not adjust the seat while wearing seat belts. Moving the seat forward will cause strong pressure on the abdomen.**
- **Do not place your hand near the seat bottom or seat track while adjusting the seat. Your hand could get caught in the seat mechanism.**


OTF030002

Front seat adjustment

Forward and backward

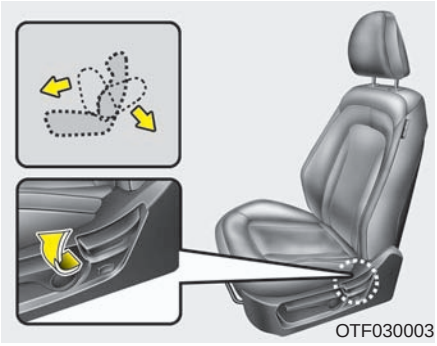
To move the seat forward or backward:

1. Pull the seat slide adjustment lever up and hold it.
2. Slide the seat to the position you desire.
3. Release the lever and make sure the seat is locked in place.

Adjust the seat before driving, and make sure the seat is locked securely by trying to move forward and backward without using the lever. If the seat moves, it is not locked properly.

⚠ WARNING - Unexpected seat movement

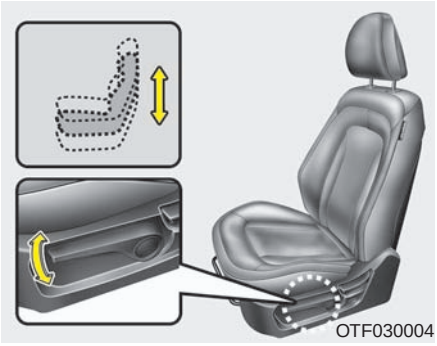
After adjusting a manual seat, always check that it is locked by shifting your weight to the front and back. Sudden or unexpected movement of the driver's seat could cause you to lose control of the vehicle.


OTF030003

Seatback angle

To recline the seatback:

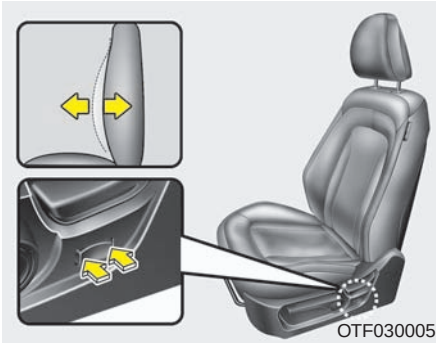
1. Lean forward slightly and lift up the seatback recline lever.
2. Carefully lean back on the seat and adjust the seatback of the seat to the position you desire.
3. Release the lever and make sure the seatback is locked in place. (The lever MUST return to its original position for the seatback to lock.)


OTF030004

Seat height (for driver's seat)

To change the height of the seat, move the lever upwards or downwards.

- To lower the seat cushion, push down the lever several times.
- To raise the seat cushion, pull up the lever several times.


OTF030005

Lumbar support (for driver's seat)

Press the front portion of the switch to increase support, or the rear portion of the switch, to decrease support.

Automatic adjustment (if equipped)

The front seat can be adjusted by using the control knob located on the outside of the seat cushion. Before driving, adjust the seat to the proper position so as to easily control the steering wheel, pedals and switches on the instrument panel.

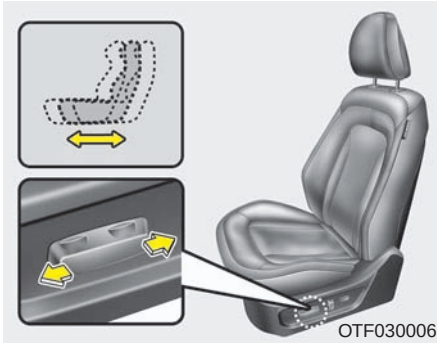
⚠ WARNING

The power seat is operable with the ignition OFF.

Therefore, children should never be left unattended in the car.

⚠ CAUTION

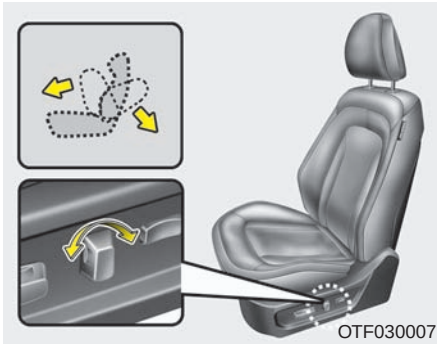
- ***The power seat is driven by an electric motor. Stop operating once the adjustment is completed. Excessive operation may damage the electrical equipment.***
- ***When in operation, the power seat consumes a large amount of electrical power. To prevent unnecessary charging system drain, don't adjust the power seat longer than necessary while the engine is not running.***
- ***Do not operate two or more power seat control knobs at the same time. Doing so may result in power seat motor or electrical component malfunction.***



OTF030006

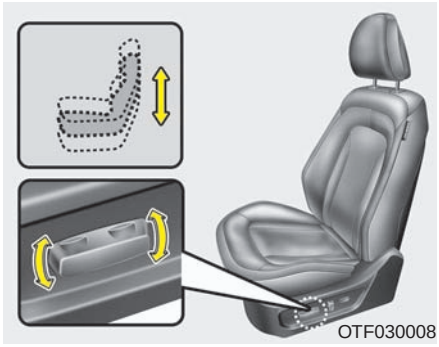
Forward and backward

Push the control switch forward or backward to move the seat to the desired position. Release the switch once the seat reaches the desired position.



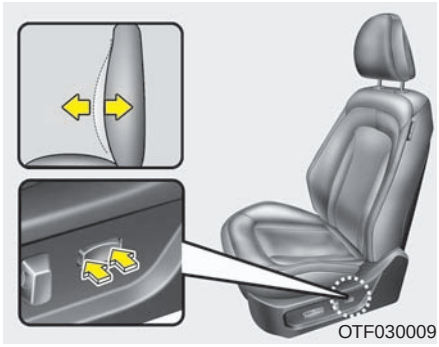
Seatback angle

Push the control switch forward or backward to move the seatback to the desired angle. Release the switch once the seat reaches the desired position.



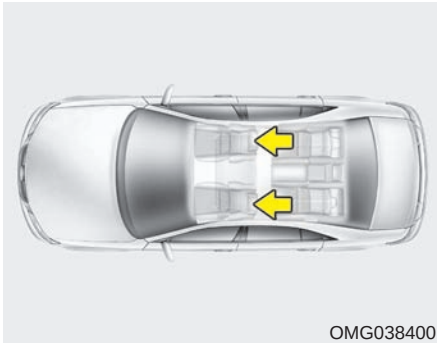
Seat height (for driver's seat)

Pull the front portion of the control switch up to raise or down to lower the front part of the seat cushion. Pull the rear portion of the control switch up to raise or down to lower the rear part of the seat cushion. Release the switch once the seat reaches the desired position.



Lumbar support
(for driver's seat, if equipped)

The lumbar support can be adjusted by pressing the lumbar support switch on the side of the drivers seat. Press the front portion of the switch to increase support, or the rear portion of the switch, to decrease support.



OMG038400

Headrest

The driver's and front passenger's seats are equipped with a headrest for the occupant's safety and comfort.

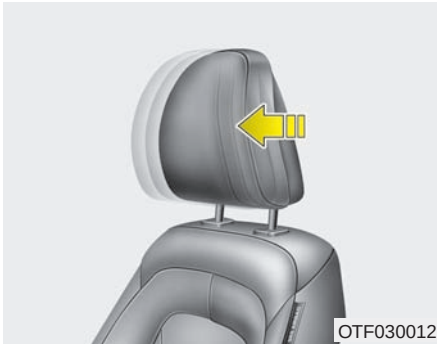
The headrest not only provides comfort for the driver and front passenger, but also helps protect the head and neck in the event of a collision.

For maximum effectiveness in case of an accident, the headrest should be adjusted so the middle of the headrest is at the same height of the center of gravity of an occupant's head. Generally, the center of gravity of most people's head is similar with the height of the top of their eyes. Also, adjust the headrest as close to your head as possible.

For this reason, the use of a cushion that holds the body away from the seatback is not recommended.

⚠ WARNING - Headrest removal/adjustment

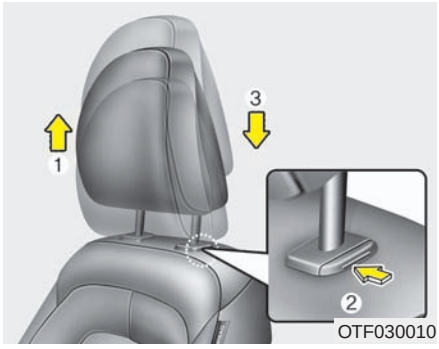
- **Do not operate the vehicle with the headrests removed. Headrests can provide critical neck and head support in a crash.**
- **Do not adjust the headrest height while the vehicle is in motion. Driver may lose control of the vehicle.**



OTF030012

Forward and backward adjustment

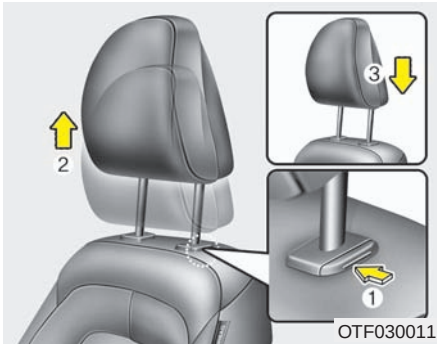
The headrest may be adjusted forward to 4 different positions by pulling the headrest forward to the desired detent. To adjust the headrest to it's furthest backwards position, pull it fully forward to the farthest position and release it. Adjust the headrest so that it properly supports the head and neck.



OTF030010

Adjusting the height up and down

To raise the headrest, pull it up to the desired position (1). To lower the headrest, push and hold the release button (2) on the headrest support and lower the headrest to the desired position (3).

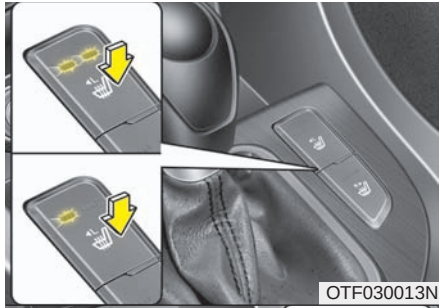


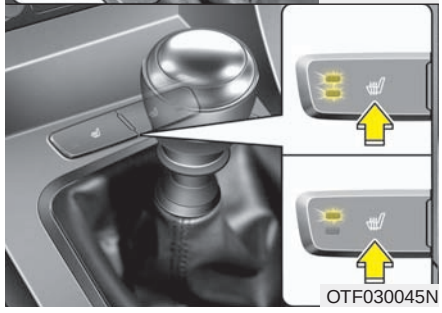
OTF030011

Removal and installation

To remove the headrest, raise it as far as it can go then press the release button (1) while pulling the headrest up (2).

To reinstall the headrest, put the headrest poles (3) into the holes while pressing the release button (1). Then adjust it to the appropriate height.


OTF030013N


OTF030045N

Seat warmer (if equipped)

The seat warmers are provided to warm the front seats during cold weather. With the ignition switch in the ON position, push either of the switches to warm the driver's seat or the front passenger's seat.

During mild weather or under conditions where the operation of the seat warmer is not needed, keep the switches in the OFF position.

With the seat warmer switch in the ON position, the heating system in the seat turns off or on automatically depending on the seat temperature.

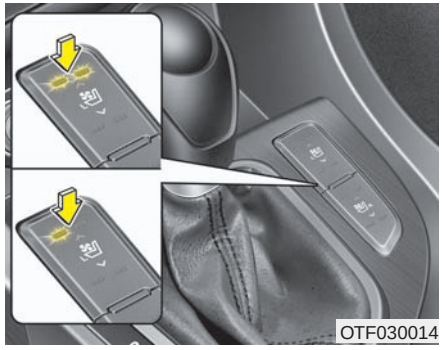
- Each time you push the button, the temperature setting of the seat is changed as follows :

OFF → HIGH ( ) → LOW ( )

- The seat warmer defaults to the OFF position whenever the engine start/stop button is turned on.

⚠ CAUTION - Seat damage

- ***When cleaning the seats, do not use an organic solvent such as paint thinner, benzene, alcohol and gasoline. Doing so may damage the surface of the heater or seats.***
- ***To prevent overheating the seat warmer, do not place anything on the seats that insulates against heat, such as blankets, cushions or seat covers while the seat warmer is in operation.***
- ***Do not place heavy or sharp objects on seats equipped with seat warmers. Damage to the seat warming components could occur.***



Climate control seat (if equipped)

The climate control seat is provided to cool or warm the seat during hot or cold weather by blowing air through small vent holes on the surface of the seat and seatback. While the engine is running, push the rear portion of the switch to cool the seat, and push the front portion of the switch to warm the seat.

When the operation of the climate control seat is not needed, keep the switch in the OFF position.

The climate control seat defaults to the OFF position whenever the ignition switch is turned on.

⚠ CAUTION

- *The climate control seat is a supplementary cooling/heating system. Use the climate control seat when the climate control system is on. Using the climate control seat for prolonged periods of time with the climate control system off could cause the climate control seat performance to impair.*
- *When cleaning the seats, do not use an organic solvent such as paint thinner, benzene, alcohol and gasoline. Doing so may damage the surface of the seats.*
- *Do not spill liquid such as water or beverages on the surface of the front seats and seatbacks, or the air vent holes may be blocked and prevented from working properly.*
- *Do not place materials such as plastic bags or newspapers under the seats. The air vent may not work properly as the air intake can be blocked.*

(Continued)

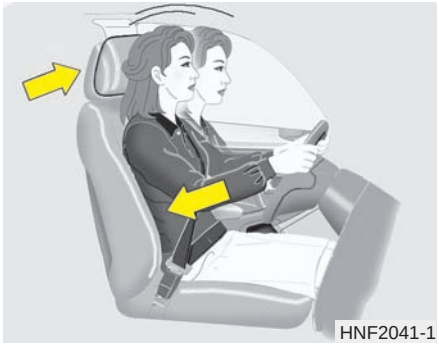
(Continued)

- *When the air vent does not operate, restart the vehicle. If there is no change, have your vehicle inspected by an authorized Kia dealer.*

⚠ WARNING

Passengers should use extreme caution when using the climate control seat to warm due to the possibility of excess heating or burns. The occupants must be able to feel if the seat is becoming too warm and to turn the seat warmer off. In particular, the driver must exercise extreme care for the following types of passengers:

1. **Infants, children, elderly or disabled persons, or hospital outpatients**
2. **Persons with sensitive skin or those that burn easily**
3. **Fatigued individuals**
4. **Intoxicated individuals**
5. **Individuals taking medication that can cause drowsiness or sleepiness (sleeping pills, cold tablets, etc.)**



Active headrest

The active headrest is designed to move forward and upward during a rear impact. This helps to prevent the driver's and front passenger's head from moving backward and thus helps prevent neck injuries.

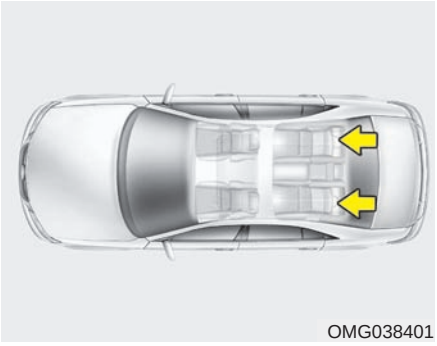


Seatback pocket

The seatback pocket is provided on the back of the front passenger's seatback.

⚠ WARNING - Seatback pocket

Do not put heavy or sharp objects in the seatback pocket. An occupant could contact such objects in a crash. Heavy objects in the front passenger seatback could also interfere with the airbag sensing system.


OMG038401

Rear seat adjustment

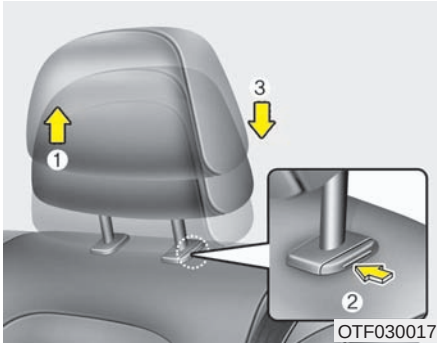
Headrest

The rear seat is equipped with headrests in all the seating positions for the occupant's safety and comfort.

The headrest not only provides comfort for passengers, but also helps protect the head and neck in the event of a collision.

For maximum effectiveness in case of an accident, the headrest should be adjusted so the middle of the headrest is at the same height of the center of gravity of an occupant's head. Generally, the center of gravity of most people's head is similar with the height as the top of their eyes.

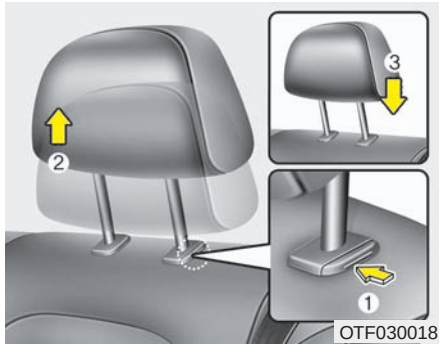
Also adjust the headrest as close to your head as possible. For this reason, the use of a cushion that holds the body away from the seatback is not recommended.



OTF030017

Adjusting the height up and down (if equipped)

To raise the headrest, pull it up to the desired position (1). To lower the headrest, push and hold the release button (2) on the headrest support and lower the headrest to the desired position (3).



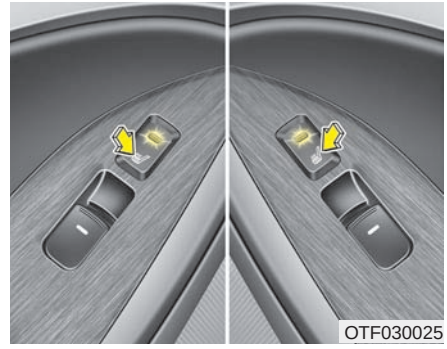
OTF030018

Removal and installation

To remove the headrest, raise it as far as it can go then press the release button (1) while pulling the headrest upward (2).

To reinstall the headrest, put the headrest poles (3) into the holes while pressing the release button (1). Then adjust it to the appropriate height and ensure that it locks in position.

Make sure the headrest locks in position after adjusting.


OTF030025

Seat warmer (if equipped)

The seat warmer is provided to warm the rear seats during cold weather. With the ignition switch in the ON position, push either of the switches to warm the seat.

During mild weather or under conditions where the operation of the seat warmer is not needed, keep the switches in the OFF position.

✻ NOTICE

With the seat warmer switch in the ON position, the heating system in the seat turns off or on automatically depending on the seat temperature.



Armrest

To use the armrest, pull it forward from the seatback.

SEAT BELTS

Seat belt restraint system

Seat belts are designed to bear upon the bony structure of the body, and should be worn low across the front of the pelvis or the pelvis, chest and shoulders, as applicable; wearing the lap section of the belt across the abdominal area must be avoided.

Seat belts should be adjusted as firmly as possible, consistent with comfort, to provide the protection for which they have been designed.

A slack belt will greatly reduce the protection afforded to the wearer.

Care should be taken to avoid contamination of the webbing with polishes, oils and chemicals, and particularly battery acid. Cleaning may safely be carried out using mild soap and water. The belt should be replaced if webbing becomes frayed, contaminated or damaged.

- For maximum restraint system protection, the seat belts must always be used whenever the vehicle is moving. A properly positioned shoulder belt should be positioned midway over your shoulder across your collarbone.
- Never allow children to ride in the front passenger seat. See child restraint system section for further discussion.

⚠ WARNING - Shoulder belt

Never wear the shoulder belt under your arm or behind your back. An improperly positioned shoulder belt cannot protect the occupant in a crash.

⚠ WARNING - Damaged seat belt

Replace the entire seat belt assembly if any part of the webbing or hardware is damage as you can no longer be sure that a damage seat belt will provide protection in a crash.

⚠ WARNING - Twisted seat belt

Make sure your seat belt is not twisted when worn. A twisted seat belt may not properly protect you in an accident and could even cut into your body.

⚠ WARNING - Seat belt buckle

Do not allow foreign material (gum, crumbs, coins, etc.) to obstruct the seat belt buckle. This may prevent the seat belt from fastening securely.



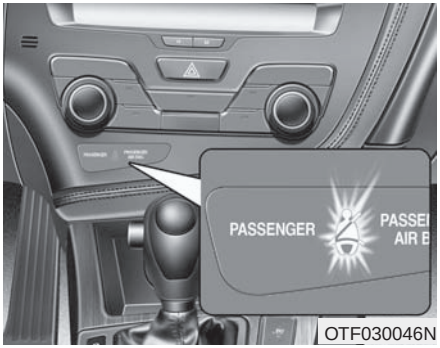
Seat belt warning (for driver's seat)

The driver's seat belt warning light and chime will activate to the following table when the ignition switch is in "ON" position.

Conditions		Warning Pattern	
Seat Belt	**Vehicle Speed**	**Light-Blink**	**Chime-Sound**
Unbuckled		6 seconds	
Buckled		6 seconds	None
Buckled → Unbuckled	Below 5 km/h (3 mph)	6 seconds	None
	5 km/h ~ 10 km/h	6 seconds	
	Above 10 km/h (6 mph)	6 sec. on / 24 sec. off (11 times)	
Unbuckled	Above 10 km/h (6 mph) ↓ Below 5 km/h (3 mph)	6 seconds *1 ↓ Stop *2	

*1 Warning pattern repeats 11 times with an interval of 24 seconds. If the driver's seat belt is buckled, the light will stop within 6 seconds and chime will stop immediately.

*2 The light will stop within 6 seconds and chime will stop immediately.



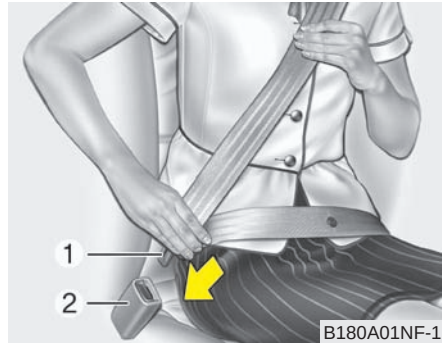
Seat belt warning (for front passenger's seat)

The front passenger's seat belt warning light will activate to the following table when the ignition switch is in "ON" position.

Conditions		Warning Pattern
Seat Belt	**Vehicle Speed**	**Light-Blink**
Unbuckled		6 seconds
Unbuckled	Above 10 km/h (6mph)	Continuously
Buckled		6 seconds
Buckled → Unbuckled	Above 10 km/h (6mph)	Continuously *1
	Below 10 km/h (6mph)	None

*1 The seat belt warning light will go off if the vehicle speed decreases below 5 km/h (3 mph). If the vehicle speed increases above 5 km/h (3 mph), the warning light will blink again.

- You can find the front passenger's seat belt warning light on the center fascia panel.
- Although the front passenger seat is not occupied, the seat belt warning light will blink for 6 seconds.
- The seat belt warning light can blink when a briefcase or purse is placed on the front passenger seat.



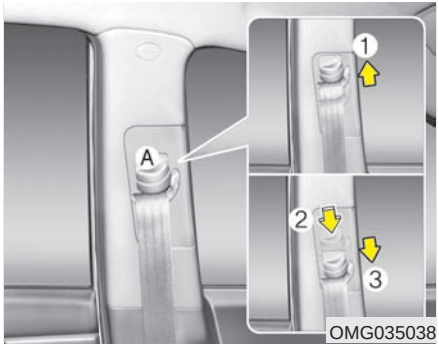
Seat belt - Driver's 3-point system with emergency locking retractor

To fasten your seat belt:

To fasten your seat belt, pull it out of the retractor and insert the metal tab (1) into the buckle (2). There will be an audible "click" when the tab locks into the buckle.

The seat belt automatically adjusts to the proper length only after the lap belt portion is adjusted manually so that it fits snugly around your hips. If you lean forward in a slow, easy motion, the belt will extend and let you move around. If there is a sudden stop or impact, however, the belt will lock into position. It will also lock if you try to lean forward too quickly.

If you are not able to pull out the seat belt from the retractor, firmly pull the belt out and release it. Then you will be able to pull the belt out smoothly.



Height adjustment

You can adjust the height of the shoulder belt anchor to one of the 4 positions for maximum comfort and safety.

The height of the adjusting seat belt should not be too close to your neck. The shoulder portion should be adjusted so that it lies across your chest and midway over your shoulder near the door and not your neck.

To adjust the height of the seat belt anchor, lower or raise the height adjuster into an appropriate position.

To raise the height adjuster, pull it up (1). To lower it, push it down (3) while pressing the height adjuster button (2).

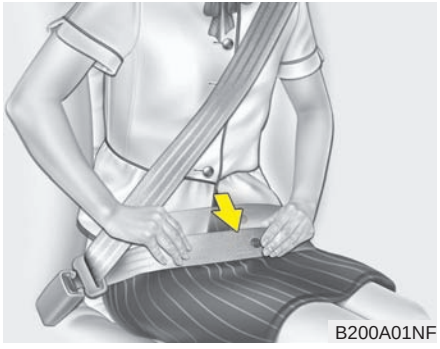
Release the button to lock the anchor into position. Try sliding the height adjuster to make sure that it has locked into position.

⚠ WARNING - Shoulder belt positioning

Never position the shoulder belt across your neck or face.

⚠ WARNING - Seat belt replacement

Replace your seat belts after being in an accident. Failure to replace seat belts after an accident could leave you with damaged seat belts that will not provide protection in the event of another collision.



You should place the lap belt portion as low as possible and snugly across your hips. If the lap belt is located too high on your waist, it may increase the chance of injury in the event of a collision.

The arm closest to the seat belt buckle should be over the belt while the other arm should be under the belt as shown in the illustration.

Seat belts - Front passenger and rear seat 3-point system with combination locking retractor

To fasten your seat belt:

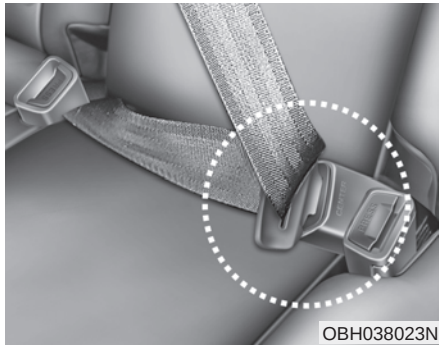
Combination retractor type seat belts are installed in the rear seat positions to help accommodate the installation of child restraint systems. Although a combination retractor is also installed in the front passenger seat position, it is strongly recommended that children always be seated in the rear seat. NEVER place any infant restraint system in the front seat of the vehicle.

This type of seat belt combines the features of both an emergency locking retractor seat belt and an automatic locking retractor seat belt. To fasten your seat belt, pull it out of the retractor and insert the metal tab into the buckle. There will be an audible "click" when the tab locks into the buckle. When not securing a child restraint, the seat belt operates in the same way as the driver's seat belt (Emergency Locking Retractor Type).

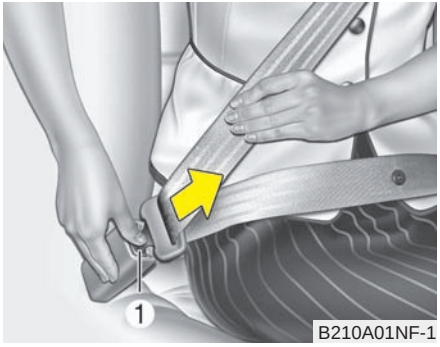
It automatically adjusts to the proper length only after the lap belt portion of the seat belt is adjusted manually so that it fits snugly around your hips.

When the seat belt is fully extended from the retractor to allow the installation of a child restraint system, the seat belt operation changes to allow the belt to retract, but not to extend (Automatic Locking Retractor Type). Refer to “Using a child restraint system” in this section.

To convert from the automatic locking feature to the emergency locking operation mode, allow the unbuckled seat belt to fully retract.



When using the rear center seat belt, the buckle with the “CENTER” mark must be used.



To release the seat belt:

The seat belt is released by pressing the release button (1) of the locking buckle. When it is released, the belt should automatically draw back into the retractor.

If this does not happen, check the belt to be sure it is not twisted, then try again.

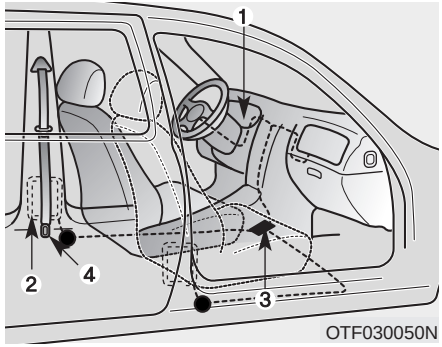


Pre-tensioner seat belt

Your vehicle is equipped with driver's and front passenger's pre-tensioner seat belts. The purpose of the pre-tensioner is to make sure that the seat belts fit tightly against the occupant's body in certain frontal collisions (or side collisions). The pre-tensioner seat belts may be activated in crashes, where the frontal collision is severe enough.

When the vehicle stops suddenly, or if the occupant tries to lean forward too quickly, the seat belt retractor will lock into position. In certain frontal collisions, the pre-tensioner will activate and pull the seat belt into tighter contact against the occupant's body.

If the system senses excessive seat belt tension on the driver or passenger's seat belt when the pre-tensioner activates, the load limiter inside the pre-tensioner will release some of the pressure on the affected seat belt.



The seat belt pre-tensioner system consists mainly of the following components. Their locations are shown in the illustration:

1. SRS air bag warning light
2. Retractor pre-tensioner assembly
3. SRS control module
4. Anchor pre-tensioner assembly

Both the driver's and front passenger's pre-tensioner seat belts may be activated in certain frontal collisions.

The pre-tensioners will not be activated if the seat belts are not being worn at the time of the collision.

✻ NOTICE

When the pre-tensioner seat belts are activated, a loud noise may be heard and fine dust, which may appear to be smoke, may be visible in the passenger compartment. These are normal operating conditions and are not hazardous.

⚠ WARNING - Skin irritation

Wash all exposed skin areas thoroughly after an accident in which the pre-tensioner seat belts were activated. The fine dust from the pre-tensioner activation may cause skin irritation and should not be breathed for prolonged periods.

Because the sensor that activates the SRS air bag is connected with the pre-tensioner seat belt, the SRS air bag warning light ( ) on the instrument panel will illuminate for approximately 6 seconds after the ignition switch has been turned to the ON position, and then it should turn off.

If the pre-tensioner seat belt does not work properly, this warning light will illuminate even if the SRS air bag has not malfunctioned. If the SRS air bag warning light does not illuminate when the ignition switch is turned ON, or if it remains illuminated after illuminating for approximately 6 seconds, or if it illuminates while the vehicle is being driven, please have an authorized Kia dealer inspect the pre-tensioner seat belt or SRS air bag system as soon as possible.

✻ NOTICE

Do not attempt to service or repair the pre-tensioner seat belt system in any manner. Do not attempt to inspect or replace the pre-tensioner seat belts yourself. This must be done by an authorized Kia dealer.

⚠ WARNING - Hot pretensioner

Do not touch the pre-tensioner seat belt assemblies for several minutes after they have been activated. When the pre-tensioner seat belt mechanism fires during a collision the pre-tensioner becomes hot and can burn you.

Pre-tensioners are designed to operate only one time. After activation, pre-tensioner seat belts must be replaced. If the pre-tensioner must be replaced, contact an authorized Kia dealer.

Seat belt precautions

Infant or small child

You should be aware of the specific requirements in your country. Child and/or infant seats must be properly placed and installed in the rear seat. For more information about the use of these restraints, refer to “Child restraint system” in this section.

Larger children

Children who are too large for child restraint systems should always occupy the rear seat and use the available lap/shoulder belts. The lap portion should be fastened and snugged on the hips and as low as possible. Check if the belt fits periodically. A child's squirming could put the belt out of position. Children are given the most safety in the event of an accident when they are restrained by a proper restraint system in the rear seat. If a larger child (over age 12) must be seated in the front seat, the child should be securely restrained by the available lap/shoulder belt and the seat should be placed in the rearmost position. Children age 12 and under should be restrained securely in the rear seat. NEVER place a child age 12 and under in the front seat. NEVER place a rear facing child seat in the front seat of a vehicle.

If the shoulder belt portion slightly touches the child's neck or face, try placing the child closer to the center of the vehicle. If the shoulder belt still touches their face or neck they need to be returned to a child restraint system.

⚠ WARNING - Small children

Do not allow small children to ride in the vehicle without an appropriate child restraint system.

Restraint of pregnant women

Pregnant women should wear lap/shoulder belt assemblies whenever possible according to specific recommendations by their doctors. The lap portion of the belt should be worn AS SNUGLY AND LOW AS POSSIBLE.

⚠ WARNING - Pregnant women

Pregnant women must never place the lap portion of the seat belt above or on the abdomen where the fetus is located. The force of the seat belt during a collision will crush the fetus.

Injured person

A seat belt should be used when an injured person is being transported. When this is necessary, you should consult a physician for recommendations.

One person per belt

Two people (including children) should never attempt to use a single seat belt. This could increase the severity of injuries in case of an accident.

Do not lie down

To reduce the chance of injuries in the event of an accident and to achieve maximum effectiveness of the restraint system, all passengers should be sitting up and the front seats should be in an upright position when the vehicle is moving. A seat belt cannot provide proper protection if the person is lying down in the rear seat or if the front seat is in a reclined position.

Care of seat belts

Seat belt systems should never be disassembled or modified. In addition, care should be taken to assure that seat belts and belt hardware are not damaged by seat hinges, doors or other abuse.

Periodic inspection

All seat belts should be inspected periodically for wear or damage of any kind. Any damaged parts should be replaced as soon as possible.

Keep belts clean and dry

Seat belts should be kept clean and dry. If belts become dirty, they can be cleaned by using a mild soap solution and warm water. Bleach, dye, strong detergents or abrasives should not be used because they may damage and weaken the fabric.

When to replace seat belts

The entire in-use seat belt assembly or assemblies should be replaced if the vehicle has been involved in an accident. This should be done even if no damage is visible. Additional questions concerning seat belt operation should be directed to an authorized Kia dealer.

CHILD RESTRAINT SYSTEM

Children riding in the car should sit in the rear seat and must always be properly restrained to minimize the risk of injury in an accident, sudden stop or sudden maneuver. According to accident statistics, children are safer when properly restrained in the rear seats than in the front seat. Larger children who are not in a child restraint should use one of the seat belts provided.

You should be aware of the specific requirements in your country. Child and/or infant safety seats must be properly placed and installed in the rear seat. You must use a commercially available child restraint system that meets the requirements of the safety standards of your country.

Child restraint systems are designed to be secured in vehicle seats by seat belt, or by a tether anchor and/or LATCH anchors (if equipped).

Children could be injured or killed in a crash if their restraints are not properly secured. For small children and babies, a child seat or infant seat must be used.

Before buying a particular child restraint system, make sure it fits your vehicle seat and seat belts, and fits your child. Follow all the instructions provided by the manufacturer when installing the child restraint system.

⚠ WARNING - Restraint location

Never install a child or infant seat on the front passenger's seat.

A child riding in the front passenger seat can be forcefully struck by an inflating airbag.

⚠ WARNING - Hot child restraint

A child restraint system can become very hot if it is left in a closed vehicle on a sunny day. Be sure to check the seat cover, buckles and latches before placing a child in the restraint system.

When the child restraint system is not in use, store it in the luggage area or fasten it with a seat belt so that it will not be thrown forward in case of a sudden stop or an accident.

⚠ WARNING - Holding children

Never hold a child in your arms or lap when riding in a vehicle. The violent forces created during a crash will tear the child from your arms and throw the child against the car's interior.

Always use a child restraint system which is appropriate for your child's height and weight.

⚠ WARNING - Seat belt use

Do not use one seat belt for two occupants at the same time. This will eliminate any safety benefit provided by the seat belt to the occupants.

Rearward-facing child restraint system



CRS09

Forward-facing child restraint system



OTQ037038

Using a child restraint system

For small children and babies, the use of a child seat or infant seat is required. This child seat or infant seat should be of appropriate size for the child and should be installed in accordance with the manufacturer's instructions.

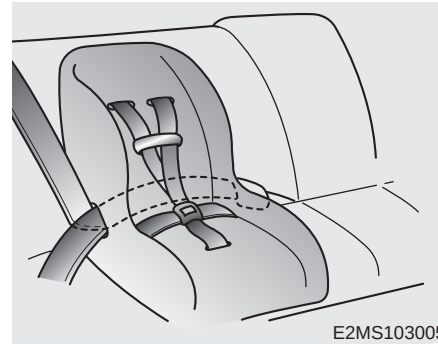
For safety reasons, we recommend that the child restraint system be used in the rear seats.

Since all passenger seat belts move freely under normal conditions and only lock under extreme or emergency conditions (emergency lock mode), you must manually change these seat belts to the auto lock mode to secure a child restraint.

If the seat belt does not operate as described in this section, have the system checked immediately by your authorized Kia dealer.

⚠ WARNING - Child seat installation

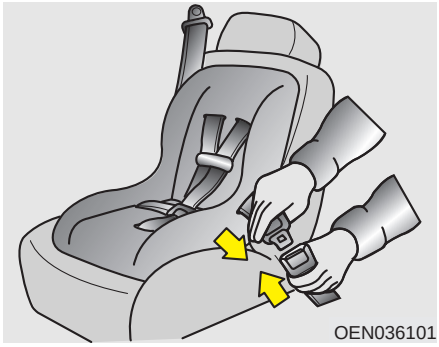
- **Always follow the instructions provided by the child restraint system manufacturer. Child restraint system manufacturers know their products best.**
- **Failure to observe this manual's instructions regarding child restraint system and the instructions provided with the child restraint system could result in the improper installation of the child restraint system which may reduce the protection to your child in a crash or a sudden stop.**



E2MS103005

lacing a passenger seat belt into the auto lock mode

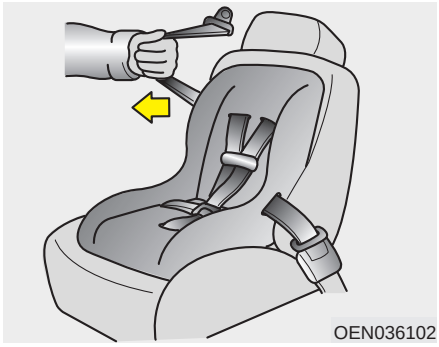
The auto lock mode will help prevent the normal movement of the child in the vehicle from causing the seat belt to loosen and compromise the child restraint system. To secure a child restraint system, use the following procedure.


OEN036101

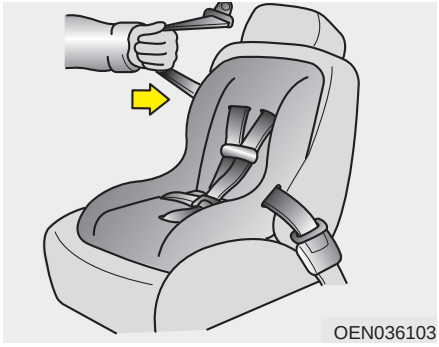
To install a child restraint system on the outboard or center rear seats, do the following:

1. Place the child restraint system in the seat and route the lap/shoulder belt around or through the restraint, following the restraint manufacturer's instructions. Be sure the seat belt webbing is not twisted.
2. Fasten the lap/shoulder belt latch into the buckle. Listen for the distinct "click" sound.

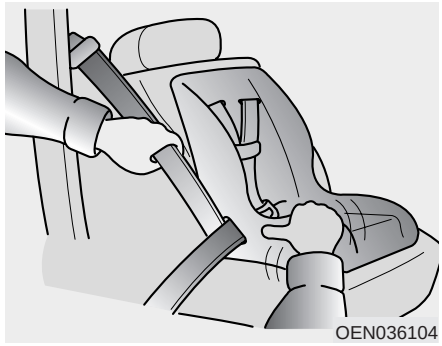
Position the release button so that it is easy to access in case of an emergency.


OEN036102

3. Pull the shoulder portion of the seat belt all the way out. When the shoulder portion of the seat belt is fully extended, it will shift the retractor to the "Auto Lock" (child restraint) mode.


OEN036103

4. Slowly allow the shoulder portion of the seat belt to retract and listen for an audible "clicking" or "ratcheting" sound. This indicates that the retractor is in the "Auto Lock" mode. If no distinct sound is heard, repeat steps 3 and 4.


OEN036104

5. Remove as much slack from the belt as possible by pushing down on the child restraint system while feeding the shoulder belt back into the retractor.
6. Push and pull on the child restraint system to confirm that the seat belt is holding it firmly in place. If it is not, release the seat belt and repeat steps 2 through 6.
7. Double check that the retractor is in the “Auto Lock” mode by attempting to pull more of the seat belt out of the retractor. If you cannot, the retractor is in the “Auto Lock” mode.

The lap/shoulder belt automatically returns to the “emergency lock mode” whenever the belt is allowed to retract fully.

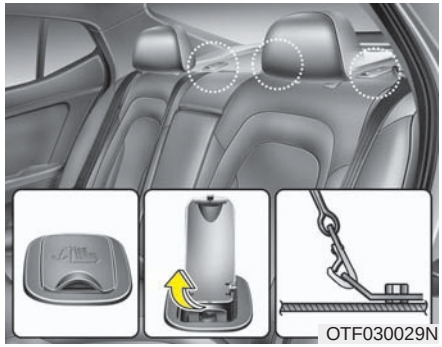
Therefore, the preceding seven steps must be followed each time a child restraint is installed.

To remove the child restraint, press the release button on the buckle and then pull the lap/shoulder belt out of the restraint and allow the seat belt to retract fully.

⚠ WARNING - Auto lock mode

Set the retractor to Automatic Lock mode when installing any child restraint system.

If the retractor is not in the Automatic Locking mode, the child restraint can move when your vehicle turns or stops suddenly.


OTF030029N

Securing a child restraint seat with tether anchorage system

Child restraint hook holders are located on the package tray.

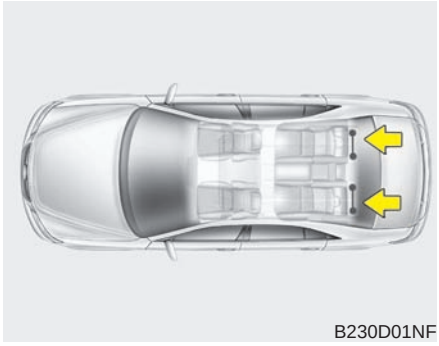

OTF030030N

1. Route the child restraint seat tether strap over the seatback.
   For vehicles with adjustable headrest, route the tether strap under the headrest and between the headrest posts, otherwise route the tether strap over the top of the seatback.
2. Connect the tether strap hook to the appropriate child restraint hook holder and tighten to secure the child restraint seat.

Check that the child restraint system is secure by pushing and pulling it in different directions. Incorrectly fitted child restraints may swing, twist, tip or separate causing death or serious injury.

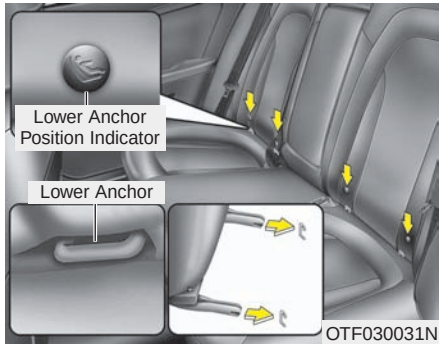
⚠ WARNING - Tether strap

Never mount more than one child restraint to a single tether or to a single lower anchorage point. The increased load caused by multiple seats may cause the tethers or anchorage points to break.


B230D01NF

Securing a child restraint seat with child seat lower anchor system

Some child seat manufacturers make child restraint seats that are labeled as LATCH or LATCH-compatible child restraint seats. LATCH stands for "Lower Anchors and Tethers for Children". These seats include two rigid or webbing mounted attachments that connect to two LATCH anchors at specific seating positions in your vehicle. This type of child restraint seat eliminates the need to use seat belts to attach the child seat in the rear seats.

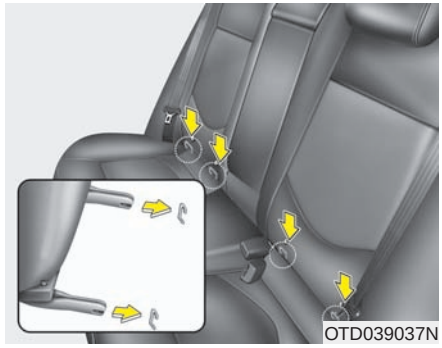


OTF030031N

Child restraint symbols are located on the left and right rear seat backs to indicate the position of the lower anchors for child restraints.

⚠ WARNING - Unused rear seatbelts

Always fasten the seatbelts behind the child restraint seat when they are not used to secure the child seat. Failure to do so may result in child strangulation.


OTD039037N

LATCH anchors have been provided in your vehicle. The LATCH anchors are located in the left and right outboard rear seating positions. Their locations are shown in the illustration. There is no LATCH anchor provided for the center rear seating position.

The LATCH anchors are located between the seatback and the seat cushion of the rear seat left and right outboard seating positions.

When you install your child's restraint system using the LATCH anchors buckle the shoulder lap belt, then lock the retractor and pull the belt to remove the slack in the belt so it lies flat against the vehicle seat.

Follow the child seat manufacturer's instructions to properly install child restraint seats with LATCH or LATCH-compatible attachments.

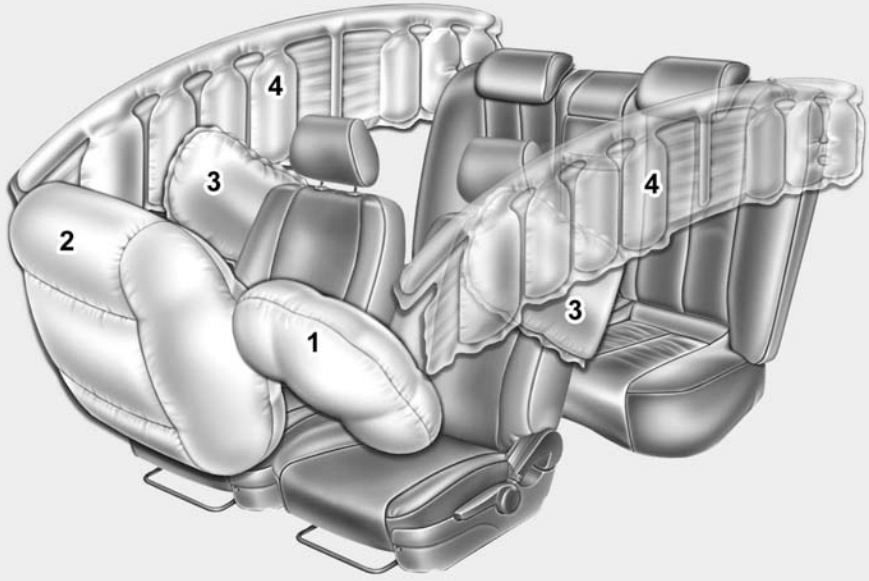
Once you have installed the LATCH child restraint, assure that the seat is properly attached to the LATCH and tether anchors.

Also, test the child restraint seat before you place the child in it. Tilt the seat from side to side. Also try to tug the seat forward. Check to see if the anchors hold the seat in place.

⚠ WARNING - LATCH lower anchors

Never attempt to attach a LATCH equipped seat in the center seating position. LATCH lower anchors are only to be used with the left and right rear outboard seating positions. You may damage the anchors or the anchors may fail and break in a collision.

AIR BAG - ADVANCED SUPPLEMENTAL RESTRAINT SYSTEM



❊ The actual air bags in the vehicle may differ from the illustration.

OMG039025

(1) Driver's front air bag
(2) Passenger's front air bag
(3) Side impact air bag
(4) Curtain air bag

Even in vehicles with air bags, you and your passengers must always wear the safety belts provided in order to minimize the risk and severity of injury in the event of a collision or rollover.

How does the air bag system operate

- Air bag are activated (able to inflate if necessary) only when the ignition switch is turned to the ON or START the appropriate position.
- Air bags inflate instantly in the event of serious frontal or side collision (if equipped with side impact air bag or curtain air bag) in order to help protect the occupants from serious physical injury.
- There is no single speed at which the air bags will inflate.

  Generally, air bags are designed to inflate based upon the severity of a collision and its direction. These two factors determine whether the sensors produce an electronic deployment/ inflation signal.
- Air bag deployment depends on a number of complex factors including vehicle speed, angles of impact and the density and stiffness of the vehicles or objects which your vehicle hits in the collision. Though, factors are not limited to those mentioned above.
- The front air bags will completely inflate and deflate in an instant.

  It is virtually impossible for you to see the air bags inflate during an accident. It is much more likely that you will simply see the deflated air bags hanging out of their storage compartments after the collision.
- In order to help provide protection in a severe collision, the air bags must inflate rapidly. The speed of air bag inflation is a consequence of extremely short time in which a collision occurs and the need to get the air bag between the occupant and the vehicle structures before the occupant impacts those structures. This speed of inflation reduces the risk of serious or life-threatening injuries in a severe collision and is thus a necessary part of air bag design.

  However, air bag inflation can also cause injuries which can include facial abrasions, bruises and broken bones because the inflation speed also causes the air bags to expand with a great deal of force.
- **There are even circumstances under which contact with the steering wheel air bag can cause fatal injuries, especially if the occupant is positioned excessively close to the steering wheel.**

Noise and smoke

When the air bags inflate, they make a loud noise and they leave smoke and powder in the air inside of the vehicle. This is normal and is a result of the ignition of the air bag inflator. After the air bag inflates, you may feel substantial discomfort in breathing due to the contact of your chest to both the seat belt and the air bag, as well as from breathing the smoke and powder. **Open your doors and/or windows as soon as possible after the impact in order to reduce discomfort and prevent prolonged exposure to smoke and powder.**

Though smoke and powder are non-toxic, it may cause irritation to the skin (eyes, nose and throat etc). If this is the case, wash and rinse with the cold water immediately and consult the doctor if the symptom persists.

⚠ WARNING - Hot components

Do not touch the air bag storage area's internal components immediately after airbag inflation. The air bag related parts in the steering wheel, instrument panel and the roof rails above the front and rear doors are very hot. Hot components can result in burn injuries.



1JBH3051

Installing a child restraint on a front passenger's seat is forbidden

Never place a rear-facing child restraint in the front passenger's seat. If the air bag deploys, it would impact the rear-facing child restraint, causing serious or fatal injury.

In addition, do not place front-facing child restraint in the front passenger's seat either. If the front passenger air bag inflates, it would cause serious or fatal injuries to the child.

⚠ WARNING - Air bag deployment

When children are seated in the rear outboard seats of a vehicle equipped with side and/or curtain air bags, install the child restraint system as far away from the door side as possible. Inflation of the side and/or curtain air bags could impact the child.



W7-147

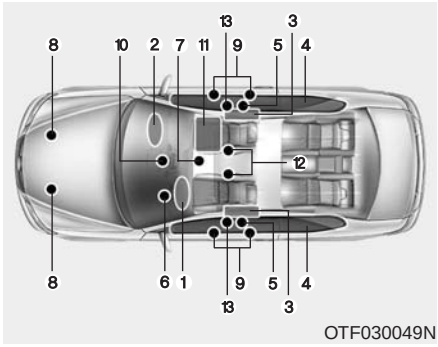
Air bag warning light

The purpose of the air bag warning light in your instrument panel is to alert you of a potential problem with your air bag - Supplemental Restraint System (SRS).

When the ignition switch is turned ON, the indicator light should illuminate for approximately 6 seconds, then go off.

Have the system checked by an authorized Kia dealer if:

- The light does not turn on briefly when you turn the ignition ON.
- The light stays on after illuminating for approximately 6 seconds.
- The light comes on while the vehicle is in motion.



OTF030049N

SRS components and functions

The SRS consists of the following components:

1. Driver's front air bag module
2. Passenger's front air bag module
3. Side impact air bag modules
4. Curtain air bag modules
5. Retractor pre-tensioner assemblies*
6. Air bag warning light
7. SRS control module (SRSCM)
8. Front impact sensors
9. Side impact sensors
10. PASSENGER AIR BAG “OFF” indicator (Front passenger’s seat only)
11. Occupant detection system (Front passenger’s seat only)
12. Driver’s and front passenger’s seat belt buckle sensors
13. Anchor pre-tensioner assembly

*: if equipped

The SRSCM continually monitors all SRS components while the ignition switch is ON to determine if a crash impact is severe enough to require air bag deployment or pre-tensioner seat belt deployment.

The SRS air bag warning light on the instrument panel will illuminate for about 6 seconds after the ignition switch is turned to the ON position, after which the air bag warning light should go out.

If any of the following conditions occurs, this indicates a malfunction of the SRS. Have an authorized Kia dealer inspect the air bag system as soon as possible.

- The light does not turn on briefly when you turn the ignition ON.
- The light stays on after illuminating for approximately 6 seconds.
- The light comes on while the vehicle is in motion.

Driver's front air bag (1)



B240B01L

The air bag modules are located both in the center of the steering wheel and in the front passenger's panel above the glove box. When the SRSCM detects a sufficiently severe impact to the front of the vehicle, it will automatically deploy the front air bags.

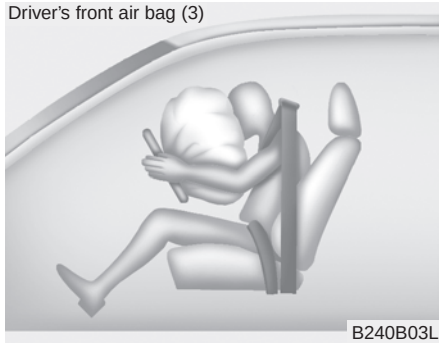
Driver's front air bag (2)



B240B02L

Upon deployment, tear seams molded directly into the pad covers will separate under pressure from the expansion of the air bags. Further opening of the covers then allows full inflation of the air bags.

Driver's front air bag (3)

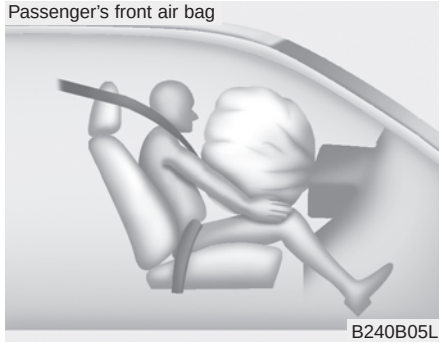


B240B03L

A fully inflated air bag, in combination with a properly worn seat belt, slows the driver's or the passenger's forward motion, reducing the risk of head and chest injury.

After complete inflation, the air bag immediately starts deflating, enabling the driver to maintain forward visibility and the ability to steer or operate other controls.

Passenger's front air bag



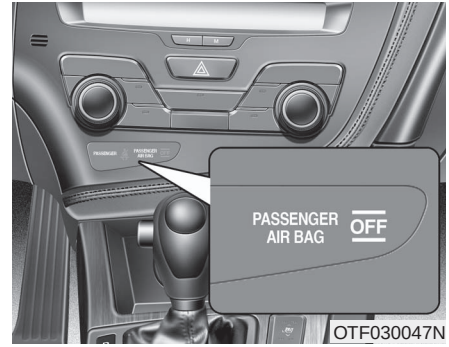
B240B05L

⚠ WARNING - Air bag obstructions

Do not install or place any accessories on the steering wheel, instrument panel, or on the front passenger's panel above the glove box in a vehicle Such objects may become dangerous projectiles if the air bag deploys.

✻ NOTICE

Before you replace a fuse or disconnect a battery terminal, turn the ignition switch to the LOCK position and remove the ignition key. Never remove or replace the air bag related fuse(s) when the ignition switch is in the ON position. Failure to heed this warning will cause the SRS air bag warning light to illuminate.



OTF030047N

Occupant detection system

Your vehicle is equipped with an occupant detection system in the front passenger's seat.

The occupant detection system is designed to detect the presence of a properly-seated front passenger and determine if the passenger's front air bag should be enabled (may inflate) or not. The driver's front air bag is not affected or controlled by the occupant detection system.

Main components of occupant detection system

- A detection device located within the front passenger seat track.
- Electronic system to determine whether passenger air bag systems should be activated or deactivated.
- An indicator light located on the instrument panel which illuminates the words PASSENGER AIR BAG “OFF” indicating the front passenger air bag system is deactivated.
- The instrument panel air bag warning light is interconnected with the occupant detection system.

If the front passenger seat is occupied by a person that the system determines to be of adult size, and he/she sits properly (sitting upright with the seatback in an upright position, centered on the seat cushion with their seat belt on, legs comfortably extended and their feet on the floor), the PASSENGER AIR BAG “OFF” indicator will turn off and the front passenger's air bag will be able to inflate, if necessary, in frontal crashes.

You will find the PASSENGER AIR BAG “OFF” indicator on the center facia panel. This system detects the conditions 1~4 in the following table and activates or deactivates the front passenger air bag based on these conditions.

Always be sure that you and all vehicle occupants are seated and restrained properly (sitting upright with the seat in an upright position, centered on the seat cushion, with the person’s legs comfortably extended, feet on the floor, and wearing the safety belt properly) for the most effective protection by the air bag and the safety belt.

- The ODS (Occupant Detection System) may not function properly if the passenger takes actions which can defeat the detection system. These include:

(1) Failing to sit in an upright position.
(2) Leaning against the door or center console.
(3) Sitting towards the sides or the front of the seat.
(4) Putting legs on the dashboard or resting them on other locations which reduce the passenger weight on the front seat.
(5) Improperly wearing the safety belt.
(6) Reclining the seat back.

Condition and operation in the front passenger occupant detection system

Condition detected by the occupant detection system	Indicator/Warning light		Devices
	PASSENGER AIR BAG “OFF” indicator light	SRS warning light	Front passenger air bag
1. Adult *1 or child age 13 and up*2	Off	Off	Activated
2. Infant or child restraint system with 12 months old*3 *4	On	Off	Deactivated
3. Unoccupied	On	Off	Deactivated
4. Malfunction in the system	Off	On	Activated

*1) The system judges a person of adult size as an adult. When a smaller adult sits in the front passenger seat, the system may recognize him/her as a child depending on his/her physique and posture.

*2) Do not allow children to ride in the front passenger seat. When a smaller child than the same age sits in the front passenger seat, the system may recognize him/her as an infant depending on his/her physique or posture.

*3) Never install a child restraint system on the front passenger seat.

*4) The PASSENGER AIR BAG "OFF" indicator may turn on or off when a child above 12 months to 12 years old (with or without child restraint system) sits in the front passenger seat. This is a normal condition.

⚠ WARNING - ODS system

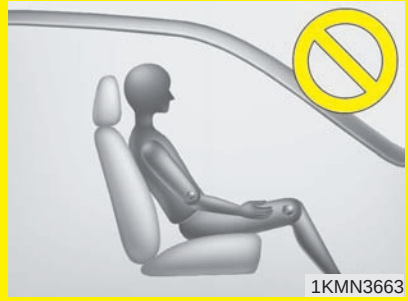
Riding in an improper position adversely affects the occupant detection system (ODS) and may result in the deactivation of front passenger airbag. It is important for the driver to instruct the passenger as to the proper seating instructions as contained in this manual.

(Continued)

(Continued)


B990A08O

- **Never put a heavy load in the front passenger seat.**


1KMN3663

- **Never sit with the hips shifted towards the front of the seat.**


1KMN3665

- **Never place the feet on the dash-board.**


OVQ036014N

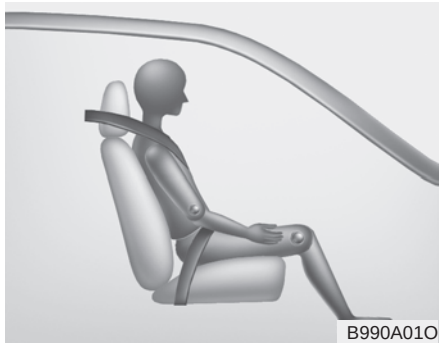
- **Never place the feet on the front passenger seatback.**


1KMN3662

- **Never excessively recline the front passenger seatback.**


1KMN3664

- **Never lean on the door or center console.**
- **Never sit on one side of the front passenger seat.**


B990A01O

When an adult is seated in the front passenger seat, if the PASSENGER AIR BAG “OFF” indicator is on, turn the ignition switch to the LOCK position and ask the passenger to sit properly (sitting upright with the seat back in an upright position, centered on the seat cushion with their seat belt on, legs comfortably extended and their feet on the floor). Restart the engine and have the person remain in that position. This will allow the system to detect the person and to enable the passenger air bag.

If the PASSENGER AIR BAG “OFF” indicator is still on, ask the passenger to move to the rear seat.

⚠ WARNING - “AIR BAG OFF” light

Do not allow an adult passenger to ride in the front seat when the PASSENGER AIR BAG “OFF” indicator is illuminated, because the air bag will not deploy in the event of a crash. The driver must instruct the passenger to reposition himself in the seat. Failure to properly position yourself may lead to airbag deactivation resulting in airbag non-deployment and in a collision. If the PASSENGER AIR BAG “OFF” indicator remains illuminated after the passenger repositions themselves properly and the car is restarted, it is recommended that passenger move to the rear seat because the passenger's front air bag will not deploy.

✻ NOTICE

The PASSENGER AIR BAG “OFF” indicator illuminates for about 4 seconds after the ignition switch is turned to the ON position or after the engine is started. If the front passenger seat is occupied, the occupant detection sensor will then classify the front passenger after several more seconds.

Any child age 12 and under should ride in the rear seat. Children too large for child restraints should use the available lap/shoulder belts. No matter what type of crash, children of all ages are safer when restrained in the rear seat.

✻ NOTICE

Do not modify or replace the front passenger seat. Don't place anything on or attach anything such as a blanket, front seat covers or after market seat heater to the front passenger seat. This can adversely affect the occupant detection system.

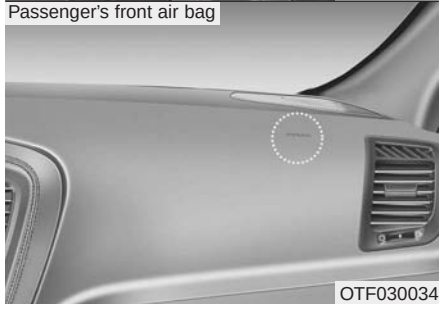
If the occupant detection system is not working properly, the SRS air bag warning light on the instrument panel will illuminate because the passenger's front air bag is connected with the occupant detection system. If there is a malfunction of the occupant detection system, the PASSENGER AIR BAG “OFF” indicator will not illuminate and the passenger's front air bag will inflate in frontal impact crashes even if there is no occupant in the front passenger's seat.

Driver’s front air bag



OTF030033

Passenger’s front air bag



OTF030034

Driver's and passenger's front air bag

Your vehicle is equipped with an Advanced Supplemental Restraint (Air Bag) System and lap/shoulder belts at both the driver and passenger seating position.

The indications of the system's presence are the letters "AIR BAG" embossed on the air bag pad cover in the steering wheel and the passenger's side front panel pad above the glove box.

The SRS consists of air bags installed under the pad covers in the center of the steering wheel and the passenger's side front panel above the glove box.

The purpose of the SRS is to provide the vehicle's driver and/or the front passenger with additional protection than that offered by the seat belt system alone in case of a frontal impact of sufficient severity. The SRS uses sensors to gather information about the driver's seat position, the driver's and front passenger's seat belt usage and impact severity.

The advanced SRS offers the ability to control the air bag inflation with two levels. A first stage level is provided for moderate-severity impacts. A second stage level is provided for more severe impacts.

The passenger's front air bag is designed to help reduce the injury of children sitting close to the instrument panel in low speed collisions. However, children are safer if they are restraint in the rear seat.

According to the impact severity, seating position and seat belt usage, the SRSCM (SRS Control Module) controls the air bag inflation. Failure to properly wear seat belts can increase the risk or severity of injury in an accident.

Additionally, your vehicle is equipped with an occupant detection system in the front passenger's seat. The occupant detection system detects the presence of a passenger in the front passenger's seat and will turn off the front passenger's air bag under certain conditions. For more detail, see "Occupant detection system" in this section.

Do not place any objects that may cause magnetic fields near the front seat. These may cause a malfunction of the seat track position sensor.

Manufacturers are required by government regulations to provide a contact point concerning modifications to the vehicle for persons with disabilities, which modifications may affect the vehicle's advanced air bag system.

However, Kia does not endorse nor will it support any changes to any part or structure of the vehicle that could affect the advanced air bag system, including the occupant detection system.

⚠ WARNING - Replacement / modifications

The front passenger seat, dashboard or door should not be replaced except by an authorized Kia dealer using original Kia parts designed for this vehicle and model. Any other such replacement or modification could adversely affect the operation of the occupant detection system and your advanced air bags.

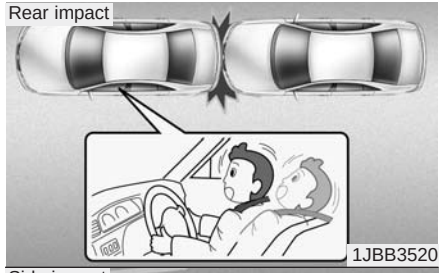
Advanced air bags are combined with pre-tensioner seat belts to help provide enhanced occupant protection in frontal crashes. Front air bags are not intended to deploy in collisions in which sufficient protection can be provided by the pre-tensioner seat belt alone.

⚠ WARNING - SRS Wiring

Do not tamper with or disconnect SRS wiring or other components of the SRS system. Doing so could result in injury, due to accidental deployment of the air bags or by rendering the SRS inoperative.

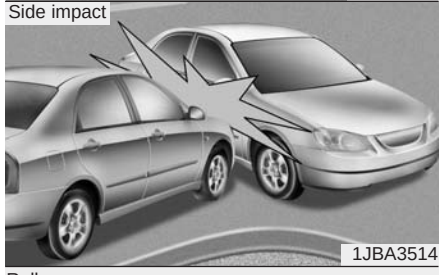
Front air bags are not intended to deploy in side-impact, rear-impact or rollover crashes. In addition, front air bags will not deploy in frontal crashes below the deployment threshold.

Rear impact



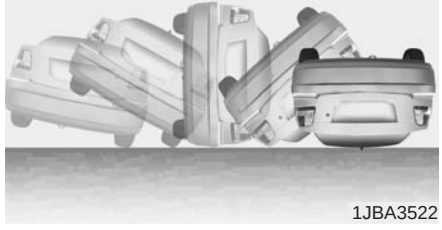
1JBB3520

Side impact



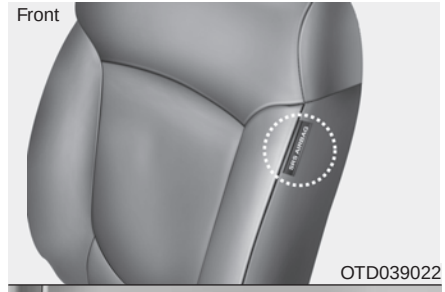
1JBA3514

Rollover

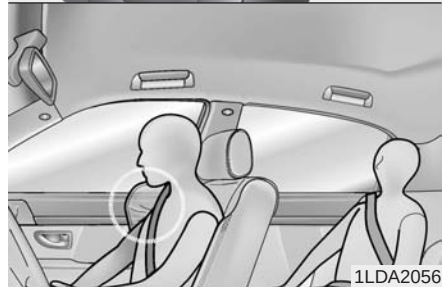


1JBA3522

Front



OTD039022



1LDA2056

❉ The actual air bags in the vehicle may differ from the illustration.

Side impact air bag

Your vehicle is equipped with a side impact air bag in each front seat.

The purpose of the air bag is to provide the vehicle's driver and/or the front passenger with additional protection than that offered by the seat belt alone.

The side impact air bags are designed to deploy only during certain side-impact collisions, depending on the crash severity, angle, speed and point of impact. The side air bags are not designed to deploy in all side impact situations.

⚠ WARNING - Unexpected deployment

Avoid impact to the side impact airbag sensor when the ignition switch is ON to prevent unexpected deployment of the side impact air bag.

The side impact air bag is supplemental to the driver's and the passenger's seat belt systems and is not a substitute for them. Therefore your seat belts must be worn at all times while the vehicle is in operation.

For best protection from the side air bag system and to avoid being injured by the deploying side air bag, both front seat occupants should sit in an upright position with the seat belt properly fastened. The driver's hands should be placed on the steering wheel at the 9:00 and 3:00 positions. The passenger's arms and hands should be placed on their laps.

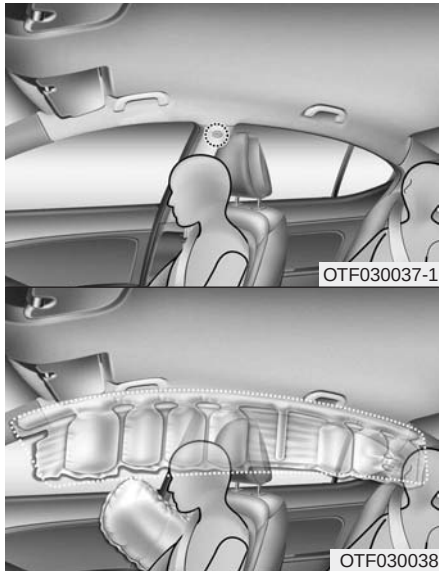
⚠ WARNING - Deployment

Do not install any accessories including seat covers, on the side or near the side impact air bag as this may affect the deployment of the side air bags.

If seat or seat cover is damaged, have the vehicle checked and repaired by an authorized Kia dealer. Inform that your vehicle is equipped with side impact air bags and an occupant detection system.

⚠ WARNING - Flying objects

Do not place any objects (an umbrella, bag, etc.) between the front door and the front seat. Such objects may become dangerous projectiles if the side airbag inflates.



❈ The actual air bags in the vehicle may differ from the illustration.

Curtain air bag

Curtain air bags are located along both sides of the roof rails above the front and rear doors.

They are designed to help protect the heads of the front seat occupants and the rear outboard seat occupants in certain side impact collisions.

The curtain air bags are designed to deploy only during certain side impact collisions, depending on the crash severity, angle, speed and impact. The curtain air bags are not designed to deploy in all side impact situations, collisions from the front or rear of the vehicle or in most rollover situations.

Do not allow the passengers to lean their heads or bodies onto doors, put their arms on the doors, stretch their arms out of the window, or place objects between the doors and passengers when they are seated on seats equipped with side and/or curtain air bags.

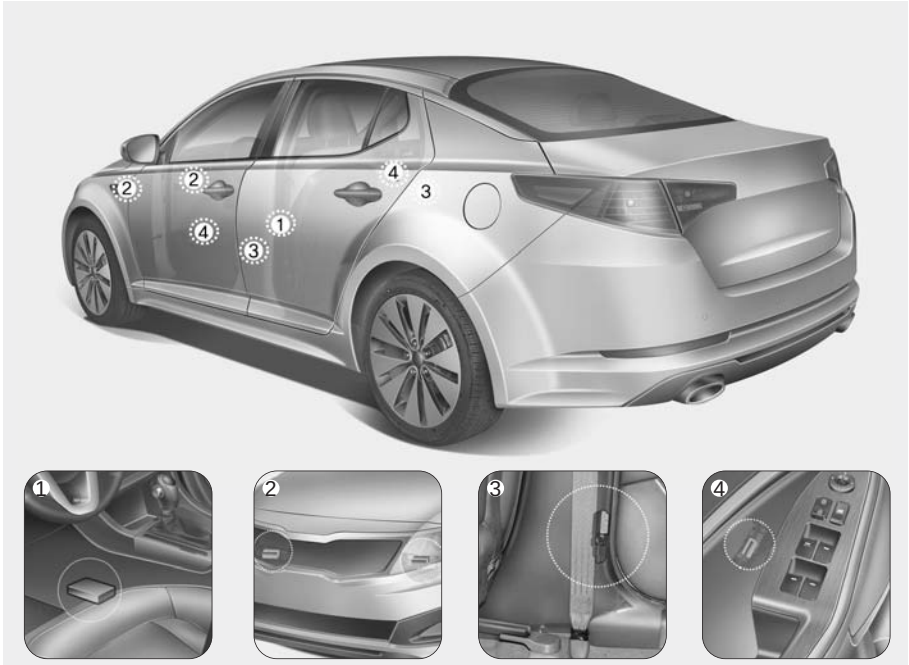
✻ NOTICE

Never try to open or repair any components of the side curtain air bag system. This should only be done by an authorized Kia dealer.

Why didn't my air bag go off in a collision? (Inflation and non-inflation conditions of the air bag)

There are many types of accidents in which the air bag would not be expected to provide additional protection.

These include rear impacts, second or third collisions in multiple impact accidents, as well as low speed impacts. In other words, just because your vehicle is damaged and even if it is totally unusable, don't be surprised that the air bags did not inflate.



OTF030039N/OTF030040/OTF030041/OMG035053/OTF030048N

Air bag collision sensors

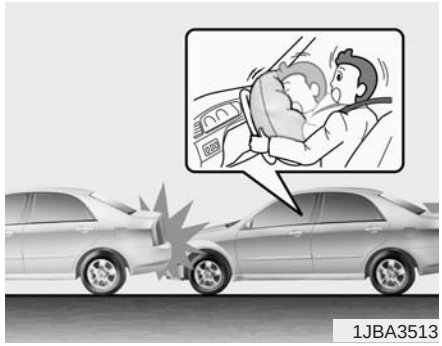
(1) SRS control module
(2) Front impact sensor
(3) Side impact sensor
(4) Side pressure sensor

⚠ WARNING - Air bag sensors

- **Do not hit or allow any objects to impact the locations where air bag or sensors are installed.**
  This may cause unexpected air bag deployment, which could result in serious personal injury or death.
- **If the installation location or angle of the sensors is altered in any way, the air bags may deploy when they should not or they may not deploy when they should.**
  Therefore, do not try to perform maintenance on or around the air bag sensors. Have the vehicle checked and repaired by an authorized Kia dealer.

Problems may arise if the sensor installation angles are changed due to the deformation of the front bumper, body or B pillar where side collision sensors are installed. Have the vehicle checked and repaired by an authorized Kia dealer.

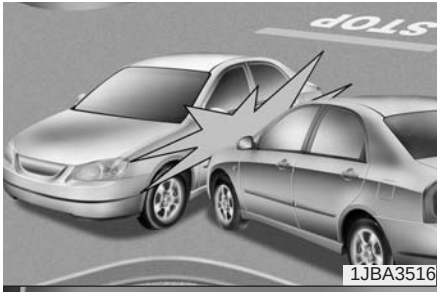
Installing aftermarket bumper guards or replacing a bumper with non-genuine parts may adversely affect your vehicle's collision and air bag deployment performance.



Air bag inflation conditions

Front air bags

Front air bags are designed to inflate in a frontal collision depending on the intensity, speed or angles of impact of the front collision.





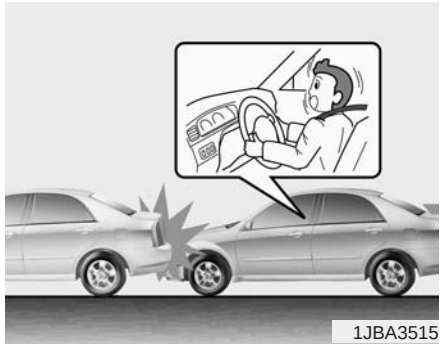
❈ The actual air bags in the vehicle may differ from the illustration.

Side air bags

Side air bags (side impact and/or curtain air bags) are designed to inflate when an impact is detected by side collision sensors depending on the strength, speed or angles of impact resulting from a side impact collision.

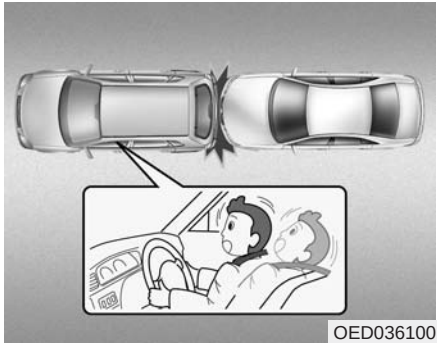
Although the front air bags (driver's and front passenger's air bags) are designed to inflate in frontal collisions, they also may inflate in other types of collisions if the front impact sensors detect a sufficient frontal force in another type of impact. Side impact and curtain air bags are designed to inflate in certain side impact collisions. They may inflate in other type of collisions where a side force is detected by the sensors.

If the vehicle chassis is impacted by bumps or objects on unimproved roads or sidewalks, air bags may deploy. Drive carefully on unimproved roads or on surfaces not designed for vehicle traffic to prevent unintended air bag deployment.



Air bag non-inflation conditions

- In certain low-speed collisions the air bags may not deploy. The air bags are designed not to deploy in such cases because they may not provide benefits beyond the protection of the seat belts in such collisions.

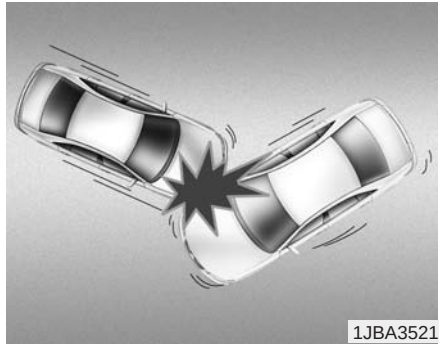

OED036100

- Air bags are not designed to inflate in rear collisions, because occupants are moved backward by the force of the impact. In this case, inflated air bags would not be able to provide any additional benefit.

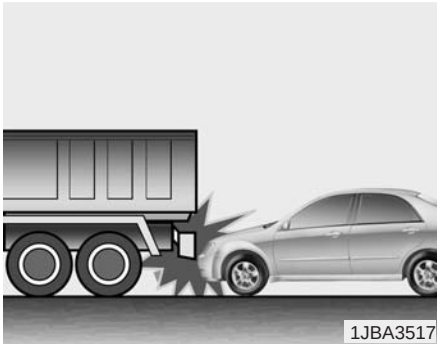


1JBA3516

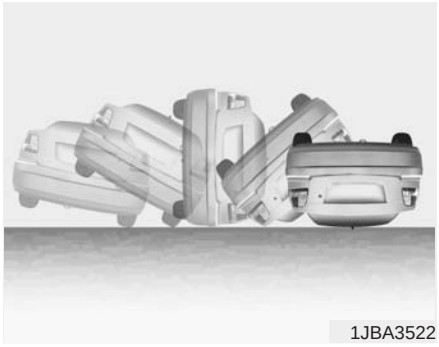
- Front air bags may not inflate in side impact collisions, because occupants move to the direction of the collision, and thus in side impacts, front air bag deployment would not provide additional occupant protection.


1JBA3521

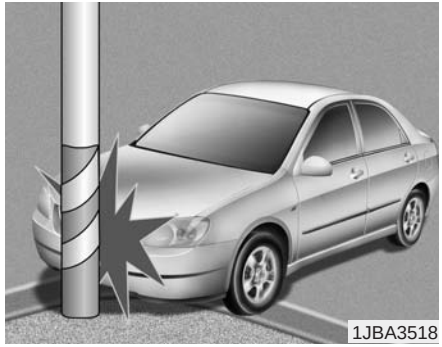
- In a slant or angled collision, the force of impact may direct the occupants in a direction where the air bags would not be able to provide any additional benefit, and thus the sensors may not deploy any air bags.


1JBA3517

- Just before impact, drivers often brake heavily. Such heavy braking lowers the front portion of the vehicle causing it to “ride” under a vehicle with a higher ground clearance. Air bags may not inflate in this "under-ride" situation because deceleration forces that are detected by sensors may be significantly replaced by such “under-ride” collisions.


1JBA3522

- Air bags do not inflate in all rollover accidents, even though the vehicle is equipped with side impact air bags and curtain air bags.


1JBA3518

- Air bags may not inflate if the vehicle collides with objects such as utility poles or trees, where the point of impact is concentrated to one area and the full force of the impact is not delivered to the sensors.

SRS Care

The SRS is virtually maintenance-free and there are no parts you can safely service by yourself. If the SRS air bag warning light does not illuminate, or continuously remains on, have your vehicle immediately inspected by an authorized Kia dealer.

Any work on the SRS system, such as removing, installing, repairing, or any work on the steering wheel must be performed by an authorized Kia dealer. Improper handling of the SRS system may result in serious personal injury.

For cleaning the air bag pad covers, use only a soft, dry cloth or one which has been moistened with plain water. Solvents or cleaners could adversely affect the air bag covers and proper deployment of the system.

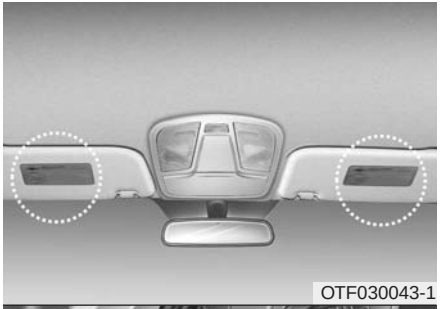
⚠ WARNING - Tampering with SRS

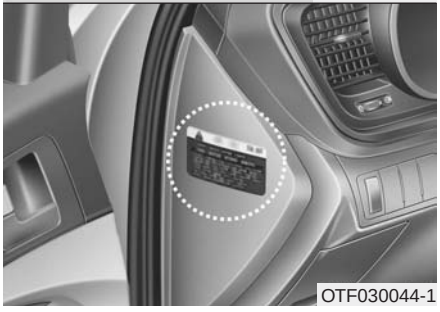
Do not tamper with or disconnect SRS wiring, or other components of the SRS system. Doing so could result in the accidental inflation of the air bags or by rendering the SRS inoperative.

If components of the air bag system must be discarded, or if the vehicle must be scrapped, certain safety precautions must be observed. An authorized Kia dealer knows these precautions and can give you the necessary information. Failure to follow these precautions and procedures could increase the risk of personal injury.

Adding equipment to or modifying your air bag-equipped vehicle

If you modify your vehicle by changing your vehicle's frame, bumper system, front end or side sheet metal or ride height, this may affect the operation of your vehicle's air bag system.


OTF030043-1


OTF030044-1

Air bag warning label

Air bag warning labels, some required by the Canada Motor Vehicle Safety Standards (CMVSS), are attached to the sunvisor to alert the driver and passengers of potential risks of the air bag system.

Keys / 4-2
Smart key / 4-4
Remote keyless entry / 4-6
Theft-alarm system / 4-9
Door locks / 4-12
Trunk / 4-17
Windows / 4-20
Hood / 4-24
Fuel filler lid / 4-25
Sunroof / 4-28

Features of your vehicle 4

Driver position memory system / 4-32
Steering wheel / 4-34
Mirrors / 4-37
Instrument cluster / 4-47
Hazard warning flasher / 4-80
Rear parking assist system / 4-81
Rearview camera / 4-84
Welcome system / 4-85
Lighting / 4-86
Wipers and washers / 4-90
Interior light / 4-93
Defroster / 4-96
Automatic climate control system / 4-97
Windshield defrosting and defogging / 4-108
Storage compartment / 4-111
Interior features / 4-113
Audio system / 4-117

KEYS



❈ The actual feature may differ from the illustration.

To remove the mechanical key, press and hold the release button (1) and remove the mechanical key (2).

To reinstall the mechanical key, put the key into the hole and push it until a click sound is heard.

⚠ WARNING - Aftermarket keys

Use only Kia original parts for the ignition key in your vehicle. If an aftermarket key is used, the ignition switch may not return to ON after START. If this happens, the starter will continue to operate causing possible fire due to excessive current in the wiring.

Immobilizer system

Your vehicle is equipped with an electronic engine immobilizer system to reduce the risk of unauthorized vehicle use.

Your immobilizer system is comprised of a small transponder in the smart key and electronic devices inside the vehicle.

With the immobilizer system, whenever you turn the engine start/stop button to the ON position by pressing the button while carrying the smart key, it checks and determines and verifies if the smart key is valid or not.

If the key is determined to be valid, the engine will start.

If the key is determined to be invalid, the engine will not start.

⚠ CAUTION

The transponder in your smart key is an important part of the immobilizer system. It is designed to give years of trouble-free service, however you should avoid exposure to moisture, static electricity and rough handling. Immobilizer system malfunction could occur.

⚠ CAUTION

Do not change, alter or adjust the immobilizer system because it could cause the immobilizer system to malfunction and should only be serviced by an authorized Kia dealer.

Malfunctions caused by improper alterations, adjustments or modifications to the immobilizer system are not covered by your vehicle manufacturer warranty.

To deactivate the immobilizer system:

Turn the engine start/stop button to the ON position by pressing the button while carrying the smart key.

To activate the immobilizer system:

Turn the engine start/stop button to the OFF position. The immobilizer system activates automatically. Without a valid smart key for your vehicle, the engine will not start.

⚠ WARNING

In order to prevent theft of your vehicle, do not leave spare keys anywhere in your vehicle. Your Immobilizer password is a customer unique password and should be kept confidential. Do not leave this number anywhere in your vehicle.

This device complies with Industry Canada Standard RSS-210.

Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and
2. This device must accept any interference received, including interference that may cause undesired operation.

⚠ WARNING

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

SMART KEY



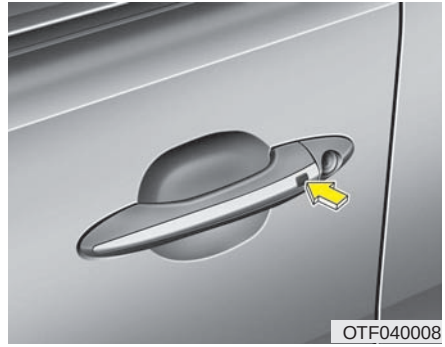
OTF040003

With a smart key, you can lock or unlock a door and even start the engine without inserting the key.

The functions of the buttons on a smart key are similar to the remote keyless entry. (Refer to the “Remote keyless entry” in this section.)

Smart key functions

Carrying the smart key, you may lock and unlock the vehicle doors. Also, you may start the engine. Refer to the following, for more details.



OTF040008

Locking

Pressing the button of the front outside door handles with all doors closed and any door unlocked, locks all the doors. The hazard warning lights will blink and the chime will sound once to indicate that all doors are locked. The button will only operate when the smart key is within 0.7~1 m (28~40 in.) from the outside door handle. If you want to make sure that a door has locked or not, you should check the door lock button inside the vehicle or pull the outside door handle.

Even though you press the button, the doors will not lock and the chime will sound for 3 seconds if any of the following occurs:

- The smart key is in the vehicle.
- The ignition switch is in the ACC or ON position.
- Any door except the trunk is opened.

Unlocking

Pressing the button of the driver's outside door handle with all doors closed and locked, unlocks the driver's door. The hazard warning lights will blink and the chime will sound twice to indicate that the driver's door is unlocked.

Pressing the button in the front passenger's outside door handle with all doors closed and locked, unlocks all the doors. The hazard warning lights will blink and the chime will sound twice to indicate that all doors are unlocked. The button will only operate when the smart key is within 0.7~1 m (28~40 in.) from the outside door handle.

Start-up

You can start the engine without inserting the key. For detailed information refer to “Starting the engine with a smart key” in section 5.

Smart key precautions

- If you lose your smart key, you will not be able to start the hybrid system. Tow the vehicle, if necessary, and contact an authorized Kia dealer.
- A maximum of 2 smart keys can be registered to a single vehicle. If you lose a smart key, you should immediately take the vehicle and key to your authorized Kia dealer to protect it from potential theft.
- The smart key will not work if any of following occurs:
  - The smart key is close to a radio transmitter such as a radio station or an airport which can interfere with normal operation of the smart key.
  - The smart key near a mobile two-way radio system or a cellular phone.
  - Another vehicle’s smart key is being operated close to your vehicle.

  When the smart key does not work correctly, open and close the door with the mechanical key. If you have a problem with the smart key, contact an authorized Kia dealer.
- If the smart key is in close proximity to your cell phone or smart phone, the signal from the smart key could be blocked by normal operation of your cell phone or smart phone. This is especially important when the phone is active such as making call, receiving calls, text messaging, and/or sending/receiving emails. Avoid placing the smart key and your cell phone or smart phone in the same pants or jacket pocket and maintain adequate distance between the two devices.

⚠ CAUTION - Transmitter

Keep the smart key away from water or any liquid as it can become damaged and not function properly.

This device complies with industry Canada standards RSS-210.

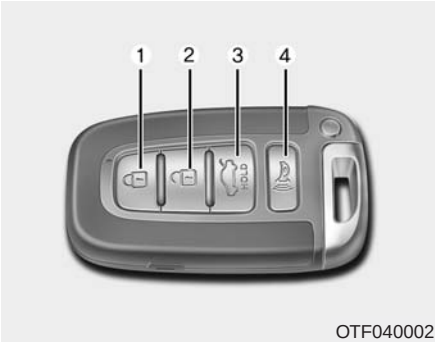
Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and
2. This device must accept any interference received, including interference that may cause undesired operation.

✻ NOTICE

Changes or modifications not expressly approved by the party responsible for compliance could void the user’s authority to operate the equipment. If the keyless entry system is inoperative due to changes or modifications not expressly approved by the party responsible for compliance, it will not be covered by your manufacturer’s vehicle warranty.

REMOTE KEYLESS ENTRY (IF EQUIPPED)



OTF040002

Remote keyless entry system operations

Lock (1)

All doors are locked if the lock button is pressed. If all doors (and trunk) are closed, the hazard warning lights will blink once to indicate that all doors (and trunk) are locked.

Also, if the lock button is pressed once more within 4 seconds, the hazard warning lights will blink and the chime will sound once to confirm that the door is locked.

However, if any door remains open, the hazard warning lights (and/or the chime) will not operate. But if all doors are closed after the lock button is pressed, the hazard warning lights will blink once.

Unlock (2)

The driver's door is unlocked if the unlock button is pressed once. The hazard warning lights will blink (for smart key, the chime also sounds) twice to indicate that the driver's door is unlocked.

All doors are unlocked if the unlock button is pressed once more within 4 seconds. The hazard warning lights will blink (for smart key, the chime also sounds) twice again to indicate that all doors are unlocked. After pressing this button, the doors will lock automatically unless you open any door within 30 seconds.

✻ NOTICE

If the keyless entry system is inoperative due to exposure to water or liquids, it will not be covered by your manufacturer's vehicle warranty.

Trunk open (3) (if equipped)

The trunk is opened if the button is pressed for more than 1 second.

Once the trunk is opened and then closed, the trunk will lock automatically.

Alarm (4)

The horn sounds and the hazard warning lights blink for about 30 seconds if this button is pressed for more than 0.5 seconds. To stop the horn and lights, press any button on the transmitter.

Transmitter precautions

✻ NOTICE

The transmitter will not work if any of following occur:

- **The ignition key is in ignition switch.**
- **You exceed the operating distance limit (about 30 m [90 feet]).**
- **The battery in the transmitter is weak.**
- **Other vehicles or objects may be blocking the signal.**
- **The weather is extremely cold.**
- **The transmitter is close to a radio transmitter such as a radio station or an airport which can interfere with normal operation of the transmitter.**

When the transmitter does not work correctly, open and close the door with the ignition key. If you have a problem with the transmitter, contact an authorized Kia dealer.

(Continued)

(Continued)

- **If the transmitter is in close proximity to your cell phone or smart phone, the signal from the transmitter could be blocked by normal operation of your cell phone or smart phone. This is especially important when the phone is active such as making call, receiving calls, text messaging, and/or sending/receiving emails. Avoid placing the transmitter and your cell phone or smart phone in the same pants or jacket pocket and maintain adequate distance between the two devices.**

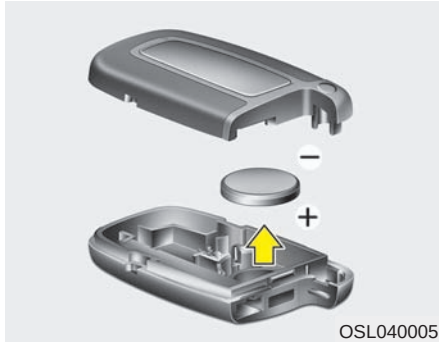
This device complies with Industry Canada Standard RSS-210 .

Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and
2. This device must accept any interference received, including interference that may cause undesired operation.

✻ NOTICE

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. If the keyless entry system is inoperative due to changes or modifications not expressly approved by the party responsible for compliance, it will not be covered by your manufacturer's vehicle warranty.



OSL040005

Battery replacement

A battery should last for several years, but if the transmitter or smart key is not working properly, try replacing the battery with a new one. If you are unsure how to use or replace the battery, contact an authorized Kia dealer.

1. Pry open the transmitter or smart key center cover.
2. Replace the battery with a new battery (CR2032). When replacing the battery, make sure the battery positive "+" symbol faces up as indicated in the illustration.
3. Install the battery in the reverse order of removal.

The transmitter or smart key is designed to give you years of trouble-free use, however it can malfunction if exposed to moisture or static electricity. If you are unsure how to use or replace the battery, contact an authorized Kia dealer.

Using the wrong battery can cause the transmitter or smart key to malfunction. Be sure to use the correct battery.

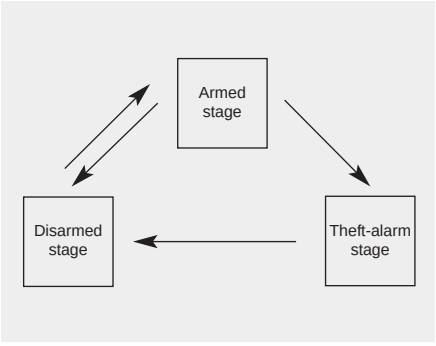
An inappropriately disposed battery can be harmful to the environment and human health.

Dispose the battery according to your local law(s) or regulation.

⚠ CAUTION - Transmitter damage

Do not drop, wet or expose the keyless entry system transmitter to heat or sunlight.

THEFT-ALARM SYSTEM



This system is designed to provide protection from unauthorized entry into the vehicle. This system is operated in three stages: the first is the "Armed" stage, the second is the "Theft-alarm" stage, and the third is the "Disarmed" stage. If triggered, the system provides an audible alarm with blinking of the hazard warning lights.

Armed stage

Park the vehicle and stop the engine. Arm the system as described below.

1. Remove the ignition key from the ignition switch and exit the vehicle.
2. Make sure that all doors (and tailgate) and engine hood are closed and latched.
3. • Lock the doors by depressing the door lock button on the transmitter (or smart key).

   After completion of the steps above, the hazard warning lights will blink once to indicate that the system is armed.

   If any door, trunk or engine hood remains open, the hazard warning lights won't operate and theft-alarm will not arm. After this, if all doors, trunk and engine hood are closed, the hazard warning lights blink once.

   • Lock the doors by pressing the button of the front outside door handles with the smart key in your possession.

   After completion of the steps above, the hazard warning lights will blink once to indicate that the system is armed.

   If any door remains open, the hazard warning lights won't operate and theft-alarm will not arm. Close the door and try again to lock the doors.

   If trunk or engine hood remains open, the hazard warning lights won't operate and theft-alarm will not arm. Close the trunk or engine hood. The hazard warning lights blink once and theft-alarm arms.

The theft-alarm system by the key can be activated by an authorized Kia dealer.

If you want this feature, consult an authorized Kia dealer.

Do not arm the system until all passengers have left the vehicle. If the system is armed while a passenger(s) remains in the vehicle, the alarm may be activated when the remaining passenger(s) leaves the vehicle. If any door (or tailgate) or engine hood is opened within 30 seconds after the system enters the armed stage, the system will be disarmed to prevent unnecessary alarm.

Theft-alarm stage

The alarm will be activated if any of the following occurs while the system is armed.

- A front or rear door is opened without using the transmitter (or smart key).
- The trunk is opened without using the transmitter (or smart key).
- The engine hood is opened.

The horn will sound and the hazard warning lights will blink continuously for approximately 27 seconds. To turn off the system, unlock the doors with the transmitter (or smart key).

Disarmed stage

The system will be disarmed when:

Smart key

- The door unlock button is pressed.
- The button of the front outside door is pressed while carrying the smart key.
- The engine is started. (within 3 seconds)

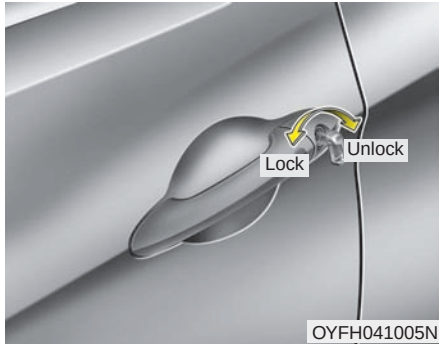
After the doors are unlocked, the hazard warning lights will blink twice to indicate that the system is disarmed.

After pressing the unlock button, if any door (or trunk) is not opened within 30 seconds, the system will be rearmed.

- Avoid trying to start the engine while the alarm is activated. The vehicle starting motor is disabled during the theft-alarm stage.

  If the system is not disarmed with the transmitter, insert the key into the ignition switch, turn the ignition switch to the ON position and wait for 30 seconds. Then the system will be disarmed.
- If you lose your keys, consult your authorized Kia dealer.
- If the system is not disarmed with the transmitter, insert the key into the ignition switch and start the engine. Then the system will be disarmed.
- If you lose your keys, consult your authorized Kia dealer.

DOOR LOCKS

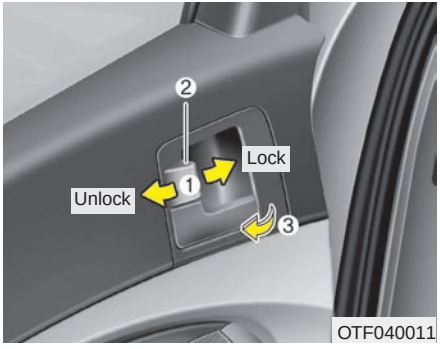


Operating door locks from outside the vehicle

- Turn the key toward the rear of the vehicle to unlock and toward the front of the vehicle to lock.
- If you lock/unlock the door with a key, all vehicle doors will lock/unlock automatically.
- From the driver's door, turn the key toward the rear of the vehicle once to unlock the driver's door and once more within 4 seconds to unlock all doors.
- Doors can also be locked and unlocked with smart key.
- Once the doors are unlocked, they may be opened by pulling the door handle.
- When closing the door, push the door by hand. Make sure the doors are closed securely.

✻ NOTICE

- **In cold and wet climates, door lock and door mechanisms may not work properly due to freezing conditions.**
- **If the door is locked/unlocked multiple times in rapid succession with either the vehicle key or door lock switch, the system may stop operating temporarily in order to protect the circuit and prevent damage to system components.**



Operating door locks from inside the vehicle

With the door lock button

- To unlock a door, push the door lock button (1) to the “Unlock” position. The red mark (2) on the button will be visible.
- To lock a door, push the door lock button (1) to the “Lock” position. If the door is locked properly, the red mark (2) on the door lock button will not show.
- To open a door, pull the door handle (3) outward.
- If the inner door handle of the front door is pulled when the door lock button is in the lock position, the button will unlock and the door will open. (if equipped)
- Front doors cannot be locked if the ignition key is in the ignition switch (or if the smart key is in the vehicle) and any front door is opened. (if equipped)

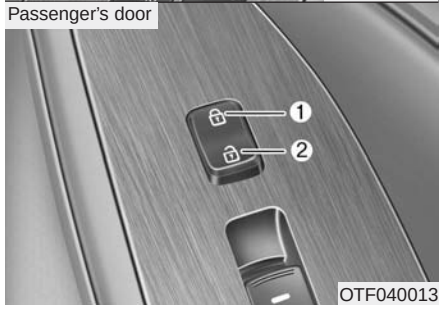
If a power door lock ever fails to function while you are in the vehicle, try one or more of the following techniques to exit:

- Operate the door unlock feature repeatedly (both electronic and manual) while simultaneously pulling on the door handle.
- Operate the other door locks and handles, front and rear.
- Lower a front window and use the key to unlock the door from outside.

Driver's door



Passenger's door



With central door lock switch (if equipped)

Operate by pressing the central door lock switch.

- Press the switch to the "Lock" position (1), all vehicle doors will lock.
- Press the switch to the "Unlock" position (2), all vehicle doors will unlock.
- If the key is in the ignition switch (or if the smart key is in the vehicle) and any front door is opened, the doors will not lock when the “Lock” position (1) of the central door lock switch is pressed. (if equipped)

⚠ WARNING - Doors

The doors should always be fully closed and locked while the vehicle is in motion to prevent accidental opening of the door.

⚠ WARNING
- Unattended children/ animals

Never leave children or animals unattended in your vehicle.

An enclosed vehicle can become extremely hot, causing death or severe injury to unattended children or animals who cannot escape the vehicle.

Impact sensing door unlock system (if equipped)

All doors will automatically unlock when an impact causes the air bags to deploy.

Auto door lock/unlock feature (if equipped)

- All doors will automatically lock when the transaxle shift lever is shifted out of P (Park).
- All doors will automatically unlock when the transaxle shift lever is shifted into P (Park).

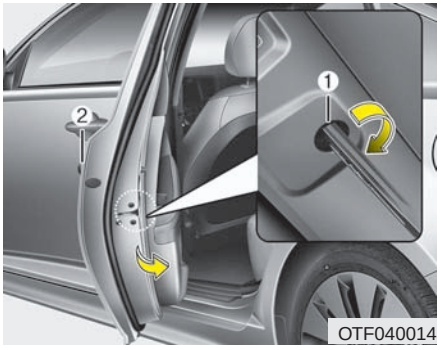
Speed sensing door lock system (if equipped)

All doors will be automatically locked after the vehicle speed exceeds 15 km/h. And all doors will be automatically unlocked when you turn the engine off or when you remove the ignition key. (if equipped)

An authorized Kia dealer can activate or deactivate some auto door lock/ unlock features as follows;

- Auto door unlock by using the driver's door lock button
- Auto door lock/unlock by shifting the transaxle shift lever out of P (Park) or into P (Park)
- Auto door unlock when the smart key is removed from the smart key holder.

If you want to activate or deactivate a door lock/unlock feature, refer to the "vehicle setting" in this chapter.



Child-protector rear door lock

The child safety lock is provided to help prevent children from accidentally opening the rear doors from inside the vehicle. The rear door safety locks should be used whenever children are in the vehicle.

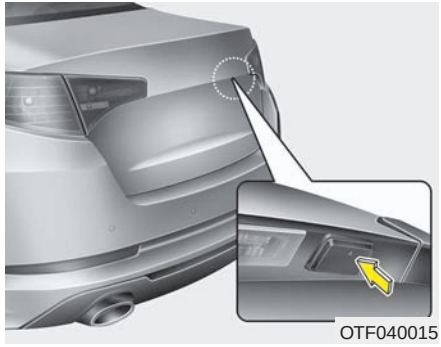
1. Open the rear door.
2. Push the child safety lock (1) located on the rear edge of the door to the lock position. When the child safety lock is in the lock position, rear door will not open even when the inner door handle is pulled.

3. Close the rear door.

To open the rear door, pull the outside door handle (2).

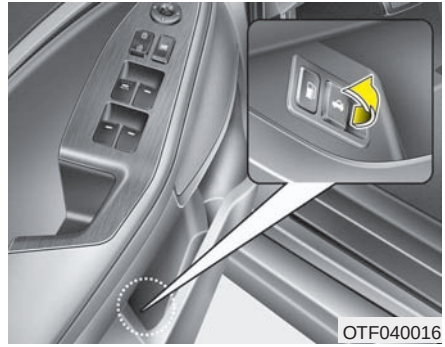
Even though the doors may be unlocked, the rear door will not open by pulling the inner door handle until the rear door child safety lock is unlocked.

TRUNK


OTF040015

Opening the trunk

- Press the trunk unlock button for more than 1 second on the smart key.
- Press the button on the trunk handle with the smart key in your possession.
  Once the trunk is opened and then closed, the trunk locks automatically.


OTF040016

- To open the trunk from inside the vehicle, pull the trunk lid release button.
  Once the trunk is opened and then closed, the trunk locks automatically.

✻ NOTICE

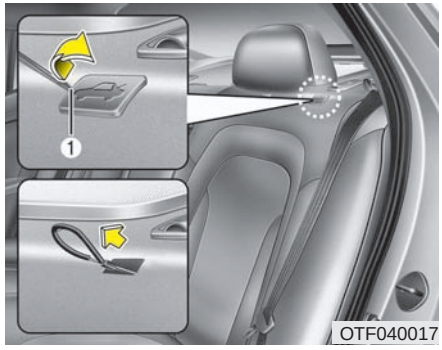
In cold and wet climates, trunk lock and trunk mechanisms may not work properly due to freezing conditions.

⚠ WARNING

The trunk swings upward. Make sure no objects or people are near the rear of the vehicle when opening the trunk.

⚠ CAUTION

Make certain that you close the trunk before driving your vehicle. Possible damage may occur to the trunk lift cylinders and attached hardware if the trunk is not closed prior to driving.



Emergency trunk lid release cable

1. Remove the cover. Using a key or screwdriver to pry up the cover may will help in removing.
2. Pull up on the loop to open the trunk.
3. After opening the trunk, securely close the cover.

⚠ CAUTION

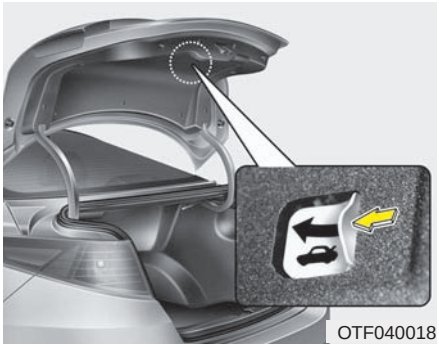
- ***While driving the vehicle, do not use the emergancy trunk release.***
- ***If there is the problem with trunk, have the vehicle checked and repaired by an authorized Kia dealer.***

Closing the trunk

To close, lower the trunk lid, then press down on it until it locks. To be sure the trunk lid is securely fastened, always check by trying to pull it up again.

⚠ WARNING

The trunk lid should be always kept completely closed while the vehicle is in motion. If it is left open or ajar, poisonous exhaust gases may enter the car and serious illness or death may result.


OTF040018

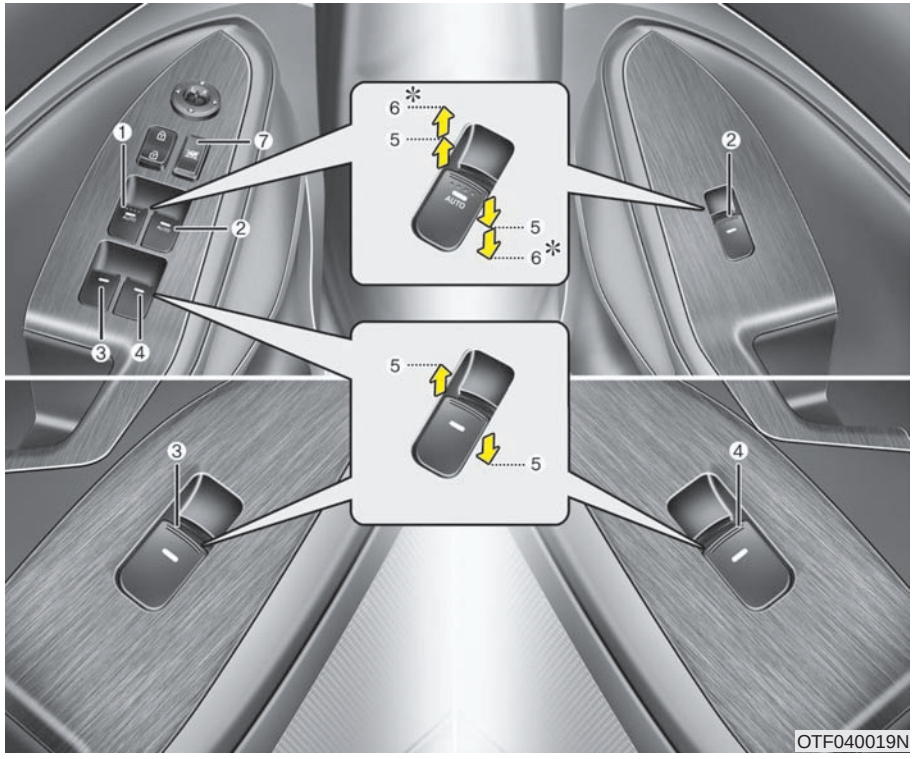
Emergency trunk safety release

Your vehicle is equipped with an emergency trunk release lever located inside the trunk. If someone is inadvertently locked in the trunk, moving the handle in the direction of the arrow will release the trunk latch mechanism and open the trunk.

⚠ WARNING

- **No one should be allowed to occupy the trunk at any time. The trunk is a very dangerous location in the event of a crash.**
- **Use the release lever for emergencies only. Use extreme caution, especially while the vehicle is in motion.**

WINDOWS



(1) Driver's door power window switch
(2) Front passenger's door power window switch
(3) Rear door (left) power window switch
(4) Rear door (right) power window switch
(5) Window opening and closing
(6) Automatic power window down
(7) Power window lock button

In cold and wet climates, power windows may not work properly due to freezing conditions.

Power windows

The ignition switch must be in the ON position for power windows to operate. Each door has a power window switch that controls the door's window. The driver has a power window lock switch which can block the operation of passenger windows.

The power windows can be operated for approximately 30 seconds after the ignition key is removed or turned to the ACC or LOCK position. However, if the front doors are opened, the power windows cannot be operated even within the 30 second period.

✻ NOTICE

While driving with the rear windows down or with the sunroof (if equipped) in an open (or partially open) position, your vehicle may demonstrate a wind buffeting or pulsation noise. This noise is a normal occurrence and can be reduced or eliminated by taking the following actions. If the noise occurs with one or both of the rear windows down, partially lower both front windows approximately one inch. If you experience the noise with the sunroof open, slightly reduce the size of the sunroof opening.



Window opening and closing

Type A

The driver's door has a master power window switch that controls all the windows in the vehicle.

To open or close a window, press down or pull up the front portion of the corresponding switch to the first detent position (5).



OTF040021

Type B - Auto down window (if equipped)

Pressing the power window switch momentarily to the second detent position (6) completely lowers the driver's window even when the switch is released. To stop the window at the desired position while the window is in operation, momentarily pull up the switch to the opposite direction of the window movement.



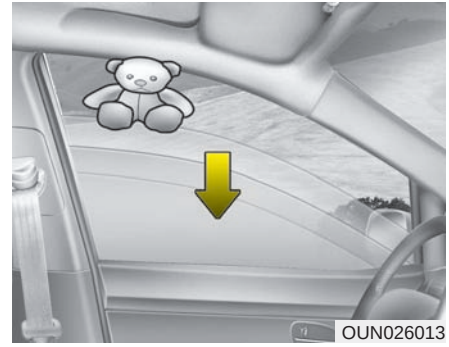
OTF040022

Type C - Auto up/down window (if equipped)

Pressing or pulling up the power window switch momentarily to the second detent position (6) completely lowers or lifts the window even when the switch is released. To stop the window at the desired position while the window is in operation, pull up or press and release the switch to the opposite direction of the movement.

If the power window is not operated correctly, the automatic power window system must be reset as follows:

1. Turn the ignition switch to the ON position.
2. Close the window and continue pulling up on the driver's power window switch for at least 1 second after the window is completely closed.


OUN026013

Automatic reversal

If the upward movement of the window is blocked by an object or part of the body, the window will detect the resistance and will stop upward movement. The window will then lower approximately 30 cm (11.8 in.) to allow the object to be cleared.

If the window detects the resistance while the power window switch is pulled up continuously, the window will stop upward movement then lower approximately 2.5 cm (1 in.). And if the power window switch is pulled up continuously again within 5 seconds after the window is lowered by the automatic window reversal feature, the automatic window reversal will not operate.

The automatic reverse feature for the driver's window is only active when the "auto up" feature is used by fully pulling up the switch. The automatic reverse feature will not operate if the window is raised using the halfway position on the power window switch.

⚠ WARNING

Always check for obstructions before raising any window to avoid injuries or vehicle damage. If an object less than 4 mm (0.16 in.) in diameter is caught between the window glass and the upper window channel, the automatic reverse window may not detect the resistance and will not stop and reverse direction.



Power window lock button (if equipped)

- The driver can disable the power window switches on the passenger doors by pressing the power window lock switch, located on the driver's door to the LOCK position (pressed).
- **When the power window lock button is in the LOCK position (pressed), the driver's master control cannot operate the passenger door power windows.**

⚠ CAUTION - Opening / closing Window

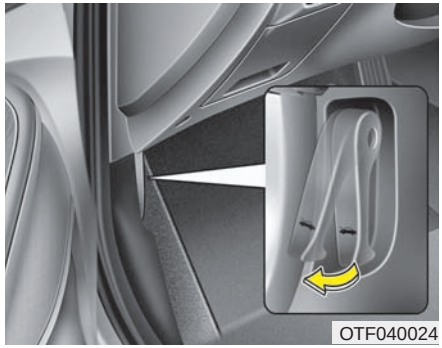
To prevent possible damage to the power window system, do not open or close two windows or more at the same time. This will also ensure the longevity of the fuse.

⚠ WARNING - Power windows

Do not allow children to play with the power windows. Keep the driver's door power window lock switch in the LOCK position (pressed).

Always double check to make sure all arms, hands, head and other obstructions are safely out of the way before closing a window.

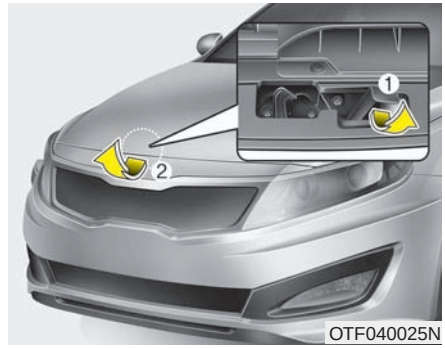
HOOD


OTF040024

Opening the hood

1. Pull the release lever to unlatch the hood. The hood should pop open slightly.

Open the hood after turning off the engine on a flat surface, shifting the shift lever to the P(Park) position for automatic transaxle and to the 1st(First) gear or R(Reverse) for manual transaxle, and setting the parking brake.



OTF040025N

2. Go to the front of the vehicle, raise the hood slightly, pull the secondary latch (1) inside of the hood center and lift the hood (2).
3. Raise the hood. It will raise completely by itself after it has been raised about halfway.

Closing the hood

1. Before closing the hood, check the following:
   - All filler caps in engine compartment must be correctly installed.
   - Gloves, rags or any other combustible material must be removed from the engine compartment.
2. Lower the hood until it is about 1 ft. (30 cm) above the closed position and let it drop. Make sure that it locks into place.

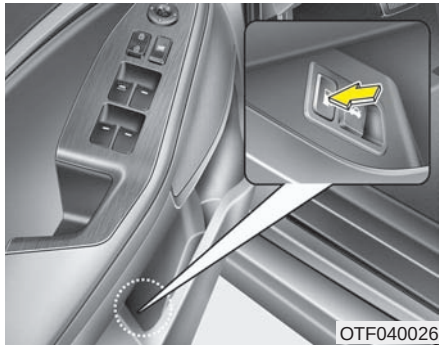
⚠ WARNING

- **Before closing the hood, ensure that all obstructions are removed from the hood opening. Closing the hood with an obstruction present in the hood opening may result in property damage or severe personal injury.**
- **Do not leave gloves, rags or any other combustible material in the engine compartment. Doing so may cause a heat-induced fire.**

⚠ WARNING

- **Always double check to be sure that the hood is firmly latched before driving away. If it is not latched, the hood could fly open while the vehicle is being driven, causing a total loss of visibility, which might result in an accident.**
- **Do not move the vehicle with the hood raised. The view will be blocked and the hood could fall or be damaged.**

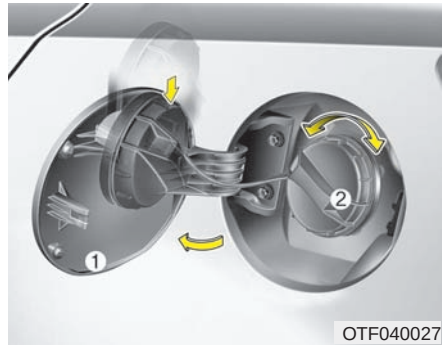
FUEL FILLER LID


OTF040026

Opening the fuel filler lid

The fuel filler lid must be opened from inside the vehicle by pushing up the fuel filler lid opener.

If the fuel filler lid does not open because ice has formed around it, tap lightly or push on the lid to break the ice and release the lid. Do not pry on the lid. If necessary, spray around the lid with an approved de-icer fluid (do not use radiator anti-freeze) or move the vehicle to a warm place and allow the ice to melt.



OTF040027

1. Stop the engine.
2. To open the fuel filler lid, push the fuel filler lid opener button.
3. Pull open the fuel filler lid (1).
4. To remove the cap (2), turn the fuel filler cap counterclockwise.
5. Refuel as needed.

Closing the fuel filler lid

1. To install the cap, turn it clockwise until it “clicks” one time. This indicates that the cap is securely one time tightened.
2. Close the fuel filler lid and push it in lightly and make sure that it is securely closed.

⚠ WARNING - Refueling

Always remove the fuel cap carefully and slowly. If the cap is venting fuel or if you hear a hissing sound, wait until the condition stops before completely removing the cap.

If pressurized fuel sprays out, it can cover your clothes or skin and subject you to the risk of fire and burns.

Always check that the fuel cap is installed securely to prevent fuel spillage in the event of an accident.

⚠ WARNING - Fire/explosion risk

Read and follow all warnings posted at the gas station facility. Failure to follow all warnings will result in severe personal injury, severe burns or death due to fire or explosion.

⚠ WARNING - Static electricity

- **Before touching the fuel nozzle, you should eliminate potentially dangerous static electricity discharge by touching another metal part of the vehicle, a safe distance away from the fuel filler neck, nozzle, or other gas source.**
- **Do not get back into a vehicle once you have begun refueling since you can generate static electricity by touching, rubbing or sliding against any item or fabric (polyester, satin, nylon, etc.) capable of producing static electricity. Static electricity discharge can ignite fuel vapors resulting in rapid burning. If you must re-enter the vehicle, you should once again eliminate potentially dangerous static electricity discharge by touching a metal part of the vehicle, away from the fuel filler neck, nozzle or other gasoline source.**

✻ NOTICE

When using an approved portable fuel container, be sure to place the container on the ground prior to refueling. Static electricity discharge from the container can ignite fuel vapors causing a fire. Once refueling has begun, contact with the vehicle should be maintained until the filling is complete. Use only approved portable plastic fuel containers designed to carry and store gasoline.

⚠ WARNING - Cell phone fires

Do not use cellular phones while refueling. Electric current and/or electronic interference from cellular phones can potentially ignite fuel vapors causing a fire.

⚠ WARNING - Refueling& Vehicle fires

When refueling, always shut the engine off. Sparks produced by electrical components related to the engine can ignite fuel vapors causing a fire. Once refueling is complete, check to make sure the filler cap and filler door are securely closed, before starting the engine.

⚠ WARNING - Smoking

DO NOT use matches or a lighter and DO NOT SMOKE or leave a lit cigarette in your vehicle while at a gas station especially during refueling. Automotive fuel is highly flammable and can, when ignited, result in fire.

Make sure to refuel your vehicle according to the "Fuel requirements" suggested in section 1.

If the fuel filler cap requires replacement, use only a genuine Kia cap or the equivalent specified for your vehicle. An incorrect fuel filler cap can result in a serious malfunction of the fuel system or emission control system.

⚠ CAUTION - Exterior paint

Do not spill fuel on the exterior surfaces of the vehicle. Any type of fuel spilled on painted surfaces may damage the paint.

SUNROOF (IF EQUIPPED)



OVG049031

If your vehicle is equipped with a sunroof, you can slide or tilt your sunroof with the sunroof control lever located on the overhead console.

The sunroof can only be opened, closed, or tilted when the ignition switch is in the ON position.

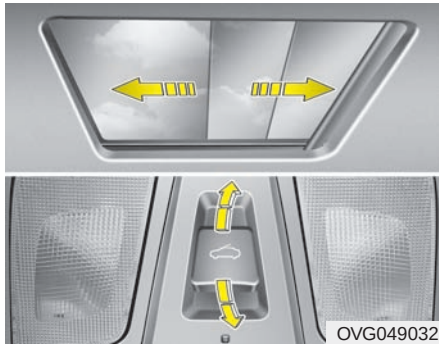
In cold and wet climates, the sunroof may not work properly due to freezing conditions.

After the vehicle is washed or in a rainstorm, be sure to wipe off any water that is on the sunroof before operating it.

⚠ CAUTION - Sunroof control lever

Do not continue to press the sunroof control lever after the sunroof is fully opened, closed, or tilted. Damage to the motor or system components could occur.

The sunroof cannot slide when it is in the tilt position nor can it be tilted while in an open or slide position.


OVG049032

Sliding the sunroof

When the sunshade is closed

If you pull the sunroof control lever backward to the second detent position, the sunshade will slide all the way open then the sunroof glass will slide all the way open. To stop the sunroof movement at any point, pull or push the sunroof control lever momentarily.

When the sunshade is opened

If you pull the sunroof control lever backward, the sunroof glass will slide all the way open. To stop the sunroof movement at any point, pull or push the sunroof control lever momentarily.

Closing the sunroof

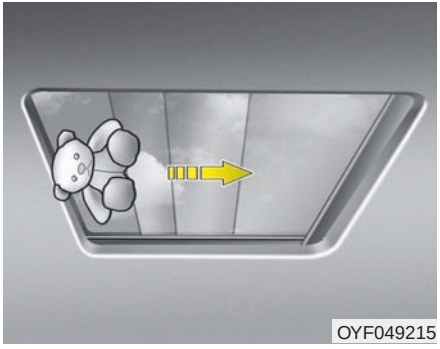
To close the sunroof glass only

Push the sunroof control lever forward to the first detent position or pull the lever downward.

To close the sunroof glass with the sunshade

Push the sunroof control lever forward to the second detent position. The sunroof glass will close then the sunshade close automatically.

To stop the sunroof movement at any point, pull or push the sunroof control lever momentarily.



Automatic reversal

If an object or part of the body is detected while the sunroof glass or sunshade is closing automatically, it will reverse the direction, and then stop.

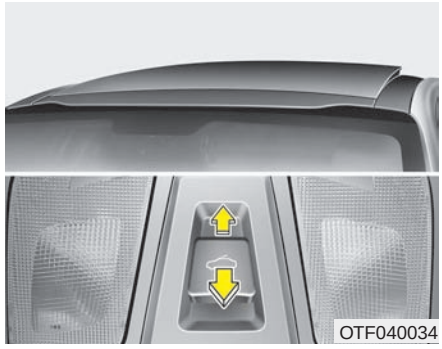
The auto reverse function does not work if a tiny obstacle is between the sliding glass or sunshade and the sunroof sash. You should always check that all passengers and objects are away from the sunroof before closing it.

⚠ WARNING - Sunroof

- **Do not extend the face, neck, arms or body outside through the sunroof opening while driving or operating the sunroof.**
- **Make sure your hands and face are safely out of the way before closing a sunroof.**

⚠ CAUTION

- ***Periodically remove any dirt that may accumulate on the guide rail.***
- ***If you try to open the sunroof when the temperature is below freezing or when the sunroof is covered with snow or ice, the glass or the motor could be damaged.***


OTF040034

Tilting the sunroof

When the sunshade is closed

If you push the sunroof control lever upward, the sunshade will slide all the way open then the sunroof glass will tilt.

To stop the sunroof movement at any point, pull or push the sunroof control lever momentarily.

When the sunshade is opened

If you push the sunroof control lever upward, the sunroof glass will tilt.

To stop the sunroof movement at any point, pull or push the sunroof control lever momentarily.

⚠ CAUTION - Sunroof motor damage

If you try to open the sunroof when the temperature is below freezing or when the sunroof is covered with snow or ice, the glass or the motor could be damaged.


OYF049214

Sunshade

- To open the sunshade, pull the sunroof control lever backward to the first detent position.
- To close the sunshade when the sunroof glass is closed, push the sunroof control lever forward.

To stop the sliding at any point, pull or push the sunroof control lever momentarily.

✻ NOTICE

It is normal for wrinkles to form on the blind because of its material characteristic.

Resetting the sunroof

Whenever the vehicle battery is disconnected or discharged, or related fuse is blown, you must reset your sunroof system as follows:

1. Turn the ignition switch to the ON position and close the sunroof completely.
2. Release the control lever.
3. Push and hold the control lever forward (for more than 10 seconds) until the sunroof tilts and slightly moves. Then, release the lever.
4. Push the sunroof control lever forward in the direction of close until the sunroof operates as follows;

   SUNSHADE OPEN → TILT OPEN → SLIDE OPEN → SLIDE CLOSE → SUNSHADE CLOSE

   Then, release the control lever.

   When this is complete, the sunroof system is reset.

❈ For more detailed information, contact an authorized Kia dealer.

✻ NOTICE

If the sunroof is not reset when the vehicle battery is disconnected or discharged, or related fuse is blown, the sunroof may operate improperly.

DRIVER POSITION MEMORY SYSTEM (IF EQUIPPED)



OTF040035

A driver position memory system is provided to store and recall the driver seat position with a simple button operation. By saving the desired position into the system memory, different drivers can reposition the driver seat based upon their driving preference. If the battery is disconnected, the position memory will be lost and the driving position should be restored in the system.

⚠ WARNING

Never attempt to operate the driver position memory system while the vehicle is moving.

This could result in loss of control, and an accident causing death, serious injury, or property damage.

Storing positions into memory using the buttons on the door

Storing driver's seat positions

1. Shift the shift lever into P while the ignition switch is ON.
2. Adjust the driver seat to position comfortable for the driver.
3. Press SET button on the control panel. The system will beep once.
4. Press one of the memory buttons (1 or 2) within 5 seconds after pressing the SET button. The system will beep twice when memory has been successfully stored.

Recalling positions from memory

1. Shift the shift lever into P while the ignition switch is ON.
2. To recall the position in memory, press the desired memory button (1 or 2). The system will beep once, then the driver seat will automatically adjust to the stored positions.

Adjusting the control switch for the driver seat while the system is recalling the stored position will cause the movement to stop and move in the direction that the control switch is moved.

⚠ WARNING

Use caution when recalling adjustment memory while sitting in the vehicle. Push the seat position control knob to the desired position immediately if the seat moves too far in any direction.

Easy access function (if equipped)

With the shift lever in the P position, the system will move the driver's seat automatically as follows.

- It will move the driver's seat rearward when the engine start/stop button is turned to the OFF position or the smart key is removed from the smart key holder.
- It will move the driver's seat forward when the engine start/stop button is turned to the ACC or START position or the smart key is inserted into the smart key holder.

STEERING WHEEL

Electric power steering

Power steering uses the motor to assist you in steering the vehicle. If the engine is off or if the power steering system becomes inoperative, the vehicle may still be steered, but it will require increased steering effort.

The motor driven power steering is controlled by the power steering control unit which senses the steering wheel torque and vehicle speed to command the motor.

The steering wheel becomes heavier as the vehicle's speed increases and becomes lighter as the vehicle's speed decreases for better control of the steering wheel.

Should you notice any change in the effort required to steer during normal vehicle operation, have the power steering checked by an authorized Kia dealer.

✻ NOTICE

The following symptoms may occur during normal vehicle operation:

- **The steering effort is high immediately after turning the ignition switch on. This happens as the system performs the EPS system diagnostics. When the diagnostics is completed, the steering wheel will return to its normal condition.**
- **A click noise may be heard from the EPS relay after the ignition switch is turned to the ON or LOCK position.**
- **Motor noise may be heard when the vehicle is at a stop or at a low driving speed.**
- **The steering effort increases if the steering wheel is rotated continuously when the vehicle is not in motion. However, after a few minutes, it will return to its normal conditions.**
- **When you operate the steering wheel in low temperature, abnormal noise could occur. If temperature rises, the noise will disappear. This is a normal condition.**

If the Electric Power Steering System does not operate normally, the warning light will illuminate on the instrument cluster. The steering wheel may become difficult to control or operate abnormally. Take your vehicle to an authorized Kia dealer and have the vehicle checked as soon as possible.

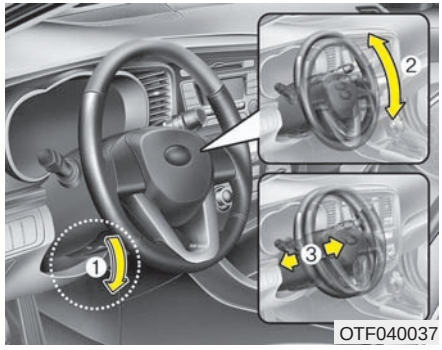
Tilt and telescoping (if equipped) steering

Tilt steering allows you to adjust the steering wheel before you drive. You can also raise it to give your legs more room when you exit and enter the vehicle.

The steering wheel should be positioned so that it is comfortable for you to drive, while permitting you to see the instrument panel warning lights and gauges.

⚠ WARNING - Steering wheel adjustment

Never adjust the angle and height of the steering wheel while driving. You may lose steering control



OTF040037

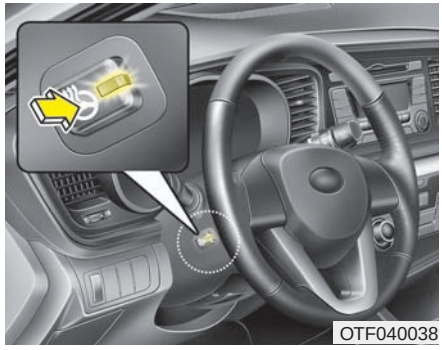
To change the steering wheel angle, pull down the lock release lever (1), adjust the steering wheel to the desired angle (2) and height (if equipped) (3), then pull up the lock-release lever to lock the steering wheel in place. Be sure to adjust the steering wheel to the desired position before driving.


OTF040039

Horn

To sound the horn, press the horn symbol on your steering wheel. Check the horn regularly to be sure it operates properly.

To sound the horn, press the area indicated by the horn symbol on your steering wheel (see illustration). The horn will operate only when this area is pressed.



Heated steering wheel (if equipped)

With the ENGINE START/STOP button in the ON position, pressing the heated steering wheel button warms the steering wheel. The indicator on the button will illuminate.

To turn the steering wheel off, press the button once again. The indicator on the button will turn off.

It will turn off automatically approximately 30 minutes after the heated steering wheel is turned on.

If you turn on the ignition again after turn off your engine in half an hour (after operating heater button), the heating system will be maintained in its 'on' condition.

⚠ CAUTION

- ***Do not install any grip to operate the steering wheel. This causes damage to the heated steering wheel system.***
- ***When cleaning the heated steering wheel, do not use an organic solvent such as paint thinner, benzene, alcohol and gasoline. Doing so may damage the surface of the steering wheel.***
- ***If the surface of steering wheel is damaged by sharp object, damage to the heated steering wheel components could occur.***

MIRRORS

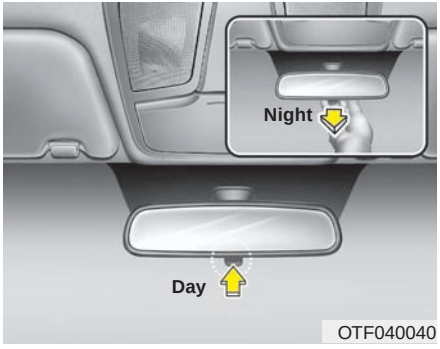
Inside rearview mirror

Adjust the rearview mirror so that the center view through the rear window is seen. Make this adjustment before you start driving.

Do not place objects in the rear seat which would interfere with your vision through the rear window.

⚠ WARNING - Mirror adjustment

Do not adjust the rearview mirror while the vehicle is moving. This could result in loss of control.



Day/night rearview mirror (if equipped)

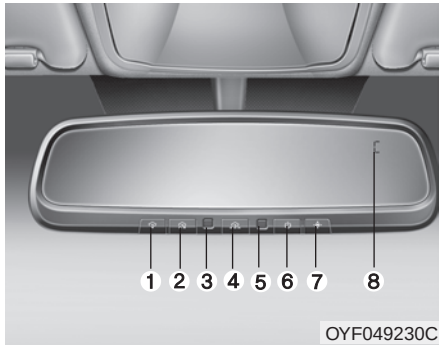
Make this adjustment before you start driving and while the day/night lever is in the day position.

Pull the day/night lever toward you to reduce the glare from the headlights of the vehicles behind you during night driving.

Remember that you lose some rearview clarity in the night position.

Electric chromic mirror (ECM) with HomeLink® system and compass (if equipped)

Your vehicle may be equipped with a Gentex Automatic-Dimming Mirror with a Z-Nav™ Electronic Compass Display and an Integrated HomeLink® Wireless Control System. During nighttime driving, this feature will automatically detect and reduce rearview mirror glare while the compass indicates the direction the vehicle is pointed. The HomeLink® Universal Transceiver allows you to activate your garage door(s), electric gate, home lighting, etc.



(1) Channel 1 button
(2) Channel 2 button
(3) Status indicator LED
(4) Channel 3 button
(5) Rear light sensor
(6) Dimming ON/OFF button
(7) Compass control button
(8) Compass display

Automatic-Dimming Night Vision Safety® (NVS®) Mirror

The NVS® Mirror in your vehicle is the most advanced way to reduce annoying glare in the rearview mirror during any driving situation. For more information regarding NVS® mirrors and other applications, please refer to the Gentex website:

www.gentex.com

⚠ CAUTION

The NVS® Mirror automatically reduces glare during driving conditions based upon light levels monitored in front of the vehicle and from the rear of the vehicle. These light sensors are visible through openings in the front and rear of the mirror case. Any object that obstructs either light sensor will degrade the automatic dimming control feature.

Automatic-dimming function

Your mirror will automatically dim upon detecting glare from the vehicles traveling behind you. The auto-dimming function can be controlled by the Dimming ON/OFF Button:

1. Pressing the ⏻ button turns the auto-dimming function OFF which is indicated by the green Status Indicator LED turning off.
2. Pressing the ⏻ button again turns the auto-dimming function ON which is indicated by the green Status Indicator LED turning on.

✻ NOTICE

The mirror defaults to the ON position each time the vehicle is started.

Z-Nav™ Compass Display

The NVS™ Mirror in your vehicle is also equipped with a Z-Nav™ Compass that shows the vehicle Compass heading in the Display Window using the 8 basic cardinal headings (N, NE, E, SE, etc.).

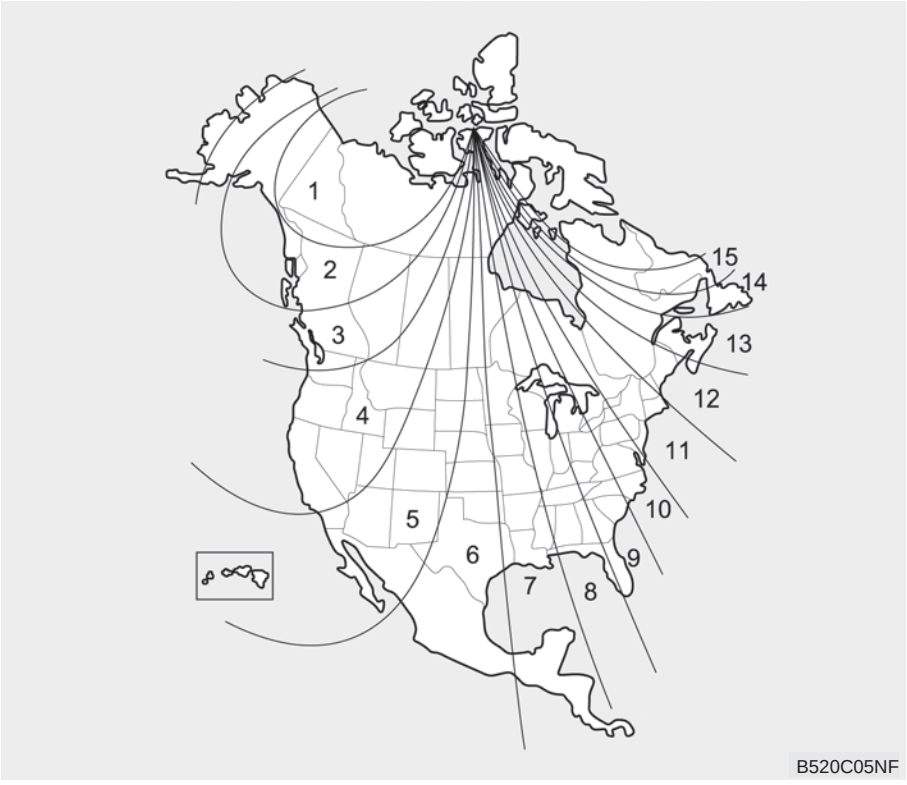
Compass function

The Compass can be turned ON and OFF and will remember the last state when the ignition is cycled. To turn the display feature ON/OFF:

1. Press and release the button to turn the display feature OFF.
2. Press and release the button again to turn the display back ON.

Additional options can be set with press and hold sequences of the button and are detailed below.

There is a difference between magnetic north and true north. The compass in the mirror can compensate for this difference when it knows the Magnetic Zone in which it is operating. This is set either by the dealer or by the user. The operating Zone Numbers for North America are shown in the figure on the following section.



To adjust the Zone setting:

1. Determine the desired Zone Number based upon your current location on the Zone Map.
2. Press and hold the button for more than 3 but less than 6 seconds, the current Zone Number will appear on the display.
3. Pressing and holding the button again will cause the numbers to increment (Note: they will repeat …13, 14, 15, 1, 2, …). Releasing the button when the desired Zone Number appears on the display will set the new Zone.
4. Within about 5 seconds the compass will start displaying a compass heading again.

There are some conditions that can cause changes to the vehicle magnets, such as installing a ski rack or a CB antenna. Body repair work on the vehicle can also cause changes to the vehicle's magnetic field. In these situations, the compass will need to be re-calibrated to quickly correct for these changes. To recalibrate the compass:

1. Press and hold the button for more than 6 seconds. When the compass memory is cleared a "C" will appear in the display.
2. To calibrate the compass, drive the vehicle in 2 complete circles at less than 8 km/h (5 mph).

Integrated HomeLink® Wireless Control System

The HomeLink® Wireless Control System provides a convenient way to replace up to three hand-held radio-frequency (RF) transmitters with a single built-in device. This innovative feature will learn the radio frequency codes of most current transmitters to operate devices such as gate operators, garage door openers, entry door locks, security systems, even home lighting. Both standard and rolling code-equipped transmitters can be programmed by following the outlined procedures. Additional HomeLink® information can be found at: www.homelink.com or by calling 1-800-355-3515.

⚠ CAUTION

Before programming HomeLink® to a garage door opener or gate operator, make sure that people and objects are out of the way of the device to prevent potential harm or damage. Do not use HomeLink® with any garage door opener that lacks the safety stop and reverse features required by U.S. federal safety standards (this includes any garage door opener model manufactured before April 1, 1982). A garage door that cannot detect an object - signaling the door to stop and reverse - does not meet current U.S. federal safety standards. Using a garage door opener without these features increases the risk of serious injury or death.

Retain the original transmitter of the RF device you are programming for use in other vehicles as well as for future HomeLink® programming. It is also suggested that upon the sale of the vehicle, the programmed HomeLink® buttons be erased for security purposes.

Programming HomeLink®

✻ NOTICE

- **When programming a garage door opener, it is advised to park the vehicle outside of the garage.**
- **It is recommended that a new battery be placed in the hand-held transmitter of the device being programmed to HomeLink® for quicker training and accurate transaxle of the radio-frequency signal.**
- **Some vehicles may require the ignition switch to be turned to the second (or "accessories") position for programming and/or operation of HomeLink.**
- **In the event that there are still programming difficulties or questions after following the programming steps listed below, contact HomeLink® at: www.homelink.com or 1-800-355-3515.**

Standard programming

To train most devices, follow these instructions:

1. For first-time programming, press and hold the two outside buttons, HomeLink® Channel 1 and Channel 3 Buttons, until the indicator light begins to flash (after 20 seconds). Release both buttons. Do not hold the buttons for longer than 30 seconds.
2. Position the end of your hand-held transmitter 2-8 cm (1-3 inches) away from the HomeLink® buttons while keeping the indicator light in view.
3. Simultaneously press and hold both the HomeLink® and hand-held transmitter button. DO NOT release the buttons until step 4 has been completed.
4. While continuing to hold the buttons the red Indicator Status LED will flash slowly and then rapidly after HomeLink® successfully trains to the frequency signal from the hand-held transmitter. Release both buttons.
5. Press and hold the just-trained HomeLink® button and observe the red Status Indicator LED. If the indicator light stays on constantly, programming is complete and your device should activate when the HomeLink® button is pressed and released.
6. To program the remaining two HomeLink® buttons, follow steps 2 through 5.

Rolling code programming

Rolling code devices which are "code-protected" and manufactured after 1996 may be determined by the following:

- Reference the device owner's manual for verification.
- The handheld transmitter appears to program the HomeLink® Universal Transceiver but does not activate the device.
- Press and hold the trained HomeLink button. The device has the rolling code feature if the indicator light flashes rapidly and then turns solid after 2 seconds.

To train rolling code devices, follow these instructions:

1. At the garage door opener receiver (motor-head unit) in the garage, locate the "learn" or "smart" button. This can usually be found where the hanging antenna wire is attached to the motor-head unit. Exact location and color of the button may vary by garage door opener brand.

   If there is difficulty locating the training button, reference the device owner's manual or please visit our Web site at www.homelink.com.
2. Firmly press and release the "learn" or "smart" button (which activates the "training light").

✻ NOTICE

There are 30 seconds in which to initiate step3.

3. Return to the vehicle, firmly press and hold for two seconds the desired HomeLink® button then release. Repeat the "press/hold/release" sequence a second time to complete the programming. (Some devices may require you to repeat this sequence a third time to complete the programming.)
4. Press and hold the just-trained HomeLink® button and observe the red Status Indicator LED. If the indicator light stays on constantly, programming is complete and your device should activate.
5. To program the remaining two HomeLink® buttons, follow either steps 1 through 4 above for other Rolling Code devices or steps 2 through 5 in Standard Programming for standard devices.

Gate operator & Canadian programming

During programming, your handheld transmitter may automatically stop transmitting. Continue to press the Integrated HomeLink® Wireless Control System button (note steps 2 through 4 in the Standard Programming portion of this document) while you press and re-press ("cycle") your handheld transmitter every two seconds until the frequency signal has been learned. The indicator light will flash slowly and then rapidly after several seconds upon successful training.

Operating HomeLink®

To operate, simply press and release the programmed HomeLink® button. Activation will now occur for the trained device (i.e. garage door opener, gate operator, security system, entry door lock, home/office lighting, etc.). For convenience, the hand-held transmitter of the device may also be used at any time.

Reprogramming a single HomeLink® button

To program a new device to a previously trained HomeLink® button, follow these steps:

1. Press and hold the desired HomeLink® button. Do NOT release until step 4 has been completed.
2. When the indicator light begins to flash slowly (after 20 seconds), position the handheld transmitter 1 to 3 inches away from the HomeLink® surface.
3. Press and hold the handheld transmitter button. The HomeLink® indicator light will flash, first slowly and then rapidly.
4. When the indicator light begins to flash rapidly, release both buttons.
5. Press and hold the just-trained HomeLink® button and observe the red Status Indicator LED. If the indicator light stays on constantly, programming is complete and your new device should activate.

Erasing HomeLink® buttons

Individual buttons cannot be erased. However, to erase all three programmed buttons:

1. Press and hold the two outer HomeLink® buttons until the indicator light begins to flash-after 20 seconds.
2. Release both buttons. Do not hold for longer than 30 seconds.

The Integrated HomeLink® Wireless Control System is now in the training (learn) mode and can be programmed at any time following the appropriate steps in the Programming sections above.

FCC ID: NZLZTVHL3
IC: 4112A-ZTVHL3

This device complies with Industry Canada Standard RSS-210.

Operation is subject to the following two conditions:

1. this device may not cause harmful interference, and
2. This device must accept any interference received, including interference that may cause undesired operation.

⚠ WARNING

The transceiver has been tested and complies with FCC and Industry Canada rules. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the device.

NVS® is a registered trademark and Z-Nav™ is a trademark of the Gentex Corporation, Zeeland, Michigan. HomeLink® is a registered trademark owned by Johnson Controls, Incorporated, Milwaukee, Wisconsin.

Outside rearview mirror

Be sure to adjust the mirror angles before driving.

Your vehicle is equipped with both left-hand and right-hand outside rearview mirrors. The mirrors can be adjusted remotely with the remote switch (if equipped). The mirror heads can be folded to prevent damage during an automatic car wash or when passing through a narrow street.

The right outside rearview mirror is convex. Objects seen in the mirror are closer than they appear.

Use your interior rearview mirror or direct observation to determine the actual distance of following vehicles when changing lanes.

⚠ CAUTION - Rearview mirror

Do not scrape ice off the mirror face; this may damage the surface of the glass. If ice should restrict movement of the mirror, do not force the mirror for adjustment. To remove ice, use a deicer spray, or a sponge or soft cloth with very warm water.

⚠ WARNING - Mirror adjustment

Do not adjust or fold the outside rearview mirrors while the vehicle is moving. This could result in loss of control.



Remote control

Electric type

The electric remote control mirror switch allows you to adjust the position of the left and right outside rearview mirrors. To adjust the position of either mirror the ignition switch should be in the ACC or ON position.

Move the lever (1) to R or L to select the right side mirror or the left side mirror, then press a corresponding point on the mirror adjustment control to position the selected mirror up, down, left or right.

After the adjustment, put the lever into neutral (center) position to prevent inadvertent adjustment.

⚠ CAUTION - Outside mirror

- ***The mirrors stop moving when they reach the maximum adjusting angles, but the motor continues to operate while the switch is pressed. Do not press the switch longer than necessary, the motor may be damaged.***
- ***Do not attempt to adjust the outside rearview mirror by hand. Doing so may damage the related parts.***



Folding the outside rearview mirror

Electric Type (if equipped)

To fold the outside rearview mirror, depress the button.

To unfold it, depress the button again.

⚠ CAUTION - Electric type outside rearview mirror

The electric type outside rearview mirror operates even though the ignition switch is in the OFF position. However, to prevent unnecessary battery discharge, do not adjust the mirrors longer than necessary while the engine is not running.

In case it is an electric type outside rearview mirror, don't fold it by hand. It could cause motor failure.



Manual type

To fold outside rearview mirror, grasp the housing of mirror and then fold it toward the rear of the vehicle.

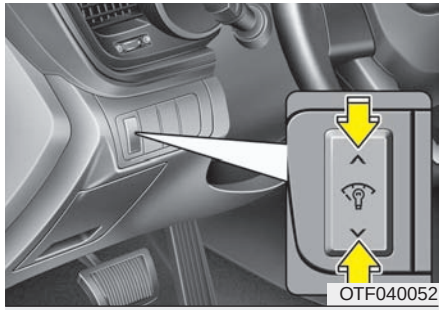
INSTRUMENT CLUSTER



1. ECO guide
2. Fuel gauge
3. Speedometer
4. Turn signal indicators
5. Warning and indicator lights
6. Odometer/Trip computer
7. READY
8. EV MODE

* The actual cluster in the vehicle may differ from the illustration.
  For more details refer to the "Gauges" in the next pages.

OTFH042051C



OTF040052



OTFH040098N

Instrument panel illumination

The instrument panel illumination intensity can be adjusted by pressing the control switch with the headlight switch in any position when the engine start/stop button is in the ON position.

The illumination intensity is shown on the instrument cluster LCD display.



OTFH042060

Gauges

Odometer (km or mi.)

The odometer indicates the total distance the vehicle has been driven.

You will also find the odometer useful to determine when periodic maintenance should be performed.

The odometer is always displayed until the display is turned off.

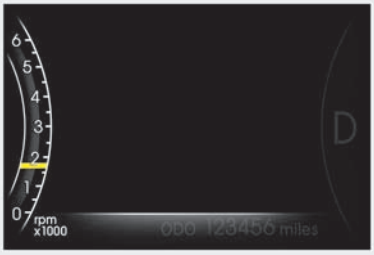


OTFH042054C

Speedometer

The speedometer indicates the forward speed of the vehicle.

The speedometer is calibrated in kilometers per hour and/or kilometers per hour.



OTFH040055N

Tachometer

The tachometer indicates the approximate number of engine revolutions per minute (rpm).

Use the tachometer to select the correct shift points and to prevent lugging and/or over-revving the engine.



OTFH042058C

Fuel gauge

The fuel gauge indicates the approximate amount of fuel remaining in the fuel tank. The fuel tank capacity is given in section 8. The fuel gauge is supplemented by a low fuel warning light, which will illuminate when the fuel tank is nearly empty.

On inclines or curves, the fuel gauge pointer may fluctuate or the low fuel warning light may come on earlier than usual due to the movement of fuel in the tank.

⚠ WARNING - Fuel gauge

Running out of fuel can expose vehicle occupants to danger.

You must stop and obtain additional fuel as soon as possible after the warning light comes on or when the gauge indicator comes close to the E level.

⚠ CAUTION

Avoid driving with extremely low fuel level. Running out of fuel could cause the engine to misfire, damaging the catalytic converter.



OTFH040057N

Engine coolant temperature gauge

This gauge shows the temperature of the engine coolant when the engine start/stop button is ON.

Do not continue driving with an overheated engine. If your vehicle overheats, refer to “If the engine overheats” in section 6.

⚠ CAUTION

If the gauge pointer moves beyond the normal range area toward the “H” position, it indicates overheating that may damage the engine.

⚠ WARNING

Never remove the radiator cap when the engine is hot. The engine coolant is under pressure and could cause severe burns. Wait until the engine is cool before adding coolant to the reservoir.



OTFH040225N

State of charge (SOC)

The state of charge (SOC) gauge indicates the hybrid battery's charge level. If the SOC is near L level, the vehicle automatically operates the engine to charge the battery. However, if the service indicator and MIL(Malfunction indicator lamp) turn on when the State of Charge(SOC) is near L(Low), the vehicle should be towed. Refer to the chapter 6.

⚠ WARNING

Never try to start the vehicle if the fuel tank is empty. The engine is impossible to charge the high voltage battery of hybrid system. If you try to start the vehicle when the fuel is empty, the high voltage battery will become discharged and be damaged.



OTFH040226N

ECO GUIDE gauge

This is a gauge to let drivers know whether the current driving condition is economical or not. The fuel efficiency is high in the green zone but is low in the red zone.

- Green zone : Good driving condition
- White zone : Normal driving condition
- Red zone : Bad driving condition



OTFH040069N

Active ECO

Your vehicle is equipped with a highly efficient power train based on Kia's Active ECO technology. Active ECO mode is for normal, everyday driving for smooth efficient operation. Each time you start the vehicle, Active ECO is activated automatically. If needed, the driver can temporarily switch Active ECO ON/OFF using the steering wheel mounted button.

- Active ECO OFF is intended for brief periods of unusual driving, such as steep roads or heavy loads.
- Active ECO ON is meant for normal vehicle driving and provides maximum fuel efficiency.

Switch back to Active ECO ON as soon as possible for maximum fuel efficiency and to restore the Active ECO center display. Your vehicle will automatically resume Active ECO each time it is restarted.



READY indicator

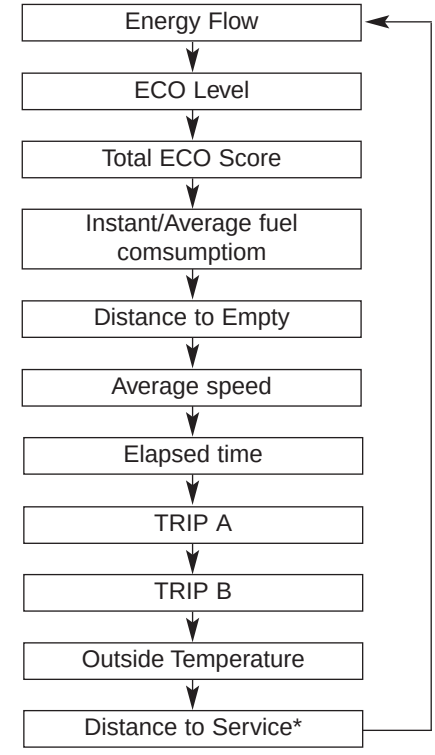
READY

This light illuminates if it is possible to drive your vehicle when the engine start/stop button is turned to the START position. If the vehicle fail to start, this light doesn't come on. Also, if this light is blinking while driving, it indicates a fault to enter into a limited operating mode. If this light goes off while driving, it indicates a fault that will cause the vehicle to shut down. If these occur, have your vehicle checked by an authorized Kia dealer.



Trip computer

The trip computer is a microcomputer-controlled driver information system that displays information related to driving on the display when the engine start/stop button is in the ON position. All stored driving information is reset if the battery is disconnected.

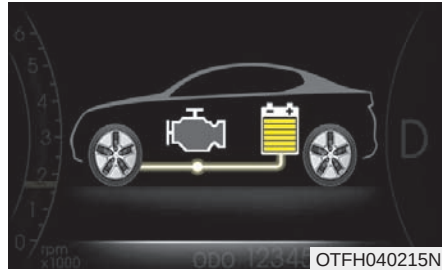


* if equipped

OPTIMA HYBRID ENERGY FLOW

Kia hybrid system notifies the drivers of energy flow in various operating modes. Twelve Modes show drivers the current operating condition.

EV Propulsion



Motor power is used to move the vehicle.
(Battery → Wheel)

Engine Only Propulsion



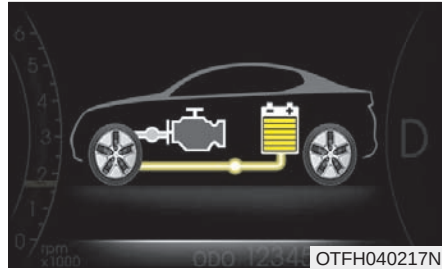
Engine power is used to move the vehicle.
(Engine → Wheel)

Vehicle Stop



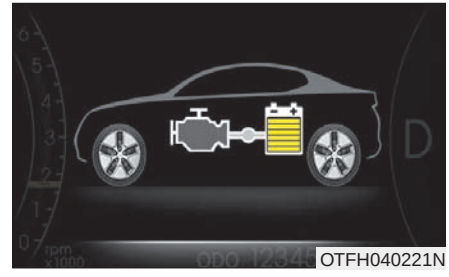
The mode means the vehicle stop.
(No energy flow)

Power Assist



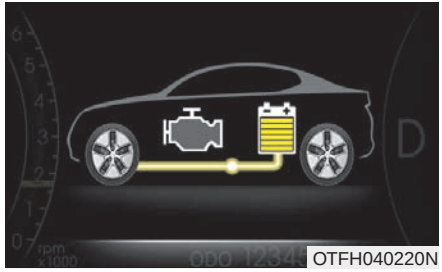
Motor and Engine power are used to move the vehicle.
(Battery & Energy → Wheel)

Engine Generation



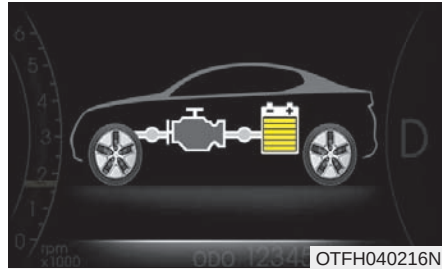
Vehicle is stopped with the Engine charging the hybrid battery.
(Engine → Battery)

Regeneration



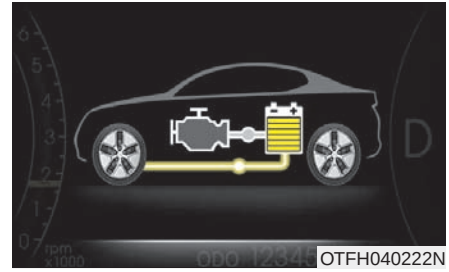
Hybrid battery is being charged by regenerative braking.
(Wheel → Battery)

Power Reserve



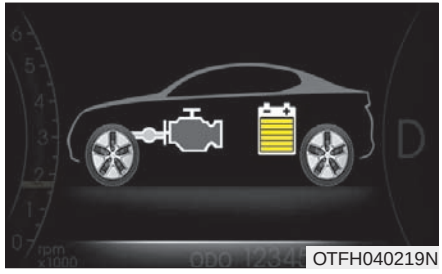
Engine is both driving the vehicle and charging the hybrid battery.
(Engine → Wheel & Battery)

Engine Generation/Regeneration



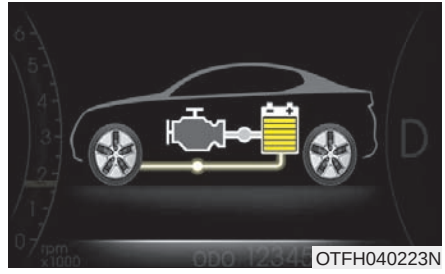
The engine and regenerative brake system charges the hybrid battery.
(Engine & Wheel → Battery)

Engine Brake



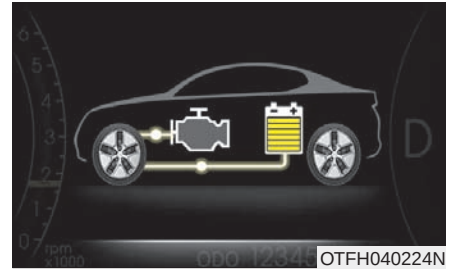
The vehicle is being slowed by engine compression.
(Wheel → Engine)

Engine Generation/Motor Drive
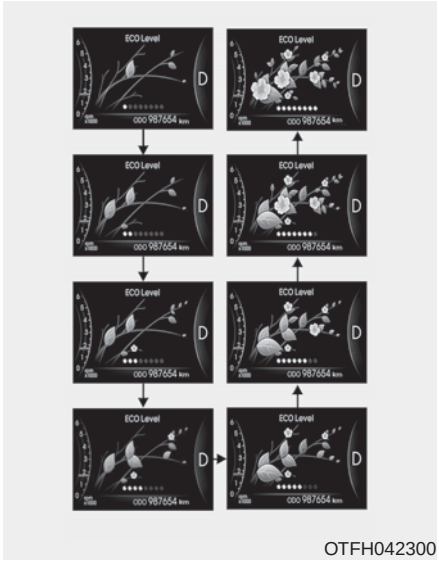


The vehicle is being slowed by engine compression and regenerative braking. The hybrid battery is being charged by regenerative braking.
(Engine → Battery → Wheel)

Engine Brake/Regeneration



The engine friction is used to vehicle brake system and the regenerative brake charges the hybrid battery.
(Wheel → Engine & Battery)

ECO Level display



OTFH042300

When the vehicle is started, the ECO Level display will indicate level number 4. If you drive economically, the ECO Level will increase. However, if you do not drive economically, the ECO Level will decrease.

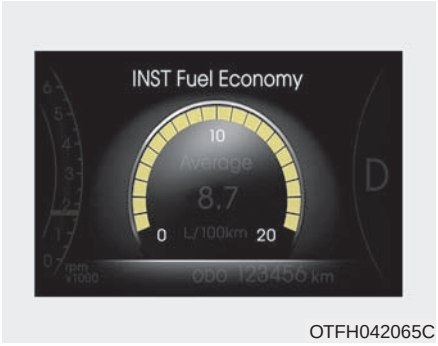
Total ECO Score display



OTFH042301C

If your ECO Level reaches its maximum, your Total ECO Score automatically rises by 1 point. Total ECO Score points are saved and accumulate over time.

The image displayed on Total ECO Score will change continuously, adding leaves and flowers to a branch.



OTFH042065C

Instant fuel consumption (l/100 km or MPG)

This mode calculates the instantaneous fuel consumption every 2 seconds, based on driving distance and amount of fuel injected into the engine.



OTFH042064C

Average fuel consumption (if equipped) (*l*/100 km or MPG)

This mode calculates the average fuel consumption from the total fuel used and the distance since the last average consumption reset. The total fuel used is calculated from the fuel consumption input. For an accurate calculation, drive more than 50 m (0.03 miles).

Pressing the RESET button for more than 1 second, when the average fuel consumption is being displayed, clears the average fuel consumption to zero (---).

If the vehicle speed exceeds 1 km/h after refueled more than 6 *l*, the average fuel consumption will be cleared to zero (---).



OTFH042062C

Distance to empty (mi. or km)

This mode indicates the estimated distance to empty based on the current fuel in the fuel tank and the amount of fuel delivered to the engine. When the remaining distance is below 50 km (30 miles), "---" will be displayed and the distance to empty indicator will blink.

The meter's working range is from 50 to 990 km (30 to 990 miles).



OTFH042066C

Average speed (MPH or km/h)

This mode calculates the average speed of the vehicle since the last average speed reset.

Even if the vehicle is not in motion, the average speed keeps going while the engine is running.

Pressing the RESET button for more than 1 second, when the average speed is being displayed, clears the average speed to zero (---).



OTFH042067C

Elapsed time

This mode indicates the total time traveled since the last driving time reset.

Even if the vehicle is not in motion, the average speed continues to be calculated while the engine is running.

The meter's working range is from 0:00~99:59.

Pressing the RESET button for more than 1 second, when the driving time is being displayed, clears the driving time to zero (0:00).

✻ NOTICE

- **If the vehicle is not on level ground or the battery power has been interrupted, the "Distance to empty" function may not operate correctly.**
  The trip computer may not register additional fuel if less than 6 liters (1.6 gallons) of fuel are added to the vehicle.
- **The fuel consumption (if equipped) and distance to empty values may vary significantly based on driving conditions, driving habits, and condition of the vehicle.**
- **The distance to empty value is an estimate of the available driving distance. This value may differ from the actual driving distance available.**



OTFH042061C

Tripmeter (mi. or km)

TRIP A : Tripmeter A

TRIP B : Tripmeter B

This mode indicates the distance of individual trips selected since the last tripmeter reset.

The meter's working range is from 0.0 to 9999.9 km (0.0 to 9999.9 miles).

Pressing the RESET button for more than 1 second, when the tripmeter (TRIP A or TRIP B) is being displayed, clears the tripmeter to zero (0.0).



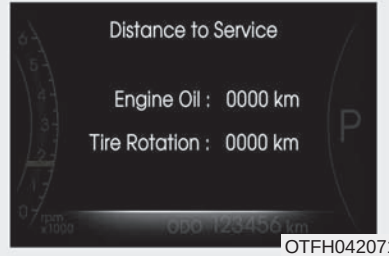
OTFH042068C

Outside thermometer

The current outside temperature is displayed in 1°C (1°F) increments. The temperature range is between -40°C ~ 60°C (-40°F ~ 140°F).

- The outside temperature display may not change immediately like a typical thermometer.

Distance to Service



OTFH042071C

To enter the "Distance to Service" mode, press the TRIP button for less than 1 second.



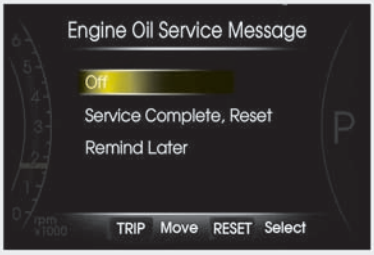
OTFH040071N



OTFH040072N

Engine Oil(Tire Rotation) Service Required

1. If service is required, the message will be displayed.



OTFH040073N

2. If you would like to reset or inactivate the maintenance system press the RESET button for more than 1 second. The display will change to "Engine Oil Service Message" mode.
   You can move to items by pressing the TRIP button and select the desired item by pressing the RESET button.



OTFH040074N



OTFH040075N

Maintenance

1. When the vehicle is at a standstill, pressing the TRIP button for more than 2 seconds with the ENGINE START/STOP button in the ON position or engine running, the LCD display on the cluster will change to the "User Setting" mode.
   You can move to the items by pressing the TRIP button and select the item by pressing the RESET button.
2. In the "User Setting" mode select "Maintenance".
3. Select the desired maintenance schedule.
4. If finished, you can come out of the Maintenance mode by pressing the TRIP button for more than 2 seconds.

Vehicle option (if equipped)

1. When the vehicle is at a standstill, pressing the TRIP button for more than 2 seconds with the ENGINE START/STOP button in the ON position or engine running, the LCD display on the cluster will change to the "User Setting" mode.

   You can move to items by pressing the TRIP button and select the item by pressing the RESET button.
2. In the "User Setting" mode, select "Vehicle Option".
3. Move (TRIP button) to the desired item and select (RESET button).

Auto Door Lock

Off - The auto door lock operation will be canceled.

Speed - All doors will be automatically locked when the vehicle speed exceeds 15 km/h (9.3 mph).

Shift Lever - All doors will be automatically locked if the shift lever is shifted from the P(Park) position to the R(Reverse), N(Neutral) or D(Drive) position.

Auto Door Unlock

Off - The auto door unlock operation will be inactivated.

Key Out - All doors will be automatically unlocked when smart key is removed from the smart key holder.

Shift Lever - All doors will be automatically unlocked if the shift lever is shifted to the P (Park) position.

Twice Unlock

On - The driver's door will unlock if the door is unlocked. When the door is unlocked again within 4 seconds, all doors will unlock.

Off - The two turn unlock function will be inactivated. Therefore, all doors will unlock if the door is unlocked.

❈ Except the central door lock switch.

Horn feedback

On - The hazard warning light will blink and the horn will sound when the door is locked or unlocked with the transmitter or smart key.

Off - The hazard warning light will blink but the horn will not sound when the door is locked or unlocked with the transmitter or smart key.

Seat Easy Access (only for Driver Position Memory System equipped vehicle)

On - The driver's seat will automatically move forward or rearward for the driver to enter or exit the vehicle comfortably.

Off - The Seat Easy Access function will be inactivated.

Headlamp Escort

On - The Headlamp Escort and Escort Welcome function will be activated.

Off - The Headlamp Escort and Escort Welcome function will be inactivated.

Welcome Light (if equipped)

On - The Welcome Light function will be activated.

Off - The Welcome Light function will be inactivated.

Steering Position

On - Steering Position display function will be activated.

Off - Steering Position display function will be inactivated.

Auto Triple Turn (One-touch triple turn signal)

On - The lane change signals will blink 3 times when the turn signal lever is moved slightly.

Off - The Auto Triple Turn function will be inactivated.

AVG fuel economy

Auto Reset - The average fuel economy will reset automatically when you drive after refueling.

Manual Reset - The average fuel economy will not reset automatically when you drive after refueling.

Warnings and indicators

All warning lights are checked by turning the ignition switch ON (do not start the engine). Any light that does not illuminate should be checked by an authorized Kia dealer.

After starting the engine, check to make sure that all warning lights are off. If any are still on, this indicates a situation that needs attention. When releasing the parking brake, the brake system warning light should go off. The fuel warning light will stay on if the fuel level is low.

EV mode



This light illuminates if the vehicle only is moved by the electric motor.

Service indicator



This indicator comes on when any malfunction occurs in the hybrid system. If this occurs, have your vehicle checked by an authorized Kia dealer.

Air bag warning light



This warning light will illuminate for approximately 6 seconds each time you turn the engine start/stop button to the ON position.

This light also comes on when the Supplement Restraint System (SRS) is not working properly. If the air bag warning light does not come on, or continuously remains on after operating for about 6 seconds when you turned the engine start/stop button to the ON position or started the engine, or if it comes on while driving, have the SRS inspected by an authorized Kia dealer.

Anti-lock brake system (ABS) warning light



This warning light illuminates if the engine start/stop button is turned ON and goes off in approximately 3 seconds if the system is operating normally.

If the ABS warning light remains on, comes on while driving, or does not come on when the engine start/stop button is turned to the ON position, this indicates that the ABS may have malfunctioned.

If this occurs, have your vehicle checked by an authorized Kia dealer as soon as possible. The normal braking system will still be operational, but without the assistance of the anti-lock brake system.

Electronic brake force distribution (EBD) system warning light



If these two warning lights illuminate at the same time while driving, your vehicle's ABS and EBD system may have malfunctioned.

In this case, your ABS and regular brake system may not work normally. Have the vehicle checked by an authorized Kia dealer as soon as possible.

⚠ WARNING

If both ABS and Brake warning lights are on and stay on, your vehicle's brake system will not work normally during sudden braking. Have your vehicle checked by an authorized Kia dealer as soon as possible.

✻ NOTICE

If the ABS warning light or EBD warning light is on and stays on, the speedometer or odometer/tripmeter may not work. In this case, have your vehicle checked by an authorized Kia dealer as soon as possible.

Seat belt warning

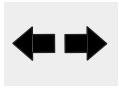


As a reminder to the driver, the seat belt warning light will blink for approximately 6 seconds each time you turn the engine start/stop button ON, regardless of belt fastening.

If the driver's seat belt is not fastened when the engine start/stop button is turned on, the seat belt warning light and the seat belt warning chime will operate for approximately 6 seconds. But if it is refastened within the 6 seconds, the warning light will blink till the 6 seconds and the warning chime will turn off immediately.

If the driver's seat belt is disconnected after the engine start/stop button is turned to the ON position, the seat belt warning light will blink for approximately 6 seconds. But if it is fastened within the 6 seconds the warning light will turn off immediately. If the driver's seat belt is not fastened when the vehicle speed exceeds 10 km/h (6 mph), the seat belt warning light and chime will operate approximately 11 times with a pattern of 6 seconds on and 24 seconds off until the belt is fastened or the vehicle speed decreases below 5 km/h (3 mph).

Turn signal indicator



The blinking green arrows on the instrument panel show the direction indicated by the turn signals. If the arrow comes on but does not blink, blinks more rapidly than normal, or does not illuminate at all, it indicates a malfunction in the turn signal system. You should consult your dealer for repairs.

This indicator also blinks when the hazard warning switch is turned on.

High beam indicator



This indicator illuminates when the headlights are on and in the high beam position or when the turn signal lever is pulled into the Flash-to-Pass position.

Engine oil pressure warning light



This warning light indicates the engine oil pressure is low.

If the warning light illuminates while driving:

1. Drive safely to the side of the road and stop.
2. With the engine off, check the engine oil level. If the level is low, add oil as required.

If the warning light remains on after adding oil or if oil is not available, call an authorized Kia dealer.

⚠ CAUTION

If the engine is not stopped immediately after the engine oil pressure warning light is illuminated, severe damage could result.

⚠ CAUTION

If the oil pressure warning light stays on while the engine is running, serious engine damage may result. The oil pressure warning light comes on whenever there is insufficient oil pressure. In normal operation, it should come on when the engine start/stop button is turned on, then go out when the engine is started. If the oil pressure warning light stays on while the engine is running, there is a serious malfunction.

If this happens, stop the vehicle as soon as it is safe to do so, turn off the engine and check the oil level. If the oil level is low, fill the engine oil to the proper level and start the engine again. If the light stays on with the engine running, turn the engine off immediately. In any instance where the oil light stays on when the engine is running, the engine should be checked by an authorized Kia dealer before the car is driven again.

Brake system &
Parking brake &
Brake fluid warning light



The brake warning light will illuminate when the Regenerative Brake System is not operating properly.

Have the system checked by an authorized Kia dealer as soon as possible.

When the brake function is not well or the regenerative brake system is not operated with brake system malfunction, the brake warning light turned on and 'check brake' is displayed on the LCD. Have the system checked by an authorized Kia dealer as soon as possible.

Parking brake warning

This light illuminated when the parking brake is applied with engine start/stop button in the START or ON position. The warning light should go off when the parking brake is released.

Low brake fluid level warning

If the warning light remains on, it may indicate that the brake fluid level in the reservoir is low.

If the warning light remains on:

1. Drive carefully to the nearest safe location and stop your vehicle.
2. With the engine stopped, check the brake fluid level immediately and add fluid as required. Then check all brake components for fluid leaks.
3. Do not drive the vehicle if leaks are found, the warning light remains on or the brakes do not operate properly. Have the vehicle towed to any authorized Kia dealer for a brake system inspection and necessary repairs.

Your vehicle is equipped with a dual-diagonal braking system. This means you still have braking on two wheels even if one of the brake circuits is damaged or malfunctions. With only one of the circuits working, more than normal pedal travel and greater pedal pressure are required to stop the car. Also, the car will not stop in as short a distance with only a portion of the brake system working. If the brakes fail while you are driving, shift to a lower gear for additional engine braking and stop the car as soon as it is safe to do so.

To check bulb operation, check whether the parking brake and brake fluid warning light illuminates when the engine start/stop button is in the ON position.

⚠ WARNING

Driving the vehicle with a warning light on is dangerous. If the brake warning light remains on, have the brakes checked and repaired immediately by an authorized Kia dealer.

⚠ WARNING

When the brake function is not well and the regenerative brake system is not operated with brake system malfunction, the brake warning light turned on with 'check brake' is displayed on the LCD and warning chime will sound. In this condition you can stop your vehicle by applying greater force to the brake pedal than normal and the stopping distance will be longer. Have the system checked by an authorized Kia dealer as soon as possible.

Front fog light indicator (if equipped)



This indicator comes on when the front fog lights are ON.

Shift pattern indicator



The indicator displays which automatic transaxle shift position is selected.

✻ NOTICE

If the engine coolant temperature warning light illuminates, it indicates overheating that may damage the engine.

Charging system warning light



This warning light indicates a malfunction of either the generator or electrical charging system.

If the warning light illuminates while the vehicle is in motion:

1. Drive to the nearest safe location.
2. With the engine off, check the generator drive belt for looseness or breakage.
3. If the belt is adjusted properly, a problem exists somewhere in the electrical charging system. Have an authorized Kia dealer correct the problem as soon as possible.

Trunk lid open warning light



This warning light illuminates when the trunk lid is not closed securely with the engine start/stop button in any position.

Door ajar warning light



This warning light illuminates when a door is not closed securely with the engine start/stop button in any position.

Tail light indicator



This indicator illuminates when the tail lights are on.

Immobilizer indicator



With smart key system

If any of the following occurs in a vehicle equipped with the smart key, the immobilizer indicator illuminates, blinks or the light goes off.

- When the smart key is in the vehicle, if the engine start/stop button is turned to the ON position, the indicator will illuminate until the engine is started. However, when the smart key is not in the vehicle, if the engine start/stop button is depressed, the indicator will blink for a few minutes to indicate that you will not be able to start the hybrid system.
- When the engine start/stop button is turned to the ON position and the indicator turns off after 2 seconds, the system may need repair. Have the vehicle checked by an authorized Kia dealer.
- When the battery is weak, if the engine start/stop button is depressed, the indicator will blink and you will not be able to start the hybrid system. However, you may still be able to start the hybrid system by inserting the smart key in the smart key holder. If smart key system related parts need repair, the indicator blinks.

Low fuel level warning light



This warning light indicates the fuel tank is nearly empty. When it comes on, you should add fuel as soon as possible. Driving with the fuel level warning light on or with the fuel level below “E” can cause the engine to misfire and damage the catalytic converter (if equipped).

Malfunction indicator lamp (MIL) (check engine light)



This indicator is part of the Engine Control System which monitors various emission control system components. If this indicator illuminates while driving, it indicates that a potential malfunction has been detected somewhere in the emission control system.

This indicator will also illuminates when the engine start/stop button is turned to the ON position, and will go off in a few seconds after the engine is started. If it illuminates while driving, or does not illuminate when the engine start/stop button is turned to the ON position, take your vehicle to the nearest authorized Kia dealer and have the system checked.

Generally, your vehicle will continue to be drivable, but have the system checked by an authorized Kia dealer promptly.

⚠ CAUTION

- ***Prolonged driving with the Emission Control System Malfunction Indicator Light illuminated may cause damage to the emission control systems which could effect drivability and/or fuel economy.***
- ***If the Emission Control System Malfunction Indicator Light illuminates, potential catalytic converter damage. This could result in loss of engine power. Have the Engine Control System inspected as soon as possible by an authorized Kia dealer.***

ESC indicator (Electronic Stability Control) / ESC malfunction indicator



The ESC indicator will illuminate when the engine start/stop button is turned ON, but should go off after approximately 3 seconds. When the ESC is on, it monitors the driving conditions. Under normal driving conditions, the ESC indicator will remain off. When a slippery or low traction condition is encountered, the ESC will operate, and the ESC indicator will blink to indicate the ESC is operating.

ESC OFF indicator



The ESC OFF indicator will illuminate when the engine start/stop button is turned ON, but should go off after approximately 3 seconds. To switch to ESC OFF mode, press the ESC OFF button. The ESC OFF indicator will illuminate indicating the ESC is deactivated.

If this indicator stays on when ESC OFF is not selected, the ESC may have malfunctioned. Take your vehicle to an authorized Kia dealer and have the system checked.

Low tire pressure telltale



The low tire pressure telltale comes on for 3 seconds after the smart key is turned to the "ON" position.

If the warning light does not come on, or continuously remains on after coming on for about 3 seconds when you turned the smart key to the "ON" position, the Tire Pressure Monitoring System is not working properly. If this occurs, have your vehicle checked by an Kia authorized dealer as soon as possible.

This warning light will also illuminate if one or more of your tires is significantly under-inflated. You should stop and check your tires as soon as possible. If the warning light illuminates while driving, reduce vehicle speed immediately and stop the vehicle.

Avoid hard braking and overcorrecting at the steering wheel. Inflate the tires to the proper pressure as indicated on the vehicle's tire information placard.

⚠ WARNING

Significantly low tire pressure makes the vehicle unstable and can contribute to loss of vehicle control and increased braking distances.

Continued driving on tires with low pressure will cause the tires to overheat and fail.

Cruise indicator (if equipped)

CRUISE indicator



The indicator illuminates when the cruise control system is enabled.

The cruise indicator in the instrument cluster is illuminated when the cruise control ON/OFF button on the steering wheel is pushed.

The indicator goes off when the cruise control ON/OFF button is pushed again. For more Information, refer to “Cruise control system” in section 5.

Cruise SET indicator



The indicator illuminates when the cruise function switch (SET- or RES+) is ON.

The cruise SET indicator in the instrument cluster illuminates when the cruise control switch (SET- or RES+) is pushed.

The cruise SET indicator does not illuminate when the cruise control switch (CANCEL) is pushed or the system is disengaged.

Key reminder warning chime

If the driver’s door is opened while the smart key is in the vehicle with the engine start/stop button in ACC or the smart key is in the smart key holder with the engine start/stop button in OFF, the key reminder warning chime will sound.

The chime sounds until the smart key is removed from the smart key holder or the driver’s door is closed.

Electronic power steering (EPS) system warning light (if equipped)

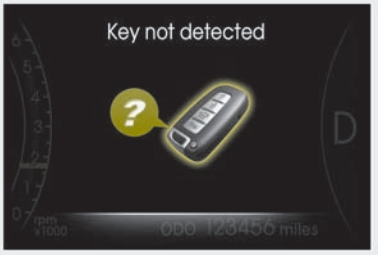
EPS

This warning light illuminates after the engine start/stop button is turned to the ON position and then it will go off when the engine starts.

This light also comes on when the EPS has malfunctioned. If it comes on while driving, have your vehicle inspected by an authorized Kia dealer.



OTFH040081N



OTFH040082N

LCD display warning (if equipped)

Key is not in vehicle

If the smart key is not in the vehicle and if any door is opened or closed with the ENGINE START/STOP button in the ACC, ON, or START position, the warning illuminates on the LCD display. Also, the chime sounds for 5 seconds when the smart key is not in the vehicle and the door is closed.

Always have the smart key with you.

Key is not detected

If the smart key is not in the vehicle or is not detected and you press the ENGINE START/STOP button, the warning illuminates on the LCD display for 10 seconds. Also, the immobilizer indicator and the key holder light blinks for 10 seconds.

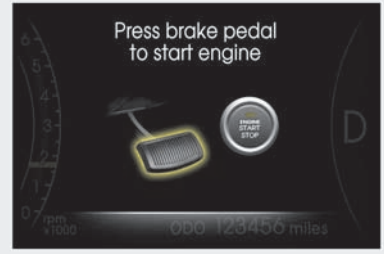


OTFH040083N

Low key battery

If the ENGINE START/STOP button is pressed to the OFF position when the smart key in the vehicle discharges, the warning illuminates on the LCD display for about 10 seconds.

Replace the battery with a new one.



OTFH040084N

Press brake pedal to start engine

If the ENGINE START/STOP button is pressed to the ACC position twice by pressing the button repeatedly without depressing the brake pedal, the warning illuminates on the LCD display for about 10 seconds to indicate that you should depress the brake pedal to start the engine.



OTFH040085N

Shift to "P" position

If you try to turn off the engine without the shift lever in the P (Park) position, the ENGINE START/STOP button will change to the ACC position. If the button is pressed once more it will change to the ON position. The warning illuminates on the LCD display for about 10 seconds to indicate that you should press the ENGINE START/ STOP button with the shift lever in the P (Park) position to turn off the engine.



OTFH040086N

Remove key

When you turn off the engine with the smart key in the smart key holder, the warning illuminates on the LCD display for about 10 seconds. Also, the smart key holder light blinks for about 10 seconds.

To remove the smart key push the smart key once and pull it out from the smart key holder.



OTFH040087N

Insert key

If you press the ENGINE START/STOP button while "Key is not detected" illuminates on the LCD display, the warning “Insert key” illuminates for about 10 seconds. Also, the immobilizer indicator and the key holder light blinks for about 10 seconds.



OTFH040088N

Press start button again

If you can not operate the ENGINE START/STOP button when there is a problem with the ENGINE START/STOP button system, the warning illuminates for 10 seconds and the chime sounds continuously to indicate that you could start the engine by pressing the ENGINE START/STOP button once more.

The chime will stop if the ENGINE START/STOP button system works normally.

If the warning illuminates each time you press the ENGINE START/STOP button, take your vehicle to an authorized Kia dealer and have the system checked.



OTFH040302N

Shift to "P" to start engine

If you try to start the engine with the shift lever not in P(Park), the warning illuminates for 10 seconds on the LCD screen.



OTFH040091N

Check stop lamp fuse

When the stop lamp fuse is disconnected, The warning illuminates for 10 seconds on the LCD display.

Replace the fuse with a new one.

If that is not possible you can start the engine by pressing the ENGINE START/STOP button for 10 seconds with the ENGINE START/STOP button in ACC.



OTFH040093N

Align steering wheel

If you start the engine when the steering wheel is turned 90 degrees to the right after a couple of seconds, “Align steering wheel” illuminates on the LCD display for 5 seconds.

Turn the steering wheel to the left and make it turned to the right less than 30 degrees.



OTFH040094N

Align steering wheel

If the steering wheel is aligned within 5 seconds after “Align steering wheel” is displayed, the indicator will appear as indicated in the above picture.



OTFH040092N

Align steering wheel

If you start the engine when the steering wheel is turned 90 degrees to the left after a couple of seconds, “Align steering wheel” illuminates on the LCD display for 5 seconds.

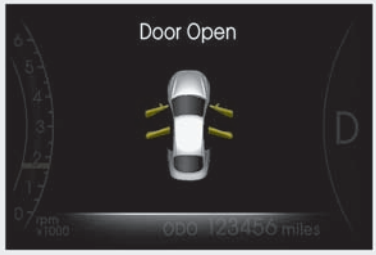
Turn the steering wheel to the right and make it turned to the left less than 30 degrees.



OTFH040095N

Low tire pressure

When one or more of your tires is significantly underinflated, the warning light comes on.



OTFH040096N

Door open

This indicator displays which door is opened.



OTFH040097N

Trunk open

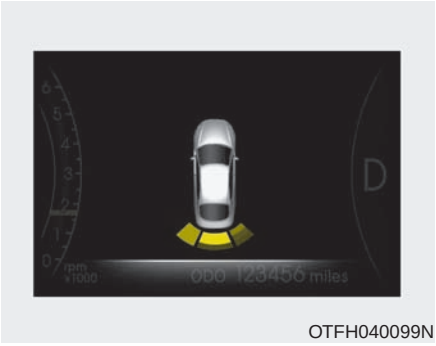
This indicator displays when the trunk is not closed securely.



OTFH040098N

Illumination

The illumination intensity of the instrument panel is shown when adjusting it with the illumination control switch.



OTFH040099N

Parking assist warning

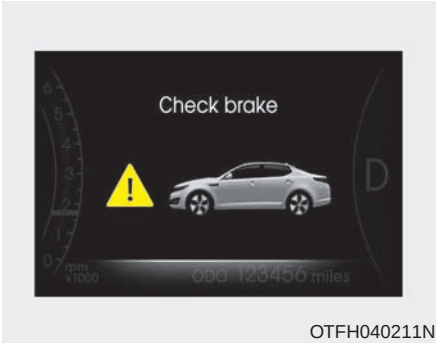
Displays the area an obstacle is detected while moving rearward.



OTFH040100N

Low washer liquid

This warning light illuminates for 12 seconds when the washer fluid reservoir is nearly empty. To turn off the warning light immediately, press the RESET button for more than 1 second. Refill the washer fluid as soon as possible.



OTFH040211N

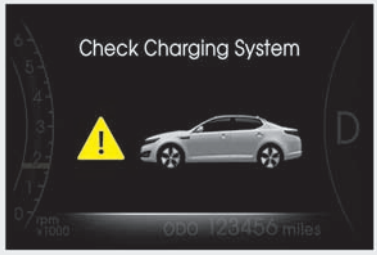
Check brake

'Check brake' is displayed when the brake function is not well or the regenerative brake system is not operated with brake system malfunction. Refer to the page 4-62 for the related information.

Have the system checked by an authorized Kia dealer as soon as possible.

⚠ WARNING

Driving with the 'check brake' on is dangerous. Have the system checked by an authorized Kia dealer as soon as possible.



OTFH040213N

Check charging system

This warning illuminates when a malfunction is detected with the Charging System.

✻ NOTICE

When the high voltage battery power is low, the warning may occur. In that time, the warning may disappear when the battery is charged by engine.



OTFH040231N

Check active air flap system

This warning will be illuminated as follow;

- When the actuator flap malfunction is detected
- When the actuator air flap controller malfunction detected
- In a condition opening the air flap, if the air flap is not open.

When the all conditions illuminating the warning are cleared, the warning will be off.

✻ NOTICE

In winter, the warning may not illuminate immediately.
The active air flap system is even normal condition, the warning or warning indicator(MIL) may be turned on. In that time, check the flap frozen condition or attached materials.
If the flap is frozen in winter, the warning indicator(MIL) may be turned on without warning contents.



OTFH042305N

Refuel now to prevent Hybrid battery damage

If the fuel tank is nearly empty, a message “Refuel now to prevent Hybrid battery damage!” will appear on the LCD display. Also, the chime will sound several times.

You must stop and obtain additional fuel as soon as possible.

⚠ CAUTION

Avoid driving with very low fuel level. Running out of fuel could damage the hybrid battery.



OTFH042304N

Hybrid system warning! Safely stop and do not drive

If the hybrid system error occurs, a message “Hybrid system warning! Safely stop and do not drive” will appear on the LCD display and the Ready indicator will blink. Also, the chime will sound until the problem is solved.

Have the vehicle towed to an authorized Kia dealer to inspect the hybrid system.

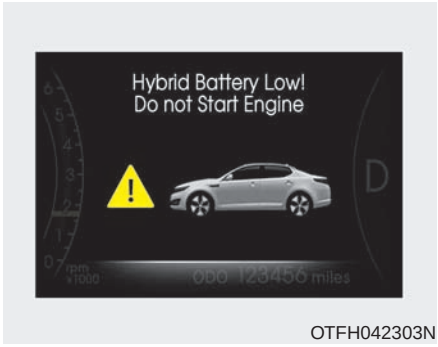


OTFH042302N

Hybrid battery low! Safely stop and shift to “P”

If the SOC (State Of Charge) is very low, a message “Hybrid battery low! Safely stop and shift to “P”” will appear on the LCD display.

To charge the hybrid battery, stop in a safe place and move the shift gear to the P(Park) position as soon as possible.



OTFH042303N

Hybrid battery low! Do not start engine

If the engine does not start and SOC (State Of Charge) is very low, a message “Hybrid battery low! Do not start engine” will appear on the LCD display. Also, the chime will sound until the problem is solved.

Have the vehicle towed to an authorized Kia dealer to inspect the hybrid system and the engine.

HAZARD WARNING FLASHER



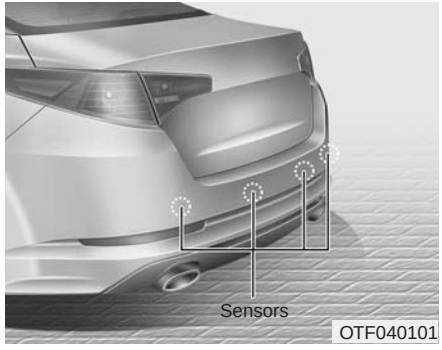
OTF040105

The hazard warning flasher should be used whenever you find it necessary to stop the car in a hazardous location. When you must make such an emergency stop, always pull off the road as far as possible.

The hazard warning lights are turned on by pushing in the hazard switch. Both turn signal lights will blink. The hazard warning lights will operate even though the key is not in the ignition switch.

To turn the hazard warning lights off, push the switch again.

REAR PARKING ASSIST SYSTEM (IF EQUIPPED)



The rear parking assist system assists the driver during backward movement of the vehicle by chiming if any object is sensed within a distance of 120 cm (47 in.) behind the vehicle. This system is a supplemental system and it is not intended to nor does it replace the need for extreme care and attention of the driver. The sensing range and objects detectable by the back sensors are limited. Whenever backing-up, pay as much attention to what is behind you as you would in a vehicle without a rear parking assist system.

⚠ WARNING

The rear parking assist system is a supplementary function only. The operation of the rear parking assist system can be affected by several factors (including environmental conditions). It is the responsibility of the driver to always check the area behind the vehicle before and while backing up.

Operation of the rear parking assist system

Operating condition

- This system will activate when backing up with the ignition switch ON.
- The sensing distance while the rear parking assist system is in operation is approximately 120 cm (47 in.).
- When more than two objects are sensed at the same time, the closest one will be recognized first.

Types of warning sound

- When an object is 120 cm to 81 cm (47 in. to 32 in.) from the rear bumper: Buzzer beeps intermittently.
- When an object is 80 cm to 41 cm (31 in. to 16 in.) from the rear bumper: Buzzer beeps more frequently.
- When an object is within 40 cm (15 in.) of the rear bumper:

  Buzzer sounds continuously.

Non-operational conditions of rear parking assist system

The rear parking assist system may not operate properly when:

1. Moisture is frozen to the sensor. (It will operate normally when the moisture has been cleared.)
2. The sensor is covered with foreign matter, such as snow or water, or the sensor cover is blocked. (It will operate normally when the material is removed or the sensor is no longer blocked.)
3. Driving on uneven road surfaces (unpaved roads, gravel, bumps, gradient).
4. Objects generating excessive noise (vehicle horns, loud motorcycle engines, or truck air brakes) are within range of the sensor.
5. Heavy rain or water spray exists.
6. Wireless transmitters or mobile phones are within range of the sensor.
7. The sensor is covered with snow.
8. Trailer towing

The detecting range may decrease when:

1. The sensor is stained with foreign matter such as snow or water. (The sensing range will return to normal when removed.)
2. Outside air temperature is extremely hot or cold.

The following objects may not be recognized by the sensor:

1. Sharp or slim objects such as ropes, chains or small poles.
2. Objects which tend to absorb the sensor frequency such as clothes, spongy material or snow.
3. Undetectable objects smaller than 1 m (40 in.) in height and narrower than 14 cm (6 in.) in diameter.

Rear parking assist system precautions

- The rear parking assist system may not sound sequentially depending on the speed and shapes of the objects detected.
- The rear parking assist system may malfunction if the vehicle bumper height or sensor installation has been modified or damaged. Any non-factory installed equipment or accessories may also interfere with the sensor performance.
- The sensor may not recognize objects less than 40 cm (15 in.) from the sensor, or it may sense an incorrect distance. Use caution.
- When the sensor is frozen or stained with snow, dirt, or water, the sensor may be inoperative until the stains are removed using a soft cloth.
- Do not push, scratch or strike the sensor. Sensor damage could occur.

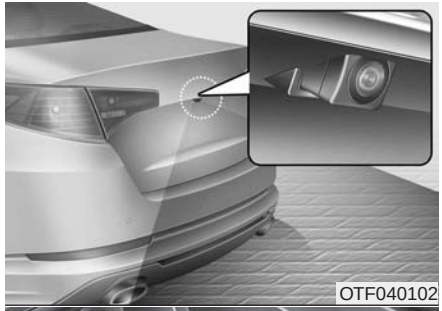
✻ NOTICE

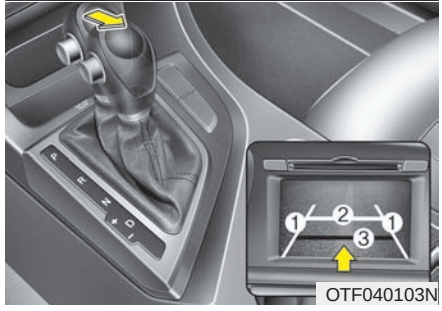
This system can only sense objects within the range and location of the sensors; It can not detect objects in other areas where sensors are not installed. Also, small or slim objects, such as poles or objects located between sensors may not be detected by the sensors.
Always visually check behind the vehicle when backing up.
Be sure to inform any drivers of the vehicle that may be unfamiliar with the system regarding the systems capabilities and limitations.

Self-diagnosis

If you don't hear an audible warning sound or if the buzzer sounds intermittently when shifting the gear to the R (Reverse) position, this may indicate a malfunction in the rear parking assist system. If this occurs, have your vehicle checked by an authorized Kia dealer as soon as possible.

REARVIEW CAMERA (IF EQUIPPED)





The rearview camera will activate when the back-up light is ON with the ignition switch ON and the shift lever in the R (Reverse) position.

This system is a supplemental system that shows behind the vehicle through the uvo audio or navigation display backing-up.

Always keep the camera lens clean. If lens is covered with foreign matter, the camera may not operate normally.

⚠ WARNING - Rearview camera

The rear view camera is not a safety device. It only serves to assist the driver in identifying objects directly behind the middle of the vehicle. The camera does NOT cover the complete area behind the vehicle.

⚠ WARNING - Backing & using camera

Never rely solely on the rear view camera when backing.

WELCOME SYSTEM (IF EQUIPPED)


OTF040113N

Welcome light (if equipped)

When all the doors (and trunk) are locked and closed, the room lamp will come on for about 15 seconds if any of the below is performed.

- Without smart key system
  - When the door unlock button is pressed on the transmitter.
- With the smart key system
  - When the vehicle is approached with the smart key in possession.

Escort welcome (if equipped)

When the headlight(light switch in the headlight or AUTO position) is on and all doors (and trunk) are locked and closed, the position light and headlight will come on for 15 seconds if any of the below is performed.

- Without smart key system
  - When the door unlock button is pressed on the transmitter.
- With the smart key system
  - When the door unlock button is pressed on the smart key.

At this time, if you press the door lock or unlock button, the position light and headlight will turn off immediately.

Interior light

When the interior light switch is in the DOOR position and all doors (and trunk) are locked and closed, the room lamp will come on for 30 seconds if any of the below is performed.

- Without smart key system
  - When the door unlock button is pressed on the transmitter.
- With the smart key system
  - When the door unlock button is pressed on the smart key.
  - When the button of the outside door handle is pressed.

At this time, if you press the door lock or unlock button, the room lamp will turn off immediately.

LIGHTING

Battery saver function

- The purpose of this feature is to prevent the battery from being discharged. The system automatically turns off the parking lights when the driver removes the ignition key and opens the driver- side door.
- With this feature, the parking lights will turn off automatically if the driver parks on the side of the road at night.

  If necessary, to keep the lights on when the Hybrid System is turned off, perform the following

  1) Open the driver-side door.
  2) Turn the parking lights OFF and ON again using the light switch on the steering column.

Daytime running light

Daytime Running Lights (DRL) can make it easier for others to see the front of your vehicle during the day. DRL can be helpful in many different driving conditions, and it is especially helpful after dawn and before sunset.

The DRL system will turn OFF when:

1. The headlight switch is ON.
2. The parking brake is applied.
3. Engine stops.

Headlight escort function (if equipped)

The headlights (and/or taillights) will remain on for approximately 20 minutes after the ignition key is removed or turned to the ACC or LOCK position. However, if the driver's door is opened and closed, the headlights are turned off after 30 seconds.

The headlights can be turned off by pressing the lock button on the transmitter (or smart key) twice or turning off the light switch from the headlight or Auto light position.

⚠ CAUTION

If the driver gets out of the vehicle through other doors (except driver's door), the battery saver function does not operate and the headlight escort function does not turn off automatically. Therefore, It causes the battery to be discharged. In this case, make sure to turn off the lamp before getting out of the vehicle.

Headlight leveling device (if equipped)

Automatic type

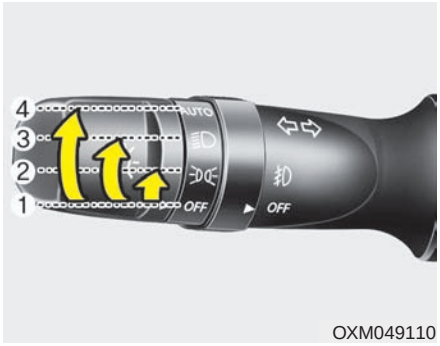
It is automatically adjusted the headlight beam level according to the number of the passengers and the loading weight in the luggage area.

And it offers the proper headlight beam under the various conditions.

⚠ WARNING

If the headlights are not working properly, have your vehicle inspected by an authorized Kia dealer.

Don't attempt to inspect or replace the wiring yourself to prevent malfunction.



OXM049110

Lighting control

The light switch has a Headlight and a Parking light position.

To operate the lights, turn the knob at the end of the control lever to one of the following positions:

(1) OFF position
(2) Parking light position
(3) Headlight position
(4) Auto light position (if equipped)



OAM049041

Parking light position ( )

When the light switch is in the parking light position (1st position), the tail, position, license and instrument panel lights will turn ON.

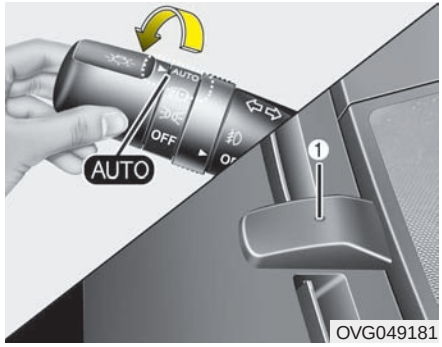


OAM049042

Headlight position ( )

When the light switch is in the headlight position (2nd position) the head, tail, position, license and instrument panel lights will turn ON.

The ignition switch must be in the ON position to turn on the headlights.



OVG049181

Auto light position (if equipped)

When the light switch is in the AUTO light position, the taillights and headlights will turn ON or OFF automatically depending on the amount of light outside the vehicle.

Never place anything over sensor (1) located on the instrument panel. This will ensure better auto-light system control.

Don't clean the sensor using a window cleaner. The cleaner may leave a light film which could interfere with sensor operation.

If your vehicle has window tint or other types of metallic coating on the front windshield, the Auto light system may not work properly.



OAM049044

High beam operation

To turn on the high beam headlights, push the lever away from you. Pull it back for low beams.

The high-beam indicator will light when the headlight high beams are switched on.

To prevent the battery from being discharged, do not leave the lights on for a prolonged time while the engine is not running.

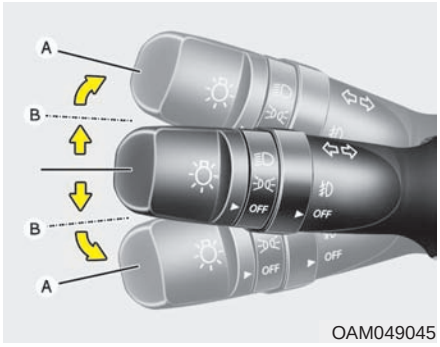
⚠ WARNING - High beams

Do not use high beam when there are other vehicles. Using high beam could obstruct the other driver's vision.



OAM049043

To flash the headlights, pull the lever towards you. It will return to the normal (low-beam) position when released. The headlight switch does not need to be on to use this flashing feature.



OAM049045

Turn signals and lane change signals

The ignition switch must be on for the turn signals to function. To turn on the turn signals, move the lever up or down (A). The green arrow indicators on the instrument panel indicate which turn signal is operating. They will self-cancel after a turn is completed. If the indicator continues to flash after a turn, manually return the lever to the OFF position.

To signal a lane change, move the turn signal lever slightly and hold it in position (B). The lever will return to the OFF position when released.

If an indicator stays on and does not flash or if it flashes abnormally, one of the turn signal bulbs may be burned out and will require replacement.

If an indicator flash is abnormally quick or slow, a bulb may be burned out or have a poor electrical connection in the circuit.



OAM049046N

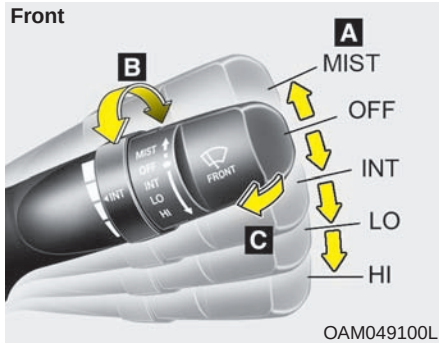
Front fog light (if equipped)

Fog lights are used to provide improved visibility when visibility is poor due to fog, rain or snow etc. The fog lights will turn on when the fog light switch (1) is turned to the on position after the headlights are turned on.

To turn off the fog lights, turn the switch (1) to the off position.

When in operation, the fog lights consume large amounts of vehicle electrical power. Only use the fog lights when visibility is poor.

WIPERS AND WASHERS



A : Wiper speed control (front)
- HI – High wiper speed
- LO – Low wiper speed
- INT – Intermittent wipe
- AUTO* – Automatic control wipe
- OFF – Off
- MIST – Single wipe

B : Intermittent control wipe time adjustment

C : Wash with brief wipes (front)

* : if equipped

Windshield wipers

Operates as follows when the ignition switch is turned ON.

MIST : For a single wiping cycle, move the lever upward and release it. The wipers will operate continuously if the lever is held in this position.

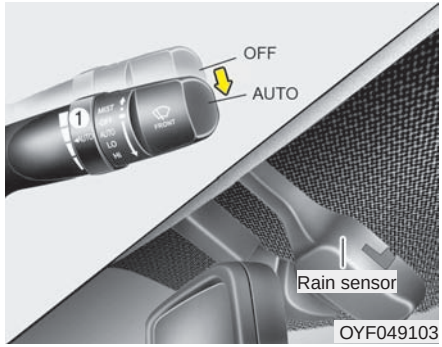
OFF : Wiper is not in operation

INT : Wiper operates intermittently at the same wiping intervals. Use this mode in a light rain or mist. To vary the speed setting, turn the speed control knob.

LO : Normal wiper speed

HI : Fast wiper speed

If there is heavy accumulation of snow or ice on the windshield, defrost the windshield for about 10 minutes, or until the snow and/or ice is removed before using the windshield wipers to ensure proper operation.



AUTO (Automatic) control (if equipped)

The rain sensor located on the upper end of the windshield glass senses the amount of rainfall and controls the wiping cycle for the proper interval. The more it rains, the faster the wiper operates. When the rain stops, the wiper stops.

To vary the speed setting, turn the speed control knob (1).

If the wiper switch is set in AUTO mode when the ignition switch is ON, the wiper will operate once to perform a self-check of the system. Set the wiper to off position when the wiper is not in use.

Always remove all snow and ice and defrost the windshield properly prior to operating the windshield wipers.

✻ NOTICE - Sensor cover

Do not remove the sensor cover located on the upper end of the passenger side windshield glass as this may damage the sensor system.

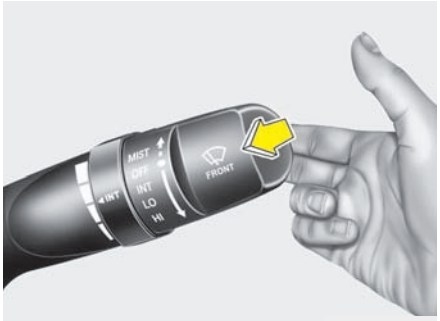
✻ NOTICE - Winter driving

Always set the auto wiper switch to the off position in the winter to avoid auto activation during icy conditions which may damage the windshield wipers.

⚠ CAUTION - Wiper position

When washing the vehicle, set the wiper switch in the off position to stop the auto wiper operation.

The wiper may operate and be damaged if the switch is set in the AUTO mode while washing the vehicle.



OYF049101

Windshield washers

In the OFF position, pull the lever gently toward you to spray washer fluid on the windshield and to run the wipers 1-3 cycles.

Use this function when the windshield is dirty.

The spray and wiper operation will continue until you release the lever. If the washer does not work, check the washer fluid level.

If the fluid level is not sufficient, you will need to add appropriate non-abrasive windshield washer fluid to the washer reservoir.

The reservoir filler neck is located in the front of the engine compartment on the passenger side.

⚠ CAUTION - Washer pump

To prevent possible damage to the washer pump, do not operate the washer when the fluid reservoir is empty.

⚠ WARNING - Obscured visibility

Do not use the washer in freezing temperatures without first warming the windshield with the defrosters; the washer solution could freeze on the windshield and obscure your vision.

⚠ CAUTION - Wipers & windshields

- ***To prevent possible damage to the wipers or windshield, do not operate the wipers when the windshield is dry.***
- ***To prevent damage to the wiper blades, do not use gasoline, kerosene, paint thinner, or other solvents on or near them.***
- ***To prevent damage to the wiper arms and other components, do not attempt to move the wipers manually.***

INTERIOR LIGHT

Do not use the interior lights for extended periods when the engine is not running. It may cause battery discharge.

⚠ WARNING - Interior light
Do not use the interior lights when driving in the dark. The glare from the interior lights may obstruct your view and cause an accident.

Automatic turn off function (if equipped)

The interior lights automatically turn off approximately 20 minutes after the ignition switch is turned off.

If your vehicle is equipped with the theft alarm system, the interior lights automatically turns off approximately 3 seconds after the system is armed stage.



Map lamp

Push the lens to turn the map lamp on or off. This light produces a spot beam for convenient use as a map lamp at night or as a personal lamp for the driver and the front passenger.

- DOOR : In the DOOR position, the map lamp and the room lamp come on when any door is opened regardless of the ignition switch position. When doors are unlocked by the transmitter (or smart key), the map lamp and the room lamp come on for approximately 30 seconds as long as any door is not open.

  The map lamp and the room lamp goes out gradually after approximately 30 seconds if the door is closed. However, if the ignition switch is ON or all doors are locked, the map lamp and the room lamp will turn off immediately. If a door is opened with the ignition switch in the ACC or LOCK position, the map lamp and the room lamp stays on for about 20 minutes. However, if a door is opened with the ignition switch in the ON position, the map lamp and the room lamp stays on continuously. If the type B room lamp switch is OFF, it doesn't work.
- OFF : The lights turn off even if a door is opened.

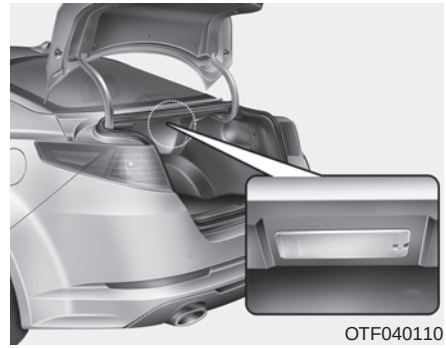
  When the lamp is turned ON by pressing the lens (1), the lamp does not turn off even if the switch (2) is in the OFF position.
- ON : The map lamp and the room lamp stay on at all times.



OVG049111

Room lamp

To turn the room lamp push lens (3).

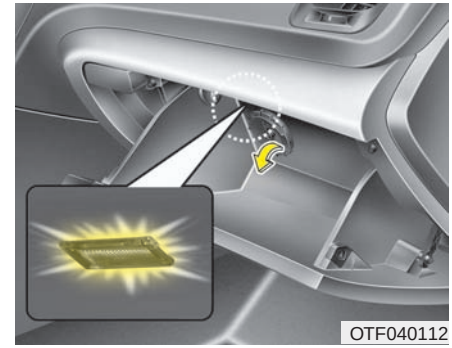

OTF040110

Trunk room lamp (if equipped)

The trunk room lamp comes on when the trunk is opened.

⚠ CAUTION

The trunk room lamp comes on as long as the trunk lid opens. To prevent unnecessary charging system drain, close the trunk lid securely after using the trunk.


OTF040112

Glove box lamp (if equipped)

The glove box lamp comes on when the glove box is opened.

The parking lights or headlights must be ON for the glove box lamp to function.

⚠ CAUTION

To prevent unnecessary charging system drain, close the glove box securely after using the glove box.


OLM049105

Vanity mirror lamp

Push the switch to turn the light on or off.

- : The lamp will turn on if this button is pressed.
- ◯ : The lamp will turn off if this button is pressed.

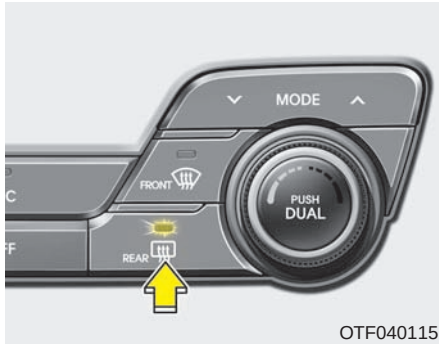
Always have the switch in the off position when the vanity mirror lamp is not in use. If the sunvisor is closed without the lamp off, it may discharge the battery or damage the sunvisor.

DEFROSTER

⚠ CAUTION - Conductors

To prevent damage to the conductors bonded to the inside surface of the rear window, never use sharp instruments or window cleaners containing abrasives to clean the window.

If you want to defrost and defog the front windshield, refer to “Windshield Defrosting and Defogging” in this section.



OTF040115

Rear window defroster

The defroster heats the window to remove frost, fog and thin ice from the interior and exterior of the rear window, while the engine is running.

To activate the rear window defroster, press the rear window defroster button located in the center facia switch panel. The indicator on the rear window defroster button illuminates when the defroster is ON.

If there is heavy accumulation of snow on the rear window, brush it off before operating the rear defroster.

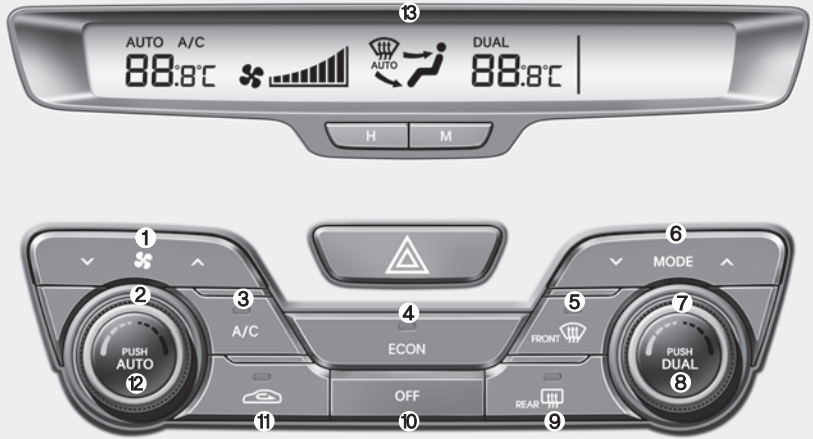
The rear window defroster automatically turns off after approximately 20 minutes or when the ignition switch is turned off. To turn off the defroster manually, press the rear window defroster button again.

Outside mirror defroster (if equipped)

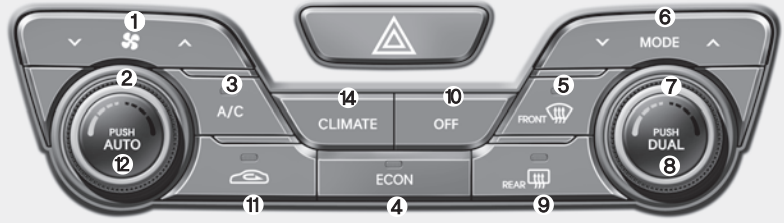
If your vehicle is equipped with the outside rearview mirror defrosters, they will operate at the same time you turn on the rear window defroster.

AUTOMATIC CLIMATE CONTROL SYSTEM (IF EQUIPPED)

■ **Type A**



■ **Type B**



1. Fan speed control switch
2. Driver's temperature control knob
3. Air conditioning button
4. ECON (economy air conditioning button)
5. Front windshield defroster button
6. Mode selection button
7. Passenger's temperature control knob
8. Dual temperature control selection button
9. Rear window defroster button
10. OFF button
11. Recirculated air position button (Type A)
    Air intake control button (Type B)
12. AUTO (automatic control) button
13. Climate control display
14. Climate information screen selection button

OTFH040129N/OTFH040175N



OTF040131

Automatic heating and air conditioning

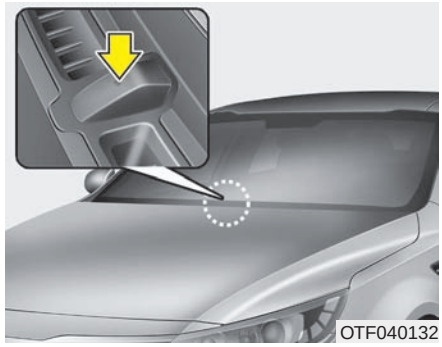
The automatic climate control system is controlled by simply setting the desired temperature.

The Full Automatic Temperature Control (FATC) system automatically controls the heating and cooling system as follows;

1. Press the AUTO button. The modes, fan speeds, air intake and air-conditioning will be controlled automatically by setting the temperature.
2. Set the temperature control knob to the desired temperature.
   If the temperature is set to the lowest setting (Lo), the air conditioning system will operate continuously.
3. To turn the automatic operation off, select any button or switch of the following:
   - Mode selection button
   - Air conditioning button
   - Front windshield defroster button
   - Air intake control button
   - Fan speed control switch

   The selected function will be controlled manually while other functions operate automatically.

For your convenience and to improve the effectiveness of the climate control, use the AUTO button and set the temperature to 23°C (73°F).


OTF040132

✻ NOTICE

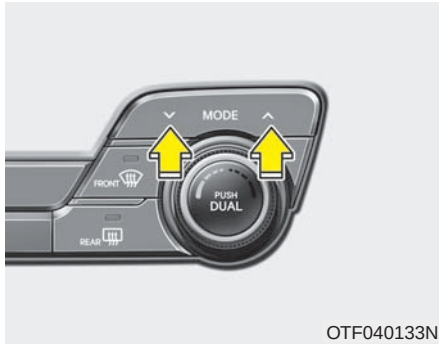
Never place anything over the sensor located on the instrument panel to ensure better control of the heating and cooling system.

Manual heating and air conditioning

The heating and cooling system can be controlled manually by pushing buttons other than the AUTO button. In this case, the system works sequentially according to the order of buttons selected.

1. Start the engine.
2. Set the mode to the desired position.
   To improve the effectiveness of heating and cooling :
   - Heating:
   - Cooling:
3. Set the temperature control to the desired position.
4. Set the air intake control to the outside (fresh) air or recirculated air position.
5. Set the fan speed control to the desired speed.
6. If air conditioning is desired, turn the air conditioning system on.

Press the AUTO button in order to convert to full automatic control of the system.



OTF040133N

Mode selection

The mode selection button controls the direction of the air flow through the ventilation system.

Every time you press the mode selection button, the mode will change as follows:



Refer to the illustration in the “Manual climate control system”.

Face-Level

Air flow is directed toward the upper body and face. Additionally, each outlet can be controlled to direct the air discharged from the outlet.

Bi-Level

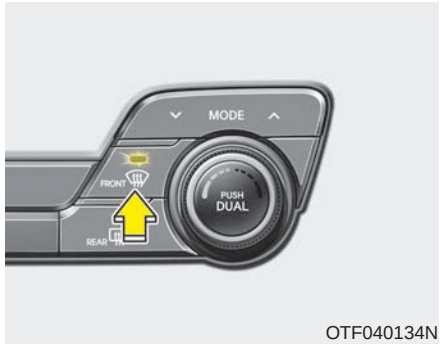
Air flow is discharged towards the face and floor.

Floor-Level

Most of the air flow is directed to the floor, with a small amount of the air being directed to the windshield and side window defroster.

Floor/Defrost-Level

Most of the air flow is directed to the floor and the windshield with a small amount directed to the side window defrosters.



OTF040134N

Defrost-level

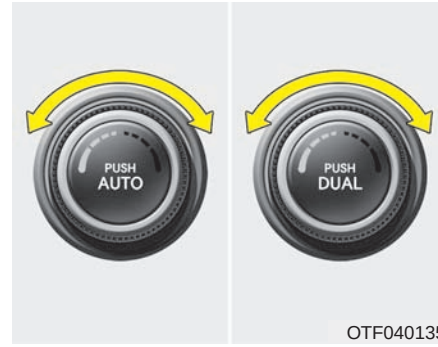
Most of the air flow is directed to the windshield with a small amount of air directed to the side window defrosters.


OTF040124

Instrument panel vents

The outlet vents can be opened or closed separately using the thumbwheel.

Also, you can adjust the direction of air delivered from these vents using the vent control lever as shown.



OTF040135

Temperature control

The temperature control knob allows you to control the temperature of the air flowing from the ventilation system. To change the air temperature in the passenger compartment, turn the knob to the right for warm air or left for cooler air.



OTF040137

Adjusting the driver and passenger side temperature individually

1. Press the DUAL button to operate the driver and passenger side temperature individually. Pressing the right temperature control button will automatically switch to the DUAL mode as well.
2. Operate the left temperature control to adjust the driver side temperature. Operate the right temperature control to adjust the passenger side temperature.

When the driver side temperature is set to the highest (HIGH) or lowest (LOW) temperature setting, the DUAL mode is deactivated for maximum heating or cooling.

Adjusting the driver and passenger side temperature equally

1. Press the DUAL button again to deactivate DUAL mode. The passenger side temperature will be set to the same temperature as the driver side temperature.
2. Operate the driver side temperature control switch. The driver and passenger side temperature will be adjusted equally.

Temperature conversion

You can switch the temperature mode between Fahrenheit to Centigrade as follows:

While pressing the MODE, press the DUAL button for 3 seconds or more.

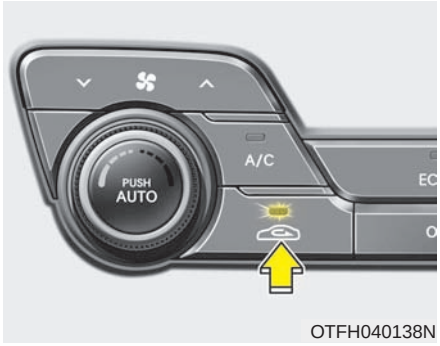
The display will change from Fahrenheit to Centigrade, or from Centigrade to Fahrenheit.

If the battery has been discharged or disconnected, the temperature mode display will reset to Fahrenheit.

Outside thermometer

The current outside temperature is displayed in 1°C (1°F) increments. The temperature range is between -40°C ~ 60°C (-40°F~140°F).

- The outside temperature on the display may not change immediately like a general thermometer to prevent the driver from being inattentive.



OTFH040138N

Air intake control

The air intake control is used to select outside (fresh) air position or recirculated air position.

To change the air intake control position, push the control button.

Outside (fresh) air position

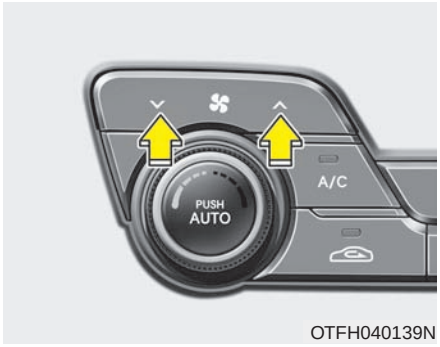
■ Type A



■ Type B



With the outside (fresh) air position selected, air enters the vehicle from outside and is heated or cooled according to the function selected.



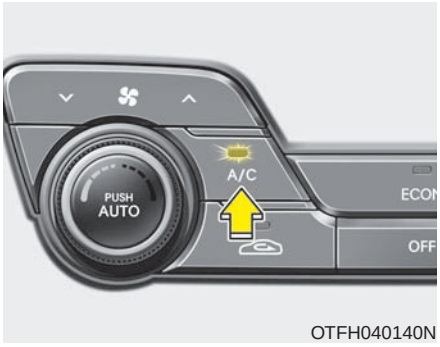
OTFH040139N

Fan speed control

The fan speed can be set to the desired speed by pressing the fan speed control switch.

To change the fan speed press the ∧ part of the switch for higher speed or press the ∨ part of the switch for lower speed.

To turn the fan speed control off, press the OFF button.

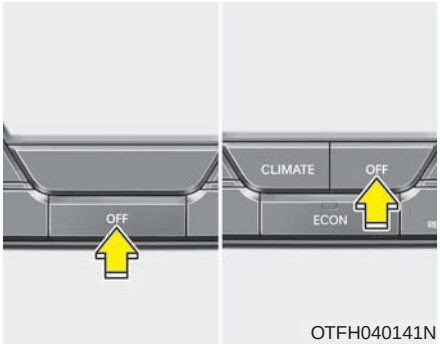


OTFH040140N

Air conditioning

Press the A/C button to turn the air conditioning system on (indicator light will illuminate).

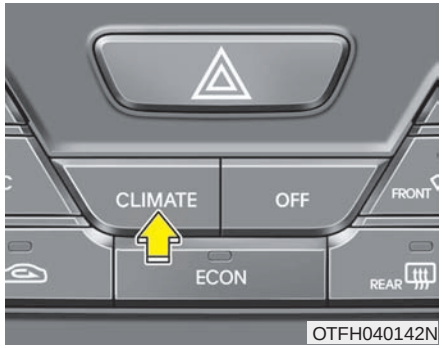
Press the button again to turn the air conditioning system off.



OTFH040141N

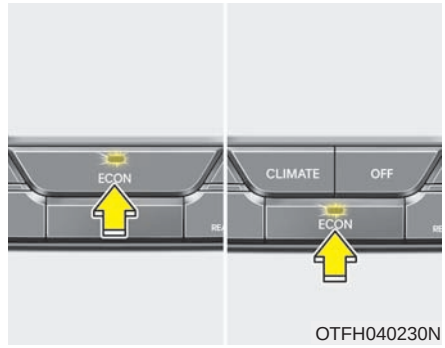
OFF mode

Press the OFF button to turn off the air climate control system. However you can still operate the mode and air intake buttons as long as the engine start/stop button is in the ON position.



Climate information screen selection (if equipped)

Press the climate information screen selection button to display climate information on the screen.



Economy air conditioning button

1. If you push the ECON button while the air conditioning system is working, the air conditioning system will work less and it could improve the fuel efficiency.
2. If you want maximum air conditioning while ECON system is working, turn the ECON system off by pushing the ECON button.

System operation

Ventilation

1. Set the mode to the position.
2. Set the air intake control to the outside (fresh) air position.
3. Set the temperature control to the desired position.
4. Set the fan speed control to the desired speed.

Heating

1. Set the mode to the position.
2. Set the air intake control to the outside (fresh) air position.
3. Set the temperature control to the desired position.
4. Set the fan speed control to the desired speed.
5. If dehumidified heating is desired, turn the air conditioning system (if equipped) on.

- If the windshield fogs up, set the mode to the , position.

Operation Tips

- To prevent dust or unpleasant fumes from entering the vehicle through the ventilation system, temporarily set the air intake control to the recirculated air position. Be sure to return the control to the fresh air position when the irritation has passed to keep fresh air in the vehicle. This will help keep the driver alert and comfortable.
- Air for the heating/cooling system is drawn in through the grilles just ahead of the windshield. Care should be taken that these are not blocked by leaves, snow, ice or other obstructions.
- To prevent interior fog on the windshield, set the air intake control to the fresh air position and fan speed to the desired position, turn on the air conditioning system, and adjust the temperature control to desired temperature.

Air conditioning (if equipped)

All Kia Air Conditioning Systems are filled with environmentally friendly R-134a refrigerant which does not damage the ozone layer.

1. Start the engine. Push the air conditioning button.
2. Set the mode to the position.
3. Set the air intake control to the recirculated air position. However, prolonged operation of the reticulated air position will excessively dry the air. In this case, change the air position.
4. Adjust the fan speed control and temperature control to maintain maximum comfort.

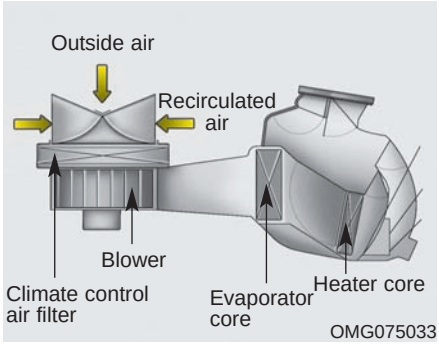
- When maximum cooling is desired, set the temperature control to the extreme left position, set the mode control to the MAX A/C position, then set the fan speed control to the highest speed.

✻ NOTICE

- **While using the air conditioning system, monitor the temperature gauge closely while driving up hills or in heavy traffic when outside temperatures are high. Air conditioning system operation may cause engine overheating. Continue to use the blower fan but turn the air conditioning system off if the temperature gauge indicates engine overheating.**
- **While opening the windows in humid weather air conditioning may create water droplets inside the vehicle. Since excessive water droplets may cause damage to electrical equipment, air conditioning should only be used with the windows closed.**

Air conditioning system operation tips

- If the vehicle has been parked in direct sunlight during hot weather, open the windows for a short time to let the hot air inside the vehicle escape.
- To help reduce moisture inside of the windows on rainy or humid days, decrease the humidity inside the vehicle by operating the air conditioning system.
- During air conditioning system operation, you may occasionally notice a slight change in engine speed as the air conditioning compressor cycles. This is a normal system operation characteristic.
- Use the air conditioning system every month only for a few minutes to ensure maximum system performance.
- When using the air conditioning system, you may notice clear water dripping (or even puddling) on the ground under the passenger side of the vehicle. This is a normal system operation characteristic.
- Operating the air conditioning system in the recirculated air position provides maximum cooling, however, continual operation in this mode may cause the air inside the vehicle to become stale.
- During cooling operation, you may occasionally notice a misty air flow because of rapid cooling and humid air intake. This is a normal system operation characteristic.



Climate control air filter

The climate control air filter installed behind the glove box filters the dust or other pollutants that come into the vehicle from the outside through the heating and air conditioning system. If dust or other pollutants accumulate in the filter over a period of time, the air flow from the air vents may decrease, resulting in moisture accumulation on the inside of the windshield even when the outside (fresh) air position is selected. If this happens, have the climate control air filter replaced by an authorized Kia dealer.

✻ NOTICE

- **Replace the filter according to the Maintenance Schedule.**
  If the vehicle is being driven in severe conditions such as dusty, rough roads, more frequent climate control air filter inspections and changes are required.
- **When the air flow rate suddenly decreases, the system should be checked at an authorized Kia dealer.**

Checking the amount of air conditioner refrigerant and compressor lubricant

When the amount of refrigerant is low, the performance of the air conditioning is reduced. Overfilling also has a negative influence on the air conditioning system.

Therefore, if abnormal operation is found, have the system inspected by an authorized Kia dealer.

✻ NOTICE

It is important that the correct type and amount of oil and refrigerant is used. Otherwise, damage to the compressor and abnormal system operation may occur.

⚠ WARNING

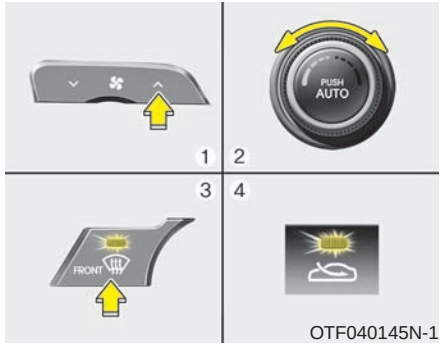
The air conditioning system for the Hybrid vehicle should be serviced by an authorized Kia dealer. The Hybrid air conditioning system is connected to the high voltage system and requires special fluids, tools and service procedures. Improperly servicing the Hybrid air conditioning system could result in electrical shock, serious injury, or even death.

WINDSHIELD DEFROSTING AND DEFOGGING

⚠ WARNING - Windshield heating

Do not use the or position during cooling operation to redure fog up in extremely humid weather.

- For maximum defrosting, set the temperature control to the extreme right/hot position and the fan speed control to the highest speed.
- If warm air to the floor is desired while defrosting or defogging, set the mode to the floor-defrost position.
- Before driving, clear all snow and ice from the windshield, rear window, outside rear view mirrors, and all side windows.
- Clear all snow and ice from the hood and air inlet in the cowl grill to improve heater and defroster efficiency and to reduce the probability of fogging up the inside of the windshield.



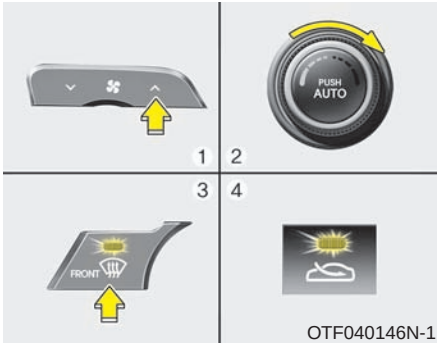
OTF040145N-1

Automatic climate control system

To defog inside windshield

1. Select desired fan speed.
2. Select desired temperature.
3. Press the defroster button ( ).
4. The outside (fresh) air position will be selected automatically.

If the outside (fresh) air position is not selected automatically, adjust the corresponding button manually.



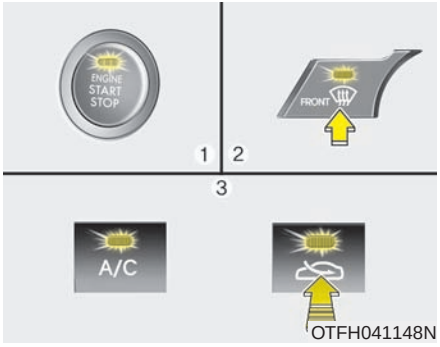
OTF040146N-1

To defrost outside windshield

1. Set the fan speed to the highest position.
2. Set the temperature to the extreme hot (HI) position.
3. Press the defroster button ( ).
4. The outside (fresh) air position will be selected automatically.

Defogging logic

To reduce the probability of fogging up inside of the windshield, the air intake or air conditioning are controlled automatically according to certain conditions such as or position. To cancel or return to the defogging logic, do the followings:



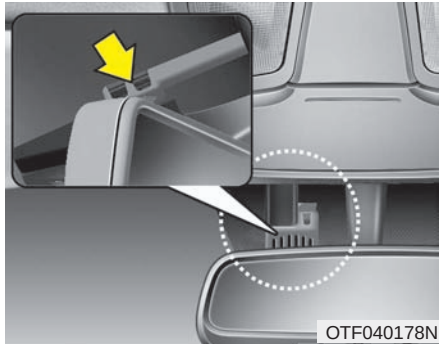
OTFH041148N

Automatic climate control system

1. Turn the engine start/stop button to the ON position.
2. Select the defroster position pressing the defroster button ( ).
3. While pressing the air conditioning button (A/C), press the air intake control button ( ) at least 5 times within 3 seconds.

The A/C display blinks 3 times with 0.5 second of interval. It indicates that the defogging logic is canceled or returned to the programmed status.

If the battery has been discharged or disconnected, it resets to the defog logic status.



Auto defogging system (Only for automatic climate control system, if equipped)

Auto defogging reduces the probability of fogging up the inside of the windshield by automatically sensing the moisture of inside the windshield.

The auto defogging system operates when the heater or air conditioning is on.



This indicator illuminates when the auto defogging system senses the moisture of inside the windshield and operates.

If more moisture is in the vehicle, higher steps operate as follow. For example if auto defogging does not defog inside the windshield at step 1 Outside air position, it tries to defog again at step 2 Blowing air toward the windshield.

Step 1 : Outside air position
Step 2 : Blowing air toward the windshield
Step 3 : Increasing air flow toward the windshield
Step 4 : Operating the air conditioning
Step 5 : Maximizing the air conditioning

If your vehicle is equipped with the auto defogging system, it is automatically activated when the conditions are met. However, if you would like to cancel the auto defogging system, press the front defroster button 4 times within 2 seconds while pressing the AUTO button. The indicator will blink 3 times to notify you that the system is cancelled. To use the auto defogging system again, follow the procedures mentioned above.

If the battery has been disconnected or discharged, it resets to the auto defogging status.

✻ NOTICE

If the A/C off or recirculated air position is manually selected while the auto defogging system is on, the auto defogging indicator will blink 3 times to give notice that manual operation is canceled.

⚠ CAUTION

Do not remove the sensor cover located on the upper end of the driver side windshield glass. Damage to the system parts could occur and may not be covered by your vehicle warranty.

STORAGE COMPARTMENT

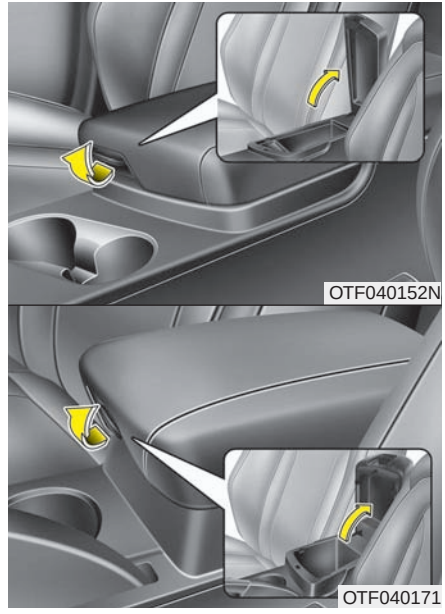
These compartments can be used to store small items.

To avoid possible theft, do not leave valuables in the storage compartment.

Always keep the storage compartment covers closed while driving. Do not attempt to place so many items in the storage compartment that the storage compartment cover can not close securely.

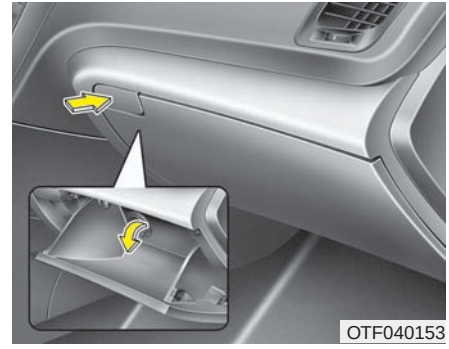
⚠ WARNING - Flammable materials

Do not store, propane cylinders, or other flammable/explosive materials in the vehicle. These items may catch fire and/or explode if the vehicle is exposed to hot temperatures for extended periods.



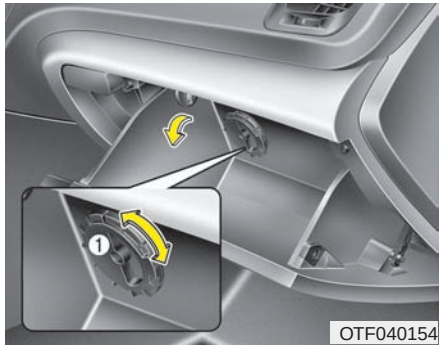
Center console storage (if equipped)

To open the center console storage, pull up the lever.



Glove box

To open the glove box, pull the handle and the glove box will automatically open. Close the glove box after use.



Cool box (if equipped)

You can keep beverage cans or other items cool in the glove box.

1. Turn on the air conditioning.
2. Slide the open/close lever of the vent installed in the glove box to the open position.
3. When the cool box is not used, slide the lever to the closed position.

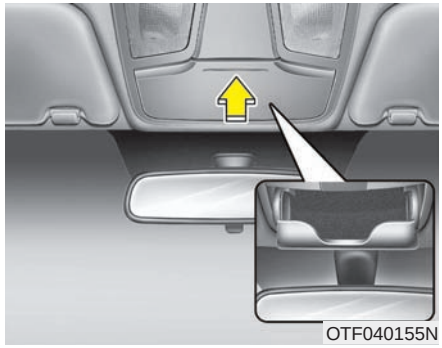
If some items in the cool box block the vent, the cooling effectiveness of the coolbox is reduced.

✻ NOTICE

Do not put perishable food in the cool box because it may not maintain the necessary consistent temperature to keep the food fresh.

✻ NOTICE

If the temperature control knob is in the warm or hot position, warm or hot air will flow into the glove box.



Sunglasses holder

To open the sunglasses holder, press the cover and the holder will slowly open. Place your sunglasses with the lenses facing out.

To close the sunglasses holder, push it up.

⚠ WARNING - Distracted driving

Do not use the sunglasses holder while driving.

INTERIOR FEATURES

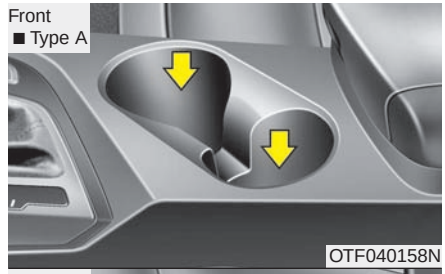
Cup holder

⚠ WARNING - Hot liquids

Do not place uncovered cups of hot liquid in the cup holder while the vehicle is in motion. If the hot liquid spills, you may burn yourself. Such a burn to the driver could lead to loss of control of the vehicle.

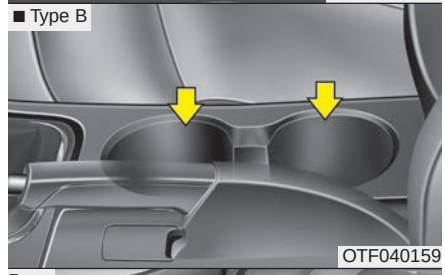
Front

■ Type A



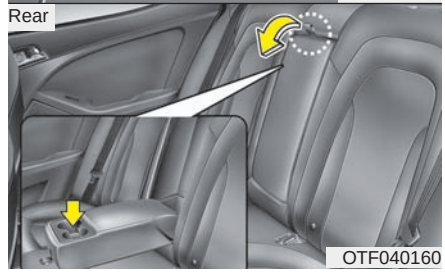
OTF040158N

■ Type B



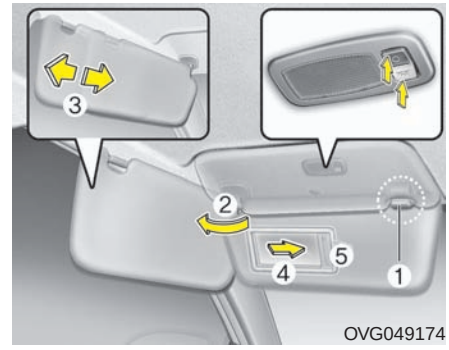
OTF040159

Rear



OTF040160

Cups or small beverage cans may be placed in the cup holders.



OVG049174

Sunvisor

Use the sunvisor to shield direct light through the front or side windows.

To use the sunvisor, pull it downward.

To use the sunvisor for the side window, pull it downward, unsnap it from the bracket (1) and swing it to the side (2).

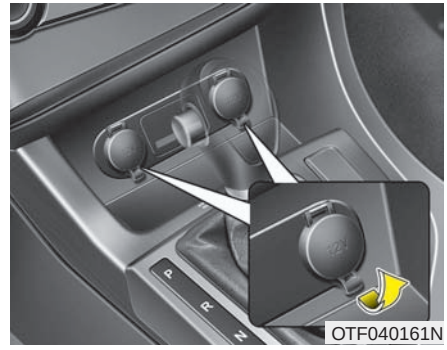
Adjust the sunvisor extension forward or backward (3).

To use the vanity mirror, pull down the visor and slide the mirror cover (4).

The ticket holder (5) is provided for holding a tollgate ticket. (if equipped)

⚠ CAUTION - Vanity mirror lamp

Close the vanity mirror cover securely and return the sunvisor to its original position after use. If the vanity mirror is not closed securely, the lamp will stay on and could result in battery discharge and possible sunvisor damage.



Power outlet (if equipped)

The power outlet is designed to provide power for mobile telephones or other devices designed to operate with vehicle electrical systems. The devices should draw less than 10 amps with the engine running.

Use the power outlet only when the engine is running and remove the accessory plug after use. Using the accessory plug for prolonged periods of time with the engine off could cause the battery to discharge.

Only use 12V electric accessories which are less than 10A in electric capacity.

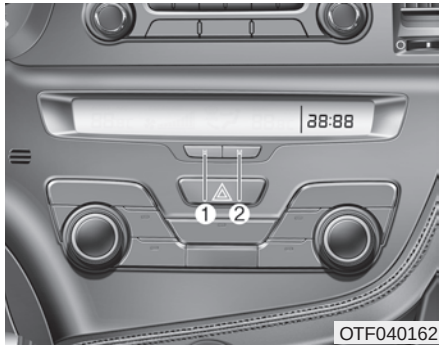
Adjust the air-conditioner or heater to the lowest operating level when using the power outlet.

Close the cover when not in use.

Some electronic devices can cause electronic interference when plugged into a vehicle's power outlet. These devices may cause excessive audio static and malfunctions in other electronic systems or devices used in your vehicle.

⚠ WARNING - Electric shock

Do not put a finger or a foreign element (pin, etc.) into a power outlet and do not touch with a wet hand. You may get an electric shock.



Digital clock

⚠ WARNING

Do not adjust the clock while driving. You may lose your steering control and cause severe personal injury or accidents.

Whenever the battery terminals or related fuses are disconnected, you must reset the time.

When the ignition switch is in the ACC or ON position, the clock buttons operate as follows:

- ***HOUR (1) :***

  Pressing the H button will advance the time display by one hour.

- ***MINUTE (2) :***

  Pressing the M button will advance the time display by one minute.

- ***Display conversion:***

  To change the 12 hour format to the 24 hour format, press the H and M button at the same time for more than 5 seconds.

  For example, if the time is 10:15 p.m., the display will change to 22:15.

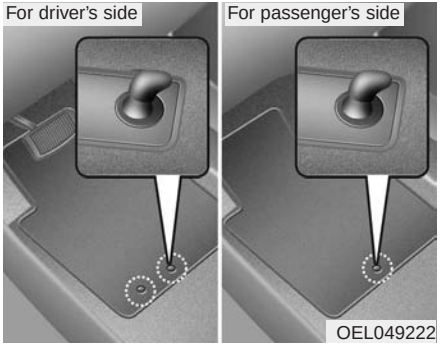


Clothes hanger (if equipped)

To use the hanger, pull down the upper portion of hanger.

⚠ CAUTION - Hanging clothing

Do not hang heavy clothes, since those may damage the hook.



Floor mat anchor(s)

When using a floor mat on the front floor carpet, make sure it attaches to the floor mat anchor(s) in your vehicle. This keeps the floor mat from sliding forward.

⚠ WARNING - After market floor mat

Do not install aftermarket floor mats that are not capable of being securely attached to the vehicle's floor mat anchors. Unsecured floor mats can interfere with pedal operation.

The following must be observed when installing ANY floor mat to the vehicle.

- Ensure that the floor mats are securely attached to the vehicle's floor mat anchor(s) before driving the vehicle.
- Do not use ANY floor mat that cannot be firmly attached to the vehicle's floor mat anchors.
- Do not stack floor mats on top of one another (e.g. all-weather rubber mat on top of a carpeted floor mat). Only a single floor mat should be installed in each position.

IMPORTANT - Your vehicle was manufactured with driver's side floor mat anchors that are designed to securely hold the floor mat in place. To avoid any interference with pedal operation, Kia recommends that only the Kia floor mat designed for use in your vehicle be installed.

Navigation system (if equipped)

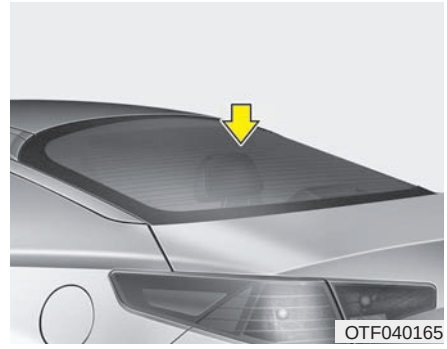
The navigation system ascertains the present position of your vehicle by using information from satellites and guides you to the place you assign as the destination.

Detailed information for the navigation system is described in a separately supplied manual.

AUDIO SYSTEM

✻ NOTICE

If you install an after market HID head lamp, your vehicle's audio and electronic device may malfunction.



Glass antenna (if equipped)

When the radio power switch is turned on while the ignition switch is in either the "ON" or "ACC" position, your car will receive both AM and FM broadcast signals through the antenna in the rear window glass.

⚠ CAUTION

- ***Do not clean the inside of the rear window glass with a cleaner or use a scraper to remove foreign deposits as this may cause damage to the antenna elements.***
- ***Avoid adding metallic coatings such as Ni, Cd, and so on. These can disturb receiving AM and FM broadcast signals.***



TFA_WHEEL_USA_2

Steering wheel audio controls (if equipped)

The steering wheel may incorporate audio control buttons.

⚠ CAUTION

Do not operate audio remote control buttons simultaneously.

VOLUME (+ / –) (1)

- Press the lever upward (+) to increase the volume.
- Press the lever downward (–) to decrease the volume.

SEEK/PRESET (∧ / ∨) (2)

The SEEK/PRESET button has different functions based on the system mode. For the following functions the button should be pressed for 0.8 seconds or more.

RADIO mode

It will function as the AUTO SEEK select button.

CD/USB/iPod mode

It will function as the FF/REW button.

If the SEEK/PRESET button is pressed for less than 0.8 seconds, it will work as follows in each mode.

RADIO mode

It will function as the PRESET STATION buttons.

CD/USB/iPod mode

It will function as TRACK UP/DOWN button.

MODE (3)

Press the button to change audio source.
FM(1~2)➟AM➟SAT(1~3)➟CD➟USB AUX(iPod)➟FM...

In addition to mode change, Power on/off can be made by pressing this button when the ignition switch is on ACC or ON.

- Power ON : Press the button when the audio is off
- Power OFF : Press the button for more than 0.8seconds when the audio is on.

MUTE (4, if equipped)

- Press the button to mute the sound.
- Press the button to turn off the microphone during a telephone call.

Detailed information for audio control buttons are described in the following pages in this section.



OTF040167N

Aux, USB and iPod®* port

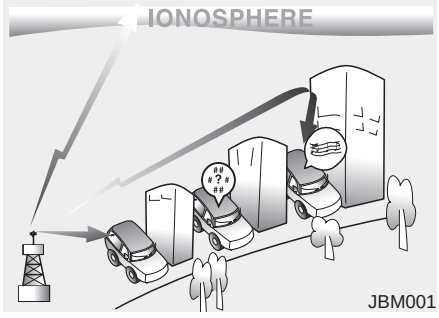
If your vehicle has an aux and/or USB(universal serial bus) port or iPod port, you can use an aux port to connect audio devices and an USB port to plug in an USB and also an iPod port to plug in an iPod.

✻ NOTICE

When using a portable audio device connected to the power outlet, noise may occur during playback. If this happens, use the power source of the portable audio device.

* iPod® is a trademark of Apple Inc.

FM radio reception



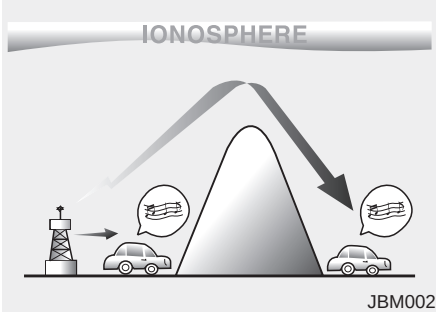
JBM001

How vehicle audio works

AM and FM radio signals are broadcast from transmitter towers located around your city. They are intercepted by the radio antenna on your vehicle. This signal is then received by the radio and sent to your vehicle speakers.

When a strong radio signal has reached your vehicle, the precise engineering of your audio system ensures the best possible quality reproduction. However, in some cases the signal coming to your vehicle may not be strong and clear. This can be due to factors such as the distance from the radio station, closeness of other strong radio stations or the presence of buildings, bridges or other large obstructions in the area.

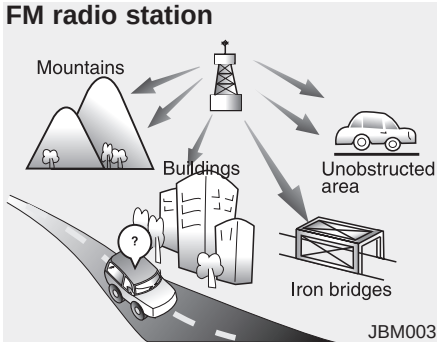
AM radio reception



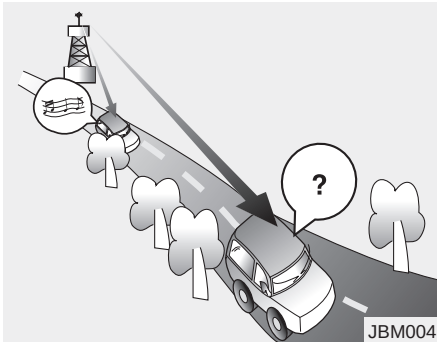
JBM002

AM broadcasts can be received at greater distances than FM broadcasts. This is because AM radio waves are transmitted at low frequencies. These long, low frequency radio waves can follow the curvature of the earth rather than travelling straight out into the atmosphere. In addition, they curve around obstructions so that they can provide better signal coverage.

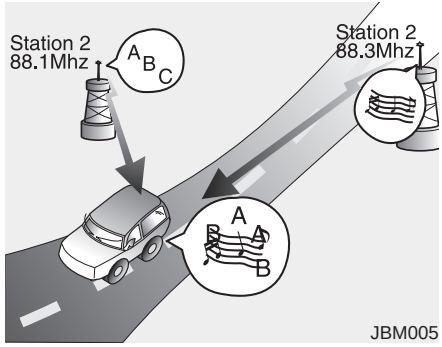
FM radio station



FM broadcasts are transmitted at high frequencies and do not bend to follow the earth's surface. Because of this, FM broadcasts generally begin to fade at short distances from the station. Also, FM signals are easily affected by buildings, mountains, or other obstructions. These can result in certain listening conditions which might lead you to believe a problem exists with your radio. The following conditions are normal and do not indicate radio trouble:



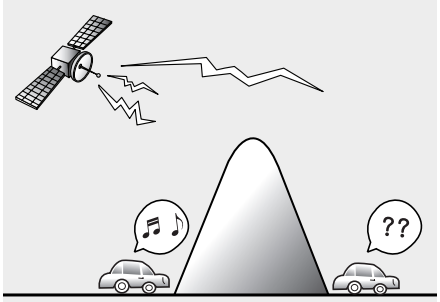
- Fading - As your vehicle moves away from the radio station, the signal will weaken and sound will begin to fade. When this occurs, we suggest that you select another stronger station.
- Flutter/Static - Weak FM signals or large obstructions between the transmitter and your radio can disturb the signal causing static or fluttering noises to occur. Reducing the treble level may lessen this effect until the disturbance clears.



- Station Swapping - As a FM signal weakens, another more powerful signal near the same frequency may begin to play. This is because your radio is designed to lock onto the clearest signal. If this occurs, select another station with a stronger signal.
- Multi-Path Cancellation - Radio signals being received from several directions can cause distortion or fluttering. This can be caused by a direct and reflected signal from the same station, or by signals from two stations with close frequencies. If this occurs, select another station until the condition has passed.

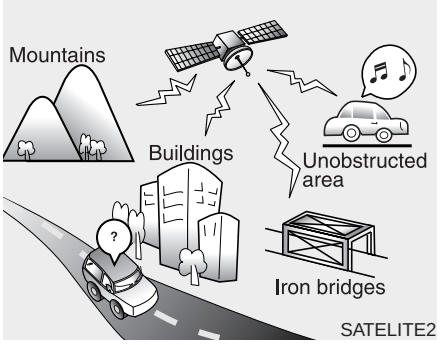
Satellite radio reception

You may experience difficulties in receiving SIRIUS satellite radio signals in the following situations.



SATELITE1

- If you are driving in a tunnel or a covered parking area.
- If you are driving beneath the top level of a multi-level freeway.
- If you drive under a bridge.
- If you are driving next to a tall vehicle (such as a truck or a bus) that blocks the signal.
- If you are driving in a valley where the surrounding hills or peaks block the signal from the satellite.
- If you are driving on a mountain road where is the signal blocked by mountains.



SATELITE2

- If you are driving in an area with tall trees that block the signal (30 ft. / 10m or more), for example on an road that goes through a dense forest.
- The signal can become weak in some areas that are not covered by the SIRIUS repeater network.

NOTE:

There may be other unforeseen circumstances leading to reception problems with the SIRIUS satellite radio signal.

Using a cellular phone or a two-way radio

When a cellular phone is used inside the vehicle, noise may be produced from the audio equipment. This does not mean that something is wrong with the audio equipment. In such a case, use the cellular phone at a place as far as possible from the audio equipment.

⚠ CAUTION

When using a communication system such a cellular phone or a radio set inside the vehicle, a separate external antenna must be fitted. When a cellular phone or a radio set is used with an internal antenna alone, it may interfere with the vehicle's electrical system and adversely affect safe operation of the vehicle.

⚠ WARNING

Do not use a cellular phone while driving. Stop at a safe location to use a cellular phone.

Care of disc

- If the temperature inside the car is too high, open the car windows for ventilation before using your car audio.
- It is illegal to copy and use MP3/WMA files without permission. Use CDs that are created only by lawful means.
- Do not apply volatile agents such as benzene and thinner, normal cleaners and magnetic sprays made for analogue disc onto CDs.
- To prevent the disc surface from getting damaged. Hold and carry CDs by the edges or the edges of the center hole only.
- Clean the disc surface with a piece of soft cloth before playback (wipe it from the center to the outside edge).
- Do not damage the disc surface or attach pieces of sticky tape or paper onto it.
- Make sure on undesirable matter other than CDs are inserted into the CD player (Do not insert more than one CD at a time).
- Keep CDs in their cases after use to protect them from scratches or dirt.
- Depending on the type of CD-R/CD-RW CDs, certain CDs may not operate normally according to manufacturing companies or making and recording methods. In such circumstances, if you still continue to use those CDs, they may cause the malfunction of your car audio system.

✻ NOTICE - Playing an Incompatible Copy Protected Audio CD

Some copy protected CDs, which do not comply with the international audio CD standards (Red Book), may not play on your car audio. Please note that if you try to play copy protected CDs and the CD player does not perform correctly the CDs maybe defective, not the CD player.

■ **CD Player : PA710TFU**



✻There will be no **Bluetooth** logo if the *Bluetooth®* wireless technology feature is not supported.

TF_USA_RADIO



TF_USA_RADIO

Using RADIO, SETUP, VOLUME and AUDIO CONTROL

1. FM/AM Button

The FM/AM button toggles between FM and AM. Listed below are the paths as the system switches from FM to AM and back to FM.

- FM/AM : FM1➟FM2➟AM➟FM1...

2. POWER Button & VOL Knob

- Turns the audio system on/off when the ignition switch is on ACC or ON.
- If the knob is turned clockwise/counter-clockwise, the volume will increase /decrease.

3. SEEK Button

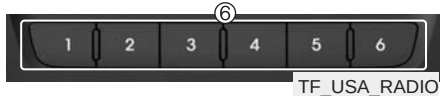
- When the ∨ SEEK is pressed, it will automatically tune to the next lower station.
- When the SEEK ∧ is pressed, it will automatically tune to the next higher station.

4. SCAN Button

- When the button is pressed, it automatically scans the radio stations upwards.
- The SCAN feature steps through each station, starting from the initial station, for 5 seconds.
- Press the SCAN button again to stop the scan feature and to listen to the currently selected channel.

5. MUTE Button

When the button is pressed, stops sound and “Audio Mute” is displayed on LCD.



TF_USA_RADIO

6. PRESET Buttons

- Press 1 ~ 6 buttons less than 0.8 seconds to play the station saved in each button.



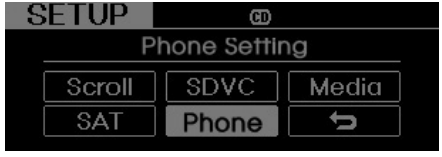
TF_USA_RADIO

- Press 1 ~ 6 button more than 0.8 seconds or longer to save the current station to the respective button with a beep.

7. SETUP Button

Press this button to enter SETUP mode, If no action is taken for 8 seconds, it will return to previous mode.

In “SETUP” mode, rotate the TUNE knob to move the cursor between items, and push the TUNE knob to select.



• SCROLL

Select whether long file names are scrolled continuously (On) or just once (Off).



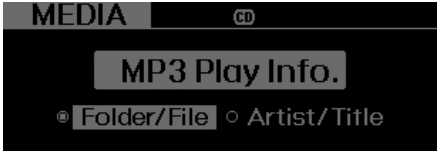
• SDVC (Speed Dependent Volume Control)

Select this item to turn the SDVC feature On or Off. If it is turned ON, volume level is adjusted automatically according to the vehicle speed.



• MEDIA

Select default display of MP3 play information. “Folder/File” or “Artist/Title” can be selected.



• SAT

Select default display of SIRIUS mode. “Cat./Ch.” or “Artist/Title” can be selected.



• PHONE

Select this item to enter BLUETOOTH setup mode. Refer to “BLUETOOTH PHONE OPERATION” section for detailed information.





TF_USA_RADIO

8. TUNE & Audio Control Knob

Rotate the knob clockwise or counter-clock wise to increase or decrease from current frequency.

(AM 10kHz, FM 200kHz)

Pressing the button changes the BASS, MIDDLE, TREBLE, FADER and BALANCE TUNE mode. The mode selected is shown on the display. After selecting each mode, rotate the Audio control knob clockwise or counterclockwise.

• BASS Control

To increase the BASS, rotate the knob clockwise, while to decrease the BASS, rotate the knob counterclockwise.

• MIDDLE Control

To increase the MIDDLE, rotate the knob clockwise, while to decrease the MIDDLE, rotate the knob counterclockwise.

• TREBLE Control

To increase the TREBLE, rotate the knob clockwise, while to decrease the TREBLE, rotate the knob counterclockwise.

• FADER Control

Turn the control knob clockwise to emphasize rear speaker sound (front speaker sound will be attenuated). When the control knob is turned counterclockwise, front speaker sound will be emphasized (rear speaker sound will be attenuated).

• BALANCE Control

Rotate the knob clockwise to emphasize right speaker sound (left speaker sound will be attenuated). When the control knob is turned counter clockwise, left speaker sound will be emphasized (right speaker sound will be attenuated).



Using CD Player

1. CD Button

If the CD is loaded, turns to CD mode. If no CD, it displays “No Media” for 3 seconds and returns to the previous mode.

2. 1 Button (RANDOM)

Press this button for less than 0.8 seconds to activate ‘RDM’ mode and more than 0.8 seconds to activate ‘ALL RDM’ mode. It wil play the next song at once.

- RDM : Only files/tracks in a folder/disc are played back in a random sequence.
- ALL RDM (MP3/WMA Only) : All files in a disc are played back in the random sequence.

3. 2 Button (REPEAT)

Press this button for less than 0.8 seconds to activate 'RPT' mode and more than 0.8 seconds to activate 'FLD RPT' mode.

- RPT : Only a track (file) is repeatedly played back.
- FLD RPT (MP3/WMA Only) : Only files in a folder are repeatedly played back.

4. TRACK Button

- Press ∨TRACK button for less than 0.8 seconds to play from the beginning of current song.
- Press ∨TRACK button for less than 0.8 seconds and press again within 1 second to play the previous song.
- Press ∨TRACK button for 0.8 seconds or longer to initiate reverse direction high speed sound search of current song.
- Press TRACK∧ button for less than 0.8 seconds to play the next song.
- Press TRACK∧ button for 0.8 seconds or longer to initiate forward direction high speed sound search of current song.

5. SCAN Button

Play each song in the CD for 10 seconds. To cancel SCAN Play, press this button again.



6. CD Eject Button

- Press ⏏ button to eject the CD. This button works regardless of ignition switch status.

7. CD Slot

Insert a CD label side up and gently push in while ignition switch is on ACC or ON. The audio automatically switches to CD mode and begins to play the CD.

If the audio was turned off, audio power will automatically turned on as the CD is inserted.

- This audio only recognizes 12cm-size, CD-DA (Audio CD) or ISO data-CD (MP3 CD).
- If UDF data-CD or non-CD (e.g. DVD) is inserted, "Reading Error" message will be displayed and the disc will be ejected.

⚠ CAUTION

Do not insert a CD if CD indicator is lit.



TF_USA_CD

8. FOLDER Button

- Press ∨FOLDER button to move to child folder of the current folder and display the first song in the folder. Press TUNE/ ENTER knob to move to the folder displayed. It will play the first song in the folder.
- Press FOLDER∧ button to move to parent folder of the current folder and display the first song in the folder. Press TUNE/ENTER knob to move to the folder displayed.

9. INFO Button

Displays the information of the current song.

- Audio CD : Disc Title/Artist, Track Title /Artist, Total Track.
- MP3 CD : File Name, Title, Artist, Album, Folder, Total Files (Not displayed if the information is unavailable on the CD or file.)

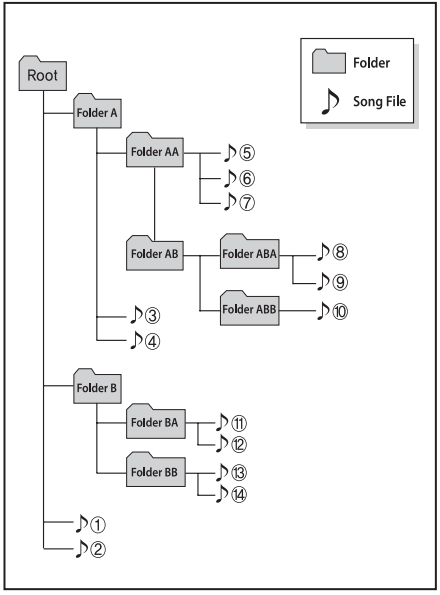
10. TUNE Knob & ENTER Button

- Turn this knob clockwise to browse songs after current song, or counterclockwise to browse songs before current song. To play the displayed song, press the knob.
- Pressing this knob without turning enters to AUDIO CONTROL mode.

NOTE:

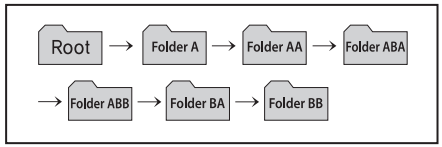
Order of playing files (folders) :

1. Song playing order : ① to ⑭ sequentially.



2. Folder playing order :

✻ If no song file is contained in the folder, that folder is not displayed.



⚠ CAUTION IN USING USB DEVICE

- *To use an external USB device, make sure the device is not connected when starting up the vehicle. Connect the device after starting up.*
- *If you start the engine when the USB device is connected, it may damage the USB device. (USB flashdrives are very sensitive to electric shock.)*
- *If the engine is started up or turned off while the external USB device is connected, the external USB device may not work.*
- *It may not play inauthentic MP3 or WMA files.*
  1) *It can only play MP3 files with the compression rate between 8Kbps~320Kbps.*
  2) *It can only play WMA music files with the compression rate between 8Kbps~320Kbps.*
- *Take precautions for static electricity when connecting or disconnecting the external USB device.*

(Continued)

(Continued)

- *An encrypted MP3 PLAYER is not recognizable.*
- *Depending on the condition of the external USB device, the connected external USB device can be unrecognizable.*
- *When the formatted byte/sector setting of External USB device is not either 512BYTE or 2048BYTE, then the device will not be recognized.*
- *Use only a USB device formatted to FAT 12/16/32.*
- *USB devices without USB I/F authentication may not be recognizable.*
- *Make sure the USB connection terminal does not come in contact with the human body or other objects.*
- *If you repeatedly connect or disconnect the USB device in a short period of time, it may break the device.*
- *You may hear a strange noise when connecting or disconnecting a USB device.*

(Continued)

(Continued)

- *If you disconnect the external USB device during playback in USB mode, the external USB device can be damaged or may malfunction. Therefore, disconnect the external USB device when the audio is turned off or in another mode. (e.g, Radio, SIRIUS or CD)*
- *Depending on the type and capacity of the external USB device or the type of the files stored in the device, there is a difference in the time taken for recognition of the device.*
- *Do not use the USB device for purposes other than playing music files.*
- *Use of USB accessories such as rechargers or heaters using USB I/F may lower performance or cause trouble.*
- *If you use devices such as a USB hub purchased separately, the vehicle's audio system may not recognize the USB device. In that case, connect the USB device directly to the multimedia terminal of the vehicle.*

(Continued)

(Continued)

- *If the USB device is divided by logical drives, only the music files on the highest-priority drive are recognized by car audio.*
- *Devices such as MP3 Player/ Cellular phone/Digital camera can be unrecognizable by standard USB I/F can be unrecognizable.*
- *Some non-standard USB devices (METAL COVER TYPE USB) can be unrecognizable.*
- *Some USB flash memory readers (such as CF, SD, microSD, etc.) or external-HDD type devices can be unrecognizable.*
- *Music files protected by DRM (DIGITAL RIGHTS MANAGEMENT) are not recognizable.*
- *The data in the USB memory may be lost while using this audio. Always back up important data on a personal storage device.*

(Continued)

(Continued)

- *Please avoid using USB memory products which can be used as key chains or cellular phone accessories as they could cause damage to the USB jack. Please make certain only to use plug type connector products as shown below.*







Using USB device

1. AUX Button (USB or AUX)

If the auxiliary device is connected, it switches to AUX or USB mode to play the sound from the auxiliary player.

If there is no auxiliary device, then the message “No Media” will become displayed on the LCD for 3 seconds and returns to previous mode.

2. 1 Button (RANDOM)

- Press this button for less than 0.8 seconds to play songs randomly in current folder.
- Press this button for 0.8 seconds or longer to play songs randomly in entire USB device.
- To cancel RANDOM play, press this button again.

3. 2 Button (REPEAT)

- Press this button for less than 0.8 seconds to repeat current song.
- Press this button for 0.8 seconds or longer to repeat all songs in current folder.
- To cancel REPEAT, press this button again.

4. TRACK Button

- Press the ∨TRACK button for less than 0.8 seconds to play from the beginning of the current song.

  Press the button for less than 0.8 sec onds and press it again within 1 second to move to and play the previous song.

  Press the button for 0.8 seconds or longer to play the song in reverse direction in fast speed.
- Press the TRACK∧ button for less than 0.8 seconds to move to the next song. Press the button for 0.8 seconds or longer to play the song in forward direction in fast speed.



5. SCAN Button

Plays each song in the USB device for 10 seconds.

To cancel SCAN Play, press this button again.

6. INFO Button

Displays the information of the file currently played in the order of

FILE NAME ➟ TITLE ➟ ARTIST ➟ ALBUM ➟ FOLDER ➟ TOTAL FILE ➟ NORMAL DISPLAY ➟ FILE NAME… (Displays no information if the file has no song information.)



TF_USA_USB

7. FOLDER Button

- Press ∨FOLDER button to move to child folder of the current folder and display the first song in the folder.

  Press TUNE/ ENTER knob to move to the folder displayed. It will play the first song in the folder.
- Press FOLDER∧ button to move to parent folder display the first song in the folder.

  Press TUNE/ENTER knob to move to the folder displayed.

8. TUNE Knob & ENTER Button

- Turn this knob clockwise to browse songs after current song, or counter clockwise to browse songs before current song. To play the displayed song, press the knob.
- Pressing this knob without turning enters to AUDIO CONTROL mode.

✻ NOTICE FOR USING THE iPod® DEVICE

- **Some iPod models might not support the communication protocol and the files will not be played.**
  Supported iPod models:
  - iPod Mini
  - iPod 4th(Photo)~ 6th(Classic) generation
  - iPod Nano 1st~4th generation
  - iPod Touch 1st~2nd generation
- **The order of search or playback of songs in the iPod can be different from the order searched in the audio system.**
- **If the iPod disabled due to its own malfunction, reset the iPod. (Reset: Refer to iPod manual)**
- **An iPod may not operate normally on low battery.**
- **Some iPod devices, such as the iPone®, can be connected through the *Bluetooth*® wireless technology interface. The device must have audio *Bluetooth*® wireless technology capability (such as for stereo headphone *Bluetooth*® wireless technology). The device can play, but it will not be controlled by the audio system.**

⚠ CAUTION IN USING THE iPod® DEVICE

- ***The Kia iPod Power Cable is needed in order to operate iPod with the audio buttons on the audio system. The USB cable provided by Apple may cause malfunction and should not be used for Kia vehicles.***
  ✻ ***The Kia iPod Power Cable may be purchased through your Kia Dealership.***
- ***When connecting iPod with the iPod Power Cable, insert the connector to the multimedia socket completely. If not inserted completely, communications between iPod and audio may be interrupted.***
- ***When adjusting the sound effects of the iPod and the audio system, the sound effects of both devices will overlap and might reduce or distort the quality of the sound.***
- ***Deactivate (turn off) the equalizer function of an iPod when adjusting the audio system's volume, and turn off the equalizer of the audio system when using the equalizer of an iPod.***

(Continued)

(Continued)

- ***When the iPod cable is connected, the system can be switched to AUX mode even without iPod device and may cause noise. Disconnect the iPod cable when you are not using the iPod device.***
- ***When not using iPod with car audio, detach the iPod cable from iPod. Otherwise, iPod may remain in accessory mode, and may not work properly.***





Using iPod®

∗ iPod® is a trademark of Apple Inc.

1. AUX Button (iPod®)

If iPod is connected, it switches to the iPod mode from the previous mode to play the song files stored in the iPod.

If there is no iPod connected, then it displays the message "No Media" for 3 seconds and returns to the previous mode.

2. 1 Button (RANDOM)

- Press this button for less than 0.8 seconds to shuffle order of all songs in current category. (Song Random)
- Press this button for 0.8 seconds or longer to shuffle order of albums in current category. (Album Random)
- To cancel RANDOM Play, press this button again.

3. 2 Button (REPEAT)

Repeats the song currently played.

4. TRACK Button

- Press the ∨TRACK button for less than 0.8 seconds to play from the beginning of the song currently played.

  Press the button for less than 0.8 seconds and press it again within 1 second to move to and play the previous track.

  Press the button for 0.8 seconds or longer to play the song in reverse direction in fast speed.
- Press the TRACK∧ button for less than 0.8 seconds to move to the next track.

  Press the button for 0.8 seconds or longer to play the song in forward direction in fast speed.



5. SCAN Button

Plays each song in the iPod device for 10 seconds.

To cancel SCAN Play, press this button again.

6. 6 Button (MENU)

Moves to the upper category from currently played category of the iPod.

To move to (play) the category (song) displayed, press TUNE knob.

You will be able to search through the lower category of the selected category.

The standard order of iPod's category is SONGS ➟ ALBUMS ➟ ARTISTS ➟ GENRES ➟ iPod



7. INFO Button

Displays the information of the file currently played in the order of
TITLE ➟ ARTIST ➟ ALBUM ➟ NORMAL DISPLAY ➟ TITLE... (Displays no information if the file has no song information.)

8. TUNE Knob & ENTER Button

When you rotate the knob clockwise, it will display the songs (category) ahead of the song currently played (category in the same level).

Also, when you rotate the knob counterclockwise, it will display the songs (category) before the song currently played (category in the same level).

To listen to the song displayed in the song category, press the button to skip to and play the selected song.

Pressing the button changes the BASS, MIDDLE, TREBLE, FADER and BALANCE TUNE mode. The mode selected is shown on the display. After selecting each mode, rotate the Audio control knob clockwise or counterclockwise.

SIRIUS Satellite Radio information (if equipped)

Satellite Radio channels:

SIRIUS Satellite Radio has over 130 channels, including 69 channels of 100% commercial-free music, plus sports, news, talk and entertainment available nationwide in your vehicle. For more information and a complete list of SIRIUS Satellite Radio channels, visit sirius.com in the United States, sirius-canada.ca in Canada, or call SIRIUS at 1-888-539-7474.

Satellite Radio reception factors:

To receive the satellite signal, your vehicle has been equipped with a satellite radio antenna located on the roof of your vehicle. The vehicle roof provides the best location for an unobstructed, open view of the sky, a requirement of a satellite radio system. Like AM/FM, there are several factors that can affect satellite radio reception performance:

- Antenna obstructions: For optimal reception performance, keep the antenna clear of snow and ice build-up and keep luggage and other material as far away from the antenna as possible.
- Terrain: Hills, mountains, tall buildings, bridges, tunnels, freeway overpasses, parking garages, dense tree foliage and thunderstorms can interfere with your reception.

SIRIUS Satellite Radio service:

SIRIUS Satellite Radio is a subscription-based satellite radio service that broadcasts music, sports, news and entertainment programming to radio receivers, which are available for installation in motor vehicles or factory installed, as well as for the home, portable and wireless devices, and through an Internet connection on personal computer.

Vehicles that are equipped with a factory installed SIRIUS Satellite Radio system include:

- Hardware and an introductory trial subscription term, which begins on the date of sale or lease of the vehicle.
- For a small upgrade fee, access to SIRIUS music channels, and other select channels over the Internet using any computer connected to the Internet (U.S. customers only).

  For information on extended subscription terms, contact SIRIUS at 1-888-539-7474.

NOTE:

Satellite Radio requires SIRIUS® compatible receiver and a subscription service fee after trial period.
Vehicles without a factory-installed radio receiver require hardware purchase and installation. Please see your dealer for further details. All fees and programming subject to change.
Subscriptions governed by the SIRIUS Terms & Conditions available at www.sirius.com / service terms.
Available only in the 48 contiguous United States and the District of Columbia. Service available in Canada; see www.siriuscanada.ca
Kia shall not be responsible for any such programming changes.

Satellite Radio Electronic Serial Number (ESN): This 12-digit Satellite Serial Number is needed to re-activate, modify or track your satellite radio account. You will need this number when communicating with SIRIUS.



Using SIRIUS Satellite Radio

Your Kia vehicle is equipped with a 3 month complimentary period of SIRIUS Satellite Radio so you have access to over 130 channels of music, information, and entertainment programming.

Activation

In order to extend or reactivate your subscription to SIRIUS Satellite Radio, you will need to contact SIRIUS Customer Care at 1-888-539-7474. Have your 12 digit SID (Sirius Identification Number)/ESN (Electronic Serial Number) ready. To retrieve the SID/ESN, turn on the radio, press the [SAT] button, and tune to channel zero.

Please note that the vehicle will need to be turned on, in Sirius mode, and have an unobstructed view of the sky in order for the radio to receive the activation signal.

1. SAT Button(SIRIUS Satellite Radio)

Press the SAT button to switch to SIRIUS Satellite Radio. It cycles through the different bands as noted below.

SAT1➟SAT2➟SAT3➟SAT1...

2. SEEK Button (CHANNEL)

- Press ∨SEEK∧ button for less than 0.8 seconds to select previous or next channel.
- Press ∨SEEK∧ button for 0.8 seconds or longer to continuously move to previous or next channel.
- If “CATEGORY” Icon is displayed at the top of the screen, channel up/down is done through the channels within current category.

3. SCAN Button

- When the SCAN button is pressed, it automatically scans the radio stations upwards.
- The SCAN feature steps through every channel, starting from the initial channel, for ten seconds.
- Press the SCAN button again to stop the scan feature and to listen to the currently selected channel.
- If "CATEGORY" Icon is displayed at the top of the screen, channel changing is done through the channels within current category.



4. CAT Button (CATEGORY)

- Press ∨CAT∧ button to enter the Category List Mode. The display will indicate the category items, highlight the category that the current channel belongs to.
- In the Category List Mode, press these buttons to navigate category list.
- Press ENTER Button to select the lowest channel in highlighted category.
- If channel is selected by selecting category "CATEGORY" Icon is displayed at the top of the screen.



TF_USA_SIRIUS

5. INFO Button

Displays the information of the current channel as below when the button is pressed each time.

- When default display is
  CAT(Category)/CH(Channel) ➟ Artist/Title ➟ Composer (if available) ➟ Category/Channel...
- When default display is
  ART(Artist)/TITLE(Title) ➟ Category/Channel ➟ Composer(if available) ➟ Artist/Title...

✻ Troubleshooting

1. Antenna Error

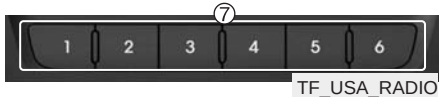
If this message is displayed, the antenna or antenna cable is broken or unplugged. Please consult with your Kia dealership.

2. Acquiring Signal

If this message is displayed, it means that the antenna is covered and that the SIRIUS Satellite Radio signal is not available. Ensure the antenna is uncovered and has a clear view of the sky.

6. TUNE Knob & ENTER Button

- Rotate clockwise to increase the channel number or to scroll down the category list.
- Rotate counterclockwise to decrease the channel number or to scroll up the category list.
- Press this to make selection of channels or items.



TF_USA_RADIO

7. PRESET Buttons

- Press 1 ~ 6 buttons less than 0.8 seconds to play the channel saved in each button.
- Press 1 ~ 6 buttons for 0.8 seconds or longer to save current channel to the respective button with a beep.

⚠ CAUTION IN USING *BLUETOOTH®* WIRELESS TECHNOLOGY CELLULAR PHONE

- ***Do not use a cellular phone or perform Bluetooth® wireless technology settings (e.g. pairing a phone) while driving.***
- ***Some Bluetooth® wireless technology-enabled phones may not be recognized by the system or fully compatible with the system.***
- ***Before using Bluetooth® wireless technology related features of the audio system, refer your phone's User's Manual for phone-side Bluetooth® wireless technology operations.***
- ***The phone must be paired to the audio system to use Bluetooth® wireless technology related features.***
- ***You will not be able to use the hands-free feature when your phone (in the car) is outside of the cellular service area (e.g. in a tunnel, in a underground, in a mountainous area, etc.).***

(Continued)

(continued)

- ***If the cellular phone signal is poor or the vehicles interior noise is too loud, it may be difficult to hear the other person's voice during a call.***
- ***Do not place the phone near or inside metallic objects, otherwise communications with Bluetooth® wireless technology system or cellular service stations can be disturbed.***
- ***While a phone is connected through Bluetooth® wireless technology your phone may discharge quicker than usual for additional Bluetooth® wireless technology-related operations.***
- ***Some cellular phones or other devices may cause interference noise or malfunction to audio system. In this case, store the device in a different location may resolve the situation.***

NOTE:

If you need more information about Kia's *Bluetooth®* wireless technology. Contact Kia website "www.Kia.com" (OWNERS>General Info>BLUETOOTH wireless technology).

BLUETOOTH® WIRELESS TECHNOLOGY PHONE OPERATION (if equipped)



1. VOLUME button : Raises or lowers speaker volume.
2. button : Activates voice recognition.
3. button : Places and transfers calls.
4. button : Ends calls or cancels functions.

■ What is *Bluetooth®* wireless technology?

Bluetooth® is a wireless technology that allows multiple devices to be connected in a short range, low-powered devices like hands-free, stereo headset, steering remote control, etc. For more information, visit the *Bluetooth®* website at *www.Bluetooth.com*

■ General Features

- This audio system supports *Bluetooth®* wireless technology hands-free and stereo-headset features.
  - HANDS-FREE feature: Making or receiving calls wirelessly through voice recognition.
  - STEREO-HEADSET feature: Playing music from cellular phones (that supports A2DP feature) wirelessly.
- Voice recognition engine of the *Bluetooth®* wireless technology system supports 3 types of languages:
  - English
  - Canadian French
  - US Spanish

✻ NOTICE

- **The phone must be paired to the system before using *Bluetooth®* wireless technology features.**
- **Only one selected (linked) cellular phone can be used with the system at a time.**
- **Some phones are not fully compatible with this system.**
- **The *Bluetooth®* word mark and logos are registered trademarks owned by *Bluetooth®* SIG, Inc. and any use of such marks by Kia is under license. A Bluetooth enabled cell phone is required to use *Bluetooth®* wireless technology.**

■ Receiving a Phone Call

When receiving a phone call, a ringtone is audible from speakers and the audio system changes into telephone mode.

When receiving a phone call, “Incoming call” message and incoming phone number (if available) are displayed on the audio.

- To Answer a Call:
  - Press button on the steering wheel.
- To Reject a Call:
  - Press button on the steering wheel.
- To Adjust Ring Volume:
  - Use VOLUME buttons on the steering wheel.
- To Transfer a Call to the Phone (Secret Call):
  - Press and hold button on the steering wheel until the audio system transfers a call to the phone.

■ Talking on the Phone

When talking on the phone, “Active Call” message and the other party’s phone number (if available) are displayed on the audio.

• To Finish a Call

- Press  button on the steering wheel.

✻ NOTICE

In the following situations, you or the other party may have difficulty hearing each other:

1. **Speaking at the same time, your voice may not reach each other parties. (This is not a malfunction.) Speak alternately with the other party on the phone.**
2. **Keep the volume to a low level. High-level volume may result in distortion and echo.**
3. **When driving on a rough road.**
4. **When driving at high speeds.**
5. **When the window is open.**
6. **When the air conditioning vents are facing the microphone.**
7. **When the sound of the air conditioning fan is loud.**

■ *Bluetooth®* Audio Music Streaming

The audio system supports *Bluetooth®* A2DP (Audio Advanced Distribution Profile) and AVRCP (Audio Video Remote Control Profile) technologies.

Both profiles provide steaming of music via compatible “PAIRED” *Bluetooth®* wireless technology Cellular phone.

To stream music from the *Bluetooth®* wireless technology cellular phone, play your music files on your cellular phone according to your cellular phone user’s manual and press the CD/AUX button on the audio system until “MP3 play” is displayed on the LCD.

The audio system head unit displays ‘MP3 MODE’.

NOTE:

- **In addition to streaming MP3 files, all music and sound files your cellular phone supports can be played by the audio system.**
- ***Bluetooth®* wireless technology compatible cellular phones must include A2DP and AVRCP capabilities.**
- **Some A2DP and AVRCP compatible *Bluetooth®* cellular phones may not play music through the audio system initially. These cellular phones may need to have the *Bluetooth®* wireless technology streaming enabled, for example;**

  i.e : Menu➟Filemanager➟Music➟ Option➟Play via Bluetooth
- **Please refer to User’s Guide for your cellular phone for more information. To cancel *Bluetooth®* wireless technology cellular phone music streaming, stop music playback on the cellular phone or change the audio mode to AM/FM, SIRIUS, CD, iPod, ect.**

■ Phone Setup

All *Bluetooth®* wireless technology related operations can be performed in PHONE menu.

1) Push the SETUP button to enter SETUP mode.
2) Select “Phone” item by rotating the TUNE knob, then push the knob.



3) Select desired item by rotating the TUNE knob, then push the knob.



• Pairing a phone

Before using *Bluetooth®* wireless technology features, the phone must be paired (registered) with the audio system. Up to 5 phones can be paired with the system.

NOTE:

• The pairing procedure of the phone varies according to each phone model. Before attempting to pair phone, please see your phone’s User’s Guide for instructions.
• Once pairing with the phone is completed, there is no need to pair with that phone again unless the phone is deleted manually from the audio system (refer “Deleting a Phone” section) or the vehicle’s information is removed from the phone.

① Press SETUP button to enter SETUP mode.
② Select “Phone”, then “Pair” in PHONE menu.
③ The audio displays “Device : [Name] passkey: 0000”
④ Search and select the device name in your mobile phone to starting the pairing process.

NOTE:

• If the phone is paired with two or more vehicles of the same model, some phones may not handle *Bluetooth®* wireless technology devices of that name correctly. In this case, you may need to change the name displayed on your phone. For example, if the vehicles' name is KMC CAR, you may need to change the name displayed on you phone from KMC_CAR to JOHNS_CAR or KMC CAR_1 to avoid ambiguity.

Refer to your phone User’s Guide, or contact your cellular carrier or phone manufacturer for instructions.

• Connecting a phone

When the *Bluetooth®* wireless technology system is enabled, the phone previously used is automatically selected and re-connected. If you want to select different phone previously paired, the phone can be selected through “Select Phone” menu.

Only a selected phone can be used with the hands-free system at a time.

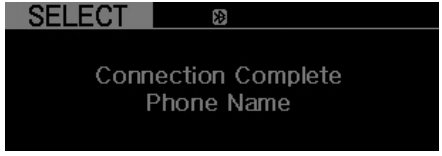
① Press SETUP button to enter SETUP mode.

② Select “Phone”, then “Select” in PHONE menu.



③ Select desired phone name from the list shown.

④ The *Bluetooth®* wireless technology icon appears on the upper side of audio display when a phone is connected.



• Changing Priority

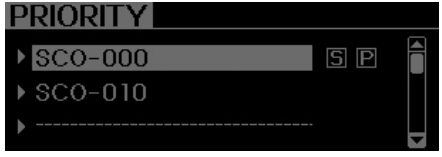
If several phones are paired with the audio system, the system attempts to connect following order when the *Bluetooth®* wireless technology system is enabled:

1) “Priority” checked phone.
2) Previously connected phone
3) Gives up auto connection.

① Press SETUP button to enter SETUP mode.

② Select “Phone”, then “Priority” in PHONE menu.

③ Select desired phone name from the list shown.



• Deleting a Phone

The paired phone can be deleted.

- When the phone is deleted, all the information associated with that phone is also deleted (including phonebook).
- If you want to use the deleted phone with the audio system again, pairing procedure must be completed once more.

① Press SETUP button to enter SETUP mode.
② Select “Phone”, then “Delete” in PHONE menu.
③ Select desired phone name from the list shown.



• ADVANCED Menu

After pressing the SETUP button, select the “Phone” menu. while in PHONE menu, select the “Advanced” menu to make *Bluetooth®* wireless technology Phone settings.(The ADVANCED menu may differ according to audio specifications.)



Incoming Volume (call volume adjustments)

While in ADVANCED menu, select “In Vol.” Use the knob key to set the desired volume and press the ENTER button.

Contacts Sync (Automatic Phonebook download setting)

While in ADVANCED menu, select “Contacts” to automatically save the contacts and call history in your mobile phone each time you connect a mobile device, select ON. If you do not wish for automatic download, select OFF.

It’s not available to make a phone call by bluetooth audio system while the phonebook is being downloaded.

Language of *Bluetooth®* wireless technology voice recognition

While in ADVANCED menu, press “Language”. To change the language, select the desired language and press the ENTER button.

***Bluetooth®* wireless technology system off**

While in ADVANCED menu, press “BT Off” To turn off the *Bluetooth®* System.

■ Voice Recognition Activation

• The voice recognition engine contained in the *Bluetooth®* wireless technology System can be activated in the following conditions:
  - Button Activation
    The voice recognition system will be active when the button is pressed and after the sound of a Beep.
  - Active Listening
    The voice recognition system will be active for a period of time when the Voice Recognition system has asked for a customer response.

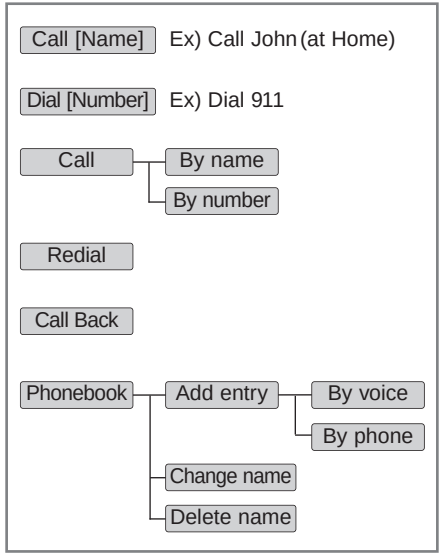
• The system can recognize single digits from zero to nine while number greater than ten will not be recognized.

• The system shall cancel voice recognition mode in following cases : When pressing the button and saying “cancel” following the beep. When not making a call and pressing the button. When voice recognition has failed 3 consecutive times.

• At any time if you say “help”, the system will announce what commands are available.

■ Menu tree

The menu tree identifies available voice recognition *Bluetooth®* wireless technology functions.



✻Tip

■ Voice Operation

To get the best performance out of the Voice Recognition System, observe the followings:

- **Keep the interior of the vehicle as quiet as possible. Close the window to eliminate surrounding noise (traffic noise, vibration sounds, etc), which may disturb recognizing the voice command correctly.**
- **Speak a command after a beep sound within 5 seconds. Otherwise the command will not be received properly.**
- **Speak in a natural voice without pausing between words.**
- **While receiving voice commands, press the button on the steering wheel remote controller to terminate guidance. Voice command will convert back to waiting mode to allow the user to say a new voice command.**

■ Making a Phone Call

• Direct Calling

① Press button.
② Say the following command.
- Call <John> : Connects the call to John.
- Call <John> on <Mobile> : Connects the call to John's mobile phone number.
- Call <John> at <Home> : Connects the call to john's home number.
- Call <John> in <Office> : Connects the call to John's office number.

Note:

Calls can be immediately connected to contacts who name or voice tag are saved in the phonebook(or contacts).

• Calling by Name

A phone call can be made by speaking names registered in the audio system.

① Press button.
② Say "Call".
③ Say "By name" when prompted.
④ Say desired name (in Phonebook or voice tag).
⑤ Say desired location (phone number type). Only stored locations can be selected.
⑥ Say "Yes" to confirm and make a call.

✻Tip

A shortcut to each of the following functions is available:
1. Say "Call Name"

• Dialing by Number

A phone call can be made by dialing the spoken numbers. The system can recognize single digits from zero to nine.

① Press button.
② Say "Call".
③ Say "By number" when prompted.
④ Say desired phone numbers.
⑤ Say "Dial" to complete the number and make a call.

✻Tip

A shortcut to each of the following functions is available:
① Say "Dial Number"
② Say "Dial <digit>"

■ Phone Book (In-Vehicle)

• Adding entry by voice

Phone numbers and voice tags can be registered. Entries registered in the phone can also be transferred.

① Press button.
② Say "Phonebook".
- The system replies with all available commands.
- To skip the information message, press again and then a beep is heard.

③ Say “Add Entry”.
④ Say “By Voice” to proceed.
⑤ Say the name of the entry when prompted.
⑥ Say “Yes” to confirm.
⑦ Say the phone number of that entry when prompted.
⑧ Say “Store” if phone number input is finished.
⑨ Say a phone number type. “Home”, “Work”, “Mobile”, “Other” or “Default” is available.
⑩ Say “Yes” to complete adding entry.
⑪ Say “Yes” to store additional location for this contact, or say “Cancel” to finish the process.

✻ NOTICE

- **The system can recognize single digits from zero to nine. Numbers that are ten or greater cannot be recognized.**
- **You can enter each digit individually or group digits together in preferred string lengths.**
- **To speed up input, it is a good idea to group all digits into a continuous string.**
- **Recommend to enter the numbers constituted an grouping within all digit numbers to dial 995 / 734 / 0000**
- **The display corresponding to each operation appears on the screen as follows:**

  Input operation example:

  1. Say: “Nine, nine, five”

  ➟ Display: “995”

  2. And say: “Seven, three, four”

  ➟ Display: “995734”

• Adding Entry by Phone

① Press button.
② Say "Phonebook".
③ Say "Add Entry" after prompt.
④ Say "By Phone" to proceed.
⑤ Say “Yes” to confirm.
⑥ Your phone will start to transfer phone/contact list to the audio system. This process may take over 10 minutes depending on the phone model and number of entries
⑦ Wait till the audio displays “Transfer Complete” message.

• Changing Name

The registered names can be modified.

① Press button.
② Say “Phonebook”.
③ Say “Change Name” after prompt.
④ Say the name of the entry (voice tag).
⑤ Say “Yes” to confirm.
⑥ Say new desired name.

• Deleting Name
The registered names can be deleted.

① Press button.
② Say “Phonebook”.
③ Say “Delete Name” after prompt.
④ Say the name of the entry (voice tag).
⑤ Say “Yes” to confirm.

■ *Bluetooth*® wireless technology Audio Speaker Adaptation

Speaker adaptation will improve performance of voice recognition system to a particular user voice.
This will degrade the performance for other users.

• Record
① Press button for 10sec.
② Say “Record profile”.
③ Say “Yes”.
④ Say the word displayed on Radio.

• Delete
① Press button for 10sec.
② Say “Delete profile”.
③ Say “Yes”.

■ Key matrix

No.	KEY		Class							
			Paired H/P Empty	Disconnected	Connected		Incoming Call	Outgoing Call	Active Call	2nd Call
					Normal mode	BT SETUP menu				
1		SHORT	Not Paired	Not Connecting	-	-	Accept Call	-	2nd call 1st Call:waiting 2nd Call:active	2nd Call 2nd Call:waiting 1st Call:active
		LONG	-	-	-	-	-	-	Transfer call:secret call	
2		SHORT	VR MODE Cancel	VR MODE Cancel	VR MODE Cancel	VR MODE Cancel	Reject Call	End Call	End Call	End Call
		LONG [10sec]	-	-	Speaker Adaptation (Only English)	Speaker Adaptation (Only English)	-	-	-	-
3		SHORT	Active	Active	Active	Active	-	-	-	-
		LONG [10sec]	-	-	-	-	-	-	-	-

Before driving / 5-3
ENGINE START/STOP button / 5-5
Starting the hybrid system / 5-7
Automatic transaxle / 5-9
Brake system / 5-14
Cruise control system / 5-27
Economical operation / 5-31
Special driving conditions / 5-33
Winter driving / 5-37
Vehicle load limit / 5-40
Vehicle weight / 5-45

Driving your vehicle

5

Trailer towing / 5-45

Be sure the exhaust system does not leak.

The exhaust system should be checked whenever the vehicle is raised to change the oil or for any other purpose. If you hear a change in the sound of the exhaust or if you drive over something that strikes the underneath side of the car, have the exhaust system checked as soon as possible by an authorized Kia dealer.

⚠ WARNING - Engine exhaust

Do not inhale exhaust fumes or leave your engine running in a enclosed area for a prolonged time. Exhaust fumes contain carbon monoxide, a colorless, odorless gas that can cause unconsciousness and death by asphyxiation.

⚠ WARNING - Open trunk

Do not drive with the trunk open. Poisonous exhaust gases can enter the passenger compartment

If you must drive with the trunk open proceed as follows:

1. **Close all windows.**
2. **Open side vents.**
3. **Set the air intake control at "Fresh", the air flow control at "Floor" or "Face" and the fan at the highest speed.**

BEFORE DRIVING

Before entering vehicle

- Be sure that all windows, outside mirror(s), and outside lights are clean.
- Check the condition of the tires.
- Check under the vehicle for any sign of leaks.
- Be sure there are no obstacles behind you if you intend to back up.

Necessary inspections

Fluid levels, such as engine oil, engine coolant, brake fluid, and washer fluid should be checked on a regular basis, with the exact interval depending on the fluid. Further details are provided in Section 7, “Maintenance”.

⚠ WARNING - Distracted driving

Focus on the road while driving. The driver's primary responsibility is in the safe and legal operation of the vehicle. Use of any handled devices, other equipment or vehicle systems that distract the drive should not be used during vehicle operation.

Before starting

- Close and lock all doors.
- Position the seat so that all controls are easily reached.
- Buckle your seat belt.
- Adjust the inside and outside rearview mirrors.
- Be sure that all lights work.
- Check all gauges.
- Check the operation of warning lights when the ignition switch is turned to the ON position.
- Release the parking brake and make sure the brake warning light goes out.

For safe operation, be sure you are familiar with your vehicle and its equipment.

⚠ WARNING - Check surrounding

Always check the surrounding areas near your vehicle for people, especially children, before putting a vehicle into D (Drive) or R (Reverse).

⚠ WARNING - Driving while intoxicated

Do not drive while intoxicated. Drinking and driving is dangerous. Even a small amount of alcohol will affect your reflexes, perceptions and judgment. Driving while under the influence of drugs is as dangerous as or more dangerous than driving drunk.

⚠ WARNING - Loose object

Securely store items in your vehicle. When you make a sudden stop or turn the steering wheel rapidly, loose objects may drop on the floor and it could interfere with the operation of the foot pedals, possibly causing an accident.

⚠ WARNING - Fire risk

When you intend to park or stop the vehicle with the engine on, be careful not to depress the accelerator pedal for a long period of time. It may overheat the engine or exhaust system and cause fire.

ENGINE START/STOP BUTTON (IF EQUIPPED)



OTF050005

Illuminated ENGINE START/STOP button

Whenever the front door is opened, the ENGINE START/STOP button will illuminate for your convenience. The light will go off after about 30 seconds when the door is closed.

ENGINE START/STOP button position

OFF



Not illuminated

To turn off the engine (START/RUN position) or vehicle power (ON position), press the ENGINE START/STOP button with the shift lever in the P (Park) position. When you press the ENGINE START/STOP button without the shift lever in the P (Park) position, the ENGINE START/STOP button will not change to the OFF position but to the ACC position.

In an emergency situation while the vehicle is in motion, you are able to turn the engine off and to the ACC position by pressing the ENGINE START/STOP button for more than 2 seconds or 3 times successively within 3 seconds.

ACC(Accessory)



Orange indicator

Press the ENGINE START/STOP button while it is in the OFF position without depressing the brake pedal.

The steering wheel unlocks and electrical accessories are operational.

If the ENGINE START/STOP button is in the ACC position for more than 1 hour, the button is turned off automatically to prevent battery discharge.

ON



Green indicator

Press the ENGINE START/STOP button while it is in the ACC position without depressing the brake pedal.

The warning lights can be checked before the engine is started. Do not leave the ENGINE START/STOP button in the ON position for a long time. The battery may discharge, because the engine is not running.

START/RUN



Not illuminated

To start the hybrid system, depress the brake pedal and press the ENGINE START/ STOP button with the shift lever in the P (Park) or the N (Normal) position. For your safety, start the hybrid system with the shift lever in the P (Park) position.

If you press the ENGINE START/STOP button without depressing the brake pedal, the hybrid system will not start and the button will change as follow:

OFF ➔ ACC ➔ ON ➔ OFF

If you leave the ENGINE START/ STOP button in the ACC or ON position for a long time, the battery will discharge.

⚠ WARNING - Starting vehicle

Never press the ENGINE START/STOP button while the vehicle is in motion. This would result in loss of directional control and braking function, which could cause an accident.

STARTING THE HYBRID SYSTEM



OTF050007

Starting the hybrid system with a smart key (if equipped)

1. Carry the smart key or leave it inside the vehicle.
2. Make sure the parking brake is firmly applied
3. Place the transaxle shift lever in P (Park).
4. Press the ENGINE START/STOP button while depressing the brake pedal.
5. In extremely cold weather (below -18°C (0°F) or after the vehicle has not been operated for several days, let the engine warm up without depressing the accelerator.

Whether the engine is cold or warm, it should be started without depressing the accelerator.

- Even if the smart key is in the vehicle, if it is far away from you, the engine may not start.
- When the ENGINE START/STOP button is in the ACC position or above, if any door is opened, the system checks for the smart key. If the smart key is not in the vehicle, the warning "Key is not in vehicle" will illuminate on the LCD display. And if all doors are closed, the chime will sound for 5 seconds. The indicator or warning will turn off while the vehicle is moving. Always have the smart key with you.

⚠ WARNING - Unintended vehicle movement

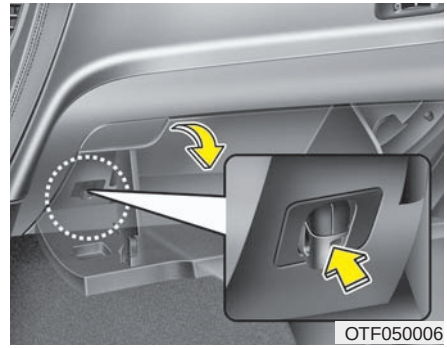
Never leave the smart key in the vehicle with children or vehicle occupants who are unfamiliar with the vehicle operation. Pushing the ENGINE START/STOP button while the smart key is in the vehicle may result in unintended engine activation and/or unintended vehicle movement.

⚠ CAUTION

If ambient temperature is low, the "READY" symbol may stay illuminated longer than the normal amount of time.

⚠ WARNING

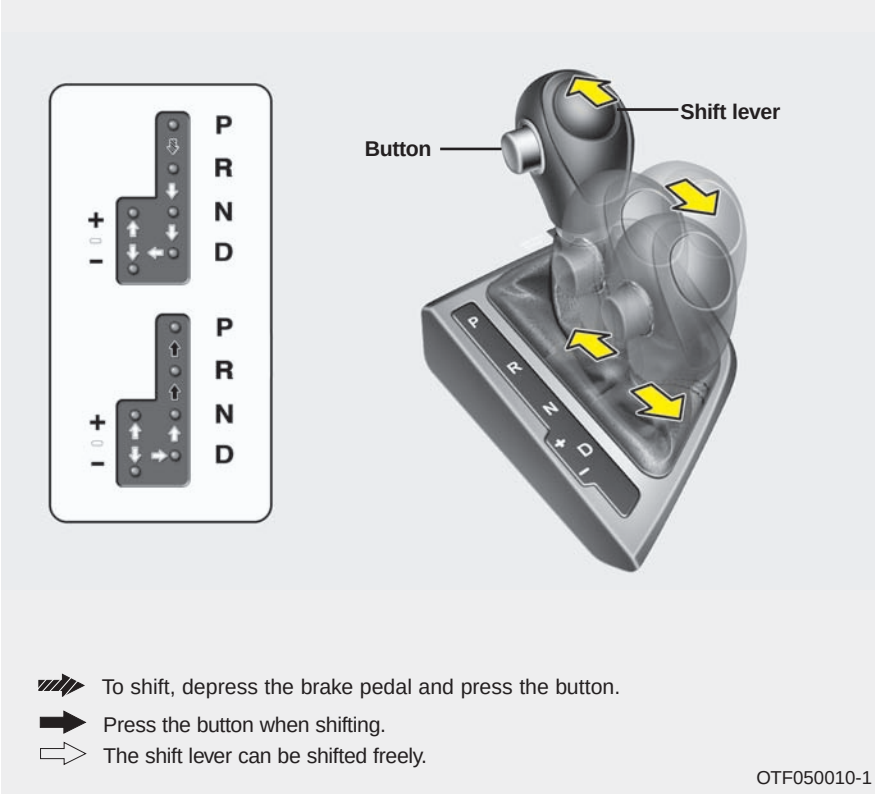
The Hybrid system will start only when the smart key is in the vehicle. Never allow children or any person who is unfamiliar with the vehicle to touch the Hybrid system start/stop button or related parts.


OTF050006

- If the battery is weak or the smart key does not work correctly, you can start the engine by inserting the smart key in the smart key holder.
- When the stop lamp fuse is blown, you can't start the engine normally. Replace the fuse with a new one. If it is not possible, you can start the engine by pressing the ENGINE START/STOP button for 10 seconds while it is in the ACC position. The engine can start without depressing the brake pedal. But for your safety always depress the brake pedal before starting the engine.

Do not press the ENGINE START/ STOP button for more than 10 seconds except when the stop lamp fuse is blown.

AUTOMATIC TRANSAXLE (IF EQUIPPED)



To shift, depress the brake pedal and press the button.

Press the button when shifting.

The shift lever can be shifted freely.

OTF050010-1

Automatic transaxle operation

The automatic transaxle has 6 forward speeds and one reverse speed. The individual speeds are selected automatically, depending on the position of the shift lever.

✻ NOTICE

The first few shifts on a new vehicle, if the battery has been disconnected, may be somewhat abrupt. This is a normal condition, and the shifting sequence will adjust after shifts are cycled a few times by the TCM (Transaxle Control Module) or PCM (Powertrain Control Module).

For smooth operation, depress the brake pedal when shifting from N (Neutral) to a forward or reverse gear.

⚠ WARNING - Automatic transaxle

Before leaving the driver's seat, always make sure the shift lever is in the P (Park) position; then set the parking brake fully and shut the engine off. Do not use the P position in place of the parking brake. Always make sure the shift lever is latched in the P position and set the parking brake fully. Unexpected and sudden vehicle movement can occur if these precautions are not followed.

⚠ CAUTION - Transaxle

To avoid damage to your transaxle, do not accelerate the engine in R (Reverse) or any forward gear position with the brakes on. The transaxle may be damaged if you shift into P (Park) while the vehicle is in motion.

When stopped on an upgrade, do not hold the vehicle with engine power. Use the service brake or the parking brake.

Transaxle ranges

The indicator light in the instrument cluster displays the shift lever position when the ignition switch is in the ON position.

P (Park)

Always come to a complete stop before shifting into P (Park). This position locks the transaxle and prevents the front wheels from rotating.

Shifting into P (Park) while the vehicle is in motion will cause the drive wheels to lock which will cause you to lose control of the vehicle.

R (Reverse)

Use this position to drive the vehicle backward.

⚠ CAUTION - Shifting

Always come to a complete stop before shifting into or out of R (Reverse); you may damage the transaxle if you shift into R (Reverse) while the vehicle is in motion, except when "Rocking the Vehicle" explained in this section.

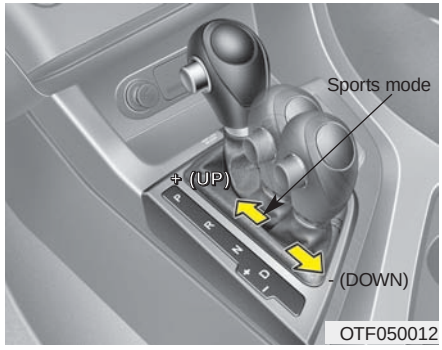
N (Neutral)

The wheels and transaxle are not engaged. The vehicle will roll freely even on the slightest incline unless the parking brake or service brakes are applied.

D (Drive)

This is the normal forward driving position. The transaxle will automatically shift through a 6-gear sequence, providing the best fuel economy and power.

For extra power when passing another vehicle or climbing grades, depress the accelerator fully, at which time the transaxle will automatically downshift to the next lower gear.



Sports mode

Whether the vehicle is stopped or in motion, sports mode is selected by pushing the shift lever from the D (Drive) position into the manual gate. To return to D (Drive) range operation, push the shift lever back into the main gate.

In sports mode, moving the shift lever backwards and forwards will allow you to make gearshifts rapidly.

Up (+) : Push the lever forward once to shift up one gear.

Down (-) : Pull the lever backwards once to shift down one gear.

- In sports mode, the driver must execute upshifts in accordance with road conditions, taking care to keep the engine speed below the red zone.
- In sports mode, only the 6 forward gears can be selected. To reverse or park the vehicle, move the shift lever to the R (Reverse) or P (Park) position as required.
- In sports mode, downshifts are made automatically when the vehicle slows down. When the vehicle stops, 1st gear is automatically selected.
- In sports mode, when the engine rpm approaches the red zone shift points are varied to upshift automatically.
- To maintain the required levels of vehicle performance and safety, the system may not execute certain gearshifts when the shift lever is operated.
- When driving on a slippery road, push the shift lever forward into the +(up) position. This causes the transaxle to shift into the 2nd gear which is better for smooth driving on a slippery road. Push the shift lever to the -(down) side to shift back to the 1st gear.

Shift lock system (if equipped)

For your safety, the automatic transaxle has a shift lock system which prevents shifting the transaxle out of P (Park) unless the brake pedal is depressed.

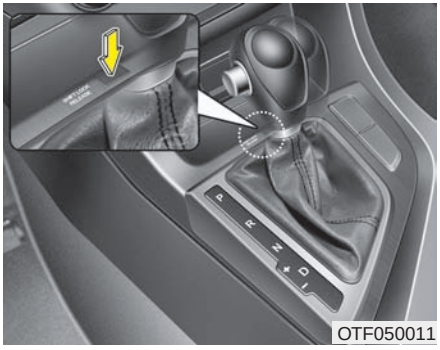
To shift the transaxle from P (Park) into R (Reverse):

1. Depress and hold the brake pedal.
2. Start the engine or turn the ignition switch to the ON position.
3. Move the shift lever.

If the brake pedal is repeatedly depressed and released with the shift lever in the P (Park) position, a chattering noise near the shift lever may be heard. This is a normal condition.

⚠ WARNING - Shifting from park

Always fully depress the brake pedal before and while shifting out of the P (Park) position into another position to avoid inadvertent motion of the vehicle.



Shift-lock override
(with smart key system)

If the shift lever cannot be moved from the P (Park) or N (Neutral) position into the R (Reverse) position with the brake pedal depressed, continue depressing the brake, then do the following:

1. Carefully remove the cap covering the shift-lock access hole (1).
2. Insert a key (or screwdriver) into the access hole and press down on the key (or screwdriver).
3. Move the shift lever.
4. Have your vehicle inspected by an authorized Kia dealer immediately.

Ignition key interlock system (if equipped)

The ignition key cannot be removed unless the shift lever is in the P (Park) position.

Good driving practices

- Never move the shift lever from P (Park) or N (Neutral) to any other position with the accelerator pedal depressed.
- Never move the shift lever into P (Park) when the vehicle is in motion.
- Slow down before shifting to a lower gear. Otherwise, the lower gear may not be engaged.
- Always use the parking brake. Do not depend on placing the transaxle in P (Park) to keep the vehicle from moving.
- Optimum vehicle performance and economy is obtained by smoothly depressing and releasing the accelerator pedal.

Moving up a steep grade from a standing start

To move up a steep grade from a standing start, depress the brake pedal, shift the shift lever to D (Drive). Select the appropriate gear depending on load weight and steepness of the grade, and release the parking brake. Depress the accelerator gradually while releasing the service brakes.

BRAKE SYSTEM

Power brakes

Your vehicle has power-assisted brakes that adjust automatically through normal usage.

In the event that the power-assisted brakes lose power because of a stalled engine or some other reason, you can still stop your vehicle by applying greater force to the brake pedal than you normally would. The stopping distance, however, will be longer.

When the engine is not running, the reserve brake power is partially depleted each time the brake pedal is applied. Do not pump the brake pedal when the power assist has been interrupted.

Pump the brake pedal only when necessary to maintain steering control on slippery surfaces.

⚠ WARNING

If the brake pedal does not return to its normal position when released, there may be a malfunction in the brake system. Take your vehicle to an authorized Kia dealer and have the system checked.

⚠ WARNING

Do not turn off the Hybrid system while going down a hill. The brake booster may not work sufficiently and the braking distance may be longer.

⚠ CAUTION

Do not depress the brake pedal continuously without READY status. The battery may be discharged.

⚠ CAUTION - Brake pedal

Do not drive with your foot resting on the brake pedal. This will create abnormally high brake temperatures which can cause excessive brake lining and pad wear.

⚠ WARNING - Steep hill braking

Avoid continuous application of the brakes when descending a long or steep hill by shifting to a lower gear. Continuous brake application will cause the brakes to overheat and could result in a temporary loss of braking performance.

Wet brakes may impair the vehicle's ability to safely slow down; the vehicle may also pull to one side when the brakes are applied. Applying the brakes lightly will indicate whether they have been affected in this way.

To dry the brakes, apply them lightly while maintaining a safe forward speed until brake performance returns to normal.

In the event of brake failure

If service brakes fail to operate while the vehicle is in motion, you can make an emergency stop with the parking brake. The stopping distance, however, will be much greater than normal.

⚠ WARNING - Parking brake

Avoid applying the parking brake to stop the vehicle while it is moving except in an emergency situation. Applying the parking brake while the vehicle is moving at normal speeds can cause a sudden loss of control of the vehicle. If you must use the parking brake to stop the vehicle, use great caution in applying the brake.

⚠ CAUTION

If the driver's door is not firmly closed for a long time, the auxiliary battery may be discharged because the brake controller keeps the standby operation. To prevent the battery discharge, close the door certainly.

Disc brakes wear indicator

When your brake pads are worn and new pads are required, you will hear a high-pitched warning sound from your front brakes or rear brakes (if equipped). You may hear this sound come and go or it may occur whenever you depress the brake pedal.

Please remember that some driving conditions or climates may cause a brake squeal when you first apply (or lightly apply) the brakes. This is normal and does not indicate a problem with your brakes.

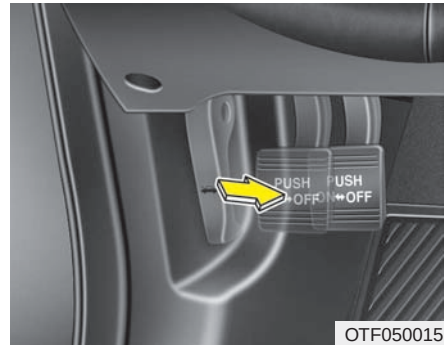
⚠ CAUTION - Replace brake pedal

Do not continue to drive with worn brake pads. Continuing to drive with worn brake pads can damage the braking system and result in costly brake repairs.

Always replace the front or rear brake pads as pairs.

⚠ WARNING - Brake wear

Do not ignore high pinched wear sounds from your brakes. If you ignore this audible warning, you will eventually lose braking performance, which could lead to a serious accident.



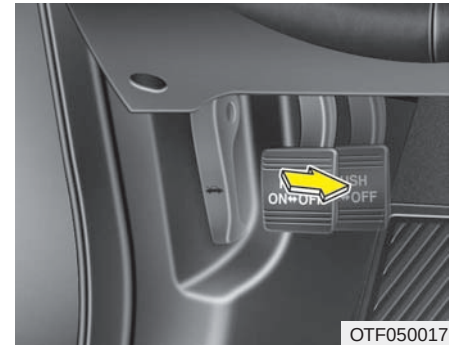
OTF050015

Parking brake

Applying the parking brake

Foot type

To engage the parking brake, first apply the foot brake and then depress the parking brake pedal down as far as possible.



OTF050017

Releasing the parking brake

Foot type

To release the parking brake, depress the parking brake pedal a second time while applying the foot brake. The pedal will automatically extend to the fully released position.

⚠ WARNING - Parking brake use

All vehicles should always have the parking brake fully engaged when parking to avoid inadvertent movement of the vehicle which can injure occupants or pedestrians.



W-75

Check the brake warning light by turning the ignition switch ON (do not start the engine). This light will illuminate when the parking brake is applied with the ignition switch in the START or ON position.

Before driving, be sure the parking brake is fully released and the brake warning light is off.

If the brake warning light remains on after the parking brake is released while the hybrid system is in READY state, there may be a malfunction in the brake system. Immediate attention is necessary.

If at all possible, stop driving the vehicle immediately. If that is not possible, use extreme caution while operating the vehicle and only continue to drive the vehicle until you can reach a safe location or repair shop.

Anti-lock brake system (ABS) (if equipped)

ABS (or ESC) will not prevent accidents due to improper or dangerous driving maneuvers. Even though vehicle control is improved during emergency braking, always maintain a safe distance between you and objects ahead. Vehicle speeds should always be reduced during extreme road conditions.

The vehicle should be driven at reduced speeds in the following circumstances:

- When driving on rough, gravel or snow-covered roads
- When driving on roads where the road surface is pitted or has different surface heights.

Driving in these conditions increases the stoppinZg distance for your vehicle.

The ABS continuously senses the speed of the wheels. If the wheels are going to lock, the ABS system repeatedly modulates the hydraulic brake pressure to the wheels.

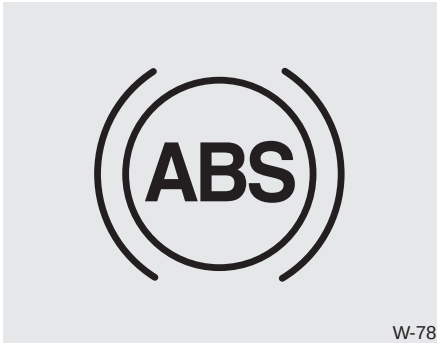
When you apply your brakes under conditions which may lock the wheels, you may hear a “tik-tik” sound from the brakes, or feel a corresponding sensation in the brake pedal. This is normal and it means your ABS is active.

In order to obtain the maximum benefit from your ABS in an emergency situation, do not attempt to modulate your brake pressure and do not try to pump your brakes. Press your brake pedal as hard as possible or as hard as the situation allows the ABS to control the force being delivered to the brakes.

✻ NOTICE

A click sound may be heard in the engine compartment when the vehicle begins to move after the engine is started. These conditions are normal and indicate that the anti-lock brake system is functioning properly.

- Even with the anti-lock brake system, your vehicle still requires sufficient stopping distance. Always maintain a safe distance from the vehicle in front of you.
- Always slow down when cornering. The anti-lock brake system cannot prevent accidents resulting from excessive speeds.
- On loose or uneven road surfaces, operation of the anti-lock brake system may result in a longer stopping distance than for vehicles equipped with a conventional brake system.



W-78

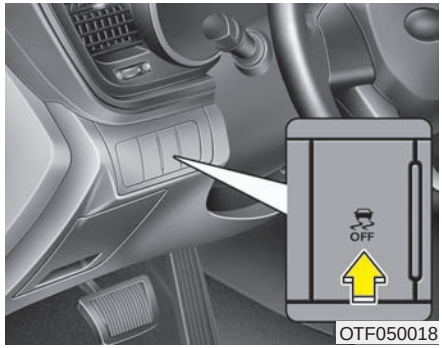
The ABS warning light will stay on for approximately 3 seconds after the ignition switch is ON. During that time, the ABS will go through self-diagnosis and the light will go off if everything is normal. If the light stays on, you may have a problem with your ABS but your regular brakes will work normally. Contact an authorized Kia dealer as soon as possible.

- When you drive on a road with poor traction, such as an icy road, and operated your brakes continuously, the ABS will be active continuously and the ABS warning light may illuminate. Pull your vehicle over to a safe place and stop the engine.
- Restart the engine. If the ABS warning light is off, then your ABS is normal. Otherwise, you may have a problem with the ABS. Contact an authorized Kia dealer as soon as possible.

✻ NOTICE

When you jump start your vehicle because of a drained battery, the engine may not run as smoothly and the ABS warning light may turn on at the same time. This happens because of the low battery voltage. It does not mean your ABS has malfunctioned.

- **Do not pump your brakes!**
- **Have the battery recharged before driving the vehicle.**



OTF050018

Electronic stability control (ESC)

The Electronic Stability control (ESC) system is designed to stabilize the vehicle during cornering maneuvers. ESC checks where you are steering and where the vehicle is actually going. ESC applies the brakes on individual wheels and intervenes with the engine management system to stabilize the vehicle.

Electronic stability control (ESC) will not prevent accidents. Excessive speed in turns, abrupt maneuvers and hydroplaning on wet surfaces can still result in serious accidents. Only a safe and attentive driver can prevent accidents by avoiding maneuvers that cause the vehicle to lose traction. Even with ESC installed, always follow all the normal precautions for driving - including driving at safe speeds for the conditions.

The Electronic Stability Control (ESC) system is an electronic system designed to help the driver maintain vehicle control under adverse conditions. It is not a substitute for safe driving practices. Factors including speed, road conditions and driver steering input can all affect whether ESC will be effective in preventing a loss of control. It is still your responsibility to drive and corner at reasonable speeds and to leave a sufficient margin of safety.

When you apply your brakes under conditions which may lock the wheels, you may hear a “tik-tik” sound from the brakes, or feel a corresponding sensation in the brake pedal. This is normal and it means your ESC is active.

ESC operation

ESC ON condition

-

- When the ignition is turned ON, ESC and ESC OFF indicator lights illuminate for approximately 3 seconds, then ESC is turned on.
- Press the ESC OFF button for at least half a second after turning the ignition ON to turn ESC off. (ESC OFF indicator will illuminate). To turn the ESC on, press the ESC OFF button (ESC OFF indicator light will go off).
- When starting the engine, you may hear a slight ticking sound. This is the ESC performing an automatic system self-check and does not indicate a problem.

When operating



When the ESC is in operation, ESC indicator light blinks.

- When the Electronic Stability Control is operating properly, you can feel a slight pulsation in the vehicle. This is only the effect of brake control and indicates nothing unusual.
- When moving out of the mud or slippery road, pressing the accelerator pedal may not cause the engine rpm (revolutions per minute) to increase.

ESC operation off

ESC OFF state



- To cancel ESC operation, press the ESC OFF button (ESC OFF indicator light illuminates).
- If the ignition switch is turned to LOCK position when ESC is off, ESC remains off. Upon restarting the engine, the ESC will automatically turn on again.

■ ESC indicator light



■ ESC OFF indicator light



Indicator light

When the ignition switch is turned ON, the indicator light illuminates, then goes off if ESC system is operating normally.

The ESC indicator light blinks whenever ESC is operating.

The ESC indicator light blinks whenever ESC is operating or illuminates when ESC fails to operate.

The ESC OFF indicator light comes on when the ESC is turned off with the button.

Driving with varying tire or wheel sizes may cause the ESC system to malfunction. When replacing tires, make sure they are the same size as your original tires.

⚠ WARNING - Electronic stability control

Drive carefully even though your vehicle has Electronic Stability Control. It can only assist you in maintaining control under certain circumstances.

ESC OFF usage

When driving

- It's a good idea to keep the ESC turned on for daily driving whenever possible.
- To turn ESC off while driving, press the ESC OFF button while driving on a flat road surface.

Never press the ESC OFF button while ESC is operating (ESC indicator light blinks).

If ESC is turned off while ESC is operating, the vehicle may slip out of control.

⚠ WARNING - Operating ESC

Never press the ESC OFF button while ESC is operating.

If the ESC is turned off while ESC is operating, the vehicle may go out of control.

Hill-start assist control (HAC)

Hill start Assist Control works to prevent the vehicle from rolling backwards while driving from a stop on an inclined surface. HAC holds the braking pressure built up during stopping. The brakes are held for 2 seconds after releasing brake pedal.

During the pressure-hold period, the driver has enough time to press the accelerator pedal to drive off.

The braking pressure is reduced as soon as the system detects the driver's intention to drive off.

⚠ WARNING - Activating HAC

Drivers should pay close attention when activating the HAC. The vehicle may roll backward causing an accident due to insufficient brake hold pressure.

- The HAC does not operate when the transaxle shift lever is in the P (Park) or N (Neutral) position.
- The HAC activates even though the ESP is off but it does not activate when the ESP has malfunctioned.

Vehicle stability management (VSM)

This system provides further enhancements to vehicle stability and steering responses when a vehicle is driving on a slippery road or a vehicle detected changes in coefficient of friction between right wheels and left wheels when braking.

VSM operation

When the VSM is in operation, ESP indicator light ( ) blinks.

When the vehicle stability management is operating properly, you can feel a slight pulsation in the vehicle. This is only the effect of brake control and indicates nothing unusual.

The VSM does not operate when:

- Driving on bank road such as gradient or incline
- Driving rearward
- ESP OFF indicator light ( ) remains on the instrument cluster
- EPS indicator light remains on the instrument cluster

VSM operation off

If you press the ESC OFF button to turn off the ESC, the VSM will also cancel and the ESC OFF indicator light ( ) illuminates.

To turn on the VSM, press the button again. The ESC OFF indicator light goes out.

Malfunction indicator

The VSM can be deactivated even if you don't cancel the VSM operation by pressing the ESC OFF button. It indicates that a malfunction has been detected somewhere in the Electric Power Steering system or VSM system. If the ESC indicator light ( ) or ESC warning light remains on, take your vehicle to an authorized Kia dealer and have the system checked.

- The VSM is designed to function above approximately 15 km/h (9 mph) on curves.
- The VSM is designed to function above approximately 30 km/h (18 mph) when a vehicle is braking on a split-mu road. The split-mu road is made of surfaces which have different friction forces.

- The Vehicle Stability Management system is not a substitute for safe driving practices but a supplementary function only. It is the responsibility of the driver to always check the speed and the distance to the vehicle ahead. Always hold the steering wheel firmly while driving.
- Your vehicle is designed to activate according to the driver's intention, even with installed VSM. Always follow all the normal precautions for driving at safe speeds for the conditions – including driving inclement weather and on a slippery road.

⚠ WARNING - Tire/Wheel size

When replacing tires and wheels, make sure they are the same size as the original tires and wheels installed. Driving with varying tire or wheel sizes may diminish any supplemental safety benefits of the VSM system.

Good braking practices

- Check to be sure the parking brake is not engaged and that the parking brake indicator light is out before driving away.
- Driving through water may get the brakes wet. They can also get wet when the vehicle is washed. Wet brakes can be dangerous! Your vehicle will not stop as quickly if the brakes are wet. Wet brakes may cause the vehicle to pull to one side.

  To dry the brakes, apply the brakes lightly until the braking action returns to normal, taking care to keep the vehicle under control at all times. If the braking action does not return to normal, stop as soon as it is safe to do so and call an authorized Kia dealer for assistance.
- Don't coast down hills with the vehicle out of gear. This is extremely hazardous. Keep the vehicle in gear at all times, use the brakes to slow down, then shift to a lower gear so that engine braking will help you maintain a safe speed.
- Don't "ride" the brake pedal. Resting your foot on the brake pedal while driving can be dangerous because the brakes might overheat and lose their effectiveness. It also increases the wear of the brake components.
- If a tire goes flat while you are driving, apply the brakes gently and keep the vehicle pointed straight ahead while you slow down. When you are moving slowly enough for it to be safe to do so, pull off the road and stop in a safe place.
- If your vehicle is equipped with an automatic transaxle, don't let your vehicle creep forward. To avoid creeping forward, keep your foot firmly on the brake pedal when the vehicle is stopped.

- Be cautious when parking on a hill. Firmly engage the parking brake and place the shift lever in P (automatic transaxle) or in first or reverse gear (manual transaxle). If your vehicle is facing downhill, turn the front wheels into the curb to help keep the vehicle from rolling. If your vehicle is facing uphill, turn the front wheels away from the curb to help keep the vehicle from rolling. If there is no curb or if it is required by other conditions to keep the vehicle from rolling, block the wheels.
- Under some conditions your parking brake can freeze in the engaged position. This is most likely to happen when there is an accumulation of snow or ice around or near the rear brakes or if the brakes are wet. If there is a risk that the parking brake may freeze, apply it only temporarily while you put the shift lever in P (automatic transaxle) or in first or reverse gear (manual transaxle) and block the rear wheels so the vehicle cannot roll. Then release the parking brake.
- Do not hold the vehicle on the upgrade with the accelerator pedal. This can cause the transaxle to overheat. Always use the brake pedal or parking brake.

CRUISE CONTROL SYSTEM (IF EQUIPPED)

The cruise control system allows you to program the vehicle to maintain a constant speed without depressing the accelerator pedal.

This system is designed to function above approximately 40 km/h (25 mph).

If the cruise control is left on, (CRUISE indicator light in the instrument cluster illuminated) the cruise control can be switched on accidentally. Keep the cruise control system off (CRUISE indicator light OFF) when the cruise control is not in use, to avoid inadvertently setting a speed.

Use the cruise control system only when traveling on open highways in good weather.

Do not use the cruise control when driving in heavy or varying traffic, or on slippery (rainy, icy or snow-covered) or winding roads or over 6% up-hill or down-hill roads.

✻ NOTICE

During normal cruise control operation, when the SET switch is activated or reactivated after applying the brakes, the cruise control will energize after approximately 3 seconds. This delay is normal.

✻ NOTICE

To activate cruise control, depress the brake pedal at least once after turning the ignition switch to the ON position or starting the engine. This is to check if the brake switch which is important part to cancel cruise control is in normal condition.

⚠ WARNING - Misuse cruise control

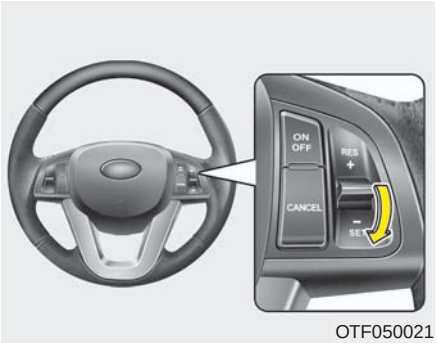
Do not use cruise control if the traffic situation does not allow you to drive safely at a constant speed and with sufficient distance to the vehicle in front.



OTF050020

To set cruise control speed:

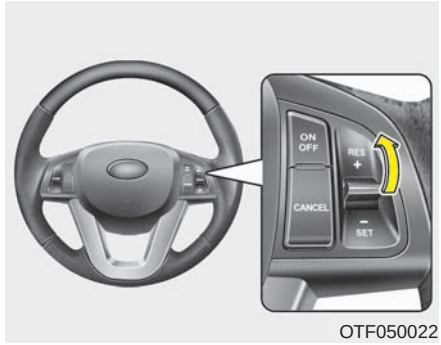
1. Press the CRUISE ON-OFF button on the steering wheel to turn the system on. The CRUISE indicator light in the instrument cluster will illuminate.
2. Accelerate to the desired speed, which must be more than 40 km/h (25 mph).



OTF050021

3. Move the lever (1) down (to SET-), and release it at the desired speed. The SET indicator light in the instrument cluster will illuminate. Release the accelerator at the same time. The desired speed will automatically be maintained.

On a steep grade, the vehicle may slow down or speed up slightly while going downhill.



OTF050022

To increase cruise control set speed:

Follow either of these procedures:

- Move the lever (1) up (to RES+) and hold it. Your vehicle will accelerate. Release the lever at the speed you want.
- Move the lever (1) up (to RES+) and release it immediately. The cruising speed will increase by 1.6 km/h (1.0 mph) each time the lever is operated in this manner.



OTF050021

To decrease the cruising speed:

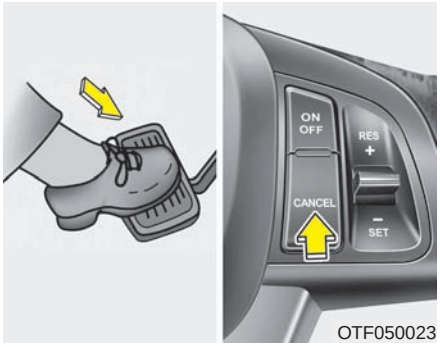
Follow either of these procedures:

- Move the lever (1) down (to SET-) and hold it. Your vehicle will gradually slow down. Release the lever at the speed you want to maintain.
- Move the lever (1) down (to SET-) and release it immediately. The cruising speed will decrease by 1.6 km/h (1.0 mph) each time the lever is operated in this manner.

To temporarily accelerate with the cruise control on:

If you want to speed up temporarily when the cruise control is on, depress the accelerator pedal. Increased speed will not interfere with the cruise control operation or change the set speed.

To return to the set speed, take your foot off the accelerator.

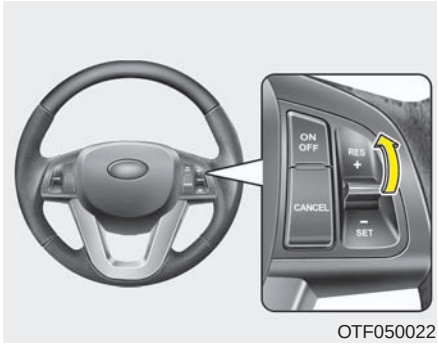


OTF050023

To cancel cruise control, do one of the following:

- Depress the brake pedal.
- Depress the clutch pedal with a manual transaxle.
- Shift into N (Neutral) with an automatic transaxle.
- Press the CANCEL switch.
- Decrease the vehicle speed lower than the memory speed by 15 km/h (9 mph).
- Decrease the vehicle speed to less than approximately 40 km/h (25 mph).

Each of these actions will cancel cruise control operation (the SET indicator light in the instrument cluster will go off), but it will not turn the system off. If you wish to resume cruise control operation, move the lever up (to RES+). You will return to your previously preset speed.



OTF050022

To resume cruising speed at more than approximately 40 km/h (25 mph):

If any method other than the CRUISE ON-OFF switch was used to cancel cruising speed and the system is still activated, the most recent set speed will automatically resume when you move the lever up.

It will not resume, however, if the vehicle speed has dropped below approximately 40 km/h (25 mph).

To turn cruise control off, do one of the following:

- Press the CRUISE ON-OFF button (the CRUISE indicator light in the instrument cluster will go off).
- Turn the ignition off.

Both of these actions will cancel the cruise control operation. If you want to resume the cruise control operation, repeat the steps provided in "To set cruise control speed" on the previous page.

ECONOMICAL OPERATION

Your vehicle's fuel economy depends mainly on your style of driving, where you drive and when you drive.

Each of these factors affects how many miles (kilometers) you can get from a gallon (liter) of fuel. To operate your vehicle as economically as possible, use the following driving suggestions to help save money in both fuel and repairs:

- Drive smoothly. Accelerate at a moderate rate. Don't make "jack-rabbit" starts or full-throttle shifts and maintain a steady cruising speed. Don't race between stoplights. Try to adjust your speed to the traffic so you don't have to change speeds unnecessarily. Avoid heavy traffic whenever possible. Always maintain a safe distance from other vehicles so you can avoid unnecessary braking. This also reduces brake wear.
- Drive at a moderate speed. The faster you drive, the more fuel your vehicle uses. Driving at a moderate speed, especially on the highway, is one of the most effective ways to reduce fuel consumption.
- Don't "ride" the brake pedal. This can increase fuel consumption and also increase wear on these components. In addition, driving with your foot resting on the brake pedal may cause the brakes to overheat, which reduces their effectiveness and may lead to more serious consequences.
- Take care of your tires. Keep them inflated to the recommended pressure. Incorrect inflation, either too much or too little, results in unnecessary tire wear. Check the tire pressures at least once a month.
- Be sure that the wheels are aligned correctly. Improper alignment can result from hitting curbs or driving too fast over irregular surfaces. Poor alignment causes faster tire wear and may also result in other problems as well as greater fuel consumption.
- Keep your vehicle in good condition. For better fuel economy and reduced maintenance costs, maintain your vehicle in accordance with the maintenance schedule in section 7. If you drive your vehicle in severe conditions, more frequent maintenance is required (see section 7 for details).
- Keep your vehicle clean. For maximum service, your vehicle should be kept clean and free of corrosive materials. It is especially important that mud, dirt, ice, etc. not be allowed to accumulate on the underside of the vehicle. This extra weight can result in increased fuel consumption and also contribute to corrosion.
- Travel lightly. Don't carry unnecessary weight in your vehicle. Weight reduces fuel economy.
- Don't let the engine idle longer than necessary. If you are waiting (and not in traffic), turn off your engine and restart only when you're ready to go.
- Remember, your vehicle does not require extended warm-up. After the engine has started, allow the engine to run for 10 to 20 seconds prior to placing the vehicle in gear. In very cold weather, however, give your engine a slightly longer warm-up period.
- Don't "lug" or "over-rev" the engine. Lugging is driving too slowly in a very high gear resulting in engine bucking. If this happens, shift to a lower gear. Over-revving is racing the engine beyond its safe limit. This can be avoided by shifting at the recommended speed.

- Use your air conditioning sparingly. The air conditioning system is operated by engine power so your fuel economy is reduced when you use it.
- Open windows at high speeds can reduce fuel economy.
- Fuel economy is less in crosswinds and headwinds. To help offset some of this loss, slow down when driving in these conditions.

Keeping a vehicle in good operating condition is important both for economy and safety. Therefore, have an authorized Kia dealer perform scheduled inspections and maintenance.

⚠ WARNING - Engine off during motion

Never turn the engine off to coast down hills or anytime the vehicle is in motion. The power steering and power brakes will not function properly without the engine running. In addition, turning off the ignition while driving could engage the steering wheel lock resulting in loss of vehicle steering. Keep the engine on and downshift to an appropriate gear for engine braking effect.

SPECIAL DRIVING CONDITIONS

Hazardous driving conditions

When hazardous driving conditions are encountered such as water, snow, ice, mud, sand, or similar hazards, follow these suggestions:

- Drive cautiously and allow extra distance for braking.
- Avoid sudden braking or steering.
- When braking with non-ABS brakes pump the brake pedal with a light up-and-down motion until the vehicle is stopped.

Do not pump the brake pedal on a vehicle equipped with ABS.

- If stalled in snow, mud, or sand, use second gear. Accelerate slowly to avoid spinning the drive wheels.
- Use sand, rock salt, or other non-slip material under the drive wheels to provide traction when stalled in ice, snow, or mud.

⚠ WARNING - Downshifting

Do not downshift with an automatic transaxle while driving on slippery surfaces. The sudden change in tire speed could cause the tires to skid and result in an accident.

Rocking the vehicle

If it is necessary to rock the vehicle to free it from snow, sand, or mud, first turn the steering wheel right and left to clear the area around your front wheels. Then, shift back and forth between 1st (First) and R (Reverse) in vehicles equipped with a manual transaxle or R (Reverse) and any forward gear in vehicles equipped with an automatic transaxle. Do not race the engine, and spin the wheels as little as possible. If you are still stuck after a few tries, have the vehicle pulled out by a tow vehicle to avoid engine overheating and possible damage to the transaxle.

The ESC system should be turned OFF prior to rocking the vehicle.

⚠ CAUTION - Vehicle rocking

Prolonged rocking may cause engine overheating, transaxle damage or failure, and tire damage.

⚠ CAUTION - Spinning tires

Do not spin the wheels, especially at speeds more than 56 km/h (35 mph). Spinning the wheels at high speeds when the vehicle is stationary could cause a tire to overheat which could result in tire damage.

⚠ WARNING - Sudden vehicle movement

Do not attempt to rock the vehicle if people or objects are nearby. The vehicle may suddenly move forward or backwards as it becomes unstuck.


OBH058035L

Smooth cornering

Avoid braking or gear changing in corners, especially when roads are wet. Ideally, corners should always be taken under gentle acceleration. If you follow these suggestions, tire wear will be held to a minimum.


OMC035004

Driving at night

Because night driving presents more hazards than driving in the daylight, here are some important tips to remember:

- Slow down and keep more distance between you and other vehicles, as it may be more difficult to see at night, especially in areas where there may not be any street lights.
- Adjust your mirrors to reduce the glare from other driver's headlights.

- Keep your headlights clean and properly aimed on vehicles not equipped with the automatic headlight aiming feature. Dirty or improperly aimed headlights will make it much more difficult to see at night.
- Avoid staring directly at the headlights of oncoming vehicles. You could be temporarily blinded, and it will take several seconds for your eyes to readjust to the darkness.



Driving in the rain

Rain and wet roads can make driving dangerous, especially if you're not prepared for the slick pavement. Here are a few things to consider when driving in the rain:

- A heavy rainfall will make it harder to see and will increase the distance needed to stop your vehicle, so slow down.
- Keep your windshield wiping equipment in good shape. Replace your windshield wiper blades when they show signs of streaking or missing areas on the windshield.
- If your tires are not in good condition, making a quick stop on wet pavement can cause a skid and possibly lead to an accident. Be sure your tires are in good shape.
- Turn on your headlights to make it easier for others to see you.
- Driving too fast through large puddles can affect your brakes. If you must go through puddles, try to drive through them slowly.
- If you believe you may have gotten your brakes wet, apply them lightly while driving until normal braking operation returns.

Driving in flooded areas

Avoid driving through flooded areas unless you are sure the water is no higher than the bottom of the wheel hub. Drive through any water slowly. Allow adequate stopping distance because brake performance may be affected.

After driving through water, dry the brakes by gently applying them several times while the vehicle is moving slowly.

Highway driving

Tires

Adjust the tire inflation pressures to specification. Low tire inflation pressures will result in overheating and possible failure of the tires.

Avoid using worn or damaged tires which may result in reduced traction or tire failure.

Never exceed the maximum tire inflation pressure shown on the tires.

Driving off-road

Drive carefully off-road because your vehicle may be damaged by rocks of roots of trees. Become familiar with the off-road conditions where you are going to drive before you begin driving.

⚠ WARNING - Under/over inflated tires

Always check the tires for proper inflation before driving. Underinflated or overinflated tires can cause poor handling, loss of vehicle control, and sudden tire failure leading to accidents, injuries, and even death. For proper tire pressures, refer to "Tires and wheels" in section 8.

⚠ WARNING - Tire tread

Always check the tire tread before driving your vehicle. Worn-out tires can result in loss of vehicle control. Worn-out tires should be replaced as soon as possible. For further information and tread limits, refer to "Tires and wheels" in section 7.

Fuel, engine coolant and engine oil

High speed travel consumes more fuel than urban motoring. Do not forget to check both the engine coolant and engine oil.

Drive belt

A loose or damaged drive belt may overheat the engine.

WINTER DRIVING



Severe weather conditions in the winter result in greater wear and other problems. To minimize the problems of winter driving, you should follow these suggestions:

Snowy or Icy conditions

To drive your vehicle in deep snow, it may be necessary to use snow tires on your tires. If snow tires are needed, it is necessary to select tires equivalent in size and type of the original equipment tires. Failure to do so may adversely affect the safety and handling of your car. Furthermore, speeding, rapid acceleration, sudden brake applications, and sharp turns are potentially very hazardous practices.

During deceleration, use engine braking to the fullest extent. Sudden brake applications on snowy or icy roads may cause skids. You need to keep sufficient distance between the vehicle in operation in front and your vehicle. Also, apply the brake gently.

Snow tires

If you mount snow tires on your vehicle, make sure they are radial tires of the same size and load range as the original tires. Mount snow tires on all four wheels to balance your vehicle's handling in all weather conditions. Keep in mind that the traction provided by snow tires on dry roads may not be as high as your vehicle's original equipment tires. You should drive cautiously even when the roads are clear. Check with the tire dealer for maximum speed recommendations.

Do not install studded tires without first checking local, state and municipal regulations for possible restrictions against their use.

Use high quality ethylene glycol coolant

Your vehicle is delivered with high quality ethylene glycol coolant in the cooling system. It is the only type of coolant that should be used because it helps prevent corrosion in the cooling system, lubricates the water pump and prevents freezing. Be sure to replace or replenish your coolant in accordance with the maintenance schedule in section 7. Before winter, have your coolant tested to assure that its freezing point is sufficient for the temperatures anticipated during the winter.

Check battery and cables

Winter puts additional burdens on the battery system. Visually inspect the battery and cables as described in section 7. Never attempt to check the Hybrid High Voltage Battery. The level of charge in your battery can be checked by an authorized Kia dealer or a service station.

Change to "winter weight" oil if necessary

In some climates it is recommended that a lower viscosity "winter weight" oil be used during cold weather. See section 8 for recommendations. If you aren't sure what weight oil you should use, consult an authorized Kia dealer.

Check spark plugs and ignition system

Inspect your spark plugs as described in section 7 and replace them if necessary. Also check all ignition wiring and components to be sure they are not cracked, worn or damaged in any way.

To keep locks from freezing

To keep the locks from freezing, squirt an approved de-icer fluid or glycerine into the key opening. If a lock is covered with ice, squirt it with an approved de-icing fluid to remove the ice. If the lock is frozen internally, you may be able to thaw it out by using a heated key. Handle the heated key with care to avoid injury.

Use approved window washer anti-freeze in system

To keep the water in the window washer system from freezing, add an approved window washer anti-freeze solution in accordance with instructions on the container. Window washer anti-freeze is available from an authorized Kia dealer and most auto parts outlets. Do not use engine coolant or other types of anti-freeze as these may damage the paint finish.

Don't let your parking brake freeze

Under some conditions your parking brake can freeze in the engaged position. This is most likely to happen when there is an accumulation of snow or ice around or near the rear brakes or if the brakes are wet. If there is a risk the parking brake may freeze, apply it only temporarily while you put the shift lever in P (automatic transaxle) or in first or reverse gear (manual transaxle) and block the rear wheels so the vehicle cannot roll. Then release the parking brake.

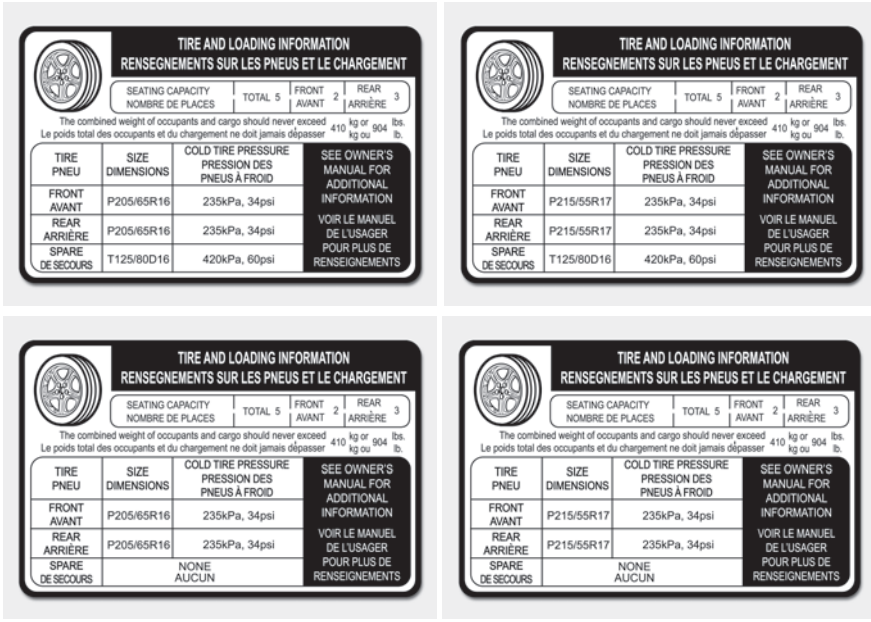
Don't let ice and snow accumulate underneath

Under some conditions, snow and ice can build up under the fenders and interfere with the steering. When driving in severe winter conditions where this may happen, you should periodically check underneath the car to be sure the movement of the front wheels and the steering components is not obstructed.

Carry emergency equipment

Depending on the severity of the weather you should carry appropriate emergency equipment. Some of the items you may want to carry include, tow straps or chains, flashlight, emergency flares, sand, a shovel, jumper cables, a window scraper, gloves, ground cloth, coveralls, a blanket, etc.

VEHICLE LOAD LIMIT



OTFH050040N/OTFH050041N/OTFH050042N/OTFH050043N

Tire and loading information label

The label located on the driver's door sill gives the original tire size, cold tire pressures recommended for your vehicle, the number of people that can be in your vehicle and vehicle capacity weight.

Vehicle capacity weight:

410 kg (904 lbs.)

Vehicle capacity weight is the maximum combined weight of occupants and cargo. If your vehicle is equipped with a trailer, the combined weight includes the tongue load.

Seating capacity:

Total : 5 persons
(Front seat : 2 persons,
Rear seat : 3 persons)

Seating capacity is the maximum number of occupants including a driver, your vehicle may carry.

However, the seating capacity may be reduced based upon the weight of all of the occupants, and the weight of the cargo being carried or towed.

Do not overload the vehicle as there is a limit to the total weight, or load limit including occupants and cargo, the vehicle can carry.

Towing capacity:

We do not recommend using this vehicle for trailer towing.

Cargo capacity:

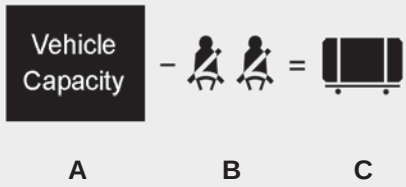
The cargo capacity of your vehicle will increase or decrease depending on the weight and the number of occupants and the tongue load, if your vehicle is equipped with a trailer.

Steps For Determining Correct Load Limit -

1. Locate the statement "The combined weight of occupants and cargo should never exceed XXX kg or XXX lbs." on your vehicle's placard.
2. Determine the combined weight of the driver and passengers that will be riding in your vehicle.
3. Subtract the combined weight of the driver and passengers from XXX kg or XXX lbs.
4. The resulting figure equals the available amount of cargo and luggage load capacity. For example, if the "XXX" amount equals 65 kg (1400 lbs.) and there will be five 68 kg (150 lbs.) passengers in your vehicle, the amount of available cargo and luggage load capacity is 295 kg (650 lbs.)

   (635-340 (5 x 68) = 295kg or 1400-750 (5 x 150) = 650 lbs.)
5. Determine the combined weight of luggage and cargo being loaded on the vehicle. That weight may not safely exceed the available cargo and luggage load capacity calculated in Step 4.
6. If your vehicle will be towing a trailer, load from your trailer will be transferred to your vehicle. Consult this manual to determine how this reduces the available cargo and luggage load capacity of your vehicle.

Example 1



C190F01JM

Item	Description	Total
A	Vehicle Capacity Weight	385 kg (849 lbs)
B	Subtract Occupant Weight 68 kg (150 lbs) × 2	136 kg (300 lbs)
C	Available Cargo and Luggage weight	249 kg (549 lbs)

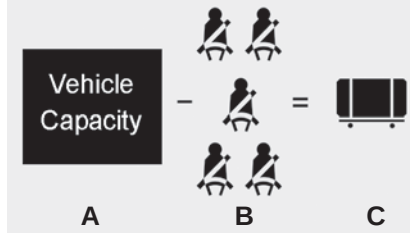
Example 2



C190F02JM

Item	Description	Total
A	Vehicle Capacity Weight	385 kg (849 lbs)
B	Subtract Occupant Weight 68 kg (150 lbs) × 5	340 kg (750 lbs)
C	Available Cargo and Luggage weight	45 kg (99 lbs)

Example 3



C190F03JM

Item	Description	Total
A	Vehicle Capacity Weight	385 kg (849 lbs)
B	Subtract Occupant Weight 73 kg (161 lbs) × 5	365 kg (805 lbs)
C	Available Cargo and Luggage weight	20 kg (44 lbs)

Refer to your vehicle's tire and loading information label for specific information about your vehicle's capacity weight and seating positions. The combined weight of the driver, passengers and cargo should never exceed your vehicle's capacity weight.

Certification label

The certification label is located on the driver's door sill at the center pillar.

This label shows the maximum allowable weight of the fully loaded vehicle. This is called the GVWR (Gross Vehicle Weight Rating). The GVWR includes the weight of the vehicle, all occupants, fuel and cargo.

This label also tells you the maximum weight that can be supported by the front and rear axles, called Gross Axle Weight Rating (GAWR).

To find out the actual loads on your front and rear axles, you need to go to a weigh station and weigh your vehicle. Your dealer can help you with this. Be sure to spread out your load equally on both sides of the centerline.

⚠ WARNING - Over loading

Never exceed the GVWR for your vehicle, the GAWR for either the front or rear axle and vehicle capacity weight. Exceeding these ratings can affect your vehicle's handling and braking ability.

The label will help you decide how much cargo and installed equipment your vehicle can carry.

If you carry items inside your vehicle - like suitcases, tools, packages, or anything else - they are moving as fast as the vehicle. If you have to stop or turn quickly, or if there is a crash, the items will keep going and can cause an injury if they strike the driver or a passenger.

⚠ WARNING - Over loading

Do not overload your vehicle. Overloading your vehicle can cause heat buildup in your vehicle's tires and possible tire failure, increased stopping distances and poor vehicle handling--all of which may result in a crash.

⚠ WARNING - Loose cargo

Do not travel with unsecured blunt objects in the passenger compartment of your vehicle (e.g. suit cases or unsecured child seats). These items may strike occupant during a sudden stop or crash.

✻ NOTICE

Overloading your vehicle may cause damage. Repairs would not be covered by your warranty. Do not overload your vehicle.

VEHICLE WEIGHT

This section will guide you in the proper loading of your vehicle and/or trailer, to keep your loaded vehicle weight within its design rating capability, with or without a trailer. Properly loading your vehicle will provide maximum return of the vehicle design performance. Before loading your vehicle, familiarize yourself with the following terms for determining your vehicle's weight ratings, with or without a trailer, from the vehicle's specifications and the compliance label:

Base curb weight

This is the weight of the vehicle including a full tank of fuel and all standard equipment. It does not include passengers, cargo, or optional equipment.

Vehicle curb weight

This is the weight of your new vehicle when you picked it up from your dealer plus any aftermarket equipment.

Cargo weight

This figure includes all weight added to the Base Curb Weight, including cargo and optional equipment.

GAW (Gross axle weight)

This is the total weight placed on each axle (front and rear) - including vehicle curb weight and all payload.

GAWR (Gross axle weight rating)

This is the maximum allowable weight that can be carried by a single axle (front or rear). These numbers are shown on the compliance label.

The total load on each axle must never exceed its GAWR.

GVW (Gross vehicle weight)

This is the Base Curb Weight plus actual Cargo Weight plus passengers.

GVWR (Gross vehicle weight rating)

This is the maximum allowable weight of the fully loaded vehicle (including all options, equipment, passengers and cargo). The GVWR is shown on the certification label located on the driver’s door sill.

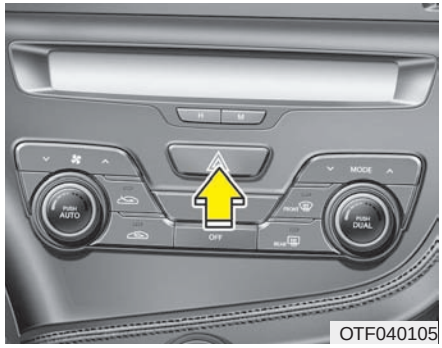
TRAILER TOWING

We do not recommend using this vehicle for trailer towing.

Road warning / 6-2
In case of an emergency while driving / 6-3
If the engine will not start / 6-4
Emergency starting / 6-5
If the engine overheats / 6-7
Tire pressure monitoring system (TPMS) / 6-8
If you have a flat tire (with spare tire and jack) / 6-13
If you have a flat tire (with tire mobility kit) / 6-21
Towing / 6-27

What to do in an emergency 6

ROAD WARNING



Hazard warning flasher

The hazard warning flasher serves as a warning to other drivers to exercise extreme caution when approaching, overtaking, or passing your vehicle.

It should be used whenever emergency repairs are being made or when the vehicle is stopped near the edge of a roadway.

Depress the flasher switch with the ignition switch in any position. The flasher switch is located in the center console switch panel. All turn signal lights will flash simultaneously.

- The hazard warning flasher operates whether your vehicle is running or not.
- The turn signals do not work when the hazard flasher is on.
- Care must be taken when using the hazard warning flasher while the vehicle is being towed.

IN CASE OF AN EMERGENCY WHILE DRIVING

If the engine stalls at a crossroad or crossing

If the engine stalls at a crossroad or crossing, set the shift lever in the N (Neutral) position and then push the vehicle to a safe place.

If you have a flat tire while driving

If a tire goes flat while you are driving:

1. Take your foot off the accelerator pedal and let the vehicle slow down while driving straight ahead. Do not apply the brakes immediately or attempt to pull off the road as this may cause a loss of control. When the vehicle has slowed down to such a speed that it is safe to do so, brake carefully and pull off the road. Drive off the road as far as possible and park on a firm level ground. If you are on a divided highway, do not park in the median area between the two traffic lanes.
2. When the vehicle is stopped, turn on your emergency hazard flashers, set the parking brake and put the transaxle in P.
3. Have all passengers get out of the vehicle. Be sure they all get out on the side of the vehicle that is away from traffic.
4. When changing a flat tire, follow the instruction provided later in this section.

If engine stalls while driving

1. Reduce your speed gradually, keeping a straight line. Move cautiously off the road to a safe place.
2. Turn on your emergency flashers.
3. Try to start the engine again. If your vehicle will not start, contact an authorized Kia dealer or seek other qualified assistance.

IF THE ENGINE WILL NOT START

If the engine doesn't turn over or turns over slowly

1. If your vehicle has an automatic transaxle, be sure the shift lever is in N (Neutral) or P (Park) and the emergency brake is set.
2. Check the battery connections to be sure they are clean and tight.
3. Turn on the interior light. If the light dims or goes out when you operate the starter, the battery is discharged.
4. Check the starter connections to be sure they are securely tightened.
5. Do not push or pull the vehicle to start it. See instructions for "Jump starting".

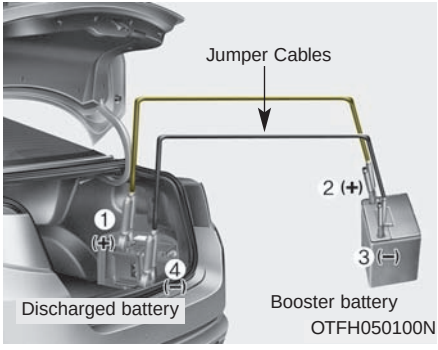
⚠ WARNING - Push/pull start

Do not push or pull the vehicle to start it. Push or pull starting may cause the catalytic converter to overload and create a fire hazard.

If engine turns over normally but does not start

1. Check fuel level.
2. With the ignition switch in the LOCK position, check all connectors at the ignition coil and spark plugs. Reconnect any that may be disconnected or loose.
3. Check the fuel line in the engine compartment.
4. If the engine still does not start, call an authorized Kia dealer or seek other qualified assistance.

EMERGENCY STARTING



Connect cables in numerical order and disconnect in reverse order.

Jump starting

Jump starting can be dangerous if done incorrectly. Therefore, to avoid harm to yourself or damage to your vehicle or battery, follow these jump starting procedures. If in doubt, we strongly recommend that you have a competent technician or towing service jump start your vehicle.

⚠ CAUTION - 12 volt battery

Use only a 12-volt jumper system. You can damage a 12-volt starting motor, ignition system, and other electrical parts beyond repair by use of a 24-volt power supply (either two 12-volt batteries in series or a 24-volt motor generator set).

⚠ WARNING - Battery

Never attempt to check the electrolyte level of the battery as this may cause the battery to rupture or explode.

⚠ WARNING - Frozen batteries

Do not attempt to jump start the vehicle if the discharged battery is frozen or if the electrolyte level is low as the battery may rupture or explode.

⚠ WARNING - Battery

Keep all flames or sparks away from the battery. The battery produces hydrogen gas which will explode if exposed to flame or sparks.

⚠ WARNING - Sulfuric acid risk

When jump starting your vehicle be careful not to get acid on yourself, your clothing or on the vehicle. Automobile batteries contain sulfuric acid. This is poisonous and highly corrosive.

1. Make sure the booster battery is 12-volt and that its negative terminal is grounded.
2. If the booster battery is in another vehicle, do not allow the vehicles to touch.
3. Turn off all unnecessary electrical loads.
4. Connect the jumper cables in the exact sequence shown in the illustration. First connect one end of a jumper cable to the positive terminal of the discharged battery (1), then connect the other end to the positive terminal on the booster battery (2).

   Proceed to connect one end of the other jumper cable to the negative terminal of the booster battery (3), then the other end to a solid, stationary, metallic point (for example, trunk/latch) away from the battery (4). Do not connect it to or near any part that moves when the engine is cranked.

   Do not allow the jumper cables to contact anything except the correct battery terminals or the correct ground. Do not lean over the battery when making connections.

⚠ CAUTION - Battery cables

Do not connect the jumper cable from the negative terminal of the booster battery to the negative terminal of the discharged battery. This can cause the discharged battery to overheat and crack, releasing battery acid.

5. Start the engine of the vehicle with the booster battery and let it run at 2,000 rpm, then start the engine of the vehicle with the discharged battery.

If the cause of your battery discharging is not apparent, you should have your vehicle checked by an authorized Kia dealer.

Push-starting

Your manual transaxle-equipped vehicle should not be push-started because it might damage the emission control system.

Vehicles equipped with automatic transaxle cannot be push-started.

Follow the directions in this section for jump-starting.

⚠ WARNING - Tow starting vehicle

Never tow a vehicle to start it because the sudden surge forward when the engine starts could cause a collision with the tow vehicle.

IF THE ENGINE OVERHEATS

If your temperature gauge indicates overheating, you will experience a loss of power, or hear loud pinging or knocking, the engine is probably too hot. If this happens, you should:

1. Pull off the road and stop as soon as it is safe to do so.
2. Place the shift lever in P (automatic transaxle) or neutral (manual transaxle) and set the parking brake. If the air conditioning is on, turn it off.
3. If engine coolant is running out under the vehicle or steam is coming out from underneath the hood, stop the engine. Do not open the hood until the coolant has stopped running or the steaming has stopped. If there is no visible loss of engine coolant and no steam, leave the engine running and check to be sure the engine cooling fan is operating. If the fan is not running, turn the engine off.
4. Check to see if the water pump drive belt is missing. If it is not missing, check to see that it is tight. If the drive belt seems to be satisfactory, check for coolant leaking from the radiator, hoses or under the vehicle. (If the air conditioning had been in use, it is normal for cold water to be draining from it when you stop).

⚠ WARNING - Under the hood

While the engine is running, keep hair, hands and clothing away from moving parts such as the fan and drive belts.

5. If the water pump drive belt is broken or engine coolant leaks, stop the engine immediately and call the nearest authorized Kia dealer for assistance.

⚠ WARNING - Radiator cap

Do not remove the radiator cap when the engine is hot. This can allow coolant to be blown out of the opening and cause serious burns.

6. If you cannot find the cause of the overheating, wait until the engine temperature has returned to normal. Then, if coolant has been lost, carefully add coolant to the reservoir to bring the fluid level in the reservoir up to the halfway mark.
7. Proceed with caution, keeping alert for further signs of overheating. If overheating happens again, call an authorized Kia dealer for assistance.

Serious loss of coolant indicates there is a leak in the cooling system and this should be checked as soon as possible by an authorized Kia dealer.

TIRE PRESSURE MONITORING SYSTEM (TPMS)



(1) Low tire pressure telltale / TPMS malfunction indicator

Each tire, including the spare (if provided), should be checked monthly when cold and inflated to the inflation pressure recommended by the vehicle manufacturer on the vehicle placard or tire inflation pressure label. (If your vehicle has tires of a different size than the size indicated on the vehicle placard or tire inflation pressure label, you should determine the proper tire inflation pressure for those tires.)

As an added safety feature, your vehicle has been equipped with a tire pressure monitoring system (TPMS) that illuminates a low tire pressure telltale when one or more of your tires is significantly under-inflated. Accordingly, when the low tire pressure telltale illuminates, you should stop and check your tires as soon as possible, and inflate them to the proper pressure. Driving on a significantly under-inflated tire causes the tire to overheat and can lead to tire failure. Under-inflation also reduces fuel efficiency and tire tread life, and may affect the vehicle's handling and stopping ability.

Please note that the TPMS is not a substitute for proper tire maintenance, and it is the driver's responsibility to maintain correct tire pressure, even if under-inflation has not reached the level to trigger illumination of the TPMS low tire pressure telltale.

Your vehicle has also been equipped with a TPMS malfunction indicator to indicate when the system is not operating properly. The TPMS malfunction indicator is combined with the low tire pressure telltale. When the system detects a malfunction, the telltale will flash for approximately one minute and then remain continuously illuminated. This sequence will continue upon subsequent vehicle start-ups as long as the malfunction exists. When the malfunction indicator is illuminated, the system may not be able to detect or signal low tire pressure as intended. TPMS malfunctions may occur for a variety of reasons, including the installation of replacement or alternate tires or wheels on the vehicle that prevent the TPMS from functioning properly. Always check the TPMS malfunction telltale after replacing one or more tires or wheels on your vehicle to ensure that the replacement or alternate tires and wheels allow the TPMS to continue to function properly.

If the TPMS indicator does not illuminate for 3 seconds when the ignition switch is turned to the ON position or engine is running, or If it comes on after blinking for approximately one minute, take your car to your nearest authorized Kia dealer and have the system checked.



Low tire pressure telltale

When the tire pressure monitoring system warning indicator is illuminated, one or more of your tires is significantly under-inflated.

If the telltale illuminates, immediately reduce your speed, avoid hard cornering and anticipate increased stopping distances. You should stop and check your tires as soon as possible. Inflate the tires to the proper pressure as indicated on the vehicle's placard or tire inflation pressure label located on the driver's side center pillar outer panel. If you cannot reach a service station or if the tire cannot hold the newly added air, replace the low pressure tire with the spare tire.

Then the Low Tire Pressure telltale may flash for approximately one minute and then remain continuously illuminated after restarting and about 20 minutes of continuous driving before you have the low pressure tire repaired and replaced on the vehicle.

In winter or cold weather, the low tire pressure telltale may be illuminated if the tire pressure was adjusted to the recommended tire inflation pressure in warm weather. It does not mean your TPMS is malfunctioning because the decreased temperature leads to a proportional lowering of tire pressure.

When you drive your vehicle from a warm area to a cold area or from a cold area to a warm area, or the outside temperature is greatly higher or lower, you should check the tire inflation pressure and adjust the tires to the recommended tire inflation pressure.

⚠ WARNING
- Low pressure damage

Do not drive on low pressure tires. Significantly low tire pressure can cause the tires to overheat and fail making the vehicle unstable resulting in increased braking distances and a loss of vehicle control.



TPMS (Tire Pressure Monitoring System) malfunction indicator

The TPMS malfunction indicator will illuminate after it blinks for approximately one minute when there is a problem with the Tire Pressure Monitoring System. If the system is able to correctly detect an under inflation warning at the same time as system failure then it will illuminate the TPMS malfunction indicator.

Have the system checked by an authorized Kia dealer as soon as possible to determine the cause of the problem.

The TPMS malfunction indicator may be illuminated if the vehicle is moving around electric power supply cables or radios transmitter such as at police stations, government and public offices, broadcasting stations, military installations, airports, or transmitting towers, etc. This can interfere with normal operation of the Tire Pressure Monitoring System (TPMS).

The TPMS malfunction indicator may illuminate if snow chains or some separately purchased devices such as notebook computers, mobile charger, remote starter, navigation etc. are used in the vehicle. This can interfere with normal operation of the Tire Pressure Monitoring System (TPMS).

Changing a tire with TPMS

If you have a flat tire, the Low Tire Pressure will come on. Have the flat tire repaired by an authorized Kia dealer as soon as possible or replace the flat tire with the spare tire.

⚠ CAUTION

Never use a puncture-repairing agent not approved by Kia to repair and/or inflate a low pressure tire. The tire sealant not approved by Kia may damage the tire pressure sensor. The sealant on the tire pressure sensor and wheel shall be eliminated when you replace the tire with a new one.

Each wheel is equipped with a tire pressure sensor mounted inside the tire behind the valve stem. You must use TPMS specific wheels. It is recommended that you always have your tires serviced by an authorized Kia dealer.

Even if you replace the low pressure tire with the spare tire, the Low Tire Pressure Telltale will blink or remain on until the low pressure tire is repaired and placed on the vehicle.

After you replace the low pressure tire with the compact spare tire, the Low Tire Pressure Telltale may blink or illuminate because the compact spare tire does not have a TPMS sensor.

Once the low pressure tire is reinflated to the recommended pressure and installed on the vehicle or the TPMS sensor mounted on the replaced spare wheel is initiated by an authorized Kia dealer, the TPMS malfunction indicator and the low tire pressure telltale will extinguish within a few minutes of driving.

If the indicator is not extinguished after a few minutes of driving, please visit an authorized Kia dealer.

If original mounted tire is replaced with the spare tire, the TPMS sensor on the replaced spare wheel should be initiated and the TPMS sensor on the original mounted wheel should be deactivated. If the TPMS sensor on the original mounted wheel located in the spare tire carrier still activates, the tire pressure monitoring system may not operate properly. Have the tire with TPMS serviced or replaced by an authorized Kia dealer.

You may not be able identify a low tire by simply looking at it. Always use a good quality tire pressure gauge to measure the tire's inflation pressure. Please note that a tire that is hot (from being driven) will have a higher pressure measurement than a tire that is cold.

A cold tire means the vehicle has been sitting for 3 hours and driven for less than 1.6 km (1 mile) in that 3 hour period.

Allow the tire to cool before measuring the inflation pressure. Always be sure the tire is cold before inflating to the recommended pressure.

The TPMS cannot alert you to severe and sudden tire damage caused by external factors such as nails or road debris.

If you feel any vehicle instability, immediately take your foot off the accelerator, apply the brakes gradually and with light force, and slowly move to a safe position off the road.

✻ NOTICE

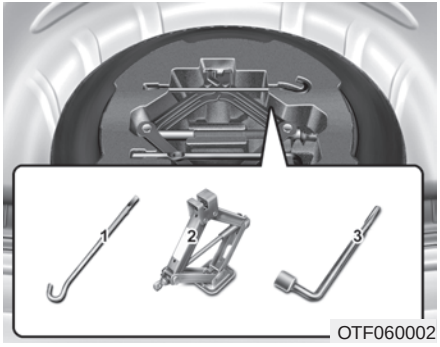
Tampering with, modifying, or disabling the Tire Pressure Monitoring System (TPMS) components may interfere with the system's ability to warn the driver of low tire pressure conditions and/or TPMS malfunctions. Tampering with, modifying, or disabling the Tire Pressure Monitoring System (TPMS) components may void the warranty for that portion of the vehicle.

This Device complies with Industry Canada Standards RSS-210.

Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and
2. This device must accept any interference received, including interference that may cause undesired operation.

IF YOU HAVE A FLAT TIRE (WITH SPARE TIRE AND JACK, IF EQUIPPED)



Jack and tools

The spare tire, jack, jack handle and wheel lug nut wrench are stored in the luggage compartment.

Remove the luggage under tray out of the way to reach the equipment.

(1) Jack handle

(2) Jack

(3) Wheel lug nut wrench

Jacking instructions

The jack is provided for emergency tire changing only.

To prevent the jack from “rattling” while the vehicle is in motion, store it properly.

Follow jacking instructions to reduce the possibility of personal injury.

⚠ WARNING - Changing tires

Never attempt vehicle repairs in the traffic lanes of a public road or highway.

Always move the vehicle completely off the road and onto the shoulder before trying to change a tire. The jack should be used on firm level ground. If you cannot find a firm level place off the road, call a towing service company for assistance.

Be sure to use the correct front and rear jacking positions on the vehicle; never use the bumpers or any other part of the vehicle for jack support.

⚠ WARNING - Jack

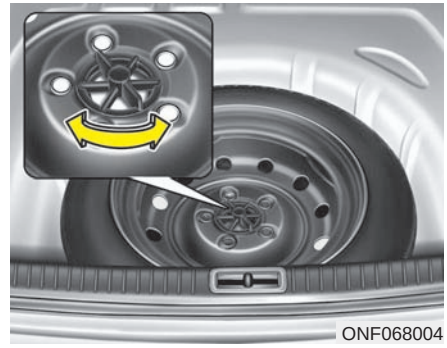
Do not place any portion of your body under a vehicle that is only supported by a jack since the vehicle can easily roll off the jack. Use vehicle support stands.

Do not allow anyone to remain in the vehicle while it is on the jack.

Make sure any children present are in a secure place away from the road and from the vehicle to be raised with the jack.

⚠ WARNING - Running vehicle on jack

Do not start or run the engine of the vehicle while the vehicle is on the jack as this may cause the vehicle to fall off the jack.


ONF068004

Removing and storing the spare tire

Turn the tire hold-down wing bolt counterclockwise.

Store the tire in the reverse order of removal.

To prevent the spare tire and tools from “rattling” while the vehicle is in motion, store them properly.


OED066033

Changing tires

1. Park on a level surface and apply the parking brake firmly.
2. Shift the shift lever into R (Reverse) for manual transaxle or P (Park) for automatic transaxle.
3. Activate the hazard warning flasher.



1JBA6504

4. Remove the wheel lug nut wrench, jack, jack handle, and spare tire from the vehicle.
5. Block both the front and rear of the wheel that is diagonally opposite the jack position.

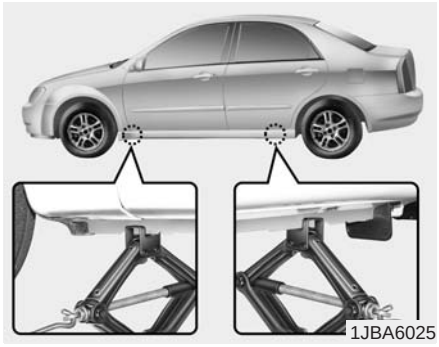
To prevent vehicle movement while changing a tire, always set the parking brake fully, and always block the wheel diagonally opposite the wheel being changed.

We recommend that the wheels of the vehicle be chocked, and that no person remain in a vehicle that is being jacked.



OTFH062004

6. Loosen the wheel lug nuts counterclockwise one turn each, but do not remove any nut until the tire has been raised off the ground.



7. Place the jack at the front or rear jacking position closest to the tire you are changing. Place the jack at the designated locations under the frame. The jacking positions are plates welded to the frame with two tabs and a raised dot to index with the jack.



8. Insert the jack handle into the jack and turn it clockwise, raising the vehicle until the tire just clears the ground. This measurement is approximately 30 mm (1.2 in). Before removing the wheel lug nuts, make sure the vehicle is stable and that there is no chance for movement or slippage.

9. Loosen the wheel nuts and remove them with your fingers. Slide the wheel off the studs and lay it flat so it cannot roll away. To put the wheel on the hub, pick up the spare tire, line up the holes with the studs and slide the wheel onto them. If this is difficult, tip the wheel slightly and get the top hole in the wheel lined up with the top stud. Then jiggle the wheel back and forth until the wheel can be slid over the other studs.

Wheels and wheel covers may have sharp edges. Handle them carefully to avoid possible injury. Before putting the wheel into place, be sure that there is nothing on the hub or wheel (such as mud, tar, gravel, etc.) that prevents with the wheel from fitting solidly against the hub.

⚠ WARNING - Installing a wheel

Make sure the wheel makes good contact with the hub when installed. If the contact of the mounting surface between the wheel and hub is not good, the wheel nuts could come loose and cause the loss of a wheel. Loss of a wheel may result in loss of control of the vehicle.

10. To install the wheel, hold it on the studs, put the wheel nuts on the studs and tighten them finger tight. Jiggle the tire to be sure it is completely seated, then tighten the nuts as much as possible with your fingers again.
11. Lower the vehicle to the ground by turning the wheel nut wrench counterclockwise.



OTF060007

Then position the wrench as shown in the drawing and tighten the wheel nuts. Be sure the socket is seated completely over the nut. Do not stand on the wrench handle or use an extension pipe over the wrench handle.

Go around the wheel tightening every nut following the numerical sequence shown in the image until they are tight. Then double-check each nut for tightness. After changing the wheels, have an authorized Kia dealer tighten the wheel nuts to their proper torque as soon as possible.

Wheel nut tightening torque:

Steel wheel & aluminium alloy wheel:

9~11 kg.m (65~79 lb.ft)

If you have a tire gauge, remove the valve cap and check the air pressure. If the pressure is lower than recommended, drive slowly to the nearest service station and inflate to the correct pressure. If it is too high, adjust it until it is correct. Always reinstall the valve cap after checking or adjusting the tire pressure. If the cap is not replaced, air may leak from the tire. If you lose a valve cap, buy another and install it as soon as possible.

After you have changed wheels, always secure the flat tire in its place and return the jack and tools to their proper storage locations.

⚠ CAUTION - Reducing lug nuts

Make certain during wheel removal that the same nuts that were removed are reinstalled - or, if replaced, that nuts with metric threads and the same chamfer configuration are used. Your vehicle has metric threads on the wheel studs and nuts. Installation of a non-metric thread nut on a metric stud will not secure the wheel to the hub properly and will damage the stud so that it must be replaced.

Note that most lug nuts do not have metric threads. Be sure to use extreme care in checking for thread style before installing aftermarket lug nuts or wheels. If in doubt, consult an authorized Kia dealer.

⚠ WARNING - Wheel studs

Do not drive your vehicle with damaged wheel studs. If the studs are damaged, they may lose their ability to retain the wheel. This could lead to the loss of the wheel and a collision.

To prevent the jack, jack handle, wheel lug nut wrench and spare tire from rattling while the vehicle is in motion, store them properly.

Check the inflation pressures as soon as possible after installing the spare tire. Adjust it to the specified pressure, if necessary. Refer to “Tires and wheels” in section 8.

Important - use of compact spare tire (if equipped)

If your vehicle is equipped with a compact spare tire. It takes up less space than a regular-size tire. This tire is smaller than a conventional tire and is designed for temporary use only.

You should drive carefully when the compact spare is in use. The compact spare should be replaced by the proper conventional tire and rim at the first opportunity.

The operation of this vehicle is not recommended with more than one compact spare tire in use at the same time.

⚠ WARNING - Spare tire

Do not operate your vehicle on this compact spare at speeds over 80 km/h (50 mph). The compact spare tire is for emergency use only. The original tire should be repaired or replaced as soon as is possible to avoid failure of the spare.

The compact spare should be inflated to 420 kPa (60 psi).

Check the inflation pressure after installing the spare tire. Adjust it to the specified pressure, as necessary.

When using a compact spare tire, observe the following precautions:

- Under no circumstances should you exceed 80 km/h (50 mph); a higher speed could damage the tire.
- Ensure that you drive slowly enough for the road conditions to avoid all hazards. Any road hazard, such as a pothole or debris, could seriously damage the compact spare.
- Any continuous road use of this tire could result in tire failure, loss of vehicle control, and possible personal injury.
- Do not exceed the vehicle's maximum load rating or the load-carrying capacity shown on the sidewall of the compact spare tire.
- Avoid driving over obstacles. The compact spare tire diameter is smaller than the diameter of a conventional tire and reduces the ground clearance approximately 25 mm (1 inch), which could result in damage to the vehicle.

- Do not take this vehicle through an automatic car wash while the compact spare tire is installed.
- The compact spare tire should not be installed on the front axle if the vehicle must be driven in snow or on ice.
- Do not use the compact spare tire on any other vehicle because this tire has been designed especially for your vehicle.
- The compact spare tire's tread life is shorter than a regular tire. Inspect your compact spare tire regularly and replace worn compact spare tires with the same size and design, mounted on the same wheel.
- The compact spare tire should not be used on any other wheels, nor should standard tires, snow tires, wheel covers or trim rings be used with the compact spare wheel. If such use is attempted, damage to these items or other car components may occur.
- Do not use more than one compact spare tire at a time.
- Do not tow a trailer while the compact spare tire is installed.

IF YOU HAVE A FLAT TIRE (WITH TIRE MOBILITY KIT, IF EQUIPPED)



OYFH062021N

For safe operation, carefully read and follow the instructions in this manual before use.

(1) Tire Mobility Kit bag

(2) Compressor

(3) Sealant bottle

The Tire Mobility Kit is a temporary fix to the tire and the tire should be inspected by an authorized Kia dealer as soon as possible.

⚠ CAUTION - One sealant bottle for one tire

The Tire Mobility Kit sealing compound in the bottle is to be used for one tire only. See your Kia dealership for additional replacement sealant bottles.

⚠ WARNING - Tire wall

Do not use the Tire Mobility Kit to repair punctures in the tire walls. This can result in an accident due to tire failure.

⚠ WARNING - Temporary fix

Have your tire repaired as soon as possible. The tire may loose air pressure at any time after inflating with the Tire Mobility Kit.


OEL069019

Introduction

With the Tire Mobility Kit you stay mobile even after experiencing a tire puncture.

The system of compressor and sealing compound effectively and comfortably seals most punctures in a passenger car tire caused by nails or similar objects and reinflates the tire.

After you ensured that the tire is properly sealed you can drive cautiously on the tire (distance up to 200 km (120 miles)) at a max. speed of 80 km/h (50 mph) in order to reach a service station or tire dealer to have the tire repaired or replaced.

It is possible that some tires, especially with larger punctures or damage to the sidewall, cannot be sealed completely.

Air pressure loss in the tire may adversely affect tire performance.

For this reason, you should avoid abrupt steering or other driving maneuvers, especially if the vehicle is heavily loaded or if a trailer is in use.

The Tire Mobility Kit is not designed or intended as a permanent tire repair method and is to be used for one tire only.

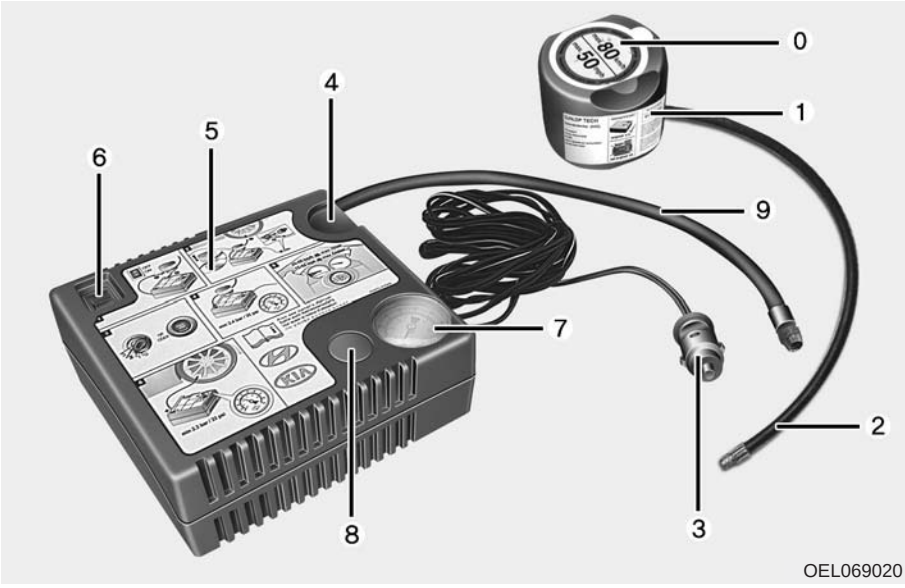
This instruction shows you step by step procedure to temporarily seal the puncture.

Read the section "Notes on the safe use of the Tire Mobility Kit".

Notes on the safe use of the Tire Mobility Kit

- Park your car at the side of the road so that you can work with the Tire Mobility Kit away from moving traffic.
- To be sure your vehicle will not move, even when you're on fairly level ground, always set your parking brake.
- Only use the Tire Mobility Kit for sealing/inflation passenger car tires. Only punctured areas located within the tread region of the tire can be sealed using the tire mobility kit.
- Do not use on motorcycles, bicycles or any other type of tires.
- When the tire and wheel are damaged, do not use Tire Mobility Kit for your safety.
- Use of the Tire Mobility Kit may not be effective for tire damage larger than approximately 6 mm (0.24 in).

  Please contact the nearest Kia dealership if the tire cannot be made roadworthy with the Tire Mobility Kit.
- Do not use the Tire Mobility Kit if a tire is severely damaged by driving run flat or with insufficient air pressure.
- Do not remove any foreign objects such as nails or screws that have penetrated the tire.
- Provided the car is outdoors, leave the engine running. Otherwise operating the compressor may eventually drain the car battery.
- Never leave the Tire Mobility Kit unattended while it is being used.
- Do not leave the compressor running for more than 10 min. at a time or it may overheat.
- Do not use the Tire Mobility Kit if the ambient temperature is below -30°C (-22°F).



Components of the Tire Mobility Kit

0. Speed restriction label
1. Sealant bottle and label with speed restriction
2. Filling hose from sealant bottle to wheel
3. Connectors and cable for the power outlet direct connection
4. Holder for the sealant bottle
5. Compressor
6. On/off switch
7. Pressure gauge for displaying the tire inflation pressure
8. Button for reducing tire inflation pressure
9. Hose to connect compressor and sealant bottle or compressor and wheel

Connectors, cable and connection hose are stored in the compressor housing.

⚠ WARNING - Expired sealant

Do not use the Tire sealant after expiration date noted on the sealant bottle. This can increase the risk of tire failure.

⚠ WARNING - Sealant

- **Keep out of reach of children.**
- **Avoid contact with eyes.**
- **Do not swallow.**

Strictly follow the specified sequence, otherwise the sealant may escape under high pressure.

Using the Tire Mobility Kit

1. Detach the speed restriction label (0) from the sealant bottle (1), and place it in a highly visible place inside the vehicle such as on the steering wheel to remind the driver not to drive too fast.
2. Screw connection hose (9) onto the connector of the sealant bottle.
3. Ensure that button (8) on the compressor is not pressed.
4. Unscrew the valve cap from the valve of the defective wheel and screw filling hose (2) of the sealant bottle onto the valve.
5. Insert the sealant bottle into the housing of the compressor (4)so that the bottle is upright.


OEL069019

6. Ensure that the compressor is switched off, position 0.
7. Connect between compressor and the vehicle power outlet using the cable and connectors.
8. With the engine start/stop button position on or ignition switch position on, switch on the compressor and let it run for approximately 5~7 minutes to fill the sealant up to proper pressure. (refer to the Tire and Wheels, chapter 8). The inflation pressure of the tire after filling is unimportant and will be checked/corrected later.

   Be careful not to overinflate the tire and stay away from the tire when filling it.

⚠ CAUTION - Tire pressure

Do not attempt to drive your vehicle if the tire pressure is below 200 kpa (29 PSI). This could result in an accident due to sudden tire failure.

9. Switch off the compressor.
10. Detach the hoses from the sealant bottle connector and from the tire valve.

Return the Tire Mobility Kit to its storage location in the vehicle.

⚠ WARNING - Carbon monoxide

Do not leave your vehicle running in a poorly ventilated area for extended periods of time. Carbon monoxide poisoning and suffocation can occur.

Distributing the sealant

11. Immediately drive approximately 7~10km (4~6miles or, about 10min) to evenly distribute the sealant in the tire.

Do not exceed a speed of 80 km/h (50 mph). If possible, do not fall below a speed of 20 km/h (12 mph).

While driving, if you experience any unusual vibration, ride disturbance or noise, reduce your speed and drive with caution until you can safely pull off of the side of the road.

Call for road side service or towing.

When you use the Tire Mobility Kit, the tire pressure sensor valve stem and wheel may be stained by sealant. After use wipe off sealant resdue and inspect. Consult you Kia dealership if necessary.

Checking the tire inflation pressure

1. After driving approximately 7 ~ 10 km (4 ~ 6 miles or about 10min), stop at a safe location.
2. Connect connection hose (9) of the compressor directly to the tire valve.
3. Plug the compressor power cord into the vehicle power outlet.
4. Adjust the tire inflation pressure to the recomended tire inflation.

   With the ignition swithched on, proceed as follows.

   - **To increase the inflation pressure :** Switch on the compressor, position I. To check the current inflation pressure setting, briefly switch off the compressor.

✻ NOTICE

The pressure gauge may show higher than actual reading when the compressor is running. To get an accurate tire reading, the compressor needs to be turned off.

- **To reduce the inflation pressure:** Press the button 8 on the compressor.

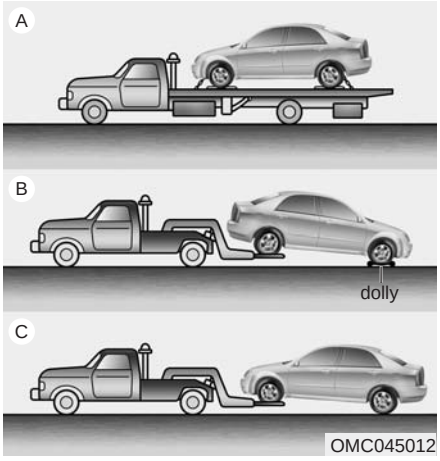
⚠ CAUTION - Tire pressure sensor

When you use the Tire Mobility Kit including sealant not approved by Kia, the tire pressure sensors may be damaged by sealant. The sealant on the tire pressure sensor and wheel should be removed when you replace the tire with a new one and inspect the tire pressure sensors in authorized dealer.

Technical Data

System voltage: DC 12 V
Working voltage: DC 10 - 15 V
Amperage rating: max. 15 A
Suitable for use at temperatures:
-30 ~ +70°C (-22 ~ +158°F)
Max. working pressure:
6 bar (87 psi)
Size
Compressor: 168 x 150 x 68 mm
(6.6 x 5.9 x 2.7 in.)
Sealant bottle: 104 x ø 85 mm
(4.1 x ø 3.3 in.)
Compressor weight:
1.05 kg (2.31 lbs)
Sealant volume:
300 ml (18.3 cu. in.)

TOWING



Towing service

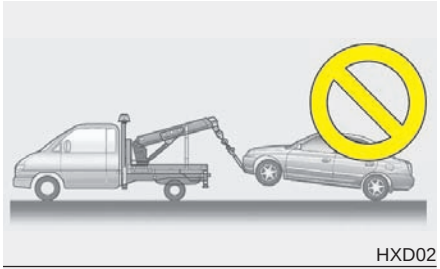
If emergency towing is necessary, we recommend having it done by an authorized Kia dealer or a commercial tow-truck service. Proper lifting and towing procedures are necessary to prevent damage to the vehicle. The use of wheel dollies or flatbed is recommended.

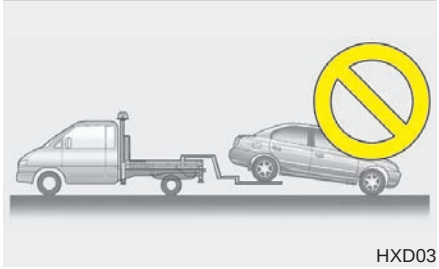
For trailer towing guidelines information, refer to "Trailer towing" in section 5.

It is acceptable to tow the vehicle with the rear wheels on the ground (without dollies) and the front wheels off the ground.

If any of the loaded wheels or suspension components are damaged or the vehicle is being towed with the front wheels on the ground, use a towing dolly under the front wheels.

When being towed by a commercial tow truck and wheel dollies are not used, the front of the vehicle should always be lifted, not the rear.


HXD02


HXD03

⚠ CAUTION - TOWING

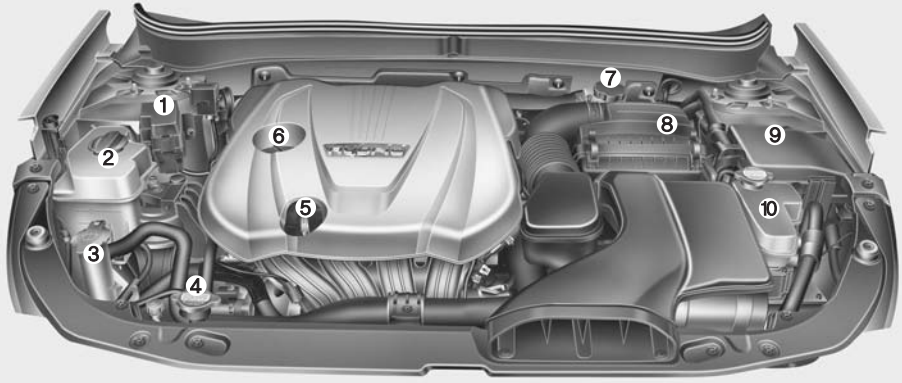
- ***Do not tow the vehicle backwards with the front wheels on the ground as this may cause damage to the vehicle.***
- ***Do not tow with sling-type equipment. Use wheel lift or flatbed equipment.***

Engine compartment / 7-2
Maintenance services / 7-3
Owner maintenance / 7-5
Scheduled maintenance service / 7-7
Explanation of scheduled maintenance items / 7-19
Engine oil / 7-22
Coolant / 7-24
Brake fluid / 7-28
Washer fluid / 7-29
Parking brake / 7-29
Air cleaner / 7-30
Climate control air filter / 7-31
Wiper blades / 7-32
Battery / 7-35
Tires and wheels / 7-38
Fuses / 7-51

Maintenance 7

Appearance care / 7-61
Emission control system / 7-68

ENGINE COMPARTMENT



1. Sub relay box
2. Engine coolant reservoir
3. Windshield washer fluid reservoir
4. Radiator cap
5. Engine oil dipstick
6. Engine oil filler cap
7. Brake fluid reservoir
8. Air cleaner
9. Fuse box
10. Inverter coolant

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

OYFH071001

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 Kia dealer perform this work.

An authorized Kia dealer has factory-trained technicians and genuine Kia parts to service your vehicle properly. For expert advice and quality service, see an authorized Kia 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 Warranty & Consumer Information manual.

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 Kia dealer. An authorized Kia dealer meets Kia's high service quality standards and receives technical support from Kia 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 Kia dealer with special tools.

✻ NOTICE

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

⚠ WARNING - Maintenance work

Do not wear jewelry or loose clothing while working under the hood of your vehicle with the engine running. These can become entangled in moving parts, 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.

⚠ WARNING

When you open the engine hood, turn the Hybrid system off. If not, it may result in death or serious injury because of the high voltage flow.

⚠ WARNING

After repair of the hydraulic brake system, the air must be bled from the system. Contact your Authorized Kia Dealer for bleeding of the brake system.

OWNER MAINTENANCE

The following lists are vehicle checks and inspections that should be performed by the owner or an authorized Kia 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 the coolant level in coolant reservoir.
- Check the windshield washer fluid level.
- Look for low or under-inflated tires.

⚠ WARNING - Hot coolant

Be careful when checking your engine or inverter coolant level when the engine is hot. Scalding hot coolant and steam may blow out under pressure.

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 the automatic transaxle P (Park) function.
- Check the parking brake.
- Check for fluid leaks under your vehicle (water dripping from the air conditioning system during or after use is normal).
- Check inverter coolant.

At least monthly:

- Check the 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.

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

- Check the radiator, heater and air conditioning hoses for leaks or damage.
- Check the windshield washer spray and wiper operation. Clean the wiper blades with clean cloth dampened with washer fluid.
- Check the headlight alignment.
- Check the 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 the body and door drain holes.
- Lubricate the door hinges and checks, and hood hinges.
- Lubricate the door and hood locks and latches.
- Lubricate the door rubber weatherstrips.
- Check the air conditioning system.
- Check the power steering fluid level.
- Inspect and lubricate automatic transaxle linkage and controls.
- Clean the battery and terminals.
- Check the brake fluid level.
- Check the drive belt.

SCHEDULED MAINTENANCE SERVICE

Follow the Normal Maintenance Schedule if the vehicle is usually operated where none of the following conditions apply. If any of the following conditions apply, follow the 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 32°C (90°F).

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 240,000 km (150,000 miles) 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.

12,000 km or 6 months

- ❑ Inspect air cleaner filter
- ❑ Inspect HSG belt (12,000 km or 12 months)
- ❑ Inspect vacuum hose
- ❑ Replace engine oil and filter (12,000 km or 12 months)
- ❑ Add fuel additive *1 (Every 12,000 km or 12 months)

24,000 km or 12 months

- ❑ Inspect air cleaner filter
- ❑ Inspect HSG belt (24,000 km or 24 months)
- ❑ 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 and rotors
- ❑ Inspect rear brake disc/pads

(Continued)

(Continued)

- ❑ 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 (24,000 km or 24 months)
- ❑ Add fuel additive *1 (Every 12,000 km or 12 months)

36,000 km or 18 months

- ❑ Inspect air cleaner filter
- ❑ Inspect HSG belt (36,000 km or 36 months)
- ❑ Inspect vacuum hose
- ❑ Replace engine oil and filter (36,000 km or 36 months)
- ❑ Add fuel additive *1 (Every 12,000 km or 12 months)

*1 : If TOP TIER Detergent Gasoline is not available, one bottle of additive is recommended. Additives are available from your authorized Kia 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.)

48,000 km or 24 months

- ❑ Inspect air conditioning refrigerant
- ❑ Inspect brake fluid
- ❑ Inspect brake hoses and lines
- ❑ Inspect drive shafts and boots
- ❑ Inspect exhaust pipe and muffler
- ❑ Inspect front brake disc/pads, calipers and rotors
- ❑ Inspect fuel filter *1
- ❑ Inspect fuel lines, fuel hoses and connections
- ❑ Inspect fuel tank air filter (if equipped) *1
- ❑ Inspect HSG belt (48,000 km or 48 months)
- ❑ Inspect rear brake disc/pads
- ❑ Inspect parking brake
- ❑ Inspect steering gear box, linkage & boots/lower arm ball joint, upper arm ball joint
- ❑ Inspect suspension mounting bolts
- ❑ Inspect vacuum hose
- ❑ Inspect vapor hose and fuel filler cap
- ❑ Replace air cleaner filter
- ❑ Replace climate control air filter (for evaporator and blower unit)
- ❑ Replace engine oil and filter (48,000 km or 48 months)
- ❑ Add fuel additive *2 (Every 12,000 km or 12 months)

60,000 km or 30 months

- ❑ Inspect air cleaner filter
- ❑ Inspect HSG belt (60,000 km or 60 months)
- ❑ Inspect vacuum hose
- ❑ Replace engine oil and filter (60,000 km or 60 months)
- ❑ Add fuel additive *2 (Every 12,000 km or 12 months)

*1 : 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 Kia dealer for details.

*2 : If TOP TIER Detergent Gasoline is not available, one bottle of additive is recommended. Additives are available from your authorized Kia 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.)

72,000 km or 36 months

- ❑ Inspect air cleaner filter
- ❑ 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 and rotors
- ❑ Inspect HSG belt (72,000 km or 72 months)
- ❑ Inspect rear brake disc/pads
- ❑ Inspect steering gear box, linkage & boots/lower arm ball joint, upper arm ball joint
- ❑ Inspect suspension mounting bolts
- ❑ Inspect vacuum hose
- ❑ Replace climate control air filter (for evaporator and blower unit)
- ❑ Replace engine oil and filter (72,000 km or 72 months)
- ❑ Add fuel additive *1 (Every 12,000 km or 12 months)

84,000 km or 42 months

- ❑ Inspect air cleaner filter
- ❑ Inspect HSG belt (84,000 km or 84 months)
- ❑ Inspect vacuum hose
- ❑ Replace engine oil and filter (84,000 km or 84 months)
- ❑ Add fuel additive *1 (Every 12,000 km or 12 months)

*1 : If TOP TIER Detergent Gasoline is not available, one bottle of additive is recommended. Additives are available from your authorized Kia 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.)

96,000 km or 48 months

- ❑ 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 and rotors
- ❑ Inspect rear brake disc/pads
- ❑ Inspect steering gear box, linkage & boots/lower arm ball joint, upper arm ball joint
- ❑ Inspect suspension mounting bolts
- ❑ Inspect brake fluid
- ❑ Inspect fuel filter *1
- ❑ Inspect fuel lines, fuel hoses and connections
- ❑ Inspect fuel tank air filter (if equipped) *1
- ❑ Inspect parking brake
- ❑ Inspect vapor hose and fuel filler cap
- ❑ Inspect valve clearance *2
- ❑ Inspect W/pump belt (auto-tensioner, HSG, w/pump) (First, 96,000 km or 72 months after every 24,000 km or 24 months)
- ❑ Inspect inverter coolant hose
- ❑ Replace air cleaner filter
- ❑ Replace climate control air filter (for evaporator and blower unit)
- ❑ Replace engine oil and filter (96,000 km or 96 months)

(Continued)

(Continued)

- ❑ Replace HSG belt (96,000 km or 48 months)
- ❑ Add fuel additive *3 (Every 12,000 km or 12 months)

108,000 km or 54 months

- ❑ Inspect air cleaner filter
- ❑ Inspect HSG belt (108,000 km or 108 months)
- ❑ Inspect vacuum hose
- ❑ Replace engine oil and filter (108,000 km or 108 months)
- ❑ Add fuel additive *3 (Every 12,000 km or 12 months)

*1 : 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 Kia dealer for details.

*2 : Inspect for excessive tappet noise and/or engine vibration and adjust if necessary.

*3 : If TOP TIER Detergent Gasoline is not available, one bottle of additive is recommended. Additives are available from your authorized Kia 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.)

120,000 km or 60 months

- ❑ Inspect air cleaner filter
- ❑ 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 and rotors
- ❑ Inspect HSG belt (120,000 km or 120 months)
- ❑ Inspect rear brake disc/pads
- ❑ Inspect steering gear box, linkage & boots/lower arm ball joint, upper arm ball joint
- ❑ Inspect suspension mounting bolts
- ❑ Inspect vacuum hose
- ❑ Inspect W/pump belt (auto-tensioner, HSG, w/pump) (First, 96,000 km or 72 months after every 24,000 km or 24 months)
- ❑ Inspect inverter coolant hose
- ❑ Replace climate control air filter (for evaporator and blower unit)
- ❑ Replace engine oil and filter (120,000 km or 120 months)
- ❑ Add fuel additive *1 (Every 12,000 km or 12 months)

132,000 km or 66 months

- ❑ Inspect air cleaner filter
- ❑ Inspect HSG belt (132,000 km or 132 months)
- ❑ Inspect vacuum hose
- ❑ Replace engine oil and filter (132,000 km or 132 months)
- ❑ Add fuel additive *1 (Every 12,000 km or 12 months)

*1 : If TOP TIER Detergent Gasoline is not available, one bottle of additive is recommended. Additives are available from your authorized Kia 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.)

144,000 km or 72 months

- ❑ Inspect air conditioning refrigerant
- ❑ Inspect brake fluid
- ❑ Inspect brake hoses and lines
- ❑ Inspect drive shafts and boots
- ❑ Inspect exhaust pipe and muffler
- ❑ Inspect front brake disc/pads, calipers and rotors
- ❑ Inspect fuel filter *1
- ❑ Inspect fuel lines, fuel hoses and connections
- ❑ Inspect fuel tank air filter (if equipped) *1
- ❑ Inspect HSG belt (144,000 km or 144 months)
- ❑ Inspect parking brake
- ❑ Inspect rear brake disc/pads
- ❑ Inspect steering gear box, linkage & boots/lower arm ball joint, upper arm ball joint
- ❑ Inspect suspension mounting bolts
- ❑ Inspect vacuum hose
- ❑ Inspect vapor hose and fuel filler cap
- ❑ Inspect W/pump belt (auto-tensioner, HSG, w/pump) (First, 96,000 km or 72 months after every 24,000 km or 24 months)
- ❑ Inspect inverter coolant hose
- ❑ Replace climate control air filter (for evaporator and blower unit)
- ❑ Replace air cleaner filter

(Continued)

(Continued)

- ❑ Replace engine oil and filter (144,000 km or 144 months)
- ❑ Add fuel additive *2 (Every 12,000 km or 12 months)

156,000 km or 78 months

- ❑ Inspect air cleaner filter
- ❑ Inspect HSG belt (156,000 km or 156 months)
- ❑ Inspect vacuum hose
- ❑ Replace engine oil and filter (156,000 km or 156 months)
- ❑ Add fuel additive *2 (Every 12,000 km or 12 months)

*1 : 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 Kia dealer for details.

*2 : If TOP TIER Detergent Gasoline is not available, one bottle of additive is recommended. Additives are available from your authorized Kia 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.)

168,000 km or 84 months

- ❑ Inspect air cleaner filter
- ❑ 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 and rotors
- ❑ Inspect HSG belt (168,000 km or 168 months)
- ❑ Inspect rear brake disc/pads
- ❑ Inspect steering gear box, linkage & boots/lower arm ball joint, upper arm ball joint
- ❑ Inspect suspension mounting bolts
- ❑ Inspect vacuum hose
- ❑ Inspect W/pump belt (auto-tensioner, HSG, w/pump) (First, 96,000 km or 72 months after every 24,000 km or 24 months)
- ❑ Inspect inverter coolant hose
- ❑ Replace climate control air filter (for evaporator and blower unit)
- ❑ Replace engine oil and filter (168,000 km or 168 months)
- ❑ Replace spark plugs (iridium coated)
- ❑ Add fuel additive *1 (Every 12,000 km or 12 months)

180,000 km or 90 months

- ❑ Inspect air cleaner filter
- ❑ Inspect HSG belt (180,000 km or 180 months)
- ❑ Inspect vacuum hose
- ❑ Replace engine oil and filter (180,000 km or 180 months)
- ❑ Add fuel additive *1 (Every 12,000 km or 12 months)

*1 : If TOP TIER Detergent Gasoline is not available, one bottle of additive is recommended. Additives are available from your authorized Kia 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.)

192,000 km or 96 months

- ❑ Inspect air conditioning refrigerant
- ❑ Inspect brake fluid
- ❑ Inspect brake hoses and lines
- ❑ Inspect drive shafts and boots
- ❑ Inspect exhaust pipe and muffler
- ❑ Inspect front brake disc/pads, calipers and rotors
- ❑ Inspect fuel filter *1
- ❑ Inspect fuel lines, fuel hoses and connections
- ❑ Inspect fuel tank air filter (if equipped) *1
- ❑ Inspect parking brake
- ❑ Inspect rear brake disc/pads
- ❑ Inspect steering gear box, linkage & boots/lower arm ball joint, upper arm ball joint
- ❑ Inspect suspension mounting bolts
- ❑ Inspect vacuum hose
- ❑ Inspect vapor hose and fuel filler cap
- ❑ Inspect valve clearance *2
- ❑ Inspect W/pump belt (auto-tensioner, HSG, w/pump) (First, 96,000 km or 72 months after every 24,000 km or 24 months)
- ❑ Inspect inverter coolant hose
- ❑ Replace air cleaner filter
- ❑ Replace climate control air filter (for evaporator and blower unit)

(Continued)

(Continued)

- ❑ Replace engine coolant (First, 192,000 km or 120 months after every 48,000 km or 24 months)
- ❑ Replace inverter coolant (First, 192,000 km or 120 months after every 48,000 km or 24 months)
- ❑ Replace engine oil and filter (192,000 km or 192 months)
- ❑ Replace HSG belt (192,000 km or 96 months)
- ❑ Add fuel additive *3 (Every 12,000 km or 12 months)

*1 : 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 Kia dealer for details.

*2 : Inspect for excessive tappet noise and/or engine vibration and adjust if necessary.

*3 : If TOP TIER Detergent Gasoline is not available, one bottle of additive is recommended. Additives are available from your authorized Kia 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.)

204,000 km or 102 months

- ❑ Inspect air cleaner filter
- ❑ Inspect HSG belt (204,000 km or 204 months)
- ❑ Inspect vacuum hose
- ❑ Replace engine oil and filter (204,000 km or 204 months)
- ❑ Add fuel additive *1 (Every 12,000 km or 12 months)

216,000 km or 108 months

- ❑ 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 and rotors
- ❑ Inspect HSG belt (216,000 km or 216 months)
- ❑ Inspect rear brake disc/pads
- ❑ Inspect steering gear box, linkage & boots/lower arm ball joint, upper arm ball joint
- ❑ Inspect suspension mounting bolts

(Continued)

(Continued)

- ❑ Inspect W/pump belt (auto-tensioner, HSG, w/pump) (First, 96,000 km or 72 months after every 24,000 km or 24 months)
- ❑ Inspect inverter coolant hose
- ❑ Replace climate control air filter (for evaporator and blower unit)
- ❑ Replace engine oil and filter (216,000 km or 216 months)
- ❑ Add fuel additive *1 (Every 12,000 km or 12 months)

228,000 km or 114 months

- ❑ Inspect air cleaner filter
- ❑ Inspect HSG belt (228,000 km or 228 months)
- ❑ Inspect vacuum hose
- ❑ Replace engine oil and filter (228,000 km or 228 months)
- ❑ Add fuel additive *1 (Every 12,000 km or 12 months)

*1 : If TOP TIER Detergent Gasoline is not available, one bottle of additive is recommended. Additives are available from your authorized Kia 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.)

240,000 km or 120 months

- ❑ Inspect air conditioning refrigerant
- ❑ Inspect brake fluid
- ❑ Inspect brake hoses and lines
- ❑ Inspect drive shafts and boots
- ❑ Inspect exhaust pipe and muffler
- ❑ Inspect front brake disc/pads, calipers and rotors
- ❑ Inspect fuel filter *1
- ❑ Inspect fuel lines, fuel hoses and connections
- ❑ Inspect fuel tank air filter (if equipped) *1
- ❑ Inspect HSG belt (240,000 km or 240 months)
- ❑ Inspect parking brake
- ❑ Inspect rear brake disc/pads
- ❑ Inspect steering gear box, linkage & boots/lower arm ball joint, upper arm ball joint
- ❑ Inspect suspension mounting bolts
- ❑ Inspect vacuum hose
- ❑ Inspect vapor hose and fuel filler cap
- ❑ Inspect W/pump belt (auto-tensioner, HSG, w/pump) (First, 96,000 km or 72 months after every 24,000 km or 24 months)
- ❑ Inspect inverter coolant hose
- ❑ Replace climate control air filter (for evaporator and blower unit)
- ❑ Replace air cleaner filter

(Continued)

(Continued)

- ❑ Replace engine oil and filter (240,000 km or 240 months)
- ❑ Replace engine coolant (First, 192,000 km or 120 months after every 48,000 km or 24 months)
- ❑ Replace inverter coolant (First, 192,000 km or 120 months after every 48,000 km or 24 months)
- ❑ Add fuel additive *2 (Every 12,000 km or 12 months)

No check, No service required

- ❑ Automatic transaxle fluid

*1 : 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 Kia dealer for details.

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

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

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 6,000 KM OR 6 MONTHS	A, B, C, D, E, F, G, H, I, K
AIR CLEANER FILTER	R	MORE FREQUENTLY	C, E
SPARK PLUGS	R	MORE FREQUENTLY	B, H
AUTOMATIC TRANSAXLE FLUID	R	EVERY 96,000 KM	A, C, E, F, G, I
HSG BELT	R	EVERY 48,000 KM or 24 MONTHS	C, D, E, K, L
	I	EVERY 6,000 KM or 6 MONTHS	C, D, E, K, L
FRONT BRAKE DISC/PADS, CALIPERS	I	MORE FREQUENTLY	C, D, G, H
REAR BRAKE DISC/PADS	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	EVERY 12,000 KM OR 6 MONTHS	C, D, E, F, G, H, I
DRIVE SHAFTS AND BOOTS	I	MORE FREQUENTLY	C, D, E, F, G, H, I, J
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 8 km in normal temperature or less than 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 32°C (90°F)
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 170 km/h (106 mph)
K - Frequently driving in stop-and-go conditions
L - Frequently driving in rainy areas

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 Kia dealer.

Fuel lines, fuel hoses and connections

Check the fuel lines, fuel hoses and connections for leakage and damage. Have an authorized Kia 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 hose and 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 Kia air cleaner filter is recommended when the filter is replaced.

Spark plugs

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

Valve clearance

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

Cooling system

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

Coolant

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

Automatic transaxle fluid

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

But in severe conditions, the fluid should be changed at an authorized Kia 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. This is a normal condition and you should not judge the need to replace the fluid based upon the changed color.

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 “MIN” and “MAX” marks on the side of the reservoir. Use only hydraulic brake fluid conforming to DOT 3 or DOT 4 specification.

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.

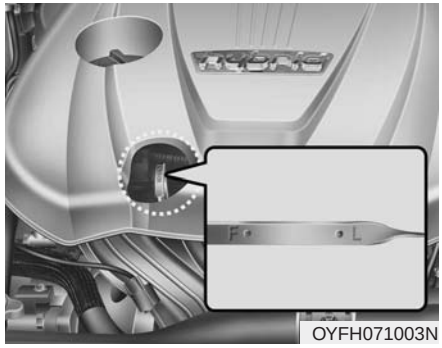
Drive shafts and boots

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



OYFH071003N

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 reinsert 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.

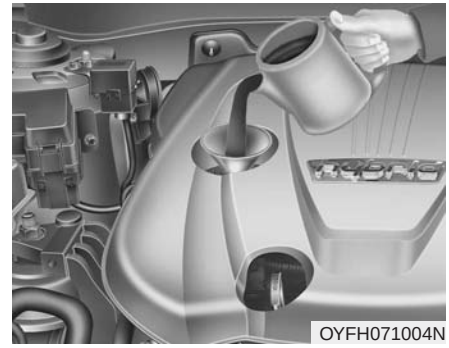
5. Pull the dipstick out again and check the level. The level should be between F and L.

⚠ CAUTION - Replace engine oil

Do not overfill with engine oil. Engine damage may result.

⚠ CAUTION

Do not spill engine oil, when adding or changing engine oil. If you drop the engine oil on the engine room, wipe it off immediately.


OYFH071004N

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

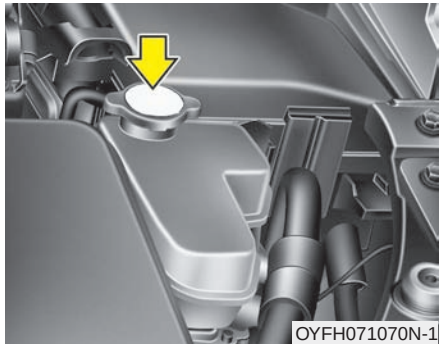
Use a funnel to help prevent oil from being spilled on engine components.

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 Kia dealer according to the Maintenance Schedule at the beginning of this section.

COOLANT


OYFH071070N-1

Inverter 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 everyday.

If it is near or at MIN, add enough coolant between MIN and MAX and check the cooling system for air bleed at an authorized Kia dealer.

⚠ CAUTION

When adding coolant, be careful not to overfill.

⚠ CAUTION

Do not confuse the cap of engine coolant and inverter coolant. If not, the coolant circulation problem of engine or Hybrid system may occur because the cap pressure is different.

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 per every day, at the beginning of the winter season, and before traveling to a colder climate.

Checking the coolant level

⚠ WARNING



Removing radiator cap and inverter coolant cap

- **Never attempt to remove the radiator cap and/or inverter coolant 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.**

(Continued)

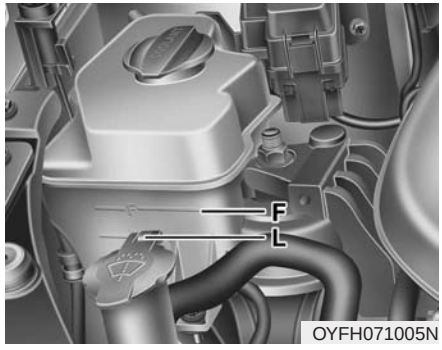
(Continued)

- **The engine coolant level is influenced by hybrid system temperature. Before filling the engine coolant and/or inverter coolant, turn the hybrid vehicle off, fill the engine coolant and/or inverter coolant carefully.**
- **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.**
- **Even if the engine is not operating, do not remove the radiator cap and/or inverter 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 electronic 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 the rotating fan blades. As the engine coolant temperature decreases, the electric motor will automatically shut off. This is a normal condition.



OYFH071005N

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.

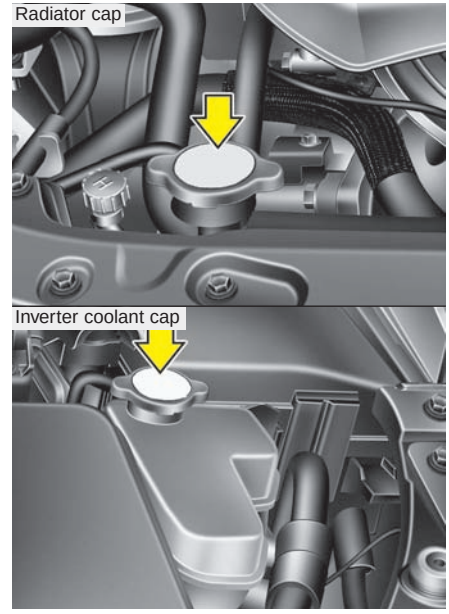
If the coolant level is low, add enough distilled (deionized) water to provide protection against freezing and corrosion. Bring the level to F, but do not overfill. If frequent additions are required, see an authorized Kia dealer for a cooling system inspection.

Recommended engine and inverter 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
-15°C (5°F)	35	65
-25°C (-13°F)	40	60
-35°C (-31°F)	50	50
-45°C (-49°F)	60	40



OYFH071006N-1/OYFH071070N-1

⚠ WARNING



Radiator cap & Inverter coolant cap

Do not remove the radiator cap and/or inverter coolant 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 engine and inverter coolant changed by an authorized Kia dealer according to the Maintenance Schedule at the beginning of this section.

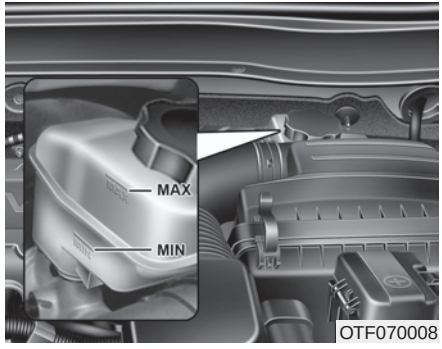
⚠ CAUTION

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

⚠ CAUTION - Proper fluid

Only use brake fluid in brake system. Small amounts of improper fluids (such as engine oil) can cause damage to the brake system.

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 and/or clutch disc (if equipped). If the fluid level is excessively low, have the brake system checked by an authorized Kia dealer.

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

Never mix different types of fluid.

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

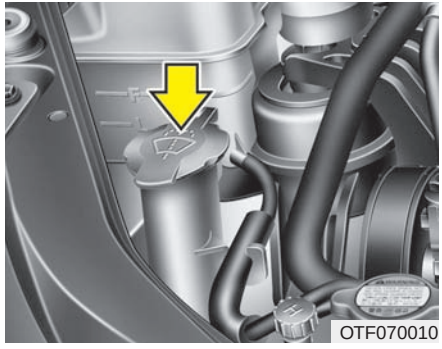
When changing and adding brake fluid, handle it carefully. Do not let it come in contact with your eyes. If brake fluid should come in contact with your eyes, immediately flush them with a large quantity of fresh tap water. Have your eyes examined by a doctor as soon as possible.

⚠ CAUTION - Brake fluid

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.

WASHER FLUID


OTF070010

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.

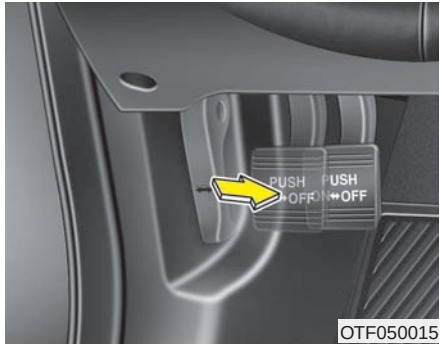
⚠ WARNING - Windshield fluid

Do not drink the windshield washer fluid. The windshield washer fluid is poisonous to humans and animals.

⚠ WARNING - Flammable fluid

Do not allow the washer fluid to come in contact with open flames or sparks. The windshield washer fluid clan is flammable under certain circumstances. This can result in a fire.

PARKING BRAKE

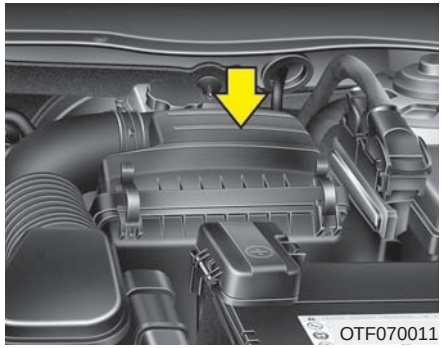


OTF050015

Checking the parking brake

Check whether the stroke is within specification when the parking brake pedal is depressed with 20 kg (44 lb, 196 N) of force. Also, the parking brake alone should securely hold the vehicle on a fairly steep grade.

AIR CLEANER



Filter replacement

It must be replaced when necessary, and should not be washed.

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

Clean the filter by using compressed air.

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 - Air filter maintenance

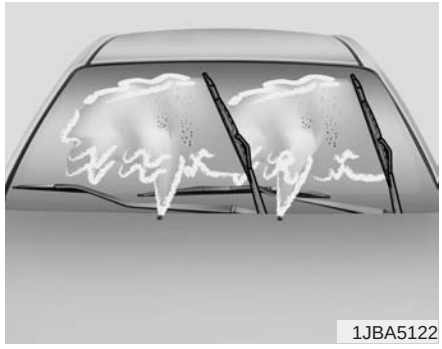
- ***Do not drive with the air cleaner removed; this will result in excessive engine wear.***
- ***When removing the air cleaner filter, be careful that dust or dirt does not enter the air intake, or damage may result.***
- ***Use a Kia genuine part. Use of nongenuine part could damage the air flow sensor.***

CLIMATE CONTROL AIR FILTER (IF EQUIPPED)

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.

WIPER BLADES



Blade inspection

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 - Wiper blades

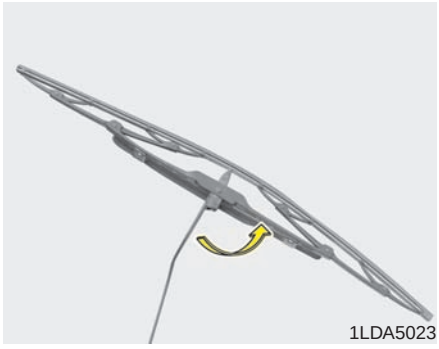
To prevent damage to the wiper blades, do not use gasoline, kerosene, paint thinner, or other solvents on or near them.

Blade replacement

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

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

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

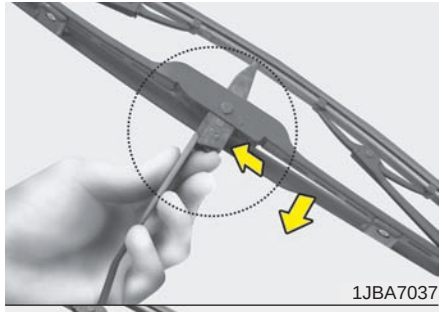


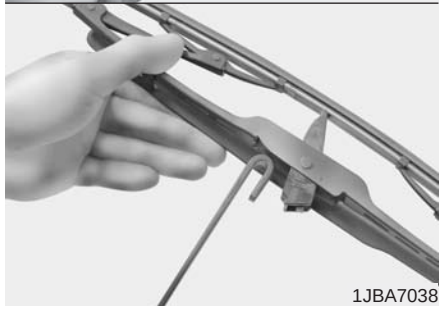
Front windshield wiper blade
Type A

⚠ CAUTION - Wiper arms

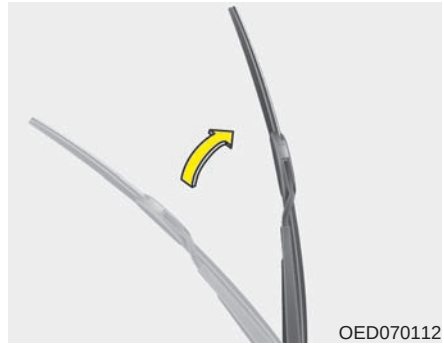
Do not allow the wiper arm to fall against the windshield, since it may chip or crack the windshield.

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





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.

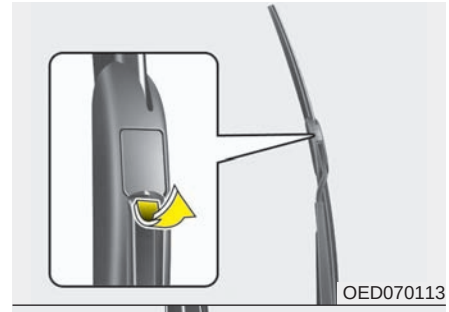


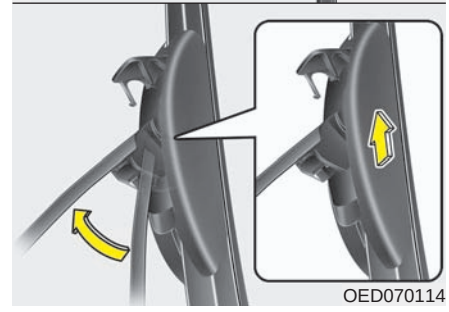
Type B

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

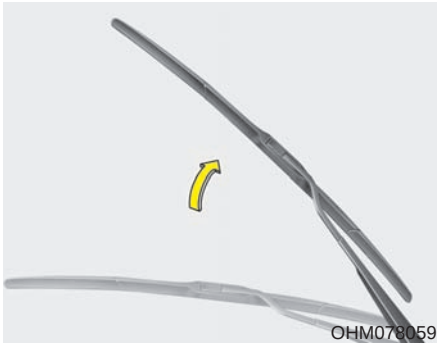
✻ NOTICE

Do not allow the wiper arm to fall against the windshield





2. Open the cover of the blade.
3. Compress the clip behind the wiper arm and lift it off the arm.
4. Install the blade assembly until it clicks into place
5. Close the cover of blade.
6. Place back the wiper arm to the proper position.

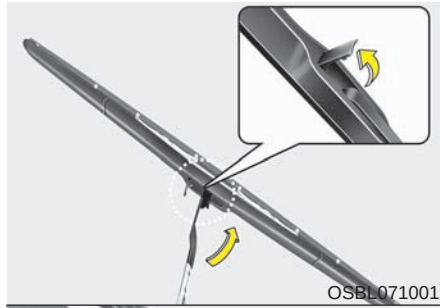


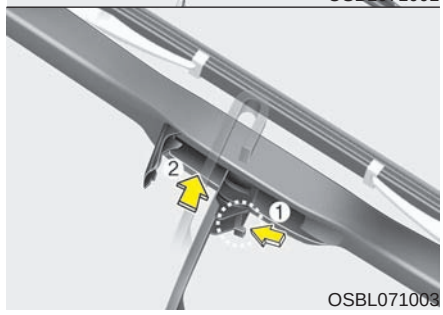
Type C

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.



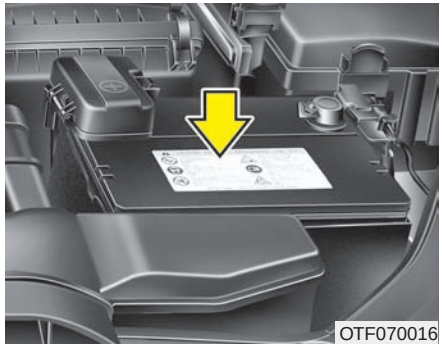


2. Turn the wiper blade clip. Then lift up the blade clip.
3. Push the clip (1) and push up the wiper arm (2).



4. Push down the wiper arm (3) and install the new blade assembly in the reverse order of removal.
5. Return the wiper arm on the windshield.

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 - Risk of explosion

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

The battery contains hydrogen -- a highly combustible gas, which will explode if it comes in contact with a flame or spark.

⚠ WARNING - Sulfuric acid in batteries

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

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



Always read the following instructions carefully when handling a battery.



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

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



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 Kia dealer to be recycled.

⚠ WARNING - Recharging battery

Never attempt to recharge the battery when the battery cables are connected.

When you don't use the vehicle for a long time in the low temperature area, separate the battery and keep it indoors.

⚠ WARNING - Risk of electrocution

Never touch the electrical ignition system while the vehicle is running. This system works with high voltage which can "zap" you.

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 the vehicle was not in use), recharge it by slow charging (trickle) for 10 hours.
- If the battery gradually discharges because of high electric load while the vehicle is being used, recharge it at 20-30A for two hours.

When recharging the battery, observe the following precautions:

- The battery must be removed from the vehicle and placed in an area with good ventilation.
- 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 49°C (120°F).
- 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.
- 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.

Reset items

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

- Auto down window (See section 4)
- 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” means the vehicle has not been driven for at least three hours or driven less than 1.6 km (one mile).

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

For recommended inflation pressure refer to “Tire and wheels” in section 8.



OMG055004

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

⚠ WARNING - Tire underinflation

Inflate your tires consistent with the instructions provided in this manual. Severe underinflation (70 kPa (10 psi) or more) can lead to severe heat build-up, causing blowouts, tread separation and other tire failures that can result in the loss of vehicle control. This risk is much higher on hot days and when driving for long periods at high speeds.

- 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 Kia dealer.
- Overinflation produces a harsh ride, excessive wear at the center of the tire tread, and a greater possibility of damage from road hazards.
- Warm tires normally exceed recommended cold tire pressures by 4 to 28 to 41 kPa (6 psi). 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.

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 1.6 km (1 mile) 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.

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 1.6 km (1 mile).

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.

- 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.
- Remember to check the pressure of your spare tire. Kia recommends that you check the spare every time you check the pressure of the other tires on your vehicle.

Tire rotation

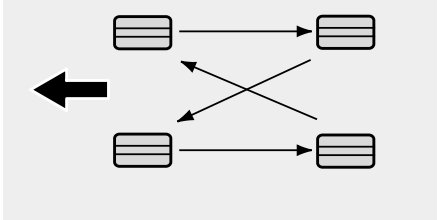
To equalize tread wear, it is recommended that the tires be rotated every 12,000 km (7,500 miles) or sooner if irregular wear develops.

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.

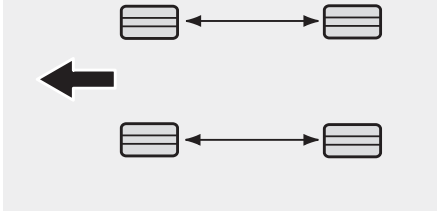
Refer to “Tire and wheels” in section 8.

Without a spare tire



S2BLA790A

Directional tires (if equipped)



CBGQ0707A

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

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

Do not use the compact spare tire for tire rotation.

⚠ WARNING - Mixing tire types

Do not mix bias ply and radial ply tires under any circumstances. This may cause unusual handling characteristics.

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 - Wheel weight

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.

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) (if equipped) to work irregularly.

Compact spare tire replacement

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.

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.

⚠ CAUTION - Wheel

Wheels that do not meet Kia's specifications may fit poorly and result in damage to the vehicle or unusual handling and poor vehicle control.

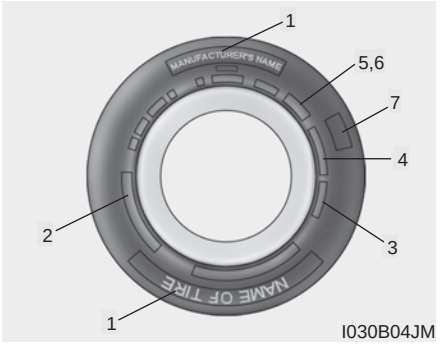
Tire traction

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. Slow down whenever there is rain, snow or ice on the road, to reduce the possibility of losing control of the vehicle.

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.)

P205/65R16 94H

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

205 - Tire width in millimeters.

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

R - Tire construction code (Radial).

16 - Rim diameter in inches.

94 - 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:

6.5JX16

6.5 - 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 vehicles. 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)
Z	Above 240 km/h (149 mph)

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 1609 represents that the tire was produced in the 16th week of 2009.

⚠ WARNING - Tire age

Replace tires within the recommended time frame. Failure to replace tires as recommended can result in sudden tire failure, which could lead to a loss of control and an accident.

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:

TREADWEAR 440

TRACTION A

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.

Tires degrade over time, even when they are not being used. Regardless of the remaining tread, we recommend that tires be replaced after approximately six (6) years of normal service. Heat caused by hot climates or frequent high loading conditions can accelerate the aging process.

These grades are molded on the side-walls of passenger vehicle tires. The tires available as standard or optional equipment on your vehicles 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 tires 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.

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.

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 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 kilopascal (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.

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: 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 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 driving by 2.

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

All season tires

Kia 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

Kia 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. Kia 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.

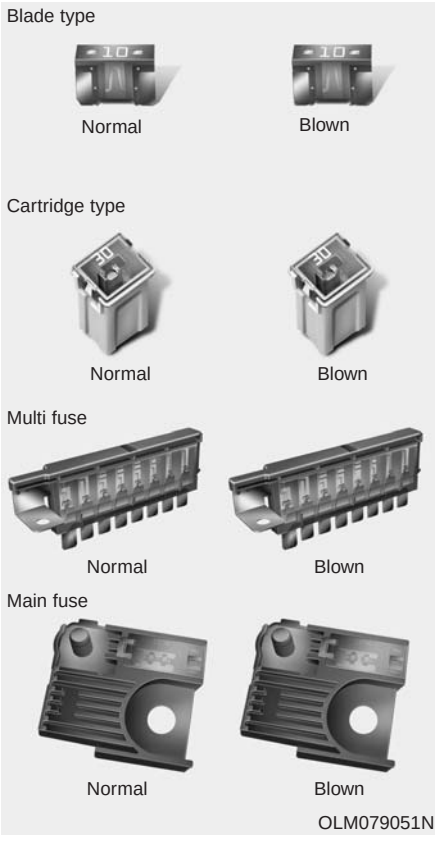
Do not drive faster than 120 km/h (75 mph) when your vehicle is equipped with snow tires.

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 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 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 melt.

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

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 Kia 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

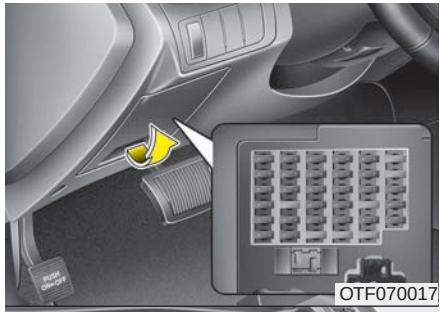
- **Never replace a fuse with anything but another fuse of the same rating.**
- **A higher capacity fuse could cause damage and possibly a fire.**
- **Never install a wire or aluminum foil instead of the proper fuse - even as a temporary repair. It may cause extensive wiring damage and a possible fire.**

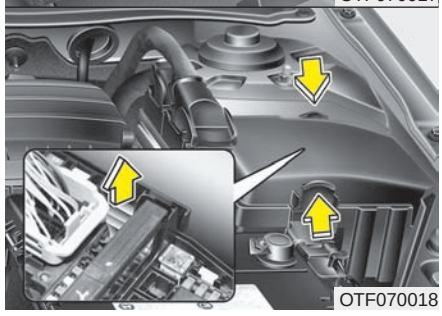
⚠ CAUTION - Fuse replacement

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.


OTF070017


OTF070018

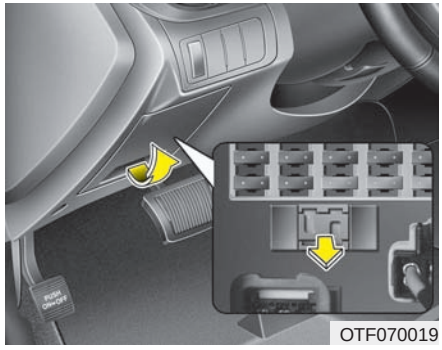
Instrument panel fuse replacement

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 Kia 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 cigar lighter fuse.

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


OTF070019

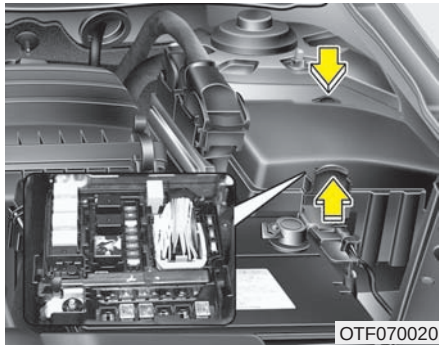
Memory fuse

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.

✻ 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 when the memory fuse is pulled up, the battery can still be discharged by operation of the headlights or other electrical devices.**

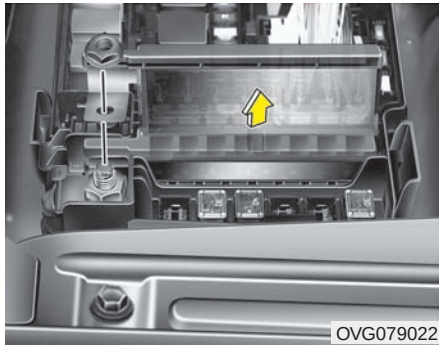


Engine compartment panel fuse replacement

1. Turn the ignition switch and all other switches off.
2. Remove the fuse box cover by pressing the tap and pulling up the cover.
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 Kia dealer.

⚠ CAUTION - Fuse panel covers

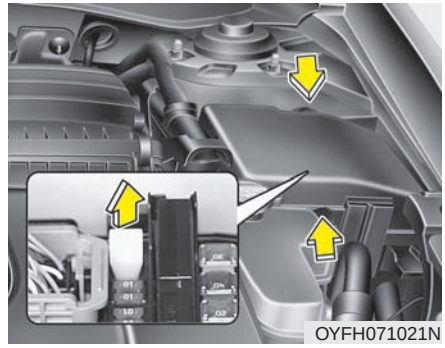
After checking the fuse panel in the engine compartment, securely install the fuse panel cover to prevent electrical failures which may occur from water leaking in.


OVG079022

Multi fuse

If the multi fuse is blown, it must be removed as follows:

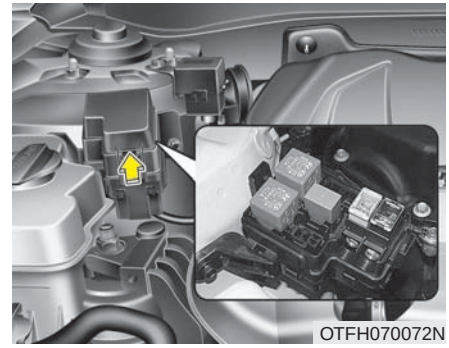
1. Remove the fuse panel in the engine compartment.
2. Remove the nuts shown in the picture above.
3. Replace the fuse with a new one of the same rating.
4. Reinstall in the reverse order of removal.


OYFH071021N

Oil pump cooling fuse/ Cooling fan fuse

If the oil pump cooling fuse or cooling fan fuse is blown, it must be removed as follows:

1. Turn off the engine.
2. Disconnect the negative battery cable.
3. Remove the fuse panel on the right side in the engine compartment.
4. Replace the fuse with a new one of the same rating.
5. Reinstall in the reverse order of removal.


OTFH070072N

Sub-relay fuse

If the sub-relay fuse is blown, it must be removed as follows:

1. Turn off the engine.
2. Disconnect the negative battery cable.
3. Replace the fuse with a new one of the same rating.
4. Reinstall in the reverse order of removal.

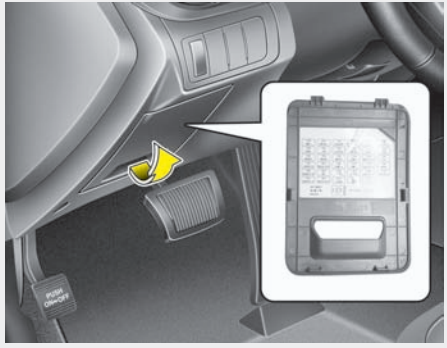
✻ NOTICE

If the multi or starting fuse is blown, consult an authorized Kia dealer.

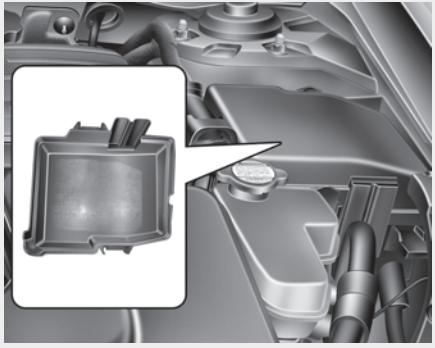
Fuse/relay panel description

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

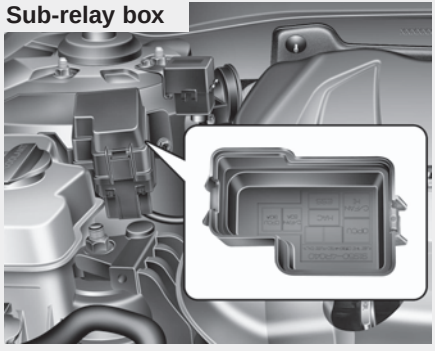
Inner fuse panel



Engine compartment fuse panel



Sub-relay box



OTF070023/OYF071071N/OTFH070071N

✻ 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.

Inner fuse panel (Driver's side fuse panel)

Description	Fuse rating	Protected component
MODULE 3	7.5A	Sport Mode Switch, Natural Vacuum Leak Detection, VESS Unit
PDM 1	25A	Smart Key Control Module
POWER OUTLET	15A	Front Power Outlet
MODULE 5	7.5A	Smart Key Control Module, Rear Seat Warmer Relay LH/RH
MODULE 2	7.5A	BCM, Panorama Sunroof, Rain Sensor
TRUNK	10A	I/P Junction Box (Trunk Lid Relay), Fuel Filler Door & Trunk Lid Switch, Trunk Room Lamp
CLOCK	10A	A/V & Navigation Head Unit, Audio, Smart Key Control Module, Overhead Console Lamp, Crash Pad Mood Lamp, VESS Unit,A/C Control Module, BCM, AMP, Power Outside Mirror Switch, Driver/Passenger Door Mood Lamp
C/LIGHTER	15A	Cigarette Lighter
HTD STRG	15A	Steering Wheel Heater
A/CON	7.5A	A/C Control Module, E/R Fuse & Relay Box (Blower Relay, Water Pump Relay), Electronic A/C Compressor
WIPER	25A	Multifunction Switch, Front Wiper Motor, E/R Fuse & Relay Box (Wiper Relay, Rain SNSR Relay)
S/HEATER FRT	20A	Driver/Passenger CCS Cushion Warmer, Driver/Passenger Seat Warmer Module
E_WATER_PUMP	10A	Hybrid Water Pump
HTD MIRR	10A	Driver/Passenger Power Outside Mirror
MODULE 4 HEV	7.5A	MCU, Hydraulic Power Unit, Low Voltage DC-DC Converter, BMS Control Module, Active Air Flap
A/BAG IND	7.5A	Instrument Cluster (Air Bag IND.)
START	7.5A	Transaxle Range Switch, Hybrid Control Unit
S/HEATER RR	15A	Rear Seat Warmer Relay LH/RH
P/SEAT PASS	20A	Passenger Seat Manual Switch

Description		Fuse rating	Protected component
MODULE 1		7.5A	Head Lamp Leveling Device Actuator LH/RH, Auto Head Lamp Leveling Device Module, Driver IMS Module, BCM, Front Seat Warmer & CCS Switch, Driver/Passenger CCS Control Module, Driver/Passenger Seat Warmer Module, Audio, A/C Control Module, Electro Chromic Mirror, Lane Keeping Assist Module, Instrument Cluster
HCU		20A	Hybrid Control Unit
A/BAG		15A	Telltale Lamp, SRS Control Module, Passenger Weight Classification Sensor
P/WDW LH		25A	I/P Junction Box (Power Window LH Relay), Driver Safety Power Window Module
AMP		30A	AMP
PDM 2		7.5A	Start Stop Button Switch, Smart Key Control Module, Fob Holder, Stop Lamp Switch
BMS		10A	BMS Control Module
MDPS		10A	EPS Control Module, Crash Pad Switch, Tire Pressure Monitoring Module, ATM Lever Indicator
PDM 3		7.5A	Smart Key Control Module
P/WDW RH		25A	I/P Junction Box (Power Window RH Relay), Passenger Safety Power Window Module
P/SEAT DRV		30A	Driver IMS Module, Driver Seat Manual Switch, Driver Lumbar Support Switch
DR LOCK		20A	Two Turn Unlock Relay, I/P Junction Box (Door Lock Relay, Door Unlock Relay, Turn Signal Lamp Sound Relay)
SUNROOF		20A	Panorama Sunroof
IG 1		20A	E/R Fuse & Relay Box (Fuse : ESC 3 10A, TCU 2 15A, ECU 4 10A, OPCU 2 10A)
POWER CONNECTOR	AUDIO	15A	A/V & Navigation Head Unit, Audio
	ROOM LP	10A	Driver/Passenger Smart Key Outside Handle, Driver IMS Module, Lamp Auto Cut Relay, Driver/Passenger Door Scuff Lamp, A/C Control Module, Data Link Connector, RF Receiver, BCM, Electro Chromic Mirror, Instrument Cluster, Auto Light & Photo Sensor, Tire Pressure Monitoring Module

Engine compartment main fuse panel

Description		Fuse rating	Protected component
MULTI FUSE	IP B+ 2	60A	I/P Junction Box (P/SEAT DRV 30A, P/SEAT PASS 20A, AMP 30A, PDM 2 7.5A, IPS 5, IPS 6, ARISU 2)
	AHB 1	60A	Hydraulic Power Unit
	IGN 2	40A	E/R Fuse & Relay Box (PDM 3 (IG 2) Relay)
	ESC 1	40A	ESC Module
	RR HTD	40A	E/R Fuse & Relay Box (RR HTD Relay)
	BLOWER	40A	E/R Fuse & Relay Box (Blower Relay)
	IP B+ 1	60A	I/P Junction Box (PDM 1 25A, MODULE 3 7.5A, S/HEATER FRT 20A, S/HEATER RR 15A, TRUNK 10A, P/WDW LH 25A, P/WDW RH 25A), Power Connector (AUDIO 15A))
	MDPS	80A	EPS Control Module
FUSE	WIPER	10A	PCM
	RR HTD IND	10A	A/C Control Module
	OPCU 1	20A	Electric Oil Pump Unit
	INVERTER	10A	MCU, Low Voltage DC-DC Converter, Active Air Flap
	TCU 1	20A	PCM
	STOP LP	15A	Hybrid Fuse & Relay Box (HAC Relay), Smart Key Control Module, Stop Lamp Relay
	DEICER	20A	E/R Fuse & Relay Box (Deicer Relay)
	WATER PUMP	10A	E/R Fuse & Relay Box (Water Pump Relay)
	BMS C/FAN	20A	BMS Blower Motor Relay
	IP B+ 3	50A	I/P Junction Box (Power Connector (ROOM LP 10A), SUNROOF 20A, DR LOCK 20A, BMS 10A, IPS 1, IPS 3, ARISU 1)
	ESC 2	30A	Multipurpose Check Connector, ESC Module
	HCU	20A	Hybrid Control Unit
	AHB 2	30A	Hydraulic Power Unit

Description		Fuse rating	Protected component
FUSE	C/FAN (LO)	40A	E/R Fuse & Relay Box (C/Fan(LO) Relay)
	IGN 1	40A	E/R Fuse & Relay Box (PDM 1(ACC) Relay, PDM 2(IG 1) Relay)
	EMS	40A	EMS Box (HORN 15A, ECU 3 10A, ECU 1 30A, F/PUMP 20A)
	ECU 4	10A	PCM
	TCU 2	15A	Transaxle Range Switch
	ESC 3	10A	Hybrid Fuse & Relay Box (HAC Relay), Stop Lamp Switch, ESC Module, Multipurpose Check Connector
	B/UP LP	10A	A/V & Navigation Head Unit, Audio, Electro Chromic Mirror, BCM, Rear Combination Lamp(IN) LH/RH
	OPCU 2	10A	Hybrid Fuse & Relay Box (OPCU Relay), Electric Oil Pump Unit

Engine compartment main fuse panel (Engine junction fuses)

Relay No.	Relay Name	Type
E41	RR HTD Relay	PLUG MICRO
E42	PDM 1 (ACC) Relay	PLUG MICRO
E43	Water Pump Relay	PLUG MICRO
E44	C/FAN (LO) Relay	PLUG MICRO
E47	Deicer Relay	PLUG MICRO
E49	PDM 2 (IG1) Relay	PLUG MICRO
E50	PDM 3 (IG2) Relay	PLUG MICRO
E51	Wiper Relay	PLUG MICRO
E52	Rain SNSR Relay	PLUG MICRO
E53	B/Horn Relay	PLUG MICRO
E54	Blower Relay	PLUG MICRO

Engine compartment sub fuse panel (Sub-relay box)

Description	Fuse rating	Protected component
OPCU	80A	OPCU Relay
C/FAN	60A	C/FAN HI Relay

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.

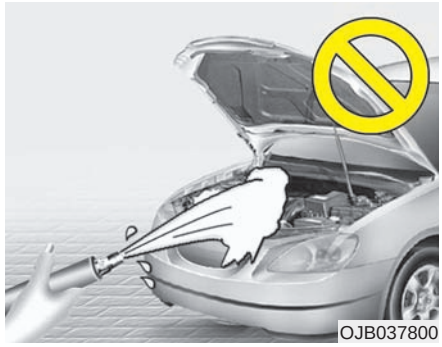
Even prompt washing with plain water may not completely remove all these deposits. A mild soap, safe for use on painted surfaces, may be used.

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

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.

⚠ WARNING

Do not wash the engine compartment and trunk with water. The hybrid system is located in the engine compartment and trunk. If water enters the engine or hybrid battery in the trunk, electric shocks or burns may result in serious injury or death.


OJB037800

⚠ CAUTION - Wetting engine

- ***Water washing in the engine compartment including high pressure water washing may cause the failure of electrical circuits located in the engine compartment.***
- ***Never allow water or other liquids to come in contact with electrical/electronic components 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 - Drying vehicle

- ***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.

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.

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 produces vehicles 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 vehicle surfaces by moisture that is slow to evaporate.

Mud is particularly corrosive because it dries slowly 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

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

Keep your vehicle 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, 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 vehicle 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 : 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 and 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 caustic solutions such as perfume and cosmetic oil from contacting the dashboard because they may cause damage or discoloration. If they do contact the dashboard, wipe them off immediately. See the instructions for the proper way to clean vinyl.

⚠ CAUTION - Electrical components

Never allow water or other liquids to come in contact with electrical/electronic components inside the vehicle as this may damage them.

⚠ CAUTION - Leather

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.

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 - Rear windows

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 Warranty & Maintenance 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 vehicle inspected and maintained by an authorized Kia 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.

- 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.

⚠ WARNING - Catalytic converter

Keep away from the catalytic converter and exhaust system while the vehicle is running or immediately thereafter. The exhaust and catalytic systems are very hot and may burn you.

Operating precautions for catalytic converters (if equipped)

⚠ WARNING - Fire

- **Do not park, idle or drive the vehicle over or near flammable objects, such as grass, vegetation, paper, leaves, etc. A hot exhaust system can ignite flammable items under your vehicle.**
- **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 Kia 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.

Engine / 8-2
Capacity/weight / 8-2
Battery / 8-2
Air conditioning / 8-2
Dimensions / 8-3
Bulb wattage / 8-3
Tires and wheels / 8-4
Recommended lubricants and capacities / 8-5
Vehicle identification number (VIN) / 8-7
Vehicle certification label / 8-7
Tire specification and pressure label / 8-8
Engine number / 8-8
Refrigerant label / 8-8

Specifications, Consumer information, Reporting safety defects

8

ENGINE

Item	Gasoline (2.4)
Displacement	2359 cc (143.96 cu.in)
Bore x Stroke	88 x 97 mm (3.46 x 3.82 in.)
Firing order	1-3-4-2
No. of cylinders	4, In-line

CAPACITY/WEIGHT

Item		Gasoline (2.4)
Gross vehicle weight kg (lbs.)	A/T	2080 (4586)
Luggage volume *l* (cu ft)		280 (9.9)

BATTERY

Item	Hybrid
Battery pack voltage	270V
Cell voltage	3.75V
Cell and module configuration	72 cells (9 modules x 8 cells per module)
Battery system weight	42 kg (93 lbs.) (system)
Dimensions	54.4L (211*355*726)

Components powered by the battery pack

- Electric motor, Power cable, HSG, Inverter/LDC, A/C Compressor

AIR CONDITIONING

Refrigerant type	R - 134a
Compressor oil	PVE (Poly Vinyl Ether)

DIMENSIONS

Item	mm (in.)
Overall length	4845 (190.7)
Overall width	1830 (72.0)
Overall height	1450 (57.1)
Front tread	1601 (63.0)*1/1595 (62.8)*2
Rear tread	1601 (63.0)*1/1595 (62.8)*2
Wheelbase	2795 (110.0)

*1 : with R16 tire
*2 : with R17 tire

BULB WATTAGE

Light Bulb	Wattage	Bulb Type
Headlights (Low)	55 or 35 (HID)	H11B/D1S
Headlights (High)	55	H7
Front turn signal	27	27/8W
Front side marker	5	W5W
Position light (with T/Sig)	8	8W
Side repeater light*	LED	LED
Front fog light*	35	H8
Stop and tail light	LED	LED
Rear turn signal light	27	27W
Back-up light	16 or 18	16 & 18W
Rear side marker	LED	LED
High mounted stop light	LED	·
License plate light	5	W5W
Front map lamp*	10	W10W
Center room lamp	10	C10W
Trunk room lamp*	5	C5W
Rear personal lamp*	10	C10W

* : If equipped

TIRES AND WHEELS

Item	Tire size	Wheel size	Inflation pressure psi (kPa)				Wheel lug nut torque lb•ft (kg•m, N•m)
			Normal load *1		Maximum load		
			Front	Rear	Front	Rear	
Full size tire	P205/65R16 94H	6.5J×16	235 (34)	235 (34)	235 (34)	235 (34)	9~11 (65~79, 88~107)
	P215/55R17 93V	6.5J×17	235 (34)	235 (34)	235 (34)	235 (34)	
Compact spare tire *2	T125/80D16 97M	4.0T×16	420 (60)	420 (60)	420 (60)	420 (60)	

*1 Normal load : Up to 3 persons

⚠ CAUTION

When replacing tires, use the same size originally supplied with the vehicle.
Using tires of a different size can damage the related parts or make it work irregularly.

RECOMMENDED LUBRICANTS AND CAPACITIES

To help achieve proper engine and powertrain performance and durability, use only lubricants of the proper quality. The correct lubricants also help promote engine efficiency that results in improved fuel economy.

These lubricants and fluids are recommended for use in your vehicle.

Lubricant	Volume	Classification
Engine oil *1 *2 (drain and refill) Recommended (or equivalent)	4.76 US qt. (4.5 *l*)	API Service SM*3, ILSAC GF-4 or above
Automatic transaxle fluid	6.87 US qt. (6.5 *l*)	MICHANG ATF SP-IV, SK ATF SP-IV NOCA ATF SP-IV, KIA genuine ATF SP-IV
Coolant	6.97~7.29 US qt. (6.6~6.9 *l*)	Mixture of antifreeze and water (Ethylene glycol base coolant for aluminum radiator)
Inverter coolant	2.39 US qt. (2.26 *l*)	Mixture of antifreeze and water (Ethylene glycol base coolant for aluminum radiator)
Brake fluid	0.7~0.8 US qt. (0.7~0.8 *l*)	FMVSS116 DOT-3 or DOT-4
Fuel	17.2 US gal. (65 *l*)	Unleaded gasoline

*1 Refer to the recommended SAE viscosity numbers on the next page.

*2 Engine oils labeled Energy Conserving Oil are now available. Along with other additional benefits, they contribute to fuel economy by reducing the amount of fuel necessary to overcome engine friction. Often, these improvements are difficult to measure in everyday driving, but in a year's time, they can offer significant cost and energy savings.

*3 If the API service SM engine oil is not available in your country, you are able to use API service SL.

Recommended SAE viscosity number

⚠ CAUTION

Always be sure to clean the area around any filler plug, drain plug, or dipstick before checking or draining any lubricant. This is especially important in dusty or sandy areas and when the vehicle is used on unpaved roads. Cleaning the plug and dipstick areas will prevent dirt and grit from entering the engine and other mechanisms that could be damaged.

Engine oil viscosity (thickness) has an effect on fuel economy and cold weather operating (engine start and engine oil flowability). Lower viscosity engine oils can provide better fuel economy and cold weather performance, however, higher viscosity engine oils are required for satisfactory lubrication in hot weather. Using oils of any viscosity other than those recommended could result in engine damage.

When choosing an oil, consider the range of temperature your vehicle will be operated in before the next oil change. Proceed to select the recommended oil viscosity from the chart.

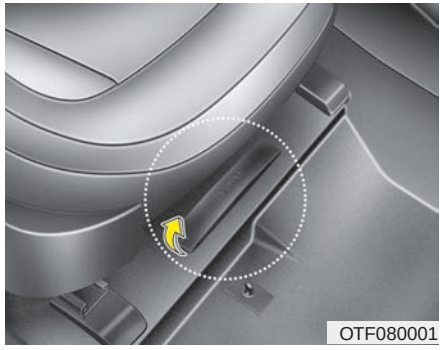
Temperature Range for SAE Viscosity Numbers

Temperature	°C	-30	-20	-10	0	10	20	30	40	50
	(°F)	-10	0	20	40	60	80	100	120	
Engine Oil *1					10W-30					
					5W-20, 5W-30					

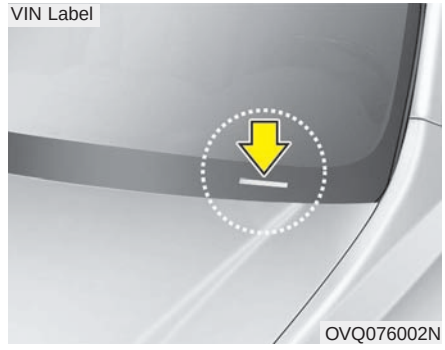
1. For better fuel economy, it is recommended to use the engine oil of a viscosity grade SAE 5W-20 (API Service SM / ILSAC GF-4). However, if the engine oil is not available, select the proper engine oil using the engine oil viscosity chart.



VEHICLE IDENTIFICATION NUMBER (VIN)



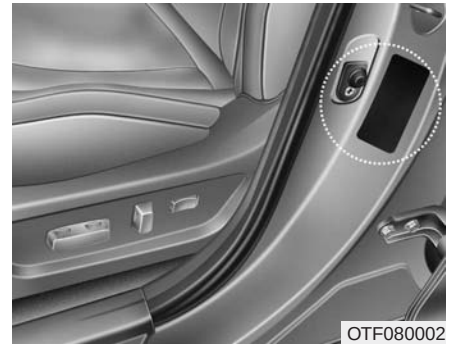
The vehicle identification number (VIN) is the number used in registering your vehicle and in all legal matters pertaining to its ownership, etc.



VIN label

The VIN is also on a plate attached to the top of the dashboard. The number on the plate can easily be seen through the windshield from outside.

VEHICLE CERTIFICATION LABEL



The vehicle certification label attatched on the driver's side center pillar gives the vehicle identification number (VIN).

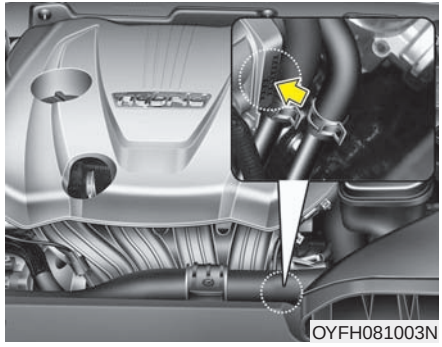
TIRE SPECIFICATION AND PRESSURE LABEL


OMG055004

The tires supplied on your new vehicle are chosen to provide the best performance for normal driving.

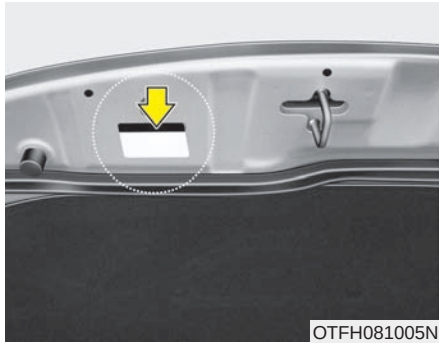
The tire label located on the driver's side center pillar gives the tire pressures recommended for your vehicle.

ENGINE NUMBER


OYFH081003N

The engine number is stamped on the engine block as shown in the drawing.

REFRIGERANT LABEL


OTFH081005N

The refrigerant label is located on the engine hood.

Hybrid System Overview

Kia HYBRID SYSTEM / H2

OPTIMA HYBRID ENERGY FLOW / H4

STARTING THE HYBRID VEHICLE / H6

THE COMPONENTS OF HYBRID VEHICLE / H8

Kia Hybrid-Electric Vehicle (HEV) uses a gasoline engine and an electric motor for power. The electric motor is run from a 270V high voltage HEV battery.

The HEV computer decides when to use the engine and when to use electric motor, according to driving conditions. At times, both are used simultaneously.

By turning off the engine under certain conditions and using the electric motor alone, the HEV system saves fuel.

When the HEV battery reaches a low state of charge, the engine will cycle on and off to recharge the battery. Charging also occurs when decelerating by using regenerative braking.

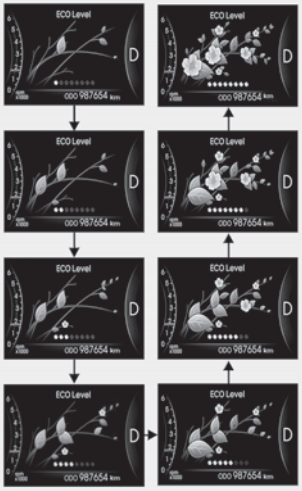
Hybrid System Display

Many of the displays provide information about the hybrid system, such as the ECO Level and ECO Score.

The ECO Level displays inform the driver of the vehicle's fuel efficiency. If the vehicle is driven economically, the ECO Level rises. When the vehicle is driven in EV mode, there is a reduction in carbon dioxide (CO_2) emissions.

The Total ECO Score display indicates the number of times the ECO Level has reached its maximum.

ECO Level display



OTFH042300

When the vehicle is started, the ECO Level display will indicate level number 4. If you drive economically, the ECO Level will increase. However, if you do not drive economically, the ECO Level will decrease.

Total ECO Score display



OTFH042301C

If your ECO Level reaches its maximum, your Total ECO Score automatically rises by 1 point. Total ECO Score points are saved and accumulate over time.

The image displayed on Total ECO Score will change continuously, adding leaves and flowers to a branch.



OTFH040225N

State of charge

The state of charge (SOC) gauge indicates the hybrid battery's charge level. If the SOC is near Low (L) level, the vehicle automatically operates the engine to charge the battery. However, if the service indicator and MIL(Malfunction indicator lamp) turn on when the State of Charge(SOC) is near L, the vehicle should be towed. Refer to the chapter 6.

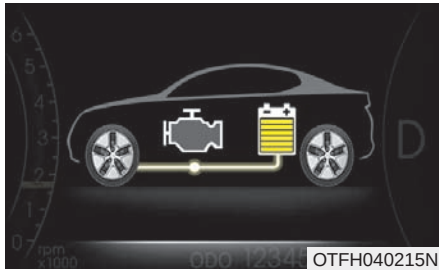
⚠ WARNING

Never crank the engine for a prolonged time without the engine starting. This could result in the HEV battery becoming totally discharged and is likely to be damaged.

OPTIMA HYBRID ENERGY FLOW

Kia hybrid system notifies the drivers of energy flow in various operating modes. Twelve Modes show drivers the current operating condition.

EV Propulsion



Electric power is used to move the vehicle. (Battery → Wheel)

Engine Only Propulsion



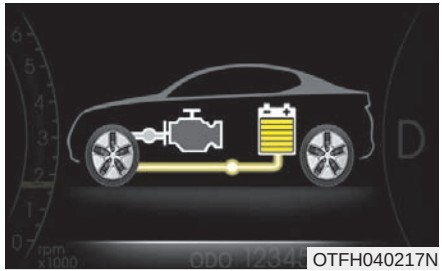
Engine power is used to move the vehicle. (Engine → Wheel)

Vehicle Stop



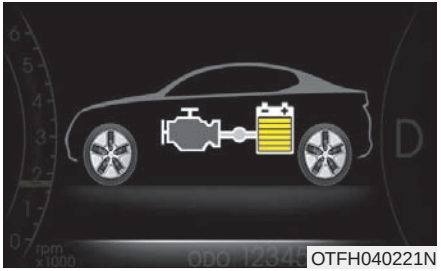
The mode means the vehicle at stop.
(No energy flow)

Power Assist



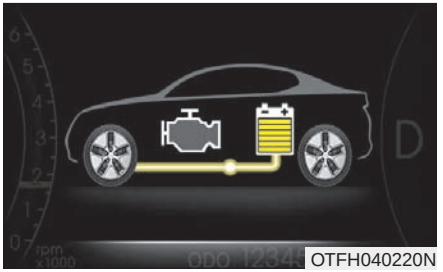
Electric and Engine power are used to move the vehicle.
(Battery & Engine → Wheel)

Engine Generation



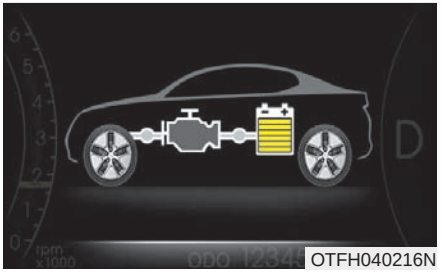
Vehicle is stopped with the Engine charging the hybrid battery.
(Engine → Battery)

Regeneration



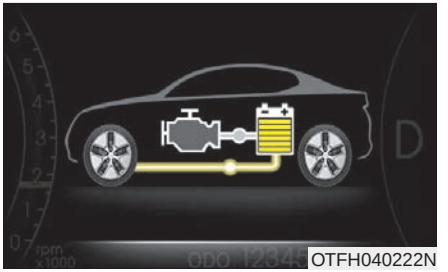
Hybrid battery is being charged by regenerative braking.
(Wheel → Battery)

Power Reserve



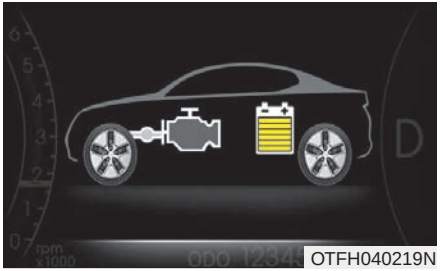
Engine is both driving the vehicle and charging the hybrid battery.
(Engine → Wheel & Battery)

Engine Generation/Regeneration



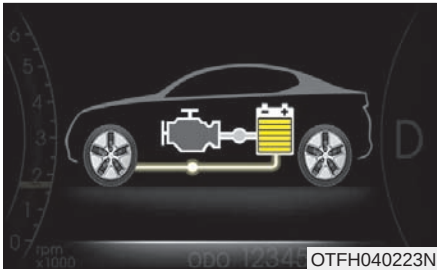
The engine and regenerative brake system charges the hybrid battery.
(Engine & Wheel → Battery)

Engine Brake



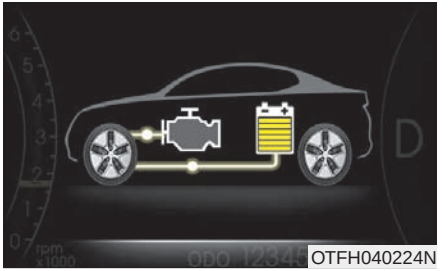
The vehicle is being slowed by engine compression.
(Wheel → Engine)

Engine Generation/Motor Drive



The vehicle is being slowed by engine compression and regenerative braking. The hybrid battery is being charged by regenerative braking. (Engine → Battery → Wheel)

Engine Brake/Regeneration



The engine friction is used to vehicle brake system and the regenerative brake charges the hybrid battery.
(Wheel → Engine & Battery)

STARTING THE HYBRID VEHICLE (SMART KEY)

Starting the Hybrid System

1. Carry the smart key into the vehicle.
2. Make sure the parking brake is firmly applied.
3. Place the shift lever in the P(Park) position.
   In N (neutral) position, you can not start the vehicle.
4. Depress the brake pedal.
5. Press the engine start/stop button.
6. The engine should be started without pressing the accelerator. In extremely cold weather or after the vehicle has not been operated fro several days, let the engine warm up without depressing the accelerator.
   - Even if the smart key is in the vehicle, if it is far away from you, the engine may not start.
   - When the engine start/stop button is in the ACC or ON position, if any door is open, the system checks for the smart key. If the smart key is not in the vehicle, the warning, "Key is not in vehicle" will come on, and if all doors are closed, the chime will also sound for about 5 seconds. The indicator will turn off while the vehicle is moving. Keep the smart key in the vehicle when using the ACC position or if the vehicle engine is on.

If the starting procedure is followed, the "READY" symbol on the instrument cluster will turn on. For more details, Please check chapter 5.

ECONOMICAL and SAFE OPERATION of Hybrid system

- Drive smoothly. Accelerate at a moderate rate and maintain a steady cruising speed. Don't make "jack-rabbit" starts. Don't race between stoplights.
  Avoid heavy traffic whenever possible. Always maintain a safe distance from other vehicles so you can avoid unnecessary braking. This also reduces brake wear.
- The regenerative brake generates energy when the vehicle decelerates.
- When the hybrid battery power is low, the hybrid system automatically recharges the hybrid battery.
- When the engine runs in "N" position, the hybrid system cannot generate electricity. The hybrid battery cannot recharge in "N" position. Please refer to chapter 5.

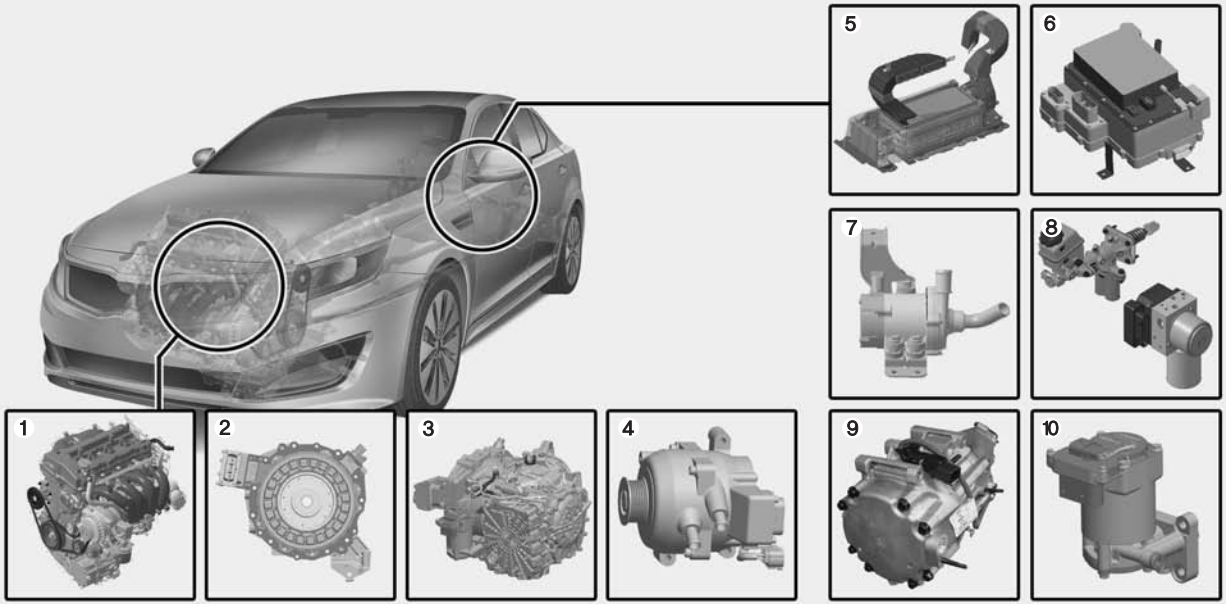
✻ NOTICE

In the hybrid system, the engine automatically runs and stops. If the hybrid system operates, the "READY" symbol is illuminated.

In the following situations, the engine may turn on and off automatically:

- **When the hybrid battery is discharged**
- **When the hybrid battery reaches a certain temperature.**

THE COMPONENTS OF HYBRID VEHICLE



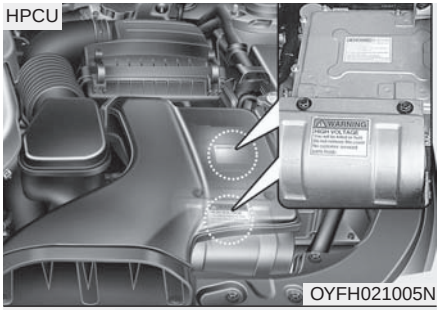
1. Engine : 2.4L
2. Motor : 30kW
3. Transmission : 6AT
4. Hybrid starter generator (HSG)
5. High voltage battery system
6. HPCU (Hybrid Power Control Unit)
7. Electric Water Pump (EWP)
8. Brake system with hydraulic compressor
9. Electric air-conditioning compressor
10. Electric Oil Pump (EOP)

OTFH020001N

The Hybrid battery uses high voltage top operate the electric motor and other components and other components. High voltage is dangerous if touched.

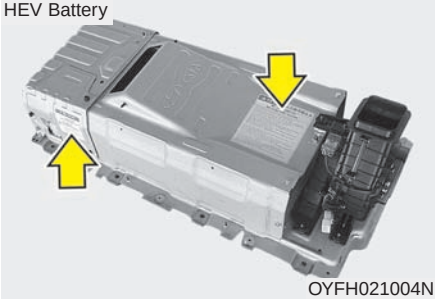
Your vehicle is equipped with orange colored insulation and covers over the high voltage components to protect people from electric shock. High voltage warning labels are attached to some system components as additional warnings. Your vehicle's hybrid system should therefore only be inspected or repaired by an authorized Kia dealer.

HPCU



OYFH021005N

HEV Battery



OYFH021004N

⚠ WARNING

Never touch orange or high voltage labeled components including wires, cables, and connections. If the insulators or covers are damaged or removed, severe injury or death from electrocution may occur.

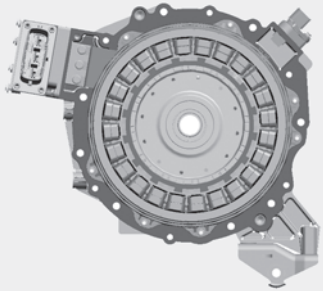
⚠ WARNING

When you replace the fuses, in the engine compartment, never touch the HPCU.

If you touch the HPCU, you may get electrocuted resulting in injury or death.

THE COMPONENTS OF HYBRID VEHICLE (CONT.)

Motor



OYFH021002N

⚠ WARNING

As with all batteries, avoid fluid contact with the Hybrid battery. If the battery is damaged and if electrolyte comes in contact with your body, clothes or eyes, immediately flush with a large quantity of fresh water.

⚠ WARNING

Do not use an after-market battery charger to charge the Hybrid battery. Doing so may result in death or serious injury.

⚠ WARNING - High Waters

- **Avoid high waters as this may result in your vehicle becoming saturated with water and could compromise the high voltage components.**
- **Do not touch the any of the high voltage components within your vehicle if your vehicle has been submerged in water equal to half of the vehicle height. Touching high voltage components once submerged in water could result in severe burns or electric shock that could result in deather or serious injury.**

⚠ WARNING - Carrying Liquids in Trunk

Do load large amounts of water in open containers into the vehicle. If the water spills onto the HEV battery, it may cause a short and damage the battery.

⚠ CAUTION - Cleaning Engine

When you clean the engine compartment, do not wash using water. Water may cause electric arcing to occur and damage electronic parts and components.

⚠ WARNING - Exposure to High Voltage

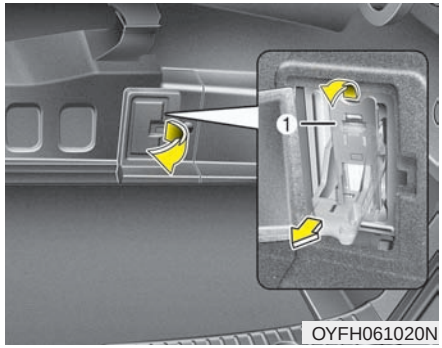
- **High voltage in the hybrid battery system is very dangerous and can cause severe burns and electric shock. This may result in serious injury or death.**
- **For your safety, never touch, replace, dismantle or remove any portion of the hybrid battery system including components, cables and connectors.**

⚠ WARNING - Use of Water or Liquids

If water or liquids come into contact with the hybrid system components, and you are also in contact with the water, severe injury or death due to electrocution may occur.

⚠ WARNING - Hot Components

When the hybrid battery system operates, the HEV battery system can be hot. Heat burns may result from touching even insulated components of the HEV system.



Service plug

This service plug (1) located in the rear trunk as shown should always be pulled out to disconnect and turn off the hybrid system.

IMPORTANT: Wait 5 minutes after this lever is disconnected to work on the car. It is to be assured all remaining charge in the system dissipated.

Some Special Features of the Hybrid Vehicle.

Hybrid vehicles sound different than gasoline engine vehicles. When the hybrid system operates, you may hear a sound from the hybrid battery system behind the rear seat. If you apply the accelerator pedal rapidly, you may hear a sound. when you apply the brake pedal, you may hear a sound from the regenerative brake system. When the hybrid system is turned off or on, you may hear a sound in the engine compartment. If you depress the brake pedal repeatedly when the hybrid system is turned on, you may hear a sound in the engine compartment. None of these sounds indicate a problem.

They are characteristics of hybrid vehicles.

When the hybrid system is turned on, the engine may run. This does not indicate a malfunction. If the "READY" symbol is on, the hybrid system is operating. Even if the gasoline engine is off, you can operate the vehicle.

The HEV system may emit electromagnetic waves which can affect the performance of electronic devices appliances, such as laptop computers, which are not part of the vehicle design.

If you park the vehicle for a long time, the hybrid system will discharge. You need to drive the vehicle several times per month to maintain a charge.

When you start the hybrid system in the "P" transmission position, the "READY" symbol is illuminated in the cluster. The driver can drive the vehicle even if the engine is stopped.

⚠ WARNING

When you leave the vehicle, you should turn off the hybrid system. If you depress the accelerator pedal by mistake and the vehicle is not in the "P" position, the vehicle will accelerate. This may result in serious injury or death.

Virtual Engine Sound System(VESS)

The Virtual Engine Sound System generates engine sound for pedestrians to hear vehicle sound because there is no sound while motor power is used.


OTFH020030N

The hybrid battery air intake is located behind the rear seats.The hybrid battery air intake is used to cool the hybrid battery. If the hybrid battery air intake is blocked, the hybrid battery may overheat. Do not cover the air intake with objects.

⚠ WARNING - Air Intake

- **Blocking the air intake behind the rear seats may damage the HEV battery.**
- **Do not allow any water into the air intake even when cleaning. If any water enters the air intake, the Hybrid battery may cause an electric shock which can cause serious injury or death due to electrocution.**

If An Accident Occurs

- Avoid the engine compartment.
- Avoid any orange or high voltage wires, cables, or components.
- Assume that a high voltage component is exposed and move away from the vehicle as promptly as possible.
- Refer to Chapter 6 for towing information or call Kia Roadside Assistance.

When the hybrid vehicle shuts off

When the high voltage battery or 12-volt battery discharges, or fuel tank is empty, the hybrid system may not operate.

If the Hybrid system stops operating while the vehicle is moving, reduce the vehicle speed gradually. Pull your vehicle off the road in a safe area, and shift the transmission in to Park (P) position and;

1. Turn on the hazard warning flashers.
2. Set the start button at OFF, and try to start the Hybrid system by applying the brake pedal and pushing the start button.
3. If the Hybrid system will not operate, refer to "EMERGENCY STARTING" in chapter 6.

Before you try to jump start the vehicle, confirm the fuel level. If the fuel level is low add more fuel before attempting as emergancy start.

⚠ WARNING - Accident Vehicle

Never touch electric wires or cable. If exposed electric wires or cables are visible inside or outside of your vehicle, an electric shock may occur.

⚠ WARNING - PUTTING OUT FIRE

Never use water to put out a fire in your vehicle. If a fire occurs, evaluate the car immediately and contact the fire department

Index

A

Air bags ····· 3-34
Air bag warning label ····· 3-57
Air bag warning light ····· 3-37
Curtain air bag ····· 3-49
Driver's and passenger's front air bag ····· 3-45
Occupant detection system ····· 3-40
Side impact air bag ····· 3-48
SRS components and functions ····· 3-38
Air cleaner ····· 7-30
Air conditioning ····· 8-2
Antenna (glass) ····· 4-117
Anti-lock brake system (ABS) ····· 5-18
Appearance care ····· 7-61
Exterior care ····· 7-61
Interior care ····· 7-66
Armrest ····· 3-15
Audio system ····· 4-117
Glass antenna ····· 4-117
Steering wheel audio control ····· 4-118
Automatic climate control system ····· 4-96
Air conditioning ····· 4-103
Climate control air filter ····· 4-106
Economy air conditioning ····· 4-104
Heating and air conditioning ····· 4-98
Automatic transaxle ····· 5-9
Shift lock system ····· 5-13
Aux, USB and iPod port ····· 4-119

B

Battery ····· 7-35
Battery ····· 8-2
Battery saver function ····· 4-86
Before driving ····· 5-3
Bottle holders, see cup holders ····· 4-113
Brake system ····· 5-14
Anti-lock brake system (ABS) ····· 5-18
Electronic stability control (ESC) ····· 5-20
Hill-start assist control (HAC) ····· 5-23
Parking brake ····· 5-16
Power brakes ····· 5-14
Brakes fluid ····· 7-28
Bulb wattage ····· 8-3
Button start/stop, see engine start/stop button ····· 5-5

C

Camera (Rear view) ····4-84
Capacities (Lubricants) ····8-5
Capacity/weight ····8-2
Care
  Exterior care ····7-61
  Interior care ····7-66
  Tire care ····7-38
Cargo weight ····5-45
Center console storage ····4-111
Central door lock switch ····4-14
Certification label ····5-43
Certification label ····8-7
Changing tires (with spare tire) ····6-13
Checking tire inflation pressure ····7-39
Child restraint system ····3-27
  Lower anchor system ····3-31
  Seat belt ····3-16
  Tether anchor system ····3-30
Child-protector rear door lock ····4-15
Climate control air filter ····4-106, 7-31
Clock (Digital) ····4-115
Clothes hanger ····4-115
Combined instrument, see instrument cluster ····4-47
Compact spare tire (with spare tire) ····6-19
Compact spare tire replacement ····7-42
Coolant ····7-24
Cooling fluid, see engine coolant ····7-24
Crankcase emission control system ····7-68
Cruise control system ····5-27
Cup holder ····4-113
Curtain air bag ····3-49

D

Dashboard illumination, see instrument panel illumination ····4-47
Dashboard, see instrument cluster ····4-47
Defogging (Windshield) ····4-108
Defogging logic (Windshield) ····4-109
Defroster (Rear window) ····4-96
Defrosting (Windshield) ····4-108
Digital clock ····4-115
Dimensions ····8-3
Display illumination, see instrument panel illumination ····4-47
Displays, see instrument cluster ····4-47
Door locks ····4-12
  Central door lock switch ····4-14
  Child-protector rear door lock ····4-15
Drinks holders, see cup holders ····4-113
Driver's 3-point system with evergency locking retractor ····3-18
Driver's air bag ····3-45
Driving at night ····5-34

Driving in flooded areas ····5-35
Driving in the rain ····5-35

E

Economical operation ····5-31
Electric chromic mirror (ECM) with HomeLink system ····4-37
Electric power steering ····4-34
Electronic stability control (ESC) ····5-20
Emergency starting ····6-5
Jump starting ····6-5
Push starting ····6-6
Emergency while driving ····6-3
Emission control system ····7-68
Crankcase emission control system ····7-68
Evaporative emission control System ····7-68
Exhaust emission control system ····7-69
Engine ····8-2
Engine compartment ····2-4, 7-2
Engine coolant ····7-24
Engine number ····8-8
Engine oil ····7-22
Engine overheats ····6-7
Engine start/stop button ····5-5
Engine temperature gauge ····4-50
Evaporative emission control System ····7-68
Exhaust emission control system ····7-69
Explanation of scheduled maintenance items ····7-19
Exterior care ····7-61

F

Flat tire (with spare tire) ····6-13
Changing tires ····6-14
Compact spare tire ····6-19
Jack and tools ····6-13
Removing and storing the spare tire ····6-14
Flat tire (with tire mobility kit) ····6-21
Floor mat anchor(s) ····4-116
Fluid
Brakes fluid ····7-28
Washer fluid ····7-29
Front passenger and rear seat 3-point system with combination locking retractor ····3-19
Front seat adjustment ····3-4
Fuel filler lid ····4-25
Fuel gauge ····4-49
Fuel requirements ····1-3
Fuse/relay panel description ····7-55
Fuses ····7-51
Fuse/relay panel description ····7-55
Instrument panel fuse ····7-52
Memory fuse ····7-52
Multi fuse ····7-54

G

Gauge
Engine temperature gauge ····4-50
Fuel gauge ····4-49
Glass antenna ····4-117
Glove box ····4-111

H

Hazard warning flasher ····4-80
Hazardous driving conditions ···· 5-33
Headrest ····3-8, 3-13
HEV powertrain ····1-5
Highway driving ····5-36
Homelink mirror, see the Electric chromic mirror (ECM) with homeLink system ····4-37
Hood ····4-24
Horn ····4-35
How to use this manual ····1-2
Hybrid
Kia Hybrid system ····H2
State of charge (SOC) ····H3
Optima hev energy flow ····H4, 4-53
The componets of hybrid vehicle ····H8
The air intake of hybrid battery ····H13
The READY indicator ····4-52
The ECO level display mode ····H2
The EV MODE ····4-62
The service indicator ····4-62
The ECO GUIDE ····4-51

I

Indicator symbols on the instrument cluster ····1-6
Indicators and warnings ····4-61
Inside rearview mirror ····4-37
Instrument cluster ····4-47
Engine temperature gauge ····4-50
Fuel gauge ····4-49
Instrument panel illumination ····4-48
Odometer ····4-48
Speedometer ····4-48
Trip computer ····4-52
Warning and indicators ····4-61
Instrument panel fuse ····7-52
Instrument panel illumination ····4-48
Instrument panel overview ····2-3
Interior care ····7-66
Interior features ····4-113
Aux, USB and iPod port ····4-119
Clothes hanger ····4-115
Cup holder ····4-113
Digital clock ····4-115
Floor mat anchor(s) ····4-116
Power outlet ···· 4-114
Sunvisor ····4-113

Interior light ····· 4-93
Interior overview ····· 2-2
Inverter coolant ····· 7-24

J

Jack and tools (with spare tire) ····· 6-13
Jump starting ····· 6-5

L

Label
Air bag warning label ····· 3-57
Tire sidewall labeling ····· 7-43
Tire specification and pressure label ····· 8-8
Vehicle certification label ····· 8-7
Latch system, see lower anchor system ····· 3-31
Lighting ····· 4-86
Battery saver function ····· 4-86
Lower anchor system ····· 3-31
Lubricants and capacities ····· 8-5

M

Maintenance
Explanation of scheduled maintenance items ····· 7-19
Maintenance services ····· 7-3
Maintenance under severe usage conditions ····· 7-18
Normal maintenance schedule ····· 7-8
Owner maintenance ····· 7-5
Scheduled maintenance service ····· 7-7
Tire maintenance ····· 7-43
Maintenance schedule ····· 7-8
Maintenance under severe usage conditions ····· 7-18
Normal maintenance schedule ····· 7-8
Maintenance services ····· 7-3
Memory fuse ····· 7-52
Mirrors ····· 4-37
Electric chromic mirror (ECM) with Homelink system ····· 4-37
Inside rearview mirror ····· 4-37
Outside rearview mirror ····· 4-44
Multi fuse ····· 7-54

N

Neck restraints, see headrest ····· 3-8, 3-13

O

Occupant Detection System ····· 3-40
Odometer ····· 4-48
Oil (Engine) ····· 7-22
Outside rearview mirror ····· 4-44
Overheats ····· 6-7
Owner maintenance ····· 7-5

P

Panorama sunroof ····· 4-28
Parking brake ····· 5-16
Parking brake inspect ····· 7-29
Passenger's front air bag ····· 3-45
Power brakes ····· 5-14
Power outlet ····· 4-114
Power window lock button ····· 4-23
Pre-tensioner seat belt ····· 3-21
Push starting ····· 6-6

R

Rear seat ····· 3-13
Rear view camera ····· 4-84
Recommended cold tire inflation pressures ····· 7-38
Recommended lubricants and capacities ····· 8-5
  Recommended SAE viscosity number ····· 8-6
Road warning ····· 6-2
Rocking the vehicle ····· 5-33

S

Scheduled maintenance service ····· 7-7
  Maintenance under severe usage conditions ····· 7-18
  Normal maintenance schedule ····· 7-8
Seat belt warning ····· 3-17
Seat belts ····· 3-16
  Driver's 3-point system with evergency locking retractor ····· 3-18
  Front passenger and rear seat 3-point system with combination locking retractor ····· 3-19
  Hight adjustment ····· 3-19
  Pre-tensioner seat belt ····· 3-21
  Seat belt warning ····· 3-17
Seat belts hight adjustment ····· 3-19
Seat warmer ····· 3-9
Seatback pocket ····· 3-12

Seats ····3-2
Armrest ····3-15
Front seat adjustment····3-4
Headrest····3-8, 3-13
Rear seat ····3-13
Seat warmer ····3-9
Seatback pocket ····3-12
Shift lock system ····5-13
Side impact air bag ····3-53
Smart key ····4-4
Smooth cornering····5-34
Snow tires ····5-37
Spare tire
Compact spare tire····6-19
Compact spare tire replacement ····7-42
Removing and storing the spare tire····6-14
Special driving conditions ····5-33
Driving at night ····5-34
Driving in flooded areas ····5-35
Driving in the rain ····5-35
Hazardous driving conditions····5-33
Highway driving ····5-36
Rocking the vehicle ····5-33
Smooth cornering ····5-34
Speedometer····4-48
Sports mode ····5-11
Starting difficulties, see vehicle will not start ····6-3
Starting the hybrid ····5-7
Steering wheel ····4-34
Electric power steering ····4-34
Horn ····4-35
Tilt steering····4-35
Steering wheel audio control ····4-118
Storage compartment ····4-111
Center console storage····4-111
Glove box ····4-111
Sunglass holder····4-112
Sunglass holder····4-112
Sunvisor ····4-113

T

Tether anchor system ····3-30
Theft-alarm system ····4-9
Tilt steering ····4-35
Tire specification and pressure label ····8-8
Tires and wheels ····7-38
Checking tire inflation pressure ····7-39
Compact spare tire replacement ····7-42
Recommended cold tire inflation pressures ····7-38
Tire care····7-38
Tire maintenance ····7-43
Tire replacement ····7-42
Tire rotation ····7-40
Tire sidewall labeling ····7-43
Tire traction ····7-43

Wheel alignment and tire balance ····· 7-41
Wheel replacement ····· 7-43
Tires and wheels ····· 8-4
Towing ····· 6-27
Trailer towing ····· 5-45
Transaxle
Automatic transaxle ····· 5-9
Trip computer ····· 4-52
Trunk ····· 4-17
Trunk overview ····· 2-5

V

Vehicle certification label ····· 8-7
Vehicle identification number (VIN) ····· 8-7
Vehicle load limit ····· 5-40
Certification ····· 5-43
Vehicle weight ····· 5-45
Base curb weight ····· 5-45
Cargo weight ····· 5-45
GAW (Gross axle weight) ····· 5-45
GAWR (Gross axle weight rating) ····· 5-45
GVW (Gross vehicle weight) ····· 5-45
GVWR (Gross vehicle weight rating) ····· 5-45
Vehicle will not start ····· 6-4

W

Warning and indicators ····· 4-61
Washer fluid ····· 7-29
Weight ····· 5-45
Base curb weight ····· 5-45
Cargo weight ····· 5-45
GAW (Gross axle weight) ····· 5-45
GAWR (Gross axle weight rating) ····· 5-45
GVW (Gross vehicle weight) ····· 5-45
GVWR (Gross vehicle weight rating) ····· 5-45
Wheel alignment and tire balance ····· 7-41
Wheel replacement ····· 7-43
Windows ····· 4-20
Auto down window ····· 4-22
Auto up/down window ····· 4-22
Power window lock button ····· 4-23
Windshield defrosting and defogging ····· 4-108
Defogging logic ····· 4-109
Winter driving ····· 5-37
Snow tires ····· 5-37
Wiper blades ····· 7-32
Wipers and washers ····· 4-90