

## kia, the company

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Congratulations! Your selection of a Kia was a wise investment. It will give you years of driving pleasure. Now that you are the owner of a Kia vehicle, you'll probably be asked a lot of questions about your vehicle and the company like "What is a Kia?", "Who is Kia?", "What does 'Kia' mean?".

Here are some answers. First, Kia is the oldest car company in Korea. It is a company that has thousands of employees focused on building high-quality vehicles at affordable prices.

The first syllable, **Ki**, in the word "Kia" means "to arise from to the world" or "to come up out of to the world." The second syllable, **a**, means "Asia." So, the word **Kia**, means "to arise from" or "to come up out of Asia to the world."

***Drive safely and enjoy your Kia!***

Thank you for choosing a Kia vehicle.

When you require service, remember that your 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. If your vehicle is equipped with an audio system, you will also have a Kia Integrated Audio System manual explaining its operation. 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, the equipment described in this manual, along with the various illustrations, may not all 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 motor-ing pleasure and satisfaction in your Kia vehicle.

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Printed in Korea

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## Introduction

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### 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. Especially, in order to minimize the chance of death or injury, you must read the **WARNING** and **CAUTION** sections spread throughout the manual.

Illustrations complement the words in this manual to best explain how to enjoy your vehicle. By reading your manual, you 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. A good place to start is the index; 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'll find various **WARNING's**, **CAUTION's**, and **NOTICE's** in this manual. These were prepared to enhance your personal safety. You should carefully read and follow ALL procedures and recommendations provided in these **WARNING's**, **CAUTION's** and **NOTICE's**.

#### **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.**

## VEHICLE BREAK-IN PROCESS

No special break-in period is needed. By following a few simple precautions for the first 600 miles (1,000 km) you may add to the performance, economy and life of your vehicle.

- Do not race the engine.
- Do not maintain a single speed for long periods of time, either fast or slow. Varying engine speed is needed to properly break-in the engine.
- Avoid hard stops, except in emergencies, to allow the brakes to seat properly.
- Avoid full-throttle starts.

### **PROPOSITION 65 WARNING**

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

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## VEHICLE DATA COLLECTION AND EVENT DATA RECORDERS

1 Your Kia vehicle is equipped with many high technology, electronically controlled systems that help to ensure your vehicle operates properly and provides the performance that you expect. These systems utilize computers to monitor the operation of various systems and components and help to control their operation. These computerized system operations are wide-ranging and involve components to reduce emissions, to continuously evaluate the readiness of the airbag and seatbelt pretensioner systems, to determine when the airbag and seatbelt pretensioner systems should be deployed and then to activate the deployment, and if equipped, to operate anti-lock braking, traction control and electrical stability control to assist the driver to control the vehicle in difficult driving situations. These systems electronically store information that is useful to service technicians when they need to diagnose and repair these systems.

Additional information is stored only when a crash occurs that results in the deployment of the airbags or seatbelt pretensioners. This type of data storage is done by devices called event data recorders (EDR).

After a crash event, the airbag and seatbelt pretensioner computer system, known as the Supplemental Restraint System Control Module (SRSCM) or Airbag Control Unit (ACU), may record some information about the condition of the vehicle and how it was being operated. This information consists of data related to seatbelt usage and if there was diagnostic information in the airbag or seatbelt systems at the time that a crash occurred, and if the ACU sensed that a crash of sufficient severity occurred to require seat belt pretensioner or airbag deployment.

To retrieve this information, special equipment is needed and access to the vehicle or the device that stores the data is required. Kia will not access information about a crash event or share it with others except:

- in response to an official request of police or similar government office, or
- with the consent of the vehicle owner or, if the vehicle is leased, with the consent of the lessee, or
- as part Kia's defense of litigation through the discovery process, or
- as required by law.

Your rights with respect to the information discussed above may vary from state to state. In some states, such information is considered private, is exclusively owned by the owner of the motor vehicle, and is not retrievable or usable by another person or entity.

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## Your vehicle at a glance

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**Instrument panel overview / 2-3**

**Engine compartment / 2-4**

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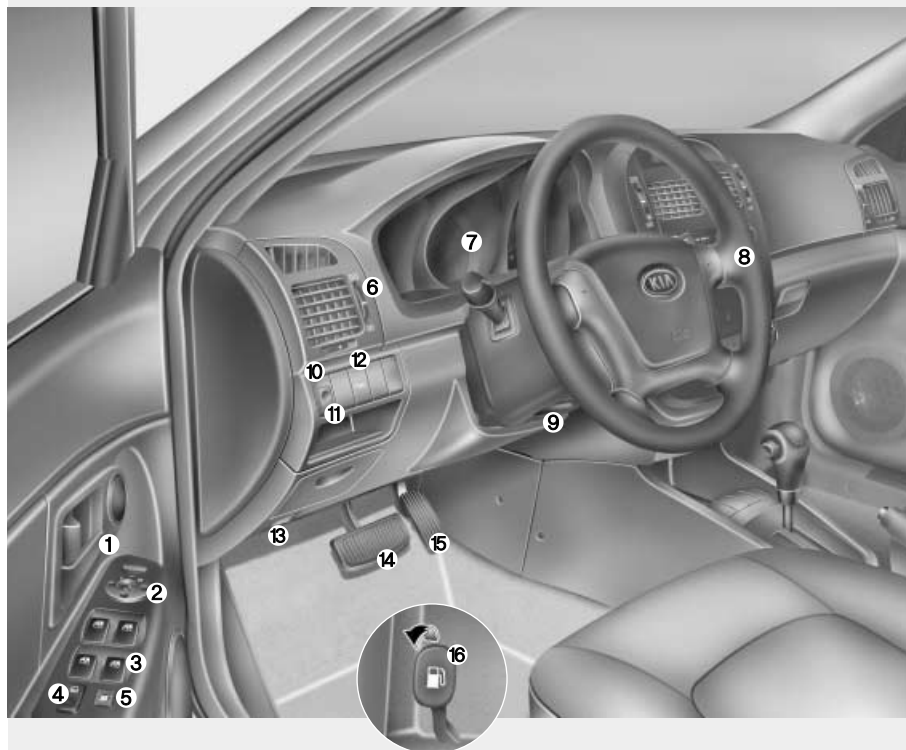
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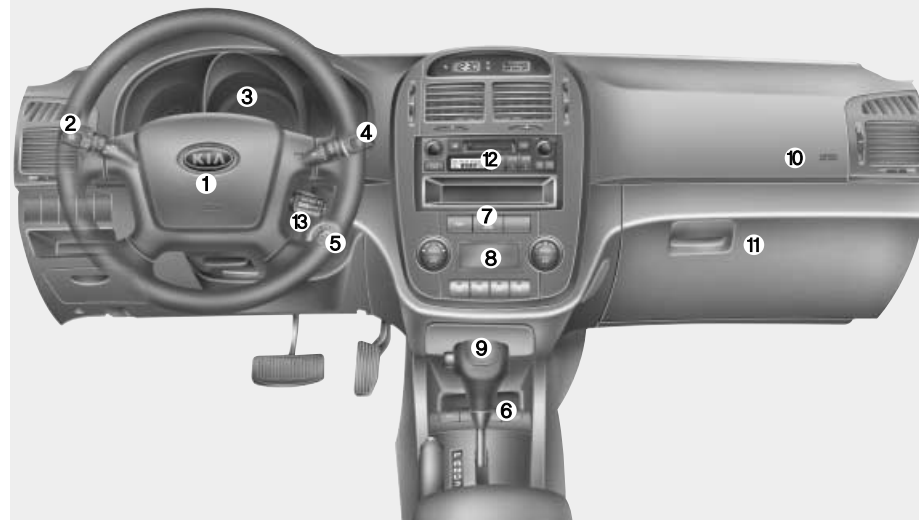
## INTERIOR OVERVIEW



1. Door lock/unlock button
  2. Outside rearview mirror control switch\*
  3. Power window switches\*
  4. Master power door lock control\*
  5. Master power window control lock\*
  6. Vent controls
  7. Instrument cluster
  8. Steering wheel
  9. Steering wheel tilt\*
  10. Trunk release button
  11. Instrument panel illumination\*
  12. TCS button\*
  13. Hood release lever
  14. Brake pedal
  15. Accelerator pedal
  16. Fuel filler lid release lever
- \* : if equipped

OLD006002N

## INSTRUMENT PANEL OVERVIEW



1. Driver's Air Bag\*
  2. Light control / Turn signals
  3. Instrument cluster
  4. Wiper/Washer
  5. Ignition switch
  6. Aux
  7. Hazard
  8. Climate control system
  9. Shift lever\*
  10. Passenger's air bag\*
  11. Glove box
  12. Audio controls\*
  13. Auto cruise controls\*
- \* : if equipped

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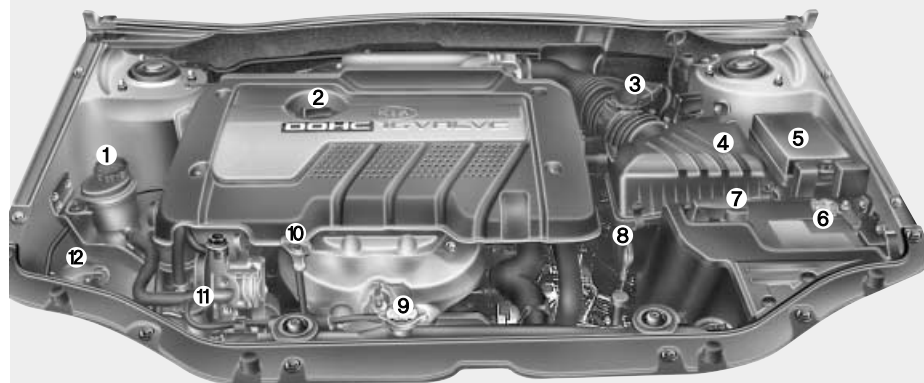
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## ENGINE COMPARTMENT



1. Power steering fluid reservoir
  2. Engine oil filler cap
  3. Brake fluid reservoir
  4. Air cleaner
  5. Fuse box
  6. Negative battery terminal
  7. Positive battery terminal
  8. Auto transaxle oil dipstick\*
  9. Radiator cap
  10. Engine oil dipstick
  11. Engine coolant reservoir
  12. Windshield washer fluid reservoir
- \* : if equipped

OLD056002

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## Knowing your vehicle

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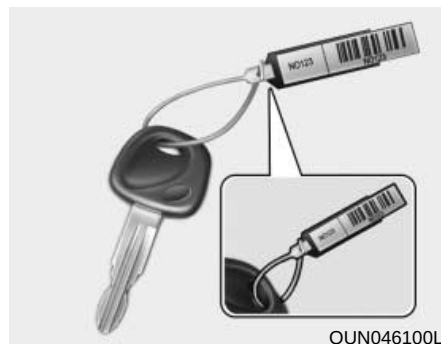
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## KEYS



The key code number is stamped on the plate attached to the key set. Should you lose your keys, this number will enable an authorized Kia Dealer to duplicate the keys easily. Remove the plate and store it in a safe place. Also, record the code number and keep it in a safe and handy place, but not in the vehicle.



### Key operations

#### *Master key*

Used to start the engine, lock and unlock the doors, and open the trunk (if equipped).



### **WARNING - Ignition key**

Leaving children unattended in a vehicle with the ignition key is dangerous even if the key is not in the ignition. Children copy adults and they could place the key in the ignition. The ignition key would enable children to operate power windows or other controls, or even make the vehicle move, which could result in serious bodily injury or even death. Never leave the keys in your vehicle with unsupervised children.



### **WARNING**

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 damage to the starter motor and possible fire due to excessive current in the wiring.

## REMOTE KEYLESS ENTRY (IF EQUIPPED)

Type A



OLD026001

Type B



OLD026002

- (1) Lock button
- (2) Unlock button
- (3) Panic button
- (4) Trunk lid open button

### ***Lock (1)***

All doors are locked and the hazard lamp flash once if the lock button is pressed.

### ***Unlock (2)***

Driver's door is unlocked and the hazard lamp will flash twice if the unlock button is pressed once. All doors are unlocked if the unlock button is pressed twice within 4 seconds.

After depressing this button, the doors will be locked automatically unless you open them within 30 seconds.

### ***Panic (3) (if equipped)***

The horn sounds and hazard lamp will flash for about 27 seconds if this button is pressed for more than 0.5 seconds.

To stop the panic operation, press any button except panic on the transmitter.

### ***Trunk lid open (4) (if equipped)***

The trunk lid opens if this button is pressed for more than 0.5 seconds.

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## \* 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 100 feet [30 m]).
- 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.

## CAUTION

***Keep the transmitter away from water or any liquid. If the keyless entry system is inoperative due to exposure to water or liquids, it will not be covered by your manufacturer vehicle warranty.***

Operational distance may vary depending upon the area the transmitter is used in. For example, if the vehicle is parked near police stations, government and public offices, broadcasting stations, military installations, airports, or transmitting towers, etc.

**This device complies with Part 15 of the FCC rules.** Operation is subject to the following two conditions:

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

## WARNING

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



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## Battery replacement

Transmitter uses a 3 volt lithium battery which will normally last for several years. When replacement is necessary, use the following procedure.

1. Insert a slim tool into the slot and gently pry open the transmitter center cover.



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2. Replace the battery with new one. 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.

## CAUTION

*The keyless entry system transmitter is designed to give you years of troublefree use, however it can malfunction if exposed to moisture or static electricity. If you are unsure how to use your transmitter or replace the battery, contact an authorized Kia dealer.*

For replacement transmitters, see an Authorized Kia Dealer for reprogramming.

## CAUTION

- *Using the wrong battery can cause the transmitter to malfunction. Be sure to use the correct battery.*
- *To avoid damaging the transmitter, don't drop it, get it wet, or expose it to heat or sunlight.*

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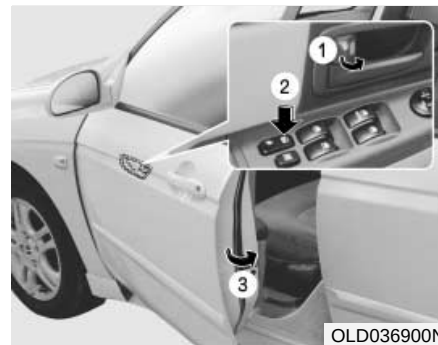
## DOOR LOCKS



### Operating door locks from outside the vehicle

- Turn the key toward rear of vehicle to unlock and toward front of vehicle to lock.
- Turn the key to the right once to unlock the driver's door and to the right twice within 4 seconds to unlock all doors. (if equipped)
- Turn the key to the left once to unlock the passenger's door and to the left twice within 4 seconds to unlock all doors. (if equipped)
- Doors can also be locked and unlocked with the transmitter key.

- Once the doors are unlocked, they may be opened by pulling the door handle.
- When closing the door, push the door by the hand. Make sure that doors are closed securely.



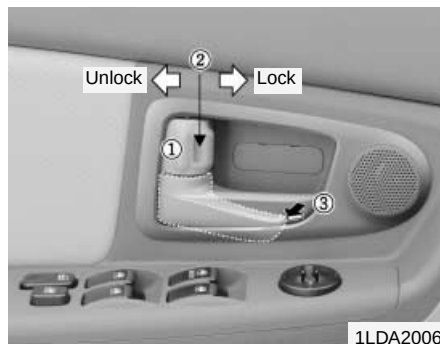
To lock a door without the key, push the inside door lock button (1) or door lock switch (2, if equipped) to the "LOCK" position and close the door (3).

### **⚠ WARNING**

**Always remove the ignition key, engage the parking brake, close all windows and lock all doors when leaving your vehicle unattended.**

**\* NOTICE**

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 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 be visible.
- To open a door, pull the door handle (3) outward.

- If the inner door handle of driver's (front passenger's, if equipped) door is pulled when the door lock button is in lock position, the button is unlocked and door opens.
- Front doors cannot be locked if the ignition key is in the ignition switch and door is open.
- If you lock the front door with door lock button, all vehicle doors will lock automatically. (if equipped)

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### ***With central door lock switch (if equipped)***

It is operated by depressing the door lock switch. If any door is open when the switch is depressed, the door will remain locked when closed.

- When pushing down on the front portion (1) of the central door lock switch, all vehicle doors will lock.
- When pushing down on the rear portion (2) of the switch, all vehicle doors will unlock.
- However, if the key is in the ignition switch and any front door is open, the doors will not lock when the front portion of central door lock switch is pressed.

### **⚠ WARNING**

- The doors should always be fully closed and locked while the vehicle is in motion to prevent accidental opening of the door. Locked doors will also discourage potential intruders when the vehicle stops or slows.
- Be careful when opening doors and watch for vehicles, motorcycles, bicycles or pedestrians approaching the vehicle in the path of the door. Opening a door when something is approaching can cause damage or injury.

**⚠ WARNING - Unlocked vehicle**

Leaving your vehicle unlocked can invite theft or possible harm to you or others from someone hiding in your vehicle while you are gone. Always remove the ignition key, engage the parking brake, close all windows and lock all doors when leaving your vehicle unattended.

**⚠ WARNING - Unattended children**

An enclosed vehicle can become extremely hot, causing death or severe injury to unattended children or animals who cannot escape the vehicle. Furthermore, children might operate features of the vehicle that could injure them, or they could encounter other harm, possibly from someone gaining entry to the vehicle. Never leave children or animals unattended in your vehicle.

**Rear door child safety 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.

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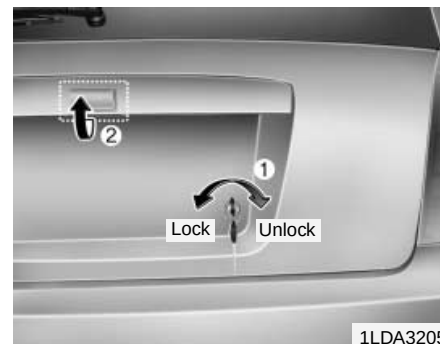
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1. Open the rear door.
2. Push the child safety lock located on the rear edge of the door to the “lock” position. When the child safety lock is in the “lock (⊕)” position, rear door will not open when the inner door handle is pulled inside the vehicle.
3. Close the rear door.
4. To open the rear door, pull the outside door handle.

Even though the doors may be unlocked, the rear door will not open by pulling the inner door handle (1) until rear door child safety lock is unlocked (⊖).

### **⚠ WARNING - Rear door locks**

**If children accidentally open the rear doors while the vehicle is in motion, they could fall out and be severely injured or killed. To prevent children from opening the rear doors from the inside, the rear door safety locks should be used whenever children are in the vehicle.**

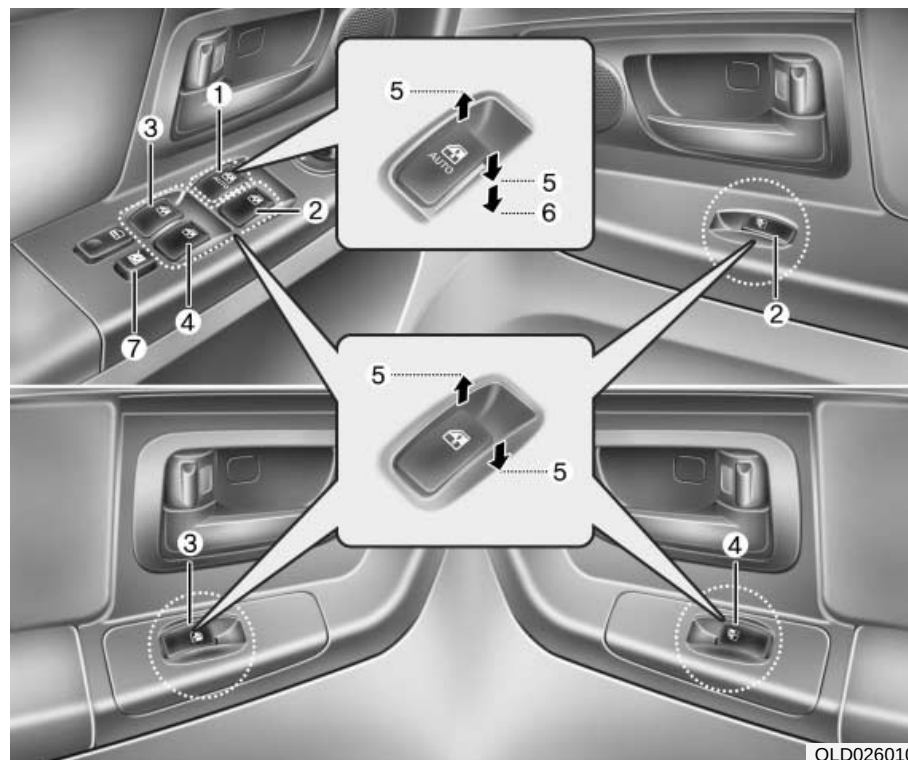


### **Rear hatch (if equipped)**

#### ***Opening the rear hatch***

- Rear hatch is locked or unlocked with a key.
- To open the rear hatch, insert the key into the lock, turn it to the unlock position (1) and pull up the rear hatch by pressing the handle (2).
- You can also lock/unlock the latch (but not release it) with the central door lock system (if equipped).
- If unlocked, the rear hatch can be opened by pressing the handle (2) and pulling the hatch up.

## WINDOWS



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**Power windows (if equipped)**

- (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\* (Driver's window)
- (7) Power window lock switch

\*: if equipped

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## 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. However, 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 seconds after the ignition key removal.

While driving, if you notice buffeting and pulsation (wind shock) with either side window open, you should open the opposite window slightly to reduce the condition.

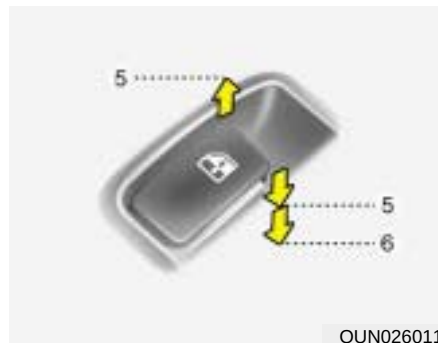


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### Window opening and closing

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).



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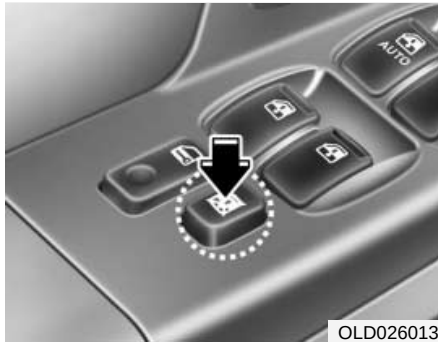
### Auto down window (if equipped) (Driver's window)

Depressing 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, pull up the switch momentarily to the opposite direction of the window 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 driver's window and continue pulling up on driver's power window switch for at least 1 second after the window is completely closed.



#### Power window lock switch

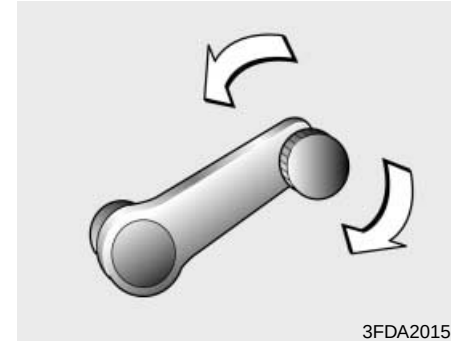
- The driver can disable the power window switches on a passenger door by depressing the power window lock switch located on the driver's door to LOCK (pressed).
- When the power window lock switch is ON, the driver's master control cannot operate the passenger door power windows either.

#### CAUTION

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

#### WARNING

- Make sure heads and hands are safely out of the way before closing a window.
- Do not allow children to play with the power windows. Keep the driver's door power window lock switch in the LOCK position (depressed). Serious injury can result from unintentional window operation by the child.
- Do not extend face or arms outside through the window opening while driving.
- Always double check to make sure all arms, hands and other obstructions are safely out of the way before closing a window



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#### Manual windows (if equipped)

Use the window crank to open and close each window.

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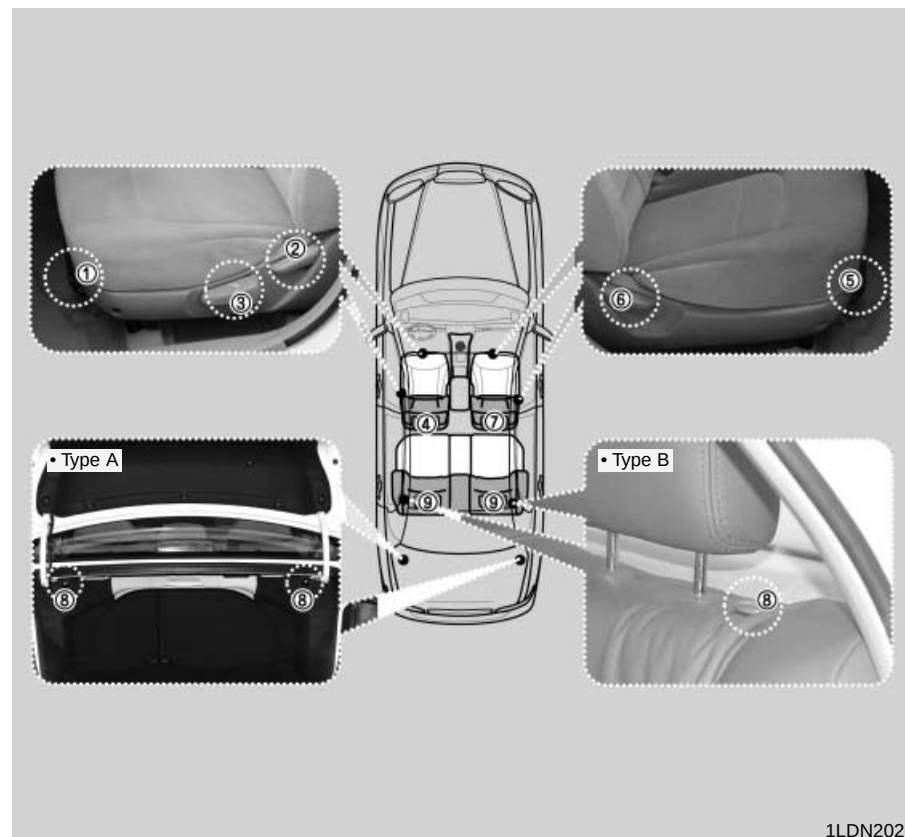
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## SEAT



### Driver's seat

- (1) Seat adjustment, forward / backward
- (2) Seatback recliner
- (3) Seat adjustment, height
- (4) Headrest adjustment

### Front passenger seat

- (5) Seat adjustment, forward / backward
- (6) Seatback recliner
- (7) Headrest adjustment

### Rear seat

- (8) Split folding rear seat\*
  - (9) Headrest adjustment
- \* : if equipped

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**⚠ WARNING - Objects on floor**

Loose objects in the driver's foot area could interfere with the operation of the foot pedals, possibly causing an accident. Do not place anything under the front seats.

**⚠ WARNING - Seating position**

- Never attempt to adjust seat while the vehicle is moving. This could result in loss of control, and an accident causing death or serious injury.
- 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 could result in serious or fatal injury in a sudden stop or collision.

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- Always drive and ride with your seatback upright and the lap portion of the safety belt, is snug and low across the hips. This puts your safety belts in the best position to protect you in case of an accident.
- In order to avoid unnecessary and perhaps severe air bag injuries, always sit as far back as possible from the steering wheel while maintaining comfortable control of the vehicle. The U.S. government recommends that your chest is at least 10 inches (250 mm) away from the steering wheel.

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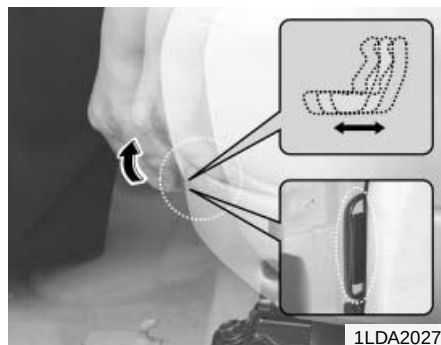
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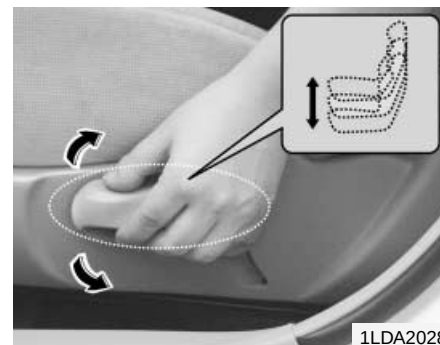
## Driver's seat adjustment

### *Adjusting the seat forward and backward*

To move the seat forward or backward:

1. Pull the seat slide adjustment lever under the front edge of the seat cushion 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.

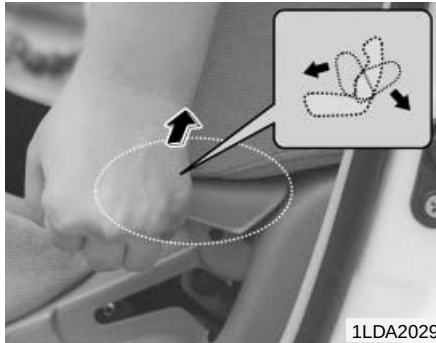
Adjust the seat before driving, and make sure the seat is locked securely by trying to move forward and backward without using the lever. If the seat moves, it is not locked properly.



### *Adjusting height of driver seat cushion (if equipped)*

Pivoting the lever upward to raise the seat cushion.

Pivoting the lever downward to lower the seat cushion



### *Adjusting the driver's seatback recliner*

To recline the seatback:

1. Lean forward slightly and lift up on the seatback recline lever located on the outside of the seat, toward the rear.
2. Carefully lean back on the seat and adjust the back 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.)

### **⚠ WARNING**

**Driving or riding in a vehicle with a front seatback reclined could lead to serious or fatal injury in an accident. If a front seat is reclined during an accident, the occupant's hips may slide under the lap portion of the safety belt applying great force to the unprotected abdomen. Serious or fatal internal injuries could result. The driver must advise the front passenger to keep the seatbacks in comfortably upright position whenever the vehicle is in motion.**

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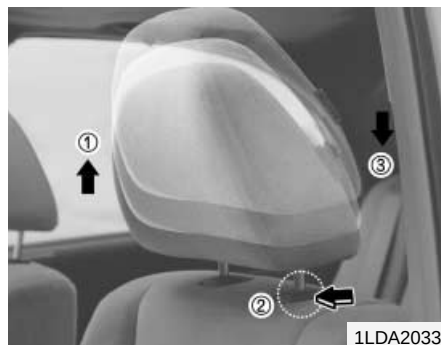
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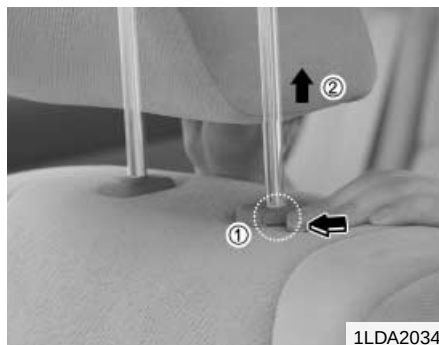


## Headrest adjustment

### Adjusting the height up and down

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

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). For best protection, adjust the headrest so its center is as high as your ears.



### Removal

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

## ⚠ WARNING

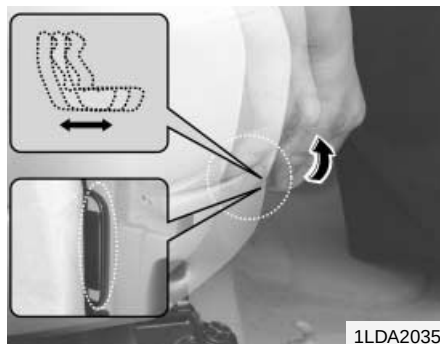
**To reduce the risk of head and neck injuries, do not drive the vehicle with the headrest removed or improperly positioned.**

**Do not adjust the driver's headrest while driving.**



### Active headrest (if equipped)

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.



1LDA2035

## Adjusting the front passenger seat

### Forward/backward position adjustment

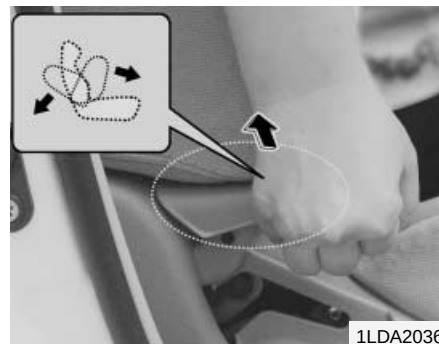
To move the seat forward or backward:

1. Pull the seat slide adjustment lever under the front edge of the seat cushion 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**

**In order to avoid unnecessary air bag injuries including the possibility of severe injury or death, always sit as far back as possible by moving the seat far back, while still maintaining good vehicle control. Serious injury or death may be caused due to the deployment of the passenger's air bag.**



1LDA2036

## Adjusting seatback recliner

To recline the seatback:

1. Lean forward slightly and lift up on the seatback recline lever located on the outside of the seat, toward the rear.
2. Carefully lean back on the seat and adjust the back 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.)

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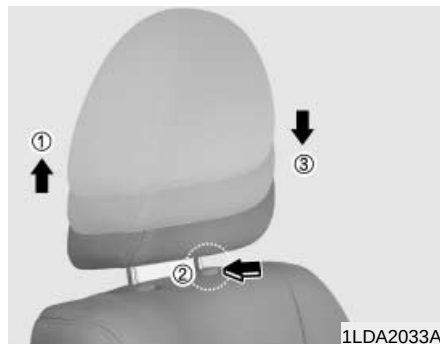
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**⚠ WARNING - Driver responsibility for front seat passenger**

Driving or riding in a vehicle with a front seatback reclined could lead to serious or fatal injury in an accident. If a front seat is reclined, the occupant's hips may slide under the lap portion of the safety belt applying great force to the unprotected abdomen. Serious or fatal internal injuries could result. Keep the seatbacks in a comfortably upright position whenever the vehicle is in motion.

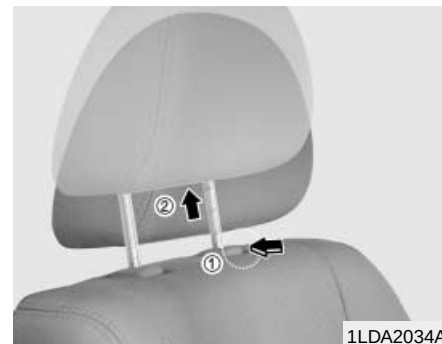


**Headrest adjustment**

**Adjusting the height up and down**

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

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). For best protection, adjust the headrest so its center is as high as your ears.



**Removal**

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

**⚠ WARNING**

**To reduce the risk of head and neck injuries, do not drive the vehicle with the headrest removed or improperly positioned.**



#### Active headrest (if equipped)

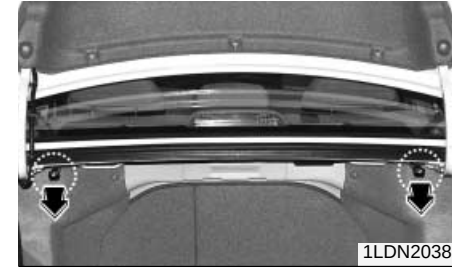
The active headrest is designed to move forward and upward during a rear impact. This helps to prevent the driver's and front passenger's head from moving backward and thus helps prevent neck injuries.

### Rear seat

#### *Split folding rear seat (if equipped)*

The rear seatbacks fold forward to provide additional cargo space and to provide access to the cargo area.

- To fold the rear seatback(s) down, pull the lock release lever, then fold the seatback forward and down.
- To raise the seatback, lift and push it firmly until it clicks into place.
- When you return the seatback to its upright position, reposition the rear safety belts so that they can be used by rear seat passengers.



#### 4 Door (if equipped)

1. Pull the lock release lever.
2. Move the rear three-point seat belts to the outside (1) so that they don't interfere with the seatback when lowering.
3. Fold the seatback forward and down firmly (2).

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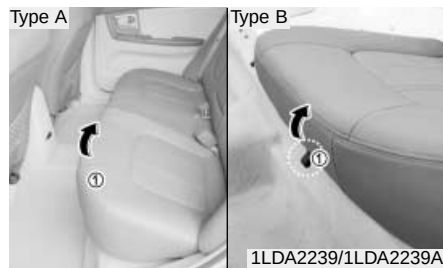
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## 5 Door (if equipped)

1. Lift the front of seat cushion (1) up.
2. Lift the rear of seat cushion up (2).



- 3 Move the seat cushion firmly until it clicks (3).
4. Remove the headrest and put the headrest poles into the holes on the rear of the seat cushion (4).

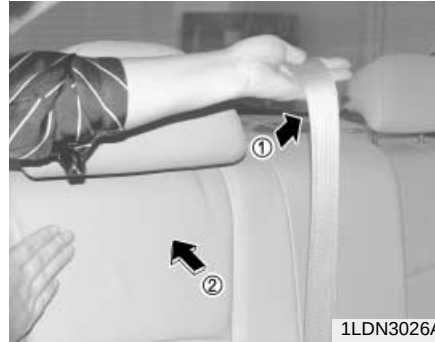


5. Pull the lock release lever (5).
6. Fold the seatback forward and down firmly (6).



### \* NOTICE

When you fold the rear seatback or put luggage on the rear seat cushion, insert the buckle in the pocket between the rear seatback and cushion. Doing so can prevent the buckle from being damaged by the rear seatback or luggage.



### To unfold the rear seat:

1. Move the rear center shoulder belt (1) to the side so that it is clear of the seatback.
2. Lift and push the seatback backward firmly until it clicks into place (2).  
Move and push the seat cushion downward firmly to the proper position (5 Door, if equipped).
3. Replace the rear safety belt to the proper position.

### \* NOTICE

If the seat belt is locked during the seatback folding, pull out and retract the seat belt to release it.

### ⚡ CAUTION

- When returning the rear seatbacks to the upright position, remember to return the rear shoulder belts to their proper position.
- Do not remove the floor carpet in your vehicle. Emission control system components cause high exhaust temperatures under the floor.

**⚠ WARNING - Cargo danger**  
Cargo should always be secured to prevent it from shifting and causing injury to the vehicle occupants.

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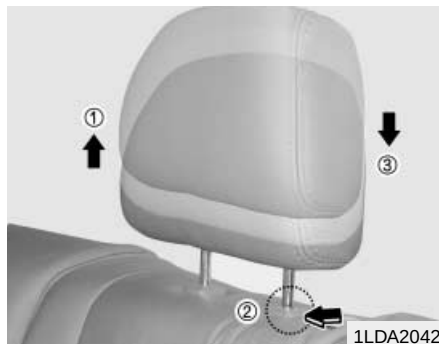
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**CAUTION** - Loading procedure

*Make sure the engine is off, the transaxle is in P and the parking brake is applied whenever loading or unloading cargo. Vehicle may move if shift lever is inadvertently moved to another position.*

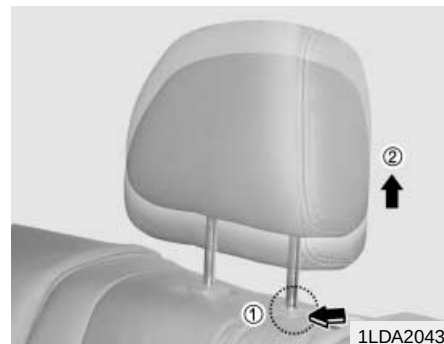


**Headrest adjustment**

**Adjusting the height up and down**

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

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). For best protection, adjust the headrest so its center is as high as your ears.



**Removal**

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

**WARNING**

**To reduce the risk of head and neck injuries, do not drive the vehicle with the headrest removed or improperly positioned.**

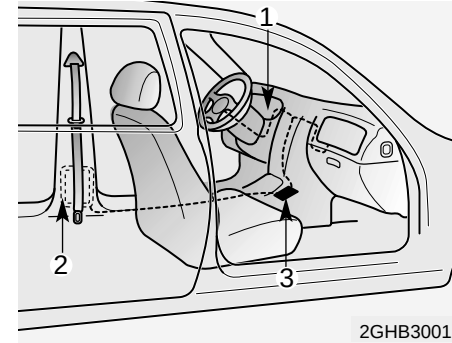
## SAFETY BELTS



### 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. The pre-tensioner seat belts can be activated together with the air bags, where the frontal collision is severe enough.

The pre-tensioner seat belt is installed at the front seats, and the sensor is equipped inside the buckle, where presence of passenger is sensed by the fastening of the seat belts. Therefore, pre-tensioner will not activate if the passenger is not fastened with the seat belts. Likewise, it will activate if buckled even without a passenger in the seat. Pre-tensioner seat belt is designed to activate when the seat-belt is in use. To ensure the pre-tensioner seatbelts activate in event of a possible seatbelt buckle switch malfunction, the system is designed to activate regardless of whether a seat belt is in use or if no seat belt use is detected within 6 seconds of turning the ignition switch ON.



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

- (1) SRS airbag warning light
- (2) Seatbelt pre-tensioner assembly
- (3) SRS airbag control module

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## **WARNING**

To obtain maximum benefit from a pre-tensioner seat belt:

- The seat belt must be worn correctly.
- The seat belt must be adjusted to the correct position.

## **CAUTION**

*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 and are not toxic.*

*Although, it is harmless, the fine dust may cause skin irritation and should not be breathed for prolonged periods. Wash your hands and face thoroughly after an accident in which the air bags and/or pre-tensioner seat belts were activated.*

## **CAUTION**

- *Because the sensor that activates the SRS air bag is connected with pre-tensioner seat belt, the SRS air bag warning light on the instrument panel will blink or illuminate for approximately 6 seconds after the ignition key has been turned to the “ON” position, then the light should go off.*
- *If the pre-tensioner seat belt is not working properly, this warning light will illuminate even if there is no malfunction of SRS air bag system. If the SRS air bag warning light does not illuminate when the ignition key is turned to “ON”, or if it remains illuminated after blinking or 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.*

**⚡ CAUTION**

*The pre-tensioner seat belt assembly mechanisms become hot during activation. Do not touch the pre-tensioner seat belt assembly for several minutes after they have been activated.*

**⚠ WARNING**

- Pre-tensioners are designed to operate once. After activation, pre-tensioner seat belts must be replaced. All seat belts, of any type, should always be replaced after they have been worn during a collision.
- Do not attempt to inspect or replace the pre-tensioner seat belts yourself. This must be done by an authorized Kia dealer.

**⚠ WARNING**

- Do not strike the pre-tensioner seat belt assemblies.
- Do not attempt to service or repair the pre-tensioner seat belt system in any manner.
- Improper handling of the pre-tensioner seat belt assemblies, and failure to heed the warnings not to strike, modify, inspect, place, service or repair the pre-tensioner seat belt assemblies may lead to improper operation or inadvertent activation causing serious injury.

Always wear the seat belts when driving or riding in a motor vehicle.

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## Safety belt restraint system

### **WARNING - Safety belts**

To minimize the risk of serious or fatal injury in an accident, the driver and all passengers should use the appropriate safety restraints for their age and size. The presence of air bags does not change the need to be properly restrained by a safety belt or size-appropriate child restraint. In fact, air bags are designed to work the best when passengers are correctly restrained in the vehicle. Be sure you are familiar with the information in this section, including the information on infant and child restraints. Read the safety warnings on the sun visors of your vehicle also.

We strongly recommend that the driver and all passengers be properly restrained at all times by using the safety belts provided with the vehicle. Proper use of the safety belts decreases the risk of severe injury or death in accidents or sudden stops. In most states, and in Canada, the law requires their use.

All seats have lap/shoulder belts. Inertial locks in the safety belt retractors allow all of the lap/shoulder safety belts to remain unlocked during normal vehicle operation. This allows the occupants some freedom of movement and increased comfort while using the safety belts. If a force is applied to the vehicle, such as a strong stop, a sharp turn, or a collision, the safety belt retractors will automatically lock the safety belts.

Since the inertial locks do not require a collision in order to lock up, you may become aware of the safety belts locking while braking or going around sharp corners.

Always use the rear seat position(s) to install your child restraint(s).

Never install a child restraint system in the front passenger position, as an inflating air bag could cause serious or fatal injury to a child in that position.

The rear safety belts use a special auto-lock feature designed to allow a child restraint to be used in these positions without an added locking clip. They normally lock only under extreme or emergency conditions (emergency lock mode). However they can be adjusted so that they remain in fixed and locked when a child restraint system is placed in these positions. (Use this auto-lock mode only to secure a child restraint, never for passengers restrained by the safety belts.) Page 3-43 gives instructions on placing the safety belt in the auto lock mode.

The drivers safety belt can only operate in the emergency lock mode.

Safety belts provide the best restraint when:

- The seatback is upright.
- The occupant is sitting upright (not slouched).
- The lap belt is snug across the hips.
- The shoulder belt is snug across the chest.
- The knees are straight forward.

To help you remember to fasten your safety belt, a warning light will come on and a chime will sound. See Safety Belt Warning Light and Chime on page 3-31.

#### **WARNING - After a collision**

- Lap/shoulder belt assemblies may be stretched or damaged when subjected to the stress and forces of a collision.
- The entire restraint system should be inspected following any collision. All belts, retractors, anchors and hardware damaged by a collision should be replaced before the vehicle is operated again.

#### **WARNING - Cargo area (if equipped)**

**Passengers should never be allowed to ride in the cargo area of a vehicle. No safety belts are provided for the cargo area. Persons riding in the vehicle without a fastened safety belt are much more likely to suffer serious bodily injury or death during an accident.**

#### **WARNING - Twisted belts**

**A twisted or jammed safety belt cannot restrain you properly. If you cannot untwist or unjam the safety belt, have an authorized Kia dealer it immediately. Never drive or ride with a twisted or jammed safety belt.**

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# **WARNING - Belt use**

Safety belts must be used correctly to work properly in an accident. Each seating position in your vehicle has a specific safety belt assembly that includes a buckle and tongue designed to be used together.

For greatest effectiveness, follow these guidelines in using safety belts:

- Use the shoulder portion of the safety belt on the outside shoulder only. Never wear the shoulder portion under the arm.
- Never swing the safety belt around your neck to fit over the inside shoulder.
- Never wear the shoulder portion of the safety belt across the neck or face.

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- Wear the lap portion as low as possible. Be sure that the lap belt fits snugly around the hips. Never wear a lap portion of a lap/shoulder belt over your waist; it should always go over the stronger area of your hips.
- Never use a single safety belt for more than one person.
- The front seatbacks should always remain in a comfortable, upright position when the vehicle is moving.

# **WARNING - Safety belt care**

- A damaged belt may not give you the protection you need in an accident.

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- Inspect your safety belts periodically for excessive wear or damage. Pull out each belt fully and look for fraying, cuts, burns or other damage. Pull the safety belt out and let it retract a number of times. Make sure that the lap/shoulder belts return smoothly and easily into the retractor.
- Check the latches to make sure they latch and release without interference or delay.
- Never close the doors on any part of the lap or shoulder belt.
- Any belt not in good condition or in good working order should be promptly replaced.

# **CAUTION**

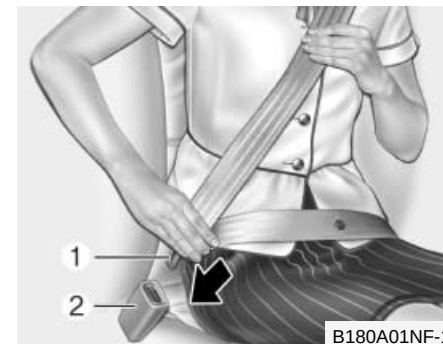
*Never close the doors on any part of the lap or shoulder belt. It can damage the safety belt or buckle which could increase the risk of injury in case of an accident.*



### Safety belt warning light and chime

If the driver's lap/shoulder belt is not fastened when the ignition switch is turned ON, the safety belt warning light and chime will activate for about 6 seconds. And if the lap/shoulder belt is fastened when the ignition switch is turned ON, the safety belt warning light will blink for about 6 seconds.

If the lap/shoulder belt is unfastened while the lap/shoulder belt is fastened with the ignition switch ON, the safety belt warning light will blink for about 6 seconds and if the vehicle speed exceeds 6 mph (10km/h) the safety belt warning light and chime will activate until it is fastened.



### Lap/shoulder belt

#### *To fasten the lap/shoulder belt:*

1. Grasp the buckle and tongue plate.
2. Slowly pull the lap/shoulder belt out from the retractor.
3. Insert the tongue plate (1) into the open end of the buckle (2) until an audible "click" is heard, indicating the belt is locked in the buckle.

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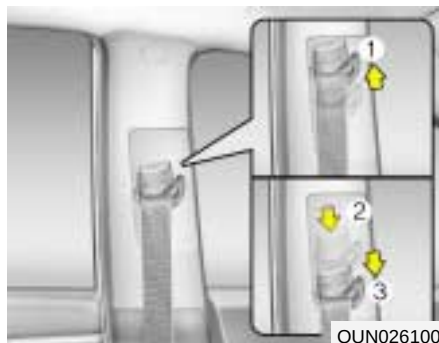
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4. Position the lap portion of the belt across your lap as **LOW ON THE HIPS** as possible to reduce the risk of sliding under it during an accident. Adjust the belt to a **SNUG FIT** by pulling up on the shoulder portion of the safety belt. The belt retractor is designed to take up excess webbing automatically and to maintain tension on the belt. For your safety, do not put any excess slack into the safety belt at any location.



5. Adjust the shoulder anchor position to your size. To raise the anchor position, push the anchor up (1). To lower the anchor position, press (2) the button and slide the anchor down (3). After adjustment, make sure the anchor is locked in position.

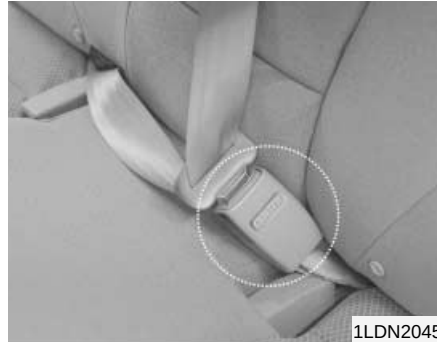
If the height of the adjusting seat belt is too near your neck, you will not be getting the most effective protection. The shoulder portion should be adjusted so that it lies across your chest and midway over your shoulder nearest the door and not your neck.

## **⚠ WARNING - Beld adjust**

- The height adjuster must be in the locked position when the vehicle is moving.
- The misadjustment of height of the shoulder belt could reduce the effectiveness of the seat belt in a crash.



**To unfasten the lap/shoulder belt:**  
Press the release button on the buckle and allow the belt to slowly retract.



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



### 3 Point rear center belt (if equipped)

**To fasten the rear center belt**

1. Extract the tongue plates from the holes on the belt assembly cover and slowly pull the tongue plates out from the retractor.

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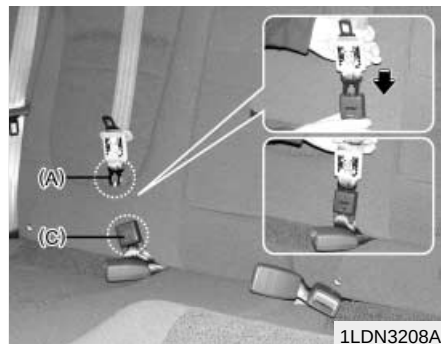
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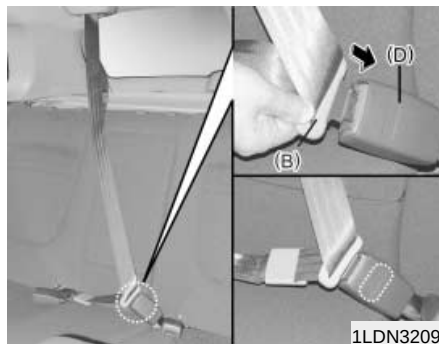
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2. Insert the tongue plate (A) into the open end of the buckle (C) until an audible “click” is heard, indicating the latch is locked. Make sure the belt is not twisted.

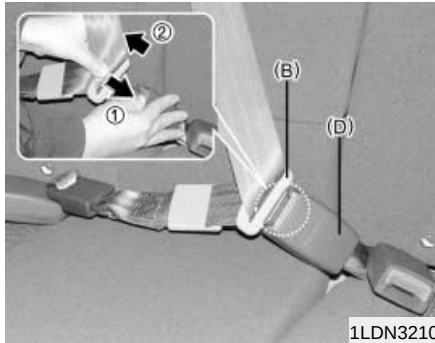


3. Pull the tongue plate (B) and insert the tongue plate into the open end of the buckle (D) until an audible “click” is heard, indicating the latch is locked. Make sure the belt is not twisted.

There will be an audible “click” when the tab locks in the buckle. The seat belt automatically adjusts to the proper length only after the lap belt 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, the belt will lock into position. It will also lock if you try to lean forward too quickly.

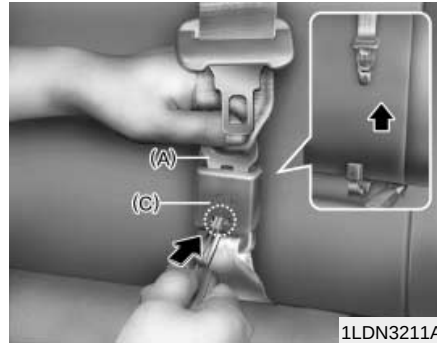
## **⚠ WARNING**

**When using the rear seat center belt, you must lock all tongue plates and buckle/anchor connector. If any tongue plate or buckle/anchor connector is not locked, it will increase the chance of injury or death in the event of collision.**



**To unfasten the rear center belt**

1. Press the release button on the buckle (D) and remove the tongue plate (B) from the buckle (D).



2. To retract the rear center seatbelt, insert the key or similar small rigid device into the web release button (C) on the anchor connector. Pull up on the seat belt web (A) and allow the webbing to retract automatically. (5 Door, if equipped)



3. Insert the tongue plates into the holes and hang the tongue plates on the hooks on the belt assembly cover.

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## Proper use and care of the safety belt system

To ensure that the safety belts provide the maximum protection, please follow these instructions:

- Use the belts at all times - even on short trips.
- If the safety belt is twisted, straighten it prior to use.
- Keep sharp edges and damaging objects away from the belts.
- Periodically inspect belt webbing, anchors, buckles and all other parts for signs of wear and damage. Replace damaged, excessively worn or questionable parts immediately.

- To clean the belt webbing, use a mild soap solution recommended for cleaning upholstery or carpets. Follow the instructions provided with the soap.
- Do not make modifications or additions to the safety belt.
- After wearing a safety belt, make sure it fully retracts to the stowed position. Do not allow the belt to get caught in the door when you close it.



### WARNING

Do not bleach or dye the webbing because this may weaken the webbing fibers and allow them to fail when loaded in a collision.

## 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 safety belt over the area of the abdomen where the fetus is located or above the abdomen where the belt could injure the fetus during an impact.

## Restraint of infants and small children

To increase their safety, infants and young children should always be restrained by a restraint system approved for their age and size.

Never allow a child to stand or kneel on the seat of a moving vehicle. Never allow a safety belt to be placed around both a child and an adult or around two children at the same time.

It is best for children to be seated in the rear seats.



### **WARNING - Children on laps**

**Never hold a child on your lap or in your arms in a moving vehicle.**

**Even a very strong person cannot hold onto a child in the event of even a minor collision.**

Many companies manufacture child restraint systems (often called child seats) for infants and small children. An acceptable child restraint system must always satisfy U.S. Federal Motor Vehicle Safety Standards. Make sure that any child-restraint system you use in your vehicle is labelled as complying with those safety standards.

The child-restraint system should be chosen to fit both the size of the child and the size of the vehicle seat. Be sure to follow any instructions provided by the child-restraint system manufacturer when installing the child-restraint system.



### **WARNING - Infants and young children**

- **Infants and young children are at much greater risk of serious injury or death in an accident or sudden stop if they are unrestrained or restrained improperly. Follow all instructions in this section of your Kia manual and the instructions that came on and with an improved child safety restraint system. The child restraint must be correctly installed in the vehicle, and the child must be correctly installed in the child restraint.**
- **All children under 12 are safest in the back seat.**
- **Never install a child or infant seat in the front passenger position. The baby will be injured or killed by the air bag if it deploys in an accident.**
- **Never allow a child to stand or kneel on the seat of a moving vehicle. Insist the child sit down in an approved restraint system.**

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 **WARNING** - Hot metal parts

Safety belts and seats can become hot in a vehicle that has been closed during warm/hot weather; they could burn a child. Check seat covers and buckles before you place a child anywhere near them.

## Restraint of larger children

As children grow, they may need to use new child-restraint systems, including larger child seats or booster seats, which are appropriate for their increased size.

A child who has outgrown available child-restraint systems should use the belts provided in the vehicle. When seated in the rear outboard seats, the child should be restrained by the lap/shoulder belt.

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 may need to be returned to a child restraint system. In addition, after-market devices are available from independent manufacturers which help pull the shoulder belt down and away from the child's face or neck.

Larger children should use one of the seat belts provided.

 **WARNING** - Shoulder belts on small children

- Never allow a shoulder belt to be in contact with a child's neck or face while the vehicle is in motion.
- If safety belts are not properly worn and adjusted, there is a risk of death or serious injury to such a child.

## Child restraint system (if equipped)

For small children and babies, the use of a child seat or infant seat is required by law. 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. It is strongly recommended that the seat be placed in the vehicle's rear seat since this can make an important contribution to safety.

Children riding in the car should sit on 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.

You are required by law to use safety restraints for children. If small children ride in your vehicle you must put them in a child restraint system (safety seat).

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 car and seat belts, and fits your child. Follow all the instructions provided by the manufacturer when installing the child restraint system.



ADAIR BAG

### **⚠ WARNING**

- **A child restraint system must be placed in the rear seat. Never install a child or infant seat on the front passenger's seat.**

**Should an accident occur and cause the passenger air bag to deploy, it could severely injure or kill an infant or child seated in an infant or child seat. Thus, only use a child restraint in the rear seat of your vehicle.**

**(Continued)**

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**(Continued)**

- Since a safety belt or child restraint system can become very hot if it is left in a closed vehicle, be sure to check the seat cover and buckles before placing a child there.
- When the child restraint system is not in use, store it in the trunk or fasten it with a safety belt so that it will not be thrown forward in the case of a sudden stop or an accident.
- Children who are too large to be in a child restraint should sit in the rear seat and be restrained with the available lap/shoulder belts. Never allow children to ride in the front passenger seat.

**(Continued)**

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- Always make sure that the shoulder belt portion of the lap/shoulder belt is positioned midway over the shoulder, never across the neck or behind the back. The lap belt portion of the lap/shoulder belt must always be positioned as low as possible on the child's hips and as snug as possible.
- If the seat belt will not properly fit the child the use of an approved booster seat in the rear seat must be used in order to raise the child's seating height so that the seat belt will properly fit the child.

**(Continued)**

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- Never allow a child to stand up or kneel on the seat.
- Never use an infant carrier or child seat that "hooks" over a seatback. It will not provide adequate protection in an accident.
- Never allow a child to be held while they are in a moving vehicle, as this could result in serious injury or death to the child in the event of an accident or sudden stop. Holding a child in a moving vehicle does not provide the child with any protection during an accident, even if the person holding the child is wearing a seat belt.

***Installing a child restraint system***

For safety reasons, we recommend that the child restraint system be used in the rear seats. **Never place a rear-facing child restraint in the front passenger seat, because of the danger that an inflating passenger side air bag could impact the rear-facing child restraint and kill the child.**

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

**\* NOTICE**

The driver's safety belt incorporates the emergency lock mode only.

** WARNING**

- Before installing the child restraint system, read the instructions supplied by the child restraint system manufacturer.
- If the seat belt does not operate as described, have the system checked immediately by your authorized Kia dealer.
- Failure to observe this manual instructions regarding child restraint system and the instructions provided with the child restraint system could increase the chance and/or severity of injury in an accident.

** WARNING**

- Do not install any child restraint system in the front passenger seat. Should an accident occur and cause the passenger air bag to deploy, it could severely injure or kill an infant or child seated in an infant or child seat. Therefore, only use a child restraint system in the rear seat of your vehicle.
- If the child restraint seat is not anchored properly, the risk of a child being seriously injured or killed in a collision greatly increases.

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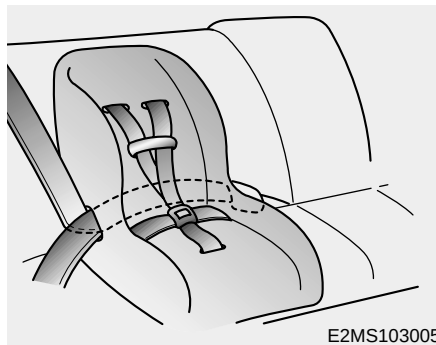
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## Placing a passenger safety belt into the auto lock mode

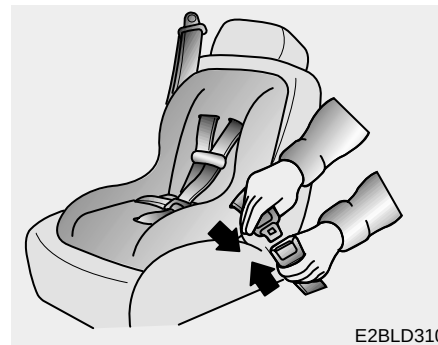
The use of the auto lock mode will ensure that the normal movement of the child in the vehicle does not cause the safety belt to be pulled out and loosen the firmness of its hold on the child restraint system. To secure a child restraint system, use the following procedure.



### Installing a child restraint system by lap/shoulder belt

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 safety 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.*



MMSA3028

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



MMSA3029

4. Slowly allow the shoulder portion of the safety 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.



MMSA3030

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 safety belt is holding it firmly in place. If it is not, release the safety belt and repeat steps 2 through 6.

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7. Double check that the retractor is in the “Auto Lock” mode by attempting to pull more of the safety belt out of the retractor. If you cannot, the retractor is in the “Auto Lock” mode.

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 safety belt to retract fully.

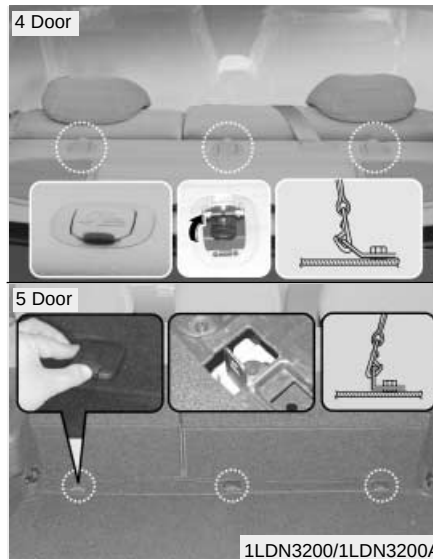
## **⚠ WARNING - Auto lock mode**

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.

If the safety belt is not placed in the “auto lock” mode, severe injury or death could occur to the child and/or other occupants in the vehicle in a collision, since the child restraint will not be effectively held in place.

## **\* NOTICE**

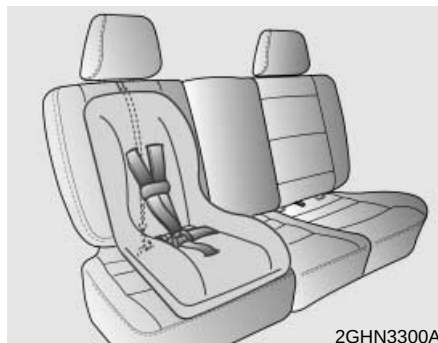
When the safety belt is allowed to retract to its fully stowed position, the retractor will automatically switch from the “Auto Lock” mode to the emergency lock mode for normal adult usage.



## ***Securing a child restraint seat with “Tether Anchor” system***

Child restraint hook holders are located on the shelf or floor behind the rear seats.

1. Open the tether anchor cover on the shelf or floor behind the rear seats.



2. Route the child restraint seat 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.

3. Connect the tether strap hook to the correct child restraint hook holder and tighten to secure the seat.

### **⚠ WARNING**

If the tether strap is secured incorrectly, the child restraint seat may not be restrained properly in the event of a collision.

### **⚠ WARNING - Child restraint**

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 come away causing death or injury.

### **⚠ WARNING**

#### **- Child restraint anchorage**

- Child restraint anchorages are designed to withstand only those loads imposed by correctly fitted child restraints. Under no circumstances are they to be used for adult seat belts or harnesses or for attaching other items or equipment to the vehicle.
- The tether strap may not work properly if attached somewhere other than the correct tether anchor.

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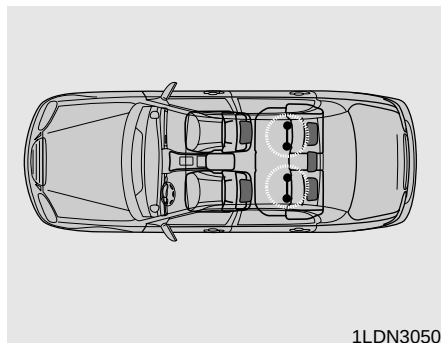
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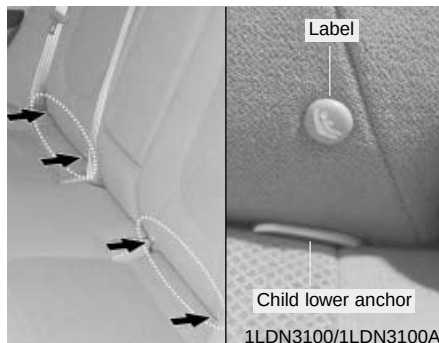
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## Child seat lower anchors

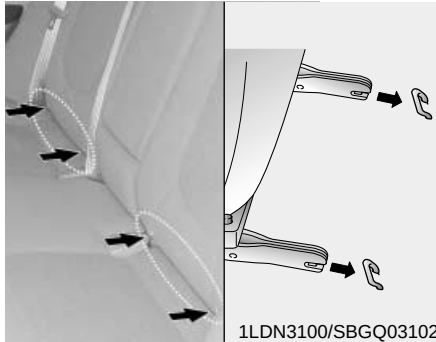
Some child seat manufacturers make child restraint seats that are labeled as International Standards Organization Fixed (ISOFIX) or ISOFIX-compatible child restraint seats. These seats include two rigid or webbing mounted attachments that connect to two ISOFIX anchors at specific seating positions in your vehicle. This type of child restraint seat eliminates the need to use seat belts to attach the child seat in the rear seats.



There is a symbol located on the lower portion of each side of the rear seatbacks. These symbols indicate the position of the lower anchors for child restraints so equipped.

## **⚠ WARNING**

When using the vehicle's "ISOFIX" system to install a child restraint system in the rear seat, all unused vehicle rear seat belt metal latch plates or tabs must be latched securely in their seat belt buckles and the seat belt webbing must be retracted behind the child restraint to prevent the child from reaching and taking hold of unretracted seat belts. Unlatched metal latch plates or tabs may allow the child to reach the unretracted seat belts which may result in strangulation and a serious injury or death to the child in the child restraint.



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

The ISOFIX anchors are located between the seatback and the seat cushion of the rear seat left and right outboard seating positions. Follow the child seat manufacturer's instructions to properly install child restraint seats with ISOFIX or ISOFIX-compatible attachments.

Once you have installed the ISOFIX child restraint, assure that the seat is properly attached to the ISOFIX 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**

**If the child restraint is not anchored properly, the risk of a child being seriously injured or killed in a collision greatly increases.**

### **⚠ WARNING**

- Do not mount more than one child restraint to a single tether or to a child restraint lower anchorage point. The improper increased load may cause the anchorage points or tether anchor to break, causing serious injury or death.

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### **(Continued)**

- Do not install a child restraint seat at the rear center seating position using the vehicle's ISOFIX anchors. The ISOFIX anchors are only provided for the left and right outboard rear seating positions. Do not misuse the ISOFIX anchors by attempting to attach a child restraint seat in the middle rear seating position to the ISOFIX anchors. In a crash, the child restraint seat ISOFIX attachments may not be strong enough to secure the child restraint seat improperly in the rear center seating position and may break, causing serious injury or death.
- Attach the ISOFIX or ISOFIX-compatible child restraint seat only to the appropriate locations shown in the illustration.
- Always follow the installation and use instructions provided by the manufacturer of the child restraint.

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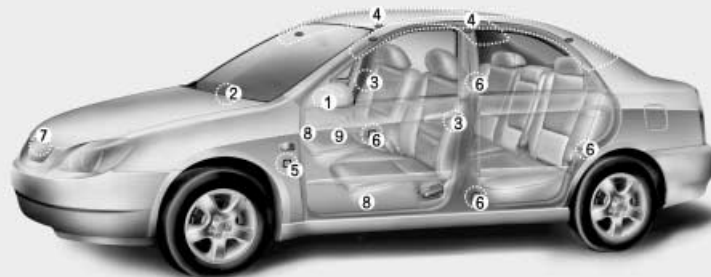
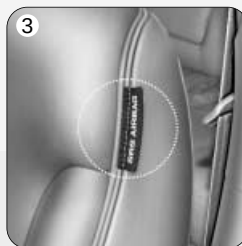
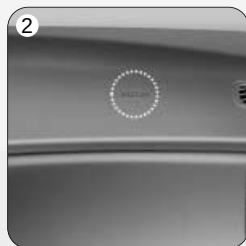
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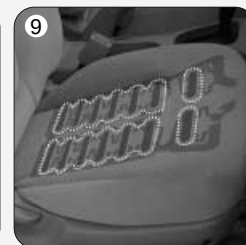
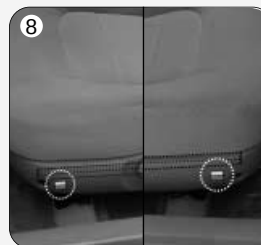
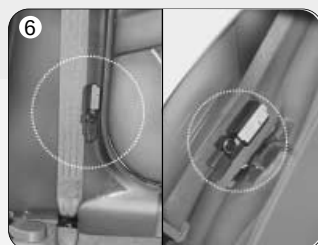
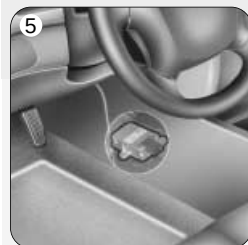
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## AIR BAG - ADVANCED SUPPLEMENTAL RESTRAINT SYSTEM



- (1) Driver's air bag
- (2) Front passenger's air bag
- (3) Side air bag\*
- (4) Curtain air bag\*
- (5) SRS Control Module
- (6) Side impact sensor\*
- (7) Front impact sensor
- (8) Front seat position sensor
- (9) Occupant classification system
- \* : if equipped



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### What your air bag system does

Driver's air bag and front passenger's air bag are designed to supplement the protection offered by the safety belt in certain frontal collisions. Likewise, side air bag and curtain air bags are designed to supplement the protection offered by the safety belt in side collisions. Safety belts are designed to reduce the injury of the driver or passengers in case of impact or collision. No safety belt or air bag system can completely eliminate injuries that may cause in collisions or impacts. To help reduce impact on driver or passengers in any collision, safety belts must be correctly worn.

### What your air bag system does not do

The air bag system is designed to supplement the protection offered by the safety belt system. **IT IS NOT A SUBSTITUTE FOR THE SAFETY BELT.**

### The importance of using safety belts

There are four very important reasons to use safety belts even with an air bag supplemental restraint system. They:

- help keep you in the proper position (away from the air bag) when it inflates.
- reduce the risk of harm in rollover, side impact (vehicles not equipped with side and curtain air bags) or rear impact collisions, because an air bag is not designed to inflate in such situations and even a side curtain air bag is designed to inflate only in certain side impact collisions.
- reduce the risk of harm in frontal or side collisions which are not severe enough to actuate the air bag supplemental restraint system.
- reduce the risk of being ejected from your vehicle.

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## \* NOTICE

Your vehicle's Supplemental Restraint System Control Module is equipped with a recording device that may record the use or status of the seat belt restraint system by the driver and front passenger in certain collisions.

### **WARNING** - Air bags & safety belts

- 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.
- Always wear your safety belt. It can help keep you away from the air bags during heavy braking just before a collision. It may also reduce the risk of occupant ejection.

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- If occupants are not wearing safety belts or correctly seated, they cannot be protected, and thus face serious injury or death.
- Driver's and front passenger's air bag are designed to inflate only in certain frontal collisions, and side and curtain air bags (if equipped) are designed to inflate in certain side impacts. Frontal air bag will generally not provide protection in side impacts (vehicles not equipped with side and curtain air bags) or rear impacts, rollovers, less severe frontal collisions. They will not provide protection from later impacts in a multi-impact collision.

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- If your vehicle has been subjected to flood conditions (e.g. soaked carpeting/standing water on the floor of the vehicle, etc.) or if your vehicle has become flood damaged in any way, do not attempt to start the vehicle or put the key in the ignition before disconnecting the battery.

Disregarding this precaution may cause air bag deployment, which could result in serious personal injury or death. If your vehicle is subjected to flooded conditions, before starting the vehicle, have the vehicle towed to an authorized Kia dealer for inspection and necessary repairs.

## Air bag system components

The main components of your SRS are:

- To indicate that your vehicle is equipped with air bags, the corresponding air bag covers are marked with “SRS AIR BAG”.
  - Driver’s air bag
  - Passenger’s air bag
  - Side air bag
  - Curtain air bag
- A diagnostic system that continually monitors the system operation.
- An indicator light to warn you of a possible problem with the system.
- Emergency power backup in case your car’s electrical system is disconnected in a crash.

The SRS uses a collection of sensors to gather information about the driver’s and front passenger’s seat position, the driver’s and front passenger’s safety belt usage and impact severity.

The driver’s and front passenger’s seat position sensors, which are installed on the seat track, determine if the seats are fore or aft of a reference position. Similarly, the safety belt usage sensors determine if the driver and front passenger’s safety belts are fastened. These sensors provide the ability to control the SRS deployment based on how close the driver’s seat is to the steering wheel, how close the passenger’s seat is to the instrument panel, whether or not the safety belts are fastened, and how severe is the impact.

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.

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

Additionally, your SRS is equipped with an occupant classification system in the front passenger’s seat. The occupant classification 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 Classification System” later in this section.

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## **CAUTION**

*If the seat position sensor is not working properly, the SRS air bag warning light (🚨) on the instrument panel will illuminate even if there is no malfunction of the SRS air bag system, because the SRS air bag warning light is connected with the seat position sensor. If the SRS air bag warning light does not illuminate when the ignition key is turned to the "ON" position, if it remains illuminated after blinking for approximately 6 seconds, or if it illuminates while the vehicle is being driven, have an authorized Kia dealer inspect the seat position sensor and the advanced SRS air bag system as soon as possible.*

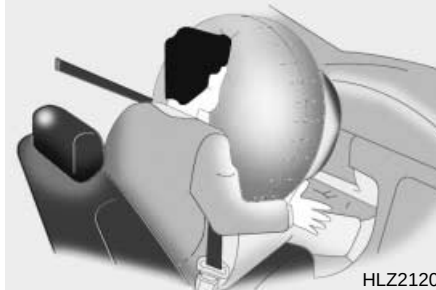
## **WARNING**

- Modification to the seat structure can adversely affect the seat position sensor and cause the air bag to deploy at a different level than should be provided.
- Failure to properly wear safety belts can increase the risk or severity of injury by causing the air bags to deploy at a different level than should be provided.
- Do not place any objects underneath the front seats which could damage the seat position sensor or interfere with the occupant classification system.
- Do not place any objects that may cause magnetic fields near the front seat. These may cause a malfunction of the seat position sensor.

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- Ignoring the SRS indicator light (air bag indicator and passenger air bag off indicator) can result in serious or fatal injury if the air bags occupant classification system or pretensioners do not work properly. Have your car checked by a dealer as soon as possible if the SRS warning light alerts you to a potential problem.
- Sitting improperly or out of position can result in serious or fatal injury in a crash. All occupants should sit upright in their seats with their feet on the floor until the vehicle is parked and the ignition key is removed.

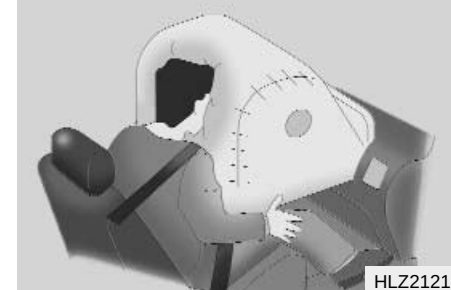


### Driver's air bag

The driver's air bag is stored in the center of the steering wheel.

### ⚠ WARNING

- You must always sit as far back from the steering wheel air bag as possible (chest at least 10 inches (250 mm) away from the steering wheel), while still maintaining a comfortable seating position for good vehicle control, in order to reduce the risk of injury or death in a collision.
- Never place objects over the air bag storage compartments or between the air bags and yourself. Due to the speed and force of the air bag inflation, such objects could hit your body at high speed and cause severe bodily injury and even death.
- Do not put stickers or ornaments on the steering wheel cover. These may interfere with the deployment of the air bag.



### Front passenger's air bag

Front passenger's air bag is stored in the instrument panel on the glove box.

Since you cannot anticipate which air bags will deploy or from what direction, never put any objects or ornaments on the instrument panel.

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### *Occupant classification system*

The occupant classification 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.

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

Only the front passenger airbag is controlled by the Occupant Classification System.

### *Main components of occupant classification system*

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

The location of OCS Indicator



If there is no passenger in the front passenger seat or if the passenger in the front passenger seat is very light, (such as a child), the front **PASSENGER AIR BAG OFF** indicator may illuminate.

When this indicator is ON, the front passenger front air bag will not deploy.

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 OCS 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.

- The "PASSENGER AIR BAG OFF" indicator illuminates after the ignition key is turned to the "ON" position or after the engine is started. If the front passenger's seat is occupied by a very small person or is occupied by someone who is improperly seated, the "PASSENGER AIR BAG OFF" indicator will remain illuminated and the front passenger air bag will not deploy in frontal crashes. If the front passenger's seat is occupied by an adult size person seated properly, the "PASSENGER AIR BAG OFF" indicator will turn off after approximately 4 seconds and the front passenger's air bag will deploy in frontal collision.

### **⚡ CAUTION**

***If the occupant classification system is not working properly, the air bag warning light (⚡) on the instrument panel will illuminate. If there is a malfunction of the occupant classification system, the "PASSENGER AIR BAG OFF" indicator will not illuminate and the front passenger's air bag will deploy in frontal crashes even if there is child or no occupant in the front passenger's seat. If the SRS air bag warning light does not illuminate when the ignition key is turned to "ON" position, if it remains illuminated after blinking for approximately six seconds, or if it illuminates while the vehicle is being driven, have an authorized Kia dealer inspect the occupant classification system with the SRS air bag system as soon as possible.***

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## Condition and operation in the front passenger occupant classification system

| Condition detected by the occupant classification system | Indicator/Warning light                 |                   | Devices                       |
|----------------------------------------------------------|-----------------------------------------|-------------------|-------------------------------|
|                                                          | "PASSENGER AIR BAG OFF" indicator light | SRS warning light | Front passenger front air bag |
| 1. Adult *1                                              | Off                                     | Off               | Activated                     |
| 2. Child*2 or child restraint system                     | On                                      | Off               | Deactivated                   |
| 3. Unoccupied                                            | On                                      | Off               | Deactivated                   |

\*1 The system detects a person who is generally adult size as an adult, thus allowing the passenger air bag to deploy. When a smaller adult sits in the front passenger seat, the system may detect their body shape as that of a child, thus preventing air bag deployment.

\*2 When a larger child who has outgrown a child restraint system sits in the front passenger seat, the system may recognize him/her as an adult depending on his/her physique sitting posture, or objects in the lap of the occupant, thus permitting airbag deployment.

### CAUTION

*If the "PASSENGER AIR BAG OFF" indicator illuminates or blinks continuously when a person of adult size sits in the front passenger's seat, it could be because that person isn't sitting properly in the seat. If this happens, turn the vehicle off, make sure the seat back is not reclined, have the passenger center on the seat cushion, with legs comfortably extended, and the safety belt properly positioned. Restart the vehicle and have the person remain in this position long enough to allow the system to detect the person and activate the passenger air bag.*

### WARNING

If the front passenger seat should be modified for persons with disabilities that may affect the operation of the occupant classification system, contact an authorized Kia dealer.

### WARNING

- Even though your vehicle is equipped with the occupant classification system, do not install a child restraint system in the front passenger seat. The child could be severely injured or killed if the air bag deploys. Children are afforded the most protection in the event of an accident when they are restrained by the proper restraint system in the rear seat.

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- If the "PASSENGER AIR BAG OFF" indicator is illuminated when the front passenger's seat is occupied by a person of adult size who is seated properly, or if the "PASSENGER AIR BAG OFF" indicator is not illuminated when the front passenger's seat is unoccupied or occupied by a very small person, the occupant classification system is not working properly. Have your vehicle immediately inspected by your Kia dealer if the occupant classification system is not working properly.

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- If a very low weight adult is seated in the front passenger seat, the occupant classification system may or may not turn off the right front passenger air bag, depending upon the person's seating position and body type. Everyone in your vehicle should wear a safety belt properly -- whether or not there is an air bag for that person.
- If the front seat passenger changes their seating position (for example, by not sitting upright, by sitting on the edge of the seat, or by otherwise being out of position), the "PASSENGER AIR BAG OFF" indicator may be turned on, and the passenger air bag may not deploy in a collision. Always be sure to sit properly in the front passenger seat and wear the safety belt properly.

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



- Never excessively recline the front passenger seatback.

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



- Never place feet on the dashboard.



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



- Always sit in a proper seating position.

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- 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. That contact is Kia's toll-free Customer Assistance center at 1-800-333-4KIA. 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 classification system. Specifically, 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.

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Any other such replacement or modification could adversely affect the operation of the occupant classification system and your advanced air bags. For the same reason, do not attach anything to the seat, dashboard or door, even temporarily. If the system is adversely affected, it could cause severe personal injuries or death in a collision.

- Do not place sharp objects on the front passenger seat. These can damage the occupant classification system, if they puncture the seat cushion.
- Do not install accessory seat covers on the front seats, since these will interfere with proper sensor operation.

**\* NOTICE**

- If luggage or other objects are placed on the front passenger's seat or if the temperature of the seat changes while the seat is unoccupied, the "PASSENGER AIR BAG OFF" indicator may blink. These conditions do not indicate a problem.
- Do not put heavy objects on the front passenger's seat. This may cause front passenger air bag deployment in the event of an accident, thus increasing your repair costs.

** WARNING - Front passenger seating**

- The front seat passenger air bag is much larger than the steering wheel air bag and inflates with considerably more force. It can seriously hurt or kill a passenger who is not in the proper position and wearing the safety belt properly. The front passengers should always move their seat as far back as practical and sit back in their seat.
- It is essential that the front passengers always wear their safety belts when vehicle is in motion, even when the vehicle is moving in a parking lot or up a driveway into garage.

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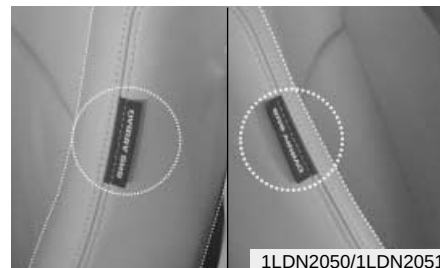
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- If the driver brakes the vehicle heavily prior to an impact, unbelted occupants will be thrown forward. If the front passenger is not wearing the safety belts, they will be directly in front of the air bag when deployment occurs. In that situation, serious injury or death is possible.
- Never allow front passenger to put their hands, feet or face on or close to the instrument panel. In the event of air bag deployment, such a mispositioned occupant would be likely to suffer severe injury or death.
- Never allow children, pregnant women or weak persons to sit in the front passenger seat. They may be seriously injured by the air bag inflation when air bag deploys.

**(Continued)**

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- Do not use child restraint systems on the front passenger's seat, as inflation may cause death or severe personal injury.
- Do not put objects or stickers on the instrument panel. Do not apply any accessory to the front windshield. Do not install aftermarket mirrors or accessories on the factory-installed rearview mirror. Any of these could interfere with the deployment of the air bag or could hit your body at high speed and cause severe bodily injury and even death.



**Side air bag (if equipped)**

Side air bags are stored in the left side of the driver's seat and right side of the front passenger's seat.

If air bag inflation conditions are met (side collision), they will inflate.

**⚠ WARNING**

- Do not use any accessory seat covers for the vehicle equipped with side air bags.

Use of seat covers could interfere with side air bag deployment.

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

- Do not make modifications or additions to the seats as they may cause the air bag system to malfunction resulting in severe personal injury or death.

**Curtain air bag (if equipped)**

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 bag deployment occurs only on the side of the vehicle affected by the impact.
- The side air bags (side and curtain air bags) are not designed to deploy during collisions from the front or rear of the vehicle or in most rollover situations.
- The curtain air bags are designed to deploy only during certain side-impact collisions, depending on the crash severity, angle, speed and impact.

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**⚠ WARNING** - Side and curtain air bags

- In order for side and curtain air bags to provide the best protection, both front seat occupants and both outboard rear occupants should sit in an upright position with the safety belts properly fastened. Importantly, children should sit in a proper child restraint system in the rear seat.
- When children are seated in the rear outboard seats, they must be seated in the proper child restraint system. Make sure to put the child restraint system as far away from the door side as possible, and secure the child restraint system in a locked position.

(Continued)

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- If a small child is seated on the rear outboard seat cushion, it is probable that they will be below the deployment level of the side curtain airbag and thus not protected by that airbag.
- 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 air bags.
- 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.

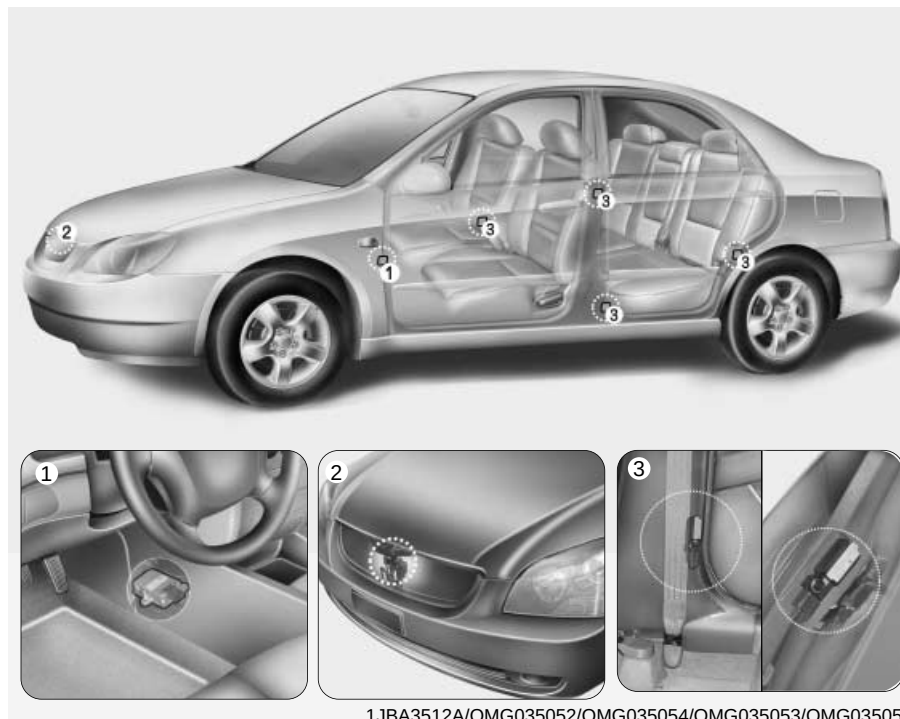
Failure to follow the above mentioned instructions can result in severe injury or death to the vehicle occupants in an accident.

## 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.



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### **Air bag collision sensors**

- (1) SRS control module
- (2) Front impact sensor

- (3) Side impact sensor (if equipped)

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## **⚠ WARNING**

- 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, causing severe injury or death.

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.

(Continued)

## **(Continued)**

- Problems may arise if the sensor installation angles are changed due to the deformation of front bumper, body or B, C pillar where side collision sensors are installed. Have the vehicle checked and repaired by an authorized Kia dealer.
- Your vehicle has been designed to absorb impact and deploy the air bag(s) in certain collisions. Installing aftermarket bumper guards or replacing a bumper with non-genuine parts may adversely affect your vehicles collision and air bag deployment performance.



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## ***Air bag inflation condition***

### **Front air bag**

Front air bags (driver's and front passenger's air bags) are designed to inflate when the impact is delivered to front collision sensors depending on the intensity, speed or angles of impact of the front collision - generally from an area a little to the left to a little to the right of straight ahead.



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### Side air bag (if equipped)

Side air bags (side and 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 of side impact of side impact collision or rollover.

Although the front air bags (driver's and front passenger's air bags) are designed to inflate only in frontal collision, it may inflate in any collision if front impact sensors detect a sufficient impact. Side air bags (side and curtain air bags) are designed to inflate only in side impact collision, it may inflate in any collision if side impact sensors detect a sufficient impact.

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 protect occupants, front air bags or pre-tensioner safety belts may deploy in certain side impact collisions.

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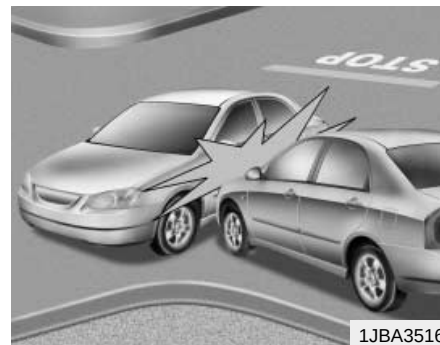


### ***Air bag non-inflation conditions***

- In certain collisions, the vehicle safety belts are sufficient to protect the vehicle occupants and the air bags may not deploy. In some cases, deploying air bags in low-speed collisions can cause a secondary impact to the occupants (light abrasions, cuts, burns, etc.), or loss of vehicle control.

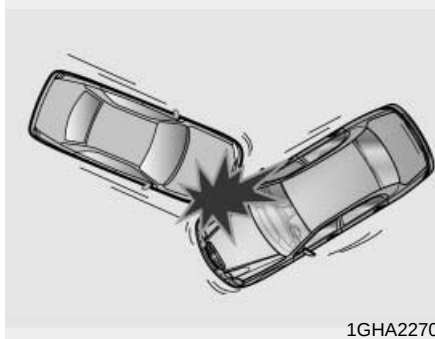


- Frontal air bags are not designed to inflate in rear collisions, because occupants are moved backward by the force of the impact. In this case, the air bags do not provide proper protection.



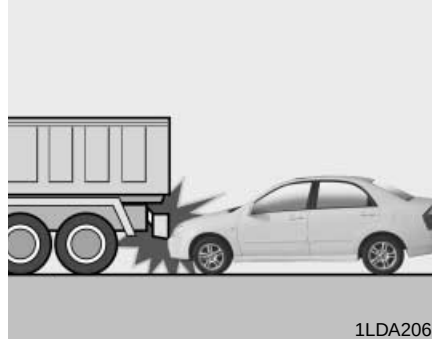
- Front air bags may not inflate in side impact collision, because occupants move to the direction of the collision, and thus in side impacts, frontal air bag deployment does not provide occupant protection.

However, side or curtain air bags may inflate depending on the intensity, vehicle speed and angles of impact.



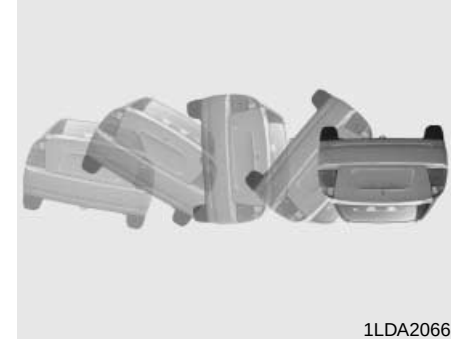
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- In a slant impact or collision, the force delivered will be relatively weaker than that of frontal collision. So, the air bags may not inflate.



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- At the moment of an accident, drivers often brake heavily with reflex. In such heavy braking, the front portion of the vehicle is lowered by the force of the braking and the vehicle can dive under a vehicle with a higher ground clearance. Air bags may not inflate in this situation because impacts may not be delivered or may be delivered with less intensity.



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- Air bags may not inflate in rollover accidents because air bag deployment would not provide proper protection to the occupants. However, side air bags may inflate when the vehicle is rolled over by a side impact collision, if the vehicle is equipped with side air bags and curtain air bags.

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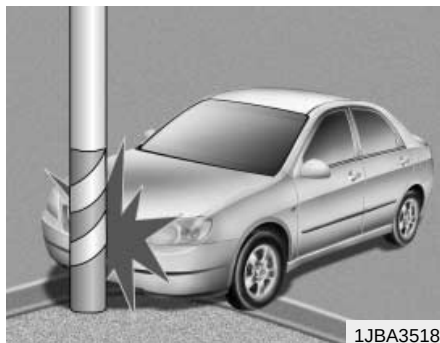
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- Air bags may not inflate if the vehicle collides with objects such as utility poles or trees, where the point of impact is concentrated to one area and the full force of the impact is not delivered to the sensors.

### How does the air bag system operate

- Air bag only operates when the ignition switch is turned to the ON or START positions.
- Air bags inflate instantly in the event of serious frontal or side collision (if equipped with side 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 by the severity of a collision and its direction. These two factors determine whether the sensors send out an electronic deployment/inflation signal.

- Air bag deployment depends on a number of 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 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 the 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 normally can include facial abrasions, bruises and broken bones, and sometimes more serious injuries 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.**

### **WARNING**

- **To avoid severe personal injury or death caused by deploying air bags in a collision, the driver should sit as far back from the steering wheel air bag as possible (at least 10 inches (250 mm) away). The front passenger should always move their seat as far back as possible and sit back in their seat.**
- **Air bag inflates instantly in an event of collision, passengers may be injured by the air bag expansion force if they are not in proper position.**
- **Air bag inflation may cause injuries which normally include facial or bodily abrasions, injuries by the broken glasses or burns by the explosives.**

## **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 safety belt and the air bag, as well as from breathing the smoke and powder. **We strongly urge you to open your doors and/or windows as soon as possible after impact in order to reduce discomfort and prevent prolonged exposure to the smoke and powder.**

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

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## **⚠ WARNING**

When the air bags deploy, the air bag related parts in steering wheel and/or instrument panel and/or in both sides of the roof rails above the front and rear doors are very hot. To prevent injury, do not touch the air bag storage areas internal components immediately after an air bag has inflated.



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**Installing a child restraint on a front passenger seat is extremely dangerous and should never be done.**

Never place a rear-facing child restraint in the front passenger seat. If the air bag deploys, it would impact the rear-facing child restraint, causing severe 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 improperly positioned or improperly restrained child.

## **⚠ WARNING**

- **Extreme Hazard! Do not use a rearward facing child restraint on a seat protected by an air bag in front of it!**
- **Never put child restraint in the front passenger's seat. If the front passenger air bag inflates, it would cause serious or fatal injuries.**
- **When children are seated in the rear outboard seats in which curtain air bags are equipped, be sure to put the child restraint system as far away from the door side as possible, and secure the child restraint system to be locked in position.**

**Inflation of curtain air bag (if equipped) could cause severe injury or death due to the expansion impact.**



### Air bag warning light

The purpose of 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 blink or illuminate for approximately 6 seconds, then go off.

Have the system checked if:

- The light does not turn on briefly when you turn the ignition ON.
- The light stays on after the engine starts.
- The light comes on while the vehicle is in motion.

### Air bag (Supplemental Restraint System) service

Your Supplemental Restraint System is virtually maintenance-free. There are no parts which you can service.

You must have the system serviced under the following circumstances:

- If an air bag ever inflates, the air bag must be replaced. Do not try to remove or discard the air bag by yourself. This must be done by an authorized Kia dealer.
- If the air bag warning indicator light alerts you to a problem, have the air bag system checked as soon as possible. Otherwise, your air bag system may be ineffective.

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### CAUTION

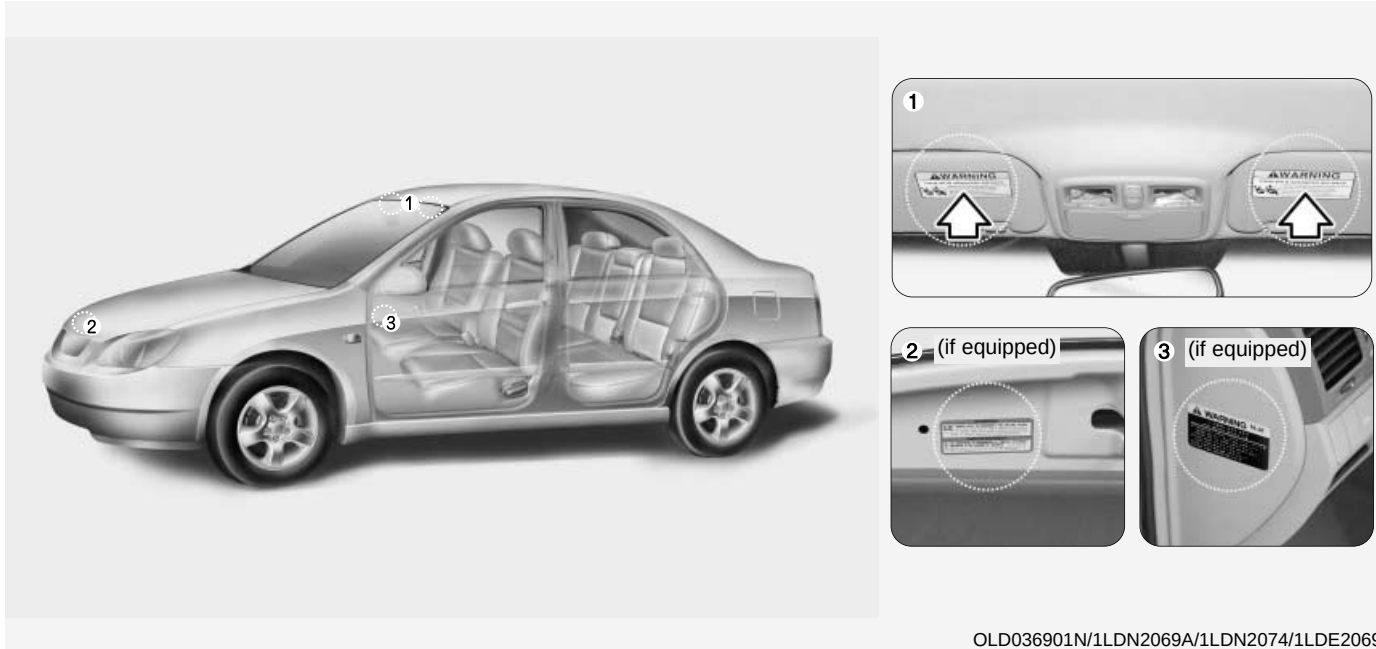
*Do not modify any part of the Supplemental Restraint System. Modification could make the air bag system ineffective or could cause unnecessary deployment.*

### WARNING

- Do not modify your steering wheel, seat or any other part of the Supplemental Restraint System. Modification could make the system inoperable.
- Do not work on the system's components or wiring. This could cause the air bags to inflate inadvertently, possibly seriously injuring someone. Working on the system could also disable the system so that the air bags would not deploy in a collision.
- Any work on the SRS system, such as removing, installing, repairing, or any work on the steering wheel must be performed by a qualified Kia technician. Improper handling of the air bag system may result in serious personal injury or death.

### *Repairing or scrapping the vehicles*

- Repairing steering wheel, instrument panel, center console or roofs, or installing car audio around center console or painting front metal sheet could disable the air bag system. Have them checked by an authorized Kia dealer.
- When leaving the vehicle at an authorized Kia dealer, inform the facility that the vehicle is equipped with air bag system, and leave the owner's manual in the vehicle.
- Since air bag system contains explosive chemical substances, contact an authorized Kia dealer when scrapping the vehicle.



### Air bag warning label

Air bag warning labels which are now required by the U.S. National Highway Traffic Safety Administration (NHTSA) are attached to alert driver and passengers of potential risk of air bag system.

Note that these government warnings focus on the risk to children, Kia also wants you to be aware of the risks which adults are exposed to. Those have been described in previous pages.

## TRUNK (IF EQUIPPED)

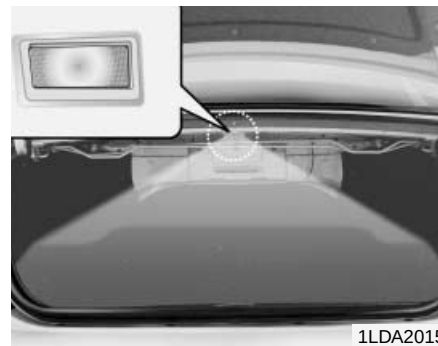


### Outside the vehicle

- To open the trunk, insert the key into the lock and turn it clockwise (1).
- To close the trunk, use both hands to push the trunk lid down. Check to see if the trunk is completely shut.
- Trunk can be opened with transmitter (if equipped).

### **⚠ PROPOSITION 65 WARNING**

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

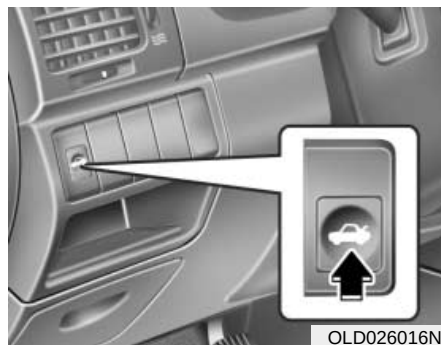


### *Trunk room lamp*

Trunk room lamp turns on when the trunk is opened. It remains on until the trunk is securely closed.

### **⚡ CAUTION**

*Make sure to close the trunk securely. If it remains open while engine is not running, it may cause battery discharge because trunk room lamp remains on.*



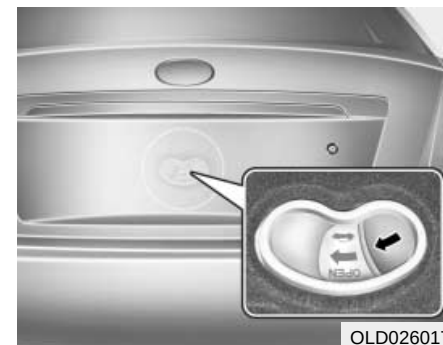
### Inside the vehicle

To open the trunk from inside the vehicle push trunk lid release switch.

### **⚠ WARNING - Exhaust fumes**

If you drive with the trunk lid open, you will draw dangerous exhaust fumes into your vehicle causing serious injury or death to vehicle occupants. Open trunk lids can also dangerously obscure rear view vision.

If you must drive with the trunk lid open, keep the air vents open so that additional outside air comes into the vehicle.



### Emergency trunk safety release (if equipped)

Your vehicle is equipped with an emergency trunk release cable located inside the trunk. The lever glows in the dark when the trunk lid is closed. If someone is inadvertently locked in the trunk, pulling this handle will release the trunk latch mechanism and open the trunk.

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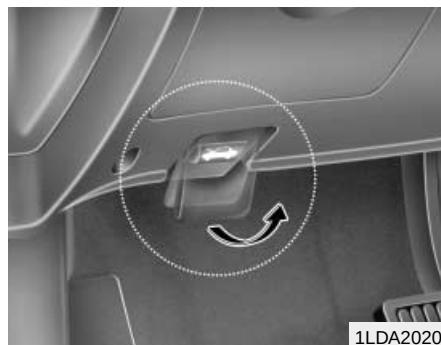
### **WARNING**

No one should be allowed to occupy the trunk of the vehicle at any time. If the trunk is partially or totally latched and the person is unable to get out, severe injury or death could occur due to lack of ventilation, exhaust fumes and rapid heat build-up, or because of exposure to cold weather conditions. The trunk is also a highly dangerous location in the event of a crash because it is not a protected occupant space but merely a part of the vehicle's crush zone.

### **WARNING**

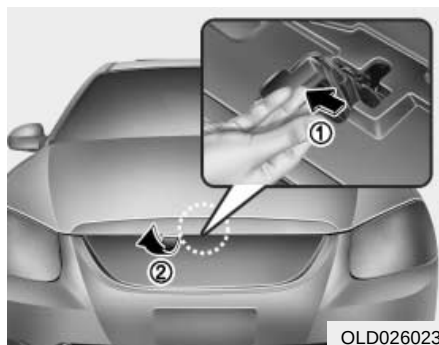
- If a person is locked in the trunk, they can pull the emergency release to open the trunk lid.
- We recommend that cars be kept locked and keys be kept out of the reach of children, and that parents teach their children about the dangers of playing in trunks.

## HOOD



### Opening the hood:

1. Pull the release lever on the lower left side of the instrument panel to unlatch the hood. The hood should pop open slightly.



2. Go to the front of the vehicle, slightly raise the hood, push the secondary latch (1) inside of the hood center and lift (2) the hood.



3. Lift the hood and hold it open with the prop rod by inserting the free end of the rod into the slot in the hood.

### **⚠ WARNING**

**Handle the support rod in the area wrapped in rubber. The rubber will help prevent you from being burned by hot metal when the engine is hot.**

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## 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. Secure the support rod in its clip.

3. Lower the hood to about 12 inches (30 cm) height and then let it drop to properly lock in place.

Make sure the hood is properly locked before driving.

### **⚠ WARNING**

- Before closing the hood, make sure that all engine parts and tools have been removed from the engine area and that no one's hands are near the hood opening.
- Do not leave gloves, rags or any other combustible material in the engine compartment. Doing so may cause a heat-induced fire.

## FUEL FILLER LID



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1. Stop the engine.
2. To open the fuel filler lid, pull the release lever.

### **⚠ WARNING**

To avoid injury from sharp edges, it is recommended that protective gloves be worn if there is a need to open the fuel filler door manually.



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3. Pull the fuel filler lid out to open.
4. To remove the cap, turn the fuel tank cap counter-clockwise.
5. Refuel as needed.
6. To install the cap, turn it clockwise until it "clicks". This indicates that the cap is securely tightened.
7. Close the fuel filler lid and push it lightly and make sure that it is securely closed.

# **WARNING**

If pressurized fuel sprays out, it can cause serious injuries. 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.

# **WARNING**

Automotive fuels are flammable/explosive materials. When refueling, please note the following guidelines carefully. Failure to follow these guidelines may result in severe personal injury, severe burns or death by fire or explosion.

- Before refueling always note the location of the Emergency Gasoline Shut-Off, if available, at the gas station facility.

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- Before touching the fuel nozzle or fuel filler cap, you should eliminate potentially dangerous static electricity discharge by touching another metal part of the front 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. Do not touch, rub or slide against any item or fabric (polyester, satin, nylon, etc.) capable of producing static electricity. Static electricity discharge can ignite fuel vapors resulting in explosion. 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.

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- When using a 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 portable fuel containers designed to carry and store gasoline.
- Do not use cellular phones around a gas station or while refueling any vehicle. Electric current and/or electronic interference from cellular phones can potentially ignite fuel vapors causing a fire. If you must use your cellular phone, use it in a place away from the gas station.

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- When refueling always shut the engine off. Sparks produced by electrical components related to the engine can ignite fuel vapors causing a fire. Always insure that the engine is OFF before and during refueling. Once refueling is complete, check to make sure the fuel filler cap and door are securely closed, before starting the engine.
- Do not light any fire around a gas station. 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 explosion by flames.

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- If a fire breaks out during refueling, leave the vicinity of the vehicle, and immediately contact the manager of the gas station or contact the police and local fire department. Follow any safety instructions they provide.

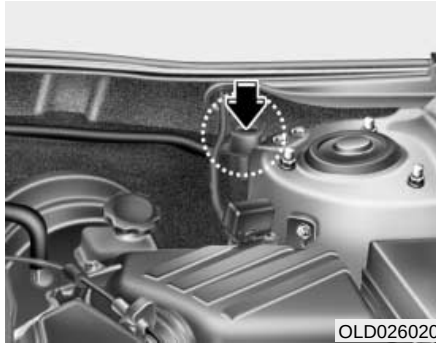
**⚡ CAUTION**

- *Make sure to refuel with gasoline (unleaded fuel) only for the gasoline engine vehicles.*
- *Check to make sure the fuel filler cap is securely closed after refueling.*

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- *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. Correct replacement caps are available at authorized Kia dealers.*
- *Do not spill fuel on the exterior surfaces of the vehicle. Any type of fuel spilled on painted surfaces may damage the paint.*
- *A loose fuel filler cap may cause the "Check Engine" (Malfunction Indicator) light in the instrument panel to illuminate unnecessarily.*
- *If the fuel filler lid will not open in cold weather because the area around it is frozen, push or lightly tap the lid.*



### Auto fuel cutoff switch (if equipped)

The auto fuel cutoff switch is located on the driver's side of the engine compartment. In the event of a collision or sudden impact, the auto fuel cutoff device cuts off the fuel supply. If this device is activated, it must be reset by pressing in on the top of the switch before the engine can be restarted.

### **⚠ WARNING**

**Before resetting the auto fuel cutoff switch, the fuel line should be checked for fuel leaks.**

## MIRRORS

### Outside rearview mirror

Be sure to adjust mirror angles before driving.

Your vehicle is equipped with both left-hand and right-hand outside rearview mirrors. The mirrors can either be adjusted remotely with the control levers or remote switch, depending on the type your vehicle has. The mirror heads can be folded back to prevent damage when using an automatic car wash or passing in a narrow street.

### **⚠ WARNING**

- 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**

*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.*

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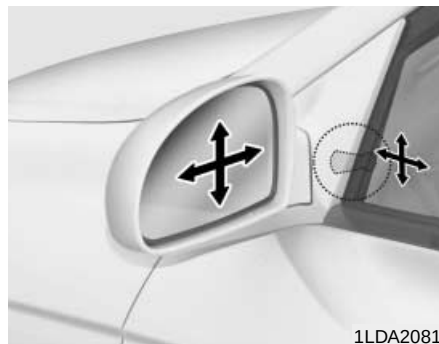
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**Manual remote control  
(if equipped)**

To adjust an outside mirror, move the control lever which is located at the forward inside area of the window frame.



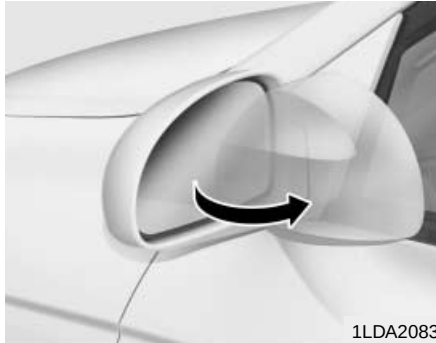
**Electric remote control  
(if equipped)**

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, 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 adjustment, put the lever into neutral position to prevent the inadvertent adjustment.

**CAUTION**

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



### ***Folding the outside rearview mirror***

#### **Manual type**

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

### ***Outside rearview mirror heater (if equipped)***

The outside rearview mirror heater is actuated in connection with the rear window defroster. To heat the outside rearview mirror glass, push the button for the rear window defroster.

The outside rearview mirror glass will be heated for defrosting or defogging and will give you improved rear vision in inclement weather conditions. Push the button again to turn the heater off. The outside rearview mirror heater automatically turns off after 20 minutes.

### **Day/night rearview mirror**

Adjust the rearview mirror to center on the view through the rear window. Make this adjustment before you start driving.

#### **⚠ WARNING**

**Do not place objects in the rear seat or cargo area which would interfere with your vision out the rear window.**

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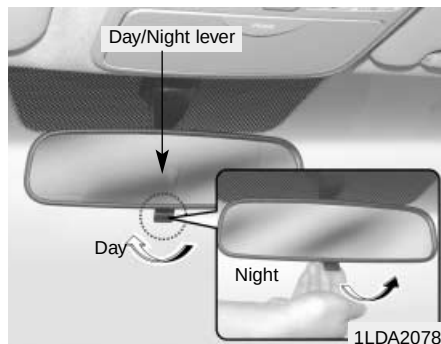
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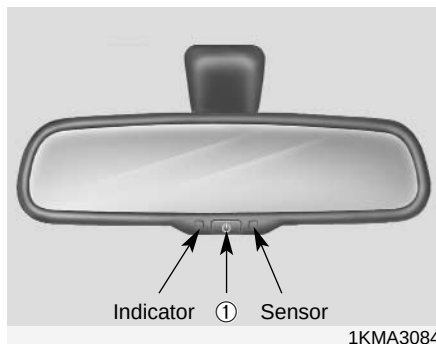


## Manual type

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 glare from the headlights of vehicles behind you during night driving.

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



## Electric type (if equipped)

When the engine is running, the glare is automatically controlled by the sensor mounted in the rearview mirror.

The sensor mounted in the mirror senses the light level around the vehicle, and through a chemical reaction, automatically controls the headlight glare from vehicles behind you.

Whenever the shift lever is shifted into reverse (R), the mirror will automatically go to the brightest setting in order to improve the drivers view behind the vehicle.

When the ignition switch is ON, the automatic-dimming function will turn on automatically.

Press the ON/OFF button(1) to turn the automatic-dimming function off. The mirror indicator light will turn off.

Press the ON/OFF button(1) once again to turn the automatic-dimming function on. The mirror indicator light will illuminate.

## CAUTION

***When cleaning the mirror, use a paper towel or similar material dampened with glass cleaner. Do not spray glass cleaner directly on the mirror as that may cause the liquid cleaner to enter the mirror housing.***

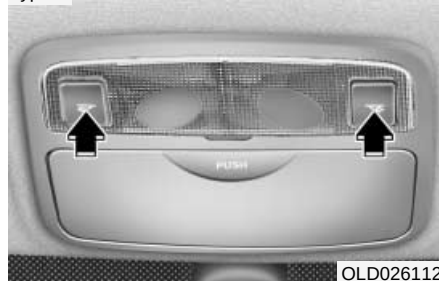
## INTERIOR LIGHTS

Type A



OLD026111

Type B

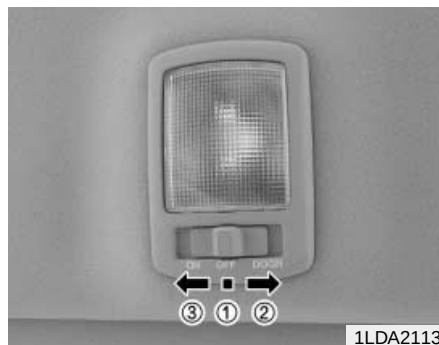


OLD026112

### Map light

#### *Front (if equipped)*

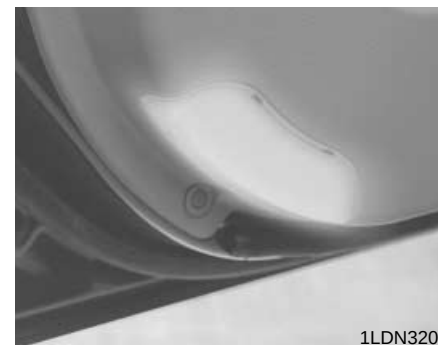
The lights are turned ON or OFF by pressing the corresponding switch.



1LDA2113

### Dome light (if equipped)

- (1) OFF - The light stays off even when a door is open.
- (2) DOOR - The light turns on when a door is opened or when a door is unlocked by the transmitter (if equipped). Interior light goes out slowly after 30 seconds if the door is closed. However if the ignition switch is ON or all vehicle doors are locked when the door is closed, interior light will turn off even within 30 seconds.
- (3) ON - The light turns on and stays on even when the doors are all closed.



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### Door courtesy lamp (if equipped)

The door courtesy lamp comes ON when the door is opened to assist entering or exiting the vehicle. It also serves as a warning to passing vehicles that the vehicle door is open.

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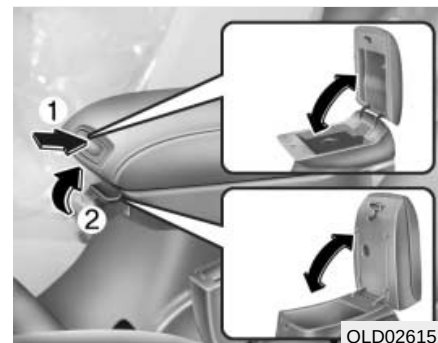
## STORAGE COMPARTMENT

### **CAUTION**

- *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 many items in the storage compartment that the storage compartment cover can not close securely.*

### **WARNING - Flammable materials**

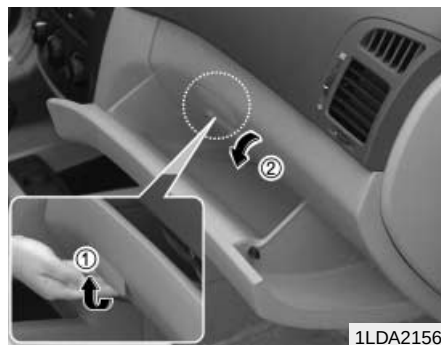
Do not store cigarette lighters, propane cylinders, or other flammable/explosive materials in the vehicle. These items may catch fire and/or explode if the vehicle is exposed to hot temperatures for extended periods.



### **Center console storage**

To open either of the console storage compartments, push the button (1) or pull up the lever (2).

These compartments can be used to store small items required by the driver or front passenger.

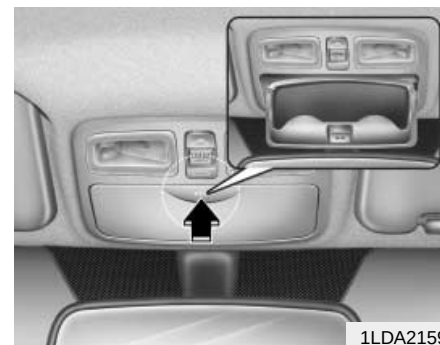


### Glove box

To open the glove box, pull the handle (1) then the glove box will automatically open (2). Close the glove box after use.

### CAUTION

*Since key is not fully inserted into the glove box key set, do not apply excessive force. Doing so may damage the parts.*



### Sunglass holder

A sunglass storage compartment is provided on the overhead console. To open the sunglass holder, press the cover and the holder will slowly open. Place your sunglasses in the compartment door with the lenses facing out. Push to close.

### CAUTION

*Make sure the sunglass holder is closed while driving.*

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## INTERIOR FEATURES

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### Cigarette lighter

#### Front

To operate the cigarette lighter, press it in and release it. When it is heated, it automatically pops out ready for use.

If the engine is not running, the ignition switch must be in the ACC position for the lighter to operate.

### CAUTION

- *Do not hold the lighter in after it is already heated because it will overheat.*
- *Only a genuine Kia lighter should be used in the cigarette lighter socket. The use of plug-in accessories (shavers, hand-held vacuums, and coffee pots, for example) may damage the socket or cause electrical failure.*
- *If the lighter does not pop out within 30 seconds, remove it to prevent overheating.*



### Ashtray

#### Front

The front ashtray may be opened by pushing in the ashtray lid. To clean the ashtray, the plastic receptacle should be removed by lifting the plastic ash receptacle upward and pulling it out.

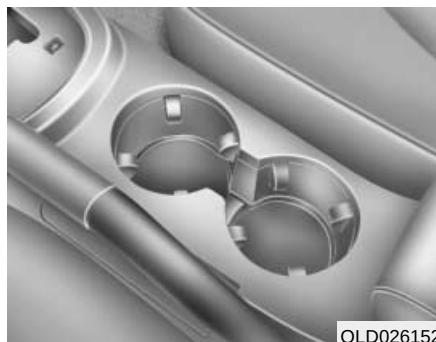
### WARNING - Ashtray use

- **Do not use the vehicle's ashtrays as waste receptacles.**
- **Putting lit cigarettes or matches in an ashtray with other combustible materials may cause a fire.**

## Cup holder

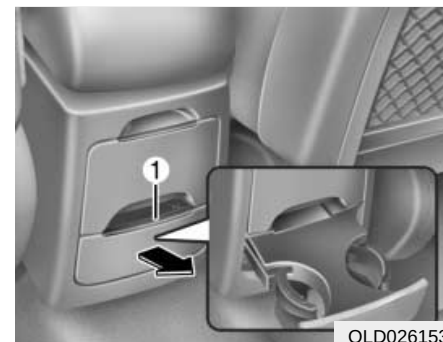
### **⚠ WARNING - Hot liquids**

- Do not place uncovered cups of hot liquid in the cup holder while the vehicle is in motion. If the hot liquid spills, you could be burned. Such a burn to the driver could cause a loss of control of the vehicle.
- To reduce the risk of personal injury in the event of sudden stop or collision, do not place uncovered or insecure bottles, glasses, cans, etc., in the cup holder while the vehicle is in motion.



#### *Front*

Cups or small beverage cans may be placed in the cup holders.



#### *Rear (if equipped)*

To use cup holders in rear seat, pull the rear cup holder cover (1) out. Push the cover to close after use.

### **⚠ CAUTION**

*Do not place heavy cups or cans in cup holders. Cup holders could be damaged.*

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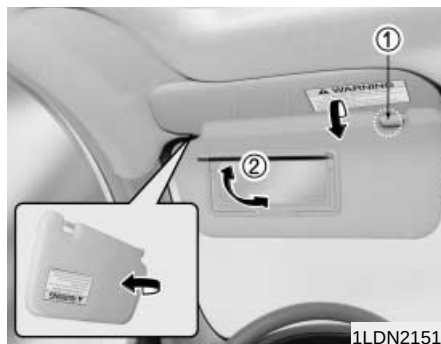
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## Sunvisor

Use the sunvisor to shield direct light through the front or side windows.

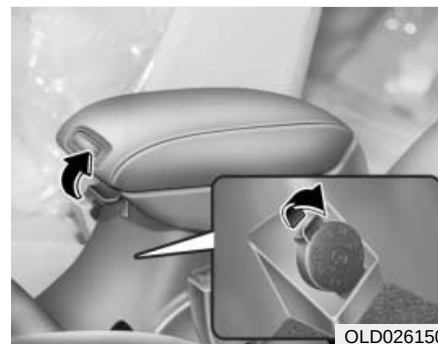
To use a sunvisor, pull it downward.

To use a sunvisor for a side window, pull it downward, unsnap it from the bracket (1) and swing it to the side.

To use the vanity mirror, pull down the visor and pull up the mirror cover (2).

## CAUTION

*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 (if equipped) will stay on and could result in battery discharge and possible sunvisor damage.*



## Power socket (if equipped)

The power outlets are 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.

**CAUTION**

- *Use when the engine is running, and remove a plug from the power outlet after using the electric appliance. Using electrical accessories when the engine is not running may result in battery discharge.*
- *Only use 12V accessories which are rated for less than 10A maximum current draw.*
- *Adjust the air-conditioner or heater to the lowest operation level when you have to use the power socket while using air-conditioner or heater.*
- *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.*

**Digital clock (if equipped)**

Whenever the battery terminals, ROOM fuse, or Power Connect 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:**

Pressing the “H” button with your finger, a pencil or similar object will advance the time displayed by one hour.

**• MINUTE:**

Pressing the “M” button with your finger, a pencil or similar object will advance the time displayed by one minute.

**• RESET:**

To clear away minutes, press the “R” button with your finger, a pencil or similar object. Then the clock will be set precisely on the hour. For example, if the “R” button is pressed while the time is between 9:01 and 9:29, the display will be reset to 9:00.

9:01 ~ 9:29 ➤ 9:00

9:30 ~ 9:59 ➤ 10:00

**Display conversion**

To change the 12 hour format to the 24 hour format, press the R button for more than 4 seconds.

For example, if the R button is pressed for more than 4 seconds while the time is 10:15 p.m., the display will be changed to 22:15.

## SUNROOF (IF EQUIPPED)



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

- (1) Slide button
- (2) Tilt button
- (3) Close button

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

### **CAUTION**

- *Do not continue to press the sunroof control button(s) after the sunroof is in the fully open, closed, or tilt position(s). 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.*

### Sliding the sunroof

#### Autoslide open

To use the autoslide feature, momentarily (less than 0.4 second) press the SLIDE OPEN (  ) button on the overhead console. The sunroof will slide all the way open. To stop the sunroof sliding at any point, press any sunroof control button.

#### Manual slide open

Press the SLIDE OPEN (  ) button on the overhead console for more than 0.4 second.

#### Close

To close the sunroof, press the CLOSE (  ) button on the overhead console and hold it until the sunroof is closed.

## Tilting the sunroof

### Autotilt open

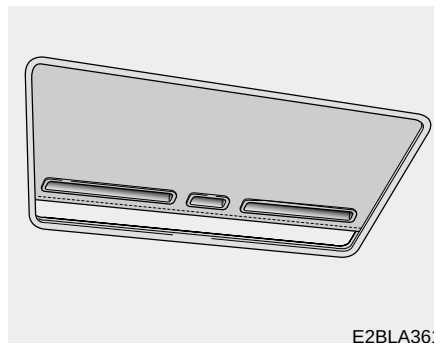
To use the autotilt feature, momentarily (less than 0.4 second) press the TILT UP (↗) button on the overhead console. The sunroof will tilt all the way open. To stop the sunroof tilting at any point, press any sunroof control button.

### Manual tilt open

Press the TILT UP (↗) button on the overhead console for more than 0.4 second.

### Close

To close the sunroof, press the CLOSE (↖) button on the overhead console and hold it until the sunroof is closed.



E2BLA361

### Sunshade

The sunshade will be opened with the glass panel automatically when the glass panel is slid. You will have to close it manually if you want it closed.

## CAUTION

- *Do not press any sunroof control button longer than necessary. Damage to the motor or system components could occur.*
- *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.*
- *The sunroof is made to slide together with sunshade. Do not leave the sunshade closed while the sunroof is open.*

## WARNING

- **Do not extend face or arms outside through the sunroof opening while driving.**
- **Make sure hand and face are safely out of the way before closing a sunroof.**

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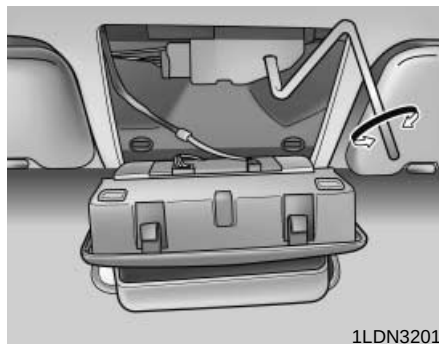
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### In case of an emergency

If the sunroof does not open electrically:

1. Open the sunglass holder.
2. Remove the two (2) screws, and then remove the overhead console.
3. Insert the emergency handle (provided with the vehicle) and turn the handle clockwise to open or counterclockwise to close.

### Resetting the sunroof

Whenever the vehicle battery is disconnected or discharged, or you use the emergency handle to operate the sunroof, you have to reset your sunroof system as follows:

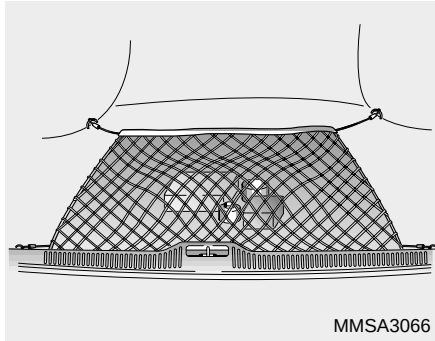
1. Turn the ignition key to the ON position.
2. According to the position of the sunroof, do as follows.
  - 1) in case that the sunroof has closed completely or been tilted  
: Press the TILT UP (  ) button for 1 second.
  - 2) in case that the sunroof has slide-opened  
: Press and hold the CLOSE (  ) button for more than 5 seconds until the sunroof has closed completely. And then press the TILT UP (  ) button for 1 second

3. Then, release it.

4. Press and hold the TILT UP (  ) button once again until the sunroof has returned to the original position of TILT UP (  ) after it is raised a little higher than the maximum TILT UP (  ) position.

When this is complete, the sunroof system is reset.

## LUGGAGE NET (IF EQUIPPED)



To keep items from shifting in the trunk, you can use the four rings located in the trunk to attach the cargo net.

### **CAUTION**

*Do not put fragile, bulky or excessive quantity of items into luggage net. They could be damaged.*

### **WARNING**

To avoid eye injury. **DO NOT** overstretch the netting.

**ALWAYS** keep face and body out of recoil path.

**DO NOT** use the luggage net when strap has visible signs of wear or damage.

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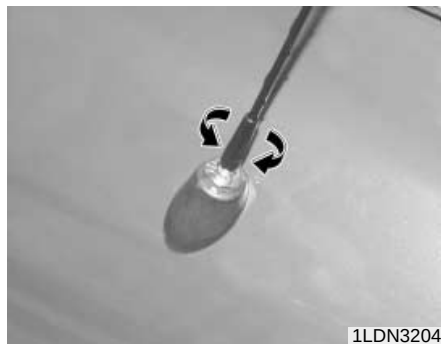
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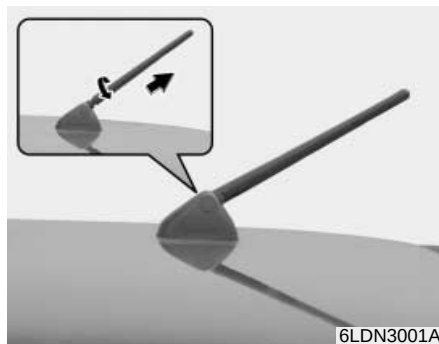
## ANTENNA



### Fixed rod antenna (if equipped)

Your car uses a fixed rod antenna to receive both AM and FM broadcast signals.

This antenna is removable. To remove the antenna, turn it counter-clockwise. To install the antenna, turn it clockwise.



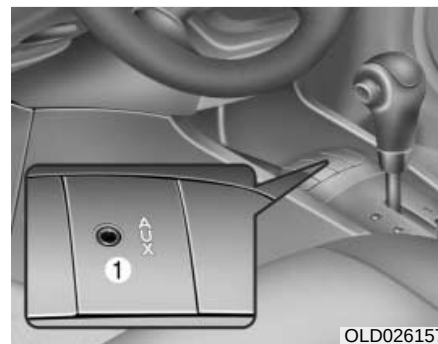
### Roof type antenna (if equipped)

If your vehicle has an audio system, an amplifying antenna is installed in your vehicle.

This antenna can be removed from the vehicle when you wash your vehicle.

#### **CAUTION**

- *Be sure to remove the antenna before washing the car in an automatic car wash or it may be damaged.*
- *When reinstalling your antenna, it is important that it is fully tightened to ensure proper reception.*



### Aux outlet

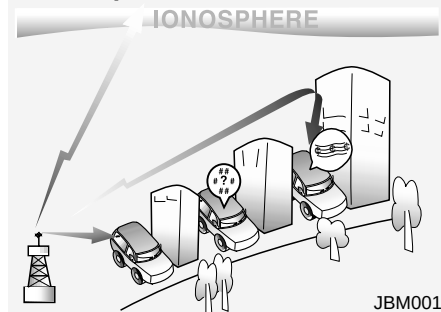
You can use an aux outlet to connect an audio device.

#### **\* 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.**

## AUDIO SYSTEM

### FM reception



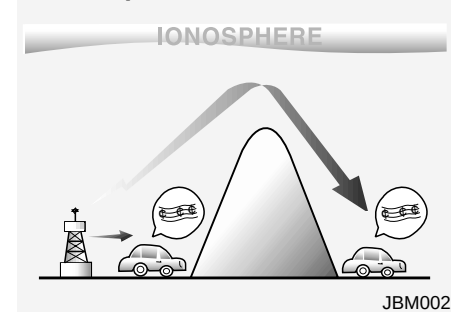
### How car audio works

AM and FM radio signals are broadcast from transmitter towers located around your city. They are intercepted by the radio antenna on your car. This signal is then received by the radio and sent to your car 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 reception



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.

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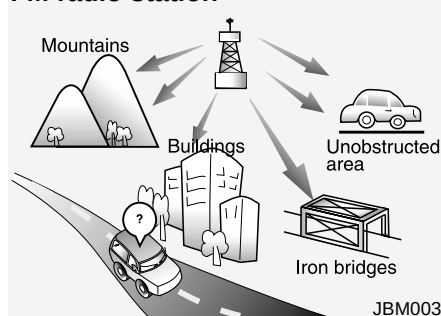
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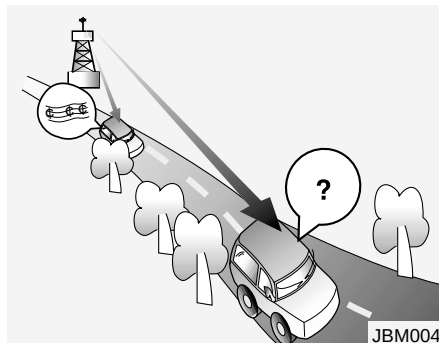
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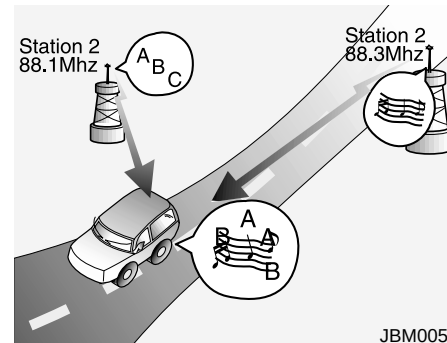
## FM radio station



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 car 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.

### 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.

**⚠ WARNING - Cellular phones**

**Don't use a cellular phone when you are driving. The driver must stop at a safe place to use a cellular phone.**

### Care of cassette tapes (if equipped)

- Because the thickness of a cassette tape with the total playback time of over 60 minutes (C-60) are too thin, we suggest that you do not use any of them to avoid having tapes being tangled.
- To achieve better sound quality, periodically clean the tape head using a cotton stick with colorless alcohol (once per month).
- If a tape is too loose, fasten it to reel by winding with objects like a pencil.
- Because dust or foreign objects on a cassette tape may damage the playback head, always store tapes in their cases when not in use.
- Make sure cassette tapes are kept away from magnetic devices (TV, stereo system, etc) in order to achieve better sound quality.
- Be certain that no objects or substances other than cassette tapes are inserted into the cassette tape player.

- Because tape media can be distorted when exposed to direct sunlight, Do not leave cassette tapes on the seats, dashboard or near the back windshield.

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### Care of disc (if equipped)

- 1 • If the temperature inside the car is too high, open the car windows for ventilation before using your car audio.
- 2 • It is illegal to copy and use MP3/WMA/AAC/WAVE files without permission (If equipped with M465, use only MP3/WMA, If equipped with M445, use only CD-DA). Use CDs that are created only by lawful means.
- 3 • Do not apply volatile agents such as benzene and thinner, normal cleaners and magnetic sprays made for analogue disc onto CDs.
- 4 • To prevent the disc surface from getting damaged. Hold and carry CDs by the edges or the edges of the center hole only.
- 5 • Clean the disc surface with a piece of soft cloth before playback (wipe it from the center to the outside edge).
- 6 • Do not damage the disc surface or attach pieces of sticky tape or paper onto it.
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- 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 of your car audio is not performing to your expectation, this may be caused by those CDs and not a defect in the device itself. Please replace those CDs.

## STEREO RADIO OPERATION (M445) (IF EQUIPPED)



1. POWER ON-OFF, VOLUME Control Knob
2. BAND (AM/FM) Select Buttons
3. TUNE Select/AUDIO Control Knob
4. AUTO SEEK Select Button
5. SCAN Button
6. EQ Button
7. PRESET STATION Select Buttons

LD 455 NA



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## 1. POWER ON-OFF Control Knob

- The radio unit may be operated when the ignition key is in the "ACC" or "ON" position. Press the knob to switch the power on. The LCD shows the radio frequency in radio mode, and displays the CD track in CD mode. To switch the power off, press the knob again.
- Push the FM/AM or CD to turn on that function without pushing the Power ON-OFF control knob.

## VOLUME Control

Rotate the knob clockwise to increase the volume and turn the knob counterclockwise to reduce the volume.

## 2. BAND Selector

### FM Selection Button

Pressing the **FM** button changes the FM1 and FM2 bands.

### AM Select Button

Pressing the **AM** button selects the AM band. AM mode is displayed on the LCD.

## 3. TUNE Select/AUDIO Control Knob

Rotate the knob clockwise to increase the frequency and turn the knob counterclockwise to reduce the frequency.

### Audio Control

Pressing the Audio Control knob changes the BASS, MID-RANGE, TREBLE, FADER and BALANCE 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.

### MID-RANGE Control

To increase the MID-RANGE, rotate the knob clockwise, while to decrease the MID-RANGE, 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

Rotate 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 counterclockwise, left speaker sound will be emphasized (right speaker sound will be attenuated).

#### 4. AUTO SEEK Select Button (Automatic Channel Selection)

Press the AUTO SEEK select button. When the  $\wedge$  side is pressed, the unit will automatically tune to the next higher frequency and when the  $\vee$  side is pressed, it will automatically tune to the next lower frequency.

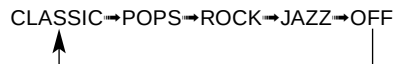
#### 5. SCAN Button

When you Press the button, frequency is changed and the next channel is received automatically.

To stay on a station, press the SCAN button again.

#### 6. EQ Button

Press the EQ button to select the CLASSIC, POPS, ROCK, JAZZ and OFF MODE for the desired tone quality. Each press of the button changes the display as follows;



#### 7. PRESET STATION Select Buttons

Six stations for AM, FM1 and FM2 respectively can be preset in the electronic memory circuit.

#### HOW TO PRESET STATIONS

Six AM and twelve FM stations may be programmed into the memory of the radio. Then, by simply pressing the AM/ FM band select buttons and/or one of the six station select buttons, you may recall any of these stations instantly.

To program the stations, follow these steps:

- Press AM/FM selector to set the band for AM, FM1 and FM2.
- Select the desired station to be stored by seek or manual tuning.
- Determine the preset station select button you wish to use to access that station.

- Press and hold the station select button for more than 0.8 seconds. A select button indicator will show in the display indicating which select button you have depressed. The frequency display will flash after it has been stored into the memory. You should then release the button, and proceed to program the next desired station. A total of 18 stations can be programmed by selecting one AM and two FM stations per button.
- When completed, any preset station may be recalled by selecting AM, FM1 or FM2 band and the appropriate station button.

#### **CAUTION**

- ***Do not place beverages close to the audio system. The audio system mechanism may be damaged if you spill them.***
- ***Do not strike or allow anything to impact the audio system, damage to the system mechanisms could occur.***

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## COMPACT DISC PLAYER OPERATION (M445) (IF EQUIPPED)



LD 455 NA

## 1. CD/AUX Select Button

### CD Select

- Insert the CD with the label facing upward.
- Insert the CD to start CD playback, during radio operation.
- When a disc is in the CD deck, if you press the CD/AUX button the CD player will begin playing even if the radio player is being used.
- The CD/AUX player can be used when the ignition switch is in either the "ON" or "ACC" position.
- Push the CD/AUX button to turn on that function without pushing the Power ON-OFF control knob.

### \* NOTICE

- Do not stick paper or tape etc., on the label side or the recording side of any discs, as it may cause a malfunction.
- The unit cannot play a CD-R(Recordable CD) and CD-RW(Rewritable CD) that is not finalized.

(Continued)

### (Continued)

Please refer to the manual of CD-R/CD-RW recoder or CD-R/CD-RW software for more information on finalization process.

- Depending on the recording status, some CD-Rs/CD-RWs may not be played on this unit.

### AUX-IN Select

- When the AUX device (such as portable MP3 players) is connected to vehicle's AUX-IN terminal, you can switch to AUX-IN mode by pressing CD/AUX button.
- With a CD loaded and AUX device connected at the same time, this button switches between AUX-IN mode and CD mode.

AUX 3.5mm STEREO MINI PLUG



### \* NOTICE

- If the AUX device is not connected, you cannot switch to AUX-IN mode.
- When the AUX device is disconnected while in AUX-IN mode, the unit automatically switches its mode to last selected mode (CD mode or RADIO mode).
- The quality of sound may be defected or distorted when the unit's EQ (BASS/MID/TREBLE) control and AUX device's EQ control are both enabled (not flat). When you want to use the unit's EQ control feature, disable the AUX device's EQ control feature, and vice versa.
- 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.

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## 2. TRACK UP/DOWN Button

- The desired track on the disc currently being played can be selected using the track number.
- Press  $\wedge$  button once to skip forward to the beginning of the next track.

Press  $\vee$  within a second after playback begins to quickly move backward through a CD.

If you press  $\vee$  after more than a second, it will take you to the beginning of the track you are now listening to.

## 3. FF/REW Button

If you want to fast forward or reverse through the compact disc track, push and hold the FF or REW button.

When you release the button, the compact disc player will resume playing.

## 4. REPEAT (RPT) Button

- To repeat the track you are currently listening to, press the RPT button. To cancel, press it again.
- If you do not release RPT operation when the track ends, it will automatically be replayed. This process will be continued until you push the button again or turn the Power OFF then ON.

## 5. CD SCAN Button

- To playback the first 10 seconds of each track, press the CD SCAN button.
- Press the CD SCAN button again within 10 sec. when you have reached the desired track.

## 6. CD EJECT Button

When the  button is pressed with a CD loaded, the CD will eject.

Forcing to eject : To force to eject a CD, press this button for more than 3 seconds.

(Do this only when a CD is jammed and you can not eject it in the normal way - e.g.) in case that you have inserted 2 CDs by mistake)

## 7. RANDOM (RDM) Button

With random, you can listen to the tracks in random, rather than sequential order.

To use random, do the following:

Press the RDM button to listen to recorded tracks in random sequence. Press RDM again to cancel or turn the power OFF then ON. The unit defaults to playing tracks in sequential order.

## \* NOTICE

- To assure proper operation of the unit, keep the vehicle interior temperature within a normal range by using the vehicle's air conditioning or heating system.
- When replacing the fuse, replace it with a fuse having the correct capacity.
- All stored bookmarks are all erased when the car battery is disconnected or power to the vehicle is lost. If this occurs, the bookmarks will have to be reset.
- This equipment is designed to be used only in a 12 volt DC battery system with negative ground.
- This unit is made of precision parts. Do not attempt to disassemble or adjust any parts.
- When driving your vehicle, be sure to keep the volume of the unit set low enough to allow you to hear sounds coming from the outside.
- Do not expose this equipment (including the speakers and CD) to water or excessive moisture.

## CAUTION

- *Do not insert warped or poor quality discs into the CD player as damage to the unit may occur.*
- *Do not insert anything like coins into the player slot as damage to the unit may occur.*
- *Do not place beverages close to the audio system. The playback mechanism may be damaged if you spill them.*
- *Do not strike or allow anything to impact the audio system, damage to the system mechanisms could occur.*
- *Off-road or rough surface driving may cause the compact disc to skip. Do not use the compact disc when driving in such conditions as damage to the compact disc face could occur.*

(Continued)

(Continued)

- *Do not attempt to grab or pull the compact disc out while the disc is being pulled into the audio unit by the self-loading mechanism. Damage to the audio unit and compact disc could occur.*
- *Avoid using recorded compact discs in your audio unit. Original compact discs are recommended for best results.*

## WARNING

When driving your vehicle, be sure to keep the volume of the unit set low enough to allow you to hear sounds coming from the outside.

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## STEREO RADIO OPERATION (M445MP3) (IF EQUIPPED)



1. POWER ON-OFF, VOLUME Control Knob
2. AUDIO Select Button
3. BAND Select Button
4. SCAN Button
5. EQ Button
6. AUTO SEEK Select Button
7. TUNE Select/AUDIO Control knob
8. PRESET STATION Select Buttons

LD 455MP3 NA

## 1. POWER ON-OFF Control Knob

- The radio unit may be operated when the ignition key is in the "ACC" or "ON" position. Press the button to switch the power on. The LCD shows the radio frequency in the radio mode or CD/MP3 track in the CD/MP3 mode. To switch the power off, press the button again.
- Push the FM/AM, TAPE or CD/MP3 to turn on that function without pushing the Power ON-OFF control knob.

### VOLUME Control

Rotate the knob clockwise to increase the volume and turn the knob counterclockwise to reduce the volume.

## 2. AUDIO Select Button

Pressing the AUDIO button changes the BASS, MID-RANGE, TREBLE, FADER and BALANCE 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.

### MID-RANGE Control

To increase the MID-RANGE, rotate the knob clockwise, while to decrease the MID-RANGE, 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).

## 3. BAND Select Button

Pressing the FM/AM button changes the AM, FM1 and FM2 bands. The mode selected is shown on the display.

## 4. SCAN Button

When you press the button, frequency is changed and the next channel is received automatically.

To stay on a station, press the SCAN button again.

## 5. EQ Button

Press the EQ button to select the CLASSIC, POPS, ROCK, JAZZ and OFF MODE for the desired tone quality. Each press of the button changes the display as follows;

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## 6. AUTO SEEK Select Button (Automatic Channel Selection)

Press the AUTO SEEK select button. When the  $\wedge$  side is pressed, the unit will automatically tune to the next higher frequency and when the  $\vee$  side is pressed, it will automatically tune to the next lower frequency.

CLASSIC  $\rightarrow$  POPS  $\rightarrow$  ROCK  $\rightarrow$  JAZZ  $\rightarrow$  OFF



## 7. TUNE Select/Audio Control Knob

Rotate the knob clockwise to increase the frequency and turn the knob counterclockwise to reduce the frequency.

## 8. PRESET STATION Select Buttons

Six stations for AM, FM1 and FM2 respectively can be preset in the electronic memory circuit.

## HOW TO PRESET STATIONS

Six AM and twelve FM stations may be programmed into the memory of the radio. Then, by simply pressing the AM/FM band select button and/or one of the six station select buttons, you may recall any of these stations instantly. To program the stations, follow these steps:

- Press AM/FM selector to set the band for AM, FM1 and FM2.
- Select the desired station to be stored by seek or manual tuning.
- Determine the preset station select button you wish to use to access that station.
- Press and hold the station select button for more than 0.8 seconds. A select button indicator will show in the display indicating which select button you have depressed. The frequency display will flash after it has been stored in to the memory. You should then release the button, and proceed to program the next desired station. A total of 18 stations can be programmed by selecting one AM and two FM stations per button.

- When completed, any preset station may be recalled by selecting AM, FM1 or FM2 band and the appropriate station button.

## **CAUTION**

- ***Do not place beverages close to the audio system. The playback mechanism may be damaged if you spill them.***
- ***Do not strike or allow anything to impact the audio system, damage to the system mechanisms could occur.***

# COMPACT DISC PLAYER (M455MP3) (IF EQUIPPED) - COMPATIBLE WITH MP3/WMA/AAC/WAVE



1. AUDIO/MP3 CD or AUX Select Button
2. TRACK UP/DOWN Button
3. FF/REW Button
4. REPEAT (RPT) Button
5. RANDOM (RDM) Button
6. BOOKMARK (MARK) Button
7. SCROLL Button
8. EQ Button
9. CD EJECT Button
10. CD SCAN Button
11. FILE SEARCH Knob  
(TUNE Select Knob)
12. DIRECTORY SEARCH (DIR) Button

LD 455MP3 NA

## 1. AUDIO/MP3 CD or AUX Select Button

### AUDIO/MP3 CD Select

- Insert the CD with the label facing upward.
- Insert the CD to start CD playback, during radio operation.
- If you press the CD/AUX button while a disc is in the CD deck, the CD player will begin playing even if the radio or cassette player is being used.
- The CD/AUX player can be used when the ignition switch is in either the "ON" or "ACC" position.
- Push the CD/AUX button to turn on that function without pushing the Power ON-OFF control knob.

### \* NOTICE

- Do not stick paper or tape etc., on the label side or the recording side of any discs, as it may cause a malfunction.
- The unit can play a multi-session CD-R (recordable CD) and CD-RW (rewritable CD) that consists of more than two sessions.

(Continued)

### (Continued)

Please refer to the manual of CD-R/CD-RW recoder or CD-R/CD-RW software for more information on finalization process.

- Depending on the recording status, some CD-Rs/CD-RWs may not be played on this unit.

### \* NOTICE

Playback of MP3, AAC and WMA file formats are supported. Load to play time for these formats may be longer due to the compressed nature of these discs.

### AUX-IN Select

- When the AUX device (such as portable MP3 players) is connected to vehicle's AUX-IN terminal, you can switch to AUX-IN mode by pressing CD/AUX button.
- With a CD loaded and AUX device connected at the same time, this button switches between AUX-IN mode and CD mode.

AUX 3.5mm STEREO MINI PLUG



### \* NOTICE

- If the AUX device is not connected, you cannot switch to AUX-IN mode.
- When the AUX device is disconnected while in AUX-IN mode, the unit automatically switches its mode to last selected mode (CD mode or RADIO mode).
- The quality of sound may be defective or distorted when the unit's EQ (BASS/MID/TREBLE) control and AUX device's EQ control are both enabled (not flat). When you want to use the unit's EQ control feature, disable the AUX device's EQ control feature, and vice versa.
- 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.

## 2. TRACK UP/DOWN Button

- The desired track on the disc currently being played can be selected using the track number.
- Press  $\wedge$  button once to skip forward to the beginning of the next track.

Press  $\vee$  within a second after playback begins to quickly move backward through a CD.

If you press  $\vee$  after more than a second, it will take you to the beginning of the file you are now listening to.

## 3. FF/REW Button

If you want to fast forward or reverse through the compact disc track, push and hold the FF or REW button.

When you release the button, the compact disc player will resume playing.

## 4. REPEAT (RPT) Button

- To repeat the track you are currently listening to, press the RPT button. To cancel, press it again.

- To repeat the music within selected folder, press the RPT button for more than 0.8 seconds. To cancel, press it again. (MP3 CD only)
- If you do not release RPT operation when the track ends, it will automatically be replayed.

This process will be continued until you push the button again or turn the power OFF then ON.

## 5. RANDOM (RDM) Button

With random, you can listen to the tracks in random, rather than sequential order.

To use random, do the following:

- Press the RDM button to listen to recorded tracks in random sequence. Press RDM again to cancel or turn the power OFF then ON. The unit defaults to playing tracks in sequential order.
- To listen to the music within the selected folder in random order, press the RDM button within a second. To cancel, press it again or turn the power OFF then ON. (MP3 CD only)

## 6. BOOKMARK (MARK) Button

When the CD player unit is operating, the desired track on the disc can be bookmarked by using the MARK button. (MP3 CD only)

- Press the MARK button for more than 0.8 seconds to bookmark the desired track.

"M" will be displayed on the LCD and "MEMORY(1~50)" will display for approximately five seconds with beep sound.

To play a bookmarked track, press the MARK button within 0.8 seconds and select the bookmarked track to play.

- To erase a bookmarked track, press the MARK button for more than 0.8 seconds. The unit will beep once when the bookmark is erased.

## \* NOTICE

**Tracks stored on Mark Memory will be automatically erased after you eject CDs that contain those tracks.**

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## 7. SCROLL Button

Press the button, and you can check the file names with more than 16 characters on MP3 CD(max 34 characters.).

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The button doesn't work on file names less than 16 characters.

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## 8. EQ Button

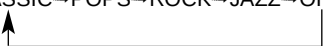
Press the EQ button to select the CLASSIC, POPS, ROCK, JAZZ and OFF MODE for the desired tone quality. Each press of the button changes the display as follows;

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CLASSIC→POPS→ROCK→JAZZ→OFF



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## 9. CD EJECT Button

When the  button is pressed with a CD loaded, the CD will eject.

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Forcing to eject : To force to eject a CD, press this button for more than 3 seconds.

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(Do this only when a CD is jammed and you can not eject it in the normal way - e.g.) in case that you have inserted 2 CDs by mistake)

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## 10. CD SCAN Button

- To playback the first 10 seconds of each track, press the CD SCAN button more than 0.8 seconds.
- To playback the first 10 seconds of each track in the selected folder, press the CD SCAN button within 0.8 seconds. (MP3 CD only)
- Press the CD SCAN button again within 10 sec. when you have reached the desired track.

## 11. FILE SEARCH Knob (TUNE Select Knob)

- You can skip the track (file) by turning the FILE SEARCH knob clockwise or counterclockwise.

After selecting the desired track (file), press the FILE SEARCH knob to playback the track (file).

If you do not press the FILE SEARCH knob within five seconds, the search will stop.

## 12. DIRECTORY SEARCH (DIR) Button

- You can move through the folder by pushing the DIR button to up () and down() .
- After moving the desired folder, press the FILE SEARCH knob to play back in the selected folder. If you do not press the FILE SEARCH knob within 5 seconds, the folder searching function will be released. It can not be operated in a single folder.

**\* NOTICE**

- To assure proper operation of the unit, keep the vehicle interior temperature within a normal range by using the vehicle's air conditioning or heating system.
- When replacing the fuse, replace it with a fuse having the correct capacity.
- All stored bookmarks are all erased when the car battery is disconnected or power to the vehicle is lost. If this occurs, the bookmarks will have to be reset.
- This equipment is designed to be used only in a 12 volt DC battery system with negative ground.
- This unit is made of precision parts. Do not attempt to disassemble or adjust any parts.
- Do not expose this equipment (including the speakers and tape) to water or excessive moisture.

**CAUTION**

- *Do not insert warped or poor quality discs into the CD player as damage to the unit may occur.*
- *Do not insert anything like coins into the player slot as damage to the unit may occur.*
- *Do not place beverages close to the audio system. The playback mechanism may be damaged if you spill them.*
- *Do not strike or allow anything to impact the audio system, damage to the system mechanisms could occur.*
- *Off-road or rough surface driving may cause the compact disc to skip. Do not use the compact disc when driving in such conditions as damage to the compact disc face could occur.*

*(Continued)**(Continued)*

- *Do not attempt to grab or pull the compact disc out while the disc is being pulled into the audio unit by the self-loading mechanism. Damage to the audio unit and compact disc could occur.*
- *Avoid using recorded compact discs in your audio unit. Original compact discs are recommended for best results.*

**⚠ WARNING**

When driving your vehicle, be sure to keep the volume of the unit set low enough to allow you to hear sounds coming from the outside.

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## RADIO AND AUDIO QUALITY/VOLUME CONTROL, EQ (HMP600) (IF EQUIPPED)



LD 600 NA

## 1. Power on/off and volume control button

When the ignition switch is on ACC or ON, push this button to power on. Push this button again to power off.

## 2. Volume control button

Rotate this button clockwise to volume up and anti-clockwise to volume down.

## 3. Radio selection button (FM/AM)

Push [FM/AM] button for FM or AM radio. Each press will change FM1→FM2→AM→FM1 and repeats.

## 4. Scan button

Push this button to automatically select available stations and remains for 5 seconds from current station. Push again to stay on current station.

## BSM button

Push [BSM] button to start automatic search from current station. The stations are memorized in 1~6 pre-set buttons from smallest station. Number 1 pre-set station will be on after the search and memory.

## 5. Automatic station selection button (Seek)

Push [seek^] button, to increase the band and [seekv] button to decrease the band. It automatically finds available station. If the station is already memorized in pre-set memory, it will show the pre-set number.

## 6. Manual station selection button (Tune)

Rotate this tune button clockwise 1 click to increase band 1 step and anti-clockwise to decrease.

## Regular export

- FM: Move by 0.1MHz  
(87.5→87.6→87.7...87.7→87.6→87.5)

- AM: Move by 9 KHz  
(531→540→549...549→540→531)

## North America export (Columbian units FM move by 0.1 MHz)

- FM: Move by 0.2MHz  
(87.5→87.7→87.9...87.9→87.7→87.5)
- AM: Move by 10 KHz  
(530→540→550...550→540→530)

## 7. Pre-set button (1~6)

Push these buttons to listen to memorized stations. Push pre-set button for more than 1.5 seconds (with a beep) to memorize current station.

## 8. LCD display

It indicates FM1/FM2/AM along with current band, pre-set channel, FM stereo with "ST".



## 9. Bass control/ left, right audio control

Push this button to select BASS→MIDDLE→TREBBLE→FADER→BALANCE on LCD display screen.

|        |                                                                                                          |
|--------|----------------------------------------------------------------------------------------------------------|
| BASS   | Rotate the volume button clockwise to increase Bass sound and anti-clockwise to decrease Bass sound.     |
| MIDDLE | Rotate the volume button clockwise to increase middle sound and anti-clockwise to decrease Middle sound. |

|         |                                                                                                                       |
|---------|-----------------------------------------------------------------------------------------------------------------------|
| TREBLE  | Rotate the volume button clockwise to increase high sound and anti-clockwise to decrease high sound.                  |
| BALANCE | Rotate the volume button clockwise to enable right speakers and anti-clockwise to enable left speakers.               |
| FADER   | Rotate the volume button clockwise to increase back speaker sound and anti-clockwise to increase front speaker sound. |

# MP3 CDC (HMP600) (IF EQUIPPED)



1. CD loading slot
2. CD load button
3. CD eject button
4. LCD Display
5. CD/AUX selection button
6. CD change button
- 7,8. Fast Backward and Fast Forward button
9. Previous track automatic selection button
10. Next track automatic selection button
11. Repeat button
12. SCAN button
13. MARK button
14. RDM button
15. FILE search knob
16. SCROLL button
17. Directory search button

LD 600

## 1. CD loading slot

Push [LOAD] button to open CD slot. Please face printed side upward and gently push in. This CDC supports only 12 cm CDs.

## 2. CD load button

Pressign the "LODE" button opens an empty tray of lowest order in the CDC deck. When a CD is loaded, the slot closes and the CD plays. To load CDs in all empty slots, press the "LOAD" button for more than 1.5 seconds. Be sure to insert only one CD into slot at a time. Then, lastly loaded CD is played. IF you do not load CDs or press any button for 10 seconds after pressing the "LOAD" button, the LOAD function will be canceled.

## 3. CD eject button

Push ▲ button to eject the CD during CD playback. Push this button for more than 1.5 seconds to eject all the CDs. If CD number 3 is currently playing, ejecting order is 3,4,5,6,1,2.

## 4. LCD display

It indicates location of CD in CD deck. When loading and ejecting CD, corresponding CD indicator number blinks.

## 5. CD/AUX selection button

### *CD Select*

When power is off while CD is loaded or radio/AUX is playing, push [CD] button to play CDC. When there is no available CD, "no disc" message will be indicated for 2 seconds and returns to previous mode.

### *AUX-IN Select*

- When the AUX device (such as portable MP3 players) is connected to vehicle's AUX-IN terminal, you can switch to AUX-IN mode by pressing CD/AUX button.
- With a CD loaded and AUX device connected at the same time, this button switches between AUX-IN mode and CD mode.

AUX

3.5mm STEREO MINI PLUG



### **\* NOTICE**

- If the AUX device is not connected, you cannot switch to AUX-IN mode.
- When the AUX device is disconnected while in AUX-IN mode, the unit automatically switches its mode to last selected mode (CD mode or RADIO mode).
- The quality of sound may be defected or distorted when the unit's EQ (BASS/MID/TREBLE) control and AUX device's EQ control are both enabled (not flat). When you want to use the unit's EQ control feature, disable the AUX device's EQ control feature, and vice versa.

**6. CD change button**

Push [DISC^] button to change to next CD (From CD 1 to CD 2).

Push [DISCv] button to change to previous CD (From CD 2 to CD 1). If changer is not fully load, the changes will be next available CD.

**7. Fast Backward button**

During CD playback, push [REW] button to fast backward. For first 5 seconds 5X and 15X after 5 seconds. While the button is pressed sound is reduced to 12dB.

**8. Fast Forward button**

During CD playback, push [FF] button to fast forward. For first 5 seconds 5X and 15X after 5 seconds. While the button is pressed sound is reduced to 12dB.

**9. Previous track automatic selection button**

Push [TRACKv] button to go to beginning of currently playing track. Push again to move to beginning of previous track.

**10. Next track automatic selection button**

Push [SEEK^] button to go to move to beginning of next track.

**11. Repeat button**

Push [RPT] button to repeat current track. Push again to disable.

**12. SCAN button**

Push [SCAN] button to listen each track for 10 seconds. Push again to disable.

**13. Book Mark button**

This is selecting desired tracks. Select desired tracks and push [MARK] button for more than 2 seconds. [M] symbol will be indicated and push for within 1 second to play [M] selected tracks.

**14. RDM button**

This button randomly selects track.

**\* NOTICE**

- Using CD-R/CD-RW, it may not be played according to CD manufacturer, or how it was created. If it does not play, please avoid using it. It could cause problems on the system.

**15. File search knob**

Turn knob left and right to change track. Push within 5 seconds to play selected track. It will return to currently playing track number after 5 seconds.

**16. Scroll button**

If the file is too long for MP3/WMA files, push [SCROLL] button to indicate on LCD display screen.

**17. Directory search button**

For MP3/WMA files, if there are more than 2 directories in a CD, push [Directory Search] buttons to search.

Select desired directory and use "File Search knob" to search file. Push "File Search knob" within 5 seconds otherwise it will go back to current playing track.

Ignition switch / 4-2  
Starting the engine / 4-4  
Manual transaxle / 4-5  
Automatic transaxle / 4-6  
Brake system / 4-12  
Steering wheel / 4-18  
Cruise control / 4-21

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## Driving your vehicle

4

Traction control system / 4-25  
Instrument cluster / 4-28  
Gauges / 4-29  
Warnings and indicators / 4-31  
Lighting / 4-39  
Wipers and washers / 4-43  
Defroster / 4-45  
Hazard warning flasher / 4-46  
Manual climate control system / 4-47  
Windshield defrosting and defogging / 4-56  
Theft-alarm system / 4-58

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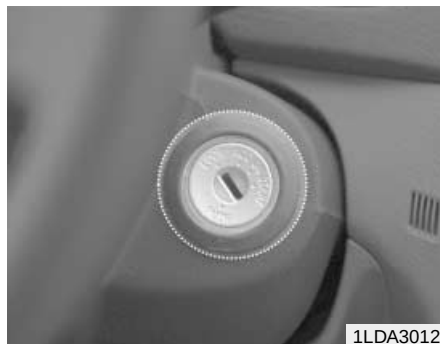
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## IGNITION SWITCH



### Illuminated ignition switch

Whenever a door is opened, the ignition switch will be illuminated for your convenience, provided the ignition switch is not in the ON position. The light will go off approximately 30 seconds after closing the door or when the ignition switch is turned on.



### Ignition switch and anti-theft steering column lock

#### *Ignition switch position*

#### **LOCK**

The steering wheel locks to protect against theft. The ignition key can be removed only in the LOCK position. When turning the ignition switch to the LOCK position, push the key inward at the ACC position and turn the key toward the LOCK position.

#### **ACC (Accessory)**

The steering wheel is unlocked and electrical accessories are operative.

#### **ON**

The warning lights can be checked before the engine is started. This is the normal running position after the engine is started.

*Do not leave the ignition switch ON if the engine is not running to prevent battery discharge.*

#### **START**

Turn the ignition key to the START position to start the engine. The engine will crank until you release the key; then it returns to the ON position. The brake warning lamp can be checked in this position.

#### **\* NOTICE**

**If difficulty is experienced in turning the ignition key to the START position, turn the steering wheel right and left to release resistance and then turn the key.**

**⚠ WARNING - Ignition key**

- Never turn the ignition switch to LOCK or ACC while the vehicle is moving. This would result in loss of directional control and braking function, which could cause an immediate accident.
- The anti-theft steering column lock is not a substitute for the parking brake. Before leaving the driver's seat, always make sure the shift lever is engaged in P (Park), set the parking brake fully and shut the engine off. Unexpected and sudden vehicle movement may occur if these precautions are not taken.

(Continued)

**(Continued)**

- Never reach for the ignition switch, or any other controls through the steering wheel while the vehicle is in motion. The presence of your hand or arm in this area could cause a loss of vehicle control, an accident and serious bodily injury or death.
- Do not place any movable objects around the driver's seat as they may move while driving, interfere with the driver and lead to an accident.

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## STARTING THE ENGINE

### **WARNING**

**Always wear appropriate shoes when operating your vehicle. Unsuitable shoes (high heels, ski boots, etc.) may interfere with your ability to use the brake and accelerator pedal, and the clutch (if equipped).**

1. Make sure the parking brake is applied.

2. **Manual Transaxle** - Depress the clutch pedal fully and shift the transaxle into Neutral. Keep the clutch pedal depressed while turning the ignition switch to the start position. The starter will not operate if the clutch pedal is not fully depressed.

**Automatic Transaxle** - Place the transaxle shift lever in P (Park). Depress the brake pedal fully.

*You can also start the engine when the shift lever is in the N (Neutral) position.*

3. Turn the ignition switch to START and hold it there until the engine starts (a maximum of 10 seconds), then release the key.

4. 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**.*

### **CAUTION**

*If the engine stalls while you are in motion, do not attempt to move the shift lever to the P (Park) position. If traffic and road conditions permit, you may put the shift lever in the N (Neutral) position while the vehicle is still moving and turn the ignition switch to the START position in an attempt to restart the engine.*

### **CAUTION**

*Do not engage the starter for more than 10 seconds. If the engine stalls or fails to start, wait 5 to 10 seconds before re-engaging the starter. Improper use of the starter may damage it.*

The starter will not operate if:

- **Manual Transaxle** - the clutch pedal is not fully depressed.
- **Automatic Transaxle** - the shift lever is NOT in the P (Park) or N (Neutral) position.



## MANUAL TRANSAXLE (IF EQUIPPED)



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### Manual Transaxle Operation

The manual transaxle has five forward gears.

Press the clutch pedal down fully while shifting, then release it slowly.

A special safety feature prevents inadvertent shifting from 5 (Fifth) to R (Reverse). The gearshift lever must be returned to the neutral position before shifting into R (Reverse).

*Make sure the vehicle is completely stopped before shifting into R (Reverse).*

*Never operate the engine with the tachometer (rpm) in the red zone.*

### CAUTION

*To avoid premature clutch wear and damage, do not drive with your foot resting on the clutch pedal. Also, don't use the clutch to hold the vehicle stopped on an upgrade, while waiting for a traffic light, etc.*

### WARNING - Manual transaxle

**Before leaving the driver's seat, always set the parking brake fully and shut the engine off. Then make sure the transaxle is shifted into 1st gear on level or uphill ground or into R (Reverse) gear on downhill ground. Unexpected and sudden vehicle movement can occur if these precautions are not followed in the order identified.**

### Downshifting

When you must slow down in heavy traffic or while driving up steep hills, downshift before the engine starts to "labor". Downshifting reduces the chance of stalling and gives better acceleration when you again need to increase your speed. When the vehicle is traveling down steep hills, downshifting helps maintain safe speed and prolongs brake life.

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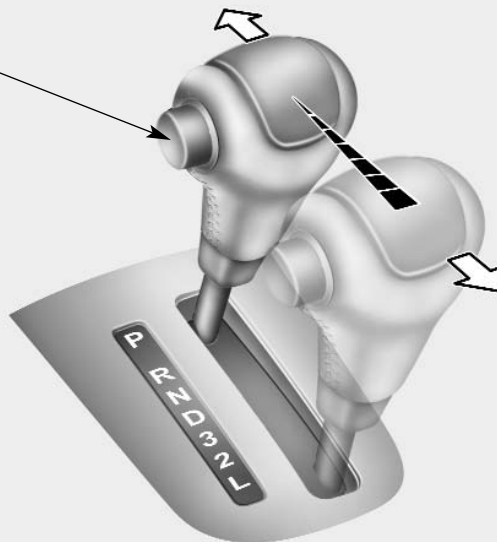
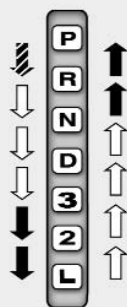
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## AUTOMATIC TRANSAXLE (IF EQUIPPED)

Lock release button  
Prevents shift lever movement  
without first depressing the button.



-  Depress the brake pedal and push the button when shifting.
-  The lock release button must be depressed while moving the shift lever.
-  The shift lever can be moved without depressing the lock release button.

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## Automatic transaxle operation

All normal forward driving is done with the shift lever in the D (Drive) position.

To move the shift lever from the P (Park) position, the brake pedal must be depressed and the lock release button must be depressed.

*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. Unexpected and sudden vehicle movement can occur if these precautions are not followed in the order identified.**

### **CAUTION**

- ***To avoid damage to your transaxle, do not accelerate the engine in R (Reverse) or any forward gear position with the brakes on.***
- ***When stopped on an upgrade, do not hold the vehicle stationary with engine power. Use the service brake or the parking brake.***
- ***Do not shift from N (Neutral) or P (Park) into D (Drive), or R (Reverse) when the engine is above idle speed.***

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## Transaxle ranges

### *P (park)*

This position locks the transaxle and prevents the front wheels from rotating. Always come to a complete stop before shifting into this position.

#### **WARNING**

- 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.
- Do not use the P (Park) position in place of the parking brake. Always make sure the shift lever is latched in the P (Park) position so that it cannot be moved unless the lock release button is pushed in, AND set the parking brake fully.

(Continued)

#### (Continued)

- Before leaving the driver's seat, always make sure the shift lever is in the P (PARK) position. Set the parking brake fully, shut the engine off and take the key with you. Unexpected and sudden vehicle movement can occur if you do not follow these precautions in the order specified.

#### **CAUTION**

*The transaxle may be damaged if you shift into P (Park) while the vehicle is in motion.*

### *R (reverse)*

Use this position to drive the vehicle backward.

#### **CAUTION**

*Always come to a complete stop before shifting into or out of R (Reverse); you may damage the transaxle if you shift into R while the vehicle is in motion, except as explained in "Rocking the Vehicle", in this manual.*

### *N (neutral)*

With the gearshift in the N position, the wheels and transaxle are not locked. 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 4-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.

**3 (Third Gear)**

Move shift lever to this position for towing a trailer during hill climbing.

This position also provides engine braking when going down hills.

**2 (Second Gear)**

Use 2 (Second Gear) for more power when climbing hills and for increased braking when going down hills. This position also helps reduce wheel spin on slippery surfaces. When the shift lever is placed in 2 (Second Gear), the transaxle will automatically shift from first to second gear.

**L (Low)**

Move the shift lever to this position in hard pulling situations and for climbing steep grades.

**⚡ CAUTION**

***Do not exceed the recommended maximum speeds in 2 (Second Gear) or L (Low). Operating the vehicle at speeds above the maximum recommended, for 2 (Second Gear) or L (Low) may cause excessive heat to develop which could result in damage to or failure of the automatic transaxle.***

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## 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.

## Shift lock system

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 out of P (Park):

1. Depress and hold the brake pedal.
2. Start the engine or turn the ignition to the ON position.
3. Depress the lock release button and move the shift lever.

When the ignition switch is in the LOCK position, the transaxle cannot be shifted from P (Park).

## Ignition key interlock system

The ignition key cannot be removed unless the shift lever is in the P (Park) position. If the ignition switch is in any other position, the key cannot be removed.

### WARNING

**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 which could injure persons in or around the car.**

## 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.

### 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**  
Pulling 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.



### **WARNING - Brakes**

- Do not drive with your foot resting on the brake pedal. This will create abnormal high brake temperatures, excessive brake lining and pad wear, and increased stopping distances.
- When descending a long or steep hill, shift to a lower gear and avoid continuous application of the brakes. Continuous brake application will cause the brakes to overheat and could result in a temporary loss of braking performance.

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- **Wet brakes may result in the vehicle not slowing down at the usual rate and pulling to one side when the brakes are applied. Applying the brakes lightly will indicate whether they have been affected in this way. Always test your brakes in this fashion after driving through deep water. To dry the brakes, apply them lightly while maintaining a safe forward speed until brake performance returns to normal.**

### Disc brakes wear indicator

Your vehicle has disc brakes.

When your brake pads are worn and it's time for new pads, 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

*To avoid costly brake repairs, do not continue to drive with worn brake pads.*

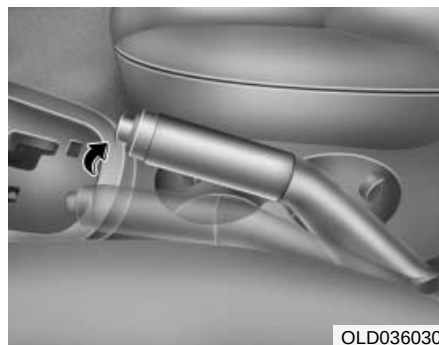
### WARNING - Brake wear

**This brake wear warning sound means your vehicle needs service. If you ignore this audible warning, you will eventually lose braking performance, which could lead to a serious accident.**

### CAUTION

*Always replace brake pads as complete front or rear axle sets.*



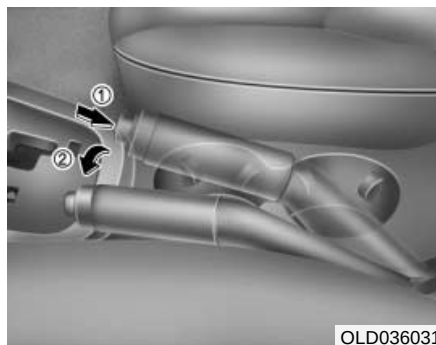


### Parking brake

To engage the parking brake, first apply the foot brake and then without pressing the release button in, pull the parking brake lever up as far as possible. In addition it is recommended that when parking the vehicle on a gradient, the shift lever should be positioned in the appropriate low gear on manual transaxle vehicles or in the P (Park) position on automatic transaxle vehicles.

### **CAUTION**

*Driving with the parking brake applied will cause excessive brake pad and brake rotor wear.*



To release the parking brake, first apply the foot brake and pull up the parking brake lever slightly.

Secondly, depress the release button and lower the parking brake lever while holding the button.

### **WARNING - Parking brake**

- To prevent unintentional movement when stopped and leaving the vehicle, do not use the gearshift lever in place of the parking brake. Set the parking brake AND make sure the gearshift lever is securely positioned in 1st (First) gear or R (Reverse) for manual transaxle equipped vehicles and in P (Park) for automatic transaxle equipped vehicles.
- Never allow a person who is unfamiliar with the vehicle or children to touch the parking brake. If the parking brake is released unintentionally, serious injury may occur.

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Check the brake warning light by turning the ignition switch ON (do not start the engine). This light will be illuminated 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, there may be a malfunction in the brake system. Immediate attention is necessary.

If at all possible, cease 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.

## Parking on curbed streets

- When parking your vehicle on an uphill grade, park as close to the curb as possible and turn the front wheels away from the curb so that the front wheels will contact the curb if the vehicle moves backward.
- When parking your vehicle on a downhill grade, park as close to the curb as possible and turn the front wheels toward the curb so that the front wheels will contact the curb if the vehicle moves forward.

## Anti-lock brake system (ABS) (if equipped)

### **WARNING - ABS Brakes**

Your ABS is not a substitute for good driving judgement. You can still have an accident. In fact, your ABS system will probably not be able to prevent an accident in the following driving conditions:

- Dangerous driving, such as neglecting safety precautions, speeding, or driving too close to the vehicle in front of you.
- Driving at high speed in situations providing considerably less traction, such as wet conditions where hydroplaning could occur.

(Continued)

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- Driving too fast on poor road surfaces. The ABS is designed to improve maximum braking effectiveness on typical highways and roads in good condition. On poor road surfaces in poor condition, the ABS may actually reduce braking effectiveness.

The ABS system 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 system is active.

In order to obtain the maximum benefit from your ABS system 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 warrants and allow the ABS system to control the force being delivered to the brakes.

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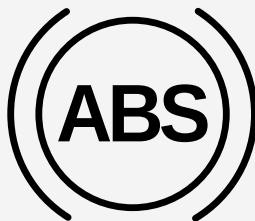
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- Even with the anti-lock brake system, your vehicle still requires sufficient stopping distance. Always maintain a safe distance from the vehicle in front of you.
- Always slow down when cornering. The anti-lock brake system cannot prevent accidents 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.



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### **CAUTION**

- *If the ABS warning light is on and stays on, you may have a problem with the ABS system. In this case, however, your regular brakes will work normally.*
- *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 system. Contact an authorized Kia dealer as soon as possible.*

### **CAUTION**

- *When you drive on a road having poor traction, such as an icy road, and operate your brakes continuously, the ABS will be active continuously and the ABS warning light may illuminate. Pull your car over to a safe place and stop the engine.*
- *Restart the engine. If the ABS warning light is off, then your ABS system 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 is malfunctioning.

- Do not pump your brakes!
- Have the battery recharged before driving the vehicle.

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## STEERING WHEEL

### Power steering

Power Steering uses energy from the engine 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.

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.

### CAUTION

- *Never hold the steering wheel against a stop (extreme right or left turn) for more than 5 seconds with the engine running. Holding the steering wheel for more than 5 seconds in either position may cause damage to the power steering pump.*
- *If the power steering drive belt breaks or if the power steering pump malfunctions, the steering effort will greatly increase.*

### \* NOTICE

If the vehicle is parked for extended periods outside in cold weather (below -10 °C/14 °F), the power steering may require increased effort when the engine is first started. This is caused by increased fluid viscosity due to the cold weather and does not indicate a malfunction.

When this happens, increase the engine RPM by depressing accelerator until the RPM reaches 1,500 rpm then release or let the engine idle for two or three minutes to warm up the fluid.

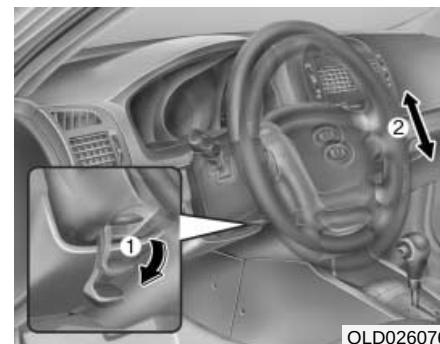
## Tilt steering (if equipped)

A tilt steering wheel allows you to adjust the steering wheel before you drive. You can also raise it to the highest level 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**

- **Never adjust the angle of steering wheel while driving. You may lose your steering control and cause severe personal injury or accidents.**
- **After adjusting, push the steering wheel both up and down to be certain it is locked in position.**



To change the steering wheel angle, pull down (1) the lock release lever, adjust the steering wheel to the desired angle (2), 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.

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## **CAUTION**

- *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.*
- *Do not strike the horn severely to operate it, or hit it with your fist. Do not press on the horn with a sharp-pointed object.*

### **Horn**

To sound the horn, press the horn symbol on your steering wheel.

Check the horn regularly to be sure it operates properly.



## CRUISE CONTROL (IF EQUIPPED)

The cruise control system allows you to program the vehicle to maintain a constant speed without resting your foot on the accelerator pedal.

This system is designed to function above approximately 40 km/h (24 mph).

### **WARNING** - Cruise control

Do not use the cruise control feature under the following conditions:

- Heavy or unsteady traffic
- Slippery or winding roads
- Situations that involve varying speeds
- Pay particular attention during the down-hill driving with cruise control system as the vehicle speed can be increased gradually.



### To set cruise control speed:

1. Push 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 (24 mph).

### **WARNING**

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 cruise control is not in use.

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3. Push down the SET/COAST switch, and release it at the speed you want. The “SET” indicator light in the instrument cluster will illuminate. Release the accelerator at the same time. The desired speed will automatically be maintained.

*The SET function cannot be activated until approximately 2 seconds after the CRUISE ON-OFF button has been engaged.*

*On a steep grade, the vehicle may momentarily slow down while going downhill.*



**To cancel cruise control, do one of the following:**

- Press the brake pedal.
- Shift into N (Neutral).
- Pull the CANCEL switch.

*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, push up the RES/ACC switch located on your steering wheel. You will return to your previously preset speed.*

**To turn cruise control off, do one of the following:**

- Push the CRUISE ON-OFF button (the CRUISE indicator light in the instrument cluster will go OFF).
- Turn the ignition off.

*Both of these actions cancel cruise control operation. If you want to resume cruise control operation, repeat the steps provided in “To Set Cruise Control Speed” on the previous page.*



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### To increase cruise control set speed:

Follow either of these procedures:

- Push up the RES/ACC switch and hold it. Your vehicle will accelerate. Release the switch at the speed you want.
- Push up the RES/ACC switch and release it immediately. The cruising speed will increase 1 mph (1.6 km/h) by one touch and will be memorized to the reset speed.

### 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 cruise control operation or change the set speed.

To return to the set speed, take your foot off the accelerator.



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### To decrease the cruising speed:

Follow either of these procedures:

- Push down the SET/COAST switch and hold it. Your vehicle will gradually slow down. Release the switch at the speed you want to maintain.
- Push down the SET/COAST switch and release it immediately. The cruising speed will decrease 1 mph (1.6 km/h) by one touch and will be memorized to the reset speed.

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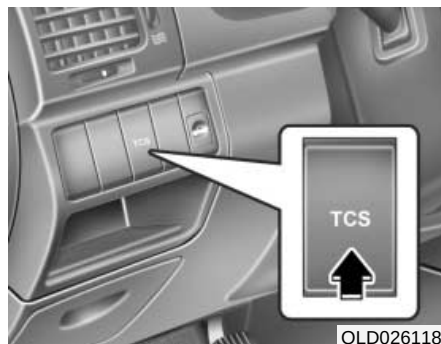


### **To resume cruising speed at more than 24 mph (40 km/h):**

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 the RES/ACC switch is pushed up.

It will not resume, however, if the vehicle speed has dropped below 24 mph (40km/h).

## TRACTION CONTROL SYSTEM (IF EQUIPPED)



The Traction Control System (TCS) helps the vehicle accelerate on slippery road surfaces by preventing the drive wheels from spinning excessively. It also provides improved driving force and steering.

### TCS operation

#### TCS ON condition

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- When the ignition is turned ON, TCS and TCS OFF indicator light illuminate for approximately 3 seconds, then TCS is turned on.
- Press the TCS button to turn TCS off. (TCS OFF indicator will illuminate). To turn the TCS on, press the TCS button (TCS OFF indicator light will go off).
- When starting the engine, you may hear a slight ticking sound. This is the TCS performing an automatic system self-check and does not indicate a problem.

#### When operating

### TCS

When the TCS is in operation, TCS indicator light blinks.

- When the traction control system 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 mud or driving on a slippery road, pressing the accelerator pedal may not cause the engine rpm (revolutions per minute) to increase.

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## TCS operation off

### *TCS OFF state*

**TCS  
OFF**

- To cancel TCS operation, press the TCS button (TCS OFF indicator light illuminates).
- If the ignition switch is turned to LOCK position when TCS is off, TCS remains off. Upon restarting the engine, the TCS will automatically turn on again.

■ TCS indicator light (blinks)

**TCS**

■ TCS OFF indicator light (comes on)

**TCS  
OFF**

### Indicator light

When ignition switch is turned to ON, the indicator light illuminates, then goes off if TCS system is operating normally.

The TCS indicator light blinks whenever TCS is operating.

TCS OFF indicator light comes on when either the TCS is turned off with the button, or TCS fails to operate when turned on.

### **WARNING**

**The Traction Control System is only a driving aid; use precautions for safe driving by slowing down on curved, snowy, or icy roads.**

## TCS OFF usage

### *When driving*

- It's a good idea to keep the TCS turned on for daily driving whenever possible.
- To turn TCS off while driving, press the TCS button while driving on a flat road surface.

Never press TCS button while TCS is operating (TCS indicator light blinks). If TCS is turned off while TCS is operating, the vehicle may slip out of control.

## \* NOTICE

- When measuring the vehicle speed with a Chassis dynamometer, make sure the TCS is turned off (TCS OFF light illuminated). If the TCS is left on, it may prevent the vehicle speed from increasing, and cause a false diagnosis of a faulty speedometer.
- Turning the TCS off does not affect ABS or brake system operation.



## WARNING - TCS

Never press the TCS button while TCS is operating.

If the TCS is turned off while TCS is operating, the vehicle may slip out of control.

To turn TCS off while driving, press the TCS button while driving on a flat road surface.

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## INSTRUMENT CLUSTER



1. Tachometer
2. Turn signal indicators
3. Speedometer
4. Engine temperature gauge
5. Warning and indicator lights
6. Odometer / Tripmeter
7. Shift position indicator  
(Automatic transaxle only)
8. Fuel gauge

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## GAUGES

### Speedometer

The speedometer indicates the forward speed of the vehicle.

### Odometer/Tripmeter

You can choose the odometer, tripmeter A or tripmeter B by pressing the TRIP button.

#### *Odometer*

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

#### *Tripmeter*

TRIP A: Tripmeter A

TRIP B: Tripmeter B

The tripmeter indicates the distance of individual trips selected by the driver. Tripmeter A and B can be reset to 0 by pressing the TRIP button for 1 second or more, and then releasing.



### 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.

The tachometer pointer may move slightly when the ignition switch is in ACC or ON position with the engine OFF. This movement is normal and will not affect the accuracy of the tachometer once the engine is running.

### **CAUTION**

*Do not operate the engine within the tachometer's RED ZONE.*

*This may cause severe engine damage.*

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## Engine temperature gauge

This gauge shows the temperature of the engine coolant when the ignition switch is ON.

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

### **CAUTION**

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

## Fuel gauge

The fuel gauge indicates the approximate amount of fuel remaining in the fuel tank.

Fuel tank capacity - 14.52 US gal. (55 litres).

The fuel gauge is supplemented by a low fuel warning light, which will illuminate when the fuel level has dropped to about 2.25 US gal. (8.5 liters).



## Instrument panel illumination

When the vehicle's parking lights or headlights are on, rotate the illumination control knob to adjust the instrument panel illumination intensity.

## WARNINGS AND INDICATORS

### Warning lights / audible indicators

#### Checking operation

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.

### Anti-lock brake system (ABS) warning light (if equipped)



This light illuminates if the key is turned to ON and goes off in approximately 3 seconds if the system is operating normally.

If the light stays on, you may have a problem with your ABS system. Contact an authorized Kia dealer as soon as possible.

### Electronic brake force distribution (EBD) system warning light (if equipped)



If two warning lights illuminate at the same time while driving, your vehicle has a problem with ABS and EBD system.

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

### **⚠ WARNING**

**If the both ABS and Brake warning lights are ON and stay ON, your vehicle's brake system will not work normally. So you may experience an unexpected and dangerous situation during sudden braking. In this case, avoid high speed driving and abrupt braking. Have your vehicle checked by Authorized Kia Dealer as soon as possible.**

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## Engine oil pressure warning



This warning light indicates the engine oil pressure is low.

If the warning light illuminates while driving:

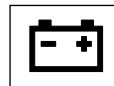
1. Drive safely to the side of the road and stop.
2. With the engine off, check the engine oil level. If the level is low, add oil as required.

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, severe damage could result.*

## Charging system warning



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

If the warning light comes on while the vehicle is in motion:

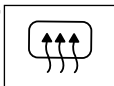
1. Drive to the nearest safe location.
2. With the engine off, check the generator drive belt for looseness or breakage.
3. If the belt is adjusted properly, a problem exists somewhere in the electrical charging system. Have an Authorized Kia Dealer correct the problem as soon as possible.

## Safety belt warning



If the driver's lap/shoulder belt is not fastened when the ignition switch is turned ON, the safety belt warning light and chime will activate for about 6 seconds. And if the lap/shoulder belt is fastened when the ignition switch is turned ON, the safety belt warning light will blink for about 6 seconds.

If the lap/shoulder belt is unfastened while the lap/shoulder belt is fastened with the ignition switch ON, the safety belt warning light will blink for about 6 seconds and if the vehicle speed exceeds 10km/h the safety belt warning light and chime will activate until it is fastened.

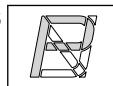
**Rear window defroster indicator (if equipped)**

This light comes on when the rear defroster switch is depressed to remove the frost on the rear glass.

Press the switch again to shut off the defroster when the frost is removed.

The rear window defroster will automatically turn off after 20 minutes.

It will also turn off whenever you remove the ignition key.

**Shift pattern indicators (if equipped)**

The individual indicators illuminate to show the automatic transaxle shift lever selection.

**Door ajar warning**

This warning light illuminates when a door is not closed securely with the ignition in any position.

**Parking brake & brake fluid warning*****Parking brake warning***

This light is illuminated when the parking brake is applied with the ignition switch 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.

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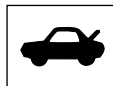
3. Do not drive the vehicle if leaks are found, the warning light remains on or the brakes do not operate properly. Have it towed to any Authorized Kia Dealer for a brake system inspection and necessary repairs.

To check bulb operation, check whether the parking brake and brake fluid warning light illuminates when the ignition switch 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.**

### **Trunk lid open warning (if equipped)**



This warning light activates when the trunk is not closed securely. Stop the vehicle and close the lid.

### **Low fuel level warning**



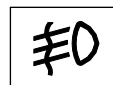
This warning light indicates the fuel tank is nearly empty. The warning light will come on when the fuel level has dropped to about 2.25 US gal. (8.5 liters). Refuel as soon as possible.

### **Headlight 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.

### **Front fog light indicator (if equipped)**



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

### **Low washer fluid level warning indicator**



This warning light indicates the washer fluid reservoir is near empty. Refill the washer fluid as soon as possible.

**Malfunction indicator  
(if equipped)**

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

Generally, your vehicle will continue to be drivable and will not need towing, but have the system checked by an Authorized Kia Dealer as soon as possible.

**\* NOTICE**

A loose fuel filler cap may cause the On Board Diagnostic System Malfunction Indicator Light (  ) in the instrument panel to illuminate unnecessarily. Always make sure that the fuel filler cap is tight.

**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 (  ) begins to flash ON and OFF, potential catalytic converter damage is possible which could result in loss of engine power. Have the Engine Control System inspected as soon as possible by an Authorized Kia Dealer.*

**Air bag warning  
(if equipped)**

This warning light will blink or illuminate for approximately 6 seconds each time you turn the ignition switch to the ON position.

If this indicator does not go out, or if it illuminates while the vehicle is being driven, see an Authorized Kia Dealer for immediate service.

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## Auto cruise indicator (if equipped)

**CRUISE indicator**

**CRUISE**

The indicator light illuminates when the cruise control system is enabled.

**SET indicator**

**SET**

The indicator light illuminates when the cruise function switch (COAST/SET or RES/ACCEL) is ON.

## TCS indicator (Traction Control System) (if equipped)

**TCS**

The TCS indicator will illuminate when the ignition switch is turned ON, but should go off after approximately 3 seconds. When the TCS is on, it monitors the driving conditions and under normal driving conditions, the TCS light will remain off. When a slippery or low traction condition is encountered, the TCS will operate, and the TCS indicator will blink to indicate the TCS is operating.

## TCS OFF indicator (if equipped)

**TCS  
OFF**

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

If this indicator stays on in the TCS ON mode, the TCS may have a malfunction. Take your car to the authorized Kia dealer and have the system checked.



### Key reminder warning chime

If the driver's door is opened and the ignition key is left in with the ignition switch in the LOCK or ACC position, the key reminder warning chime will sound. This is to prevent you from locking your keys in the vehicle.

### Low tire pressure telltale (if equipped)



The low tire pressure telltale comes on for 3 seconds after the ignition switch 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 ignition switch to the ON position, the Tire Pressure Monitoring System is not working properly. If this occurs, have your vehicle checked by an authorized KIA 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 over-correcting at the steering wheel. Inflate the tires to the proper pressure as indicated on the vehicle's tire information placard.

### **WARNING - Low tire pressure**

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

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

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## TPMS (Tire pressure monitoring system) malfunction indicator (if equipped)

### TPMS

TPMS malfunction indicator comes on for 3 seconds after the ignition switch 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 ignition switch to the ON position, the Tire Pressure Monitoring System is not working properly. If this occurs, have your vehicle checked by an authorized KIA dealer as soon as possible.

The warning light also comes on and stays on when there is a problem with the Tire Pressure Monitoring System.

If this happens, the system may not monitor the tire pressure. Have the system checked by an authorized KIA dealer as soon as possible.

### **WARNING - Safe stopping**

- The TPMS cannot alert you to severe and sudden tire damage caused by external factors.
- 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.

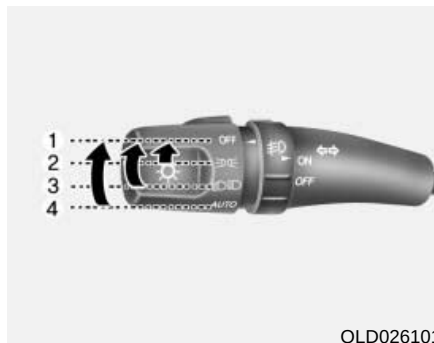
## LIGHTING

### Battery saver function

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

If necessary, to keep the lights on when the ignition key is removed, perform the following :

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



OLD026101

### Lighting control

The light switch has a Headlight and a Parklight 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 Parklight position
- ③ Headlight position
- ④ Auto light position



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### *Parklight position (1st position)*

When the light switch is in the parklight position (1st position), the tail, position, license and instrument panel lights are ON.

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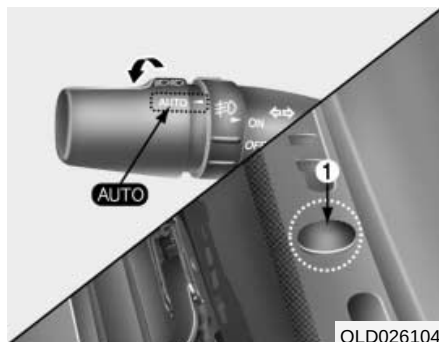
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#### Headlight position (ヘッド)

When the light switch is in the headlight position (2nd position) the head, tail, position, license and instrument panel lights are ON.



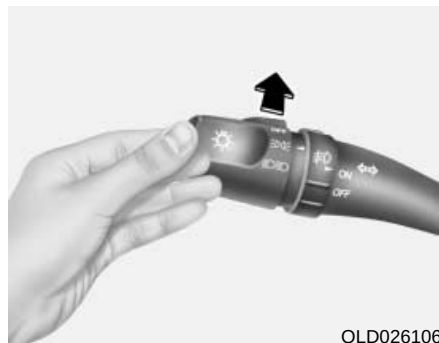
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#### Auto light position (if equipped)

When the light switch is in the AUTO light position, the taillights and headlights will be turned ON or OFF automatically depending on the amount of light outside the vehicle.

#### CAUTION

- **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 cleanser may leave a light film which could interfere with sensor operation.**
- **If your vehicle has window tint or other types of coating on the front windshield, the Auto light system may not work properly.**



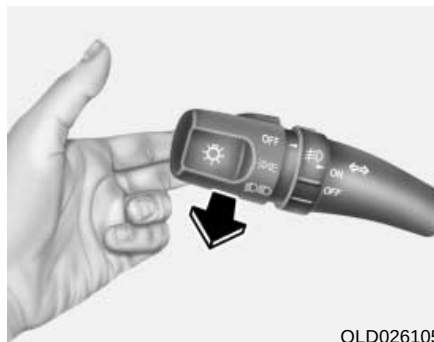
OLD026106

### 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.

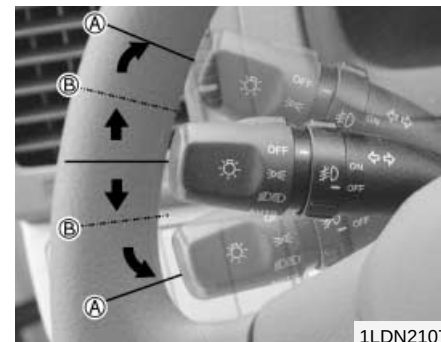
To prevent the battery from being discharged, do not leave the lights on for a prolonged time while the engine is not running.



OLD026105

### Flashing headlights

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.



1LDN2107

### Turn signals (A)

The ignition switch must be on for the turn signals to function. To turn on the turn signals, move the lever up or down. 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.

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### Lane change signals (B)

To signal a lane change, move the turn signal lever slightly and hold it in position. 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.

### \* NOTICE

If an indicator flash is abnormally quick or slow, bulb may be burned out or have a poor electrical connection in the circuit.



### Front fog light (if equipped)

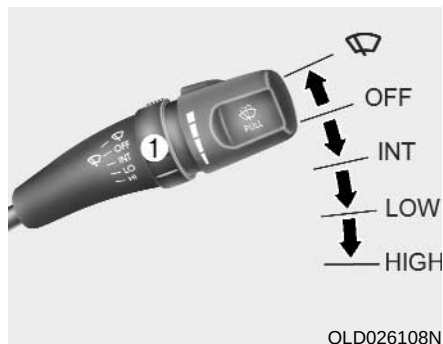
Fog lights are used to provide improved visibility and avoid accidents when visibility is poor due to fog, rain or snow etc. The fog lights will turn on when fog light switch (1) is turned to ON after the headlight switch is turned on.

To turn off the fog lights, turn the switch to OFF.

### CAUTION

*When in operation, the fog lights consume large amounts of vehicle electrical power. Only use the fog lights when visibility is poor or unnecessary battery and generator drain could occur.*

## WIPERS AND WASHERS



### Windshield wipers

Operates as follows when the ignition switch is turned ON.

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(1). (S : slow operation, F: fast operation)

LO : Normal wiper speed

HI : Fast wiper speed

 : For a single wiping cycle, push the lever forward and release it with the lever in the OFF position. The wipers will operate continuously if the lever is pushed upward and held.

### \* NOTICE

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.

### CAUTION

- 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.

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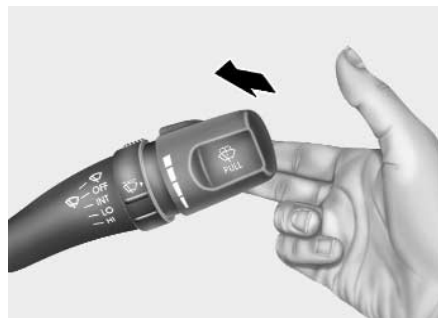
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## Windshield washers

In the OFF position, pull the lever gently toward you to spray washer fluid on the windshield and to run the wipers 2-3 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.

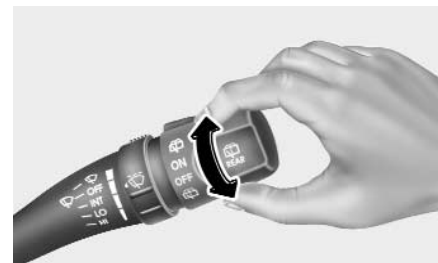
The reservoir filler neck is located in the front of the engine compartment on the passenger side.

## CAUTION

*To prevent possible damage to the washer pump, do not operate the washer when the fluid reservoir is empty.*

## WARNING

**Do not use the washer in freezing temperatures without 1st warming the windshield with the defrosters; the washer solution could freeze on contact with the windshield and obscure your vision.**



OLD026110N

## Rear window wiper and washer switch (if equipped)

The rear window wiper and washer switch is located at the end of the wiper and washer switch lever. Turn the switch to desired position to operate the rear wiper and washer.

 - Spraying washer fluid and wiping

INT - Intermittent wiper operation

ON - Normal wiper operation

 - Spraying washer fluid and wiping



## DEFROSTER



OLD026116N

The defroster heats the window to remove frost, fog and thin ice from the interior and exterior of the rear window, while engine is running.

### **CAUTION**

- *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.*
- *To prevent the battery from being discharged, operate the defroster only while the engine is running.*
- *If you want to defrost and defog on the front windshield, refer to “Windshield Defrosting and Defogging” in this section.*

To activate the rear window defroster, press the rear window defroster button located in the center console switch panel. The indicator in the instrument cluster illuminates when the defroster is ON.

If your vehicle is equipped with the outside mirror defroster, it will be operating at the same time when you operate the rear window defroster.

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 20 minutes or when the ignition switch is turned off. To turn off the defroster, press the rear window defroster button again.

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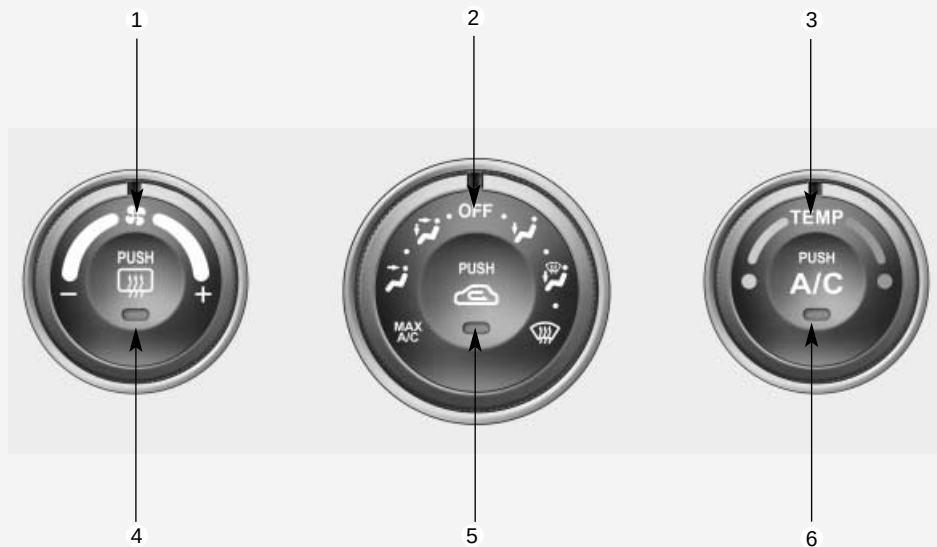
## HAZARD WARNING FLASHER



The hazard warning flasher causes the rear tail lights and front turn signal lights to flash on and off, which serves as a warning to other drivers to exercise caution when approaching or passing your vehicle.

To activate the flasher, depress the hazard warning flasher switch. This switch operates in any ignition switch position.

To turn the flashers off, depress the switch again.

**MANUAL CLIMATE CONTROL SYSTEM (IF EQUIPPED)**

- 1. Fan speed control knob
- 2. Mode selection knob
- 3. Temperature control knob

- 4. Rear window defroster button
- 5. Air intake control button
- 6. Air conditioning button (if equipped)

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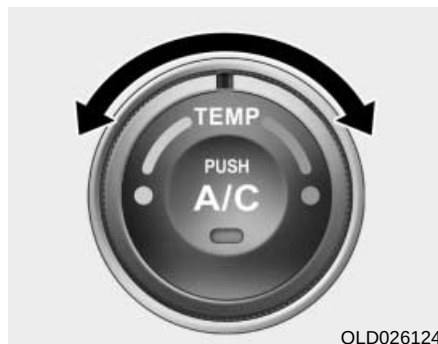
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### Fan speed control knob

The ignition switch must be in the ON position for fan operation.

The fan speed control knob allows you to control the fan speed of the air flowing from the ventilation system. To change the fan speed, turn the knob to the right for higher speed or left for lower speed.



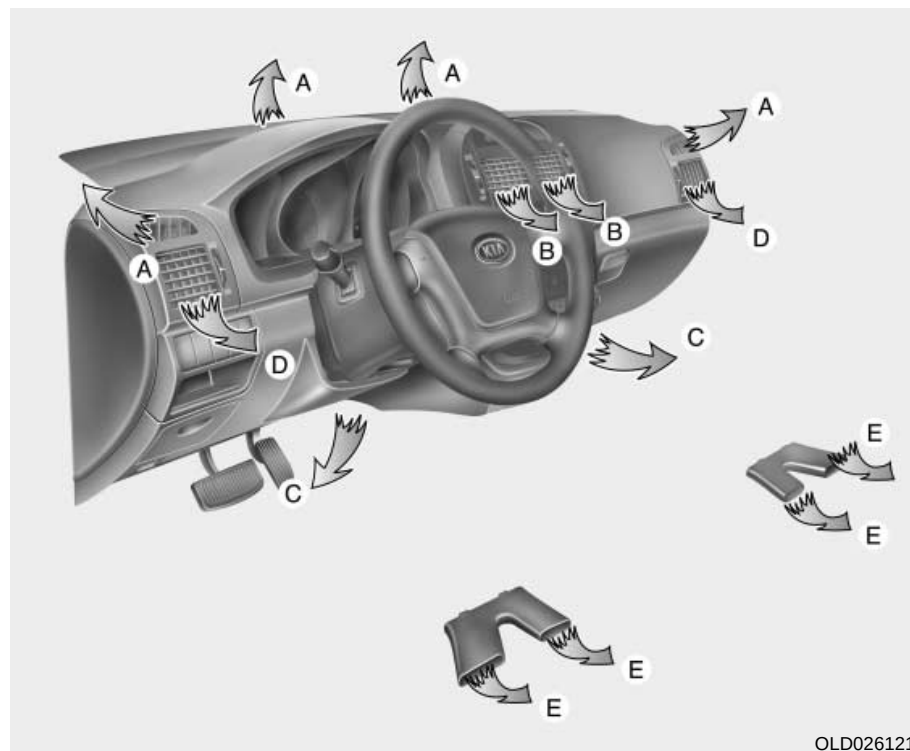
### Temperature control knob

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 and hot air or left for cooler air.



### Mode selection knob

The mode selection knob controls the direction of the air flow through the ventilation system.

**MAX/ A/C position****MAX  
A/C**

When you select the MAX A/C mode while the fan speed is on, the following system settings will be made automatically;

- the air conditioning system will be turned on.
- the recirculated air position will be selected.
- the face mode will be selected.

If you select MAX A/C mode, you will not be able to cancel the A/C system operation, or change the recirculated air mode position.

Set the fan speed control knob to desired speed and rotate the temperature control knob to the extreme left position for maximum cooling. (outlet port: B, D)

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### Face position



Air flow is directed toward the upper body and face. Additionally, each outlet can be controlled to direct the air discharged from the outlet.  
(outlet port: B, D)

### Face - floor position



Air flow is directed towards the face and the floor. The air to the floor is warmer than the air to the face (except when the temperature control is set to the extreme cold position).  
(outlet port: B, D, C, E)

### Floor position



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.  
(outlet port: C, E, A, D)

### Floor - defrost position

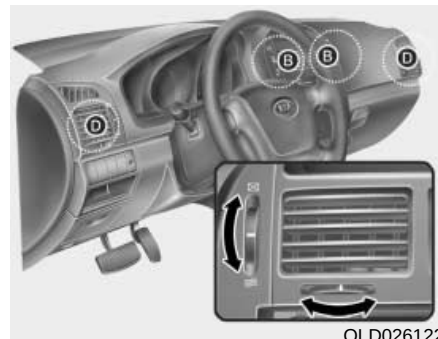


Most of the air flow is directed to the floor and the windshield with a small amount directed to the side window defrosters.  
(outlet port: A, C, E, D)

### Defrost position



Most of the air flow is directed to the windshield with a small amount of air directed to the side window defrosters.  
(outlet port: A, D)



OLD026122

### Instrument panel vents

If air flow control is not satisfactory, check the instrument panel vents. The outlet port (B, D) can be opened or closed separately using the vertical thumbwheel. To close the vent, rotate it upward to the maximum position. To open the vent, rotate it downward.

Also, you can adjust the direction of air delivery from these vents using vertical or horizontal thumbwheels as shown.



OLD026125N

### Air intake control button

This is used to select outside (fresh) air position or recirculated air position.

To change the air intake control position, push the control button.

### Recirculated air position



The indicator light on the button is illuminated when the recirculated air position is selected.

With the recirculated air position selected, air from passenger compartment will be drawn through the heating system and heated or cooled according to the function selected.

### Outside (fresh) air position



The indicator light on the button is not illuminated when the outside (fresh) air position is selected.

With the outside (fresh) air position selected, air enters the vehicle from outside and is heated or cooled according to the function selected.

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### \* NOTICE

Prolonged use of the air conditioning with the “recirculated air position” selected, will result in excessively dry air in the passenger compartment.

### **WARNING - Recirculated air**

- Continued climate control system operation in the recirculated air position may allow humidity to increase inside vehicle which may fog the glass and obscure visibility.
- Continued climate control system operation in the recirculated air position can slightly reduce oxygen levels which can lead to cause drowsiness or sleepiness, and loss of vehicle control. Set the air intake control to the outside (fresh) air position as much as possible while driving.



### **Air conditioning button (if equipped)**

Push the A/C button to turn the air conditioning system on (indicator light will illuminate). Push the button again to turn the air conditioning system off.



## 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 cool air is desired at face level for bi-level operation, set the mode to the  position.
  - If the windshield fogs up, set the mode to the ,  position.

### Air conditioning (if equipped)

All Kia Air Conditioning Systems are filled with environmentally friendly R-134a refrigerant which is not damaging to 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 outside air or recirculated air position.
4. Set the temperature control knob to the desired position.
5. Set the fan speed control to the desired speed.
6. Adjust the fan speed control and temperature control to maintain maximum comfort.
  - If warmer air is desired at floor level for bi-level operation, set the mode to the  position and adjust the temperature control to maintain maximum comfort.

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- When maximum cooling is desired, set the temperature control to the extreme left position and set the air intake control to the recirculated air position, then set the fan speed control to the highest speed.

### \* NOTICE

- When 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.
- With opening the windows in humid weather air conditioning may cause to make water drops. Be careful because excessive water drop may cause to damage electrical equipment. In this case, close the windows and turn on the air conditioning system.

### 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 windows on rainy 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 at idle as the air conditioning compressor cycles on. This is a normal system operation characteristics.
- Use the air conditioning system every month if 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 characteristics.

- The air conditioning system includes a function that automatically turns the air conditioning compressor off if engine coolant temperature approaches an over heating level. The air conditioning compressor operation will resume once engine coolant temperature returns to the normal range. Also, the air conditioning compressor is automatically turned off for a few seconds when the accelerator is fully depressed (wide open throttle).
- When operating the air conditioning system use the outside (fresh) air position.
- Operating the air conditioning system in the recirculated air position does provide maximum cooling, however, continual operation in this mode may cause the air inside the vehicle to become stale.

### 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 bad influence on the air conditioning system.

Therefore, if abnormal operation is found, have the system inspected by an authorized Kia dealer.

### *Air conditioner refrigerant and compressor lubricant*



#### **WARNING - AC service**

**The air conditioning system should be serviced by an authorized Kia dealer. Improper service may cause serious injury to the person performing the service.**



#### **CAUTION**

*When the performance of the air conditioning system is reduced 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.*

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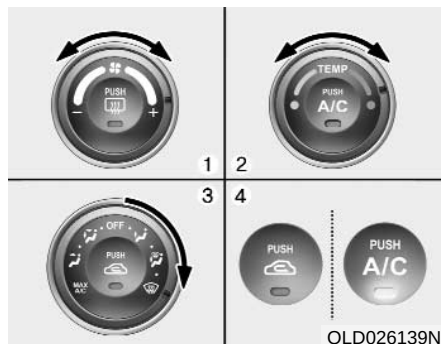
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## WINDSHIELD DEFROSTING AND DEFOGGING



### To defog inside windshield

1. Select any fan speed.
2. Select desired temperature.
3. Select the or position.
4. The outside (fresh) air and air conditioning will be selected.

If the air-conditioning and outside (fresh) air position are not selected automatically, press the corresponding button manually.



### To defrost outside windshield

1. Set the fan speed to the highest (extreme right) position.
2. Set the temperature to the extreme hot position.
3. Select the position.
4. The outside (fresh) air and air conditioning will be selected.

If the air-conditioning and outside (fresh) air position are not selected automatically, press the corresponding button manually.

### **CAUTION** - Windshield heating

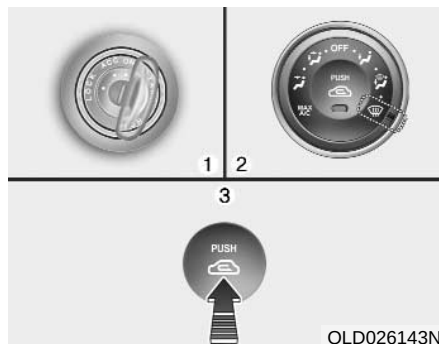
*Do not use or position during cooling operation in extremely humid weather. The difference between the temperature of the outside air and that of the windshield could cause the outer surface of the windshield to fog up, causing loss of visibility. In this case, set the mode selection knob to the position and fan speed control knob to the lower speed.*

- 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 inside of the windshield.

### Defogging logic

To reduce the probability of fogging up the inside of the windshield, the air intake is controlled automatically according to certain conditions such as  or  position. To cancel or return the defogging logic, do the following.



### Manual climate control system

1. Turn the ignition switch to the ON position.
2. Turn the mode selection knob to the defrost position (.
3. Push the air intake control button () at least 5 times within 3 seconds.

The indicator light in the air intake control button will blink 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.

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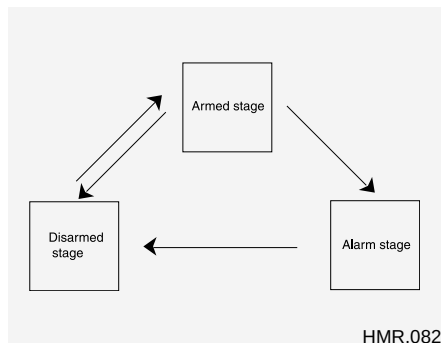
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## THEFT-ALARM SYSTEM (IF EQUIPPED)



### Armed stage

*The Theft-Alarm system is armed as follows.*

- After all doors, engine hood, and trunk are locked, press the “LOCK” button on the transmitter once. The hazard flasher lights will flash once. (At this time, the alarm does not sound.)

### Alarm stage

The alarm will be activated when:

- Any door is opened without using the key or the transmitter.
- The trunk lid is opened without using the key or the transmitter.
- The engine hood is opened.

The alarm will sound and the hazard warning lights will blink for 27 seconds, then OFF for 10 seconds. This ON/OFF cycle will be repeated three times. During this time, the engine will not start.

### Withheld alarm

When the alarm is armed, the alarm will not sound if the trunk lid is opened with either the key or the transmitter.

However, if the trunk lid is not opened completely within 30 seconds after unlocking with the transmitter, the alarm will sound. Also, if any of the doors or hood is opened while the trunk lid is open and the alarm armed, the alarm will sound.

## Disarmed stage

The armed stage will be deactivated when:

- The “ ” button on the transmitter is pressed (hazard lamps will flash twice).

But, after depressing unlock button, unless you open the doors within 30 seconds all doors will be locked and into armed stage automatically.

- The ignition switch is in the “ON” position.
- Unlock the doors with the ignition key.

The alarm will be deactivated when:

- The lock () , unlock () or trunk lid open () button on the transmitter is pressed.
- The ignition switch is in the “ON” position for 30 seconds or more.
- Unlock the doors with the ignition key.

## \* NOTICE

**If the ignition key is in the ignition switch, the transmitter will not function. Avoid trying to start the engine with the alarm activated.**

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|--|--------------------------------------------|----|
|  | Fuel requirements / 5-2                    | 1  |
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## FUEL REQUIREMENTS

### Gasoline engine (unleaded)

Your new Kia vehicle is designed to use only unleaded fuel with a minimum Octane Rating of 87 Anti-Knock Index (AKI).

### \* NOTICE

**NEVER USE LEADED FUEL.** The use of leaded fuel is detrimental to the catalytic converter and will damage the engine control system's oxygen sensor and affect emission control.

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

### 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 driveability 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.

### CAUTION

***Never use gasohol which contains methanol. Discontinue use of any gasohol product which impairs drivability.***

## 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 & Consumer Information Manual in your vehicle.

### Vehicle modifications

This vehicle should not be modified. Modification of your Kia could affect its performance, safety or durability, may violate governmental safety and emissions regulations, and void the vehicle's warranty.

In addition, damage or performance problems resulting from any modification may not be covered under warranty.

### Engine exhaust gas precautions (carbon monoxide)

#### WARNING

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

- 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 by an authorized Kia dealer. 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.

- 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.

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## Operating precautions for catalytic converters

### **WARNING - Fire**

**A hot exhaust system can ignite flammable items under your vehicle. Do not park the vehicle over or near flammable objects, such as dry grass, paper, leaves, etc.**

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

Therefore, the following precautions must be observed:

- Use only UNLEADED FUEL for gasoline engine (unleaded).
- 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.

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

## 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.

### Before starting

- Close and lock all doors.
- Position the seat so that all controls are easily reached.
- 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 - Driving under the influence of alcohol or drugs**

**Drinking and driving is dangerous. Drunk driving is the number one contributor to the highway death toll each year. Even a small amount of alcohol will affect your reflexes, perceptions and judgement.**

**You are much more likely to have a serious accident if you drink and drive.**

**If you are drinking or taking drugs, don't drive. Do not ride with a driver who has been drinking or taking drugs. Choose a designated driver or call a cab.**

**Driving while under the influence of drugs is as dangerous or more dangerous than driving drunk.**

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## SUGGESTIONS FOR 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 kilometers (miles) you can get from a liter (gallon) of fuel. To operate your vehicle as economically as possible, use the following driving suggestions to help save money in both fuel and repairs:

- Avoid lengthy warm-up idling. Once the engine is running smoothly, begin driving. Remember, engine warm-up may take a little longer on cold days.
- Save fuel by accelerating slowly after stopping.
- Keep the engine in tune and follow the recommended periodic maintenance schedule. This will increase the life of all parts and lower your operating costs.

- Do not use the air conditioner unnecessarily.
- Slow down when driving on rough roads.
- For longer tire life and better fuel economy, always keep the tires inflated to the recommended pressures.
- Maintain a safe distance from other vehicles to avoid sudden stops. This will reduce wear on brake linings and pads. Driving in such a way will also save fuel because extra fuel is required to accelerate back to driving speed.
- Do not carry unnecessary weight in the vehicle.
- Do not rest your foot on the brake pedal while driving. This can cause needless wear, possible damage to the brakes, and poor fuel economy.
- Improper wheel alignment results in faster tire wear and lower fuel economy.

- 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. Instead, 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 movements in braking or steering.
- When braking, pump the brake pedal with a light up-and-down motion until the vehicle is stopped.



#### **WARNING**

**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, tire chains, or other non-slip material under the drive wheels to provide traction when stalled in ice, snow, or mud.



**WARNING - Downshifting**  
**Downshifting with an automatic transaxle, while driving on slippery surfaces can cause an accident. The sudden change in tire speed could cause the tires to skid. Be careful when downshifting on slippery surfaces.**

### 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 1 (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.

#### **CAUTION**

***Prolonged rocking may cause engine over-heating, transaxle damage or failure, and tire damage.***

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## CAUTION

*The TCS system (if equipped) should be turned OFF prior to rocking the vehicle.*

 **WARNING - Spinning tires**  
Do not spin the wheels, especially at speeds more than 35 mph (56 km/h). Spinning the wheels at high speeds when the vehicle is stationary could cause a tire to overheat, explode and injure bystanders.

## 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.

### Winter driving

- We recommend that you carry emergency equipment, including tire chains, a window scraper, windshield de-icer, a bag of sand or salt, flares, a small shovel and jumper cables.
- Make sure you have sufficient ethylene-glycol coolant in the radiator.
- Check the battery condition and cables. Cold temperatures reduce the capacity of any battery, so it must be in excellent condition to provide enough winter starting power.
- Make sure the engine oil viscosity is suitable for cold weather.
- Check the ignition system for loose connections and damage.

- Use antifreeze-formulated windshield washer fluid. (Do not use engine coolant antifreeze.)
- Do not use the parking brake if it might freeze. When parking, shift to 1 (First) or R (Reverse) with a manual transaxle or P (Park) with an automatic transaxle and block the rear wheels.

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### Snow tires

If you mount snow tires on your Kia, 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.

### **WARNING - Snow tire size**

**Snow tires should be equivalent in size and type to the vehicle's standard tires. Otherwise, the safety and handling of your vehicle may be adversely affected.**

*Do not install studded tires without first checking local, state and municipal regulations for possible restrictions against their use.*



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### **Tire chains**

Since the sidewalls of radial tires are thinner, they can be damaged by mounting some types of snow chains on them. Therefore, the use of snow tires is recommended instead of snow chains. Do not mount tire chains on vehicles equipped with aluminum wheels, snow chains may cause damage to the wheels. If snow chains must be used, use wire-type chains with a thickness of less than 0.59 in (15 mm). Damage to your vehicle caused by improper snow chain use is not covered by your vehicle manufacturers warranty.

Install them only on the front tires.

**CAUTION**

- ***Make sure the snow chains are the correct size and type for your tires. Incorrect snow chains can cause damage to the vehicle body and suspension and may not be covered by your vehicle manufacturer warranty. Also, the snow chain connecting hooks may be damaged from contacting vehicle components causing the snow chains to come loose from the tire. Make sure the snow chains are SAE class "S" certified.***
- ***Always check chain installation for proper mounting after driving approximately 0.3 to 0.6 miles (0.5 to 1 km) to ensure safe mounting. Retighten or remount the chains if they are loose.***

**Chain installation**

When installing chains, follow the manufacturer's instructions and mount them as tightly as you can. Drive slowly with chains installed. If you hear the chains contacting the body or chassis, stop and tighten them. If they still make contact, slow down until it stops. Remove the chains as soon as you begin driving on cleared roads.

**WARNING**

When mounting snow chains, park the vehicle on level ground away from traffic. Turn on the vehicle Hazard Warning flashers and place a triangular emergency warning device behind the vehicle if available. Always place the vehicle in park (P), apply the parking brake and turn off the engine before installing snow chains.

**WARNING - Tire chains**

- **The use of chains may adversely affect vehicle handling.**
- **Do not exceed 20 mph (30 km/h) or the chain manufacturer's recommended speed limit, whichever is lower.**
- **Drive carefully and avoid bumps, holes, sharp turns, and other road hazards, which may cause the vehicle to bounce.**
- **Avoid sharp turns or locked-wheel braking.**
- **Chains that are the wrong size or improperly installed can damage your vehicle's brake lines, suspension, body and wheels.**
- **Stop driving and retighten the chains any time you hear them hitting the vehicle.**

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## 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.

## VEHICLE LOAD LIMIT

Type A

| TIRE AND LOADING INFORMATION<br>PNEUS ET CHARGE-INFORMATION                                                                                                                      |                  |                                       |         |                        |                                                                                 |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|---------------------------------------|---------|------------------------|---------------------------------------------------------------------------------|
| SEATING CAPACITY                                                                                                                                                                 |                  | TOTAL 5                               | FRONT 2 | REAR 3                 |                                                                                 |
| NOMBRE DE SIÈGES                                                                                                                                                                 |                  | TOTAL 5                               | AVANT 2 | ARRIÈRE 3              |                                                                                 |
| The combined weight of occupants and cargo should never exceed 3500 lb or 1588 kg.<br>Le poids combiné des occupants et du chargement ne doit jamais excéder 3500 lb ou 1588 kg. |                  |                                       |         |                        |                                                                                 |
| TIRE / PNEU                                                                                                                                                                      | SIZE / DIMENSION | COLD TIRE PRESSURE / PRESSION À FROID |         | SEE OWNER'S MANUAL FOR | CONSULTER LE GUIDE DU PROPRIÉTAIRE POUR OBTENIR DES RENSEIGNEMENTS ADDITIONNELS |
| FRONT / AVANT                                                                                                                                                                    | P195/60R15       | 210kPa, 30psi                         |         |                        |                                                                                 |
| REAR / ARRIÈRE                                                                                                                                                                   | P195/60R15       | 210kPa, 30psi                         |         |                        |                                                                                 |
| SPARE / SECOURS                                                                                                                                                                  | T125/70D15       | 420kPa, 60psi                         |         |                        |                                                                                 |

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Type B

| TIRE AND LOADING INFORMATION<br>PNEUS ET CHARGE-INFORMATION                                                                                                                      |                  |                                       |         |                        |                                                                                 |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|---------------------------------------|---------|------------------------|---------------------------------------------------------------------------------|
| SEATING CAPACITY                                                                                                                                                                 |                  | TOTAL 5                               | FRONT 2 | REAR 3                 |                                                                                 |
| NOMBRE DE SIÈGES                                                                                                                                                                 |                  | TOTAL 5                               | AVANT 2 | ARRIÈRE 3              |                                                                                 |
| The combined weight of occupants and cargo should never exceed 3500 lb or 1588 kg.<br>Le poids combiné des occupants et du chargement ne doit jamais excéder 3500 lb ou 1588 kg. |                  |                                       |         |                        |                                                                                 |
| TIRE / PNEU                                                                                                                                                                      | SIZE / DIMENSION | COLD TIRE PRESSURE / PRESSION À FROID |         | SEE OWNER'S MANUAL FOR | CONSULTER LE GUIDE DU PROPRIÉTAIRE POUR OBTENIR DES RENSEIGNEMENTS ADDITIONNELS |
| FRONT / AVANT                                                                                                                                                                    | P205/50R16       | 210kPa, 30psi                         |         |                        |                                                                                 |
| REAR / ARRIÈRE                                                                                                                                                                   | P205/50R16       | 210kPa, 30psi                         |         |                        |                                                                                 |
| SPARE / SECOURS                                                                                                                                                                  | T125/70D16       | 420kPa, 60psi                         |         |                        |                                                                                 |

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## 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:

849 lbs (385 kg)

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:**

Without trailer brakes:

750 lbs (340 kg)

With trailer brakes:

1500 lbs (680 kg)

Towing capacity is the maximum trailer weight including its cargo weight, your vehicle can tow.

**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 1400 lbs. (635 kg), and there will be five 150 lbs. (68 kg) passengers in your vehicle, the amount of available cargo and luggage load capacity is 650 lbs. (295 kg).  
 $(1400 - 750 (5 \times 150) = 650 \text{ lbs. or } 635 - 340 (5 \times 68) = 295 \text{ kg})$

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.

** CAUTION**

*We do not recommend using this vehicle for trailer towing.*

** WARNING - Load distributor**

**Your vehicle may become unstable while towing if your vehicle is overloaded to one side. Make sure that the load in the vehicle is distributed equally to each side of the centerline.**

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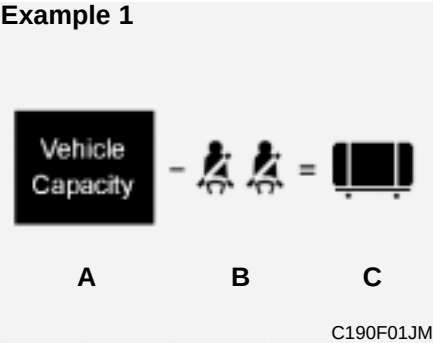
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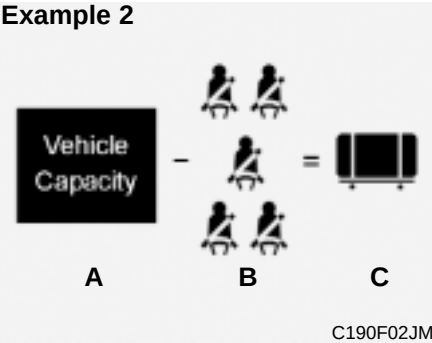
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Example 1



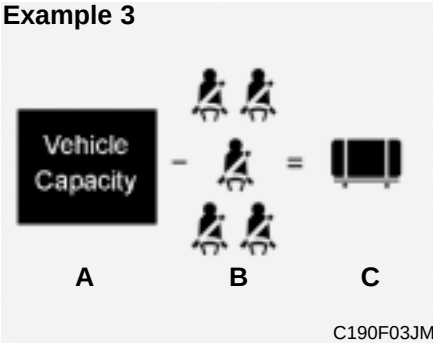
| Item | Description                                     | Total             |
|------|-------------------------------------------------|-------------------|
| A    | Vehicle Capacity Weight                         | 1400 lbs (635 kg) |
| B    | Subtract Occupant Weight<br>150 lbs (68 kg) × 2 | 300 lbs (136 kg)  |
| C    | Available Cargo and Luggage weight              | 1100 lbs (499 kg) |

Example 2



| Item | Description                                     | Total             |
|------|-------------------------------------------------|-------------------|
| A    | Vehicle Capacity Weight                         | 1400 lbs (635 kg) |
| B    | Subtract Occupant Weight<br>150 lbs (68 kg) × 5 | 750 lbs (340 kg)  |
| C    | Available Cargo and Luggage weight              | 650 lbs (295 kg)  |

Example 3



| Item | Description                                     | Total             |
|------|-------------------------------------------------|-------------------|
| A    | Vehicle Capacity Weight                         | 1400 lbs (635 kg) |
| B    | Subtract Occupant Weight<br>172 lbs (78 kg) × 3 | 516 lbs (234 kg)  |
| C    | Available Cargo and Luggage weight              | 884 lbs (400 kg)  |

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.



### Vehicle certification

The vehicle certification label is located on the driver's door sill.

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.

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### **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 cause an accident or vehicle damage. You can calculate the weight of your load by weighing the items (or people) before putting them in the vehicle. Be careful not to overload your vehicle.
- If you overload your vehicle, the tires can suddenly and without warning fail. The overloading can also make your vehicle unstable and dramatically increase braking distance. This could cause you to lose control and crash.

### **CAUTION**

- *Overloading your vehicle may cause damage. Repairs would not be covered by your warranty. Do not overload your vehicle.*
- *Using heavier suspension components to get added durability might not change your weight ratings. Ask your dealer to help you load your vehicle the right way.*

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 - Loose cargo**

Items you carry inside your vehicle can strike and injure occupants in a sudden stop or sharp turn, or in a crash.

- Put items in the trunk of your vehicle. Try to spread the weight evenly.
- Never stack items, like suitcases, inside the occupant compartment.
- Do not leave an unsecured child restraint in your vehicle, since it can injure occupants in a crash.
- When you carry something inside the vehicle, secure it.

## WEIGHT OF THE VEHICLE

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 compliance label located on the driver's door sill.

### GCW (Gross combined weight)

This is the weight of the loaded vehicle (GVW) plus the weight of the fully loaded trailer.

### GCWR (Gross combined weight rating)

This is the maximum allowable weight of the vehicle and the loaded trailer - including all cargo and passengers - that the vehicle can handle without risking damage. (Important : The towing vehicle's braking system is rated for operation at GVWR, not GCWR. Separate functional brakes should be used for safe control of towed vehicles and for trailers weighing an 750 lbs (340kg).) The GCW must never exceed the GCWR.

### Maximum trailer weight

This is the highest possible weight of a fully loaded trailer the vehicle can tow. It assumes a vehicle with only mandatory options, no cargo, and a driver. The weight of other optional equipment, passengers and cargo in your vehicle will reduce the maximum trailer weight your vehicle can tow.

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Calculating the load your vehicle can tow

1. Use the appropriate maximum GCWR chart (in the Weight of the Trailer section in this chapter) for your type of drive system and transmission.
2. Weigh your vehicle.
3. Subtract the weight of your vehicle from the maximum GCWR in the chart. This is the maximum trailer weight your vehicle can tow. It must be below the maximum trailer weight shown in the chart. Note that the maximum trailer weight your vehicle can tow depends on the total weight of any cargo, passengers and available equipment in the vehicle.

TRAILER TOWING

 **WARNING** - Towing a trailer

If you don't use the correct equipment or you drive improperly, you can lose control when you pull a trailer. For example, if the trailer is too heavy, the brakes may fail, and would at least be ineffective to promptly stop the vehicle. You and your passenger could be seriously or fatally injured. We do not recommend towing a trailer. However, in the event there is a need to tow a trailer, such as in an emergency, follow all the steps in this section.

 **CAUTION**

*Pulling a trailer improperly can damage your vehicle and result in costly repairs not covered by your warranty.*

To identify what the vehicle trailering capacity is for your vehicle, you should read the information in "Weight of the Trailer" that appears later in this section. Remember that trailering is different than just driving your vehicle by itself. Trailering causes major changes in handling, durability, and fuel economy. Successful, safe trailering requires correct equipment, and cautious driving.

| Item                   |                        | Specification |
|------------------------|------------------------|---------------|
| Maximum trailer weight | Without trailer brakes | 750 (340)     |
|                        | With trailer brakes    | 1500 (680)    |

This section contains many time-tested, important trailering tips and safety rules. Many of these are important for your safety and that of your passengers. Please read this section carefully before you pull a trailer.

Load-pulling components such as the engine, transaxle, wheel assemblies, and tires are forced to work harder against the load of the added weight. The engine is required to operate at relatively higher speeds and under greater loads. This additional burden generates extra heat which creates more wear in engine, and a shortened engine life. The trailer also adds considerably to wind resistance, increasing the pulling requirements.

### **If you do decide to pull a trailer**

Here are some important points if you decide to pull a trailer:

- Consider using a sway control. You can ask a hitch dealer about sway control.
- After your odometer indicates 500 miles (800 km) or more, you can tow a trailer. For the first 500 miles (800 km) that you tow a trailer, don't drive over 50 mph (80 km/h) and don't make starts at full throttle. This helps your engine and other parts of your vehicle "wear" in at the heavier loads.
- Always drive your vehicle at a moderate speed (less than 60 mph (100 km/h)).
- The important considerations have to do with weight:

### **Weight of the trailer**

How heavy can a trailer safely be? It should never weigh more than the maximum trailer weight with trailer brakes. But even that can be too heavy.

If you feel that the trailer is adversely affecting the movement of your vehicle, reduce your speed, avoid uneven or winding roads, avoid roads with steep grades, and/or lighten your trailer load.

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### Weight of the trailer tongue

The tongue load of any trailer is an important weight to measure because it affects the total gross vehicle weight (GVW) of your vehicle since that is the trailer weight pushing down on the hitch on your vehicle. The rest of the trailer weight is sitting on the trailer's wheels.

The trailer tongue should weigh a maximum of 10% of the total loaded trailer weight.

After you've loaded the trailer, go to a Weigh Station and weigh the trailer and then the tongue, separately, to see if the weights are proper. If they aren't, you may be able to correct them simply by moving some items around in the trailer.

### **WARNING - Trailer balance**

- **Never load a trailer with more weight in the rear than in the front. The front should be loaded with approximately 60% of the total trailer load; the rear should be loaded with approximately 40% of the total trailer load.**
- **Never exceed the maximum weight limits of the trailer or trailer towing equipment. Improper loading can result in excessive personal injury. Check weights and loading at a commercial scale or highway patrol office equipped with scales.**
- **An improperly loaded trailer can cause loss of vehicle control.**

### *Hitches*

It's important to have the correct hitch equipment. Crosswinds, large trucks going by, and rough roads are a few reasons why you'll need the right hitch. Here are some rules to follow:

- Do not attach a trailer hitch which requires you to alter other parts on your vehicle.
- Never make a hole in your vehicle to accommodate a hitch.
- The bumpers on your vehicle are not intended for hitches. Do not attach rental hitches or other bumper-type hitches to them. Use only a frame-mounted hitch that does not attach to the bumper.

### *Safety chains*

You should always attach chains between your vehicle and your trailer. Cross the safety chains under the tongue of the trailer so that the tongue will not drop to the road if it becomes separated from the hitch.

Instructions about safety chains may be provided by the hitch manufacturer or by the trailer manufacturer. Follow the manufacturer's recommendation for attaching safety chains. Always leave just enough slack so you can turn with your trailer. And, never allow safety chains to drag on the ground.

### *Trailer brakes*

If your trailer weighs more than the maximum weight for a trailer without brakes, then the trailer needs its own brakes. You must consult with a knowledgeable and reputable trailer vendor to determine which brake equipped trailer is right for your needs. Be sure to read and follow the instructions for the trailer brakes so you'll be able to install, adjust and maintain them properly.

#### **WARNING**

**Do not use a trailer with its own brakes unless you are absolutely certain that you have properly set up the brake system pursuant to the trailer manufacturer's instructions. This is not a task for amateurs. Use an experienced, competent trailer shop for this work.**

### *Driving with a trailer*

Towing a trailer requires experience. You must gain that experience slowly and carefully which practicing with an unloaded or lightly loaded trailer.. Before setting out for the open road, you must get to know your trailer. Acquaint yourself with the feel of handling and braking with the trailer. And always keep in mind that the vehicle you are driving is now a good deal longer and not nearly so responsive as your vehicle is by itself.

Before you start, check the trailer hitch and platform, safety chains, electrical connector(s), lights, tires and mirror adjustment. If the trailer has electric brakes, start your vehicle and trailer moving and then apply the trailer brake controller by hand to be sure the brakes are working. This lets you check your electrical connection at the same time.

During your trip, stop every hour or so to be sure that the load is secure, and that the lights and any trailer brakes are still working.

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### ***Following distance***

Stay at least twice as far behind the vehicle ahead as you would when driving your vehicle without a trailer. This can help you avoid situations that require heavy braking and sudden turns.

### ***Passing***

You'll need more passing distance up ahead when you're towing a trailer. And, because you're a good deal longer, you'll need to go much farther beyond the passed vehicle before you can return to your lane.

### ***Backing up***

The trailer will go in the opposite direction of the rear of your vehicle when backing up. This is very difficult for an inexperienced trailer driver to get used to. To help you avoid mistakes, hold the bottom of the steering wheel with one hand. Then, to move the trailer to the left, just hold the steering wheel firmly and move your hand to the left. To move the trailer to the right, move your hand to the right. Always back up slowly and, if possible, have someone guide you.

### ***Making turns***

When you're turning with a trailer, make wider turns than normal. Do this so your trailer won't strike soft shoulders, curbs, road signs, trees, or other objects. Avoid jerky or sudden maneuvers. Signal well in advance.

### ***Turn signals when towing a trailer***

When you tow a trailer, your vehicle has to have a different turn signal flasher and extra wiring. The green arrows on your instrument panel will flash whenever you signal a turn or lane change. Properly connected, the trailer lights will also flash to alert other drivers you're about to turn, change lanes, or stop.

When towing a trailer, the green arrows on your instrument panel will flash for turns even if the bulbs on the trailer are burned out. Thus, you may think drivers behind you are seeing your signals when, in fact, they are not. It's important to check regularly to be sure the trailer bulbs are still working. You must also check the lights every time you disconnect and then reconnect the wires.

Do not connect a trailer lighting system directly to your vehicle's lighting system. Use only an approved trailer wiring harness.

Your Authorized Kia Dealer can assist you in installing the wiring harness.

**⚠ WARNING - Trailer wiring harness**

**Failure to use an approved trailer wiring harness could result in damage to the vehicle's electrical system, there by disabling the brake light system resulting in an accident.**

***Driving on grades***

Reduce speed and shift to a lower gear before you start down a long or steep downgrade. If you don't shift down, you might have to use your brakes so much that they would get hot and no longer operate efficiently.

On a long uphill grade, shift down and reduce your speed to around 45 mph (70 km/h) to reduce the possibility of engine and transaxle overheating.

Operating your vehicle in D (Drive) when towing a trailer will minimize heat buildup and extend the life of your transaxle.

**⚠ CAUTION**

***When towing a trailer on steep grades especially (in excess of 6%) pay close attention to the engine coolant temperature gauge to ensure the engine does not overheat. If the needle of the coolant temperature gauge moves across the dial towards "H" (HOT), pull over and stop as soon as it is safe to do so, and allow the engine to idle until it cools down. You may proceed once the engine has cooled sufficiently.***

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### **Parking on hills**

Generally, you should not park your vehicle, with a trailer attached, on a hill. People can be seriously or fatally injured, and both your vehicle and the trailer can be damaged if they begin to move downhill.

#### **WARNING - Parking on a hill**

**Parking your vehicle on a hill with a trailer attached is dangerous. It could cause serious injury or death, should the trailer break loose, or should the trailer drag the vehicle downhill.**

However, if you ever have to park your trailer on a hill, here's how to do it:

1. Apply your brakes, but don't shift into gear.
2. Have someone place chocks (blocks of wood or metal intended for this purpose) under the downhill sides of the trailer wheels.
3. When the wheel chocks are in place, release the brakes until the chocks absorb the load.
4. Reapply the brakes. Apply your parking brake, and then shift to R (Reverse) for a manual transaxle or P (Park) for an automatic transaxle.
5. Release the brakes.

#### **WARNING - Parking brake**

**It can be dangerous to get out of your vehicle if the parking brake is not firmly set or if the engine is still running. In either case the vehicle can move suddenly. You or others could be seriously or fatally injured.**

### ***When you are ready to leave after parking on a hill***

1. With the manual transaxle in Neutral or automatic transaxle in P (Park), apply your brakes and hold the brake pedal down while you:
  - Start your engine;
  - Shift into gear; and
  - Release the parking brake.
2. Slowly remove your foot from the brake pedal.
3. Drive slowly forward until the trailer is clear of the chocks.
4. Stop and have someone pick up and store the chocks.

## Maintenance when trailer towing

Your vehicle will need service more often when you regularly pull a trailer. Important items to pay particular attention to include engine oil, automatic transaxle fluid, axle lubricant and cooling system fluid. Brake condition is another important item to frequently check. Each item is covered in this manual, and the Index will help you find them quickly. If you're trailering, it's a good idea to review these sections before you start your trip.

Don't forget to also maintain your trailer and hitch. Follow the maintenance schedule that accompanied your trailer and check it periodically. Preferably, conduct the check at the start of each day's driving. Most importantly, all hitch nuts and bolts should be tight.

### CAUTION

- *Due to higher load during trailer usage, overheating might occur in hot days or during uphill driving. If the coolant gauge indicates overheating, switch off the A/C and stop the vehicle in a safe area to cool down the engine.*
- *When towing check transaxle fluid more frequently.*
- *If your vehicle is not equipped with the air conditioner, you should install a condenser fan for engine performance when towing a trailer.*

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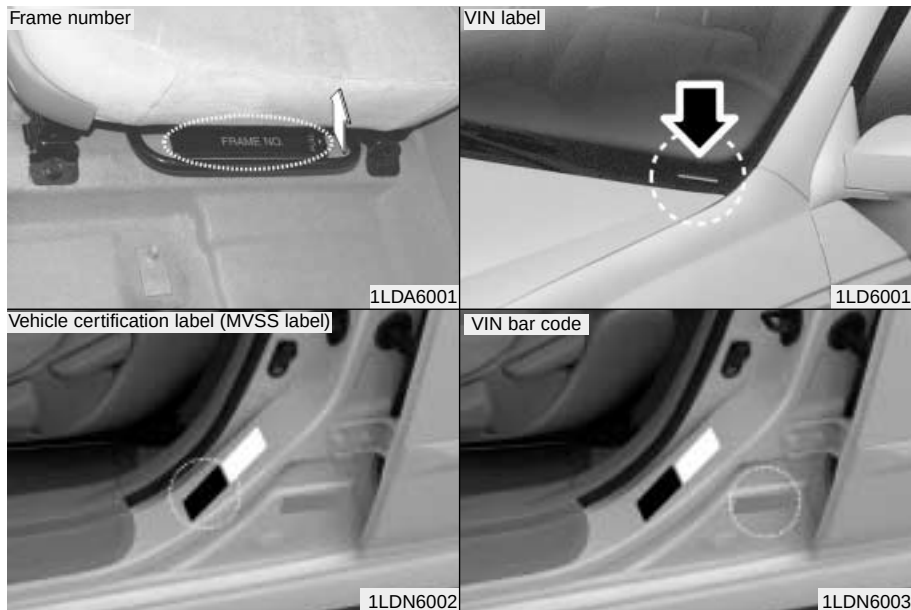
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## LABEL INFORMATION

There are several important labels and identification numbers located on your vehicle. The label locations are identified in the illustrations shown.

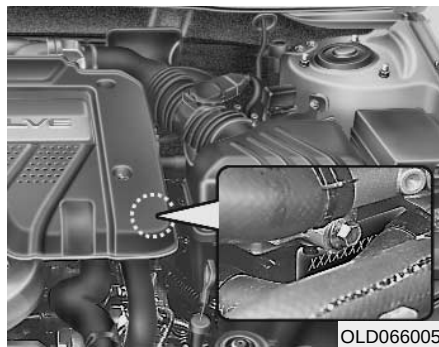


### Vehicle identification number (VIN)

To check the frame number under the passenger seat, remove the cover by pulling one side marked with "PULL".



**Tire specification / pressure label**



**Engine number**

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|--|---------------------------------------------|----|
|  | <b>Road warning / 6-2</b>                   | 1  |
|  | <b>TPMS / 6-3</b>                           |    |
|  | <b>Overheating / 6-8</b>                    | 2  |
|  | <b>Emergency starting / 6-8</b>             |    |
|  | <b>Electrical circuit protection / 6-12</b> | 3  |
|  | <b>Towing / 6-19</b>                        |    |
|  | <b>If you have a flat tire / 6-24</b>       | 4  |
|  |                                             | 5  |
|  | <b>In case of an emergency</b>              | 6  |
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## ROAD WARNING



- 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.

### 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.

## TIRES PRESSURE MONITORING SYSTEM (TPMS) (IF EQUIPPED)



- (1) Low Tire Pressure Telltale
- (2) 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 provided by a separate telltale, which displays the symbol "TPMS" when illuminated. 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.



## Low tire pressure telltale

When the tire pressure monitoring system warning telltale is illuminated, one or more of your tires is significantly under-inflated. 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 temporary spare tire. Then the TPMS malfunction indicator may turn on and the Low Tire Pressure telltale may turn off after restarting and about 20 minutes of continuous driving before you have the low-pressure tire repaired and replaced on the vehicle.

## CAUTION - Changing temperatures

*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

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

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

**TPMS (Tire pressure monitoring system) malfunction telltale**



The TPMS malfunction indicator turns on and stays on 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 both the TPMS malfunction and the low tire pressure telltale e. g. if Front Left sensor fails, the TPMS malfunction indicator turns on, but if Front Right, Rear Left, or Rear Right tire is under-inflated, the low tire pressure telltale may turn on at the same time as the TPMS malfunction indicator.

Have the system checked by an authorized KIA dealer as soon as possible to determine the cause of the problem.

**\* NOTICE**

- The TPMS malfunction indicator may be illuminated if the vehicle is moving around electric power supply cable or radio transmitter such as police stations, government and public offices, broadcasting stations, military installations, airports, or transmitting tower, etc. which can interfere with normal operation of the Tire Pressure Monitoring System (TPMS).
- The TPMS malfunction indicator may be illuminated if some electronic devices, such as notebook computers, are used in the vehicle. This can interfere with normal operation of the Tire Pressure Monitoring System (TPMS).

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- If there is a failed tire sensor, it is possible for the TPMS to temporarily learn a replacement sensor if closely driven to another vehicle that is also equipped with TPMS. In rare cases, this may temporarily delay the TPMS malfunction indicator from turning on.

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## Changing a tire with TPMS

If you have a flat tire, the Low Tire Pressure telltale will turn on. Have the flat tire repaired by an authorized KIA dealer as soon as possible or replace the flat tire with the temporary spare tire.

### \* NOTICE

**NEVER use a puncture-repairing agent to repair and/or inflate a low pressure tire. If used, you will have to replace the tire pressure sensor.**

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 as soon as possible.

After you replace the low pressure tire with the temporary spare tire, the TPMS malfunction indicator may illuminate after restarting and about 20 minutes of continuous driving.

Once the low pressure tire is re-inflated to the recommended pressure and installed on the vehicle, the TPMS malfunction indicator and the low tire pressure telltale will be soon extinguished. If the low pressure and TPMS malfunction indicators are not extinguished after about 20 minutes of continuous driving, please visit an authorized KIA dealer.

You may not be able to 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 (from sitting stationary for at least 3 hours and driven less than 1 mile (1.6 km) during 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.

A cold tire means the vehicle has been sitting for 3 hours and driven for less than 1 mile (1.6 km) in that 3 hour period.

### CAUTION

***Do not use any tire sealant if your vehicle is equipped with a Tire Pressure Monitoring System. The liquid sealant can damage the tire pressure sensors.***

***In order for the system to correctly monitor tires for under-inflation, there should be a total of exactly 4 sensors fitted to each of the four driven wheel positions. There should be no other sensors in the vehicle since this could cause the system to monitor the wrong sensors***



**⚠ WARNING - TPMS**

- 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.

**⚠ WARNING - Protecting TPMS**

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.

**This device complies with Part 15 of the FCC rules.**

Operation is subject to the following two conditions:

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

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

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## OVERHEATING

If your temperature gauge indicates overheating, if you experience a loss of power, or if you hear a loud knocking or pinging noise, the engine has probably overheated. Should any of these symptoms occur, use the following procedure:

1. Turn on the hazard warning flasher, then drive to the nearest safe location and stop your vehicle; set the automatic transaxle in P (Park), or shift the manual transaxle to N (Neutral) and apply the parking brake.
2. Make sure the air conditioner is off.
3. If coolant or steam is boiling out of the radiator, stop the engine and call an Authorized Kia Dealer for assistance.

If coolant is not boiling out, allow the engine to idle and open the hood to permit the engine to cool gradually.

If the temperature does not go down with the engine idling, stop the engine and allow sufficient time for it to cool.

4. The coolant level should then be checked. If the level in the reservoir is low, look for leaks at the radiator hoses and connections, heater hoses and connections, radiator, and water pump. If you find a major leak or another problem that may have caused the engine to overheat, do not operate the engine until it has been corrected. Call an Authorized Kia Dealer for assistance. If you do not find a leak or other problem, carefully add coolant to the reservoir.

### **WARNING - Removing radiator cap**

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

*If the engine frequently overheats, have the cooling system checked and repaired by an Authorized Kia Dealer.*

# EMERGENCY STARTING

## Jump starting

Jump starting can be dangerous if done incorrectly. Therefore, to avoid harm to yourself or damage to your vehicle or battery, follow the jump starting procedures listed on page 6-6. If in doubt, we strongly recommend that you have a competent technician or towing service jump start your vehicle.

### CAUTION

*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 causing serious injury.

### WARNING - Battery

- Keep all flames or sparks away from the battery. The battery produces hydrogen gas which may explode if exposed to flame or sparks.
- Do not attempt to jump start the vehicle if the discharged battery is frozen or if the electrolyte level is low; the battery may rupture or explode.

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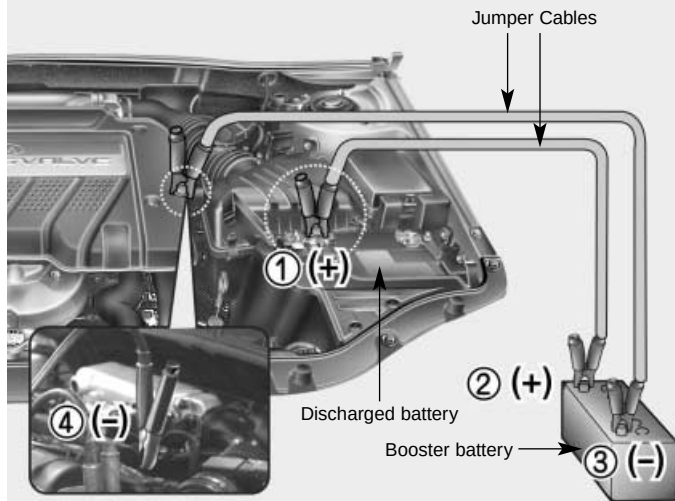
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### Connecting jumper cables

Connect cables in numerical order and disconnect in reverse order.



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### Jump starting procedure

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 previous 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, the engine lifting bracket) away from the battery (4). Do not connect it to or near any part that moves when the engine is cranked. Do not connect the jumper cable from the negative terminal of the booster battery to the negative terminal of the discharged battery.

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- 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.
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.*

*Refer to illustration on page 6-10.*

**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.

**⚡ CAUTION**

***Never tow a vehicle to start it because the sudden surge forward when the engine starts could cause a collision with the tow vehicle.***

## ELECTRICAL CIRCUIT PROTECTION

Blade type



Normal



Blown

Cartridge type



Normal



Blown

Fusible link



Normal



Blown

1VQA4037

This vehicle has two fuse panels, one located in the driver's side knee 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 be melted.

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 fusible link for higher amperage ratings.*

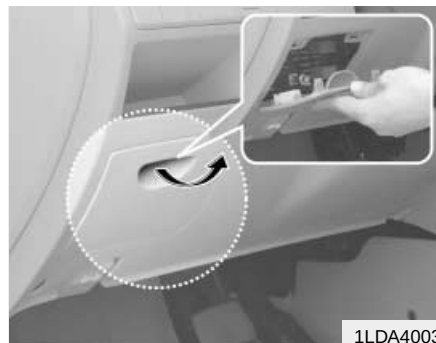
### Fuses

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

## Fuse replacement

### **⚠ 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 instead of the proper fuse - even as a temporary repair. It may cause extensive wiring damage and possibly a fire.
- Do not use a screwdriver or any other metal object to remove fuses because it may cause a short circuit and damage the system.



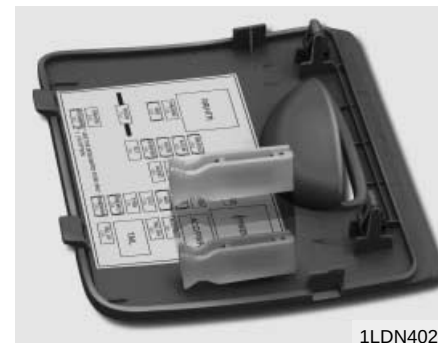
### Driver-side knee bolster

1. Turn the ignition switch and all other switches off.
2. Pull the suspected fuse straight out. Use the removal tool provided on the cover.
3. Check the removed fuse; replace it if it is blown.

*Spare fuses are provided in the fuse panel in engine compartment.*

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.



*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 audio 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.

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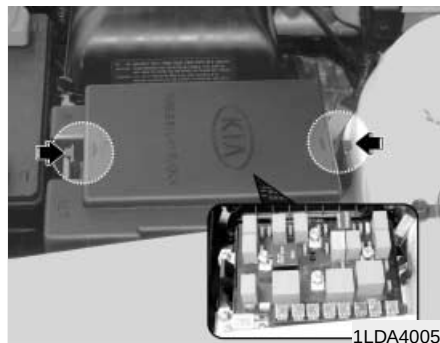
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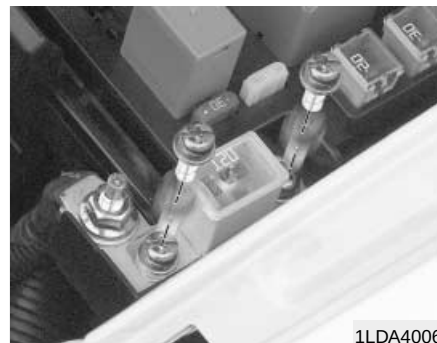
### Engine compartment

1. Turn the ignition switch and all other switches off.
2. Remove the fuse box cover by pressing the taps on both ends and pulling up.
3. Check the removed fuse; replace it if it is blown.
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

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



### Main fuse

If the ALT (120A) fuse is blown, it must be removed as follows:

1. Disconnect the negative battery cable.
2. Remove the screws 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.





## Engine compartment

| Description | Fuse rating | Protected component             |
|-------------|-------------|---------------------------------|
| ATM         | 20A         | Automatic transaxle control     |
| ECU1        | 10A         | Engine control unit             |
| STOP        | 15A         | Stop light                      |
| FWIPER      | 20A         | Front wiper                     |
| R/FOG       | 10A         | Rear fog light                  |
| F/FOG       | 15A         | Front fog light                 |
| LO HDLP     | 15A         | Headlight (low)                 |
| HI HDLP     | 15A         | Headlight (high)                |
| A/CON       | 10A         | Air conditioner                 |
| F/PUMP      | 15A         | Fuel pump                       |
| T/OPEN      | 10A         | Trunk lid opener                |
| FOLD        | 10A         | Outside rearview mirror folding |
| HORN        | 10A         | Horn                            |
| DEICE       | 15A         | Deicer                          |
| INJ         | 15A         | Injection                       |
| SNSR        | 10A         | O2 sensor                       |
| ECU2        | 30A         | Engine control unit             |
| SPARE       | 10A         | spare fuse                      |
| SPARE       | 15A         | spare fuse                      |
| SPARE       | 20A         | spare fuse                      |
| SPARE       | 30A         | spare fuse                      |
| ABS2        | 30A         | Anti-lock brake system          |
| ABS1        | 30A         | Anti-lock brake system          |
| IP B+       | 50A         | In panel B+                     |

| Description | Fuse rating | Protected component               |
|-------------|-------------|-----------------------------------|
| BLOWER      | 30A         | Blower                            |
| IGN2        | 30A         | Ignition                          |
| IGN1        | 30A         | Ignition                          |
| RAD         | 30A         | Radiator fan                      |
| COND        | 20A         | Condenser fan                     |
| ALT         | 120A        | Alternater                        |
| ATM         | -           | Automatic transaxle control relay |
| WIPER       | -           | Wiper relay                       |
| F/FOG       | -           | Front fog light relay             |
| LO HDLP     | -           | Headlight relay (low)             |
| HI HDLP     | -           | Headlight relay (high)            |
| A/CON       | -           | Air conditioner relay             |
| F/PUMP      | -           | Fuel pump                         |
| DRL         | -           | Daytime running light relay       |
| COND2       | -           | Condenser fan relay               |
| HORN        | -           | Horn relay                        |
| MAIN        | -           | Main relay                        |
| START       | -           | Start motor relay                 |
| RAD         | -           | Radiator fan relay                |
| COND        | -           | Condenser fan relay               |

**Driver-side knee bolster**

| Description | Fuse rating | Protected component            |
|-------------|-------------|--------------------------------|
| START       | 10A         | Start motor                    |
| SRF/D_LOCK  | 20A         | Sunroof, Door lock             |
| HAZARD      | 10A         | Hazard warning flasher         |
| A/CON       | 10A         | Air conditioner                |
| CLUSTER     | 10A         | Cluster                        |
| RKE         | 10A         | Remote keyless entry           |
| S/HTR       | 20A         | Seat warmer                    |
| C/LIGHTER   | 15A         | Cigar lighter                  |
| A/BAG       | 15A         | Airbag                         |
| R/WIPER     | 15A         | Rear wiper                     |
| AUDIO       | 10A         | Audio                          |
| ABS         | 10A         | Anti-lock brake system         |
| ACC/PWR     | 15A         | Accessory / Power socket       |
| ROOM        | 15A         | Room lamp                      |
| IGN         | 10A         | Ignition                       |
| ECU         | 10A         | Engine control unit            |
| TAIL RH     | 10A         | Tail light (right)             |
| T/SIG       | 10A         | Turn signal light              |
| RR/HTR      | 30A         | Rear window defroster          |
| P/PDW LH    | 25A         | Power window (left)            |
| HTD/MIRR    | 10A         | Outside rearview mirror heater |
| P/PDW RH    | 25A         | Power window (right)           |
| TAIL LH     | 10A         | Tail light (left)              |

| Description | Fuse rating | Protected component            |
|-------------|-------------|--------------------------------|
| RR/HTR      | -           | Rear window defroster relay    |
| RESISTOR    | -           | Resistor                       |
| P/PDW       | -           | Power window relay             |
| POWER       | -           | Accessory / Power socket relay |
| TAIL        | -           | Tail light relay               |

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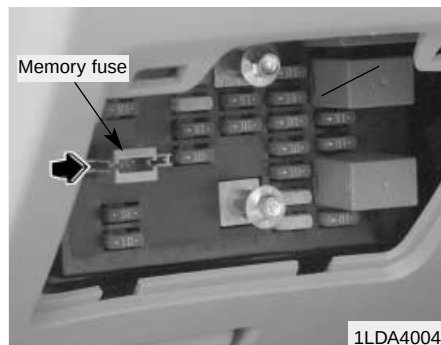
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### **Memory fuse**

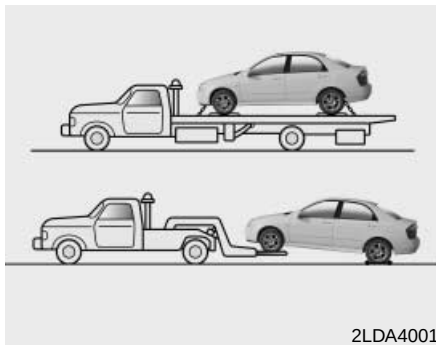
Your vehicle is equipped with a memory fuse to prevent battery discharge if your vehicle is parked without being operated for prolonged periods. Use the following procedures before parking the vehicle for prolonged period.

1. Turn off the engine.
2. Turn off the headlights and tail lights.
3. Open the driver-side knee bolster cover and pull up the "ROOM 15A".

### **\* 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 "Items to be reset..." on page 7-30)
- Even though the memory fuse is pulled up, the battery can still be discharged by operation of the headlights or other electrical devices.

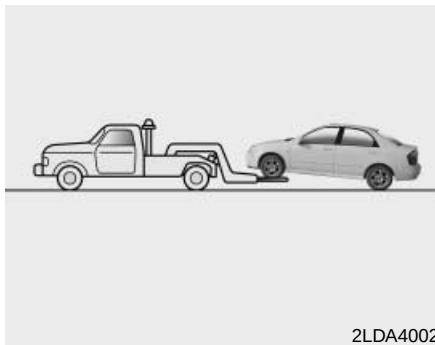
## TOWING



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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.

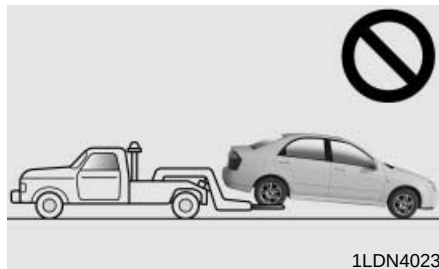
*For trailer towing guidelines information, refer to section 5 "Driving Tips".*



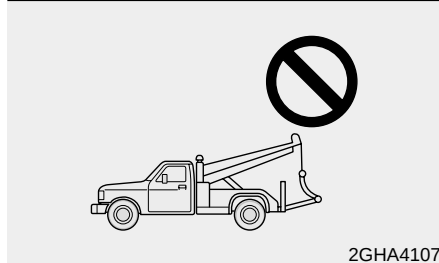
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It is acceptable to tow the vehicle with the rear wheels on the ground (without dollies) and the front wheels off the ground.

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.



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### **CAUTION**

- **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.**

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When towing your vehicle in an emergency without wheel dollies :

1. Set the ignition switch in the ACC position.
2. Place the transaxle shift lever in N (Neutral).
3. Release the parking brake.

**CAUTION**

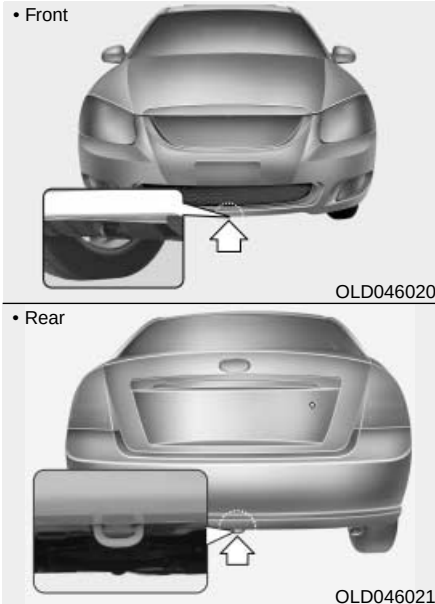
*Failure to place the transaxle shift lever in N (Neutral) may cause internal damage to the transaxle.*



**Tie-down hook  
(for flatbed towing)**

**WARNING**

Do not use the hooks under the front of the vehicle for towing purposes. These hooks are designed **ONLY** for transport tie-down. If the tie-down hooks are used for towing, the tie-down hooks will be damaged and this could lead to serious injury.



### Towing with a vehicle other than a tow truck

If towing is necessary, we recommend you to have it done by an Authorized Kia dealer or a commercial tow truck service.

If towing service is not available in an emergency, your vehicle may be temporarily towed using a cable or chain secured to the emergency towing hook under the front or rear of the vehicle. Use extreme caution when towing the vehicle. A driver must be in the vehicle to steer it and operate the brakes.

Towing in this manner may be done only on hard-surfaced roads for a short distance and at low speeds. Also, the wheels, axles, power train, steering and brakes must all be in good condition.

- Do not use the tow hooks to pull a vehicle out of mud, sand or other conditions from which the vehicle cannot be driven out under its own power.
- Avoid towing a vehicle heavier than the vehicle doing the towing.
- The drivers of both vehicles should communicate with each other frequently.

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## **CAUTION**

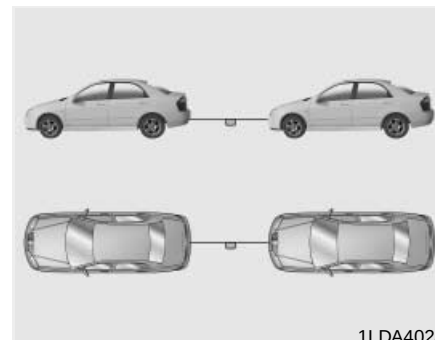
- **Attach a towing strap to the tow hook.**
- **Using a portion of the vehicle other than the tow hooks for towing may damage the body of your vehicle.**
- **Use only a cable or chain specifically intended for use in towing vehicles. Securely fasten the cable or chain to the towing hook provided.**

- Before emergency towing, check that the hook is not broken or damaged.
- Fasten the towing cable or chain securely to the hook.
- Do not jerk the hook. Apply steady and even force.
- To avoid damaging the hook, do not pull from the side or at a vertical angle. Always pull straight ahead.

## **WARNING**

Use extreme caution when towing the vehicle.

- Avoid sudden starts or erratic driving maneuvers which would place excessive stress on the emergency towing hook and towing cable or chain. The hook and towing cable or chain may break and cause serious injury or damage.
- If the towing vehicle can hardly move, do not forcibly continue the towing. Contact an Authorized Kia dealer or a commercial tow truck service for assistance.
- Tow the vehicle as straight ahead as possible.



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- Use a towing strap less than 16 feet (5 m) long. Attach a white or red cloth (about 12 inches (30 cm) wide) in the middle of the strap for easy visibility.
- Drive carefully so that the towing strap is not loosened during towing.



**When your vehicle is being towed by another vehicle other than a tow truck (In case of an emergency)**

- Turn the ignition switch to ACC so the steering wheel isn't locked.
- Place the transaxle shift lever in N (Neutral).
- Release the parking brake.
- Vehicle equipped with automatic transaxles should not exceed 28 mph (45 km/h) and should not be towed more than 50 miles (80 km).
- Vehicle equipped with manual transmissions should not be towed in excess of 55 mph (88 km/h) and should not be towed more than 400 miles (645 km).

- Press the brake pedal with more force than normal since you will have reduced brake performance.
- More steering effort will be required because the power steering system will be disabled.
- If you are driving down a long hill, the brakes may overheat and brake performance will be reduced. Stop often and let the brakes cool off.

**⚡ CAUTION**

***To prevent internal damage to the transaxle, never tow your vehicle from the rear (backwards) with all four tires in contact with the surface.***

**Tips for towing a stuck vehicle**

The following methods are effective when your vehicle is stuck in mud, sand or similar substances that prevent the vehicle from being driven out under its own power.

- Remove the soil and sand, etc. from the front and the back of the tires.
- Place a stone or wood under the tires.

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## IF YOU HAVE A FLAT TIRE



The spare tire, jack, jack handle, wheel lug nut wrench are stored in the trunk compartment. Move the carpeting out of the way to reach this equipment.



### Removing 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.

### Important - use of compact spare tire

your vehicle is equipped with a compact spare tire. This compact spare tire takes up less space than a regular-size tire. This tire is smaller than a conventional tire and is designed for temporary use only.

### **CAUTION** - Compact spare

- *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.*

**CAUTION - Compact spare**

***This spare tire should be used only for VERY short distances. Compact spares should NEVER be used for long drives or extended distances.***

The compact spare should be inflated to 60 psi (420 kPa).

**\* NOTICE**

**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 50 mph (80 km/h); 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 1 inch (25 mm), which could result in damage to the vehicle.

- Do not take this vehicle through an automatic car wash.
- Do not use tire chains on this tire. Because of the smaller size, a tire chain will not fit properly. This could damage the vehicle and result in loss of the chain.
- This 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.

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## Changing tires

### *Jacking instructions*

The jack is provided for emergency tire changing only.

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 level firm ground whenever possible. 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.

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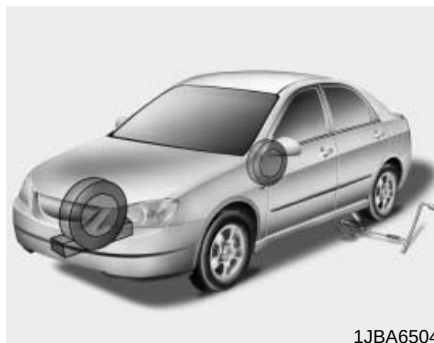
(Continued)

- The vehicle can easily roll off the jack causing serious injury or death. No person should place any portion of their body under a vehicle that is supported only by a jack.
- Do not start or run the engine while the vehicle is on the jack.
- 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.



### ***Tire replacement***

1. Park on a level surface and apply the parking brake firmly.
2. Shift the shift lever into R (Reverse) with manual transaxle or P (Park) with automatic transaxle.
3. Activate the hazard warning flasher.



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.

### **⚠ WARNING - Changing a tire**

- 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.
- It is recommended that the wheels of the vehicle be chocked, and that no person should remain in a vehicle that is being jacked.

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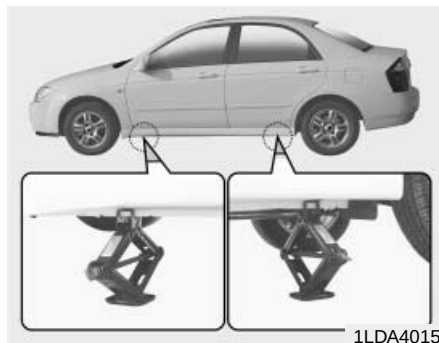
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6. Loosen the wheel lug nuts counterclockwise one turn each, but do not remove any nut until the tire has been raised off the ground.



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.

**⚠ WARNING - Jack location**  
To reduce the possibility of injury, be sure to use only the jack provided with the vehicle and in the correct jack position; never use any other part of the vehicle for jack support.



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 1.2 in (30 mm). Before removing the wheel lug nuts, make sure the vehicle is stable and that there is no chance for movement or slippage.

9. Remove the wheel lug nuts by turning them counterclockwise, then remove the wheel.

10. Mount the spare tire into position and install the wheel lug nuts with the beveled edge inward.



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11. Once the wheel lug nuts have been tightened, lower the vehicle fully to the ground and continue to tighten the lug nuts until they are fully secured. Tighten the wheel lug nuts firmly in a "X" pattern.

If you are unsure of the tightness of the wheel lug nuts, have them checked at the nearest service station. The specified tightening torque is 65-79 lb•ft (9~11 kg•m, 88-107 N•m). Improperly tightened wheel lug nuts could cause brake pedal vibration while braking.

### **CAUTION**

*Your vehicle has metric threads on the wheel bolts and nuts. Make certain during wheel removal that the same nuts removed are reinstalled - or, if replaced, that nuts with metric threads and the same chamfer configuration are used. Installation of a non-metric thread nut on a metric bolt or vice-versa will not secure the wheel to the hub properly and will damage the bolt 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 bolts**

If the bolts are damaged or if non-metric nut is used on a metric bolts or vice versa, they may lose their ability to retain the wheel. This could lead to the loss of the wheel resulting in severe injury or death.

To prevent the jack, jack handle, wheel lug nut wrench and spare tire from rattling while the vehicle is in motion, store them properly.

### **WARNING**

Check the inflation pressures as soon as possible after installing the spare tire. Adjust it to the specified pressure, if necessary. Refer to Section 8, Specifications.

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**Maintenance services / 7-2**  
**Normal maintenance schedule / 7-4**  
**Severe maintenance schedule / 7-7**  
**Owner maintenance / 7-8**  
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**Engine oil and oil filter / 7-12**  
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## Maintenance

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### MAINTENANCE SERVICES

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

Should you have any doubts concerning the inspection or servicing of your vehicle, we strongly recommend that you have an Authorized 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 Kia 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.

## Scheduled maintenance service

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

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

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

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## 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.

R : Replace

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

| No.                    | DESCRIPTION                            |                 | MILES X 1000                           | 7.5 | 15 | 22.5 | 30 | 37.5 | 45 | 52.5 | 60 | 67.5 | 75  | 82.5 | 90  | 97.5 | 105 | 112.5 | 120 | 127.5 | 135 | 142.5 | 150 |
|------------------------|----------------------------------------|-----------------|----------------------------------------|-----|----|------|----|------|----|------|----|------|-----|------|-----|------|-----|-------|-----|-------|-----|-------|-----|
|                        |                                        |                 | KILOMETERS X 1000                      | 12  | 24 | 36   | 48 | 60   | 72 | 84   | 96 | 108  | 120 | 132  | 144 | 156  | 168 | 180   | 192 | 204   | 216 | 228   | 240 |
|                        |                                        |                 | MONTHS                                 | 6   | 12 | 18   | 24 | 30   | 36 | 42   | 48 | 54   | 60  | 66   | 72  | 78   | 84  | 90    | 96  | 102   | 108 | 114   | 120 |
| EMISSION CONTROL ITEMS |                                        |                 |                                        |     |    |      |    |      |    |      |    |      |     |      |     |      |     |       |     |       |     |       |     |
| 1                      | ENGINE OIL AND FILTER                  |                 | Replace every 7,500 miles or 12 months |     |    |      |    |      |    |      |    |      |     |      |     |      |     |       |     |       |     |       |     |
| 2                      | FUEL FILTER                            |                 |                                        |     |    |      |    |      | R  |      |    |      |     |      |     | R    |     |       |     |       |     |       |     |
| 3                      | FUEL LINES, FUEL HOSES AND CONNECTIONS |                 |                                        |     |    | I    |    |      |    | I    |    |      |     |      | I   |      |     |       | I   |       |     |       | I   |
| 4                      | VACUUM HOSE                            |                 | I                                      | I   | I  | I    | I  | I    | I  | I    | I  | I    | I   | I    | I   | I    | I   | I     | I   | I     | I   | I     | I   |
| 5                      | CRANKCASE VENTILATION HOSE             |                 |                                        |     |    | I    |    |      |    | I    |    |      |     |      | I   |      |     |       | I   |       |     |       | I   |
| 6                      | VAPOR HOSE AND FUEL FILLER CAP         |                 |                                        |     |    | I    |    |      |    | I    |    |      |     |      | I   |      |     |       | I   |       |     |       | I   |
| 7                      | AIR CLEANER FILTER                     |                 | I                                      | I   | I  | R    | I  | I    | I  | R    | I  | I    | I   | I    | R   | I    | I   | I     | R   | I     | I   | I     | R   |
| 8                      | SPARK PLUGS                            | PLATINUM COATED |                                        |     |    |      |    |      |    |      | R  |      |     |      |     |      |     |       | R   |       |     |       |     |
|                        |                                        | IRIDIUM COATED  | Replace every 100,000 miles            |     |    |      |    |      |    |      |    |      |     |      |     |      |     |       |     |       |     |       |     |
| 9                      | VALVE CLEARANCE *1                     |                 |                                        |     |    |      |    |      |    |      | I  |      |     |      |     |      |     |       | I   |       |     |       |     |
| 10                     | FUEL TANK AIR FILTER                   |                 |                                        | I   |    | R    |    | I    |    |      | R  |      | I   |      | R   |      | I   |       | R   |       | I   |       | R   |

\*1 : Inspect for excessive tappet noise and/or engine vibration and adjust if necessary.

## NORMAL MAINTENANCE SCHEDULE (CONT.)

R : Replace

I : Inspect and, after Inspection, clean, adjust, repair or replace if necessary.

| No.           | DESCRIPTION                                        | MILES X 1000                                                                                                                  | 7.5 | 15 | 22.5 | 30 | 37.5 | 45 | 52.5 | 60 | 67.5 | 75  | 82.5 | 90  | 97.5 | 105 | 112.5 | 120 | 127.5 | 135 | 142.5 | 150 |
|---------------|----------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|-----|----|------|----|------|----|------|----|------|-----|------|-----|------|-----|-------|-----|-------|-----|-------|-----|
|               |                                                    | KILOMETERS X 1000                                                                                                             | 12  | 24 | 36   | 48 | 60   | 72 | 84   | 96 | 108  | 120 | 132  | 144 | 156  | 168 | 180   | 192 | 204   | 216 | 228   | 240 |
|               |                                                    | MONTHS                                                                                                                        | 6   | 12 | 18   | 24 | 30   | 36 | 42   | 48 | 54   | 60  | 66   | 72  | 78   | 84  | 90    | 96  | 102   | 108 | 114   | 120 |
| GENERAL ITEMS |                                                    |                                                                                                                               |     |    |      |    |      |    |      |    |      |     |      |     |      |     |       |     |       |     |       |     |
| 1             | DRIVE BELT<br>(ALTERNATOR, P/STR'G, A/CON, W/PUMP) | I                                                                                                                             | I   | I  | I    | I  | I    | I  | I    | I  | I    | I   | I    | I   | I    | I   | I     | I   | I     | I   | I     | I   |
| 2             | COOLANT                                            | At first, replace at 60,000 miles (96,000 km) or 60 months<br>After that, replace every 25,000 miles (40,000 km) or 24 months |     |    |      |    |      |    |      |    |      |     |      |     |      |     |       |     |       |     |       |     |
| 3             | TIMING BELT                                        |                                                                                                                               |     |    |      |    |      |    |      | I  |      |     |      | R   |      |     |       | I   |       |     |       | R   |
| 4             | TENSIONER/IDLER-TIMING BELT                        |                                                                                                                               |     |    |      |    |      |    |      | I  |      |     |      | I   |      |     |       | I   |       |     |       | I   |
| 5             | MANUAL TRANSAXLE OIL                               |                                                                                                                               |     |    | I    |    |      |    |      | I  |      |     |      | I   |      |     |       | I   |       |     |       | I   |
| 6             | AUTOMATIC TRANSAXLE FLUID                          |                                                                                                                               | I   |    | I    |    | I    |    | I    |    | I    |     | I    |     | R    |     |       | I   |       | I   |       | I   |
| 7             | BRAKE FLUID                                        |                                                                                                                               |     |    | I    |    |      |    |      | I  |      |     |      | I   |      |     |       | I   |       |     |       | I   |
| 8             | BRAKE HOSES AND LINES                              |                                                                                                                               | I   |    | I    |    | I    |    | I    |    | I    |     | I    |     | I    |     |       | I   |       | I   |       | I   |
| 9             | REAR BRAKE DRUMS/LININGS, PARKING BRAKE            |                                                                                                                               |     |    | I    |    |      |    |      | I  |      |     |      | I   |      |     |       | I   |       |     |       | I   |
| 10            | BRAKE PADS, CALIPERS AND ROTORS                    |                                                                                                                               | I   |    | I    |    | I    |    | I    |    | I    |     | I    |     | I    |     |       | I   |       | I   |       | I   |

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NORMAL MAINTENANCE SCHEDULE (CONT.)

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

| No.           | DESCRIPTION                                                                       | MILES X 1000                                        | 7.5 | 15 | 22.5 | 30 | 37.5 | 45 | 52.5 | 60 | 67.5 | 75  | 82.5 | 90  | 97.5 | 105 | 112.5 | 120 | 127.5 | 135 | 142.5 | 150 |
|---------------|-----------------------------------------------------------------------------------|-----------------------------------------------------|-----|----|------|----|------|----|------|----|------|-----|------|-----|------|-----|-------|-----|-------|-----|-------|-----|
|               |                                                                                   | KILOMETERS X 1000                                   | 12  | 24 | 36   | 48 | 60   | 72 | 84   | 96 | 108  | 120 | 132  | 144 | 156  | 168 | 180   | 192 | 204   | 216 | 228   | 240 |
|               |                                                                                   | MONTHS                                              | 6   | 12 | 18   | 24 | 30   | 36 | 42   | 48 | 54   | 60  | 66   | 72  | 78   | 84  | 90    | 96  | 102   | 108 | 114   | 120 |
| GENERAL ITEMS |                                                                                   |                                                     |     |    |      |    |      |    |      |    |      |     |      |     |      |     |       |     |       |     |       |     |
| 11            | EXHAUST PIPE AND MUFFLER                                                          |                                                     | I   |    | I    |    | I    |    | I    |    | I    |     | I    |     | I    |     | I     |     | I     |     | I     |     |
| 12            | SUSPENSION MOUNTING BOLTS                                                         |                                                     | I   |    | I    |    | I    |    | I    |    | I    |     | I    |     | I    |     | I     |     | I     |     | I     |     |
| 13            | STEERING GEAR BOX, LINKAGE & BOOTS<br>/LOWER ARM BALL JOINT, UPPER ARM BALL JOINT |                                                     | I   |    | I    |    | I    |    | I    |    | I    |     | I    |     | I    |     | I     |     | I     |     | I     |     |
| 14            | POWER STEERING PUMP, BELT AND HOSES                                               |                                                     | I   |    | I    |    | I    |    | I    |    | I    |     | I    |     | I    |     | I     |     | I     |     | I     |     |
| 15            | DRIVE SHAFTS AND BOOTS                                                            |                                                     | I   |    | I    |    | I    |    | I    |    | I    |     | I    |     | I    |     | I     |     | I     |     | I     |     |
| 16            | AIR CONDITIONING REFRIGERANT                                                      |                                                     | I   |    | I    |    | I    |    | I    |    | I    |     | I    |     | I    |     | I     |     | I     |     | I     |     |
| 17            | CLIMATE CONTROL AIR FILTER<br>(FOR EVAPORATOR AND BLOWER UNIT)                    | Replace every 12 months or 10,000 miles (15,000 km) |     |    |      |    |      |    |      |    |      |     |      |     |      |     |       |     |       |     |       |     |

## MAINTENANCE UNDER SEVERE USAGE CONDITIONS

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

R : Replace

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

| MAINTENANCE ITEM                                                                  | MAINTENANCE OPERATION | MAINTENANCE INTERVALS                       | DRIVING CONDITION            |
|-----------------------------------------------------------------------------------|-----------------------|---------------------------------------------|------------------------------|
| ENGINE OIL AND FILTER                                                             | R                     | EVERY 3,000 MILES (5,000 KM) OR 3 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                         |
| BRAKE PADS, CALIPERS AND ROTORS                                                   | I                     | MORE FREQUENTLY                             | C, D, G, H                   |
| REAR BRAKE DRUMS/LININGS, PARKING BRAKE                                           | I                     | MORE FREQUENTLY                             | C, D, G, H                   |
| STEERING GEAR BOX, LINKAGE & BOOTS/<br>LOWER ARM BALL JOINT, UPPER ARM BALL JOINT | I                     | MORE FREQUENTLY                             | C, D, E, F, G, H, I          |
| DRIVE SHAFTS AND BOOTS                                                            | I                     | EVERY 7,500 MILES (12,000 KM) OR 6 MONTHS   | C, D, E, F, G, H             |
| TIMING BELT/IDLER/TENSIONER                                                       | R                     | EVERY 60,000 MILES (96,000 KM) OR 48 MONTHS | B, C, D, E, F, G             |
| MANUAL TRANSAXLE OIL                                                              | R                     | EVERY 60,000 MILES (96,000 KM)              | A, C, D, E, F, G, H, I, J    |
| AUTOMATIC TRANSAXLE FLUID                                                         | R                     | EVERY 30,000 MILES (48,000 KM)              | A, C, E, F, G, H, I          |
| CLIMATE CONTROL AIR FILTER<br>(FOR EVAPORATOR AND BLOWER UNIT)                    | R                     | MORE FREQUENTLY                             | C, E                         |

### SEVERE DRIVING CONDITIONS

- A - Repeatedly driving short distance of less than 5miles (8km) in normal temperature or less than 10miles (16km) in freezing temperature
- B - Extensive engine idling or low speed driving for long distances
- C - Driving on rough, dusty, muddy, unpaved, graveled or salt- spread roads
- D - Driving in areas using salt or other corrosive materials or in very cold weather

- E - Driving in sandy areas
- F - Driving in heavy traffic area over 90°F (32°C)
- G - Driving on uphill, downhill, or mountain road
- H - Towing a Trailer, or using a camper, or roof rack
- I - Driving as a patrol car, taxi, other commercial use or vehicle towing
- J - Driving over 100 MPH (170 Km/h)
- K - Frequently driving in stop-and-go conditions

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## OWNER MAINTENANCE

### Owner maintenance schedule

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.

#### *When you stop for fuel:*

- Check the engine oil level.
- Check coolant level in coolant reservoir.

#### **WARNING - Radiation coolant**

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

- Check the windshield washer fluid level.
- Look for low or under-inflated tires.

#### *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 strange sounds, pulling to one side, increased brake pedal travel or “hard-to-push” brake pedal.
- If any slipping or changes in the operation of your transaxle occurs, check the transaxle fluid level.
- Check automatic transaxle P (Park) function.
- Check parking brake.
- Check for fluid leaks under your vehicle (water dripping from the air conditioning system after use is normal).

*At least monthly:*

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

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

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

*At least once a year :*

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

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### 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.

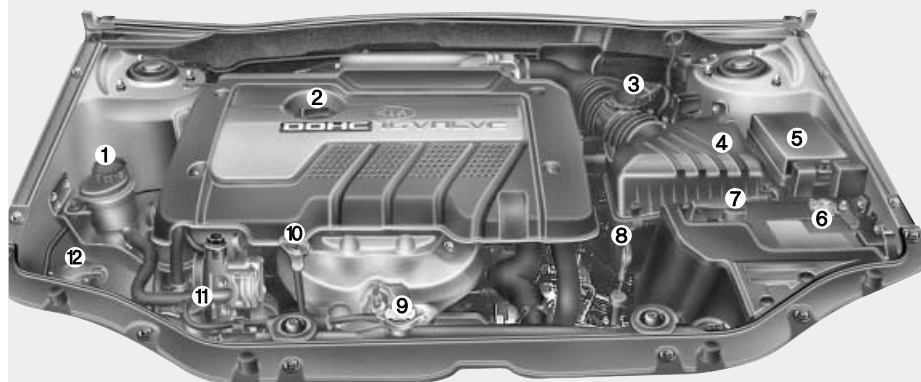
#### \* NOTICE

Improper owner maintenance during the warranty period may affect warranty coverage. For details, read the separate Kia 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

- Performing maintenance work on a vehicle can be dangerous. You can be seriously injured while performing some maintenance procedures. If you lack sufficient knowledge and experience or the proper tools and equipment to do the work, have it done by an Authorized Kia Dealer.
- Working under the hood with the engine running is dangerous. It becomes even more dangerous when you wear jewelry or loose clothing. These can become entangled in moving parts and result in injury. Therefore, if you must run the engine while working under the hood, make certain that you remove all jewelry (especially rings, bracelets, watches, and necklaces) and all neckties, scarves, and similar loose clothing before getting near the engine or cooling fans.

## ENGINE COMPARTMENT



1. Power steering fluid reservoir
2. Engine oil filler cap
3. Brake fluid reservoir
4. Air cleaner
5. Fuse box
6. Negative battery terminal
7. Positive battery terminal
8. Auto transaxle oil dipstick (if equipped)
9. Radiator cap
10. Engine oil dipstick
11. Engine coolant reservoir
12. Windshield washer fluid reservoir

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## ENGINE OIL AND OIL FILTER



### Checking the engine oil level

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



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

*Use only the specified engine oil. (Refer to "Recommended Lubricants" later in this section.)*

### 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.

### **⚠ PROPOSITION 65 WARNING**

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

## ENGINE COOLING SYSTEM

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

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

### Checking the coolant level

 **WARNING - Removing radiator cap**

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

(Continued)

**(Continued)**

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

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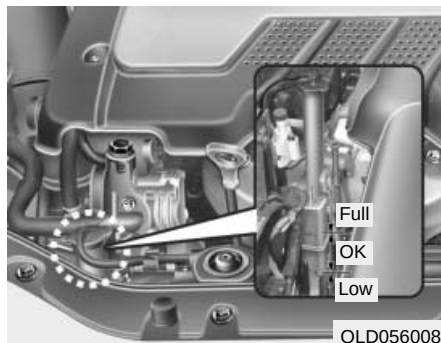
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Check the condition and connections of all cooling system hoses and heater hoses. Replace any swollen or deteriorated hoses.

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

If the coolant level is low, add enough specified coolant 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 coolant

- Use only soft (de-mineralized) water in the coolant mixture.
- The engine in your vehicle has aluminum engine parts and must be protected by an ethylene-glycol-based coolant to prevent corrosion and freezing.
- DO NOT USE alcohol or methanol coolant or mix them with the specified coolant.
- Do not use a solution that contains more than 60% antifreeze or less than 35% antifreeze, which would reduce the effectiveness of the solution.

For mixture percentage, refer to the following table.

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



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### **⚠ WARNING**

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

## **Changing the coolant**

Have 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 before refilling the coolant in order to prevent the coolant from overflowing into engine parts such as generator.*

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## BRAKES AND CLUTCH (IF EQUIPPED)



### Checking brake/clutch fluid level

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

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

If the level is low, add fluid to the MAX level. The level will fall with accumulated mileage. This is a normal condition associated with the wear of the brake linings. If the fluid level is excessively low, have the brake system checked by an Authorized Kia Dealer.

*Use only the specified brake/clutch fluid. (Refer to "Recommended Lubricants" later in this section.)*

*Never mix different types of fluid.*

### **⚠ WARNING**

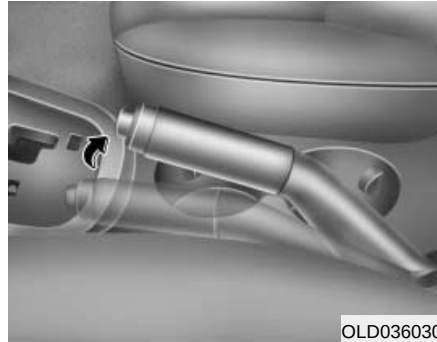
**In the event the brake system requires frequent additions of fluid, the vehicle should be inspected by an Authorized Kia Dealer.**

### **⚠ WARNING**

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

**CAUTION**

*Do not allow brake/clutch fluid to contact the vehicle's body paint, as paint damage will result. Brake/clutch 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 thrown out. Don't put in the wrong kind of fluid. For example, just a few drops of mineral-based oil, such as engine oil, in your brake clutch system can damage brake clutch system parts.*

**PARKING BRAKE****Checking the parking brake**

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

Stroke : 7~8 “clicks” at a force of 44 lbs (20kg, 196N).

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## POWER STEERING



### Checking the power steering fluid level

With the vehicle on level ground, check the fluid level in the power steering reservoir periodically. The fluid should be between MAX and MIN marks on the side of the reservoir at the normal temperature.

Before adding power steering fluid, thoroughly clean the area around the reservoir cap to prevent power steering fluid contamination.

If the level is low, add fluid to the MAX level.

In the event the power steering system requires frequent addition of fluid, the vehicle should be inspected by an Authorized Kia Dealer.

### **CAUTION**

- *To avoid damage to the power steering pump, do not operate the vehicle for prolonged periods with a low power steering fluid level.*
- *Never start the engine when the reservoir tank is empty.*
- *When adding fluid, be careful that dirt does not get into the tank.*
- *Too little fluid can make the steering wheel heavier or strange noise can be generated.*
- *The use of the non-specified fluid could reduce the effectiveness of the power steering wheel and cause damage to it.*

*Use only the specified power steering fluid. (Refer to "Recommended Lubricants" later in this section.)*

### Power steering hose

Check the connections for oil leaks, severe damage and the twists in the power steering hose before driving.

## MANUAL TRANSAXLE (IF EQUIPPED)

### Changing the manual transaxle fluid

Have manual transaxle fluid checked and changed by an authorized KIA dealer according to the Maintenance Schedule at the beginning of this section.

## AUTOMATIC TRANSAXLE (IF EQUIPPED)



### Checking the automatic transaxle fluid level

The automatic transaxle fluid level should be checked regularly.

Keep the vehicle on the level ground with the parking brake applied and check the fluid level according to the following procedure.

1. Place the selector lever in N (Neutral) position and confirm the engine is running at normal idle speed.

2. After the transaxle is warmed up sufficiently (fluid temperature 158~176°F (70~80°C)), for example by 10 minutes usual driving, shift the selector lever through all positions then place the selector lever in N (Neutral) or P (Park) position.

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3. Confirm that the fluid level is in "HOT" range on the level gauge. If the fluid level is lower, add the specified fluid from the fill hole. If the fluid level is higher, drain the fluid from the drain hole.
4. If the fluid level is checked in cold condition (fluid temperature 68~86°F (20~30°C)) add the fluid to "COLD (C)" line and then recheck the fluid level according to the above step 2.

### **⚠ WARNING - Transaxle fluid**

The transaxle fluid level should be checked when the engine is at normal operating temperature. This means that the engine, radiator, radiator hose and exhaust system etc., are very hot. Exercise great care not to burn yourself during this procedure.

### **⚠ CAUTION**

- *Low fluid level causes transaxle slippage. Overfilling can cause foaming, loss of fluid and transaxle malfunction.*
- *The use of a non-specified fluid could result in transaxle malfunction and failure.*

### **⚠ WARNING - Parking brake**

To avoid sudden movement of the vehicle, apply parking brake and depress the brake pedal before moving the shift lever.

### **\* NOTICE**

"COLD (C)" scale is for reference only and should NOT be used to determine transaxle fluid level.

### **\* NOTICE**

New automatic transaxle fluid should be red. The red dye is added so the assembly plant can identify it as automatic transaxle fluid and distinguish it from engine oil or antifreeze. The red dye, which is not an indicator of fluid quality, is not permanent. As the vehicle is driven, the automatic transaxle fluid will begin to look darker. The color may eventually appear light brown. Therefore, have an Authorized Kia dealer change the automatic transaxle fluid according to the Scheduled Maintenance at the beginning of this section.

### **Changing the automatic transaxle fluid**

Have automatic transaxle fluid changed by an authorized KIA dealer according to the Maintenance Schedule at the beginning of this section.

## LUBRICANTS AND FLUIDS



### Checking the washer fluid level

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

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

### **⚠ WARNING**

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

### Body lubrication

All moving points of the body, such as door hinges, hood hinges, and locks, should be lubricated each time the engine oil is changed. Use a non-freezing lubricant on locks during cold weather.

Make sure the engine hood secondary latch keeps the hood from opening when the primary latch is released.

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## AIR CLEANER

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### Filter replacement

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



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



2. Replace the air cleaner filter.

3. Lock the cover with the cover attaching clips.

Replace the filter according to the Maintenance Schedule.

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

### CAUTION

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

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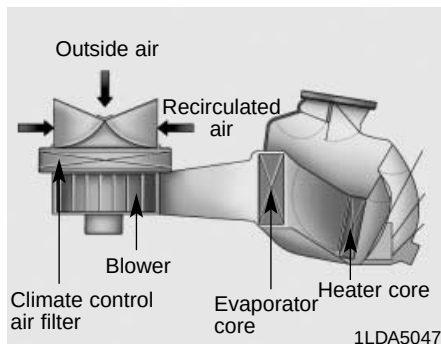
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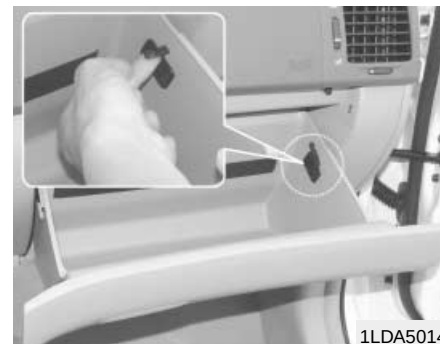
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## CLIMATE CONTROL AIR FILTER (IF EQUIPPED)



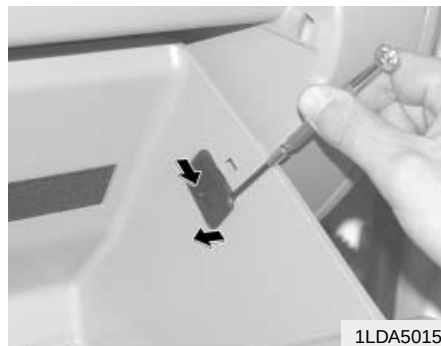
The climate control air filter installed behind the glove box filters the dust or other pollutants coming into the vehicle through the heating and air conditioning system from the outside of vehicle. If dust or other pollutants accumulate in the filter over a period of time, the air flow from the air vents may be decrease and the moisture inside of the windshield easily occurs than before when the air intake is outside (fresh) position, then have the climate control air filter replace by an Authorized Kia Dealer.

The climate control air filter should be regularly replaced every 10,000 miles, especially in the event that the vehicle is operated in the severely air-polluted cities or on dusty rough roads for a long period, inspect the air filter more frequently and replace it earlier. When you try to replace the climate control air filter by owner maintenance, replace it performing the following procedure, and in this case, be careful to avoid damaging other components.

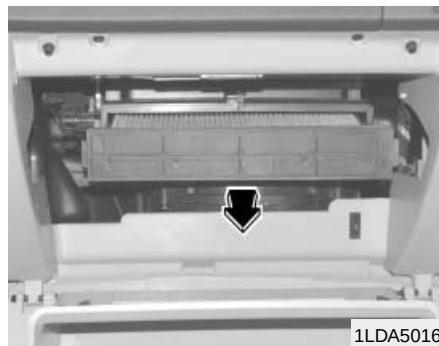


### Filter replacement

1. Open the glove box part way, reach inside and pull out the elastic line and push the retaining clip through the hole on the side of the glove box. Allow the glove box to open.



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



3. Pull out the hooks on both sides of the climate control air filter case.



4. Replace the climate control air filter.

5. Reassemble in the reverse order of disassembly.

### \* NOTICE

When replacing the climate control air filter install it according to the “AIR FLOW↓” and “↑UP” identification marks. Otherwise, the system may produce noise and the effectiveness of the filter may be reduced.

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## WIPER BLADES



### Wiper blade maintenance

#### \* NOTICE

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

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

#### CAUTION

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

### Windshield wiper blade replacement

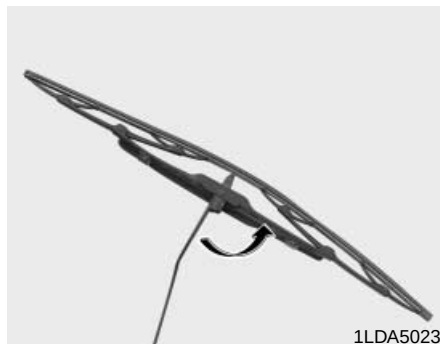
When the wipers no longer clean adequately, the blades may be worn or cracked, and require replacement.

#### CAUTION

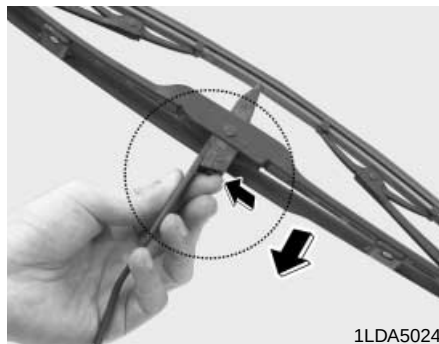
*To prevent damage to the wiper arms or other components, do not attempt to move the wipers manually.*

#### CAUTION

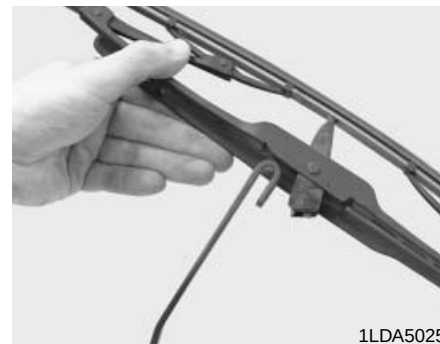
*The use of a non-specified wiper blade could result in wiper malfunction and failure.*



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.

### **CAUTION**

*Do not allow the wiper arm to fall against the windshield.*

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**BATTERY****⚠ WARNING - Battery dangers**

Always read the following instructions carefully when handling a battery.



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



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



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

(Continued)

**(Continued)**

If any electrolyte gets into your eyes, flush your eyes with clean water for at least 15 minutes and get immediate medical attention. If possible, continue to apply water with a sponge or cloth until medical attention is received.

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



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

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**(Continued)**

- When lifting a plastic-cased battery, excessive pressure on the case may cause battery acid to leak, resulting in personal injury. Lift with a battery carrier or with your hands on opposite corners.
- Never attempt to charge the battery when the battery cables are connected.
- The electrical ignition system works with high voltage. Never touch these components with the engine running or the ignition switched on.

**⚠ PROPOSITION 65  
WARNING**

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



### 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.

### 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.

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

- Clock (See section 3)
- Climate control system (See section 4)
- Audio (See section 3)
- Sunroof (See section 3)

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**⚠ WARNING - Recharging battery**

When recharging the battery, observe the following precautions:

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

(Continued)

**(Continued)**

- 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.

**⚠ CAUTION**

- *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.*

## 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 every day when the tires are cold. "Cold Tires" means the vehicle has not been driven for at least three hours or driven less than one mile (1.6 km).

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



All specifications (sizes and pressures) can be found on a label attached to the vehicle.

### **⚠ WARNING - Tire underinflation**

Severe underinflation (10 psi (70 kPa) 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 leading to severe injury or death. This risk is much higher on hot days and when driving for protracted periods at high speeds.

### **⚡ CAUTION**

- *Underinflation also results in excessive wear, poor handling and reduced fuel economy. Wheel deformation also is possible. Keep your tire pressures at the proper levels. If a tire frequently needs refilling, have it checked by an Authorized 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.*

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**CAUTION**

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

**WARNING - Tire Inflation**

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

**CAUTION - Tire pressure**

*Always observe the following:*

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

**Checking tire inflation pressure**

Check your tires once a month or more.

Also, check the tire pressure of the spare tire.

**How to check**

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

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

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

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

## Tire rotation

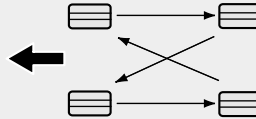
To equalize tread wear, it is recommended that the tires be rotated every 7,500 miles (12,000 km) or sooner if irregular wear develops.

During rotation, check the tires for correct balance.

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

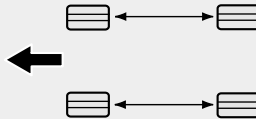
Refer to Section 8, Specifications.

Do not include compact spare tire in rotation.



CBGQ0707

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.**

## WARNING

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

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## Tire replacement

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

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

## **⚠ WARNING - Replacing tires**

- Driving on worn-out tires is very hazardous and will reduce braking effectiveness, steering accuracy, and traction.
- Your vehicle is equipped with tires designed to provide for safe ride and handling capability. Do not use a size and type of tire and wheel that is different from the one that is originally installed on your vehicle. It can affect the safety and performance of your vehicle, which could lead to handling failure or rollover and serious injury. When replacing the tires, be sure to equip all four tires with the tire and wheel of the same size, type, tread, brand and load-carrying capacity.

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If you nevertheless decide to equip your vehicle with any tire/wheel combination not recommended by Kia for off road driving, you should not use these tires for highway driving.

- The use of any other tire size or type may seriously affect ride, handling, ground clearance, stopping distance, body to tire clearance, snow tire clearance, and speedometer reliability.
- It is best to replace all four tires at the same time. If that is not possible, or necessary, then replace the two front or two rear tires as a pair. Replacing just one tire can seriously affect your vehicle's handling.

## Compact spare tire replacement (if equipped)

A compact spare tire has a shorter tread life than a regular size tire. Replace it when you can see the tread wear indicator bars on the tire. The replacement compact spare tire should be the same size and design tire as the one provided with your new Kia 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 alignment and tire balance

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

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

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

### CAUTION

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

## Wheel replacement

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

### WARNING

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

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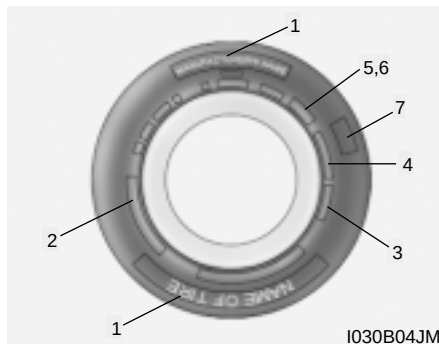
## Tire maintenance

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 traction

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



## Tire sidewall labeling

Federal law requires tire manufacturers to place standardized information on the sidewall of all tires. This information identifies and describes the fundamental characteristics of the tire and also provides the tire identification number (TIN) for safety standard certification. The TIN can be used to identify the tire in case of a recall.

### 1. Manufacturer or brand name

Manufacturer or Brand name is shown.

## 2. Tire size designation

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

Example tire size designation:

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

**P195/60R15 87H**

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

195 - Tire width in millimeters.

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

R - Tire construction code (Radial).

15 - Rim diameter in inches.

87 - 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:

**6.0JX15**

6.0 - Rim width in inches.

J - Rim contour designation.

15 - Rim diameter in inches.

### Tire speed ratings

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

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

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

Any tires that are over 6 years, based on the manufacturing date, tire strength and performance, decline with age naturally (even unused spare tires). Therefore, the tires (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 1606 represents that the tire was produced in the 16th week of 2006.

**⚠ WARNING - Tire age**

A tire more than 6 years old may sustain separation of cord layers inside the tire. Tire failure to separation of cord, can cause accidents resulting in severe injuries or death.

Make sure to check the manufacturing date of the tire and replace it within 6 years of that date.

**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**

The following information relates to the tire grading system developed by the National Highway Traffic Safety Administration (NHTSA) for grading tires by tread wear, traction and temperature performance.

**Tread wear**

The tread wear grade is a comparative rating based on the wear rate of the tire when tested under controlled conditions on a specified government test course. For example, a tire graded 150 would wear one-and-a-half times as well on the government course as a tire graded 100.

The relative performance of tires depends upon the actual conditions of their use. However, performance may differ from the norm because of variations in driving habits, service practices and differences in road characteristics and climate.

These grades are molded on the side-walls of passenger vehicle tires. The tires available as standard or optional equipment on your 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. The 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.

### Temperature - A, B & C

The temperature grades are A (the highest), B and C. The grades represent the tire's resistance to the generation of heat and its ability to dissipate heat when tested under controlled conditions on a specified indoor laboratory test wheel.

Sustained high temperature can cause the material of the tires to degenerate and reduce tires life, and excessive temperature can lead to sudden tires failure. Grade C corresponds to a level of performance which all passenger vehicle tires must meet under the Federal Motor Vehicle Safety Standard No. 109. Grades A and B represent higher levels of performance on the laboratory test wheel than the minimum required by the law.

### **WARNING** - Tire temperature

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

### Tire terminology and definitions

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

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

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

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

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

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

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

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**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.

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

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**GVWR:** Gross Vehicle Weight Rating

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**GAWR FRT:** Gross Axle Weight Rating for the front Axle.

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**GAWR RR:** Gross Axle Weight Rating for the rear axle.

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

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

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

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

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

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

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

**Occupant Distribution:** Designated seating positions.

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

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

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

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

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

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

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

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

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

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

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

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

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

**Vehicle Normal Load on the Tire:** That 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.

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### Snow tires

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

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

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

### Tire chains

Tire chains, if necessary, should be installed on the drive wheels (front wheel).

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

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

### **WARNING** - Snow or ice

- When driving on roads covered with snow or ice, drive at less than 20 mph (30 km/h).
- Use the SAE "S" class or wire chains.
- If you have noise caused by chains contacting the body, retighten the chain to avoid contact with the vehicle body.
- To prevent body damage, retighten the chains after driving 0.3~0.5 miles (0.5~0.8 km).
- Do not use tire chains on vehicles equipped with aluminum wheels. In unavoidable circumstance, use a wire type chain.
- Use wire chains less than 15mm to prevent damage to the chain's connection.

### **CAUTION**

- If you hear noise caused by chains contacting the body, retighten the chain to avoid contact with the vehicle body.
- To prevent body damage, retighten the chains after driving 0.3 ~ 0.6 miles (0.5 ~ 1.0 km).

## BULB REPLACEMENT

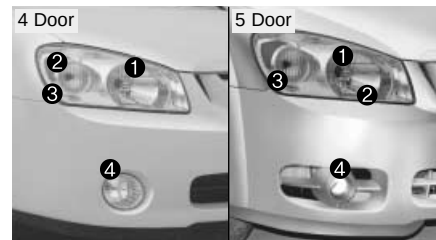
### **⚠ WARNING** - Working on the lights

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

*Use only the bulbs of the specified wattage.*

### **⚠ CAUTION**

*If you don't have necessary tools, the correct bulbs and the expertise, consult an Authorized Kia Dealer. In many cases, it is difficult to replace vehicle light bulbs because other parts of the vehicle must be removed before you can get to the bulb. This is especially true if you have to remove the front bumper to get to the bulb(s). Removing/installing the front bumper or bumper hardware can result in damage to the vehicle.*



- ① Headlight (High/Low)
- ② Position light
- ③ Front turn signal light
- ④ Front fog light (if equipped)

1LDN5032/1LDE5032

### Headlight bulb replacement

#### \* NOTICE

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

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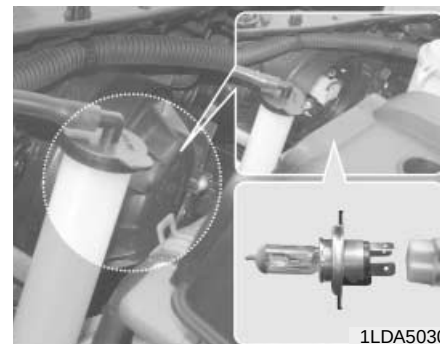
## **⚠ WARNING - Halogen bulbs**

- Halogen bulbs contain pressurized gas that will produce flying pieces of glass if broken.
- Always handle them carefully, and avoid scratches and abrasions. If the bulbs are lit, avoid contact with liquids. Never touch the glass with bare hands. Residual oil may cause the bulb to overheat and burst when lit. A bulb should be operated only when installed in a headlight.

(Continued)

## (Continued)

- If a bulb becomes damaged or cracked, replace it immediately and carefully dispose of it.
- Wear eye protection when changing a bulb. Allow the bulb to cool down before handling it.



1LDA5030

1. Open the hood.
2. Remove the headlight bulb cover by turning it counterclockwise.
3. Disconnect the headlight bulb socket-connector.
4. Unsnap the headlight bulb retaining wire by depressing the end and pushing it upward.
5. Remove the bulb from the headlight assembly.

6. Install a new headlight bulb and snap the headlight bulb retaining wire into position by aligning the wire with the groove on the bulb.
7. Connect the headlight bulb socket-connector.
8. Install the headlight bulb cover by turning it clockwise.



### Front turn signal/position light bulb replacement

1. Open the hood.
2. Remove the socket from the housing by turning the socket counter clockwise until the tabs on the socket align with the slots on the housing.
3. Remove the bulb from the socket by pressing it in and rotating it until the tabs on the bulb align with the slots in the socket. Pull the bulb out of the socket.
4. Insert a new bulb by inserting it into the socket and rotating it until it locks into place.

5. Install the socket in the housing by aligning the tabs on the socket with the slots in the housing. Insert the socket into the housing and turn the socket clockwise.

### Front fog light bulb replacement

If the light bulb is not operating, have the vehicle checked by an authorized Kia Dealer.

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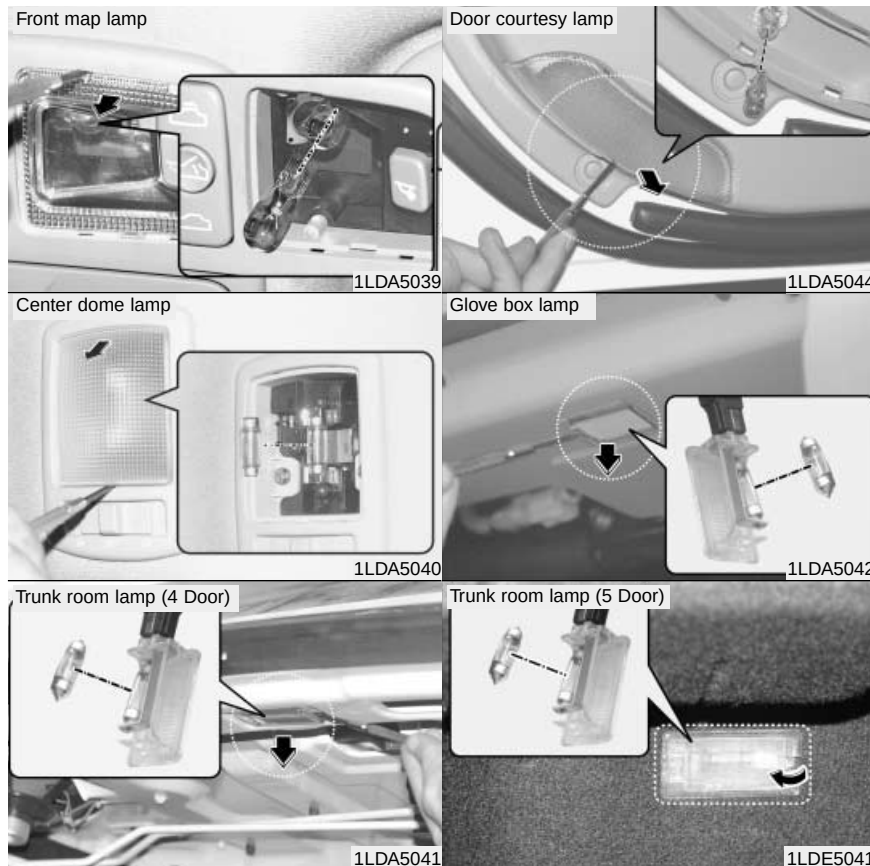
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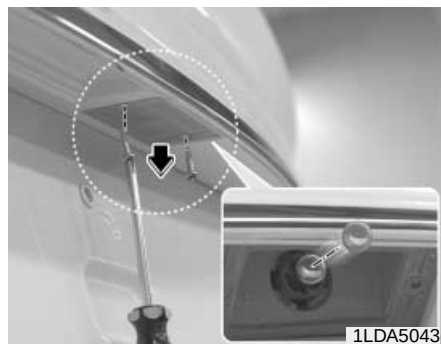


## Interior lights bulb replacement

1. Using a flat-blade screwdriver, gently pry the lens from the interior light housing.

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

2. Remove the bulb by pulling it straight out.
3. Install a new bulb.
4. Align the lens tabs with the interior light housing notches and snap the lens into place.



### License plate lights bulb replacement

1. Loosen the lens retaining screws with a cross-tip screwdriver.
2. Remove the lens.
3. Remove the bulb by pulling it straight out.
4. Install a new bulb.
5. Reinstall the lens securely with the lens retaining screws.



### Rear combination light bulb replacement

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



1. Open the trunk lid or rear hatch.
2. Remove the service cover by turning the plastic screw counterclockwise and removing the cover.

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3. Remove the socket from the assembly by turning the socket counterclockwise until the tabs on the socket align with the slots on the assembly.

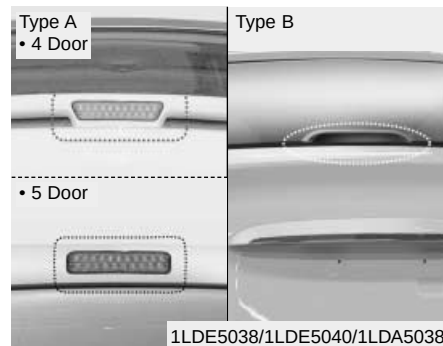


4. Remove the bulb from the socket by pressing it in and rotating it until the tabs on the bulb align with the slots in the socket. Pull the bulb out of the socket.

5. Insert a new bulb by inserting it into the socket and rotating it until it locks into place.

6. Install the socket in the assembly by aligning the tabs on the socket with the slots in the assembly. Push the socket into the assembly and turn the socket clockwise.

7. Replace the service cover and tighten the screws.



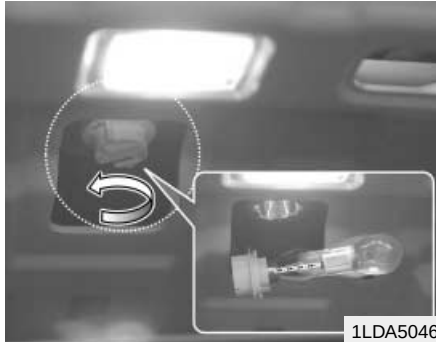
## High mounted stop light bulb replacement

### Type A

If the light bulb is not operating, have the vehicle checked by an authorized Kia Dealer.

### Type B

1. Open the trunk lid.



2. Remove the socket from the housing by turning the socket counter clockwise until the tabs on the socket align with the slots on the housing.
3. Remove the bulb from the socket by pressing it in and rotating it until the tabs on the bulb align with the slots in the socket. Pull the bulb out of the socket.
4. Insert a new bulb by inserting it into the socket and rotating it until it locks into place.
5. Install the socket in the housing by aligning the tabs on the socket with the slots in the housing. Insert the socket into the housing and turn the socket clockwise.

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## 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.

### \* NOTICE

**Do not use strong soap, chemical detergents or hot water, and do not wash the vehicle in direct sunlight or when the body of the vehicle is warm.**

### CAUTION

- ***Water washing in the engine compartment 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 and cause a short which can lead to a fire.***

### Waxing

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

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

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

### CAUTION

- *Wiping dust or dirt off the body with a dry cloth will scratch the finish.*
- *Do not use steel wool, abrasive cleaners, or strong detergents containing highly alkaline or caustic agents on chrome-plated or anodized aluminum parts. This may result in damage to the protective coating and cause discoloration or paint deterioration.*

### Finish damage repair

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

### \* NOTICE

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

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### Bright-metal maintenance

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

### Underbody maintenance

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

Thoroughly flush the vehicle underbody and wheel openings with lukewarm or cold water once a month, after off-road driving and at the end of each winter. Pay special attention to these areas because it is difficult to see all the mud and dirt. It will do more harm than good to wet down the road grime without removing it. The lower edges of doors, rocker panels, and frame members have drain holes that should not be allowed to clog with dirt; trapped water in these areas can cause rusting.

### WARNING

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

**Aluminum wheel maintenance**

The aluminum wheels are coated with a clear protective finish.

- Do not use any abrasive cleaner, polishing compound, solvent, or wire brushes on aluminum wheels. They may scratch or damage the finish.
- 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 acid detergent. It may damage and corrode the aluminum wheels coated with a clear protective finish.

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## 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 that follow for the proper way to clean vinyl.

### Cleaning the upholstery and interior trim

#### *Vinyl*

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

#### *Fabric*

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

#### **⚡ CAUTION**

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

### Cleaning the lap/shoulder belt webbing

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

### Cleaning the interior window glass

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

#### **⚡ CAUTION**

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

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SPECIFICATIONS

The specifications given here are for general information only. Although this information was accurate at the time of printing, Kia reserves the right to change its vehicles or their specifications without notice. Please check with an authorized Kia dealer for more precise and more up-to-date information.

Dimensions

in (mm)

| Item           | 4 Door        | 5 Door        |
|----------------|---------------|---------------|
| Overall length | 177.2 (4,500) | 171.3 (4,350) |
| Overall width  | 68.3 (1,735)  | 68.3 (1,735)  |
| Overall height | 57.9 (1,470)  | 57.9 (1,470)  |
| Front tread    | 58.9 (1,495)  | 58.9 (1,495)  |
| Rear tread     | 58.5 (1,485)  | 58.5 (1,485)  |
| Wheelbase      | 102.8 (2,610) | 102.8 (2,610) |

Tires

| Item               |           | Inflation Pressure<br>psi (kPa) | Wheel lug nut torque<br>lb·ft (kg·m, N·m) |
|--------------------|-----------|---------------------------------|-------------------------------------------|
| Tire               | Wheel     |                                 |                                           |
| P195/60R15         | 6.0J x 15 | 30 (210)                        | 65~79<br>(9~11, 88~107)                   |
| P205/50R16         | 6.0J x 16 | 30 (210)                        | 65~79<br>(9~11, 88~107)                   |
| Compact spare tire |           |                                 |                                           |
| T125/70D15         |           | 60 (420)                        | 65~79<br>(9~11, 88~107)                   |

## Light bulbs

| Light Bulb               | Wattage   |
|--------------------------|-----------|
| Headlights (Low/High)    | 55/60     |
| Front turn signal lights | 27        |
| Position lights          | 5         |
| Front fog lights*        | 27        |
| Stop and tail lights     | 27/8      |
| Rear turn signal lights  | 27        |
| Back-up lights           | 17        |
| Rear side mark light     | 5         |
| High mounted stop light* | 27 or LED |
| License plate lights     | 5         |
| Front map lamp           | 10        |
| Center dome lamp         | 10        |
| Door courtesy lamps      | 5         |
| Trunk room lamp          | 5         |
| Glove box lamp           | 5         |

\* : if equipped

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# 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 <sup>*1 *2</sup><br>(drain and refill) | 4.23 US qt. (4.0 l)           | API Service SJ, SL or above,<br>ILSAC GF-3 or above                                                                |
| Manual transaxle fluid                            | 2.11 US qt. (2.0 l)           | API Service GL-4 (SAE 75W-85, fill for-life)                                                                       |
| Automatic transaxle fluid                         | 6.97 US qt. (6.6 l)           | DIAMOND ATF SP-III,<br>SK ATF SP-III or other brands meeting the SP-III specification approved by Kia Motors Corp. |
| Power steering fluid                              | 0.85 US qt. (0.8 l)           | PSF-III                                                                                                            |
| Coolant                                           | 6.97 US qt. (6.6 l)           | MIXTURE, Antifreeze with water<br>(Ethylene glycol base coolant for aluminum radiator)                             |
| Brake/Clutch fluid                                | 0.7~0.8 US qt.<br>(0.7~0.8 l) | FMVSS116 DOT-3 or DOT-4                                                                                            |
| Fuel                                              | 14.5 US gal. (55 l)           | -                                                                                                                  |

<sup>\*1</sup> Refer to the recommended SAE viscosity numbers on the next page.

<sup>\*2</sup> 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.

Recommended SAE viscosity number

\* NOTICE

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 (starting and oil flow). 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-20,5W-30 (API SJ, SL / ILSAC GF-3). However, if the engine oil is not available in your country, select the proper engine oil using the engine oil viscosity chart.

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## CONSUMER ASSISTANCE (U.S. ONLY)

Roadside Assistance is provided on all new current model year Kia Vehicles from the date the vehicle is delivered to the first retail buyer or otherwise put into use (in-service date), whichever is earlier, for a period of 60 months or 60,000 miles, whichever is earlier, subject to the terms, conditions and exclusions set forth in the Kia Warranty and Consumer Information Guide applicable to your model year vehicle.

KMA reserves the right to limit or deny services or other benefits to any owner or driver when, in KMA's judgment, the claims and/or service requests are excessive in frequency or type of occurrence.

### *Toll Free Assistance*

Kia's toll-free Consumer Assistance hot line is staffed from 5:00 AM to 6:00 PM PST, Monday through Friday and is accessible by dialing 1-800-333-4Kia (4542).

For more information regarding assistance available, please refer to your Kia Warranty & Consumer Information Manual.

### *Emergency Roadside Assistance*

Kia's toll free Roadside Assistance hot line is staffed 24 hours a day, 365 days a year and is accessible by dialing 1-800-333-4Kia (4542).

Please note that you must provide your Vehicle Identification Number (VIN) to verify coverage at the time of your call. The VIN can be found on the dash of your vehicle on the driver's side, on the door jamb of the driver's door, your vehicle's registration or proof of insurance card.

Kia utilizes a network of over 17,000 roadside assistance providers. Should you accidentally run out of fuel, require a battery jump, or need help changing a tire, a Kia Roadside Assistance Representative will dispatch someone to deliver a small quantity of gas, change a flat tire with your inflated spare, or arrange a battery jump to allow you to proceed to your destination. We have access to a network of over 10,000 locksmiths to help you should you become locked out of your Kia.

In the event that mechanical difficulty renders your vehicle undriveable due to a warranty-related concern, Kia's Roadside Assistance Representative will arrange to transport your vehicle to the nearest Kia dealer or to an alternative service location.

Your vehicle must be accessible to our dispatch transport vehicle, as determined by our driver, to receive this service. In the event that Kia does not have a dealer or an alternative service location available in a particular location, Kia will work with a reputable local service facility to ensure that you receive prompt service. Warranty repairs are performed at no cost.

### **\* NOTICE**

**Roadside Assistance benefits are not available for any Kia vehicle that has ever been or should be issued a "salvage" title or similar "branded" title under any state's law or has been declared a "total loss" or equivalent by a financial institution or insurance company.**

### ***Trip Interruption***

Trip interruption expense benefits are provided in the event that a warranty-related disablement occurs more than 150 miles from your home, and the repairs require more than 24 hours to complete. Reasonable reimbursement is included for meals, lodging, or rental car expenses. Trip interruption coverage is limited to \$100 per day subject to a three day maximum limit per incident. You must contact the Kia Roadside Assistance Center to obtain pre-authorization of expenses. Once the Kia Roadside Assistance Center gives authorization for trip interruption benefits, they will assist you in making the necessary arrangements. Insurance deductibles, expenses, and claims paid by your insurance company or other providers are not eligible for reimbursement.

Fleet vehicles are excluded from reimbursement under Kia's Trip Interruption Policy.

### ***Registering Your Vehicle in a Foreign Country***

If you plan to register your vehicle in a foreign country, you should confirm that it conforms to the regulations in that country. Even if you successfully register the vehicle in a foreign country, you may experience the following problems and should therefore consider the possibility of having to deal with them:

1. The fuel specified for your vehicle may be unavailable. If other than the specified fuel is used, it could cause damage to the engine, the fuel injection system, and other fuel-related parts which may not be covered under your New Vehicle Emissions Limited Warranty.
2. We must, therefore, clearly state that when you leave the country in which you purchased your Kia as new and register it in another country, problems arising from the use of fuel other than the specified fuel are not subject to manufacturer's warranty. Because vehicles like yours may not be marketed in the new country of registration, parts, servicing techniques and tools necessary to maintain and repair your vehicle may be unavailable.  
Even if vehicles like yours are sold there, mechanical specifications required by the government may vary enough from the country of purchase to cause additional problems.
3. There may not be an Authorized Kia Dealer in the area in which you plan to register your vehicle. You may additionally experience difficulty in obtaining services in a foreign country for any number of reasons.

Further, we cannot assume any responsibility for problems that result from unsatisfactory service or lack of service outside of the United States.

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## ELECTRICAL EQUIPMENT (U.S. ONLY)

The electrical system of your vehicle is designed to perform under all reasonably expected operating conditions. However, before any additional electrical equipment is installed in your vehicle, consult an Authorized Kia Dealer, in order to ensure that you do not void your warranty.

Certain electrical equipment, or the way in which it is installed, may adversely affect the operation of your vehicle, including such systems as the engine control system, the audio system and the electrical charging system and thus potentially void all or part of your warranty.

We assume no responsibility for any expense you may incur or for any malfunction of your vehicle or any of its components or systems that may result from the installation of additional electrical equipment that is not supplied, or recommended for installation by Kia.

### *Installation of a Mobile Two-Way Radio System*

If a mobile two-way radio system is installed improperly, or if an excessively powerful type of system is used, other electronic systems may be adversely affected. To avoid damage to your vehicle, consult an Authorized Kia Dealer concerning the proper equipment and installation.

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Kia motor vehicles are designed and manufactured to meet or exceed all applicable safety standards.

For your safety, however, we strongly urge you to read and follow all directions in this Owner's Manual, particularly the information under the headings "NOTICE", "CAUTION" and "WARNING".

If, after reading this manual, you have any questions regarding the operation of your vehicle, safety issues and defects please contact your Kia's toll-free Consumer Assistance hot line as below:

National Consumer Affairs Manager  
Kia Motors America, Inc.  
P.O. Box 52410  
Irvine, CA 92619-2410  
1-800-333-4Kia (4542)

## REPORTING SAFETY DEFECTS (U.S. ONLY)

If you believe your vehicle has a defect which could cause an accident or could cause injury or death, you should inform the National Highway Traffic Safety Administration (NHTSA) immediately, in addition to notifying Kia Motors America, Inc.

If NHTSA receives similar complaints, it may open an investigation. A recall and remedy campaign may be ordered if a safety defect exists in a group of vehicles. However, NHTSA cannot become involved in individual problems between you, your dealer, or Kia Motors America, Inc.

To contact NHTSA, you may call the Vehicle Safety Hotline toll-free at 1-888-327-4236 (TTY: 1-800-424-9153); go to <http://www.safercar.gov>; or write to: Administrator, NHTSA, 400 Seventh Street, SW., Washington, DC 20590. You can also obtain other information about motor vehicle safety from <http://www.safercar.gov>.

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## PURCHASING FACTORY AUTHORIZED MANUALS (U.S. ONLY)

The following publications covering the operation and servicing of your vehicle can be obtained from Kia by calling the toll-free phone number. For manuals prior to the year shown below, call 1-866-542-6268.

| Publication Part Number | Form Description                                   |
|-------------------------|----------------------------------------------------|
| UD070 PS 010            | 2007 Kia Spectra Service Repair Manual             |
| UD070 PS 011            | 2007 Kia Spectra Electrical Troubleshooting Manual |
| UD070 PS 013            | 2007 Kia Spectra Owner's Manual                    |

Valid only for sales within the U.S.. Canadian owners should contact their Authorized Kia Dealer.

**ORDER TOLL FREE: 1-866-542-6268**  
**(NOTE: For Credit Card Holder Orders Only)**  
**Monday-Friday 8:00 A.M. - 6:00 P.M. EST**  
**MINIMUM CREDIT CARD PURCHASE \$10.00**

### Service manual:

This manual covers maintenance and recommended procedures for repair to engine and chassis components. It is written for the Journeyman mechanic, but is simple enough for most mechanically-inclined owners to understand.

### Electrical troubleshooting manual:

This manual complements the Service Manual by providing in-depth troubleshooting information for each electrical circuit in your vehicle.

### Owner's manual:

This manual describes the overall features and operating procedures for the vehicle.

Vehicle service information is accessible electronically at <http://www.kiatechinfo.com>