

# FOREWORD

Dear Customer,

Thank you for selecting your new Kia vehicle.

As a global car manufacturer focused on building high-quality vehicles with exceptional value, Kia is dedicated to providing you with a customer service experience that exceeds your expectations.

This Owner's Manual will acquaint you with the operation of features and equipment that are either standard or optional on this vehicle, along with the maintenance needs of this vehicle. Therefore, you may find certain descriptions and illustrations not applicable to your vehicle. You are advised to read this publication carefully and follow the instructions and recommendations. Please always keep this manual in the vehicle for your and any subsequent owner's reference.

If you need technical assistance, visit an authorized Kia dealership where factory trained technicians, recommended special tools, and genuine Kia replacement parts can be provided.

All information contained in this Owner's Manual was accurate at the time of publication. However, as Kia continues to make improvements to its products, the company reserves the right to make changes to this manual or any of its vehicles at any time without notice and without incurring any obligations.

Please drive safely, and enjoy your Kia vehicle!

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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. In order to minimize the chance of death or injury, you must read the WARNING and CAUTION sections in the manual.

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

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

**Chapters:** This manual has nine chapters plus an index. Each chapter begins with a brief list of contents so you can tell at a glance if that chapter has the information you want.

You will find various WARNINGS, CAUTIONS, and NOTICES in this manual. These WARNINGS were prepared to enhance your personal safety. You should carefully read and follow ALL procedures and recommendations provided in these WARNINGS, CAUTIONS and NOTICES.

### **WARNING**

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

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### **CAUTION**

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

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### **NOTICE**

A NOTICE indicates interesting or helpful information is being provided.

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# Hybrid system overview

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## Hybrid system overview

### PHEV (Plug-in Hybrid Electric Vehicle) system

The Kia Plug-in Hybrid Electric Vehicle (PHEV) shares the characteristics of both a conventional hybrid electric vehicle and an all-electric vehicle.

When used as a conventional hybrid electric vehicle, the HEV computer selectively operates between the engine and the electric motor or even both at the same time.

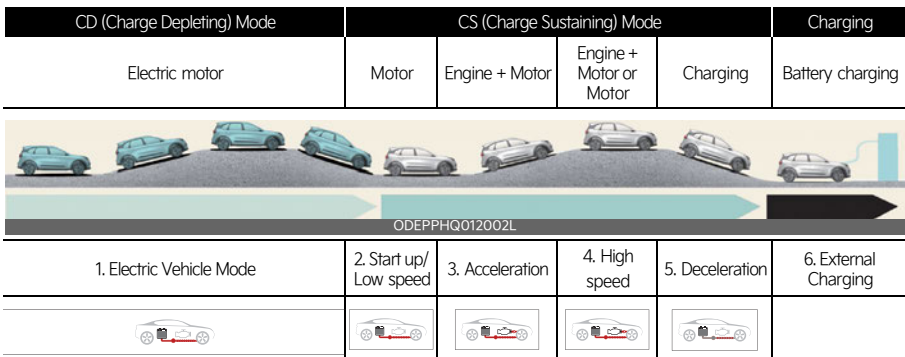
When it is operating in the electric vehicle mode, the vehicle is driven only using the electric motor over a certain distance until the hybrid battery becomes low. The driving distance in EV mode depends on customer driving style and road conditions.

Aggressive driving maneuvers may at times temporarily enable the engine to operate.

The engine power could be limited during emission reduction control period at cold engine condition.

The hybrid battery can be fully charged by connecting a plug to an external electric power source.

An engine can be turned on due to factors such as heater and a frequent operation of the accelerator pedal by a driver in CD mode.



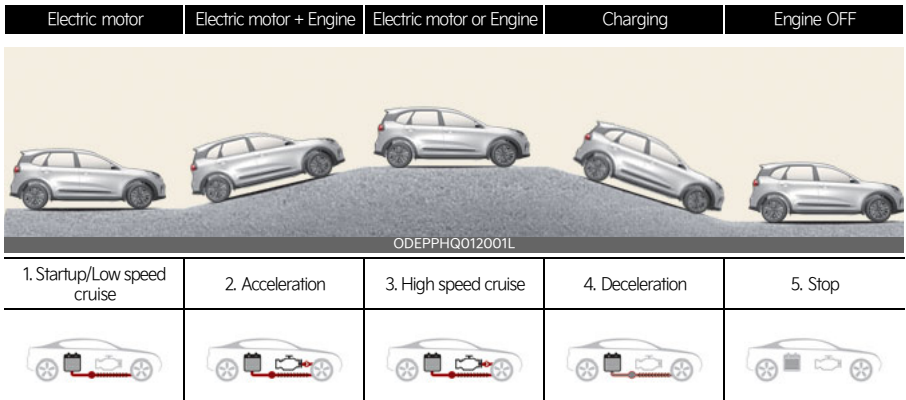
## HEV (Hybrid Electric Vehicle) system

The Kia Hybrid Electric Vehicle (HEV) uses both the gasoline engine and the electric motor for power. The electric motor is run by a high-voltage HEV battery.

Depending on the driving conditions, the HEV computer selectively operates between the engine and the electric motor or even both at the same time.

Fuel efficiency increases when the vehicle is driven by the electric motor with the HEV battery.

The HEV battery charge must be maintained, so at times the engine will come on even at idle to act as a generator. Charging also occurs when decelerating or by regenerative braking.



## Charging the plug-in hybrid vehicle

### Charging information

- AC Charger: The plug-in hybrid vehicle is charged by plugging into a AC charger installed in your home or a public charging station. (For further details, refer to "AC charger" on page 1-8.)
- Trickle Charger: The plug-in hybrid vehicle can be charged by using household electricity.








The electrical outlet in your home must comply with regulations and can safely accommodate the Voltage/Current (Amps)/Power (Watts) ratings specified on the trickle charge. Use only as a backup charger.

### Charging time

- AC Charger: Takes about 2 hours 15 minutes at room temperature when charged from 15 to 100%. Depending on the condition and durability of the high-voltage battery, charger specifications, and ambient temperature, the time required for charging the high-voltage battery may vary.
- Trickle Charger: For charging at home. Please note that the Trickle Charger is slower than the AC Charger.

### Charging types

- Depending on the condition and durability of the high voltage battery, charger specifications, and ambient temperature, the time required for charging the high voltage battery may vary.
- Actual charger image and charging method may vary in accordance with the charger manufacturer.

Category	Charging Inlet (Vehicle)	Charging Connector	Charging Outlet	Charging Method	Charging Time
AC Charger	 ODEPPHQ012003L	 ODEPPHQ012004L	 OCVQ011007L	AC charger installed in homes or public charging stations	Approximately 2 hours 15 minutes at room temperature when charged from 15 to 100%.
Trickle Charger	 ODEPPHQ012003L	 ODEPPHQ012004L OCVQ011005L	Type A  ODEPVQ012093 Type B  OCVQ011009L	Household current	For charging at home. Please note that the Trickle Charger is slower than the AC Charger

## Charging status



When charging the high voltage battery, the charge level can be checked from outside the vehicle.

It takes about 2~3 hours or more to complete charging.

Details	Operation of charging indicator lamp		
	(1)	(2)	(3)
Not charged	OFF	OFF	OFF
Charging (0~33%)	Blinking	OFF	OFF
Charging (34~66%)	ON	Blinking	OFF
Charging (67~99%)	ON	ON	Blinking
Charging completed (100%) (Turns off in approximately 5 seconds)	ON	ON	ON
Error while charging	Blinking	Blinking	Blinking
Charging 12V auxiliary battery or reserved air conditioner is operating	OFF	OFF	Blinking
Reserved charging is operating or interruptions that temporarily prevent charging (e.g. power failure) (Turns off after approximately 3 minutes)	OFF	Blinking	OFF

## Charging connector AUTO/LOCK mode



You may select when the charging connector can be locked and unlocked in the charging inlet. Press the AUTO/LOCK mode button (AUTO) to change between AUTO mode and LOCK mode.

### When the charging connector is locked

	LOCK	AUTO
Before charging	O	X
While charging	O	O
Finished charging	O	X

### LOCK mode (button indicator OFF)

The connector locks when the charging connector is plugged into the charging inlet. The connector is locked until all doors are unlocked by the driver. This mode can be used to prevent charging cable theft.

- If the charging connector is unlocked when all doors are unlocked, but the charging cable is not disconnected within approximately 15 seconds, the connector will be automatically locked again.
- If the charging connector is unlocked when all doors are unlocked, but all doors are locked again, immediately, the connector will be automatically locked again.

### AUTO mode (button indicator ON)

The connector locks when the charging starts. The connector unlocks when charging is complete. This mode can be used when charging in a public charging station.

If the connector does not unlock automatically after the charging is completed in AUTO mode, the connector will unlock when all the doors are unlocked.

### Scheduled charging

- You can set reserved charging using the infotainment system. Refer to the infotainment system for detailed information about setting reserved charging.
- Scheduled charging can only be done when using a AC charger or the portable charging cable (ICCB: In-Cable Control Box).
- When scheduled charging is set and the AC charger or the portable charging cable (ICCB: In-Cable Control Box) is connected for charging, the scheduled charge release button is illuminated (for approximately 3 minutes) to indicate that scheduled charging is set.



- When scheduled charging is set, charging is not initiated immediately when the AC charger or portable charging cable (ICCB: In-Cable Control Box) is connected.

- If charging is required immediately, turn off the scheduled charge using the infotainment system and Kia Connect application, or press the vehicle's scheduled charging deactivation button (OFF).



- When the scheduled charge is set, the charge start time is calculated by itself. In some cases, charging may start immediately after connecting the charger.
- If you press the scheduled charging deactivation (OFF) button to immediately charge the battery, charging must be initiated approximately 3 minutes after the charging cable has been connected.

When you press the scheduled charging deactivation (OFF) button for immediate charging, the scheduled charge setting is not completely deactivated. If you need to completely deactivate the scheduled charge setting, use the infotainment system to finalize the deactivation.

Refer to "AC charger" on page 1-8 or "Trickle charger (portable charging cable)" on page 1-11 for details about connecting the AC charger and the portable charger (ICCB: In-Cable Control Box).



## Charging precautions

### AC Charger



#### **⚠ WARNING**

- **Fires caused by dust or water**

Do not connect the charging cable connector plug to the vehicle if there is water or dust on the charging inlet. Connecting while there is water or dust on the charging cable connector and plug may cause a fire or electric shock. There may be a risk of fire and injury when using old worn out public electrical outlets.

- **Interference with electronic medical devices**

When using medical electric devices such as an implantable cardiac pacemaker, make sure to ask the medical team and manufacturer whether charging your electric vehicle will impact the operation of the medical devices. In some instances, electromagnetic waves that are generated from the charger can seriously impact medical electric devices such as an implantable cardiac pacemaker.

- **Touching the charging connector**

Do not touch the charging connector, charging plug, and the charging inlet when connecting the cable to the charger and the charging inlet on the vehicle. Doing so may result in electrocution.

- Comply with the following in order to prevent electrical shock when charging:

- Use a waterproof charger
- Make sure to not touch the charging connector and charging plug when your hand is wet
- Do not charge when there is lightning
- Do not charge when the charging connector and plug is wet

#### **⚠ WARNING**

- **Charging cable**

- Immediately stop charging when you find abnormal symptoms (smell, smoke, etc.).
- Replace the charging cable if the cable coating is damaged to prevent electrical shock.
- When connecting or removing the charging cable, make sure to hold the charging connector handle and charging plug.

If you pull the cable itself (without using the handle), the internal wires may disconnect or get damaged. This may lead to electric shock or fire.

- **Cooling fan**

Do not touch the cooling fan while vehicle is charging. When the vehicle is switched OFF while charging, the cooling fan inside the motor compartment may automatically operate.

- Always keep the charging connector and charging plug in clean and dry condition. Be sure to keep the charging cable in a condition where there is no water or moisture.

- Make sure to use the designated charger for charging the vehicle. Using any other charger may cause failure.
- Before charging the battery, turn the vehicle OFF.
- Be careful not to drop the charging connector. The charging connector can be damaged.

### AC charger

AC Charger



AC charger cable



You can charge your vehicle by plugging into a public charger at a charging station.

### How to connect AC charger



1. Depress the brake pedal and apply the parking brake.
2. Move the shift lever to P (Park), and turn OFF the vehicle.

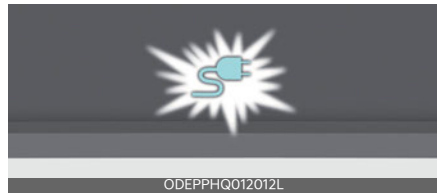
3. Open the charging door by pressing circle mark area on the right edge of the charging door. If the vehicle doors are locked, the charging door will not open.
4. Remove any dust on the charging connector and charging inlet.
5. Hold the charging connector handle.



Then, insert the charger into the charging inlet, until you hear a "click" sound. If it is not fully connected, a bad connection between the charging connector and the charging terminals may cause a fire.

6. Check if the charging cable connection indicator (S) of the high voltage battery in the instrument cluster is turned ON.

Type A



Type B



Charging does not occur when the indicator is OFF. When the charging

connector is not connected properly, reconnect the charging cable to charge.

- After charging has started, the estimated charging time is displayed on the instrument cluster for about 1 minute. It is also displayed, when the driver's door is opened with charging in progress. When scheduled charging is set, the estimated charging time is displayed as "--".



#### A: Remaining Time

#### ⚠ CAUTION

If you cannot open the charging door due to freezing weather, tap lightly or remove any ice near the charging door. Do not try to forcibly open the charging door. The charging door may be broken if it is forcibly opened.

#### \* NOTICE

- The charging door does not open when the theft alarm system is armed.
- The charging is in progress only with the shift lever is in P (Park). Charging the battery with the vehicle in the ACC position is possible. However, it may discharge the 12V battery. Thus, if possible, charge the battery with the vehicle in the OFF position.

- Moving the shift lever from P (Park) to R (Reverse)/N (Neutral)/D (Drive) stops the charging process. To restart the charging process, move the shift lever to P (Park), turn OFF the vehicle, and disconnect the charging cable. Then, connect the charging cable again.

### Charging connector AUTO/LOCK mode

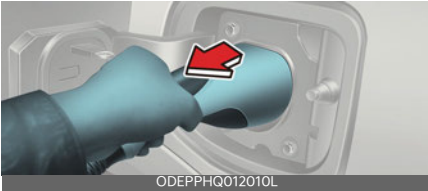
When the charging connector is plugged into the charging inlet, the connector lock timing varies with the modes selected by the user settings menu or the infotainment screen menu.

- LOCK mode: The connector locks when the charging connector is plugged into the charging inlet.
- AUTO mode: The connector locks when charging starts. The connector unlocks when charging is completed.

For more details, refer to "Charging connector AUTO/LOCK mode" on page 1-5.

## How to disconnect AC charger

1. The vehicle doors must be unlocked in order to be able to disconnect the charging connector. A lock system prevents charger cable disconnection when the vehicle's doors are locked.
2. Hold the charging connector handle and pull it out.



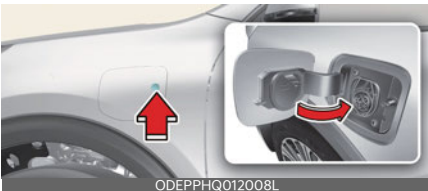
To prevent charging cable theft, the charging connector cannot be disconnected from the inlet when the doors are locked.

However, if the vehicle is in the charging connector AUTO mode, the charging connector automatically unlocks from the inlet when charging is completed.

If the connector is not automatically unlocked after charging is completed in AUTO mode, the connector is unlocked when all of the doors are unlocked.

For more details, refer to "Charging connector AUTO/LOCK mode" on page 1-5.

3. Make sure to securely close the charging door.



### \* NOTICE

- In order to disconnect the charging connector, unlock the doors to unlatch the charging connector lock system. If not, the charging connector and the vehicle's charging inlet may be damaged.
- When disconnecting the charging connector, do not try to disconnect it by force while not pressing the release button. This may damage the charging connector and vehicle charging inlet.
- If you cannot open the charging door due to freezing weather, tap lightly or remove any ice near the charging door. Do not try to forcibly open the charging door. If you open it by force, the charging door may be damaged.
- Do not modify or disassemble the charging cable components. It may cause a fire or an electric shock with personal injury.
- Keep the charging connector and the charging plug clean and dry. The charging cable should be also kept dry.
- Use an air gun to blow any foreign substances from the charging connector and the charging plug.

### Trickle charger (portable charging cable)

Type A



Type B

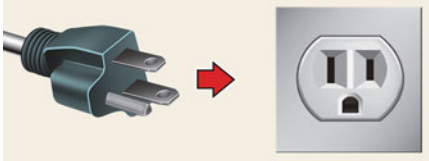
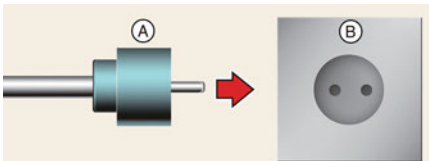


- 1 Plug and cable
- 2 Control box (ICCB)
- 3 Charging connector/cable

Trickle charger can be used if AC Charger is unavailable.

### How to connect portable charger (ICCB: In-Cable Control Box)

1. Move the shift lever to P (Park), and turn OFF the vehicle.
2. Connect the plug to a household electric outlet.



- A: Plug
- B: Electric Outlet

3. Check if the power lamp (green) appears on the control box.

Type A



Type B



4. Depress the brake pedal and apply the parking brake.
5. After unlocking doors, open the charging door by pressing it.
6. Open the charging door by pressing circle mark area on the right edge of the charging door. If the vehicle doors are locked, the charging door will not open.
7. Remove any dust on the charging connector and charging inlet.
8. Hold the charging connector handle and connect it to the vehicle charging inlet. Push the connector all the way in. If the charging connector and charging terminal are not connected properly, this may cause a fire.

9. Charging starts automatically (charging lamp appears).

Type A

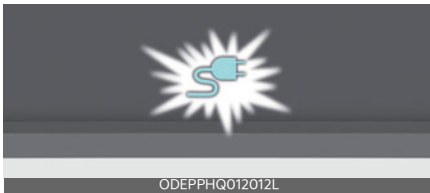


Type B

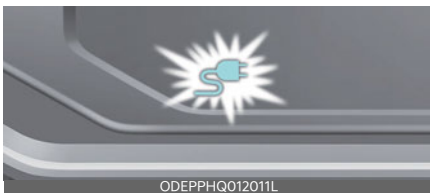


10. Check if the charging indicator light (⚡) of the high voltage battery in the instrument cluster is turned ON. Charging is not active when the charging indicator light (⚡) is OFF. When the charging connector is not connected properly, reconnect the charging cable to charge it again.

Type A



Type B



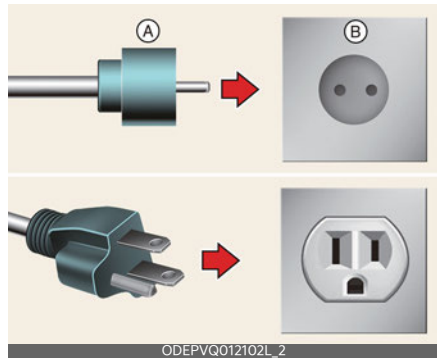
11. After charging has started, the estimated charging time is displayed on the instrument cluster for about 1 minute.



**A: Remaining Time**

If you open the driver seat door while charging, the estimated charging time is also displayed on the instrument cluster for approximately 1 minute. When scheduled charging or scheduled air conditioner/heater is set, the estimated charging time is displayed as "--".

**Setting the charge level of the portable charger (Type B)**



- A: Plug
  - B: Electric Outlet
1. Check the rated current of the electric outlet prior to connecting the plug to the outlet.
  2. Connect the plug to a household electric outlet.

3. Check the display window on the control box.
4. Press the button (1) on the back of the control box for 2~8 seconds to adjust the charge level. (Refer to charging cable type and example for setting the charge level.)



5. The charge level on the display window of the control box changes every time you press the button (1).
6. When setting the charge level is complete, start charging according to the portable charge procedure.

\* Example for setting the ICCB charge level

\* The example is only for reference and may vary according to the surrounding environment.

Outlet current	ICCB charge level	Control box display window
14-16A	12A	
13-12A	10A	
11-10A	8A	
9-8A	6A	

**⚠ CAUTION**

Please make sure that charge level selection matches the capacity of your circuit breaker to avoid blown fuse.

**Charging cable storage (if equipped)**



We recommend that the trickle charger cable should be put in the storage box after use.



## Charging status indicator lamp for portable charger (Type A)







Indicator		Status
PLUG	(Green) 	<ul style="list-style-type: none"> <li>ON: Power on</li> <li>Blink: Plug temperature sensor failure</li> </ul>
	(Red) 	<ul style="list-style-type: none"> <li>ON: Plug high temperature protection</li> <li>Blink: Plug high temperature warning</li> </ul>
POWER		<ul style="list-style-type: none"> <li>ON: Power on</li> </ul>
CHARGE		<ul style="list-style-type: none"> <li>Blink: Charging in power saving mode</li> <li>* (Only the CHARGE indicator appears)</li> </ul>
FAULT		<ul style="list-style-type: none"> <li>Blink: Charging interrupted</li> </ul>
CHARGE LEVEL		<ul style="list-style-type: none"> <li>Charging current 12 A</li> </ul>
		<ul style="list-style-type: none"> <li>Charging current 10 A</li> </ul>
		<ul style="list-style-type: none"> <li>Charging current 8 A</li> </ul>





Indicator		Status
VEHICLE	(Green) 	<ul style="list-style-type: none"> <li>Charging connector plugged</li> </ul>
	(Blue) 	<ul style="list-style-type: none"> <li>Charging</li> </ul>
	(Red) 	<ul style="list-style-type: none"> <li>Blink: Charging impossible</li> </ul>

### \* NOTICE

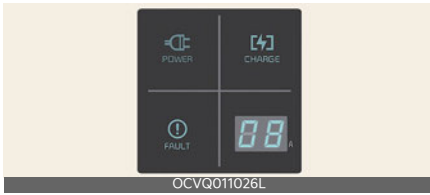
The charging current changes (3 level) whenever the button (1) is pressed for 1 sec with the charger plugged into an electrical outlet but not the vehicle.



No	Control Box	Status/Diagnosis/Countermeasure
1	 <p>ODEPVQ012056</p>	<ul style="list-style-type: none"> <li>• Charging connector plugged into vehicle (Green ON)</li> <li>• Plug temperature sensor failure (Green blink)</li> <li>• Plug high temperature protection (Red flash)</li> <li>• Plug high temperature warning (Red ON)</li> </ul> <p>* Have the system inspected by a professional workshop. Kia recommends to visit an authorized Kia dealer/service partner.</p>
2	 <p>ODEPVQ012057</p>	<ul style="list-style-type: none"> <li>• Charging connector plugged into vehicle (Green ON)</li> </ul>
3	 <p>ODEPVQ012058</p>	<ul style="list-style-type: none"> <li>• While charging             <ul style="list-style-type: none"> <li>- Charge indicator (Green blink)</li> <li>- Vehicle indicator (Blue ON)</li> </ul> </li> </ul>
4	 <p>ODEPVQ012059</p>	<ul style="list-style-type: none"> <li>• Before plugging charging connector into vehicle (Red blink)             <ul style="list-style-type: none"> <li>- Abnormal temperature</li> <li>- ICCB (In-Cable Control Box) failure</li> </ul> </li> </ul> <p>* Have the system inspected by a professional workshop. Kia recommends to visit an authorized Kia dealer/service partner.</p>

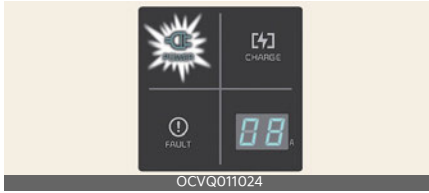
No	Control Box	Status/Diagnosis/Countermeasure
5	 <p>ODEPVQ012060</p>	<ul style="list-style-type: none"> <li>Plugged into vehicle (Red blink)                             <ul style="list-style-type: none"> <li>- Diagnostic device failure</li> <li>- Current leakage</li> <li>- Abnormal temperature</li> </ul> </li> </ul> <p>* Have the system inspected by a professional workshop. Kia recommends to visit an authorized Kia dealer/service partner.</p>
6	 <p>ODEPVQ012061</p>	<ul style="list-style-type: none"> <li>After plugging charging connector into vehicle (Red blink)                             <ul style="list-style-type: none"> <li>- Communication failure</li> </ul> </li> </ul> <p>* Have the system inspected by a professional workshop. Kia recommends to visit an authorized Kia dealer/service partner.</p>
7	 <p>ODEPVQ012062</p>	<ul style="list-style-type: none"> <li>Plug temperature sensor failure (Green blink)</li> <li>Plug high temperature protection (Red blink)</li> <li>Plug high temperature warning (Red ON)</li> </ul> <p>* Have the system inspected by a professional workshop. Kia recommends to visit an authorized Kia dealer/service partner.</p>
8	 <p>ODEPVQ012063</p>	<ul style="list-style-type: none"> <li>Power saving mode                             <ul style="list-style-type: none"> <li>- 3 minutes after charging starts (Green blink)</li> </ul> </li> </ul>

## Charging status indicator lamp for portable charger (Type B)



Indicator		Details
<b>POWER</b>		On: Power on
<b>CHARGE</b>		On: Charge Blink: Current limit due to high plug temperature or high internal temperature
<b>FAULT</b>		Blink: Charging interrupted
CHARGE LEVEL	12	12 A
	10	10 A
	08	8 A
	06	6 A
	<p>The charging current changes whenever the button (1) is pressed for less than 1 sec with the charger plugged into an electrical outlet but not the vehicle.</p> <p style="text-align: center;">Control box</p> <p>The image shows a close-up of the control box with a digital display showing '5.5'. A red arrow points to a button labeled with the number '1'.</p>	

### Status/Diagnosis/Countermeasure



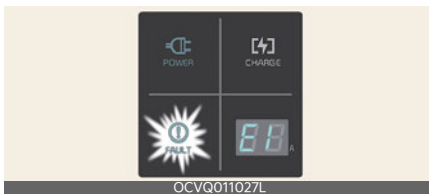
- Charging connector plugged into vehicle (**POWER** Green ON)
- Plug connected to an electric outlet (**POWER** Green ON)

### While charging



- Charge indicator (**POWER** Green ON/**CHARGE** Blue ON)
- Charging current

### Before plugging charging connector into vehicle (**POWER** Green ON, **FAULT** Red blink)



- Abnormal temperature
- ICCB (In-Cable Control Box) failure

### Plugged into vehicle (**POWER** Green ON, **FAULT** Red Blink)



- Diagnostic device failure
- Current leakage
- Abnormal temperature

### Leakage current failure (**POWER** Green ON, **FAULT** Red Blink)



- After disconnecting and reconnecting the power plug, press and release the button for 2 seconds or longer to clear the error.

### Power saving mode



- Charge level indicator is turned off if there is no status change for more than 1 minute.

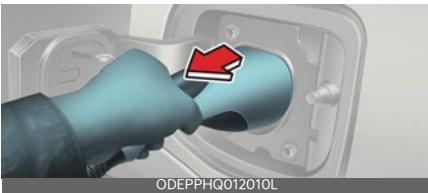
### How to disconnect portable charging cable (ICCB: In-Cable Control Box)

1. Before disconnecting the charging connector, make sure the doors are unlocked. When the door is locked, the charging connector lock system will not allow disconnection.

To prevent charging cable theft, the charging connector cannot be disconnected from the inlet when the doors are locked.

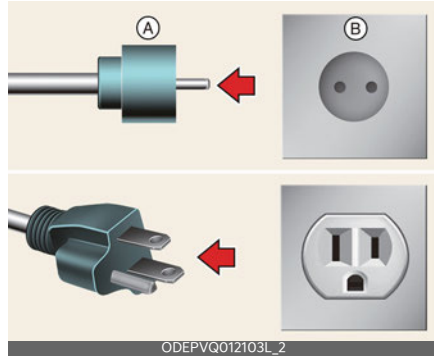
However, if the vehicle is in the charging connector AUTO mode, the charging connector automatically unlocks from the inlet when charging is completed. For more details, refer to "Charging connector AUTO/LOCK mode" on page 1-5.

2. Hold the charging connector handle and pull it out.



3. Make sure to securely close the charging door.

4. Disconnect the plug from the household electric outlet. Do not pull the cable when disconnecting the plug.



A: Plug  
B: Electric Outlet

5. Close the protective cover for the charging connector so that foreign material cannot get into the terminal.
6. Put the charging cable inside the cable compartment to protect it.

#### \* NOTICE

In order to disconnect the charging connector, unlock the doors to unlatch the charging connector lock system. If not, the charging connector and the vehicle's charging inlet may be damaged.

## Precautions for portable charging cable (ICCB: In-Cable Control Box)

- Use the portable charging cable that is certified by Kia.
- Do not try to repair, disassemble, or adjust the portable charging cable.
- Do not use an extension cord or adapter.
- Stop using immediately if failure warning light occurs.
- Do not touch the plug and charging connector with wet hands.
- Do not touch the terminal part of the AC charging connector and the AC charging inlet on the vehicle.
- Do not connect the charging connector to voltage that does not comply with regulations.
- Do not use the portable charging cable if it is worn out, exposed, or there exists any type of damage on the portable charging cable.
- If the ICCB case and AC charging connector is damaged, cracked, or the wires are exposed in any way, do not use the portable charging cable.
- Do not let children operate or touch the portable charging cable.
- Keep the control box free of water.
- Keep the AC charging connector or plug terminal free of foreign substances.
- Do not step on the cable or cord. Do not pull the cable or cord and do not twist or bend it.
- Do not charge when there is lightning.
- Do not drop the control box or place a heavy object on the control box.

- Do not place an object that can generate high temperatures near the charger when charging.
- Charging with the worn out or damaged household electric outlet can result in a risk of electric shock. If you are in doubt to the household electric outlet condition, have it checked by a licensed electrician.
- Stop using the portable charging cable immediately if the household electric outlet or any components is overheated or you notice burnt odors.

## Actions to be taken for electric vehicle charging issues

When you cannot charge the high voltage battery after connecting the charger, check the following:

1. Check the charging settings for the vehicle.  
(e.g. when scheduled charging is set, charging is not initiated immediately when the AC charger or portable charger is connected.)
2. Check the operation status of the AC charger, portable charger.  
(Status of portable charger)  
\* Actual method for indicating the charging status may vary in accordance with the charger manufacturer.
3. When the vehicle does not charge and a warning message appears on the instrument cluster, check the corresponding message.
4. If the vehicle is properly charged when charged with another normally working charger, contact the charger manufacturer.

- If the vehicle does not charge when charged with another normally working charger, we recommend that you contact an authorized Kia dealer/service partner for inspection.

### How to disconnect charging connector in emergency



If the charging connector does not unlock for some reason, open the hood and slightly pull the emergency cable as shown above. The charging door will then open.


If a charging door is not opened immediately with emergency cable in operation, press a charging door lightly and pull emergency cable again. The charging cable lock may not work properly when foreign materials such as dust enter the cable or the cable is encrusted with ice.

In that case, the charging cable may not be disconnected or locked, or the vehicle may not be charged. If this happens, open the hood and pull the emergency cable lightly 2~3 times and then try to disconnect the charging cable or start recharging.


## Driving the hybrid/plug-in hybrid vehicle

### Starting the vehicle

#### Vehicles with smart key system (if equipped)

- Carry the smart key or leave it inside the vehicle.
- Make sure the parking brake is firmly applied.
- Place the shift dial in P (Park). With the shift dial in N (Neutral), you cannot start the vehicle.
- Depress the brake pedal.
- Press the ENGINE START/STOP button. If the hybrid system starts, the  indicator will come on.

Whether the engine is cold or warm, it should be started without depressing the accelerator.

After following the start procedures, The  indicator on the instrument cluster will turn on. For more details, please refer to "Starting the vehicle" on page 6-8.

#### Economical and safe operation of Hybrid system

- Drive smoothly. Accelerate at a moderate rate and maintain a steady cruising speed. Do not make "jackrabbit" starts. Do not race between stoplights.
  - Avoid heavy traffic whenever possible. Always maintain a safe distance from other vehicles so you can avoid unnecessary braking. This also reduces brake wear out.
- The regenerative brake generates energy when the vehicle decelerates.



- When the hybrid battery power is low, the hybrid system automatically recharges the hybrid battery.
- When the engine is running with the shift dial in N (Neutral), the hybrid system cannot generate electricity. The hybrid battery cannot recharge with the shift dial in N (Neutral).

**\* NOTICE**

In the hybrid system, the engine automatically runs and stops. When the hybrid system operates, the (🚗) indicator is appeared.

In the following situation, the engine may operate automatically.

- When the engine is ready to run.
- When the hybrid battery is being charged.
- Depending on the temperature condition of the hybrid battery.

**Changing plug-in hybrid mode (Plug-in hybrid vehicle)**



Whenever you press the EV/HEV button, Plug-in hybrid system drive mode will be changed in sequential as:

1. Electric (CD) mode
2. Automatic (AUTO) mode
3. Hybrid (CS) mode

Each time the mode is changed, a corresponding indicator is displayed on the instrument cluster as follows.

**Automatic (AUTO) mode**

Type A



Type B

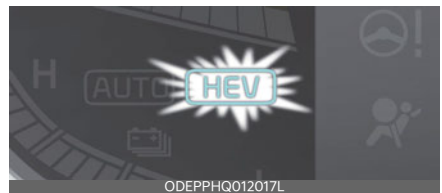


**Hybrid (CS) mode**

Type A



Type B



### Plug-in hybrid mode message

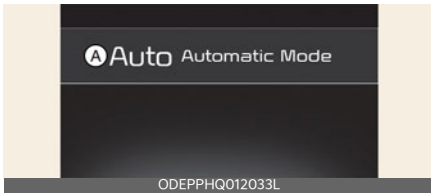
#### CD (Charge Depleting, Electric) mode



##### A: Electric Mode

The high voltage (hybrid) battery is used to drive the vehicle.

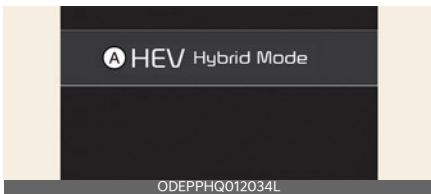
#### AUTO (Automatic) mode



##### A: Automatic Mode

The drive mode will be automatically selected from either Electric (CD) mode or Hybrid (CS) mode by the system according to the driving condition.

#### CS (Charge Sustaining, Hybrid) mode



##### A: Hybrid Mode

The high voltage (hybrid) battery and gasoline engine is used to drive the vehi-

cle. A corresponding message is displayed to indicate the selected mode.

### Special features

Hybrid vehicles sound different than gasoline engine vehicles. When the hybrid system operates, you may hear a sound from the hybrid battery system behind the rear seat. If you apply the accelerator pedal rapidly, you may hear an unconventional sound. When you apply the brake pedal, you may hear a sound from the regenerative brake system. When the hybrid system is turned off or on, you may hear a sound in the engine compartment. If you depress the brake pedal repeatedly when the hybrid system is turned on, you may hear a sound in the engine compartment. None of these sounds indicate a problem. These are normal characteristics of hybrid vehicles.

It is a normal condition if you hear a motor sound in the engine compartment in any of the following situations:

- The brake pedal is released after turning off the hybrid system.
- The brake pedal is applied when the hybrid system is turned off.
- When the driver door is opened.


When the hybrid system is turned ON, the gasoline engine may run or may not. In this situation, you may feel a vibration. This does not indicate a malfunction.

When the (🔋) indicator appears, the hybrid system is ready to begin driving. Even if the engine is off, you can operate the vehicle as long as the (🔋) indicator is appeared.

**\* NOTICE**

- The hybrid system contains many electronic components. High voltage components, such as cables and other parts, may emit electromagnetic waves. Even when the electromagnetic cover blocks electromagnetic emissions, electromagnetic waves may have an effect on electronic devices.
- When your vehicle is not used for a long period of time, the hybrid system will discharge. You need to drive the vehicle several times a month. We recommend driving at least for 1 hour or 16 km (10 miles). When the hybrid battery is discharged, or when it is impossible to jump start the vehicle, we recommend that you contact your authorized Kia dealer/partner.

**▲ WARNING**

- When you start the hybrid system with the shift lever in P (Parking), the  indicator appears on the instrument cluster. The driver can drive the vehicle, even when the gasoline engine is off.
- When you leave the vehicle, you should turn OFF the hybrid system or locate the shift lever in P (Park). When you depress the accelerator pedal by mistake, or when the shift lever is not in P (Park), the vehicle will abruptly move, possibly resulting in serious injury or death.

**Virtual Engine Sound System (VESS)**


Virtual Engine Sound System generates engine sound for pedestrians to hear vehicle sound because there is limited sound while motor power is used.

- If the vehicle is in the ready mode and the gear is not in P (Park), the VESS will operate.
- When the shift lever is shifted to R (Reverse), an additional warning sound will be heard.

**What does regenerative braking do?**

It uses an electric motor when decelerating and when braking and transforms kinetic energy to electrical energy in order to charge the high voltage battery.

**Battery**

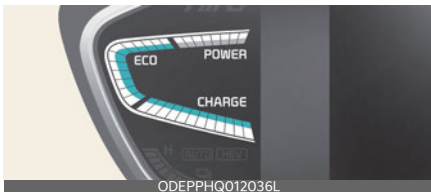
- The vehicle is composed of a high voltage battery that drives the motor and air conditioner, and an integrated 12V lead battery with the HEV battery that drives the lamps, wipers, and audio system.
- The integrated 12V battery is automatically charged when the vehicle is in the ready  mode.

### Hybrid system gauge Power/Charge gauge

Type A



Type B

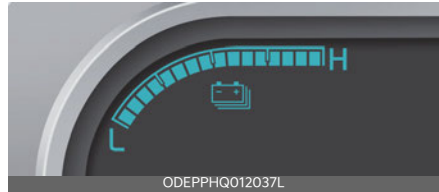


The hybrid system gauge indicates whether the current driving condition is fuel efficient or not.

- CHARGE: Shows that the energy made by the vehicle is being converted to electrical energy. (Regenerated energy)
- ECO: Shows that the vehicle is being driven in an Eco-friendly manner.
- POWER: Shows that the vehicle is exceeding the Eco-friendly range.

### Hybrid battery SOC (State of Charge) gauge

Type A



Type B



This gauge indicates the remaining hybrid battery power. If the SOC is near the "L (Low) or 0" level, the vehicle automatically operates the engine to charge the battery.

However, if the Service Indicator (⚠️) and Malfunction Indicator Lamp (MIL) (🔧) turn on when the SOC gauge is near the "L (Low) or 0" level, we recommend the vehicle to be checked by an authorized Kia dealer/service partner.

### Warning and indicator lights

#### Ready indicator 🚗

#### This indicator appears:

When the vehicle is ready to be driven.

- ON: Normal driving is possible.
- OFF: Normal driving is not possible, or a problem has occurred.
- Blinking: Emergency driving.

When the ready indicator goes OFF or blinks, there is a problem with the sys-

tem. If this occurs, we recommend that you have your vehicle inspected by an authorized Kia dealer/service partner.

## Service warning light

### This warning light appears:

- When you set the ENGINE START/STOP button to the ON position.
  - The service warning light appears for approximately 3 seconds and then turns off when all checks have been performed.
- When there is a problem with the hybrid vehicle control system or hardware.

When the warning light appears while driving, or does not go OFF after starting the vehicle, we recommend that you have the vehicle inspected by an authorized Kia dealer/service partner.

## EV mode indicator

### This indicator appears:

When the vehicle is driven by the electric motor.

- "EV" indicator ON: Vehicle is driven using the electric motor or the gasoline engine is stopped.
- "EV" indicator OFF: Vehicle is driven using the gasoline engine.

## Regenerative brake warning light (red color) (yellow color)

### This warning light appears:

When the regenerative brake does not operate and the brake does not perform well. This causes the brake warning light

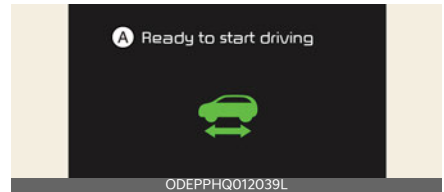
(red) and regenerative brake warning light (yellow) to appear simultaneously. If this occurs, drive safely and have your vehicle inspected by an authorized Kia dealer/service partner. The operation of the brake pedal may be more difficult than normal and the braking distance may increase.

## Charging cable connection indicator (Plug-in hybrid vehicle)

This indicator appears in red when the charging cable is connected.

## LCD display messages

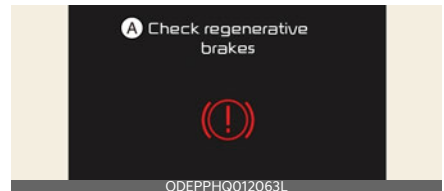
### Ready to drive



#### A: Ready to start driving

This message is displayed when the vehicle is ready to be driven.

### Check regenerative brakes

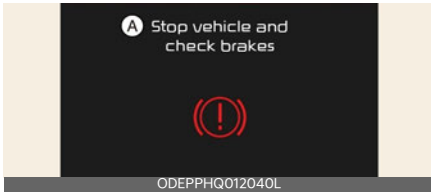


#### A: Check regenerative brakes

This message is displayed when the brake performance is low or the regenerative brake does not work properly due to a failure in the brake system.

If this occurs, it may take longer for the brake pedal to operate and the braking distance may become longer.

### Stop vehicle and check regenerative brakes

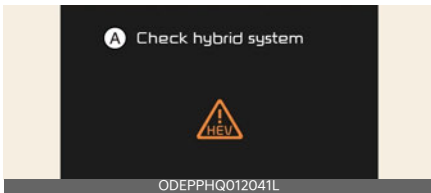


#### A: Stop vehicle and check brakes

This message is displayed when a failure occurs in the brake system.

If this occurs, park the vehicle in a safe location and we recommend that you tow your vehicle to the nearest authorized Kia dealer/service partner and have the vehicle inspected.

### Check Hybrid system



#### A: Check Hybrid system

This message is displayed when there is a problem with the hybrid control system. Refrain from driving when the warning message is displayed.

If this occurs, we recommend that you have the vehicle inspected by an authorized Kia dealer/service partner.

### Check Hybrid system. Stop safely



#### A: Stop safely and check Hybrid system

This message is displayed when there is a problem with the hybrid control system. The (EV) indicator will blink and a warning chime will sound until the problem is solved. Refrain from driving when the warning message is displayed.

If this occurs, we recommend that you have the vehicle inspected by an authorized Kia dealer/service partner.

### Check Hybrid system. Do not start engine



#### A: Check Hybrid system. Do not start engine

This message is displayed when the hybrid battery power (SOC) level is low. A warning chime will sound until the problem is solved. Refrain from driving when the warning message is displayed.

If this occurs, we recommend that you have the vehicle inspected by an authorized Kia dealer/service partner.

## Stop vehicle and check power supply

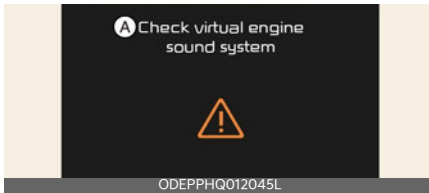


### A: Stop safely and check power supply

This message is displayed when a failure occurs in the power supply system.

If this occurs, park the vehicle in a safe location and tow your vehicle to the nearest authorized Kia dealer/service partner and have the vehicle inspected.

## Check Virtual Engine Sound System



### A: Check virtual engine sound system

This message is displayed when there is a problem with the Virtual Engine Sound System (VESS).

If this occurs, we recommend that you have the vehicle inspected by an authorized Kia dealer/service partner.

## Refill inverter coolant



### A: Refill inverter coolant

This message is displayed when the inverter coolant is nearly empty. You should refill the inverter coolant.

## Park with engine On to charge battery



### A: Park with engine On to charge battery

This message is displayed when the hybrid battery power (SOC) level is low. If this occurs, park the vehicle in a safe location and wait until the hybrid battery is charged.

### Start engine to avoid battery discharge

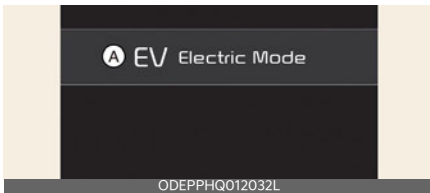


#### A: Start engine to avoid battery discharge

This message is displayed to inform the driver the 12V battery may be discharged if the ENGINE START/STOP button is in ON position (without the (🔌) indicator ON).

Set the vehicle to the ready (🔌) mode to prevent the 12V battery from being discharged.

### CD (Charge Depleting, Electric) mode (Plug-in hybrid vehicle)



#### A: Electric Mode

The high-voltage (hybrid) battery is used to drive the vehicle.

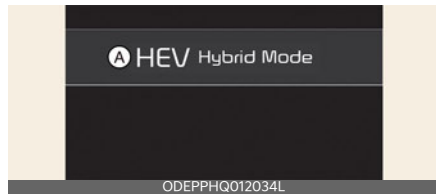
### AUTO (Automatic) mode (Plug-in hybrid vehicle)



#### A: Automatic Mode

The drive mode will be automatically selected from either Electric (CD) mode or Hybrid (CS) mode by the system according to the driving condition.

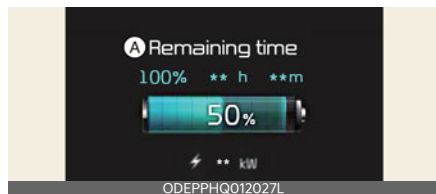
### CS (Charge Sustaining, Hybrid) mode (Plug-in hybrid vehicle)



#### A: Hybrid Mode

The high-voltage (hybrid) battery and gasoline engine is used to drive the vehicle.

### Remaining charge time (Plug-in hybrid vehicle)



#### A: Remaining Time

The message is displayed to notify the remaining time to fully charge the battery.



### **Charging stopped. Check the AC charger (Plug-in hybrid vehicle)**

This message is displayed when the charging failed by external charger error.

The purpose of this message is to let you know the error has occurred in the charger itself, not in the vehicle.

### **Charging stopped. Check the cable connection (Plug-in hybrid vehicle)**

This message is displayed when charging is stopped because the charging connector is not correctly connected to the charging inlet. If this occurs, separate the charging connector and reconnect it and check whether there is any problem (external damage, foreign substances, etc.) with the charging connector and charging inlet. If the same problem occurs when charging the vehicle with a replaced charging cable or genuine Kia portable charger, have the vehicle inspected by a professional workshop. Kia recommends to visit an authorized Kia dealer/service partner.

### **Low/High System Temp. Maintaining Hybrid mode (Plug-in hybrid vehicle)**

This message is displayed when the temperature of the high-voltage (hybrid) battery is too low or too high.

This warning message is to protect the battery and the hybrid system.

### **Low/High System Temp. Switching to Hybrid mode (Plug-in hybrid vehicle)**

This message is displayed when the temperature of the high-voltage (hybrid) battery is too low or high. This warning message is to protect the battery and the hybrid system.

### **Switching to Hybrid mode to allow heating (Plug-in hybrid vehicle)**

- When the outdoor temperature is lower than -13 °C (9 °F) and the coolant temperature is lower than 40 °C (104 °F), you turn the climate control On for heating, the above message will be displayed in the cluster. Then, the vehicle will automatically switch to HEV mode and EV mode will not be activated (although EV/HEV button is pressed)
- When the outdoor temperature is higher than -10 °C (14 °F), or the coolant temperature is higher than 80 °C (176 °F) or you turn the climate control Off, the vehicle will automatically return to EV mode.
- If high-voltage PTC is equipped in the vehicle, the vehicle will not switch to hybrid mode to allow heating.

### Wait until fuel door unlocks (Plug-in hybrid vehicle)

The message is displayed when you attempt to unlock the fuel filler door with the fuel tank pressurized. Wait until the fuel tank is depressurized.

#### \* NOTICE

- It may take up to 20 seconds to unlock fuel filler door.
- If the fuel filler door does not open because ice has formed around it, tap lightly or push on the door to break the ice and release the door.
- Do not pry on the door. If necessary, spray around the door with an approved de-icer fluid (do not use radiator anti-freeze) or move the vehicle to a warm place and allow the ice to melt.

### Fuel door unlocked (Plug-in hybrid vehicle)

This message is displayed when the fuel filler door is unlocked.

Also means "Ready to refuel".

Please press the rear center edge of fuel filler door to open.

### Check fuel door (Plug-in hybrid vehicle)

This message is displayed when the fuel filler door is open while driving or an abnormality has occurred.

### Charging door open (Plug-in hybrid vehicle)

This message indicates that the charging door is open while in driving ready state to encourage you to inspect and close the door.

(Driving with the charging door open may result in moisture inflow or damage. This message is used to prevent such occurrences.)

### Unplug vehicle to start (Plug-in hybrid vehicle)

The message is displayed when you start the engine without unplugging the charging cable. Unplug the charging cable, and then start the vehicle.

### Maintaining Hybrid mode to continue heating (Plug-in hybrid vehicle)

A message is displayed when heating is in operation and the HEV mode is maintained to meet the heating operating conditions when attempting to switch to EV mode by pressing the EV/HEV button.

### EV modes (Plug-in hybrid vehicle)

A corresponding message is displayed when a mode is selected by pressing the EV/HEV button.

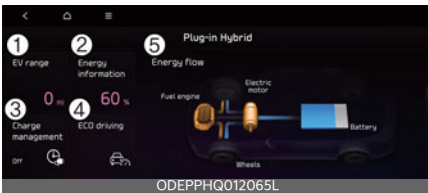
### PHEV infotainment system (Plug-in hybrid vehicle)

Press [PHEV] on the [Home screen].

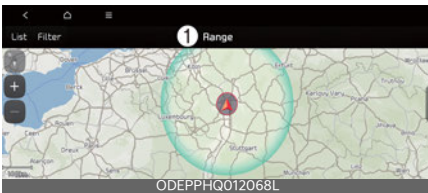


### 1 PHEV

The Plug-in Hybrid menu consists of five sections: [EV range], [Energy information], [Charge management], [ECO driving], [Energy flow].



- 1 EV range
- 2 Energy information
- 3 Charge management
- 4 ECO driving
- 5 Energy flow



### 1 EV range

#### \* INFORMATION

The infotainment system may change after software updates. For more information, refer to the manual provided in the infotainment system and the quick reference guide.

## Energy flow

The hybrid system informs the drivers its energy flow in various operating modes. While driving, the current energy flow is specified in 11 modes.

## Vehicle stop



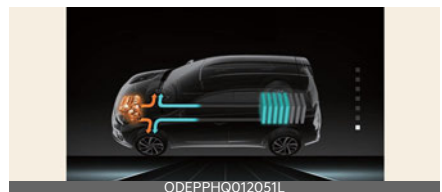
The vehicle is stopped.  
(No energy flow)

## EV propulsion



Only the motor power is used to drive the vehicle.  
(Battery → Wheel)

## Power assist



Both the motor and the engine power are used to drive the vehicle.  
(Battery & Engine → Wheel)

### Engine only propulsion



Only the engine power is used to drive the vehicle.  
(Engine → Wheel)

### Engine brake



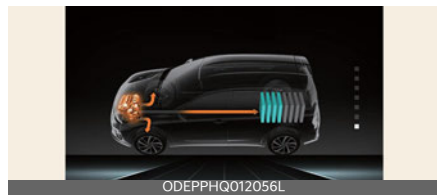
The engine braking is used to decelerate the vehicle.  
(Wheel → Engine)

### Engine generation



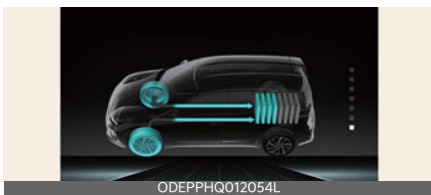
When the vehicle is stopped, the high-voltage battery is charged up by the engine.  
(Engine → Battery)

### Power reserve



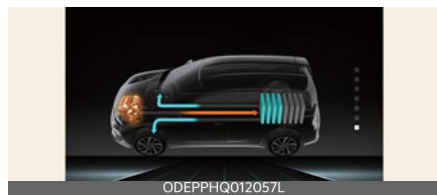
The engine is simultaneously used to drive the vehicle and to charge up the high-voltage battery.  
(Engine → Wheel & Battery)

### Regeneration



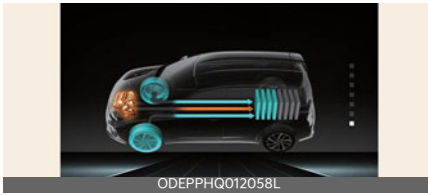
The high-voltage battery is charged up by the regenerative brake system.  
(Wheel → Battery)

### Engine generation/motor drive



The engine charges up the high-voltage battery. The motor power is used to drive the vehicle.  
(Engine → Battery → Wheel)

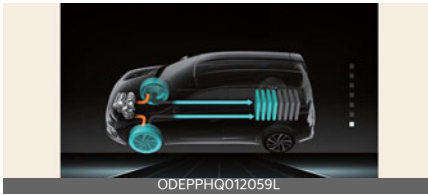
## Engine generation/regeneration



### A: Charging

The engine and regenerative brake system charges up the high-voltage battery. (Engine & Wheel → Battery)

## Engine brake/regeneration



### A: Charging

The engine braking is simultaneously used to decelerate the vehicle and to charge up the high-voltage battery. (Wheel → Engine & Battery)

## Aux. Battery Saver+ (if equipped)

The Aux. Battery Saver+ is a function that monitors the charging status of the 12V auxiliary battery. If the auxiliary battery level is low, the main high voltage battery charges the auxiliary battery.

### \* NOTICE

The Aux. Battery Saver+ function will be ON when the vehicle is delivered.

## Mode

- Cycle Mode: When the vehicle is OFF with all doors, hood and tailgate closed, the Aux. Battery Saver+ periodically activates according to the auxiliary battery status.
- Automatic Mode: When the ENGINE START/STOP button is in the ON position with the charging connector plugged in, the function activates according to the auxiliary battery status to prevent over-discharge of the auxiliary battery.

### ⚠ CAUTION

- The Aux. Battery Saver+ activates for a maximum of 20 minutes. If the Aux. Battery Saver+ function activates more than 10 times consecutively, in the Automatic Mode the function will stop activating, judging that there is a problem with the auxiliary battery. In this case, drive the vehicle for some period of time. The function will start activating if the auxiliary battery returns to normal.
- The Aux. Battery Saver+ function cannot prevent battery discharge if the auxiliary battery is damaged, worn out, used as a power supply or unauthorized electronic devices are used.

## System setting

The driver can activate the Aux. Battery Saver+ function by placing the ENGINE START/STOP button to the ON position.

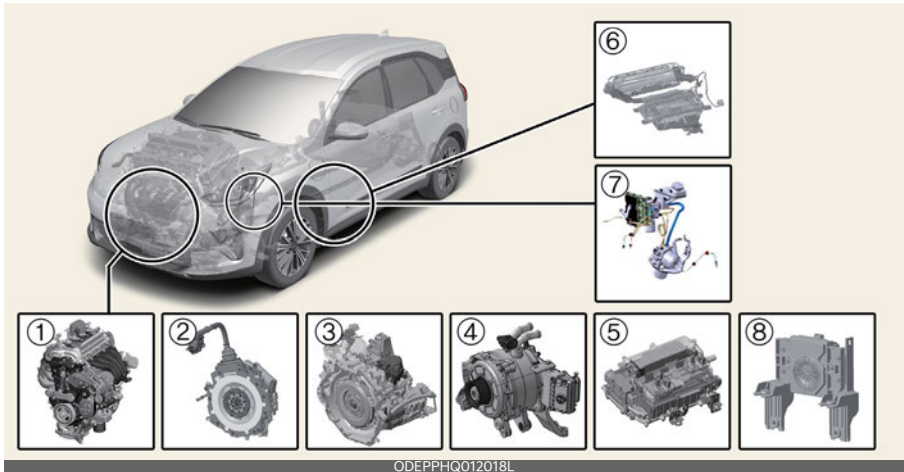
### **WARNING**

When the function is activating the charging indicator lamp will quickly blink and high voltage electricity will be flowing in the vehicle. Do not touch the high voltage electric wire (orange), connector, and all electric components and devices. This may cause electric shock and lead to injuries. Also, do not modify your vehicle in any way. This may affect your vehicle performance and lead to an accident.



## Components of the hybrid/plug-in hybrid vehicle

### Plug-in hybrid vehicle components



\* The actual shape may differ from the illustration.

- 1 Engine: 1.6L
- 2 Motor: 32 kW (HEV)/44.5 kW (PHEV)
- 3 Transmission: 6DCT
- 4 Hybrid starter generator (HSG)
- 5 HPCU (Hybrid Power Control Unit)
- 6 High voltage battery system
- 7 Regenerative brake system
- 8 Virtual Engine Sound System (VESS)

The Hybrid battery uses high voltage to operate the electric motor and other components. High voltage is dangerous if touched.

Your vehicle is equipped with orange colored insulation and covers over the high voltage components to protect people from electric shock. High voltage warning labels are attached to some system components as additional warnings. Have your vehicle serviced by a professional workshop. Kia recommends to visit an authorized Kia dealer/service partner.

HPCU (Hybrid Power Control Unit) \*1



High voltage battery system \*2



Drive motor \*3



- 1 Located in the engine compartment
- 2 Located under the floor
- 3 Located in the engine compartment

**⚠ WARNING**

- Never touch orange colored or high voltage labeled components, including wires, cables, and connections. When the insulators or covers are damaged or removed, severe injury or death from electrocution may occur.
- While replacing the fuses in the engine compartment, never touch the HPCU. The HPCU carries high voltage. Touching the HPCU may result in electrocution, serious injury, or death.

- In the hybrid system, the hybrid battery uses high voltage to operate the motor and other components. This high voltage hybrid battery system can be very dangerous. Never touch the hybrid system. When you touch the hybrid battery system, serious injury or death may occur.
- As with all batteries, avoid fluid contact with the hybrid battery. If the battery is damaged and if electrolyte comes in contact with your body, clothes or eyes, immediately flush with a large quantity of fresh water.
- Do not use an after-market battery charger to charge the hybrid battery. Doing so may result in death or serious injury.
- **High waters**
  - Avoid high waters as this may result in your vehicle becoming saturated with water and could compromise the high voltage components.
  - Do not touch the any of the high voltage components within your vehicle if your vehicle has been submerged in water equal to half of the vehicle height. Touching high voltage components once submerged in water could result in severe burns or electric shock that could result in death or serious injury.
- **Carrying liquids in tailgate**

Do not load large amounts of water in open containers into the vehicle. If the water spills onto the HEV battery, it may cause a short and damage the battery.



• **Exposure to high voltage**

- High voltage in the hybrid battery system is very dangerous and can cause severe burns and electric shock. This may result in serious injury or death.
- For your safety, never touch, replace, dismantle or remove any portion of the hybrid battery system including components, cables and connectors.

• **Use of water or liquids**

If water or liquids come into contact with the hybrid system components, and you are also in contact with the water, severe injury or death due to electrocution may occur.

• **Hot components**

When the hybrid battery system operates, the HEV battery system can be hot. Heat burns may result from touching even insulated components of the HEV system.

**CAUTION**

- Do not pile up any items in an area behind the high voltage battery. In a crash, the battery may become unstable, or its performance may degrade.
- Do not apply strong force or pile up any items above the luggage compartment. Such an attempt may distort the high voltage battery case, causing a safety problem or degrading the performance.
- Be careful when loading flammable liquid in the passenger compartment. It could cause operational and safety degradation if the liquid leaks and flows in the high voltage battery.
- **Cleaning engine**

When you clean the engine compartment, do not wash using water. Water may cause electric arcing to occur and damage electronic parts and components.

• **Prolonged parking**

Prolonged parking might cause battery discharge and operation failure due to natural discharge. Driving the vehicle approximately once every 2 months, more than 15 km (9 miles) is recommended. The battery will be charged automatically when driving the vehicle.

**Hybrid vehicle components**

HPCU (Hybrid Power Control Unit) \*1



High voltage battery system \*2



Drive motor \*3



- 1 Located in the engine compartment
- 2 Located under the 2nd row seats

### 3 Located in the engine compartment

#### **WARNING**

- Never touch orange colored or high voltage labeled components, including wires, cables, and connections. When the insulators or covers are damaged or removed, severe injury or death from electrocution may occur.
- While replacing the fuses in the engine compartment, never touch the HPCU. The HPCU carries high voltage. Touching the HPCU may result in electrocution, serious injury, or death.
- In the hybrid system, the hybrid battery uses high voltage to operate the motor and other components. This high voltage hybrid battery system can be very dangerous.

Never touch the hybrid system. When you touch the hybrid battery system, serious injury or death may occur.

- Do not disassemble the high voltage motor connector. The high voltage motor connector may contain residual high voltage. Coming in contact with high voltage may result in death or serious injury.
- Your vehicle's hybrid system should only be inspected or repaired by an authorized Kia dealer/service partner.
- Do not disassemble or assemble the high voltage battery system. Doing so may result in electric shock, causing death or serious injury.
- If you disassemble or assemble hybrid system components improperly, it may damage the performance and reliability of your vehicle.
- If electrolyte comes in contact with your body, clothes or eyes, immediately flush with a large quantity of fresh tap water. Have your eyes

examined by a doctor as soon as possible.

- Never assemble or disassemble the high voltage battery system.
  - If you assemble or disassemble the high voltage battery system, the durability and performance of the vehicle may be damaged.
  - When you want to check the high voltage battery system, we recommend that you contact your authorized Kia dealer/service partner.
  - Do not touch the high voltage battery and high voltage cable connected to motor (orange color). Severe burns and electric shock may occur. For your safety, do not touch the cover of electronic components and electronic cable. Do not remove the cover of electronic components and electronic cable. In particular, never touch the high voltage battery system when the hybrid system in operation. It may result in death or serious injury.
- Never use the package modules (high voltage battery, inverter and converter) for any other purpose.
- Do not use an unauthorized battery charger to charge the high voltage battery. Doing so may result in death or serious injury.
- Never locate the high voltage system near or in a fire.
- Never drill into or strike the package module. Otherwise, it may be damaged. An electric shock may occur, resulting in serious injury or death.
- This hybrid vehicle uses the hybrid battery system inverter and converter to generate high voltage. High voltage in the hybrid battery system is very dangerous and may cause severe

burns and electric shock. This may result in serious injury or death.

- For your safety, never touch, replace, disassemble or remove the hybrid battery system including components, cables and connectors. Severe burns or electric shock may result in serious injury or death when you fail to follow this warning.
- When the hybrid battery system operates, the hybrid battery system can be hot. Always be careful because burns or electric shock may be caused by high voltage.
- Do not spill liquid on the HPCU, HSG, motor and fuses. If the hybrid system components come in contact with liquid, it may result in electric shock.

**⚠ CAUTION**

- Do not pile up any items in an area behind the high voltage battery. In a crash, the battery may become unstable, or its performance may degrade.
- Do not apply strong force nor pile up any items above the luggage compartment. Such an attempt may distort the high voltage battery case, causing a safety problem or degrading the performance.
- Be careful when loading flammable liquid in the luggage compartment. It could cause operational and safety degradation if the liquid leaks and flows in the high voltage battery.

**\* NOTICE**

- When the vehicle is paint baked, do not bake over 30 minutes in 70°C (158°F) or 20 minutes in 80°C (176°F) degree.
- Do not wash the engine compartment, using water. Water may cause an electric shock and damage the electronic components.

**High voltage battery air intake**



The hybrid battery cooling duct is located under the rear seats. The cooling duct cools down the hybrid battery. When the hybrid battery cooling duct is blocked, the hybrid battery may be overheated.

Clean the cooling duct for the hybrid battery with a dry cloth on a regular basis.

**⚠ WARNING**

- Never clean the cooling duct of the hybrid battery with a wet cloth. If any water enters the cooling duct of the hybrid battery, the hybrid battery may cause an electric shock, resulting in a serious damage, an injury or a death.
- The hybrid battery is composed of lithium-ion polymer. If the hybrid battery is improperly handled, it is dangerous to the environment. Also it may cause electrical shock and severe burns, resulting in a serious injury or a death.

- Do not spill liquid over the cooling duct of the hybrid battery. Doing so is very dangerous. It may cause electric shock or serious injury.
- Do not cover the cooling duct with objects.
- Do not put any objects into the cooling duct of the hybrid battery. Doing so may cause loss of cooling duct volume to the hybrid battery. When the cooling duct is blocked with any objects, immediately contact your Kia dealer/partner.
- Never place a container of liquid on or near the cooling duct. If the liquid spills, the hybrid battery located in the luggage compartment may be damaged.
- Secure all loads in the luggage compartment to prevent them from being tossed about before driving. When a sharp or heavy load strike with a strong impact or pierce the interior luggage compartment wall, the hybrid battery system may be damaged, deteriorating its performance.
- Do not obstruct the cooling duct with any other objects.

## Service plug

For HEV



For PHEV



### **⚠ DANGER**

Never touch the safety plug. Safety plug is attached to high voltage hybrid battery system. Touching safety plug will result in death or serious injury. Service personnel should follow procedure in service manual.

## If an accident occurs

### WARNING

- For your safety, do not touch the high voltage cables, connectors and package modules. High voltage components are orange in color.
- Exposed cables or wires may be visible inside or outside of the vehicle. Never touch the wires or cables, because an electrical shock, an injury, or a death may occur.
- Any gas or electrolyte leakage from your vehicle is not only poisonous but also flammable. Upon witnessing one of those, open the windows, and remain a safe distance from the vehicle out of the road.

Immediately call an emergency services or contact an authorized Kia dealer and advise them that a hybrid vehicle is involved.

- When the vehicle is severely damaged, remain a safe distance of 15 meter or more between your vehicle and other vehicles/ flammables.
- **If a fire occurs:**

- If a small scale fire occurs, use a fire extinguisher (ABC, BC) that is meant for electrical fires.

If it is impossible to extinguish the fire in the early stage, remain a safe distance from the vehicle and immediately call your local fire emergency responders. Also, advise them that a hybrid vehicle is involved.

If the fire spreads to the high voltage battery, large amount of water is needed to put out the fire.

Using small amount of water or fire extinguishers not meant for electri-

cal fires could cause serious injury or death from electrical shocks.

- Upon witnessing any sparks, gases, flames, or fuel leakage of your vehicle, immediately call emergency services or contact an authorized Kia dealer/service partner. Also, advise them that a hybrid vehicle is involved.

- **When a submersion in water occurs:**

When your vehicle is flooded in water, a high-voltage battery may cause shock or fires. Thus, turn the hybrid system OFF, take the key in your possession and escape to a safe place. Never attempt physical contact with your flooded vehicle.

Immediately contact an authorized Kia dealer/service partner and advise them that a hybrid vehicle is involved.

## When the hybrid vehicle shuts off

When the high voltage battery or 12V battery is discharged, or when the fuel tank is empty, the hybrid system may not operate while driving. When the Hybrid system does not operate, do the followings:

1. Gradually reduce the vehicle speed. Pull over your vehicle off the road in a safe area.
2. Locate the shift lever in P (Park).
3. Turn ON the hazard warning flashers.
4. Turn OFF the vehicle, and try to start the hybrid system again, while depressing the brake pedal and turning on the ENGINE START/STOP button.

5. When the hybrid system still does not operate, refer to "Emergency starting" on page 7-5.

Before jump-starting the vehicle, check the fuel level and the exact procedure to jump start. When the fuel level is low, do not attempt to drive the vehicle only with the battery power. The high voltage battery may be discharged, and the hybrid system will turn OFF.

### **WARNING**

#### **Vehicle accident**

Never touch electric wires or cable. If exposed electric wires or cables are visible inside or outside of your vehicle, an electric shock may occur.

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### **WARNING**

#### **Putting out fire**

Never use a small quantity of water to put out a fire in your vehicle because it could cause serious injuries or death from electrical shocks. If a fire occurs, evacuate the car immediately and contact the fire department.

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## Introduction

### Fuel requirements

#### Unleaded gasoline

##### For Europe

For the optimal vehicle performance, we recommend you to use unleaded gasoline with an octane rating of RON (Research Octane Number) 95/AKI (Anti Knock Index) 91 or higher.

You may use unleaded gasoline with an octane rating of RON 91~94/AKI 87~90 but it may result in slight performance reduction of the vehicle. (Do not use methanol blended fuels.)

##### Except Europe

Your new Kia vehicle is designed to use only unleaded fuel having an Octane Rating of RON (Research Octane Number) 91/AKI (Anti- Knock Index) 87 or higher. (Do not use methanol blended fuels.)

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

#### **⚠ WARNING**

- Do not "top off" after the nozzle automatically shuts off when refueling.
- Always check that the fuel cap is installed securely to prevent fuel spillage in the event of an accident.

#### **⚠ CAUTION**

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 has been specified. Kia recommends to consult an authorized Kia dealer/service partner for details.

#### **Leaded (if equipped)**

For some countries, your vehicle is designed to use leaded gasoline. When you are going to use leaded gasoline, Kia recommends to visit an authorized Kia dealer/service partner and ask whether leaded gasoline in your vehicle is available or not.

Octane Rating of leaded gasoline is same with unleaded one.

#### **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 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, engine control system and emission control system.

Discontinue using gasohol of any kind if drivability problems occur.



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

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

### **⚠ CAUTION**

Never use gasohol which contains methanol. Discontinue use of any gasohol product which impairs drivability.

### **Other fuels**

Using fuels such as

- Silicone (Si) contained fuel,
- MMT (Methylcyclopentadienyl Manganese Tricarbonyl), Manganese (Mn) contained fuel,
- Ferrocene (Fe) contained fuel, and
- Other metallic additives contained fuels,

may cause vehicle and engine damage or cause plugging, misfiring, poor acceleration, engine stalling, catalyst melting, abnormal corrosion, life cycle reduction, etc.

Also, the Malfunction Indicator Lamp (MIL) may appear.

### **\* NOTICE**

Damage to the fuel system or performance problem caused by the use of these fuels may not be covered by your New Vehicle Limited Warranty.

### **Use of MTBE**

Kia recommends avoiding fuels containing MTBE (Methyl Tertiary Butyl Ether) over 15.0% vol. (Oxygen Content 2.7% weight) in your vehicle.

Fuel containing MTBE over 15.0% vol. (Oxygen Content 2.7% weight) may reduce vehicle performance and produce vapor lock or hard starting.

### **⚠ CAUTION**

Your New Vehicle Limited Warranty may not cover damage to the fuel system and any performance problems that are caused by the use of fuels containing methanol or fuels containing MTBE (Methyl Tertiary Butyl Ether) over 15.0% vol. (Oxygen Content 2.7% weight.)

### **Do not use methanol**

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

## Fuel additives

Kia recommends that you use unleaded gasoline which has an octane rating of RON (Research Octane Number) 95/AKI (Anti Knock Index) 91 or higher (for Europe) or Octane Rating of RON (Research Octane Number) 91/AKI (Anti-Knock Index) 87 or higher (except Europe).

For customers who do not use good quality gasolines including fuel additives regularly, and have problems starting or the engine does not run smoothly, one bottle of additives should be added to the fuel tank when the engine oil is replaced.

Additives are available from a professional workshop along with information on how to use them. Kia recommends to visit an authorized Kia dealer/service partner.

## Operation in foreign countries

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

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

## Vehicle handling instructions

As with other vehicles of this type, failure to operate this vehicle correctly may result in loss of control, an accident or vehicle rollover.

Specific design characteristics (higher ground clearance, track, etc.) give this vehicle a higher center of gravity than other types of vehicles. In other words they are not designed for cornering at the same speeds as conventional 2-wheel drive vehicles.

Avoid sharp turns or abrupt maneuvers. Again, failure to operate this vehicle correctly may result in loss of control, an accident or vehicle rollover.

**Be sure to read the "Reducing the risk of a rollover" on page 6-108.**

## Vehicle modifications

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

### \* NOTICE

Damage or performance problems resulting from any modification may not be covered under warranty.

### ▲ CAUTION

If you use unauthorized electronic devices, it may cause the vehicle to operate abnormally, wire damage, battery discharge and fire. For your safety, do not use unauthorized electronic devices.

## Vehicle break-in process

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

- Do not race the engine.
- While driving, keep your engine speed (rpm, or revolutions per minute) within 3,000 rpm.
- 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.
- Don't tow a trailer during the first 2,000 km (1,200 miles) of operation.
- Fuel economy and engine performance may vary depending on vehicle break-in process and be stabilized after 6,000 km (4,000 miles). New engines may consume more oil during the vehicle break-in period.

## HEV/PHEV powertrain

By following a few simple precautions for the first 6,000 km (4,000 miles) you may increase the performance economy and life of your vehicle.

- Do not race the engine.
- Avoid hard stops, except in emergencies, to allow the brakes to seat properly.

## Risk of burns when parking or stopping vehicle

### **WARNING**

- Do not park or stop the vehicle near flammable items such as leaves, paper, oil, and tire. Such items placed near the exhaust system can become a fire hazard.
  - When an engine idles at a high speed with the rear side of the vehicle touching the wall, heat of the exhaust gas can cause discoloration or fire. Keep enough space between the rear part of the vehicle and the wall.
  - Be sure not to touch the exhaust/catalytic systems while engine is running or right after the engine is turned off. There is a risk of burns since the systems are extremely hot.
-

# Your vehicle at a glance

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# Your vehicle at a glance

## Exterior overview

Front view



ODEPPH012001L

\* The actual features in your vehicle may not necessarily be available due to the selected options or regions.

- |                                  |                  |
|----------------------------------|------------------|
| 1. Hood                          | 5-23             |
| 2. Head lamp                     | 5-51, 8-57, 8-59 |
| 3. Wheel and tire                | 8-34, 9-5        |
| 4. Outside rear view mirror      | 5-32             |
| 5. Front windshield wiper blades | 5-56, 8-29       |
| 6. Windows                       | 5-19             |
| 7. Front ultrasonic sensors      | 6-95             |
| 8. Front radar                   | 6-31, 6-67       |
| 9. Front view camera             | 6-31             |
| 10. Charging door                | 1-4              |

## 11.Day time running lamp/Position lamp

8-57

Rear view



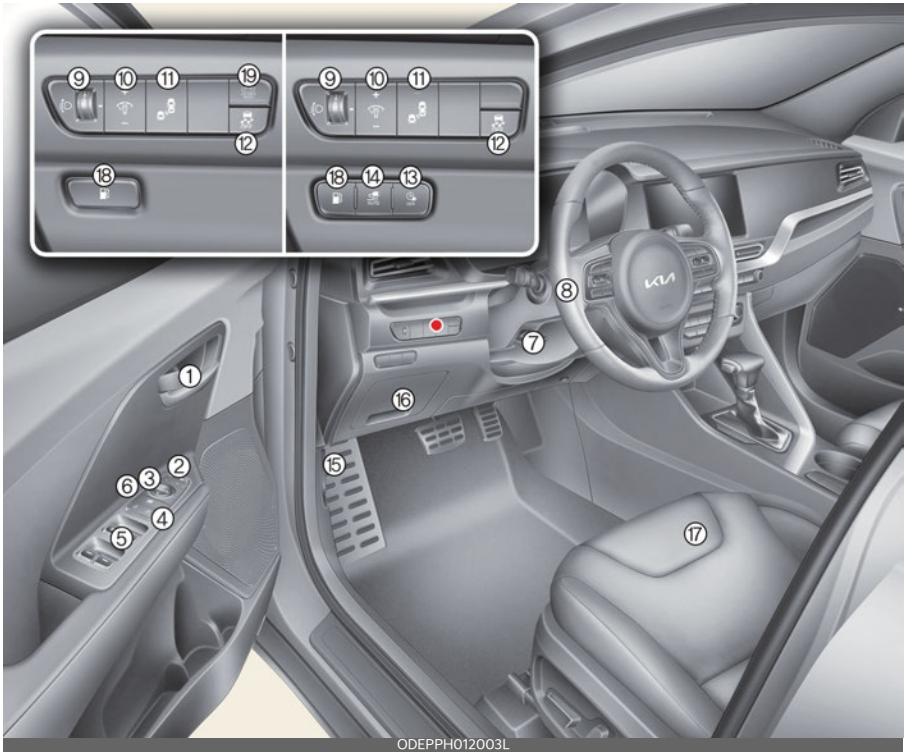
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\* The actual features in your vehicle may not necessarily be available due to the selected options or regions.

1. Doors	5-12
2. Rear combination lamp	8-57
3. High mounted stop lamp	8-57
4. Tailgate	5-17
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7. Rear ultrasonic sensors	6-92
8. Rear wiper	5-56, 8-29
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10.Backup lamp/Rear fog lamp	8-57, 8-61
11.Backup lamp/Rear fog lamp	8-57, 8-61
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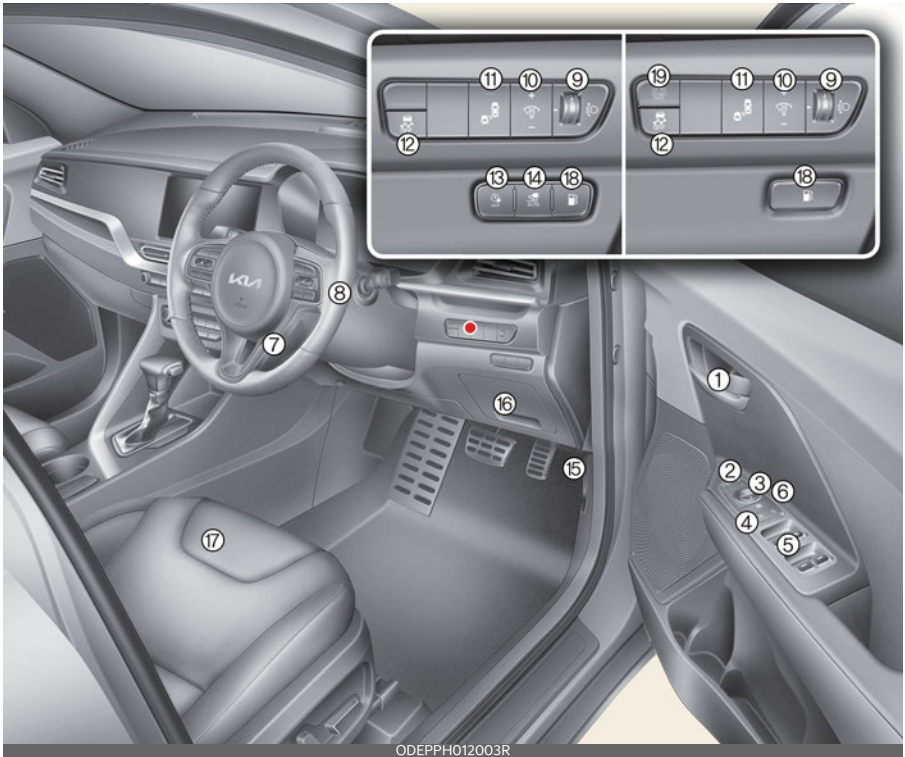
# Interior overview

Left-hand drive





Right-hand drive



ODEPPH012003R

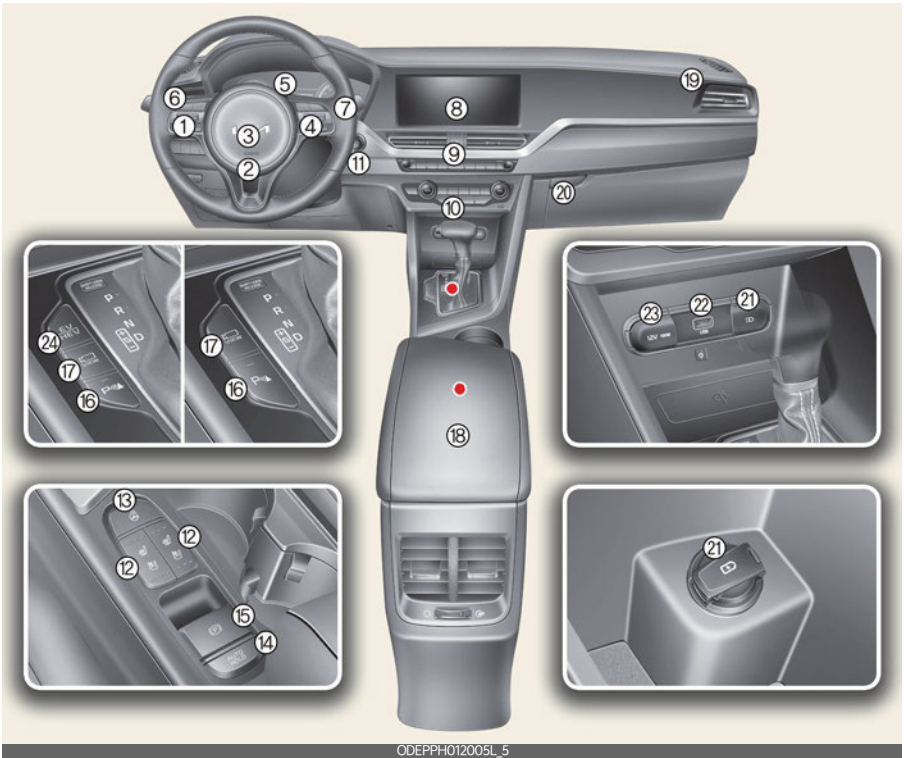
\* The actual features in your vehicle may not necessarily be available due to the selected options or regions.

- |  |      |
|--|------|
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| 4. Central door lock/unlock switch                 | 5-14 |
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| 7. Steering wheel tilt/telescopic lever            | 5-29 |
| 8. Steering wheel                                  | 5-29 |
| 9. Headlight leveling adjustment switch            | 5-56 |
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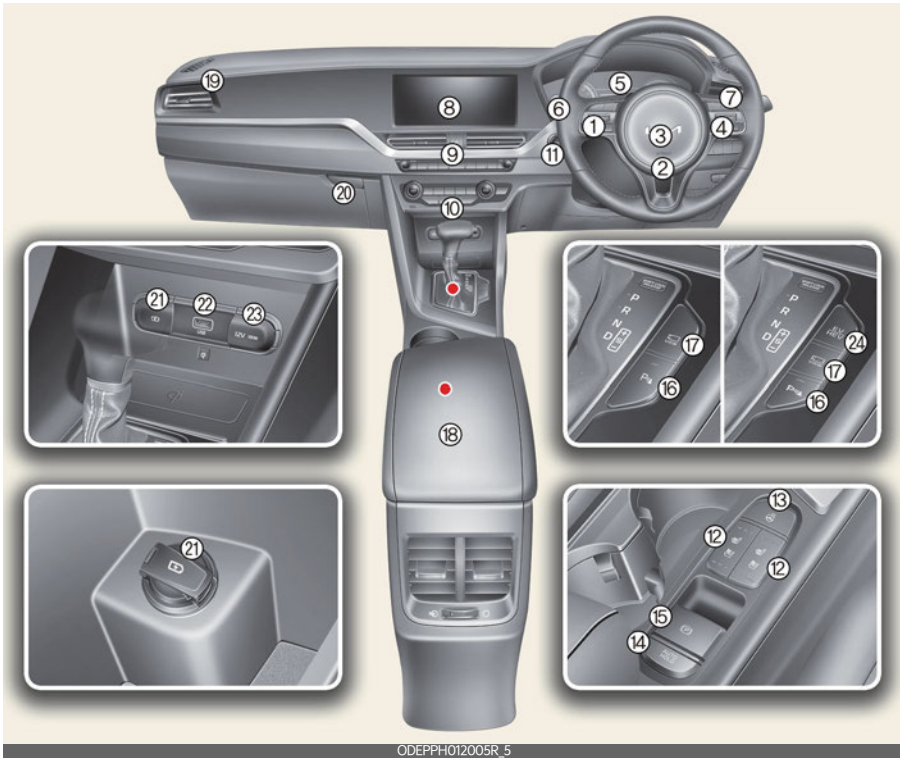
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# Instrument panel overview

Left-hand drive



Right-hand drive



ODEPPH012005R\_5

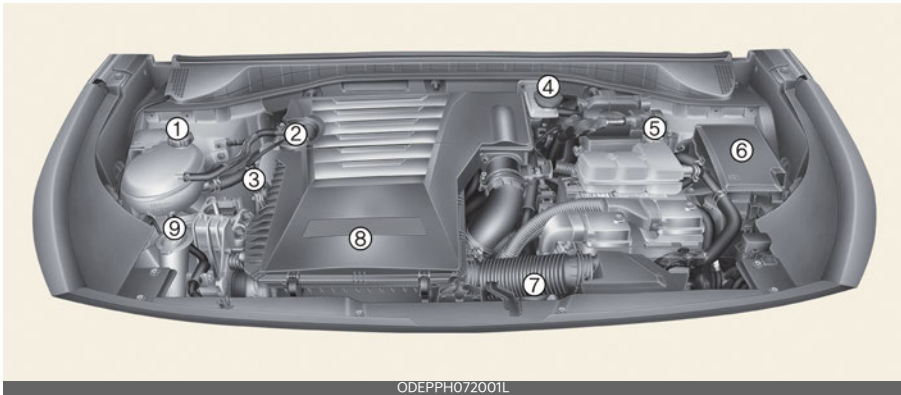
\* The actual features in your vehicle may not necessarily be available due to the selected options or regions.

- 1. Driving Assist button 6-67
- 2. Driver's front air bag 4-36
- 3. Horn 5-31
- 4. Audio remote control button 5-80
- 5. Instrument cluster 5-34
- 6. Light control/turn signals lever 5-52  
Wiper and washer control lever 5-56
- 7. Light control/turn signals lever 5-52  
Wiper and washer control lever 5-56
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## Engine compartment

(Gasoline) 1.6 GDi



ODEPPH072001L

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

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# 4 Safety features of your vehicle

- Suitability of each seating position for belted & ISOFIX Child Restraint Systems (CRS) according to UN regulations (Information for use by vehicle users and CRS manufacturers) (if equipped with 2-point system) .....4-27

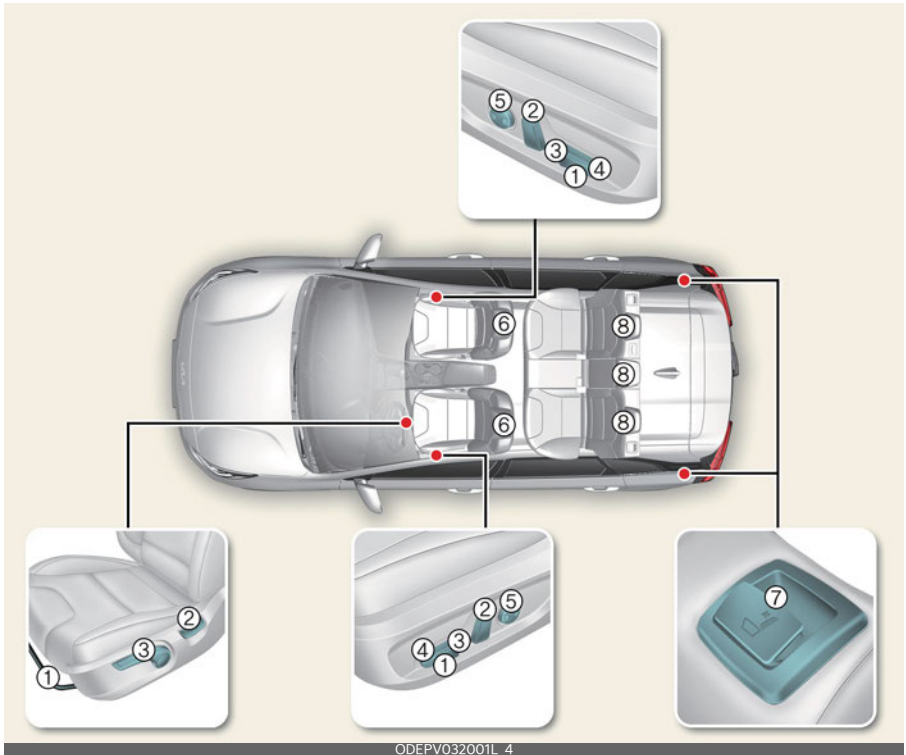
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## Safety features of your vehicle

### Seat



ODEPV032001L\_4

\* The actual features in your vehicle may not necessarily be available due to the selected options or regions.

\* The picture above is based on LHD vehicle. For RHD vehicle, the operation of front seat are located on the opposite side.

#### Front seat

- 1 Forward and backward
- 2 Seatback angle
- 3 Seat height
- 4 Cushion tilt
- 5 Lumbar support
- 6 Headrest

#### 2nd-row seat

- 7 Seatback folding
- 8 Headrest

### Feature of seat leather (if equipped)

- Our car seats are upholstered with a combination of artificial and genuine leather. The genuine leather is made from the outer skin of an animal, which goes through a special process to be available for use. Since it is a natural substance, each part differs in thickness or density. Also, wrinkles could appear depending on the temperature and humidity.
- The seat cover is made of stretchable material to improve comfort of passengers.
- The parts contacting the body are curved and the side supporting area is high which provides driving comfort and stability.
- Wrinkles may appear naturally from usage. It is not a fault of the product.

### ⚠ CAUTION

- Wrinkles or abrasions which appear naturally from usage are not covered by warranty.
- Belts with metallic accessories, zippers or keys inside the back pocket may damage the seat fabric.
- Make sure not to wet the seat. It may change the nature of leather.
- Jeans or clothes which could bleach may contaminate the surface of the seat covering fabric.

### Adjusting the front seat

#### Operation

The seat can be adjusted by using the control levers located on the outside of the seat cushion.

#### \* INFORMATION

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

#### Manual seat



- 1 Forward/backward
- 2 Seatback angle
- 3 Seat height

### Power seat (if equipped)



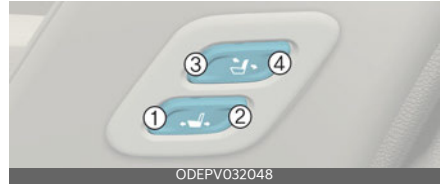
- 1 Forward/backward
- 2 Seatback angle
- 3 Seat height
- 4 Cushion tilt

### Lumbar support (if equipped)



- 1 Increase support
- 2 Decrease support

### Passenger walk-in switch (if equipped)



### Operation

- To move the front passenger seat forward, press the switch (1). To move the front passenger seat rearward, press the switch (2).
- To recline the front passenger seat forward, press the switch (3). To recline the front passenger seat rearward, press the switch (4).

### Seatback pocket



### ⚠ WARNING

- Loose objects in the driver's foot area could interfere with the operation of the foot pedals, possibly causing an accident.
- When you return the seatback to its upright position, hold the seatback and return it slowly and be sure there are no other occupants around the seat. If the seatback is returned without being held and controlled, the back of the seat could spring forward resulting in accidental injury to a person struck by the seatback.

- Riding in a vehicle with the seatback reclined could lead to serious or fatal injury in an accident.  
If a seat is reclined during an accident, the occupant's hips may slide under the lap portion of the seatbelt, applying great force to the unprotected abdomen. Serious or fatal internal injuries could result. The driver must advise the passenger to keep the seatback in an upright position whenever the vehicle is in motion.
- Do not use a sitting cushion that reduces friction between the seat and passenger. The passenger's hips may slide under the lap portion of the seat belt during an accident or a sudden stop. Serious or fatal internal injuries could result because the seat belt can't operate normally.
- Never attempt to adjust any seat while the vehicle is moving. This could result in loss of control, and an accident causing death, serious injury, or property damage.
- 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.
- Always drive and ride with your seatback upright and the lap portion of the seat belt snug and low across the hips. This is 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. We recommend that your chest is at least 250 mm (10 inches) away from the steering wheel.
- The rear seatback must be securely latched. If not, passengers and objects could be thrown forward resulting in serious injury or death in the event of a sudden stop or collision.
- Luggage and other cargo should be laid flat in the cargo area. If objects are large, heavy, or must be piled, they must be secured. Under no circumstances should cargo be piled higher than the seatbacks. Failure to follow these warnings could result in serious injury or death in the event of a sudden stop, collision or rollover.
- No passenger should ride in the cargo area or sit or lie on folded seatbacks while the vehicle is moving. All passengers must be properly seated in seats and restrained properly while riding.
- When resetting the seatback to the upright position, make sure it is securely latched by pushing it forward and backwards.
- To avoid the possibility of burns, do not remove the carpet in the cargo area. Emission control devices beneath this floor generate high temperatures.
- After adjusting the seat, always check that it is securely locked into place by attempting to move the seat forward or backward without using the lock release lever. Sudden or unexpected movement of the driver's seat could cause you to lose control of the vehicle resulting in an accident.
- Do not adjust the seat while wearing seat belts. Moving the seat cushion forward may cause strong pressure on the abdomen.

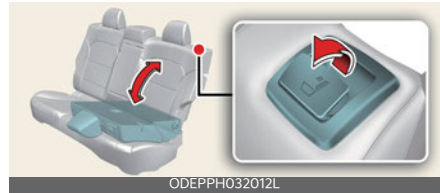
- Use extreme caution so that hands or other objects are not caught in the seat mechanisms while the seat is moving.
- Do not put a cigarette lighter on the floor or seat. When you operate the seat, gas may gush out of the lighter and cause fire.
- If there are occupants in the rear seats, be careful while adjusting the front seat position.
- Use extreme caution when picking small objects trapped under the seats or between the seat and the center console. Your hands might be cut or injured by the sharp edges of the seat mechanism.
- The power seat is operable with the vehicle in OFF position. Therefore, children should never be left unattended in the car.

### **⚠ CAUTION**

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

## Adjusting the rear seat

### Folding rear seatback



### Operation

1. Lower the rear headrests to the lowest position.
2. Pull on the seatback folding lever, then fold the seat toward the front of the vehicle.

### Unfolding rear seatback

1. While pulling on the seatback folding lever, lift and pull the seatback backward. Pull the seatback firmly until it clicks into place.
2. Return the rear seat belt to the proper position.
3. If you want to tilt the rear seatback a bit more, while pulling on the seatback folding lever and push the top of the rear seatback towards the rear.

### **⚠ WARNING**

- Never attempt to adjust while the vehicle is moving or the rear seat is occupied as the seat may suddenly move and cause the passenger on the seat to be injured.
- The purpose of the fold-down rear seatbacks is to allow you to carry longer objects that could not be accommodated in the cargo area. Never allow passengers to sit on top of the folded down seatback while the vehicle is moving. This is not a proper seating position and no seat belts are

available for use. This could result in serious injury or death in case of an accident or sudden stop. Objects carried on the folded down seatback should not extend higher than the top of the front seatbacks. This could allow cargo to slide forward and cause injury or damage during sudden stops.

- Do not fold the rear seats if passengers, pets or luggage are in the rear seats. It may cause injury or damage to passengers, pets or luggage.
  - When you return the seatback to its upright position, hold the seatback and return it slowly. If the seatback is returned without holding it, the back of the seat could spring forward resulting in injury caused by being struck by the seatback.
  - Cargo should always be secured to prevent it from being thrown about the vehicle in a collision and causing injury to the vehicle occupants. Do not place objects in the rear seats, since they cannot be properly secured and may hit the front seat occupants in a collision.
  - Make sure the engine is off, the automatic is in P (Park), and the parking brake is securely applied whenever loading or unloading cargo. Failure to take these steps may allow the vehicle to move if the shift lever or dial is inadvertently moved to another position.
  - Never attempt to adjust while the vehicle is moving or the rear seat is occupied as the seat may suddenly move and cause the passenger on the seat to be injured.
- Do not allow your hands or fingers to get caught in the seat mechanisms while adjusting the seats.
  - When returning the rear seatbacks to the upright position, remember to return the rear shoulder belts to their proper position. Routing the seat belt webbing through the rear seat belt guides will help keep the belts from being trapped behind or under the seats.
  - When you fold the rear seatback, 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.

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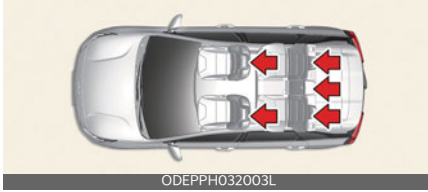
**⚠ CAUTION**

Avoid excessive force when unfolding rear seat back.

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## Headrest

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

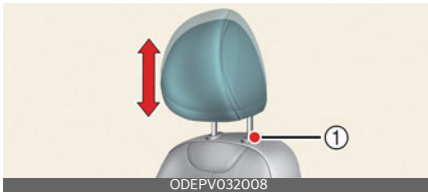


## Adjusting the headrest forward and backward (for front seats) (if equipped)

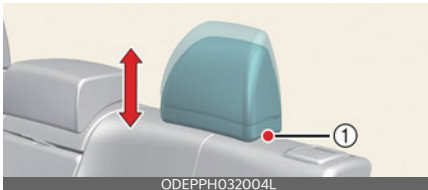


## Adjusting the headrest

Front



Rear

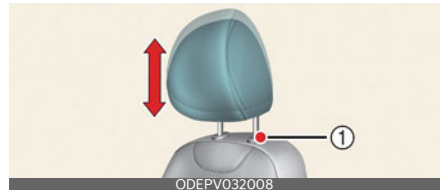


## Operation

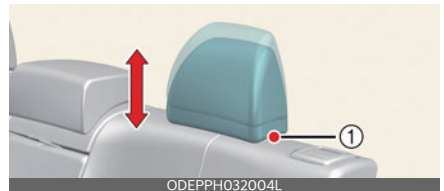
- Pull the headrest fully forward and release it.

## Removing/reinstalling the headrest

Front



Rear



## Operation

- Pull up the headrest to raise.
- Push and hold the release button (1) to lower the headrest.

## Operation

- Push and hold the release button (1) while pulling the headrest up.
- Do it in reverse order to reinstall the headrest.

4

**⚠ WARNING**

- For maximum effectiveness in case of an accident, the headrest should be adjusted so the middle of the headrest is at the same height of the center of gravity of an occupant's head. Generally, the center of gravity of most people's head is similar with the height of the top of their eyes. Also, adjust the headrest as close to your head as possible. For this reason, the use of a cushion that holds the body away from the seatback is not recommended.



**⚠ CAUTION**

- When there is no occupant in the rear seats, adjust the height of the headrest to the lowest position. The rear seat headrest can reduce the visibility of the rear area.
- If you recline the seatback towards the front with the headrest and seat cushion raised, the headrest may come in contact with the sun visor or other parts of the vehicle.



- Do not operate the vehicle with the headrests removed or reversed as severe injury to the occupants may occur in the event of an accident. Headrests may provide protection against neck injuries when properly adjusted.
- Do not adjust the headrest position of the driver's seat while the vehicle is in motion.
- Make sure the headrest locks in position after adjusting it to properly protect the occupants.
- Never allow anyone to ride in a seat with the headrests removed.
- Always make sure the headrest locks into position after reinstalling and adjusting it properly.



## Seat belts

Seat belts are designed to bear upon the bony structure of the body, and should be worn low across the front of the pelvis, chest and shoulders.

### **WARNING**

- For maximum restraint system protection, the seat belts must always be used whenever the car is moving.
- Seat belts are most effective when seatbacks are in the upright position.
- Children age 13 and younger must always be properly restrained in the rear seat. Never allow children to ride in the front passenger seat. If a child over 13 must be seated in the front seat, he/she must be properly belted and the seat should be moved as far back as possible.
- Never wear the shoulder belt under your arm or behind your back. An improperly positioned shoulder belt can cause serious injuries in a crash. The shoulder belt should be positioned midway over your shoulder across your collarbone.
  - Never wear a seat belt over fragile objects. If there is a sudden stop or impact, the seat belt can damage it.
  - Avoid wearing twisted seat belts. A twisted belt can't do its job as well. In a collision, it could even cut into you. Be sure the belt webbing is straight and not twisted.
  - Be careful not to damage the belt webbing or hardware. If the belt webbing or hardware is damaged, replace it.
- Seat belts are designed to bear upon the bony structure of the body, and should be worn low across the front of the pelvis or the pelvis, chest and shoulders, as applicable; wearing the lap section of the belt across the abdominal area must be avoided. Seat belts should be adjusted as firmly as possible, consistent with comfort, to provide the protection for which they have been designed. A slack belt will greatly reduce the protection afforded to the wearer. Care should be taken to avoid contamination of the webbing with polishes, oils and chemicals, and particularly battery acid. Cleaning may safely be carried out using mild soap and water. The belt should be replaced if webbing becomes frayed, contaminated or damaged. It is essential to replace the entire assembly after it has been worn in a severe impact even if damage to the assembly is not obvious. Belts should not be worn with straps twisted. Each belt assembly must only be used by one occupant; it is dangerous to put a belt around a child being carried on the occupant's lap.
- No modifications or additions should be made by the user which will either prevent the seat belt adjusting devices from operating to remove slack, or prevent the seat belt assembly from being adjusted to remove slack.
- When you fasten the seat belt, be careful not to latch the seat belt in buckles of other seat. It's very dangerous and you may not be protected by the seat belt properly.
- Do not unfasten the seat belt and do not fasten and unfasten the seat belt repeatedly while driving. This could result in loss of control, and an accident causing death, serious injury, or property damage.

- When fastening the seat belt, make sure that the seat belt does not pass over objects that are hard or can break easily.
- Make sure there is nothing in the buckle. The seat belt may not be fastened securely.

## Seat belt restraint system

### Seat belt warning light

#### Front seat belt warning light

Driver's seat (Type A)



Driver's seat (Type B)



Passenger's seat



#### Operating condition(s)

- When the vehicle is running
  - The front seat belt warning light will appear for approximately 6 seconds.

- When the front seat belt is unfastened
  - For driver's seat, the front seat belt warning chime will sound for approximately 6 seconds.
  - The front seat belt warning light will stay appeared.
- When the front seat belt is unfastened during driving and the vehicle speed is under approximately 20 km/h (12 mph)
  - The front seat belt warning light will appear.
- When the vehicle speed is over approximately 20 km/h (12 mph)
  - The warning chime will sound for approximately 100 seconds.
  - The front seat belt warning light will blink.

#### Rear passenger's seat belt warning lights (if equipped)



- 1 Driver's side
- 2 Center
- 3 Passenger's side

#### Operating condition(s)

- When the vehicle is running
  - Rear passenger's seat belt warning light will appear for approximately 6 seconds.
- When the seat belt is unfastened during driving and the vehicle speed is under approximately 20 km/h (12 mph)

- Rear passenger's seat belt warning light will appear for approximately 70 seconds.
- When the vehicle speed is over approximately 20 km/h (12 mph)
  - Rear passenger's seat belt warning chime will sound for approximately 35 seconds
  - Rear passenger's seat belt warning light will blink.

**Non-operating condition(s)**

- When the rear door is opened or closed, and the vehicle speed is under 10 km/h (6 mph)
  - Seat belt warning light and the seat belt warning chime will not work even if the vehicle speed is over approximately 20 km/h (12 mph).

**⚠ WARNING**

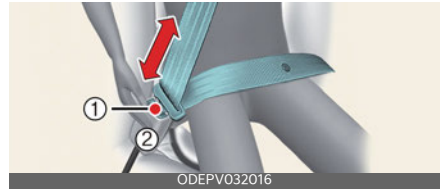
Riding in an improper position adversely affects the front seat belt warning system. It is important for the driver to instruct the passenger to properly be seated as instructed in this manual.

**\* NOTICE**

- Although the front passenger seat is not occupied, the seat belt warning light will blink or appear for 6 seconds.
- The front passenger's seat belt warning may operate when luggage is placed.

**Fastening and releasing the seat belt**

**3-point system with emergency locking retractor**



**Operation**

- To fasten the seat belt, insert the metal tab into the buckle (2).
- To release the seat belt, press the release button (1) in the locking buckle.

**\* INFORMATION**

There will be an audible "click" when the tab locks into the buckle.



- 1 Rear right seat belt fastening buckle
- 2 Rear center seat belt fastening buckle (with the "CENTER" mark)
- 3 Rear left seat belt fastening buckle

**⚠ WARNING**

- You should place the lap belt portion as low as possible and snugly across your hips, not on your waist. If the lap belt is located too high on your waist, it may increase the chance of injury in the event of a collision. Both arms should not be under or over the belt. Rather, one should be over and the other under, as shown in the illustration. Never wear the seat belt under the arm near the door.
- Prior to fastening the rear seat belts, ensure the latch matches the seat belt buckle. Forcefully fastening the left or right seat belt to the center buckle can result in an improper fastening scenario that will not protect you in an accident.

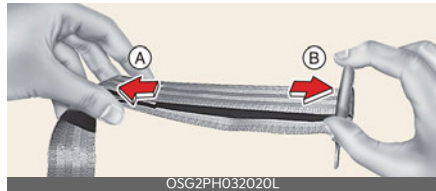
**⚠ CAUTION**

Do NOT fold down the left portion of the rear seatback when the rear center seat belt is buckled. ALWAYS UNBUCKLE the rear center seat belt before folding down the left portion of the rear seatback. If the rear center seat belt is buckled when the left portion of the rear seatback is folded down, distortion and damage to the top portion of the seatback and seat belt garnish may result, causing the seatback to lock into the folded down position.

**2-point system (rear center seat) (if equipped)**

**Operation**

- To fasten the seat belt, manually adjust the belt so it fits snugly around your body. Fasten the belt and pull on the loose end to tighten it.



[A]: Shorten, [B]: Lengthen

- Insert the metal tab (1) into the locking buckle (2).



- To release the seat belt, press the button (1) in the locking buckle.

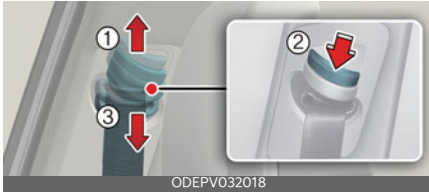


**\* NOTICE**

- The belt should be placed as low as possible on your hips, not on your waist. If the belt is too high, it could increase the possibility of you being injured in an accident.

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

### Adjusting height of the shoulder belt



#### Operation

- Pull the height adjuster up (1).
- Press the height adjuster button (2) and push the height adjuster down (3).

#### **WARNING**

- After a collision, the seat belt system should be inspected to ensure it is operating normally. Replace any belts that are not functioning appropriately.
- Verify the shoulder belt anchor is locked into position at the appropriate height. Never position the shoulder belt across your neck or face.

#### **CAUTION**

- Do not force to lock the left or right seat belt into the center seat belt buckle. Make sure to lock the rear center seat belt into the center seat belt buckle. If not, the improperly fastened seat belt will not be able to provide protection.
- When pulling out to wear the seat belt, the tongue should be slowly pulled out of the seat belt guide so that the

seat belt guide does not come off the trim.

#### **\* NOTICE**

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

### Pre-tensioner seat belt (if equipped)

Your vehicle is equipped with driver's, front passenger's and rear passengers' pre-tensioner seat belts.



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 collisions.

The pre-tensioner seat belts may be activated in crashes where the collision is severe enough.

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

#### **1 Retractor pre-tensioner**

The purpose of the retractor pre-tensioner is to make sure that the shoulder belts fit in tightly against the

occupant's upper body in certain frontal collisions.

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

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



- 1 SRS air bag warning light
- 2 Front retractor pre-tensioner assembly
- 3 SRS control module

### Operating condition(s)

- When the vehicle stops suddenly, or if the occupant tries to lean forward too quickly, the seat belt retractor will lock into position.
- In certain frontal collisions, the pre-tensioner will activate and pull the seat belt into tighter contact against the occupant's body.
- When the system senses excessive tension on the driver or passenger's seat belt when the pre-tensioner system activates, the load limiter inside the retractor pre-tensioner will release some of the pressure on the affected seat belt.

### **⚠ WARNING**

- For your safety, be sure that the belt webbing is not loose or twisted and always sit properly on your seat.
- To obtain maximum benefit from a pre-tensioner seat belt:
  1. The seatbelt must be working correctly and adjusted to the proper position. Please read and follow all of the important information and precautions about your vehicle's occupant safety features - including seat belts and air bags that are provided in this manual.
  2. Be sure you and your passengers always wear their seat belts, and wear them properly.
- Pre-tensioner seat belts systems are designed to operate only one time. 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.
- The pre-tensioner seat belt assembly mechanisms become hot during activation. Do not touch the pre-tensioner seat belt assemblies for several minutes after they have been activated.
- Do not attempt to inspect or replace the pre-tensioner seat belts yourself. Have the system inspected by a professional workshop. Kia recommends to visit an authorized Kia dealer/service partner.
- 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, replace, service or

repair the pre-tensioner seat belt assemblies may lead to improper operation or inadvertent activation and serious injury.

- Always wear the seat belts when driving or riding in a motor vehicle.
- If the vehicle or pre-tensioner seat belt must be discarded, contact a professional workshop. Kia recommends to visit an authorized Kia dealer/service partner.
- Body work on the front area of the vehicle may damage the pre-tensioner seat belt system. Therefore, have the system serviced by a professional workshop. Kia recommends to visit an authorized Kia dealer/ service partner.
- **Skin Irritation**

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

### **⚠ CAUTION**

If the pre-tensioner seat belt is not working properly, the SRS air bag warning light will appear even if there is no malfunction of the SRS air bag. If the SRS air bag warning light does not appear when the vehicle is in ON position, or if it remains appeared after appearing for approximately 3~6 seconds, or if it appears while the vehicle is being driven, have the system inspected by a professional workshop. Kia recommends to visit an authorized Kia dealer/service partner.

### **\* NOTICE**

- The pre-tensioner will activate not only in a frontal collision but also in a side collision, if the vehicle is equipped with a side or curtain air bag.
- When the pre-tensioner seat belts are activated, a loud noise may be heard and fine dust, which may appear to be smoke, may be visible in the passenger compartment. These are normal operating conditions and are not hazardous.
- Although it is harmless, the fine dust may cause skin irritation and should not be breathed for prolonged periods. Wash all exposed skin areas thoroughly after an accident in which the pre-tensioner seat belts were activated.
- Because the sensor that activates the SRS air bag is connected with the pre-tensioner seat belt, the SRS air bag warning light on the instrument panel will appear for approximately 3~6 seconds after the vehicle is in ON position, and then it should turn off.

### **Seat belt precautions**

#### **⚠ WARNING**

All occupants of the vehicle must wear their seat belts at all times. Seat belts and child restraints reduce the risk of serious or fatal injuries for all occupants in the event of a collision or sudden stop. Without a seat belt, occupants could be shifted too close to a deploying air bag, strike the interior structure or be thrown from the vehicle. Properly worn seat belts greatly reduce these hazards. Always follow the precautions about

seat belts, air bags and occupant seat contained in this manual.

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### Infant or small child

You should be aware of the specific requirements in your country. Child and/or infant seats must be properly placed and installed in the rear seat.

#### \* INFORMATION

Refer to "Child restraint system (CRS)" on page 4-20.

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#### ⚠ WARNING

Every person in your vehicle needs to be properly restrained at all times, including infants and children. Never hold a child in your arms or lap when riding in a vehicle. The violent forces created during a crash will tear the child from your arms and throw the child against the interior. Always use a child restraint appropriate for your child's height and weight.

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#### \* NOTICE

Small children are best protected from injury in an accident when properly restrained in the rear seat by a child restraint system that meets the requirements of the Safety Standards of your country. Before buying any child restraint system, make sure that it has label certifying that it meets Safety Standards of your country. The restraint must be appropriate for your child's height and weight. Check the label on the child restraint for this information. Refer to "Child restraint system (CRS)" on page 4-20.

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### Larger children

Children who are too large for child restraint systems should always occupy the rear seat and use the available lap/shoulder belts. The lap portion should be fastened and snugged on the hips and as low as possible. Check if the belt fits periodically. A child's squirming could put the belt out of position. Children are afforded the most safety in the event of an accident when they are restrained by a proper restraint system in the rear seat. If a larger child (over age 13) must be seated in the front seat, the child should be securely restrained by the available lap/shoulder belt and the seat should be placed in the rearmost position. Children age 13 and under should be restrained securely in the rear seat. Never place a child age 13 and under in the front seat. Never place a rear facing child seat in the front seat of a vehicle. If the shoulder belt portion slightly touches the child's neck or face, try placing the child closer to the center of the vehicle. If the shoulder belt still touches their face or neck they need to be returned to a child restraint system.

#### ⚠ WARNING

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



## Pregnant women

The use of a seat belt is recommended for pregnant women to lessen the chance of injury in an accident. When a seat belt is used, the lap belt portion should be placed as low and snugly as possible on the hips, not across the abdomen. For specific recommendations, consult a physician.

### WARNING

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 crush the fetus during an impact.

## Injured person

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

## One person per belt

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

## Do not lie down

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

### WARNING

Riding with a reclined seatback increases your chance of serious or fatal injuries in the event of a collision or sudden stop. The protection of your restraint system (seat belts and air bags) is greatly reduced by reclining your seat. Seat belts must be snug against your hips and chest to work properly. The more the seatback is reclined, the greater the chance that an occupant's hips will slide under the lap belt causing serious internal injuries or the occupant's neck could strike the shoulder belt. Drivers and passengers should always sit well back in their seats, properly belted, and with the seatbacks upright.

## Care of seat belts

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

### WARNING

- When you return the rear seatback to its upright position after the rear seatback was folded down, be careful not to damage the seat belt webbing or buckle. Be sure that the webbing or buckle does not get caught or pinched in the rear seat. A seat belt with damaged webbing or buckle will not be as strong and could possibly fail during a collision or sudden stop, resulting in serious injury. If the webbing or buckles are damaged, get them replaced immediately.
- Seat belts can become hot in a vehicle that has been closed up in sunny

weather. They could burn infants and children.

### Periodic inspection

It is recommended that all seat belts be inspected periodically for wear or damage of any kind. Any damaged parts should be replaced as soon as possible.

### Keep belts clean and dry

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

### When to replace seat belts

Entire in-use seat belt assembly or assemblies should be replaced if the vehicle has been involved in an accident. This should be done even if no damage is visible. In this case, have the system replaced by a professional workshop. Kia recommends to consult an authorized Kia dealer/service partner.

## Child restraint system (CRS)

### Our recommendation: Children always in the rear

Infants and younger children must be restrained in an appropriate rearward-facing or forward-facing CRS that has first been properly secured to the seat of the vehicle. Read and comply with the instructions for installation and use provided by the manufacturer of the Child Restraint System.

Children under age 13 should always ride in the rear seats 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. Children too large for a Child Restraint System must use the seat belts provided.

Most countries have regulations which require children to travel in approved Child Restraint Systems.

The laws governing the age or height/weight restrictions at which seat belts can be used instead of Child Restraint System differs among countries, so you should be aware of the specific requirements in your country, and where you are traveling.

Child Restraint Systems must be properly installed in the vehicle seat. Always use a commercially available Child Restraint System that meets the requirements of your country.

#### WARNING

- Always properly restrain children in the vehicle. Children of all ages are safer when riding in the rear seats. Never place a rearward-facing Child Restraint System on the front passen-

ger seat, unless the air bag is deactivated.

- Always follow the Child Restraint System manufacturer's instructions for installation and use.
- Always properly restrain your child in the Child Restraint System.
- Do not use an infant carrier or a child safety seat that "hooks" over a seat-back, it may not provide adequate protection in an accident.
- After an accident, have the system checked by a professional workshop. Kia recommends to visit an authorized Kia dealer/service partner.

## Selecting a Child Restraint System (CRS)

### Operation

1. Select a Child Restraint System based on your child's height and weight. The required label or the instructions for used typically provide this information.
2. Select a Child Restraint System that fits the vehicle seating position where it will be used.

### \* INFORMATION

- Make sure the Child Restraint System has a label certifying that it meets the applicable Safety Standards of your country.

A Child Restraint System may only be installed if it was approved in accordance with the requirements of ECE-R44 or ECE-R129 or relevant regulation.

- Select a Child Restraint System based on your child's height and weight. The

required label or the instructions for use typically provide this information.

- Select a Child Restraint System that fits the vehicle seating position where it will be used.

For the suitability of Child Restraint Systems on the vehicle's seating positions, please refer to "Suitability of each seating position for belted & ISO-FIX Child Restraint Systems (CRS) according to UN regulations (Information for use by vehicle users and CRS manufacturers) (if equipped with 3-point system)" on page 4-26.

- Read and comply with the warnings and instructions for installation and use provided with the Child Restraint System.

## Child restraint system types

### Forward/rearward-facing Child Restraint System



A rearward-facing Child Restraint System provides restraint with the seating surface against the back of the child. The harness system holds the child in place, and in an accident, acts to keep the child positioned in the Child Restraint Systems and reduce the stress to the fragile neck and spinal cord.

All children under the age of one year must always ride in a rearward-facing Child Restraint System. There are different types of rearward-facing Child Restraint Systems: infant-only Child

Restraint Systems can only be used rearward-facing. Convertible and 3-in-1 Child Restraint Systems typically have higher height and weight limits for the rearward-facing position, allowing you to keep your child rearward-facing for a longer period of time.

Keep using Child Restraint Systems in the rearward-facing position as long as children fit within the height and weight limits allowed by the Child Restraint System's manufacturer.

A forward-facing Child Restraint System provides restraint for the child's body with a harness. Keep children in a forward-facing Child Restraint System with a harness until they reach the top height or weight limit allowed by your Child Restraint System's manufacturer.

Once your child outgrows the forward-facing Child Restraint System, your child is ready for a booster seat.

### Booster seats

A booster seat is a Child Restraint System designed to improve the fit of the vehicle's seat belt system. A booster seat positions the seat belt so that it fits properly over the stronger parts of your child's body. Keep your children in booster seats until they are big enough to fit in a seat belt properly.

For a seat belt to fit properly, the lap belt must lie comfortable across the upper thighs, not the stomach. The shoulder belt should lie comfortable across the shoulder and chest and not across the neck or face. Children under age 13 must always be properly restrained to minimize the risk of injury in an accident, sudden stop or sudden maneuver.

## Installing a Child Restraint System (CRS)

### Operation

1. Properly secure the Child Restraint System to the vehicle.
2. Make sure the Child Restraint System is firmly secured.
3. Secure the child in the Child Restraint System.

### WARNING

- Before installing your Child Restraint System always: Read and follow the instructions provided by the manufacturer of the Child Restraint System. Failure to follow all warnings and instructions could increase the risk of the serious injury or death if an accident occurs.
- If the vehicle's headrest prevents proper installation of a Child Restraint System, the headrest of the respective seating position shall be readjusted or entirely removed.

### CAUTION

A Child Restraint System in a closed vehicle can become very hot. To prevent burns, check the seating surface and buckles before placing your child in the Child Restraint System.

## ISOFIX anchorage and top-tether anchorage (ISOFIX anchorage system) for children

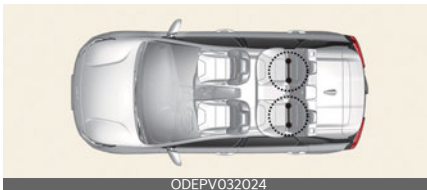
ISOFIX anchorages are metal bars built into the vehicle. There are two lower anchors for each ISOFIX seating position that will accommodate a Child Restraint System with lower attachments.



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- 1 ISOFIX anchor position indicator
- 2 ISOFIX anchor

ISOFIX anchorages have been provided in the left and right outboard rear seating positions.



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### **⚠ WARNING**

Do not attempt to install a Child Restraint System using ISOFIX anchorages in the rear center seating position. There are no ISOFIX anchorages provided for this seat. Using the outboard seat anchorages, for the CRS installation

on the rear center seating position, can damage the anchorages.

## Securing a Child Restraint System with the "ISOFIX Anchorage System" ISOFIX anchorage system

When not using the ISOFIX system, all Child Restraint Systems must be secured to a rear seat with the lap part of a lap/shoulder belt.

### Operation

1. Move the seat belt buckle away from the ISOFIX anchorages.
2. Move any other objects away from the anchorages.
3. Place the Child Restraint System on the vehicle seat, then attach the seat to the ISOFIX anchorages according to the instructions provided by the Child Restraint System manufacturer.
4. Follow the instructions of the Child Restraint System's manufacturer for proper installation and connection of the ISOFIX attachments on the Child Restraint System to the ISOFIX anchorages.

### **⚠ WARNING**

Take the following precautions when using the ISOFIX system:

- Read and follow all installation instructions provided with your Child Restraint System.
- To prevent the child from reaching and taking hold of unretracted seat belts, buckle all unused rear seat belts and retract the seat belt webbing behind the child. Children can be strangled if a shoulder belt becomes wrapped around their neck and the seat belt tightens.

## Safety features of your vehicle

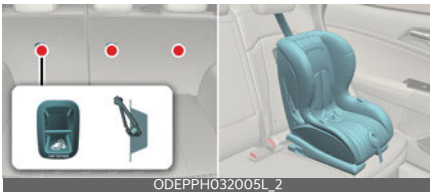
- Never attach more than one Child Restraint System to a single anchorage. This could cause the anchor or attachment to come loose or break.
- Always have the ISOFIX (i- Size) system inspected by your dealer after an accident. An accident can damage the ISOFIX system and may not properly secure the Child Restraint System.

## Securing a Child Restraint System seat with "Top-tether Anchorage" system

Type A



Type B



## Operation

1. Route the Child Restraint System seat strap over the seatback.
2. Connect the top-tether to the top-tether anchorage,
3. Tighten the top-tether according to the instructions of your Child Restraint System's manufacturer.

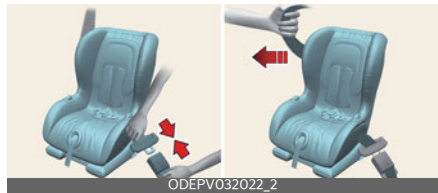
## ISOFIX anchorage and top-tether anchorage (ISOFIX anchorage system) for children

### **⚠ WARNING**

Take the following precautions when installing the top-tether:

- Read and follow all installation instructions provided with your Child Restraint System.
- Never attach more than one Child Restraint System to a single ISOFIX top-tether anchorage. This could cause the anchorage or attachment to come loose or break.
- Do not attach the top-tether to anything other than the correct top-tether anchorage. It may not work properly if attached to something else.
- 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.

## Securing a Child Restraint System with a lap/shoulder belt



## Operation

1. Place the Child Restraint System on a rear seat and route the lap/shoulder belt around or through the Child Restraint System.
2. Fasten the lap/shoulder belt latch into the buckle.

3. 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.
4. Push and pull on the Child Restraint System to confirm that the seat belt is holding it firmly in place.
5. If your Child Restraint System manufacturer recommends the use of a top-tether with the lap/shoulder belt, see Securing a Child Restraint System seat with "Top-tether Anchorage" system section in this chapter.
6. To remove the Child Restraint System, press the release button on the buckle and then pull the lap/shoulder belt out of the Child Restraint System and allow the seatbelt to retract fully.

### Suitability of each seating position for belted & ISOFIX Child Restraint Systems (CRS) according to UN regulations (Information for use by vehicle users and CRS manufacturers) (if equipped with 3-point system)


- Yes: Suitable for fitment of the designated category of CRS
- No: Not suitable for fitment of the designated category of CRS
- "-": Not applicable
- The table is based on LHD vehicle. Except for the front passenger seat, the table is valid for RHD vehicle. For RHD vehicle front passenger seat, please use information for the seating position number 3.
- All type vehicle is allowed.

F: Forward facing

R: Rearward facing

CRS categories		Seating positions (Rear center 3-point belt type)					
		1	2	3	4	5	6
Universal belted CRS	All mass groups	-	-	Yes <sup>†1</sup> (F, R)	Yes (F, R)	Yes (F, R)	Yes (F, R)
i-size CRS	ISOFIX CRF: F2, F2X, R1, R2	-	-	No	Yes (F, R)	No	Yes (F, R)
Carry-cot (ISOFIX lateral facing CRS)	ISOFIX CRF: L1, L2	-	-	No	No	No	No
ISOFIX infant* CRS (*: ISOFIX baby CRS)	ISOFIX CRF: R1	-	-	No	Yes (R)	No	Yes (R)
ISOFIX toddler CRS - small	ISOFIX CRF: F2, F2X, R2, R2X	-	-	No	Yes (F, R)	No	Yes (F, R)
ISOFIX toddler CRS - large* (*: not booster seats)	ISOFIX CRF: F3, R3	-	-	No	Yes (F, R)	No	Yes (F, R)
Booster Seat - reduced width	ISO CRF: B2	-	-	No	Yes	No	Yes
Booster Seat - full width	ISO CRF: B3	-	-	No	Yes	No	Yes

\* 1. For fitment of universal belted Child Restraint Systems on the seat number 3, Seat back angle should be at its fully forward position.

Seat Number	Position in the vehicle	Seating positions
1	Front left	
2	Front center	
3	Front right	
4	2nd row left	
5	2nd row center	
6	2nd row right	

\* Never place a rearward facing Child Restraint System on the front passenger seat, unless the air bag is deactivated.

\* For semi-universal or vehicle specific CRS (ISOFIX or belted CRS), please see the vehicle list provided in the manual of CRS.



### Suitability of each seating position for belted & ISOFIX Child Restraint Systems (CRS) according to UN regulations (Information for use by vehicle users and CRS manufacturers) (if equipped with 2-point system)


- Yes: Suitable for fitment of the designated category of CRS
- No: Not suitable for fitment of the designated category of CRS
- "-": Not applicable
- The table is based on LHD vehicle. Except for the front passenger seat, the table is valid for RHD vehicle. For RHD vehicle front passenger seat, please use information for the seating position number 3.
- Only HEV type vehicle is allowed.

**F:** Forward facing

**R:** Rearward facing

CRS categories		Seating positions (Rear center 2-point belt type)					
		1	2	3	4	5	6
Universal belted CRS	All mass groups	-	-	Yes <sup>*1</sup> (F, R)	Yes (F, R)	Yes (F)	Yes (F, R)
i-size CRS	ISOFIX CRF: F2, F2X, R1, R2	-	-	No	Yes (F, R)	No	Yes (F, R)
Carry-cot (ISOFIX lateral facing CRS)	ISOFIX CRF: L1, L2	-	-	No	No	No	No
ISOFIX infant* CRS (*: ISOFIX baby CRS)	ISOFIX CRF: R1	-	-	No	Yes (R)	No	Yes (R)
ISOFIX toddler CRS - small	ISOFIX CRF: F2, F2X, R2, R2X	-	-	No	Yes (F, R)	No	Yes (F, R)
ISOFIX toddler CRS - large* (*: not booster seats)	ISOFIX CRF: F3, R3	-	-	No	Yes (F, R)	No	Yes (F, R)
Booster Seat - reduced width	ISO CRF: B2	-	-	No	Yes	No	Yes
Booster Seat - full width	ISO CRF: B3	-	-	No	Yes	No	Yes

\* 1. For fitment of universal belted Child Restraint Systems on the seat number 3, Seat back angle should be at its fully forward position.

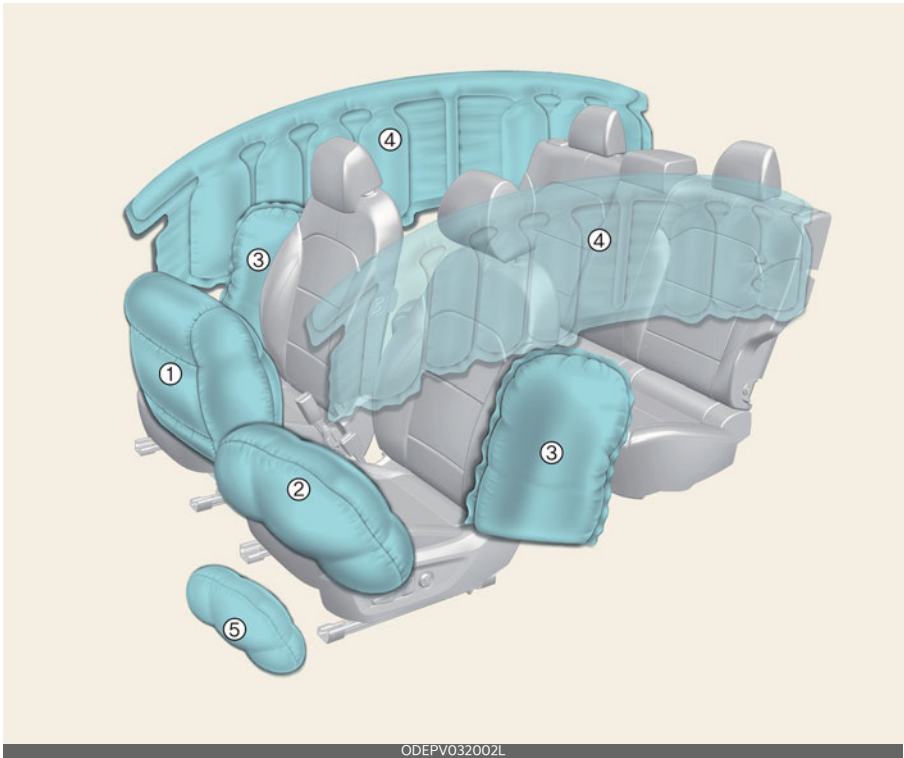
Seat Number	Position in the vehicle	Seating positions
1	Front left	
2	Front center	
3	Front right	
4	2nd row left	
5	2nd row center	
6	2nd row right	

\* Never place a rearward facing Child Restraint System on the front passenger seat, unless the air bag is deactivated.

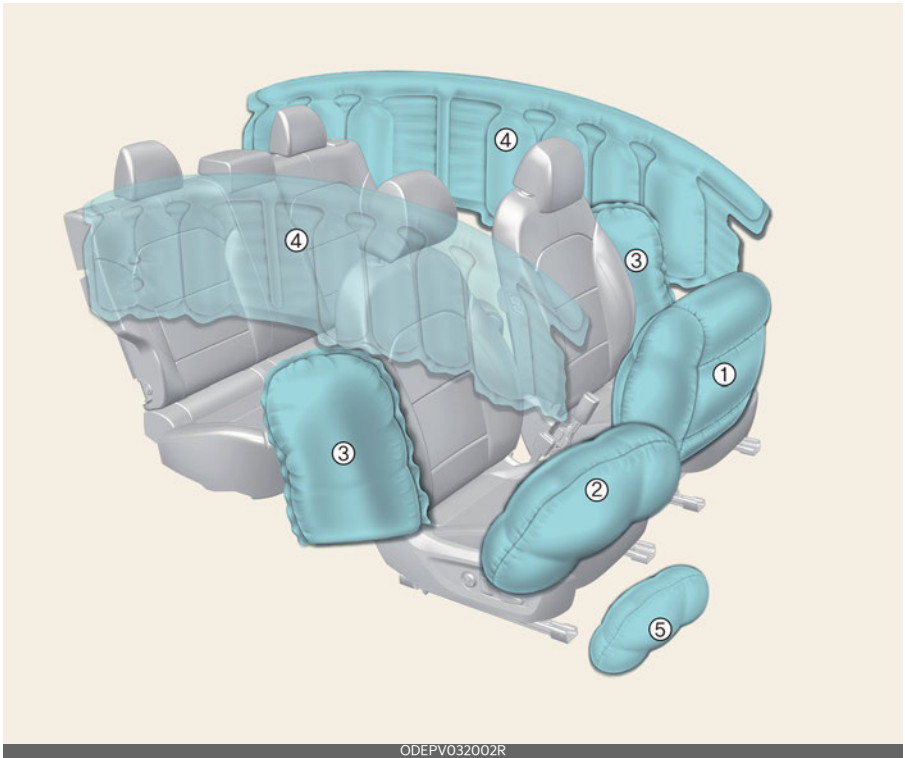
\* For semi-universal or vehicle specific CRS (ISOFIX or belted CRS), please see the vehicle list provided in the manual of CRS.

## Air bag - supplemental restraint system

Left-hand drive



Right-hand drive



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\* The actual features in your vehicle may not necessarily be available due to the selected options or regions.

- 1 Passenger's front air bag
- 2 Driver's front air bag
- 3 Side air bag\*
- 4 Curtain air bag\*
- 5 Driver's knee air bag\*

\* : if equipped

## How does the air bag system operate?

- Air bags are activated (able to inflate if necessary) only when the vehicle is in the ON position and it can be activated within about 3 minutes after the vehicle is in OFF position.
- 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 based upon the severity of a collision and its direction. These two factors determine whether the sensors produce an electronic deployment/ inflation signal.
- Air bags will inflate based upon the severity of a collision and its direction, etc. Air bags will not inflate in every crash or collision situation.
- The front air bags will completely inflate and deflate in an instant. It is virtually impossible for you to see the air bags inflate during an accident. It is much more likely that you will simply see the deflated air bags hanging out of their storage compartments after the collision.
- In order to help provide protection in a severe collision, the air bags must inflate rapidly. The speed of air bag inflation is a consequence of extremely short time in which a collision occurs and the need to get the air bag between the occupant and the vehicle structures before the occupant impacts those structures. This speed of inflation reduces the risk of serious or life-threatening injuries in a

severe collision and is thus a necessary part of air bag design.

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

### **WARNING**

- 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 in most rollover situations.
- SRS and pre-tensioners contain explosive chemicals. If scraping a vehicle without removing SRS and pre-tensioners from a vehicle, it may cause fire. Before scraping a vehicle, contact a professional workshop. Kia recommends to visit an authorized Kia dealer/service partner.
- Keep the SRS parts and wirings away from water or any liquid. If the SRS components are inoperative due to exposure to water or liquids, it may cause fire or severe injury.
- 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. 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 a collision, passengers may be injured

by the air bag expansion force if they are not in a proper position.

- Air bag inflation may cause injuries including facial or bodily abrasions, injuries from broken glasses or burns.

### \* NOTICE

#### If equipped with rollover sensor

Also, the air bags inflate instantly in the event of a rollover (if equipped with a side air bag or curtain air bag) in order to help protect the occupants from serious physical injury.

### 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 with both the seat belt and the air bag, as well as from breathing the smoke and powder.

**Open your doors and/or windows as soon as possible after 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.). If this is the case, wash and rinse with cold water immediately and consult the doctor if the symptom persists.

### ⚠ WARNING

- When the air bags deploy, the air bag related parts in the 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.
- Do not install or place any accessories near air bag deployment areas, such as the instrument panel, windows, pillars, and roof rails.

### Air bag warning and indicator light

#### Air bag warning light

#### Operating condition(s)

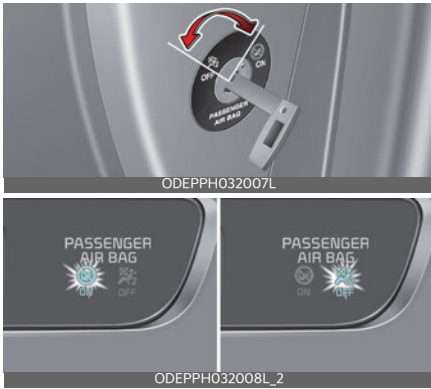
- When the engine is running, the warning light should appear for approximately 3~6 seconds, and go off.

#### Malfunction

- The light does not turn on briefly when the engine is running.
- The light stays on after appearing for approximately 3~6 seconds.
- The light comes on while the vehicle is in motion.
- The light blinks when the engine is running.

### Passenger's front air bag ON/OFF switch (if equipped)

The passenger's front air bag can be deactivated by the passenger's front air bag ON/OFF switch if a child restraint is installed on the front passenger's seat or if the front passenger's seat is unoccupied by a person.



### Operation

- Insert the mechanical key into the passenger's front air bag ON/OFF switch.
- Turn the key to activate/deactivate passenger's front air bag.
  - When the child restraint is installed on the front passenger's seat.
  - When the seat is unoccupied.

### \* INFORMATION

To ensure the safety of your child, the passenger's front air bag must be deactivated when it should be necessary to install a rearward facing child seat on the front passenger seat in exceptional circumstances.

### Front passenger air bag ON/OFF indicator



### Operating condition(s)

- After the vehicle is running
  - The front passenger air bag ON/OFF indicator appears for approximately 4 seconds.
- When the passenger's front air bag ON/OFF switch is set to the ON/OFF position
  - The front passenger air bag ON/OFF indicator appears.

### Non-operating condition(s)

- When the vehicle is running within approximately 3 minutes after the vehicle is turned off
  - The front air bag ON/OFF indicator will not appear.

### ⚠ WARNING

- The front air bag ON/OFF switch could turn by using a similar small rigid device. Always check the status of the front air bag ON/OFF switch and Front passenger air bag ON/OFF indicator.
- The driver is responsible for the proper position of the passenger's front air bag ON/OFF switch.
- Deactivate the passenger's front air bag only when the vehicle is in OFF position, or the malfunction may occur in the SRS Control Module.

And there may be a danger that the driver's and/or front passenger's and/or side and curtain air bag may fail to trigger, or not trigger correctly during a collision.

- Never install a rearward facing child seat on the front passenger's seat unless the passenger's front air bag has been deactivated. The infant or child could be severely injured or killed by an air bag deployment in case of an accident.
- Even though your vehicle is equipped with the passenger's front air bag ON/OFF switch, do not install a child restraint system in the front passenger's seat. A child restraint system must never be placed in the front seat. Children who are too large for child restraint systems should always occupy the rear seat and use the available lap/shoulder belts. In the event of an accident, children are afforded the most safety when they are restrained by a proper restraint system in the rear seat.
- As soon as the child seat is no longer needed on the front passenger's seat, reactivate the front passenger's air bag.
- Never place or insert any object into any small opening near side airbag labels attached to the vehicle seats. When the air bag deploys, the object may affect the deployment and result in unexpected accident or bodily harm.
- No objects (such as crash pad cover, cellular phone holder, cup holder, perfume or stickers) should be placed over or near the air bag modules on the steering wheel, instrument cluster, windshield glass, and the front passenger's panel above the glove box.

Such objects could cause harm if the vehicle is in a crash severe enough to cause the air bags to deploy. Do not place any objects over the air bag or between the air bag and yourself.

### CAUTION

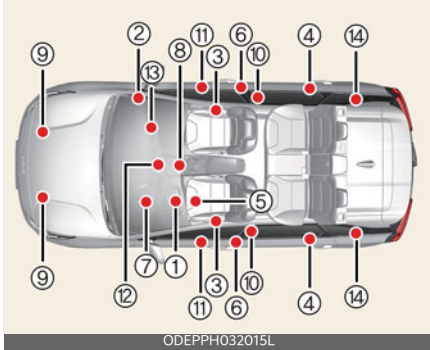
- If the passenger's front air bag ON/OFF switch is not working properly, the air bag warning light on the instrument panel will appear. And, the passenger's front air bag OFF indicator (OFF) will not appear (The passenger's front air bag ON indicator comes on), the SRS Control Module reactivate the passenger's front air bag and the passenger's front air bag will inflate in frontal impact crashes even if the passenger's front air bag ON/OFF switch is set to the OFF position (OFF). In this case, have the system inspected by a professional workshop. Kia recommends visiting an authorized Kia dealer/service partner.
- If the SRS air bag warning light blinks or does not appear when the vehicle is in ON position, or if it appears while the vehicle is being driven, have the system inspected by a professional workshop. Kia recommends visiting an authorized Kia dealer/service partner.

### NOTICE

- When the passenger's front air bag ON/OFF switch is set to the ON position, the passenger's front air bag is activated and child or infant seat should not be installed on the front passenger's seat.
- When the passenger's front air bag ON/OFF switch is set to the OFF position,

tion, the passenger's front air bag is deactivated.

### SRS components and functions



\* The actual features in your vehicle may not necessarily be available due to the selected options or regions.

- 1 Driver's front air bag module
  - 2 Passenger's front air bag module
  - 3 Side air bag modules\*
  - 4 Curtain air bag modules\*
  - 5 Driver's knee air bag\*
  - 6 Retractor pre-tensioner assemblies
  - 7 Air bag warning light
  - 8 SRS control module (SRSCM)/rollover sensor\*
  - 9 Front impact sensors
  - 10 Side impact sensors\*
  - 11 Side pressure sensors\*
  - 12 Passenger's front air bag ON/OFF indicator (front passenger's seat only)\*
  - 13 Passenger's front air bag ON/OFF switch\*
  - 14 Retractor pre-tensioner assemblies\*
- \* : if equipped

### Operation

After the engine is running, the SRS air bag warning light on the instrument panel will appear for approximately 6 seconds.

The SRS air bag warning light on the instrument panel will appear for about 6 seconds after the vehicle is in the ON position, after which the air bag warning light should go out.

### ⚠ WARNING

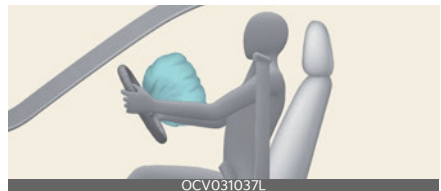
If any of the following conditions occurs, this indicates a malfunction of the SRS. In this case, have the system inspected by a professional workshop. Kia recommends to visit an authorized Kia dealer/service partner.

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

Driver's front air bag (1)



Driver's front air bag (2)





Driver's front air bag (3)



Passenger's front air bag



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

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

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

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

### WARNING

- Do not install or place any accessories (drink holder, CD holder, sticker, etc.) on the front passenger's panel above the glove box in a vehicle with a passenger's air bag. Such objects may become dangerous projectiles and cause injury if the passenger's air bag inflates.
- When installing a container of liquid air freshener inside the vehicle, do not place it near the instrument cluster nor on the instrument panel surface. It may become dangerous projectiles and cause injury if the passenger's air bag inflates.
- If an air bag deploys, there may be a loud noise followed by a fine dust released in the vehicle. These conditions are normal and are not hazardous - the air bags are packed in this fine powder. The dust generated during air bag deployment may cause skin or eye irritation as well as aggravate asthma for some persons. Always wash all exposed skin areas thoroughly with cold water and a mild soap after an accident in which the air bags were deployed.
- The SRS can function only when the vehicle is in the ON position. If the SRS air bag warning light does not appear, or continuously remains on after appearing for about 6 seconds when the vehicle is in the ON position, or after the engine is started, comes on while driving, the SRS is not working properly. In this case, have the system inspected by a professional workshop. Kia recommends to visit an authorized Kia dealer/service partner.

- Before you replace a fuse or disconnect the battery terminal (For plug-in hybrid vehicle) or the battery connector (For hybrid vehicle), turn the ignition switch to the LOCK position and remove the ignition key or turn off the ENGINE START/STOP button. Never remove or replace the air bag related fuse(s) when the vehicle is in the ON position. Failure to heed this warning will cause the SRS air bag warning light to appear.

### Driver's and passenger's front air bag

Driver's front air bag/Passenger's front air bag



Driver's knee air bag



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

### **⚠ WARNING**

- The driver's hands should be placed on the steering wheel at the 9:00 and 3:00 positions. The passenger's arms and hands should be placed on their laps.

- Always use seat belts and child restraints - every trip, every time, everyone! Air bags inflate with considerable force and in the blink of an eye. Seat belts help keep occupants in proper position to obtain maximum benefit from the air bag. Even with air bags, improperly and unbelted occupants can be severely injured when the air bag inflates. Always follow the precautions about seat belts, air bags and occupant safety contained in this manual.
- To reduce the chance of serious or fatal injuries and receive the maximum safety benefit from your restraint system:
  - Never place a child in any child or booster seat in the front seat.
  - ABC - Always Buckle Children in the back seat. It is the safest place for children of any age to ride.
  - Front and side air bags can injure occupants improperly positioned in the front seats.
  - Move your seat as far back as practical from the front air bags, while still maintaining control of the vehicle.
  - You and your passengers should never sit or lean unnecessarily close to the air bags. Improperly positioned drivers and passengers can be severely injured by inflating air bags.
  - Never lean against the door or center console - always sit in an upright position.
  - No objects should be placed over or near the air bag modules on the steering wheel, instrument panel, and the front passenger's panel above the glove box, because any

such object could cause harm if the vehicle is in a crash severe enough to cause the air bags to deploy.

- Do not tamper with or disconnect SRS wiring or other components of the SRS system. Doing so could result in injury, due to accidental deployment of the air bags or by rendering the SRS inoperative.
- If the SRS air bag warning light remains appeared while the vehicle is being driven, have the system inspected by a professional workshop. Kia recommends to visit an authorized Kia dealer/service partner.
- Air bags can only be used once - have the system replaced by a professional workshop.  
Kia recommends to visit an authorized Kia dealer/service partner.
- The SRS is designed to deploy the front air bags only when an impact is sufficiently severe and when the impact angle is less than 30° from the forward longitudinal axis of the vehicle. Additionally, the air bags will only deploy once. Seat belts must be worn at all times.
- Front air bags are not intended to deploy in side-impact, rear-impact or rollover crashes. In addition, front air bags will not deploy in frontal crashes below the deployment threshold.
- A child restraint system must never be placed in the front seat. The infant or child could be severely injured or killed by an air bag deployment in case of an accident.
- Children age 13 and under must always be properly restrained in the rear seat. Never allow children to

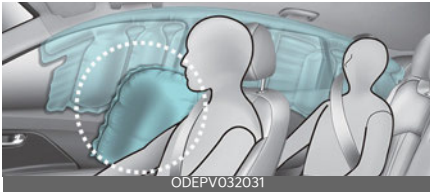
ride in the front passenger seat. If a child over age 13 must be seated in the front seat, he or she must be properly belted and the seat should be moved as far back as possible.

- For maximum safety protection in all types of crashes, all occupants including the driver should always wear their seat belts whether or not an air bag is also provided at their seating position to minimize the risk of severe injury or death in the event of a crash. Do not sit or lean unnecessarily close to the air bag while the vehicle is in motion.
- Sitting improperly or out of position can result in serious or fatal injury in a crash. All occupants should sit upright with the seat back in an upright position, center on the seat cushion with their seat belt on, legs comfortably extended and their feet on the floor until the vehicle is parked and the ignition key is removed.
- The SRS air bag system must deploy very rapidly to provide protection in a crash. If an occupant is out of position because of not wearing a seat belt, the air bag may forcefully contact the occupant causing serious or fatal injuries.
- No objects (such as crash pad cover, cellular phone holder, cup holder, perfume or stickers) should be placed over or near the air bag modules on the steering wheel, instrument panel, windshield glass, and the front passenger's panel above the glove box. Such objects could cause harm if the vehicle is in a crash severe enough to cause the air bags to deploy. Do not

place any objects over the air bag or between the air bag and yourself.

### Side air bag (if equipped)

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



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

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

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

### **WARNING**

- Do not allow the passengers to lean their heads or bodies onto doors, put their arms on the doors, stretch their arms out of the window, or place objects between the doors and passengers when they are seated on seats equipped with side and/or curtain air bags.
- The side air bags are supplemental to the driver's and the passenger's seat belt systems and is not a substitute for them. Therefore your seat belts must be worn at all times while the vehicle is in motion. The air bags deploy only in certain side impact or rollover conditions (Only vehicle equipped with rollover sensor) severe enough to cause significant injury to the vehicle occupants.
- For best protection from the side air bag system and to avoid being injured by the deploying side air bag, both front seat occupants should sit in an upright position with the seat belt properly fastened.
- Do not use any accessory seat covers.
- Use of seat covers could reduce or prevent the effectiveness of the system.
- To prevent unexpected deployment of the side air bag that may result in personal injury, avoid impact to the side impact sensor when the vehicle is in ON position and within approximately 3 minutes after the vehicle is in OFF position.
- If the seat or seat cover is damaged, have the system serviced by a professional workshop.  
Kia recommends to visit an authorized Kia dealer/service partner.

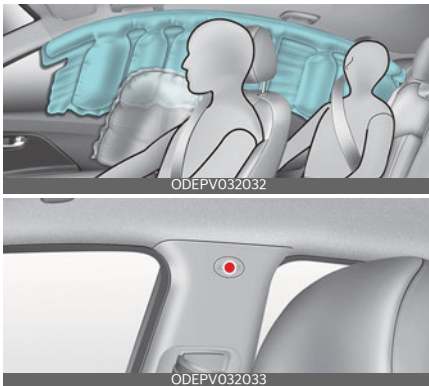
- Do not place any objects over the air bag or between the air bag and yourself. Also, do not attach any objects around the area the air bag inflates such as the door, side door glass, front and rear pillar.
- Do not place any objects between the door and the seat. They may become dangerous projectiles if the side air bag inflates.
- Do not install any accessories on the side or near the side air bags.

### \* NOTICE

#### If equipped with rollover sensor

Also, the air bags inflate instantly in the event of a rollover (if equipped with a side air bag or curtain air bag) in order to help protect the occupants from serious physical injury.

#### Curtain air bag (if equipped)



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

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 seat occupants in certain side impact collisions.

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

### ⚠ WARNING

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

- Do not hang heavy items on the coat hooks for safety reasons.
- 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 seat 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.

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

- Never try to open or repair any components of the curtain air bag system. If necessary, have the system serviced by a professional workshop. Kia recommends to visit an authorized Kia dealer/service partner.
- Do not place any objects over the air bag. Also, do not attach any objects around the area the air bag inflates such as the door, side door glass, front and rear pillar, roof side rail.
- Do not hang hard or breakable objects on the clothes hanger.

---

**\* NOTICE**

**If equipped with rollover sensor**

Also, the air bags inflate instantly in the event of a rollover (if equipped with a side air bag or curtain air bag) in order to help protect the occupants from serious physical injury.

---

## Air bag collision sensors



ODEPPH032010L

1



ODEPPH032016L

2



ODEPPH032011L

3



ODEPV032037

4



ODEPV032038

\* The actual features in your vehicle may not necessarily be available due to the selected options or regions.

**1** Supplemental Restraint System (SRS) control module/rollover sensor\*

**2** Front impact sensor

**3** Side pressure sensors (front door)\*

**4** Side impact sensor (B-pillar)\*




\*: if equipped

**⚠ 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 system serviced by a professional workshop. Kia recommends to visit an authorized Kia dealer/service partner.
- Problems may arise if the sensor installation angles are changed due to the deformation of the front bumper, body or B pillar where side collision sensors are installed. In this case, have the system serviced by a professional workshop. Kia recommends to visit an authorized Kia dealer/ service partner.
- Your vehicle has been designed to absorb impact and deploy the air bag(s) in certain collisions.  
Use only Kia Genuine Parts or those of an equivalent standard to install bumper guards or replace a bumper. If not, it may adversely affect your vehicle's collision and air bag deployment performance.
- If equipped with rollover sensor**  
If your vehicle is equipped with side and curtain air bag, set the vehicle to OFF or ACC position and wait for

approximately 3 minutes when the vehicle is being towed.  
The side and curtain air bag may deploy when the vehicle is in ON position or the vehicle is in OFF position within approximately 3 minutes, and the rollover sensor detects the situation as a rollover.

**Air bag inflation conditions**

Air bag inflation conditions	
 <p>ODEPPH032017L</p>	<p>Front air bags are designed to inflate in a frontal collision depending on the intensity, speed or angles of impact of the front collision.</p>
 <p>ODEPV032032</p>	<p>Side and/or curtain air bags are designed to inflate when an impact is detected by side collision sensors depending on the strength, speed or angles of impact resulting from a side impact collision.</p>
 <p>ODEPPH032018L</p>	

**\* INFORMATION**

**Side and curtain air bags (if equipped)**

Also, the side and curtain air bags are designed to inflate when a rollover is detected by a rollover sensor.  
Although the front air bags (driver's and front passenger's air bags) are designed to inflate only in frontal collisions, they also may inflate in other types of collisions if the front impact sensors detect a sufficient impact. Side air bags (side and/or curtain air bags) are designed to inflate only in side impact collisions, but they may inflate in other collisions if the side impact sensors detect a sufficient impact.  
For instance, side airbag and curtain air bags may inflate if rollover sensors indicate the possibility of a rollover occur-



ring (even if none actually occurs) or in other situations, including when the vehicle is tilted while being towed. Even if side and/or curtain air bags do not provide impact protection in a rollover, they will deploy to prevent ejection of occupants, especially those who are restrained with seat belts.




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





**\* NOTICE**

**If equipped with rollover sensor**

Also, the side and curtain air bags are designed to inflate when a rollover is detected by a rollover sensor.

**Air bag non-inflation conditions**

Air bag non-inflation conditions	
 <p>ODEPPH032017L</p>	<p>In certain low-speed collisions the air bags may not deploy.</p>
 <p>ODEPPH032019L</p>	<p>Air bags are not designed to inflate in rear collisions.</p>
 <p>ODEPPH032020L</p>	<p>Heavy braking lowers the front portion of the vehicle causing it to "ride" under a vehicle with a higher ground clearance. Air bags may not inflate in this "under-ride" situation because deceleration forces that are detected by sensors may be significantly reduced by such "under-ride" collisions.</p>

Air bag non-inflation conditions	
 <p>ODEPV032042</p>	<p>In an angled collision, the force of impact may send the occupants in a direction where the air bags would not be able to provide any additional benefit; thus, the sensors may not deploy any air bags.</p>
 <p>ODEPPH032018L</p>	<p>Front air bags may not inflate in side impact collisions. However, if equipped with side and curtain air bags, the air bags may inflate depending on the intensity, vehicle speed and angles of impact.</p>
 <p>ODEPV032044</p>	<p>Air bags may not inflate in rollover accidents because the vehicle cannot detect the rollover. However, side and/or curtain air bags may inflate when the vehicle is rolled over following (or after) side impact collision.</p>
 <p>ODEPPH032021L</p>	<p>Air bags may not inflate if the vehicle collides with objects such as utility poles or trees, meaning the point of impact is concentrated in one area and the full force of the impact is not delivered to the sensors.</p>

**⚠ WARNING**

- The SRS is designed to deploy the front air bags only when an impact is sufficiently severe and when the impact angle is less than 30° from the forward longitudinal axis of the vehicle.
- Front air bags are not intended to deploy in side-impact, rear-impact or rollover crashes. In addition, front air bags will not deploy in frontal crashes below the deployment threshold.
- The air bags deploy only in certain side impact or rollover conditions (Only vehicle equipped with rollover sensor) severe enough to cause significant injury to the vehicle occupants.

- If your vehicle is equipped with side and curtain air bag, set the vehicle to OFF or ACC position and wait for approximately 3 minutes when the vehicle is being towed. This side and curtain air bag may deploy when the vehicle is ON or OFF position within approximately 3 minutes, and the rollover sensor detects the situation as a rollover.
- 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 system serviced by a professional workshop. Kia recommends to visit an authorized Kia dealer/service partner.
- Your vehicle has been designed to absorb impact and deploy the air bag(s) in certain collisions. Use only genuine parts or those of an equivalent standard to install bumper guards or replace a bumper. If not, it may adversely affect your vehicle's collision and air bag deployment performance.
- If an air bag deploys, there may be a loud noise followed by a fine dust released in the vehicle. These conditions are not hazardous.
- The air bags are packed in this fine powder. The dust generated during air bag deployment may cause skin or eye irritation as well as aggravate asthma for some persons. Always wash all exposed skin areas thoroughly with cold water and a mild soap after an accident in which the air bags were deployed.
- For cleaning the air bag pad covers, use only a soft, dry cloth or one which has been moistened with plain water.
- Solvents or cleaners could adversely affect the air bag covers and proper deployment of the system.
- Keep the SRS parts and wirings away from water or any liquid. If the SRS components are inoperative due to exposure to water or liquids, it may cause fire or severe injury.
- If any of the following conditions occurs, this indicates a malfunction of the SRS. In this case, have the system inspected by a professional workshop. Kia recommends to visit an authorized Kia dealer/service partner.
  - The light does not turn on briefly when you turn the vehicle in ON position.
  - The light stays on after appearing for approximately 6 seconds.
  - The light comes on while the vehicle is in motion.
  - The light blinks when the vehicle is in ON position.
- Before you replace a fuse or disconnect the battery terminal (For plug-in hybrid vehicle) or the battery connector (For hybrid vehicle), turn the ignition switch or ENGINE START/STOP button to the LOCK position and remove the ignition key or turn off the ENGINE START/STOP button. Never remove or replace the air bag related fuse(s) when the vehicle is in the ON position. Failure to heed this warning

will cause the SRS air bag warning light to appear.

- Do not tamper with or disconnect wiring or other components of the SRS system, including the addition of any kind of badges to the pad covers or modifications to the body structure. Doing so could adversely affect SRS performance and lead to possible injury. If necessary, have the system serviced by a professional workshop. Kia recommends to visit an authorized Kia dealer/service partner.
- If your car was flooded and has soaked carpeting or water on flooring, you shouldn't try to start the engine; in this case, have your vehicle inspected by a professional workshop. Kia recommends to contact an authorized Kia dealer/service partner.
- Air bags can only be used once. If the air bags inflate, have the system replaced by a professional workshop. Kia recommends to visit an authorized Kia dealer/service partner.
- If components of the air bag system must be discarded, or if the vehicle must be scrapped, certain safety precautions must be observed, such as removing SRS and pre-tensioners from a vehicle due to the risk of fire. Failure to follow these precautions and procedures could increase the risk of personal injury. An authorized Kia dealer knows these precautions and can give you the necessary information.

#### \* NOTICE

- **If equipped with rollover sensor**  
The side and curtain air bags are designed to inflate when a rollover is detected by a rollover sensor. The air

bags may inflate in a rollover, when it is detected by the rollover sensor.

- **If equipped without rollover sensor**  
However, side and/or curtain 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.

#### SRS care

The SRS is virtually maintenance-free and so there are no parts you can safely service by yourself.

If the SRS air bag warning light does not appear, or continuously remains on, have the system inspected by a professional workshop. Kia recommends to visit an authorized Kia dealer/service partner.

#### ⚠ WARNING

- Modification to SRS components or wiring, including the addition of any kind of badges to the pad covers or modifications to the body structure, can adversely affect SRS performance and lead to possible injury.
- For cleaning the air bag pad covers, use only a soft, dry cloth or one which has been moistened with plain water. Solvents or cleaners could adversely affect the air bag covers and proper deployment of the system.
- No objects should be placed over or near the air bag modules on the steering wheel, instrument panel, and the front passenger's panel above the glove box, because any such object could cause harm if the vehicle is in a crash severe enough to cause the air bags to inflate.
- If the air bags inflate, have the system replaced by a professional workshop.

Kia recommends to visit an authorized Kia dealer/service partner.

- Do not tamper with or disconnect SRS wiring, or other components of the SRS system. Doing so could result in injury, due to accidental inflation of the air bags or by rendering the SRS inoperative.
- If components of the air bag system must be discarded, or if the vehicle must be scrapped, certain safety precautions must be observed. An authorized Kia dealer knows these precautions and can give you the necessary information. Failure to follow these precautions and procedures could increase the risk of personal injury.
- If your car was flooded and has soaked carpeting or water on flooring, you shouldn't try to start the engine; in this case, have your vehicle inspected by a professional workshop. Kia recommends to contact an authorized Kia dealer/service partner.

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### Additional safety precautions

- **Never let passengers ride in the cargo area or on top of a folded-down back seat.** All occupants should sit upright, fully back in their seats with their seat belts on and their feet on the floor.
- **Passengers should not move out of or change seats while the vehicle is moving.** A passenger who is not wearing a seat belt during a crash or emergency stop can be thrown against the inside of the vehicle, against other occupants, or out of the vehicle.
- **Each seat belt is designed to restrain one occupant.** If more than one person uses the same seat belt, they could be seriously injured or killed in a collision.
- **Do not use any accessories on seat belts.** Devices claiming to improve occupant comfort or reposition the seat belt can reduce the protection provided by the seat belt and increase the chance of serious injury in a crash.
- **Passengers should not place hard or sharp objects between themselves and the air bags.** Carrying hard or sharp objects on your lap or in your mouth can result in injuries if an air bag inflates.
- **Keep occupants away from the air bag covers.** All occupants should sit upright, fully back in their seats with their seat belts on and their feet on the floor. If occupants are too close to the air bag covers, they could be injured if the air bags inflate.
- **Do not attach or place objects on or near the air bag covers.** Any object attached to or placed on the front or side air bag covers could interfere with the proper operation of the air bags.
- **Do not modify the front seats.** Modification of the front seats could interfere with the operation of the supplemental restraint system sensing components or side air bags.
- **Do not place items under the front seats.** Placing items under the front seats could interfere with the operation of the supplemental restraint system sensing components and wiring harnesses.
- **Never hold an infant or child on your lap.** The infant or child could be seriously injured or killed in the event of a crash. All infants and children

should be properly restrained in appropriate child safety seats or seat belts in the rear seat.

**WARNING**

- Sitting improperly or out of position can cause occupants to be shifted too close to a deploying air bag, strike the interior structure or be thrown from the vehicle resulting in serious injury or death.
- Always sit upright with the seatback in an upright position, centered on the seat cushion with your seat belt on, legs comfortably extended and your feet on the floor.

**Adding equipment to or modifying your air bag-equipped vehicle**

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

**Air bag warning labels**

Left-hand drive



ODEPV032046\_2

Right-hand drive



ODEPV032046R\_2

Air bag warning label (Type A)



ODEPV032047

Air bag warning label (Type B)



OCV031063L

Air bag warning labels are attached to alert the passengers of potential risk of air bag system.

Note that these government warnings focus on the risk of children. We also want you to be aware of the risks adult are exposed to which have been described in previous pages.

**WARNING**

- Never place a rear facing child restraint in the front passenger seat, unless the passenger-side air bag is deactivated. An inflating passenger-side air bag could impact the rear-facing child restraint and kill the child.
- Extreme Hazard! Do not use a rearward facing child restraint on a seat protected by an air bag in front of it!
- Never put a child restraint in the front passenger's seat. If the front passenger air bag inflates, it can cause serious or fatal injuries.
- Never use a rearward facing child restraint on a seat protected by an ACTIVE AIR BAG in front of it. DEATH or SERIOUS INJURY to the CHILD can occur.

- When children are seated in the rear outboard seats of a vehicle equipped with side and/or curtain air bags, be sure to install the child restraint system as far away from the door side as possible, and securely lock the child restraint system in position.  
Inflation of side and/or curtain air bags could cause serious injury or death to an infant or child.
- 

**\* NOTICE**

**If equipped with rollover sensor**

- The air bags inflate instantly in the event of a rollover (if equipped with a side air bag or curtain air bag) in order to help protect the occupants from serious physical injury.
  - The side and/or the curtain air bag may deploy when the rollover sensor detects the situation as a rollover.
-

# Features of your vehicle

# 5

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## Features of your vehicle

\* The information provided may differ according to which functions are applicable to your vehicle.

## Keys

### Record your key number

The key code number is stamped on the key code tag attached to the key set.

If you lose your keys, Kia recommends to contact an authorized Kia dealer/service partner.

Remove the key code tag and store it in a safe place. Also, record the key code number and keep it in a safe place (not in the vehicle).

### Using the remote key (if equipped)



- 1 Lock button
- 2 Unlock button
- 3 Tailgate unlock button
- 4 Mechanical key release button

### Operation

1. Press the corresponding button.
2. Fold the mechanical key while pressing the mechanical key release button (4).

### Non-operating condition(s)

- The mechanical key is in the ignition switch.
- Exceeding the operating distance limit (approximately 10 m [30 ft.])
- The battery in the key is weak.
- Other vehicles or objects may be blocking the signal.
- The weather is extremely cold.
- The key is close to a radio transmitter, such as a radio station or an airport which can interfere with normal operation of the remote key.

### \* INFORMATION

- After pressing the lock/unlock button (1, 2) on the key, the hazard warning lights will blink.
- After pressing unlock button (2), the doors will lock automatically unless you open any door within 30 seconds.
- Press and hold the tailgate unlock button (3) to unlock the tailgate. The tailgate will lock automatically once the tailgate is opened and closed.
- If any door, hood or tailgate remains open, the hazard warning lights will not blink.

### ⚠ WARNING

#### • Never leave the keys in your vehicle

Leaving children unattended in a vehicle with the keys is dangerous even if the vehicle is ACC or ON position.

Unattended children could place the key in the ignition switch or press the ENGINE START/STOP button and may 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, when the engine is running.

- Kia recommends to use parts for replacement from an authorized Kia dealer/service partner. If an aftermarket key is used, the vehicle 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.

**⚠ CAUTION**

Do not fold the key without pressing the release button. This may damage the key.

**\* NOTICE**

- Keep the remote key away from water or any liquid and fire. If the inside of the remote key gets damp (due to drinks or moisture), or is heated, internal circuit may malfunction, excluding the car from the warranty.
- Avoid dropping or throwing the remote key.
- Protect the remote key from extreme temperatures.
- When the remote key does not work correctly, open and close the door with the mechanical key. If you have a problem with the remote key, Kia recommends to contact an authorized Kia dealer/service partner.
- If the remote key is in close proximity to your cellular phone or smartphone, the signal from the transmitter could be blocked by normal operation of your cellular phone or smartphone. This is especially important when the phone is active such as making call,

receiving calls, text messaging, and/or sending/receiving emails.

- Avoid placing the remote key and your cellular phone or smartphone in the same pants or jacket pocket and maintain adequate distance between the two devices.

**Using the smart key (if equipped)**



- 1 Lock button
- 2 Unlock button
- 3 Tailgate unlock button (if equipped)

**Operation**

- Press the corresponding button.

**Non-operating condition(s)**

- The key is close to a radio transmitter, such as a radio station or an airport which can interfere with normal operation of the smart key.
- Being near a mobile two-way radio system or a cellular phone.
- Another vehicle's smart key is being operated close to your vehicle.

**\* INFORMATION**

- After pressing the lock/unlock button (1, 2) on the key, the hazard warning lights will blink.
- After pressing unlock button (2), the doors will lock automatically unless you open any door within 30 seconds.

- Press and hold the tailgate unlock button (3) to unlock the tailgate. The tailgate will lock automatically once the tailgate is opened and closed.
- If any door, hood or tailgate remains open, the hazard warning lights will not blink.

**\* NOTICE**

- If, for some reason, you happen to lose your smart key, you will not be able to start the vehicle. Tow the vehicle, if necessary, contact a professional workshop. Kia recommends to contact an authorized Kia dealer/service partner.
- A maximum of 2 smart keys can be registered to a single vehicle. If you lose a smart key, Kia recommends to contact an authorized Kia dealer/service partner.
- When the smart key does not work properly, open and close the door with the mechanical key. If you have a problem with the smart key, Kia recommends to contact an authorized Kia dealer/service partner.

**Removing the mechanical key from the smart key**



- 1 Tab
- 2 Mechanical key

**Operation**

1. Press and hold the tab (1).
2. Pull the mechanical key (2) out.

**Replacing the key battery**



**Operation**

1. Pry open the key cover gently.
2. Replace the old battery with a new battery.

**⚠ WARNING**

**THIS PRODUCT CONTAINS A BUT-TON BATTERY**

If swallowed, a lithium button battery can cause severe or fatal injuries within 2 hours.

Keep batteries out of reach of children.

If you think batteries may have been swallowed or placed inside any part of the body, seek immediate medical attention.

**\* INFORMATION**

The battery is CR2032 (3V).

**⚠ WARNING**

Leaving children unattended in a vehicle with the keys is dangerous even if the vehicle is ACC or ON position.

Unattended children could place the mechanical key in the ignition switch or press the ENGINE START/STOP button and may 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, when the engine is running.

**⚠ CAUTION**

- The remote key or smart key is designed to give you years of trouble-free use, however it can malfunction if exposed to moisture or static electricity. If you are unsure how to use or replace the battery, Kia recommends to contact an authorized Kia dealer/service partner.
- Using the wrong battery can cause the remote key or smart key to malfunction. Be sure to use the correct battery.
- To avoid damaging the remote key or smart key, don't drop it, get it wet, or expose it to heat or sunlight.



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

**\* NOTICE**

- If, for some reason, you happen to lose your smart key, you will not be able to start the vehicle. Tow the vehicle, if necessary, contact a professional workshop. Kia recommends to contact an authorized Kia dealer/service partner.
- A maximum of 2 smart keys can be registered to a single vehicle. If you lose a smart key, Kia recommends to contact an authorized Kia dealer/service partner.
- When the smart key does not work properly, open and close the door with the mechanical key. If you have a problem with the smart key, Kia recommends to contact an authorized Kia dealer/service partner.

## Theft-alarm system



The system provides an audible alarm and the hazard warning lights blink if triggered. The system is operated in 3 stages.

### Armed stage

#### Operation

1. Lock the doors by pressing the lock button on the key or door handle.
2. The hazard warning lights will blink once to indicate that the system is armed.
3. The chime will sound for approximately 3 seconds if any doors remain open.

#### Operating condition(s)

- 30 seconds after all doors are closed and locked.
- Mechanical key is removed from the ignition switch.
- ENGINE START/STOP button is in the OFF position.

### Theft-alarm stage

#### Operation

1. The horn will sound.
2. The hazard warning lights will blink continuously for approximately 30 seconds.
3. Unlock the doors with the key to turn off the system.

### Disarmed stage

#### Operation

1. The hazard warning lights will blink twice after the doors are unlocked.
2. After pressing the door unlock button, if any door (or tailgate) is not opened within 30 seconds, the system will be rearmed.

#### Operating condition(s)

- Door unlock button is pressed.
- The button of the front outside door is pressed while carrying the smart key.
- The engine is started. (within 3 seconds)
- After pressing the unlock button, the hazard warning lights will blink and the chime will sound twice (in smart key) to indicate that the system is disarmed.
- After pressing the unlock button, if any door (or tailgate) is not opened within 30 seconds, the system will be rearmed.

#### **⚠ CAUTION**

- Do not attempt to alter this system or add other devices to it. Electrical problems could result that may make your vehicle inoperable.
- Do not change, alter or adjust the theft-alarm system because it could cause the theft-alarm system to malfunction. In this case, have the system serviced by a professional workshop. Kia recommends visiting an authorized Kia dealer/service partner. Malfunctions caused by improper alterations, adjustments or modifications to the theft-alarm system are

not covered by your vehicle manufacturer warranty.

- Do not attempt to alter this system or add other devices to it. Electrical problems could result that may make your vehicle inoperable.

### \* NOTICE

- Avoid trying to start the engine while the alarm is activated. The vehicle starting motor is disabled during the theft-alarm stage.
- If the system is not disarmed with the remote key, insert the mechanical key into the ignition switch, turn the ignition switch to the ON position and wait for 30 seconds. Then the system will be disarmed.

## Immobilizer system

The immobilizer system reduces the risk of unauthorized vehicle use.

It is comprised of a small transponder in the ignition switch and electronic devices inside the vehicle. It checks and determines and verifies if the ignition key is valid or not.

If the key is valid, the engine will start. If the key is invalid, the engine will not start.

### Vehicles with the remote key

#### Operation

1. To deactivate the immobilizer system, insert the mechanical key into the ignition switch and turn to the ON position.
2. To activate the immobilizer system, turn the mechanical key to the OFF position.
3. The immobilizer system activates automatically. Without a valid remote key for your vehicle, the vehicle will not start.

### Vehicles with the smart key (if equipped)

#### Operation

1. To deactivate the immobilizer system, press the ENGINE START/STOP button to the ON position.
2. To activate the immobilizer system, press the ENGINE START/STOP button to the OFF position.
3. The immobilizer system activates automatically. Without a valid smart key for your vehicle, the vehicle will not start.



**⚠ WARNING**

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

**⚠ CAUTION**

- Do not put metal accessories near the ignition switch or the ENGINE START/STOP button. Metal accessories may interrupt the transponder signal and may prevent the vehicle from being started.
- The transponder in your key is an important part of the immobilizer system. It is designed to give years of trouble-free service, however you should avoid exposure to moisture, static electricity and rough handling. Immobilizer system malfunction could occur.
- Do not change, alter or adjust the immobilizer system because it could cause the immobilizer system to malfunction. In this case, have the system serviced by a professional workshop. Kia recommends visiting an authorized Kia dealer/service partner.
- Malfunctions caused by improper alterations, adjustments or modifications to the immobilizer system are not covered by your vehicle manufacturer warranty.
- Do not attempt to alter this system or add other devices to it. Electrical problems could result that may make your vehicle inoperable.

**\* NOTICE**

- When starting the vehicle, do not use the key with other immobilizer keys around. Otherwise, the engine may not start or may stop soon after it starts. Keep each key separately in order to avoid a starting malfunction.
- If you need additional keys or lose your keys, Kia recommends visiting an authorized Kia dealer/service partner.

## Door locks

### Door locks outside the vehicle

#### Locking/unlocking with the smart key (if equipped)



#### Operation

1. Press the front door handle button (driver's side).
2. Hazard warning lights will blink and the chime will sound.
  - Locking: Once
  - Unlocking: Twice

#### Operating condition(s)

- All doors are closed
- Smart key is detected within 0.7~1 m (28~40 inches)

#### Non-operating condition(s)

- Smart key is in the vehicle.
- The vehicle is in ACC or ON position.
- Doors (except tailgate) is opened.

#### ⚠ CAUTION

When leaving your vehicle with a smart key, be sure to close all doors (including hood and tailgate) and check by pressing the front door handle button. If the button is unpressed, the doors are unlocked.

#### \* NOTICE

- After pressing the button, the doors will lock automatically unless you open any door within 30 seconds.
- By pulling the driver-side exterior door handle, you can find whether the door has locked or not.
- Make sure the doors are closed securely.
- 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 to protect the circuit and prevent damage to system components.
- Always place the vehicle in the OFF position, engage the parking brake, close all windows, and lock all doors when leaving your vehicle unattended.
- If the Welcome Mirror/Light function is selected, the outside rear view mirror will automatically unfold when the doors are unlocked.

#### Limitation(s)

- Smart key is detected within 0.7~1 m (28~40 inches).

## Locking/unlocking with the mechanical key



### Operation

1. Pull out the mechanical key from smart key.
2. Insert the mechanical key into the keyhole outside of driver's door.
3. Turn the key to unlock.

### **⚠ WARNING**

- If you don't close the door securely, the door may open again.
- Be careful that someone's body and hands are not trapped when closing the door.
- If people must spend a longer time in the vehicle while it is very hot or cold outside, there is risk of injuries or danger to life. Do not lock the vehicle from the outside when there are people in it.

### **⚠ CAUTION**

Do not frequently repeat opening and closing of doors, or apply excessive force to a door while the door closer is operating.

### **\* NOTICE**

- When locking the door with a mechanical key, be aware that only the driver's door can be locked/unlocked.
- To lock all doors, operate the central lock switch inside the vehicle. Open the car door using the inner handle, then close the door and lock the driver's door with a mechanical key.
- Refer to "Door locks inside the vehicle" on page 5-14 to lock from inside the vehicle.
- Be careful not to lose or scratch the cover when removing it.
- When the key cover freezes and does not open, tap it lightly or indirectly warm (hand temperature, etc.) it up.
- Do not apply excessive force to the door and door handle. It may be damaged.
- 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.

## Door locks inside the vehicle

### Unlocking with the door handle



- 1 Door lock switch
- 2 Door handle

### Operation

1. To unlock a door, pull the door lock switch (1) to the "Unlock" position.
2. To lock a door, push the door lock switch (1) to the "Lock" position.
3. Pull the door handle (2) to open a door.

### **⚠ WARNING**

- If a power door lock ever fails to function while you are in the vehicle, try one or more of the following techniques to exit:
  - Operate the door unlock feature repeatedly (both electronic and manual) while simultaneously pulling on the door handle.
  - Operate the other door locks and handles, front and rear.
  - Lower a front window and use the key to unlock the door from outside.
  - Move to the cargo area and open the tailgate.
- Do not pull the inner door handle of driver's (or passenger's) door while the vehicle is moving.

## Locking/unlocking with the central door lock switch



- 1 Door lock button
- 2 Door unlock button

### Operation

1. To lock all vehicle doors, press the left side (1) of the switch.
2. To unlock all vehicle doors, press the right side (2) of the switch.

### **\* INFORMATION**

If the key is in the vehicle (or if the smart key is in the vehicle) and any door is opened, the doors will not lock even though the 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 down.
- Be careful when opening doors and watch out for vehicles, motorcycles, bicycles or pedestrians approaching the vehicle in the path of the door. Opening a door when something is approaching can result in an accident to cause vehicle damage or serious injury.

- 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.

- **Unattended children, the elderly or pets**

An enclosed vehicle can become extremely hot, causing death or severe injury such as heatstroke to unattended children, the elderly or pets who cannot escape the vehicle. When left or trapped in a hot vehicle, make sure to stay hydrated and avoid sun exposure through the vehicle's windshield. 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.

## Door lock features

Your vehicle is equipped with features that will automatically lock or unlock your vehicle based on settings you select in the cluster or infotainment system screen.

### Auto lock enable on speed

When this feature is set in the cluster or infotainment system screen, all the doors will be locked automatically when the vehicle exceeds 15 km/h (9 mph).

### Auto lock enable on shift

When this feature is set in the cluster or infotainment system screen, all the doors will be locked automatically when

the vehicle is shifted out of P (Park) while the vehicle is running.

### Auto unlock on shift to P

When this feature is set in the cluster or infotainment system screen, all the doors will be locked automatically when the vehicle is shifted out of P (Park) while the vehicle is running.

### Auto unlock on vehicle off (if equipped)

When this feature is set in the cluster or infotainment system screen, all the doors will be unlocked automatically when the vehicle is turned off.

### Impact sensing door unlock system (if equipped)

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

### Speed sensing door lock system (if equipped)

All doors will automatically lock after the vehicle speed exceeds 15 km/h.

### Deadlocks (if equipped)

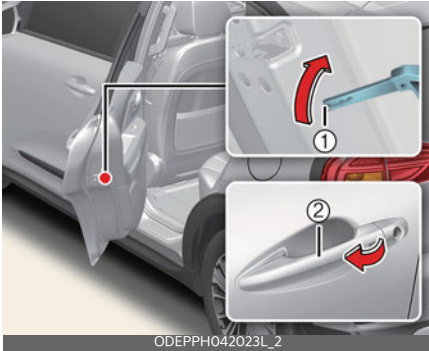
Some vehicles are equipped with dead-lock system. Deadlocks prevent opening of a door from either inside or outside the vehicle once the dead-locks have been activated providing an additional measure of vehicle security.

To lock the vehicle using the dead lock function, the doors must be locked by using the smart key. To unlock the vehicle, the smart key must be used again.

### Additional unlock safety feature air bag deployment

When this feature is set in the cluster or infotainment system screen, all the doors will be unlocked automatically when the vehicle is turned off.

## Child-protector rear door lock



ODEPPH042023L\_2

### Operation

1. Insert the mechanical key.
2. Turn the child safety lock to the lock position (1).
3. To allow a rear door to be opened from inside the vehicle, unlock the child safety lock.
4. To open the rear door, pull the outside door handle (2).

### **⚠ WARNING**

- 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.
- The system does not detect every obstacle approaching the vehicle exit.
- The driver and passenger are responsible for the accident occurred while exiting the vehicle. Always check the surrounding before you exit the vehicle.

## Rear Occupant Alert (ROA) (if equipped)

Rear Occupant Alert (ROA) is provided to help prevent exiting the vehicle with a rear passenger left in the vehicle.

### Operation

- Select **Convenience** → **Rear Occupant Alert** on the Settings menu.

### Alert operation



ODEPPH042102L

### A: **Check rear seat**

When you turn off the vehicle and open the driver's door after opening and closing the rear door or tailgate, the warning message appears on the cluster.

### **⚠ WARNING**

- Rear Occupant Alert provides information to the driver to check the rear seats but it does not detect whether there is an object or passenger in the back seats. Always make sure to check the rear seats before you leave the vehicle.
- The door lock system may not work if the electrical system is compromised. Accordingly, please train children passengers regarding how to open the car door manually before an emergency situation arises. That way, they would be able to open the door manually in the event an emergency situation arises.

**⚠ CAUTION**

The door open and close history is initialized when the driver turns off the engine and locks the vehicle door. Even though the rear door is not opened again, an alert may occur if the previous history is not initialized. For example, if driver does not lock the vehicle door and opens the door to get off after the alert sounds, the alert may go off.

**Tailgate****Opening/closing the manual tailgate**

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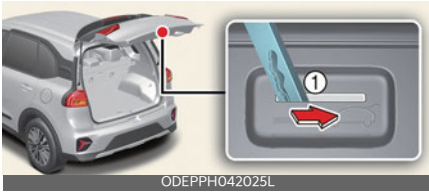
**Operation**

1. Press the outside handle switch to open the tailgate.
2. Pull up the tailgate.
3. Push down the tailgate to close it.  
Make sure that the tailgate is securely latched.

**Operating condition(s)**

- The tailgate is locked or unlocked using the key or central door lock switch.

## Tailgate emergency safety release



### Operation

1. Insert the mechanical key into the keyhole.
2. Move the mechanical key to the right (1).
3. Push the tailgate upward.

### **⚠ WARNING**

- For emergencies, be fully aware of the location of the emergency tailgate safety release lever in the vehicle and how to open the tailgate if you are accidentally locked in the luggage compartment.
- No one should be allowed to occupy the cargo area of the vehicle at any time. The cargo area is a very dangerous location in the event of a crash.
- Use the release lever for emergencies only. Use with extreme caution, especially while the vehicle is in motion.
- Do not grasp the part supporting the tailgate (gas lifter), as this may cause serious injury.





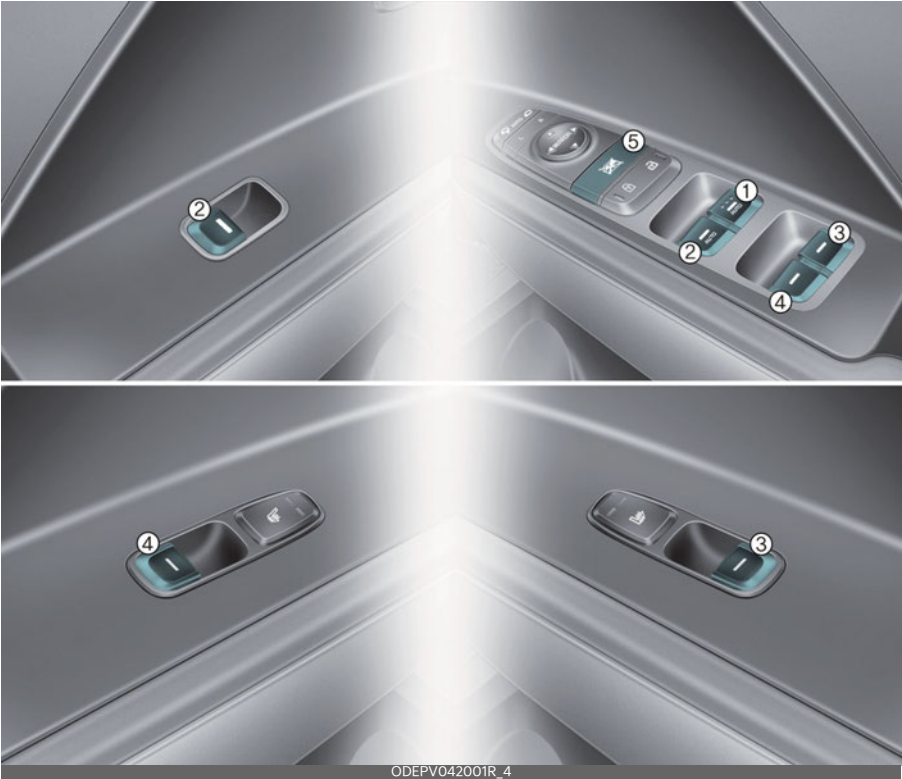
# Windows

Left-hand drive



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Right-hand drive



- 1 Driver's door power window switch
- 2 Front passenger's door power window switch
- 3 Rear door (left) window switch
- 4 Rear door (right) window switch
- 5 Power window lock switch

## Controlling power windows switch



- Type A: 1
- Type B: 1, 2 (if equipped)

### Operation

- Press or pull the switch to the first/second detent position (1, 2).

#### \* INFORMATION

Only type B can use auto up/down function.

### Operating condition(s)

- The vehicle is in the ON position.

#### ⚠ WARNING

Do not install any accessories in the area of windows. It may impact jam protection.

#### \* NOTICE

- While driving with the rear windows down in an open (or partially open position), your vehicle may demonstrate a wind buffeting or pulsation noise. This noise is a normal occurrence and can be reduced or eliminated by taking the following actions. If the noise occurs with one or both of the rear windows down, partially lower both front windows approximately 2.5 cm (1 inch). If you experience the noise with the sunroof open,

slightly reduce the size of the sunroof opening.

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

## Resetting power windows

### Operation

1. Close the window.
2. Pull the power window switch.
  - Approximately 1 second

### Operating condition(s)

- The vehicle is in the ON position.

## Power windows automatic reversal (if equipped)

### Operation

1. Windows will stop and move down.
  - Approximately 30 cm (12 inches)
2. Windows will move down.
  - Approximately 2.5 cm (1 inch)

### Operating condition(s)

- Object or part of the body is detected
- Force is detected

#### ⚠ WARNING

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

- The automatic reverse feature is not activated while resetting power window system. Make sure body parts or other objects are safely out of the way before closing the windows to avoid injuries or vehicle damage.

### \* NOTICE

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

### Power windows lock button



### Operation

1. Push the power windows lock button.
  - Rear passenger window is inoperable.
2. The front driver and passenger window can be operated.

### ⚠ WARNING

- Never leave the keys in your vehicle with unsupervised children, when the engine is running.
- Never leave any child unattended in the vehicle. Even very young children may inadvertently cause the vehicle to move, entangle themselves in the windows, or otherwise injure themselves or others.
- Always double check to make sure all arms, hands, head and other obstructions are safely out of the way before closing a window.
- Do not allow children play with the power windows. Keep the driver's door power window lock button in the LOCK position (pressed). SERIOUS INJURY can result from unintentional window operation by the child.
- Do not extend heads or any limbs outside the window while the vehicle is in motion.

### ⚠ CAUTION

- To prevent possible damage to the power window system, do not open or close two windows or more at the same time. This will also ensure the longevity of the fuse.
- Never try to operate the main switch on the driver's door and the individual door window switch in opposite directions at the same time. If this is done, the window will stop and cannot be opened or closed.

## Hood

### Opening the hood



- 1 Hood release lever
- 2 Hood secondary latch
- 3 Hood
- 4 Support rod

### Operation

1. Pull the hood release lever (1).
2. Push the secondary latch (2) to the left.
3. Lift the hood (3) upwards.
4. Pull out the support rod (4).
5. Hold the hood opened with the support rod.

### **⚠ WARNING**

- Open the hood after turning off the engine on a flat surface, shifting the gear to the P (Park) position and setting the parking brake.

- Grasp 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.
- The support rod must be inserted completely into the hole provided in the hood whenever you inspect the engine compartment. This will prevent the hood from falling and possibly injuring you.

### Closing the hood



### Operation

1. Before closing the hood, check the following:
  - All filler caps in the engine compartment must be correctly installed.
  - Gloves, rags or any other combustible material must be removed from the engine compartment.
2. Lower the hood until it is about 30 cm (12 inches) above the closed position and let it drop. Make sure that it locks into place.
3. Check that the hood has engaged properly.
  - If the hood can be raised slightly, it is not properly engaged.
  - Open it again and close it with a little more force.

**⚠ WARNING**

- Before closing the hood, ensure that all obstructions are removed from the hood opening. Closing the hood with an obstruction present in the hood opening may result in property damage or severe personal injury.
- Do not leave gloves, rags or any other combustible material in the engine compartment. Doing so may cause a heat-induced fire.
- Always double check to be sure that the hood is firmly latched before driving away. If it is not latched, the hood could open while the vehicle is being driven, causing total loss of visibility, which might result in an accident.
- Do not move the vehicle with the hood raised. The view will be blocked and the hood could fall or be damaged.

**Fuel filler door****Opening the fuel filler door (Hybrid vehicle)****Operation**

1. Stop the engine. To open the fuel filler door, push the fuel filler door opener button.



2. Pull open the fuel filler door (1).

To remove the cap, turn the fuel filler cap (2) counterclockwise.

Refuel as needed.

**⚠ WARNING**

Before refueling, be sure to check what type of fuel is used for your vehicle.

If you put diesel fuel into a gasoline-powered vehicle or gasoline into a diesel-powered vehicle, it may affect the fuel system and cause serious damage to the vehicle.

**\* NOTICE**

- The fuel filler door will unlock when driver's door is unlocked.  
To unlock fuel filler door:
  - Press the unlock button on your smart key.
  - Press the central door unlock button on armrest trim of driver's door.
  - Pull the driver's inside door handle outward.
- The fuel filler door will lock when all doors are locked.  
To lock fuel filler door:
  - Press the lock button on your smart key.
  - Press the central door lock button on armrest trim of driver's door.
- \* All doors will automatically lock after the vehicle speed exceeds 15 km/h (9.3 mph). Fuel door is also locked when vehicle speed exceeds 15 km/h (9.3 mph).
- If the fuel filler door does not open because ice has formed around it, tap lightly or push on the door to break the ice and release the door. Do not pry on the door. If necessary, spray around the door with an approved de-icer fluid (do not use radiator anti-freeze) or move the vehicle to a warm place and allow the ice to melt.

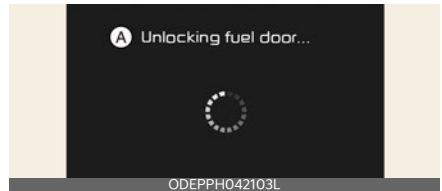
**Opening the fuel filler door (Plug-in hybrid vehicle)**

**Operation**

1. Stop the engine. To open the fuel filler door, push the fuel filler door opener button.

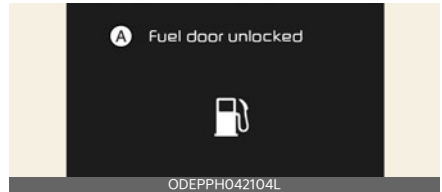


2. Wait until the fuel tank is depressurized. The message is displayed when the fuel filler door unlocks after the fuel tank is depressurized.



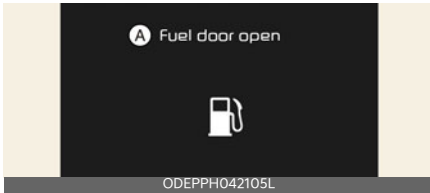
**A: Unlocking fuel door...**

3. The fuel door is unlocked when the message is displayed.



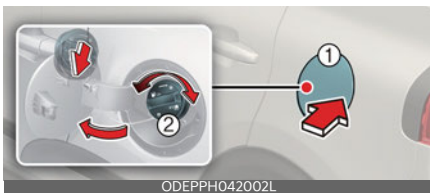
**A: Fuel door unlocked**

4. When the fuel door is open, a message is displayed.



**A: Fuel door open**

5. Pull open the fuel filler door (1).  
To remove the cap, turn the fuel filler cap (2) counterclockwise.  
Refuel as needed.



**⚠ WARNING**

- Before refueling, be sure to check what type of fuel is used for your vehicle. If you put diesel fuel into a gasoline-powered vehicle or gasoline into a diesel-powered vehicle, it may affect the fuel system and cause serious damage to the vehicle.
- Add fuel into the fuel tank within 20 minutes after opening the fuel filler door. After 20 minutes, the fuel tank may shut off, causing fuel to overflow. In this case, re-press the fuel filler door opening button.
- Do not leave the fuel filler door opened for an extended period of time. It may discharge the battery.
- Close the fuel filler door after fueling the vehicle. If you start the vehicle with the fuel filler door opened, **Check fuel door** message appears on the LCD display.

- Avoid refueling the vehicle while charging the (high-voltage) hybrid battery. It may cause a fire or an explosion due to static electricity.

**\* NOTICE**

- It may take up to 20 seconds to unlock fuel filler door.
- If the fuel filler door does not open because ice has formed around it, tap lightly or push on the door to break the ice and release the door.
- Do not pry on the door. If necessary, spray around the door with an approved de-icer fluid (do not use radiator anti-freeze) or move the vehicle to a warm place and allow the ice to melt.

**Closing the fuel filler door**

**Operation**

1. Turn the fuel tank cap (2) clockwise until it "clicks".
2. Press the rear center edge to close the fuel filler door (1).
3. Ensure all the doors and the fuel filler door are locked.

**⚠ WARNING**

Automotive fuels are flammable 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.

- Read and follow all warnings posted at the gas station.
- Before refueling, note the location of the Emergency Gasoline Shut-Off, if available, at the gas station.



- Before touching the fuel nozzle, you should eliminate the potential build-up of static electricity by touching a metal part of the vehicle, a safe distance away from the fuel filler neck, nozzle, or other gas source, with your bare hand.
- Do not use cellular phones while refueling. Electric current and/or electronic interference from cellular phones can potentially ignite fuel vapors and cause a fire.
- Do not get back into a vehicle once you have begun refueling. You can generate a build-up of static electricity by touching, rubbing or sliding against any item or fabric capable of producing static electricity. Static electricity discharge can ignite fuel vapors causing a fire. 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, with your bare hand.
- When refueling, always shift the gear to the P (Park) position, set the parking brake, and place the vehicle to the LOCK/OFF position.
- Sparks produced by electrical components related to the engine can ignite fuel vapors causing a fire.
- When using an approved portable fuel container, be sure to place the container on the ground prior to refueling. Static electricity discharge from the container can ignite fuel vapors causing a fire. Once refueling has begun, contact between your bare hand and the vehicle should be maintained until the filling is complete.
- Use only approved portable plastic fuel containers designed to carry and store gasoline.
- 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.
- Do not over-fill or top-off your vehicle tank, which can cause gasoline spillage.
- If a fire breaks out during refueling, leave the vicinity of the vehicle, and immediately contact the manager of the gas station and then contact the local fire department. Follow any safety instructions they provide.
- If pressurized fuel sprays out, it can cover your clothes or skin and thus subject you to the risk of fire and burns. 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.
- Always check that the fuel cap is installed securely to prevent fuel spillage in the event of an accident.
- In case of using EV drive mode for a certain time without running engine, EMM (Engine Maintenance Mode) will automatically activate by the system to protect the fuel system and the engine.  
Therefore, even though if it is possible to use EV drive mode with enough battery power, the engine may run by the system to protect fuel system and the engine.  
If you leave the fuel without refueling or using for over 6 months, the remained fuel in the fuel system may be deteriorated. From this corrosion or blocking problem may occur.

It is recommended using minimum 40% of remained fuel at least every 6 months by selecting Hybrid (CS) mode and refuel the vehicle with new fuel.

### ⚠ CAUTION

Keep the door into LOCK position when the vehicle is being washed (i.e. high pressure washer, automatic car washer, etc.)

### \* NOTICE

- Make the vehicle door to LOCK position when the fuel filler door is completely closed in order to lock the fuel filler door. If the fuel filler door is not completely closed, the fuel filler door will not be locked.
- Make sure to refuel your vehicle according to the fuel requirements.
- Do not spill fuel on the exterior surfaces of the vehicle. Any type of fuel spilled on painted surfaces may damage the paint.
- If the fuel filler cap requires replacement, use only Kia Genuine Parts or those of an equivalent standard for your vehicle. An incorrect fuel filler cap can result in a serious malfunction of the fuel system or emission control system.
- After refueling, make sure the fuel cap is installed securely to prevent fuel spillage in the event of an accident.

## Emergency fuel filler door release

If the fuel filler door does not open using the remote fuel filler door release, you can open it manually.



## Operation

1. Remove the panel in the cargo area.
2. Pull the handle.

### ⚠ CAUTION

Do not pull the handle excessively, otherwise the luggage area trim or release handle may be damaged.

## Steering wheel

### Motor Driven Power Steering (MDPS)

Power steering uses the motor to assist you in steering the vehicle.

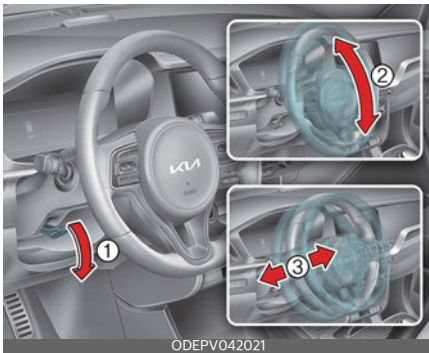
If the engine is off or if the power steering system becomes inoperative, the vehicle may still be steered, but it will require increased steering effort.

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

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

Should you notice any change in the effort required to steer during normal vehicle operation, have the system checked by a professional workshop. Kia recommends to visit an authorized Kia dealer/service partner.

### Adjusting steering wheel angle and height



ODEPV042021

### Operation

1. Pull the lock-release lever (1) down.
2. Adjust the steering wheel to the desired angle (2) and height (3)(if equipped).
3. Pull the lock-release lever up.

#### \* INFORMATION

Be sure to adjust the steering wheel to the desired position before driving.

#### ⚠ WARNING

- Never adjust the angle and height of the steering wheel while driving. You may lose steering control and cause severe personal injury, death or accidents.
- After adjusting, push the steering wheel both up and down to be certain it is locked in position.
- While adjusting the steering wheel angle and height, please do not push or pull it hard since the fixture can be damaged.

#### ⚠ CAUTION

- Do not press or pull the steering wheel hardy while adjusting. The steering wheel column may be damaged.
- The steering effort can suddenly increase, if the operation of the MDPS system is stopped to prevent serious accidents when MDPS control unit detects malfunction of the MDPS system by self-diagnosis.

### \* NOTICE

- After adjustment, sometimes the lock-release lever may not lock the steering wheel.

It is not a malfunction. This occurs when two gears engage. In this case, adjust the steering wheel again and then lock the steering wheel.

- The following symptoms may occur during normal vehicle operation:
  - The MDPS warning light does not appear.
  - The steering effort is high immediately after turning the vehicle ON. This happens as the MDPS system performs the diagnostics. When the diagnostics is completed, the steering effort will return to its normal condition.
  - A click noise may be heard from the MDPS relay after the vehicle is in LOCK/ON position.
  - Motor noise may be heard when the vehicle is at a stop or at a low driving speed.
  - When the abnormality is detected in the electric power steering system, a deadly accident prevention purposes, steering assist functions will be stopped. At this time, the instrument panel warning light turns on or blinks and the power to manipulate the steering will be off. Please check immediately after moving the vehicle to a safe zone.
  - The steering effort increases if the steering wheel is rotated continuously when the vehicle is not in motion. However, after a few minutes, it will return to its normal conditions.

- If the Motor Driven Power Steering System does not operate normally, the warning light appear on the instrument cluster. The steering wheel may become difficult to control or operate abnormally. In this case, have the system inspected by a professional workshop. Kia recommends to visit an authorized Kia dealer/service partner.
  - When you operate the steering wheel in low temperature, abnormal noise could occur. If temperature rises, the noise will disappear. This is a normal condition.
  - When jump starting the vehicle after battery discharge, the steering wheel may not function properly. It is a temporary situation due to low battery voltage, and upon stable battery charging, the steering wheel will function normally again. Please move the steering wheel around to make sure the steering wheel is functioning properly before driving the vehicle.
-

## Heated steering wheel (if equipped)



### Operation

1. Press the button to turn the heated steering wheel ON or OFF.
2. The heated steering wheel reverts to the OFF position whenever the vehicle is restarted.

### \* INFORMATION

The heated steering wheel automatically controls the steering wheel temperature depending on the ambient temperature when the vehicle is running.

### ⚠ WARNING

If the steering wheel becomes too warm, turn the system off. The heated steering wheel may cause burns even at low temperatures, especially if used for long periods of time.

### ⚠ CAUTION

- Do not install any type of grip cover for the steering wheel, it may impair the function of the heated steering wheel system.
- When cleaning the heated steering wheel, do not use an organic solvent such as paint thinner, benzene, alcohol and gasoline. Doing so may damage the surface of the steering wheel.

- If the surface of the steering wheel is damaged by a sharp object, damage to the heated steering wheel components could occur.

### \* NOTICE

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

## Horn



### Operation

- Press the area around the horn symbol on your steering wheel.

### ⚠ CAUTION

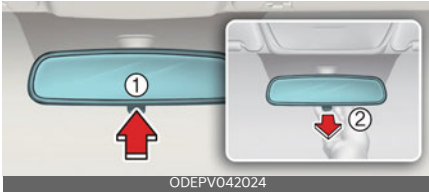
- Do not strike the horn severely to operate it, or hit it with your fist. Do not press on the horn with a sharp-pointed object.
- When cleaning the steering wheel, do not use an organic solvent such as thinner, benzene, alcohol and gasoline. Doing so may damage the steering wheel.

## Mirrors

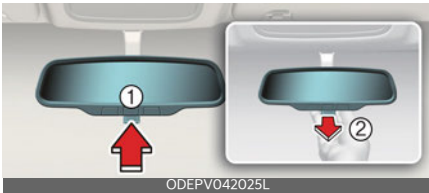
### Inside rear view mirror

#### Adjusting the day/night rear view mirror (if equipped)

Type A



Type B



- A: Day
- B: Night

### Operation

1. Push the day/night lever (1) during daytime.
2. Pull the day/night lever (2) to reduce the headlamp glare during low light and night driving conditions.

### Electric Chromic Mirror (ECM) (if equipped)

The sensor detects the light level and automatically controls the headlamp glare during low light and night driving conditions.

### **⚠ WARNING**

- Do not place objects in the rear seat or cargo area which would interfere with your vision out the rear window.
- Do not adjust the rear view mirror while the vehicle is moving. This could result in loss of control, and an accident which could cause DEATH, SERIOUS INJURY, or property damage.
- Do not modify the inside mirror and don't install a wide mirror. It could result in injury, during an accident or deployment of the air bag.

### Outside rear view mirror

#### Adjusting the outside rear view mirror



### Operation

1. Move the outside rear view mirror switch (1) to select the left or right side of the mirror.
2. Adjust the mirror adjustment control (2) to move the selected mirror.

### **⚠ WARNING**

- The outside rear view mirror is convex. Objects seen in the mirror are closer than they appear.
- Use your interior rear view mirror or direct observation to determine the actual distance of following vehicles when changing lanes.

- Do not adjust or fold the outside rear view mirrors while the vehicle is moving. This could result in loss of control, and an accident which could cause DEATH, SERIOUS INJURY, or property damage.

### **CAUTION**

- Do not scrape ice off the mirror face; this may damage the surface of the glass. If ice should restrict the 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 warm water.
- If the mirror is jammed with ice, do not adjust the mirror by force. Use an approved spray de-icer (not radiator antifreeze) to release the frozen mechanism or move the vehicle to a warm place and allow the ice to melt.
- The mirrors stop moving when they reach the maximum adjusting angles, but the motor continues to operate while the switch is pressed. Do not press the switch longer than necessary, the motor may be damaged.
- Do not attempt to adjust the outside rear view mirror by hand. Doing so may damage the parts.

## Folding the outside rear view mirror

### Manual type (if equipped)



### Operation

- Grasp the housing of the mirror and fold it toward the rear of the vehicle.

### Electric type (if equipped)

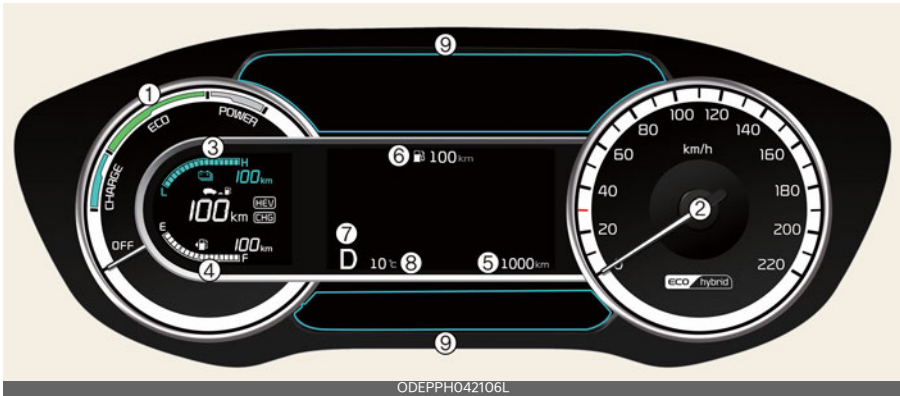


### Operation

- Press the button to fold or unfold the mirror.

## Instrument cluster

Type A



ODEPPH042106L

Type B



ODEPPH042107L

### 1. Power gauge

Indicates whether the current driving condition is fuel efficient or not.

- CHARGE: energy made by the vehicle is being converted to electrical energy. (Regenerated energy)
- ECO: Shows that the vehicle is being driven in an Eco-friendly manner.
- POWER: Shows that the vehicle is exceeding the Eco-friendly range.

### 2. Speedometer

- km/h, MPH
- The speed of the vehicle in kilometers per hour (km/h) or miles per hour (mph).

### 3. Hybrid battery SOC gauge

- Indicates the remaining hybrid battery power.



#### 4. Fuel gauge

- Indicates the approximate amount of fuel remaining in the fuel tank.

#### 5. Odometer

- Indicates the total distance that the vehicle has been driven.

#### 6. Distance to empty

- Indicates the distance the vehicle can be driven with the remaining fuel.

#### 7. Transmission shift indicator (if equipped)

- Indicates which gear is selected.

#### Dual clutch transmission shift indicator



This indicator displays which shift lever is selected.

- Park: P
- Reverse: R
- Neutral: N
- Drive: D
- Sports mode: S

#### Dual clutch transmission shift indicator in sports mode (if equipped)



If the driver selects "Sports mode" and changes gear, both higher and lower, the gear will automatically change to manual "Sports mode".

Depending on the selected gear, the gear display range will be from 1 to 6.

- Shifting up: ▲2, ▲3, ▲4, ▲5, ▲6
- Shifting down: ▼1, ▼2, ▼3, ▼4, ▼5

For example:

▲3: Indicates that shifting up to the 3rd gear is desired (currently the shift lever is in the 2nd or 1st gear).

▼4: Indicates that shifting down to the 4th gear is desired (currently the shift lever is in the 5th or 6th gear).

#### 8. Outside temperature gauge

- Indicates the current outside air temperatures.

#### 9. Warning and indicator lights

- Refer to "Warning and indicator lights" on page 5-47.

## 10. Plug-in hybrid mode indicator (Plug-in hybrid vehicle)

### CD (Charge Depleting, Electric) mode

The high-voltage (hybrid) battery is used to drive the vehicle.


### AUTO mode

The AUTO mode will be automatically selected from either from Electric (CD) mode or Hybrid (CS) mode by the system according to the driving

### CS (Charge Sustaining, Hybrid) mode

The high-voltage (hybrid) battery and gasoline engine is used to drive the vehicle. A corresponding message is displayed to indicate the selected mode.


#### WARNING

- Never remove the engine coolant reservoir cap when the engine is hot. The engine coolant is under pressure and could severely burn. Wait until the engine is cool before adding coolant to the reservoir.
- Running out of fuel can expose vehicle occupants to danger. You must stop and obtain additional fuel as soon as possible after a low fuel warning light () appears or when the gauge indicator comes close to the "E (O) (Empty)" level.

#### CAUTION

Do not operate the engine within the tachometer's red zone. This may cause severe engine damage.

#### NOTICE

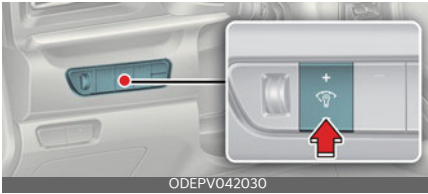
- According to the hybrid system gauge area, the "EV" indicator comes on or off.
  - "EV" indicator ON: Vehicle is driven using the electric motor or the gasoline engine is stopped.
  - "EV" indicator OFF: Vehicle is driven using the gasoline engine.
- Never try to start the vehicle if the fuel tank is empty. In this condition, the engine cannot charge the high voltage battery of the hybrid system. If you try to start the vehicle when the fuel is empty, the high voltage battery will become discharged and be damaged.
- The fuel tank capacity is given in "Recommended lubricants and capacities" on page 9-6.
- The fuel gauge is supplemented by a low fuel warning light () which will appear when the fuel tank is nearly empty.
- On inclines or curves, the fuel gauge pointer may fluctuate or the low fuel warning light may come on earlier than usual due to the movement of fuel in the tank.
- If the vehicle is not on level ground or the battery power has been interrupted, the distance to empty function may not operate correctly.
- The distance to empty may differ from the actual driving distance as it

is an estimate of the available driving distance.

- The trip computer may not register additional fuel if less than 6 liters (1.6 gallons) of fuel are added to the vehicle.
- The fuel economy and distance to empty may vary significantly based on driving conditions, driving habits, and condition of the vehicle.
- Use a clean soft microfiber cloth to gently wipe any finger prints off the screen.

---

### Adjusting instrument cluster illumination (if equipped)



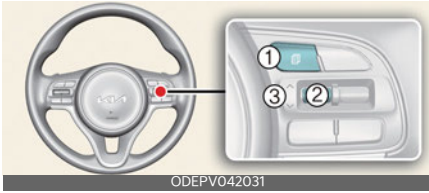
#### Operation

Press the illumination control button (+) or (-).

#### Operating condition(s)

- The vehicle is ON position
- Light switch is in parking light/AUTO\*/low beam position

## LCD display



- 1 : MODE button for changing modes
- 2 : MOVE switch for changing items
- 3 : OK: SELECT/RESET button for setting or resetting the selected item

## LCD display modes

\*: if equipped

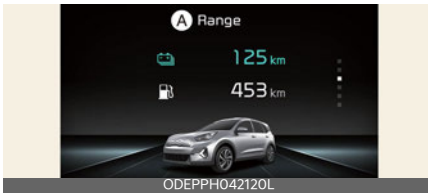
Mode						
		Trip Computer	Turn By Turn (TBT)*	Driving Assist	User Settings	Master Warning
	Range*	Route Guidance	Lane Keeping Assist* Intelligent Speed Limit Warning* Smart Cruise Control* Driver Attention Warning*	Driver Assistance*	The Master Warning mode displays warning messages related to the vehicle when one or more systems is not operating normally.	
^ v Up/ Down	Fuel Economy	Destination Info	TPMS	Door		
	Accumulated Info			Lights		
	Drive Info			Sound		
	Digital Speedometer*			Convenience		
	Driving Style			Service Interval		
	Energy Flow			Other		
	Engine Temperature			Language		
			Reset			

## Trip computer mode

\* You may change through items in the following order.

### Range (Plug-in hybrid vehicle)

The range is the estimated distance the vehicle can be driven with the remaining high-voltage (hybrid) battery (1, Electric) and fuel in the fuel tank (2, Gasoline).



#### A: Range

- 1 Estimated distance with the remaining high-voltage (hybrid) battery (Electric)
  - 2 Estimated distance with the fuel in the fuel tank (Gasoline)
- If the estimated distance is below 1 km (1 mile), the trip computer will display "---" as distance to empty.
    - Distance range: 1~510 km or 1~510 miles.

#### \* NOTICE

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

## Fuel economy



#### A: Fuel economy

- 1 Average fuel economy
- 2 Instant fuel economy

### 1. Average fuel economy

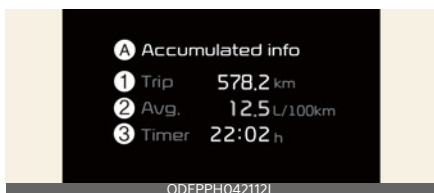
The average fuel economy is calculated by the total driving distance and fuel consumption since the last average fuel economy reset.

- **At vehicle start:** The information will automatically reset when the driver's door is opened after the vehicle is turned off, or approximately 3 minutes have passed after the vehicle is turned off.
- **After refueling:** After refueling more than 6 liters (1.5 gallons) and driving over 1 km/h (1 mph), the vehicle will reset to default automatically.
- **Manually:** Press and hold the OK button on the steering wheel when the average fuel economy is displayed.

### 2. Instant fuel economy

Displays the instant fuel economy during the last few seconds when the vehicle speed is more than approximately 10 km/h (6 mph).

## Accumulated info



### A: Accumulated info

- 1 Accumulated trip distance
- 2 Average fuel efficiency
- 3 Total driving time

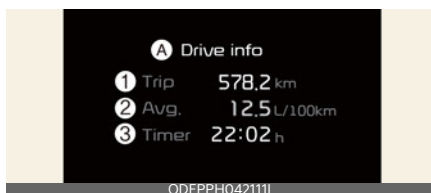
The information is accumulated starting from the last reset.

To manually reset the information, press and hold the OK button on the steering wheel when viewing the **Accumulated Info**.

### \* NOTICE

- The average fuel economy is not displayed for more accurate calculation if the vehicle does not drive more than 10 seconds or approximately 50 m (0.03 miles) since the vehicle is in ON position.
- Fuel efficiency is calculated after the vehicle has run for more than 300 meters.
- The information will be accumulated even if the engine is running and the vehicle is not in motion.

## Drive info



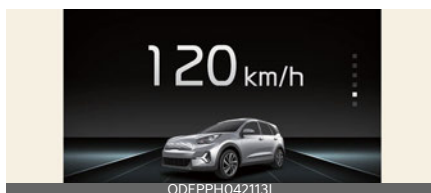
### A: Drive info

- 1 Accumulated trip distance
- 2 Average fuel efficiency
- 3 Total driving time

The information after one ignition cycle.

Drive Info screen will reset when the driver's door is opened after turning off the vehicle, or the vehicle is turned on after 3 minutes have passed.

## Digital speedometer (if equipped)



Indicates the speed of the vehicle.

## Driving style



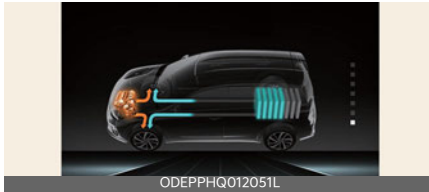
### A: Driving style

- 1 Economical
- 2 Normal
- 3 Aggressive

The driving style is displayed when you are driving in ECO mode.

When you drive in SPORT mode, each driving category will be displayed with "--".

### Energy flow



The hybrid system informs the driver about its energy flow in various operating modes. While driving, the current energy flow is specified in 11 modes.  
\* For more details, refer to "Energy flow" on page 1-33.

### Engine coolant temperature



#### A: Engine temperature

This gauge indicates the temperature of the engine coolant when the engine is running.

#### \* NOTICE

When the gauge indicator gets out of the normal range, toward the "130 or H (Hot)" position, it indicates overheating of the engine. It may damage the engine. Do not continue driving with the overheated engine.

### Driving Assist mode



#### A: Lane Keep Assist

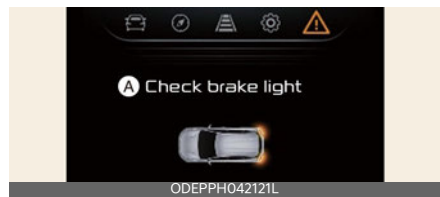
This mode displays the state of:

- Lane Keeping Assist
- Intelligent Speed Limit Warning
- Smart Cruise Control
- Lane Following Assist
- Driver Attention Warning

### Turn By Turn (TBT) mode

This mode displays the Navigation status.

### Master warning mode



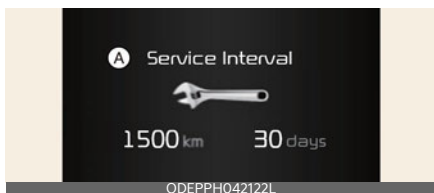
#### A: Check brake light

This mode informs you of the following situations:

- Driver assistance system malfunction, limitation or radar/camera blockage
- LED headlamp malfunction
- Lamp malfunction
- TPMS failure, low tire pressure, etc.

At this time, the Master warning light will appear. If the warning situation is solved, the master warning light will be turned off and the Master Warning icon will disappear.

## Service Interval



### A: Service Interval

#### 1 Service interval schedule

It calculates and displays when you need a scheduled maintenance service (mileage or days).

To reset the service interval, select **Convenience** → **Service Interval** → **Reset** from the Settings menu.

#### \* NOTICE

- If the remaining mileage or time reaches 1,500 km (900 miles) or 30 days, the message **Service in** is displayed for several seconds each time you set the vehicle to the ON position.
- If you do not have your vehicle serviced according to the already inputted service interval, **Service required** message is displayed for several seconds each time you set the vehicle to the ON position.
- If any of the following conditions occurs, the mileage and days may be incorrect.
  - The battery terminal is disconnected (For plug-in hybrid vehicle)
  - The battery connector is disconnected (For hybrid vehicle)
  - The battery is discharged.

## User settings mode

In this mode, you can change the settings of the instrument cluster, doors, lights, etc.

\* The information provided may differ depending on which functions are applicable to your vehicle.

### 1. Driver Assistance (if equipped)

Items	Explanation
SCC Reaction	• Fast/Normal/Slow
Driving Assist	Speed Limit Warning
Warning Timing	• Normal/Slow
Driver Attention Warning	• Leading Vehicle Departure Alert • Attention Warning
Forward Safety	• Assist/Warning/Off
Lane Safety	• Lane Keeping Assist/Lane Departure Warning/Off
Blind-Spot Safety	• Blind-Spot Collision Warning/Off
Parking Safety	Rear Cross-Traffic Safety

### 2. Door (if equipped)

Items	Explanation
Automatically Lock	• Enable on shift/Enable on speed/Off
Automatically Unlock	• On shift to P/Vehicle Off/On key out (if equipped)/Off

#### \* INFORMATION

- **Automatically Lock**
  - **Enable On Shift:** All doors will be automatically unlocked when the vehicle is shifted to P (Park) to R (Reverse), N (Neutral), or D (Drive). (With the Engine ON, it is activated.)
  - **Enable On Speed:** All doors will be automatically locked when the vehicle speed is over 15 km/h (9 mph).



• **Automatically Unlock**

- **On Shift to P:** All doors will be automatically unlocked if the gear is shifted to the P (Park) position. (With the Engine ON, it is activated.)
- **Vehicle Off/On key out (if equipped):** All doors will be automatically unlocked when the ignition key is removed from the ignition switch or the ENGINE START/STOP button is set to the OFF position.

**3. Lights (if equipped)**

Items	Explanation
One Touch Turn Signal	• Off/3/5/7 Flashes
Ambient Brightness	• Off/1/2/3/4
Ambient Light Color	• 8 colors
Headlight Delay	Activate/Deactivate
High Beam Assist	Activate/Deactivate

**4. Sound (if equipped)**

Items	Explanation
Parking Distance Warning Volume	• High/Low

**5. Convenience (if equipped)**

Items	Explanation
Welcome Mirror/Light	• On door unlock/On door unlock
Wiper/Lights Display	Activate/Deactivate
Auto Rear Wiper (in R)	Activate/Deactivate
Gear Position Pop-up	Activate/Deactivate
Icy Road Warning	Activate/Deactivate
Rear Occupant Alert	Activate/Deactivate

**6. Service Interval (if equipped)**

Items	Explanation
Enable Service Interval	Activate/Deactivate
Adjust Interval	• Time/Distance
Reset	• Yes/No

**7. Other (if equipped)**

Items	Explanation
AUX. Battery Saver+	Activate/Deactivate
Fuel Economy Reset	• After Refueling/After Ignition
Speed Unit	• km/h, MPH
Fuel Economy Unit	• km/L, L/100km, US gallon, UK gallon
Temperature Unit	• °C, °F
Tire Pressure Unit	• psi/kPa/bar

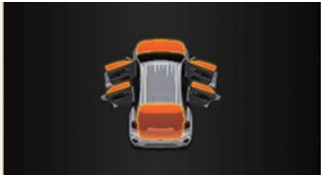

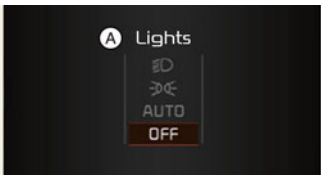



**8. Language**

Items	Explanation
Language	Activate

**9. Reset**

Items	Explanation
Reset	• Yes/No

## LCD display messages

LCD displays	Displayed contents
 <p>ODEPVO42111</p>	<p>Door, hood, tailgate open</p>
 <p>ODEPPH042116L</p>	<p>Low tire pressure warning display A: <b>Low tire pressure</b></p>
 <p>ODEPPH042117L</p>	<ul style="list-style-type: none"> <li>• A: <b>Lights</b></li> <li>• 1: </li> <li>• 2: </li> <li>• 3: AUTO</li> <li>• 4: OFF (O)</li> </ul>
 <p>ODEPPH042118L</p>	<ul style="list-style-type: none"> <li>• A: <b>Front Wiper</b></li> <li>• 1: OFF (O)</li> <li>• 2: INT</li> <li>• 3: LO (1)</li> <li>• 4: HI (2)</li> </ul>
<p>Low washer fluid</p>	<p>The washer fluid level in the reservoir is nearly empty.</p>
<p>Engine overheated</p>	<p>The engine coolant temperature is above 120 °C (248 °F).</p>
<p>Low key battery (for smart key system)</p>	<p>The battery of the smart key is discharged</p>
<p>Key not in vehicle (for smart key system)</p>	<p>The smart key is not in the vehicle when you press the ENGINE START/STOP button</p>
<p>Icy road warning</p>	<p>The temperature on the outside temperature gauge is below approximately 4 °C (40 °F).</p>
<p>Key not detected (for smart key system)</p>	<p>The smart key is not detected when you press the ENGINE START/STOP button</p>
<p>Shift to P or N to start engine (for smart key system)</p>	<p>Starting the vehicle with the gear not in the P (Park) or N (Neutral) position</p>
<p>Press brake pedal to start vehicle (for smart key system)</p>	<p>The ENGINE START/STOP button changes to the ACC position twice by pressing the button repeatedly without depressing the brake pedal</p>

LCD displays	Displayed contents
Battery discharging due to external electrical devices	Self-discharge of the battery due to overcurrent that is generated by unauthorized electrical devices
Press START button again (for smart key system)	The ENGINE START/STOP button cannot be operated due to a problem with the ENGINE START/STOP button system
Press START button with key (for smart key system)	The ENGINE START/STOP button is pressed while the "Key not detected" warning message is displayed
Low fuel	The fuel tank is almost out of fuel. The low fuel level warning light in the cluster will come on

## For Plug-in hybrid vehicle

LCD displays	Displayed contents
Unplug vehicle to start	The engine is started without unplugging the charging cable
Remaining Time	The remaining time to fully charge the battery is notified
Shift to P to charge	The charging connector is plugged with the shift lever in R (Reverse), N (Neutral) or D (Drive)
Electric mode/Automatic mode/Hybrid mode	A corresponding message is displayed when a mode is selected by pressing the EV/HEV button
Low battery. Maintaining Hybrid mode	Unable to convert to EV mode even when pressing the EV/HEV button during HEV mode driving due to insufficient high-voltage (hybrid) battery level
Low system temperature. Switching to Hybrid mode/ High system temperature. Switching to Hybrid mode	The temperature of the high-voltage (hybrid) battery is too low or high
Low system temperature. Maintaining Hybrid mode/ High system temperature. Maintaining Hybrid mode	The temperature of the high-voltage (hybrid) battery is too low or too high
Wait until fuel door opens	Attempting to open the fuel filler door with the fuel tank pressurized
Fuel door open	The fuel filler door opens after the fuel tank is depressurized
Charging stopped. Check the AC charger	The charging failed by external charger error
Charging stopped. Check the cable connection	Charging is stopped because the charging connector is not correctly connected to the charging inlet
Charging Door Open	The charging door is open while in driving- ready state to encourage you to inspect and close the door
Switching to Hybrid mode to allow heating or air conditioning	<ul style="list-style-type: none"> <li>Turning the climate control On for heating when the outdoor temperature is lower than -15 °C (5 °F) and the coolant temperature is lower than 70 °C (158 °F). The vehicle will automatically switch to HEV mode and EV mode will not be activated (although EV/HEV button is pressed)</li> <li>The outdoor temperature is higher than -10 °C (14 °F), or the coolant temperature is higher than 80 °C (176 °F) or you turn the climate control Off, the vehicle will automatically return to EV mode.</li> </ul>
Switching to Hybrid mode for self-diagnosis	This message is displayed for self-diagnosis of the hybrid mode system

## \* INFORMATION

- If there is no problem with the operation and the messages above are constantly displayed, have your vehicle inspected by a professional workshop. Kia recommends to contact an authorized Kia dealer/service partner.

### • Icy road warning

When the following conditions occur, the warning light (including outside temperature gauge) blinks 5 times and then appears, and also warning chime sounds once.

- The temperature on the outside temperature gauge is below approximately 4°C (40°F).

### • Battery discharging due to external electrical devices

The vehicle can detect self-discharge of the battery due to overcurrent that is generated by unauthorized electrical devices such as dashboard camera (dash cam) mounting during parking.

If the warning continues even after external electrical devices are removed, have your vehicle inspected by a professional workshop. Kia recommends to contact an authorized Kia dealer/service partner.

### • Press START button again

- You could start the engine by pressing the ENGINE START/STOP button once more.
- If the warning message is displayed each time you press the ENGINE START/STOP button, have the vehicle inspected by a professional workshop. Kia recommends to visit an authorized Kia dealer/service partner.

## ⚠ CAUTION

### • Low fuel

















- Driving with the low fuel level warning light on or with the fuel level below "E (O) (Empty)" can cause the engine to misfire and damage the catalytic converter.

## \* NOTICE

- If the warning message is displayed in the cluster, the driving information message may not be displayed.
- To set the charging time and/or climate time, refer to a separately supplied car navigation system manual for detailed information.
- If the icy road warning appears while driving, you should drive more attentively and safely refraining from overspeeding, rapid acceleration, sudden braking or sharp turning, etc.

## Warning and indicator lights

Once you set the vehicle to the ON position, the symbols shown below will light up. If these symbols remain on or malfunction, we recommend having the vehicle inspected by an authorized Kia dealer/service partner.

Symbol	Time	Notes
	6 seconds	The air bag warning light appears for about 6 seconds and then turns off.
	Continuously	<ul style="list-style-type: none"> <li>There is a malfunction with the Safety Restraint System (SRS) air bag operation.</li> </ul>
	Continuously	Seat belt warning light informs the driver that the seat belt is not fastened. Refer to "Seat belts" on page 4-11.
	3 seconds	Parking brake & brake fluid warning light appears for approximately 3 seconds.
	Continuously	<ul style="list-style-type: none"> <li>Red: When the parking brake is applied.</li> <li>Red: When the brake fluid level in the reservoir is low.</li> <li>Red: When the regenerative brake does not operate.</li> <li>Yellow: Regenerative brake warning light appears when the regenerative brake does not operate and the brake does not perform well.</li> </ul>
	3 seconds	The Anti-lock brake system (ABS) warning light appears for about 3 seconds and then goes off.
	Continuously	<ul style="list-style-type: none"> <li>Whenever there is a malfunction with the ABS.</li> </ul>
 	Continuously	Electronic Brake Force Distribution (EBD) system warning light appears when there is a problem with the Electronic Brake Force Distribution system.
	3 seconds	Motor Driven Power Steering (MDPS) warning light appears for about 3 seconds and then goes off.
	Continuously	<ul style="list-style-type: none"> <li>Whenever there is a malfunction with the electric power steering.</li> </ul>
	3 seconds	Charging system warning light appears for approximately 3 seconds and then goes off.
	Continuously	<ul style="list-style-type: none"> <li>Whenever there is a malfunction with either the alternator or electrical charging system.</li> </ul>
	Continuously	Master warning light appears when there is a malfunction in various vehicle functions. To identify the details of the warning, refer to the LCD display warning message.
	3 seconds	Malfunction Indicator Lamp (MIL) appears for approximately 3 seconds and then goes off.
	Continuously	<ul style="list-style-type: none"> <li>Whenever there is a malfunction with either the emission control system or the engine or the vehicle powertrain.</li> </ul>
	Continuously	Engine oil pressure warning light appears until the engine is started. <ul style="list-style-type: none"> <li>When the engine oil pressure is low.</li> </ul>
	3 seconds	Service warning light appears for approximately 3 seconds and then goes off.
	Continuously	<ul style="list-style-type: none"> <li>Whenever there is a malfunction with hybrid vehicle control system or hardware.</li> </ul>
	Continuously	<ul style="list-style-type: none"> <li>When the fuel tank is nearly empty.</li> </ul>
	Continuously	<ul style="list-style-type: none"> <li>When there is a malfunction with Gasoline Particulate Filter (GPF) system.</li> </ul>
<b>EPB</b>	3 seconds	Electronic Parking Brake <b>EPB</b> warning light appears for about 3 seconds and then goes off.
	Continuously	<ul style="list-style-type: none"> <li>Whenever there is a malfunction with the Electronic Parking Brake <b>EPB</b></li> </ul>
	3 seconds	Low tire pressure warning light appears for approximately 3 seconds and then goes off.
	Continuously	<ul style="list-style-type: none"> <li>When one or more of your tires are significantly under inflated.</li> </ul>
	Blinking	<ul style="list-style-type: none"> <li>When there is a malfunction with the TPMS. Refer to "Tire Pressure Monitoring System (TPMS) (if equipped)" on page 7-9.</li> </ul>
	3 seconds	Forward Safety warning light appears for approximately 3 seconds and then goes off.
	Continuously	<ul style="list-style-type: none"> <li>Whenever there is a malfunction with Forward Collision-Avoidance Assist. Refer to "Forward Collision-Avoidance Assist (FCA) (Sensor Fusion) (if equipped)" on page 6-31.</li> </ul>

Symbol	Time	Notes
	Continuously	Lane safety indicator light appears: <ul style="list-style-type: none"> <li>• Green: When Lane Keeping Assist operating conditions are satisfied.</li> <li>• White: When Lane Keeping Assist operating conditions are not satisfied.</li> <li>• Yellow: Whenever there is a malfunction with Lane Keeping Assist.</li> </ul> Refer to "Lane Keeping Assist (LKA) (if equipped)" on page 6-43.
	Continuously	Lane Following Assist indicator light appears: <ul style="list-style-type: none"> <li>• Green: When Lane Following Assist is activated</li> <li>• Gray: When Lane Following Assist operating conditions are not satisfied.</li> </ul> Refer to "Lane Following Assist (LFA) (if equipped)" on page 6-80.
	3 seconds	LED headlight warning light appears for approximately 3 seconds and then goes off.
	Continuously	• Whenever there is a malfunction with the LED headlight.
	Blinking	• Whenever there is a malfunction with a LED headlight related part.
	Continuously	Icy Road warning light and outside temperature gauge blinks and then appears. Also, the warning chime sounds 1 time.
	Continuously	Charging cable connection indicator (Plug-in hybrid vehicle) light appears in red when the charging cable is connected.
<b>EV</b>	Continuously	EV mode indicator appears when the vehicle is driven using the electric motor or the gasoline engine is stopped.
	Continuously	Ready indicator appears when the vehicle is ready to be driven.
	Blinking	Whenever there is a problem with the system.
	3 seconds	Electronic Stability Control (ESC) indicator light appears for about 3 seconds and then goes off.
	Continuously	• Whenever there is a malfunction with ESC system.
	Blinking	While the ESC is operating.
	3 seconds	The ESC OFF indicator light appears for approximately 3 seconds and then goes off.
	Continuously	• When you deactivate ESC system by pressing the ESC OFF button. Refer to "Electronic Stability Control (ESC)" on page 6-27.
	Continuously	When the vehicle detects the key in the vehicle in ACC/ON position
	Blinking	<ul style="list-style-type: none"> <li>• When the key is not in the vehicle</li> <li>• Whenever there is a malfunction with the immobilizer system.</li> </ul>
	2 seconds	When the vehicle cannot detect the key.
	Blinks	When the turn signal light is on.
	Continuously	When high-beam headlamps are on.
	Continuously	When low-beam headlamps are on.
	Continuously	When the light switch is in the ON position.
	Continuously	When the rear fog lights are on.
	Continuously	<ul style="list-style-type: none"> <li>• When High Beam Assist (HBA) is activated.</li> </ul> Refer to "High Beam Assist (HBA) (if equipped)" on page 5-54.
<b>AUTO HOLD</b>	Continuously	When AUTO HOLD is activated.
120 km/h	Blinking	Overspeed warning light blinks when you drive the vehicle more than 120 km/h. The overspeed warning chime also sound for approximately 5 seconds.


## \* INFORMATION


### • Dual-diagonal braking system

Your vehicle is equipped with dual diagonal braking systems. This means you still have braking on two wheels even if one of the dual systems should fail.

With only one of the dual systems working, more than normal pedal travel and greater pedal pressure are required to stop the vehicle. Also, the vehicle will not stop in as short a distance with only a portion of the brake system working.


### • Engine oil pressure warning light

 - When the engine oil pressure is low

- Drive carefully to the nearest safe location and stop your vehicle.
- Turn the engine off and check the engine oil level (For more details, refer to "Engine oil" on page 8-18). If the level is low, add oil as required.
- If the engine oil pressure warning light () remains on after adding oil or if oil is not available, have the vehicle inspected by a professional workshop as soon as possible. Kia recommends to visit an authorized Kia dealer/service partner. Continued driving with the warning light on may cause engine failure.

### • Exhaust system (GPF) warning light



- Exhaust system (GPF) warning light () may turn off after the vehicle speed is over approximately 80 km/h (50 mph), or above 3rd gear with 1,500~4,000 rpm for a certain time (approximately 30 minutes).
- If this warning light blinks in spite of the procedure (at this time the LCD

warning message will be displayed), have the system checked by a professional workshop. Kia recommends to visit an authorized Kia dealer/service partner.

## ⚠ WARNING

### • Parking brake & brake fluid warning light

- Driving the vehicle with a warning light ON is dangerous. If the parking brake & brake fluid warning light appears with the parking brake released, it indicates that the brake fluid level is low.
- In this case, have the vehicle inspected by a professional workshop. Kia recommends visiting an authorized Kia dealer/service partner.

### • Electronic Brake force Distribution (EBD) system warning light





- When both ABS and parking brake & brake fluid warning lights are on, the brake system will not work normally and you may experience an unexpected and dangerous situation during sudden braking.
- In this case, avoid high speed driving and abrupt braking. We recommend you have the vehicle inspected by an authorized Kia dealer/service partner as soon as possible.

### • Safe stopping


- The TPMS cannot alert you to severe and sudden tire damage caused by external factors.
- If you notice any vehicle instability, immediately take your foot off the accelerator pedal, apply the brakes gradually with light force, and

slowly move to a safe position off the road.


**CAUTION**

- **Low fuel level warning light** 
  - Driving with the Low fuel level warning light on or with the fuel level below "E (O) (Empty)" can cause the engine to misfire.
- **Malfunction Indicator Lamp (MIL)** 
  - If the Malfunction Indicator Lamp (MIL) appears, potential catalytic converter damage is possible which could result in loss of engine power. In this case, have the vehicle inspected by a professional workshop. Kia recommends to visit an authorized Kia dealer/service partner.
- **Exhaust system warning light** 
  - If you continue to drive with the exhaust system warning light  blinking for a long time, the system can be damaged and fuel consumption can worsen.

**\* NOTICE**

- Make sure that all warning lights are OFF after starting the vehicle. If any light is still ON, this indicates a situation that needs attention.
- **Malfunction Indicator Lamp (MIL)** 
  - Driving with the Malfunction Indicator Lamp (MIL) on may cause damage to the emission control system which could affect drivability and/or fuel economy.
  - If the enhanced engine protection system becomes activated due to


lack of engine oil, engine power will be limited. If such condition continues repeatedly, the Malfunction Indicator Lamp (MIL) will appear.

- **Electronic Brake force Distribution (EBD) system warning light** 
  - When the ABS warning light is on or both ABS and Parking Brake & Brake Fluid warning lights are on, the speedometer, odometer, or trip-meter may not work. Also, the MDPS warning light may appear and the steering effort may increase or decrease.
  - In this case, avoid high speed driving and abrupt braking. We recommend you have the vehicle inspected by an authorized Kia dealer/service partner as soon as possible.
- **Electronic Parking Brake warning light EPB**
  - The Electronic Parking Brake warning light (**EPB**) may appear when the Electronic Stability Control (ESC) indicator light comes on to indicate that the ESC is not working properly (This does not indicate malfunction of the EPB).
- Continuous driving with the LED Headlight warning light on or blinking can reduce LED headlight life.
- If the icy road warning light appears while driving, you should drive more attentively and safely refraining from over-speeding, rapid acceleration, sudden braking or sharp turning, etc.



- **Engine oil pressure warning light**



- When engine oil pressure decreases due to insufficient engine oil, etc., the engine oil pressure warning light () will appear.
  - The enhanced engine protection system which limits engine power will be activated. If the engine oil pressure is restored, the engine oil pressure warning light and the enhanced engine protection system will turn off.
- 

## Lighting

### Lighting functions

#### Battery saver function

The purpose of this feature is to prevent the battery from being discharged.

The system automatically shuts off the parking lights after the engine is off and the driver's door is opened.

However, the position lamps stay ON even when the driver-side door is opened if the light switch is operated after the engine is turned off.

If necessary, to keep the lamps on turn the position lamps OFF and ON again using the headlamp switch on the steering column after the engine is turned off.

#### CAUTION

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

---

### Headlamp escort function

#### Operation

- The headlamps remain on for approximately 5 minutes.
- If the driver's door is opened and closed, the headlamps turn off after 15 seconds.
- To turn the headlamps OFF:
  - Press the lock button on the key 2 times
  - Turn the headlamp switch to OFF position

#### Operating condition(s)

- The vehicle is in ACC or OFF position with the headlamps ON

## Daytime Running Light (DRL)

### Operating condition(s)

- The vehicle is in ON position
- The headlamp switch is in OFF position
- Parking brake is disengaged

### \* INFORMATION

If necessary, to keep the position lamp on when the vehicle is turned off, perform the following:

- Open the driver's side door.
- Turn the position lamp ON.

## Lighting controls

### Operating lights

Type A



ODEPPH042030L

Type B



ODEPPH042006L

Type C



ODEPPH042031L

### Operation

- 1 OFF/O
- 2 AUTO
  - Tailamps and headlamps will turn ON or OFF automatically depending on the amount of light outside the vehicle.
- 3 Position & Taillamp (DRL)
- 4 Low beam (Low beam)

### \* INFORMATION

The vehicle must be in the ON position to turn on the headlights.

### ⚠ CAUTION

- Never place anything over the sensor located on the instrument panel as this will ensure better auto-light system control.
- Don't clean the sensor using a window cleaner, the cleaner may leave a light film which could interfere with sensor operation.
- If your vehicle has window tint or other types of metallic coating on the front windshield, the Auto light system may not work properly.

### Operating turn signals



ODEPPH042007L

### Operation

- Move the lever up or down (A).

### \* NOTICE

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

## One-touch lane change function

### Operation

1. Move the turn signal lever up or down (B).
2. Release the lever.

### \* INFORMATION

- You can activate or deactivate the One Touch Turn Signal function or choose the number of blinking (3, 5, or 7) by selecting **Lights** → **One Touch Turn Signal** from the Settings menu.
- 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.

## Operating fog lights (if equipped)



### Operation

- Turn the front fog light switch (1) to the dedicated position.
- Rear: (D)

## Operating condition(s)

- The headlamp is turned ON.

### ⚠ CAUTION

When in operation, the fog lights consume large amounts of vehicle electrical power. Only use the fog lights when visibility is poor.

## Operating high beam



### Operation

- Push the lever to use high beam.
- Pull the lever towards you to flash the headlights (D).

### ⚠ WARNING

Do not use high beam when there are other vehicles. Using high beam could obstruct the other driver's vision.

### \* INFORMATION

- If you push the lever away from you, the lever will return to its original position. The high beam indicator will light when the headlight high beams are switched on.
- It will return to the normal (low beam) position when released after pulling the lever towards you. The headlight switch does not need to be on to use this flashing feature.

## High Beam Assist (HBA) (if equipped)



High Beam Assist is a function that automatically adjusts the headlamp range (switches between high beam and low beam) according to the brightness of other vehicles and road conditions.

### Operating condition

1. Place the light switch in the AUTO position.
2. Turn on the high beam by pushing the lever away from you.
3. High Beam Assist (HBA) indicator will appear.
4. High Beam Assist will turn on when vehicle speed is above 40 km/h (25 mph).
5. The details of operation with the light switch while High Beam Assist is on are below.
  - 1) If the light switch is pushed away, High Beam Assist will turn off and the high beam will be on continuously.
  - 2) If the light switch is pulled towards you when the high beam is off, the high beam will be on without cancellation of High Beam Assist. (When you take your hands off the switch the lever will move to the middle and the high beam will turn off.)
  - 3) If the light switch is pulled towards you when the high beam is on by High Beam Assist, the low beam will

be on and High Beam Assist will turn off.

- 4) If the light switch is turned to the headlamp position (H) from AUTO position, High Beam Assist will turn off and the low beam will be on continuously.

When High Beam Assist is operating, the high beam switches to low beam in the below conditions.

- When the headlamp is detected from the oncoming vehicle.
- When the tail lamp is detected from the front vehicle.
- When headlamp/tail lamp of bicycle/motorcycle is detected.
- When the surrounding is so bright that high beams are not needed.
- When streetlights or other lights are detected.
- When the light switch is not in the AUTO position.
- When vehicle speed is below 30 km/h (19 mph).

### Warning light and message

When High Beam Assist is not working properly, a warning message (**Check High Beam Assist (HBA) system**) will come on for a few second. After the message disappears, the master warning light (⚠) will appear.

Have the function checked by a professional workshop. Kia recommends to visit an authorized Kia dealer/service partner.

### ⚠ CAUTION

The driver must be cautious in the below situations as the function may not operate in the following conditions:

### **When the light from on-coming or front vehicle is poor**

- When the light from the oncoming or front vehicle is not detected because of lamp damage, or because it is hidden from sight, etc.
- When the lamp of the oncoming or front vehicle is covered with dust, snow or water.
- When the front vehicle's headlamps are off but the fog lamps on and etc.

### **When external conditions intervene**

- When there is a lamp that has a similar shape as a vehicle's lamps.
- When the headlamp is not repaired or replaced at an authorized dealer
- When headlamp aiming is not properly adjusted.
- When driving on a narrow curved road, rough road, downhill or uphill.
- When only part of the vehicle in front is visible on a crossroad or curved road.
- When there is a traffic light, reflecting sign, flashing sign or mirror ahead.
- When there is a temporary reflector or flash ahead (construction area).
- When the road conditions are bad such as being wet, iced or covered with snow.
- When a vehicle suddenly appears from a curve.
- When the vehicle is tilted from a flat tire or being towed.
- When the Lane Safety indicator (yellow) appears (if equipped) and etc.

### **When front visibility is poor**

- When the lamp of the oncoming or front vehicle is covered with dust, snow or water.

- When the light from the oncoming or front vehicle is not detected because of exhaust fume, smoke, fog, snow, etc.
- When the front window is covered with foreign matters.
- When it is hard to see because of fog, heavy rain or snow and etc.
- Do not disassemble a front view camera temporarily for tinted window or attaching any types of coatings and accessories. If you disassemble the camera and assemble it again, have the function checked by a professional workshop. Kia recommends to visit an authorized Kia dealer/service partner and have the function checked to need a calibration.
- When you replace or reinstall the windshield glass, or front view camera, have the function checked by a professional workshop. Kia recommends to visit an authorized Kia dealer/service partner.
- Be careful that water doesn't get into High Beam Assist unit and do not remove or damage related parts of High Beam Assist.
- Do not place objects on the crash pad that reflect light such as mirrors, white paper, etc. The function may not be able to function if sunlight is reflected.
- At times, High Beam Assist may not operate due to function limitations. The function is for your convenience only. It is the responsibility of the driver for safe driving practices and always check the road conditions for your safety.
- When the function does not operate normally, change the lamp position

manually between the high beam and low beam.

### Headlamp leveling adjustment switch (if equipped)



ODEPV042037

### Operation

- The higher the number of the switch position, the lower the headlamp beam level.
- Always keep the headlamp beam at the proper leveling position, or headlamps may dazzle other road users.

Loading condition	Switch position
Driver only	0
Driver + Front passenger	0
Full passengers (including driver)	1
Full passengers (including driver) + Maximum permissible loading	2
Driver + Maximum permissible loading	3

## Wipers and washers

### Wipers

#### Controlling wipers

Type A



ODEPV042044

Type B



ODEPPH042011L

Type C



ODEPPH042032L

### Operation

- 1 Front wiper speed control
  - MIST (1x): Single wipe
  - OFF (0): Off
  - INT (---): Intermittent control wipe
  - LO (1): Low wiper speed
  - HI (2): High wiper speed
- 2 Rear wiper speed control
  - HI (2): Continuous wipe
  - LO (1): Intermittent wipe
  - OFF (0): Off

**\* 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. If you do not remove the snow and/or ice before using the wiper and washer, it may damage the wiper and washer system.

**Washers**

**Controlling washers**

Type A



Type B



Type C



2. Pull/push the lever to spray washer fluid on the windshield.
3. The wipers run several times.

**⚠ WARNING**

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

**⚠ CAUTION**

- To prevent possible damage to the washer pump, do not operate the washer when the fluid reservoir is empty.
- 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.
- To prevent possible damage to the wipers and washer system, use anti-freezing washer fluids in the winter season or cold weather.

**Operation**

1. Move the wiper speed control switch to OFF (O) position.

## Welcome system

The surroundings or the interior will be appeared when the driver approaches or exits the vehicle.

### Illuminating functions

#### Door handle lamp (if equipped)



#### Operation

- Door handle lamp will turn on for approximately 15 seconds.

#### Operating condition(s)

- All the doors (and tailgate) are closed and locked.

### Headlamp escort function

#### Operation

- The headlamps remain on for approximately 5 minutes if the vehicle is in ACC or OFF position with the headlamps ON.
  - The headlamps turn off after 15 seconds if the driver door is opened and closed.

#### Operating condition(s)

- Vehicle is in the ACC position.
- The driver's door is opened and closed.

## Interior illumination

### Operation

- The room lamp will turn on.
  - For approximately 30 seconds.

### Operating condition(s)

- Map lamp switch is in DOOR mode.
- All the doors (and tailgate) are closed and locked.





## Interior lights

### Map lamp



### Operation

- Press or touch the lamp (1) to turn the map lamp ON.
-  (2): DOOR mode
-  (3): Front and rear room lamps on and off.

### \* INFORMATION

#### DOOR mode

- The map lamp and room lamp come on approximately 30 seconds.
  - When a door is opened.
  - When doors are unlocked with a smart key as long as the doors are not opened.
- The map lamp and room lamp will stay on
  - If a door is opened with the vehicle in the ACC or OFF position. (5 minutes)
  - If the door is opened with the vehicle in the ON position. (continuously)
- The map lamp and room lamp will go out
  - If the vehicle is changed to the ON position or all doors are locked. (immediately)

### \* NOTICE

The DOOR mode and ROOM mode can not be selected at a time.

### Room lamp (if equipped)



### Operation

- Press the switch to turn the room lamp on and off.

### Luggage room lamp



### Operation

- Open the tailgate. The lamp will turn on.

### Vanity mirror lamp (if equipped)



#### Operation

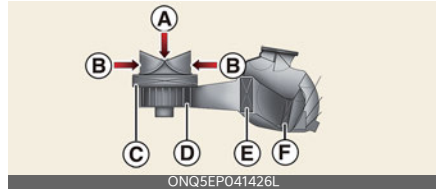
- ☀️: The lamp will turn on if this button is pressed.
- : The lamp will turn off if this button is pressed.

#### \* NOTICE

To prevent unnecessary charging system drain, close the vanity mirror cover after using the mirror.

### Climate control system

#### Climate control system components



- A: Outside air
- B: Recirculated air
- C: Climate control air filter
- D: Blower
- E: Evaporator core
- F: Heater core

The climate control air filter installed behind the glove box filters the dust or other pollutants that come into the vehicle from the outside through the heating and air conditioning system.

If dust or other pollutants accumulate in the filter over a period of time, the air flow from the air vents may decrease. This leads to moisture accumulating on the inside of the windshield even when the outside (fresh) air position is selected.

If this happens, have the climate control air filter replaced by a professional workshop. Kia recommends to visit an authorized Kia dealer/service partner.

**⚠ CAUTION**

- Excessive air conditioning use**  
 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 vehicle overheating. Continue to use the blower fan but turn the air conditioning system off if the temperature gauge indicates vehicle overheating.
- The air conditioning system should only be used with the windows and sunroof closed to prevent condensation inside the vehicle that may cause damage to electrical components.

**\* NOTICE**

- Replace the filter according to the maintenance schedule. If the vehicle is being driven in severe conditions such as dusty or rough roads, more frequent air conditioner filter inspections and changes are required.
- When the air flow rate suddenly decreases, have the system checked by a professional workshop. Kia recommends to visit an authorized Kia dealer/service partner.

**Air conditioning refrigerant label**

Example Type A



Example Type B



- Classification of refrigerant
- Amount of refrigerant
- Classification of Compressor lubricant
- Caution
- Flammable Refrigerant
- Registered technician to service Air Conditioning system
- Service manual

You can find out which air conditioning refrigerant is applied your vehicle at the label inside of the engine compartment. Refer to "Refrigerant label" on page 9-9 for more detail.

**\* INFORMATION**

- When the amount of refrigerant is low, the performance of the air conditioning is reduced. Overfilling also has a negative impact on the air conditioning system.
- If abnormal operation is found, have the system inspected by a professional workshop. Kia recommends to visit an authorized Kia dealer/service partner.

**⚠ WARNING**

- **Vehicles equipped with R-134a**



Because the refrigerant is at very high pressure, the air conditioning system should only be serviced by trained and certified technicians. It is important that the correct type and amount of oil and refrigerant is used.

Otherwise, it may cause damage to the vehicle and personal injury.

- **Vehicles equipped with R-1234yf\***



Since the refrigerant is mildly flammable and operated at high pressure, the air conditioning system should only be serviced by trained and certified technicians.

It is important that the correct type and amount of oil and refrigerant are used. All refrigerants should be reclaimed with proper equipment. Venting refrigerants directly to the atmosphere is harmful to individuals and environment. Failure to heed

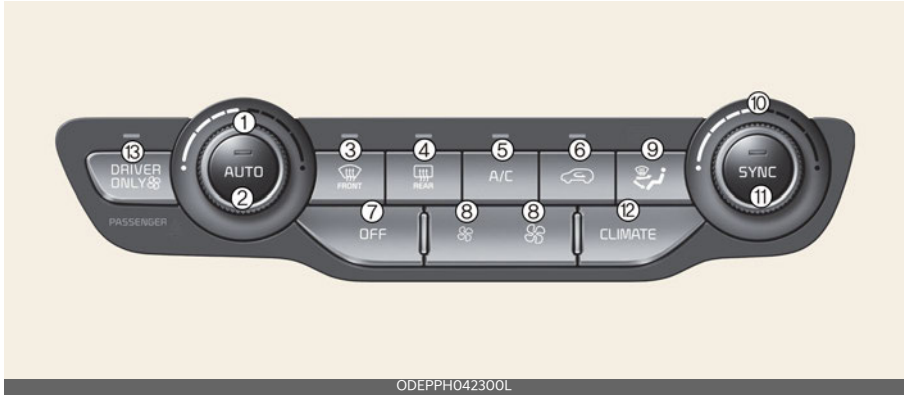
these warnings can lead to serious injuries.

**⚠ CAUTION**

**AC repair**

It is important that the correct type and amount of oil and refrigerant is used, otherwise, damage to the vehicle may occur. To prevent damage, the air conditioning system in your vehicle should only be serviced by trained and certified Kia technicians.

## Automatic climate control system



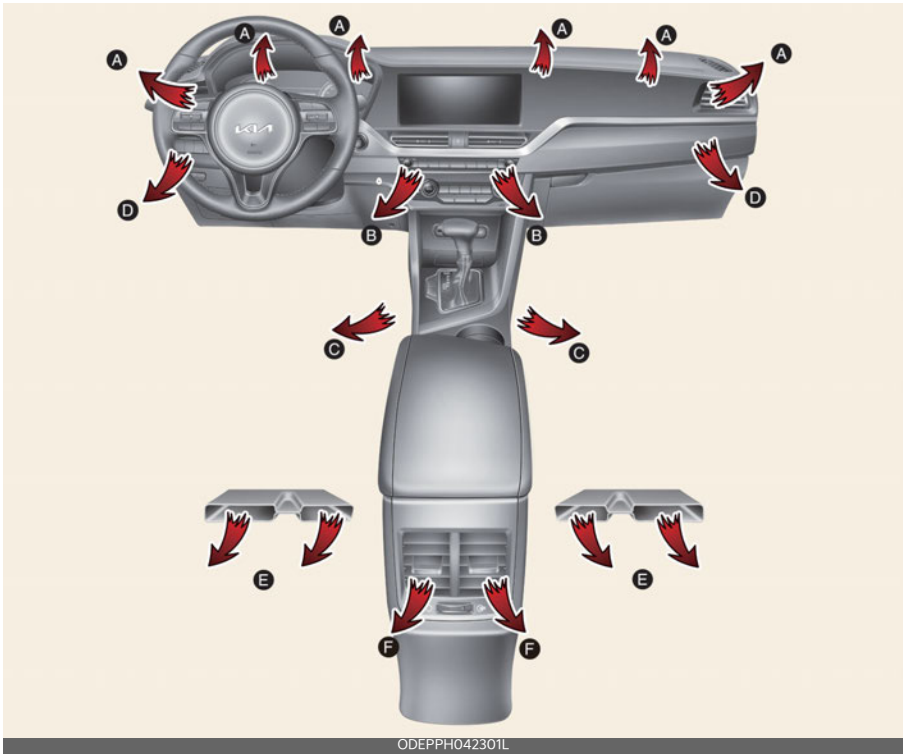
- 1 Driver's temperature control knob
- 2 AUTO (automatic control) button
- 3 Front windshield defroster button
- 4 Rear window defroster button
- 5 Air conditioning (A/C) button
- 6 Air intake control button
- 7 OFF button
- 8 Fan speed control button
- 9 Mode selection button
- 10 Passenger's temperature control knob
- 11 SYNC button
- 12 Climate button
- 13 Driver's side only button

### **⚠ CAUTION**

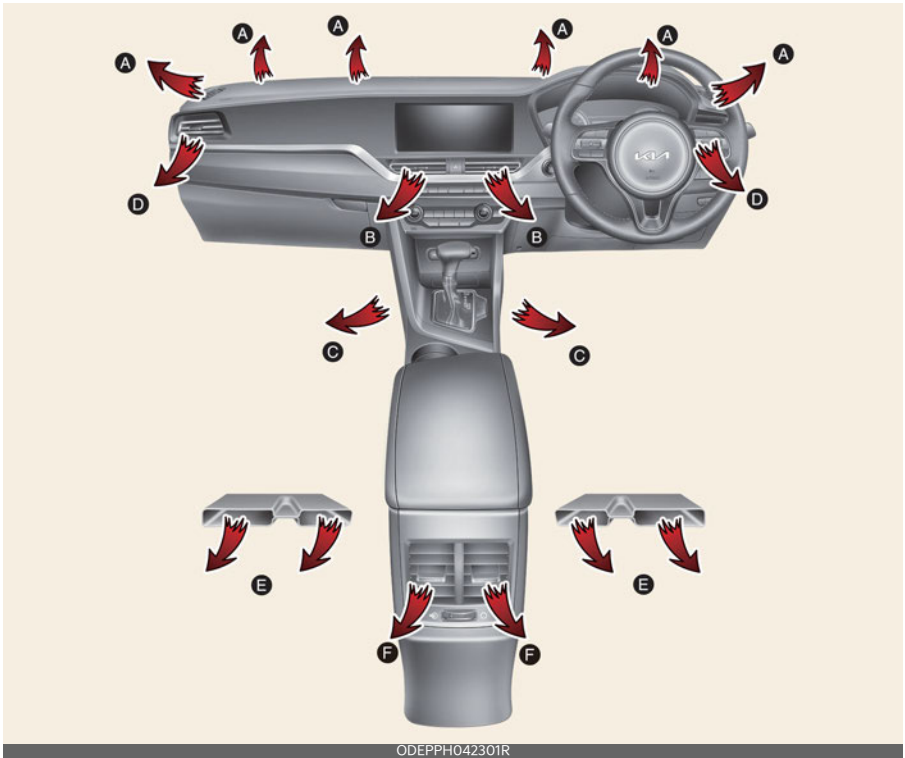
Operating the blower when the vehicle is in the ON position could cause the battery to discharge. Operate the blower when the engine is running.

# Operating climate control system

Left-hand drive



Right-hand drive



ODEPPH042301R

Mode	Operation	Air flow
	Air flow is directed toward the upper body and face.	B, D, F
	Air flow is directed towards the face and the floor.	B, C, D, E, F
	Most of the air flow is directed to the floor, with a small amount of air directed to the windshield, side-window defrosters, and side air vents.	A, C, D, E, F
	Most of the air flow is directed to the floor and the windshield, with a small amount directed to the side-window defrosters and side air vents.	A, C, D, E, F
	Most of the air flow is directed to the windshield, with a small amount of air directed to the side-window defrosters and side air vents.	A, D

### Operation

1. Start the vehicle.
2. Set the mode-selection buttons as desired. To improve the effectiveness of heating and cooling:
  - Heating: (🔥)
  - Cooling: (❄️)
3. Set the temperature control to the desired temperature level.
4. Set the air intake control to the position for outside (fresh) air if required.
5. Set the position of the fan speed control so that it runs at the desired speed.
6. If desired, turn the air conditioning ON with the temperature set high in order to dehumidify the air before it enters into the cabin.

If the windshield fogs up, select the Front Defrost (👑) mode.

### Selecting air flow modes



### Operation

- Select the direction of the air flow through the ventilation system.
- The air flow outlet ports are enabled in the following sequence:



### 👤 Face-Level (B, D, F)

Air flow is directed toward the upper body and face. Additionally, each out-

let can be controlled to direct the air discharged from the outlet.

### 👤 Bi-Level (B, C, D, E, F)

Air flow is directed towards the face and the floor.

### 👣 Floor-Level (A, C, D, E, F)

Most of the air flow is directed to the floor, with a small amount of the air being directed to the windshield, side window defrosters and side air vents.

### 👣👑 Floor/Defrost-Level (A, C, D, E, F)

Most of the air flow is directed to the floor and the windshield with a small amount directed to the side window defrosters and side air vents.

### 👑 Defrost-Level (A, D)

Most of the air flow is directed to the windshield with a small amount of air directed to the side window defrosters and side air vents.

### Controlling air intake



### Operation

- Select the outside (fresh) air position or recirculated air position.
- Outside (fresh) air position: Air enters the vehicle from outside. The indicator light will turn off.
- Recirculated air position: Air from the passenger compartment will be



drawn through the heating system. The indicator light appears.

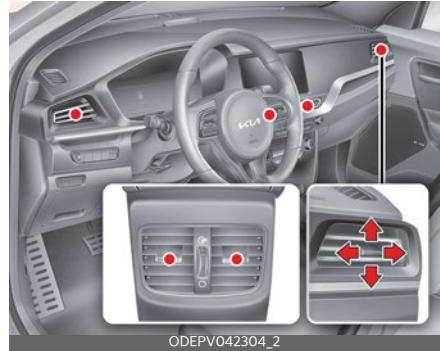
### **⚠ WARNING**

- Continuously using the climate control system in the recirculated air position may allow humidity to increase inside the vehicle which may fog the glass and obscure visibility.
- Do not sleep in a vehicle with the air conditioning or heating system on. It may cause serious harm or death due to a drop in the oxygen level and/or body temperature.
- Continuously using the climate control system in the recirculated air position can 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.

### **\* NOTICE**

Prolonged operation of the heater in the recirculated air position (without air conditioning selected) may cause fogging of the windshield and side windows and make the air in the passenger compartment stale. In addition, prolonged use of the air conditioning with the re circulated air position selected will result in excessively dry air in the passenger compartment.

## Controlling instrument panel vents



### Operation

- Adjust the direction of air delivered from the vents.
- To close the vent, push the air vent lever in the opposite direction of the passenger.
- To open the vent, push the air vent lever in the same direction of the passenger.

## Air conditioning (A/C)



### Operation

- Press the A/C button.

### Controlling heating and air conditioning automatically



#### Operation

1. Set the desired temperature.
2. Press the AUTO button to control:
  - Mode
  - Fan speed
  - Air intake
  - Air conditioning

#### \* NOTICE

- To turn the automatic operation off, select any button or switch of the following:
  - Mode selection button
  - Fan speed control button
  - Front windshield defroster button (Press the button one more time to deselect the front windshield defroster function. The AUTO sign will appear on the information display once again.)

The selected function will be controlled manually while other functions operate automatically.

- For your convenience and to improve the effectiveness of the climate control, use the AUTO button and set the temperature to 22 °C (72 °F).

### Controlling temperature



#### Operation

- Turn the knob left or right to the desired temperature.

#### \* NOTICE

Never place anything over the sensor located on the instrument panel to ensure better control of the heating and cooling system.

### Adjusting driver and passenger side temperature equally



#### Operation

1. Press the 'SYNC' button.
2. Move the driver's side temperature control switch.

## Changing temperature scale

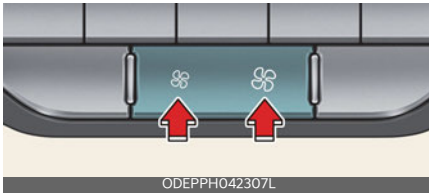
### Operation

- While pressing the OFF button, press and hold the AUTO button for more than 3 seconds.
- The display will change from °C to °F, or from °F to °C.

### \* INFORMATION

If the battery has been discharged or disconnected, the temperature mode display will reset to Centigrade.

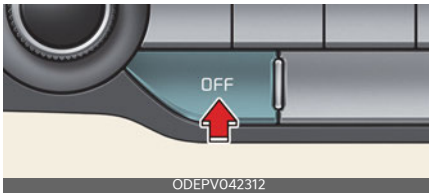
## Controlling fan speed



### Operation

- Press left or right button to adjust the speed.

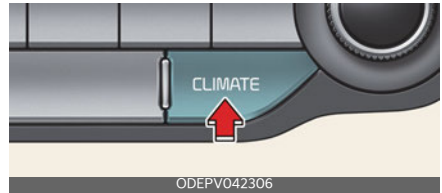
## Turning the fan OFF



### Operation

- Press OFF button to turn the blowers off.

## Climate information screen selection (if equipped)



### Operation

- Press the climate information screen selection button to display climate information on the screen.

## Climate control features

### Automatic ventilation (if equipped)

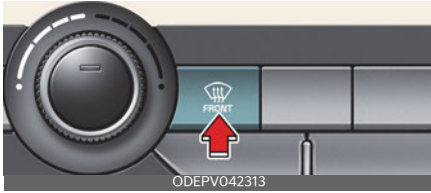
The system automatically selects the outside (fresh) air position when the climate control system operates over a certain period of time (approximately 30 minutes) in low temperature with the re-circulated air position selected.

### Operation

- When the air conditioning system is on, select Face Level (↖) mode.
- While pressing the A/C button, press the re-circulated air position button 5 times within 3 seconds.
- When the automatic ventilation is canceled, the indicator will blink 3 times.
- When the automatic ventilation is activated, the indicator will blink 6 times.

## Windshield defrosting and defogging

### Defrosting/defogging windshield



#### Operation

1. Set the fan speed to the desired position.
2. Select desired temperature.
3. Select (🌀) or (🌀🌀).
4. The outside (fresh) air and air conditioning will be selected automatically.

#### **⚠ WARNING**

#### Windshield heating

Do not use the (🌀) or (🌀🌀) position during cooling operation in extremely humid weather. The difference between the temperature of the outside air and the windshield could cause the outer surface of the windshield to fog up, causing loss of visibility. In this case, set the mode selection to the (🌀) position and fan speed control to the lower speed.

## Auto defogging for automatic climate control



ODEPPO42014L

#### Operation

- Air conditioning will turn ON at low temperature.
- Air intake control will change to Fresh mode.
- Fan speed will increase.
- Mode will change to defrost to direct airflow to the windshield

#### Operating condition(s)

- When the heater or air conditioning is on.
- A high amount of humidity is detected in the vehicle.

#### Canceling or resetting auto defogging

#### Operation

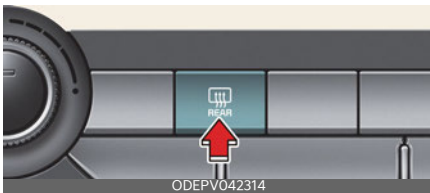
- Press (🌀🌀🌀) for 3 seconds.
  - The button indicator will blink 3 times if canceled.
  - The button indicator will blink 6 times if reset.

#### **\* NOTICE**

- When the air conditioning is turned on by Auto defogging system, if you try to turn off the air conditioning, the air conditioning will not be turned off.

- To maintain the effectiveness and efficiency of the Auto Defogging System, do not select Recirculation mode while the system is operating.
- When the Auto Defogging System is operating, the fan speed adjustment button, the temperature adjustment knob, and the air intake control button are all disabled.
- Do not remove the sensor cover located on the upper end of the driver side windshield glass.  
Damage to system parts could occur and may not be covered by your vehicle warranty.

### Rear window/outside mirror defroster



#### Operation

1. Press the rear window defroster button. The indicator appears when the defroster is ON.
2. It turns OFF after approximately 20 minutes or when the vehicle is in OFF position.

#### **CAUTION**

#### Conductors

To prevent damage to the conductors bonded to the inside surface of the rear window, never use sharp instruments or window cleaners containing abrasives to clean the window.

## Storage compartment

### Center console storage/glove box

#### Opening center console storage/glove box



#### Operation

- Pull the lever upward to open the center console storage.
- Push the button of the glove box, and it will open.

#### **WARNING**

#### • Flammable materials

Do not store glasses, gas lighter, portable battery, canned beverage, spray can, propane cylinder, cosmetic tube 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.

#### • Glove box

To reduce the risk of injury in an accident or sudden stop, always keep the glove box door closed while driving.

**⚠ 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 so many items in the storage compartment that the storage compartment cover cannot close securely.
- Do not keep food in the glove box for a long time.

**Luggage board (if equipped)**



- Lift the luggage board up.
- Fold the rear luggage board to the front.

**Sunglass holder**



**Operation**

- Press the cover and the holder will slowly open.
- Push to close the holder.

**Luggage net holder (if equipped)**



There are 4 holders located in the cargo area.

**⚠ WARNING**

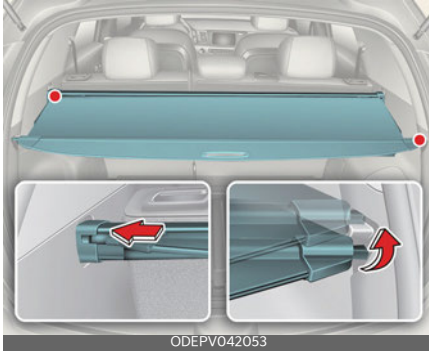
Avoid eye injury. DO NOT overstretch the luggage net, ALWAYS keep your face and body out of the luggage net's recoil path. DO NOT use when the strap has visible signs of wear or damage.

**⚠ CAUTION**

To prevent damage to the goods or the vehicle, care should be taken when carrying fragile or bulky objects in the luggage compartment.

## Cargo security screen (if equipped)

### Installing cargo security screen



### Operation

1. Pull the cargo security screen towards the rear of the vehicle by the handle.
2. Insert the guide pin into the guide.

### **⚠ WARNING**

- Do not place objects on the cargo security screen. Such objects may move around inside the vehicle and possibly injure vehicle occupants during an accident or when braking.
- Never allow anyone to ride in the luggage compartment. It is designed for luggage only.
- Maintain the balance of the vehicle and locate the weight as forward as possible.

### \* NOTICE

- Since the cargo security screen may be damaged or malformed, do not put luggage on it when it is used.
- Pull out the cargo security screen using the handle in the center to prevent the guide pin from falling out of the guide.
- The cargo security screen may not automatically slide back in if the cargo security screen is not fully pulled out. Fully pull it out and then let go.

### Removing cargo security screen

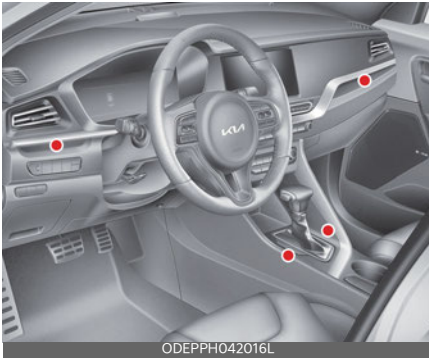


### Operation

1. Push the guide pin in the direction.
2. Pull the cargo security screen out.
3. Keep the cargo security screen in the tray.

## Interior features

### Ambient lights (if equipped)



The ambient lights are applied to the front crash pad.

### Cup holders



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

#### **⚠ WARNING**

##### • Hot liquids

- Do not place uncovered cups with hot liquid in the cup holder while the vehicle is in motion. If the hot liquid spills, you burn yourself. Such a burn to the driver could lead to 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 unsecured bottles, glasses, cans, etc., in the cup holder while the vehicle is in motion.

- Keep cans or bottles out of direct sun light and do not put them in a vehicle that is heated up. It may explode.

#### **\* NOTICE**

- Keep your drinks sealed while driving to prevent spilling your drink. If liquid spills, it may get into the vehicle's electrical/electronic system and damage electrical/ electronic parts.
- When cleaning spilled liquids, do not dry the cup holder at high temperature. This may damage the cup holder.

### Ashtray (if equipped)



Use the ashtray by putting it to the cup holder.

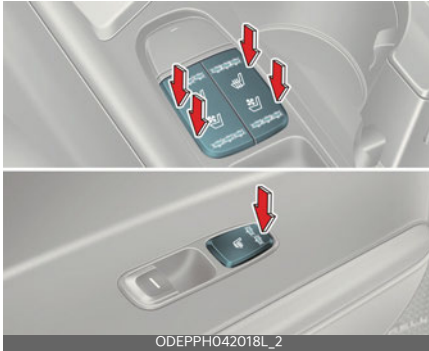
#### **⚠ WARNING**

##### 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.



## Seat warmer/ventilation (if equipped)



The seat warmer/ventilation is provided to warm/cool the front and the rear seats.

\* The seat ventilation is provided only on the front seats.

### Operation

- Push the button to control the function.
- It defaults to the OFF position the vehicle is in ON position.
- The temperature setting of the seat will change as follows:

Temperature	Duration	
	Warmer	Ventilation
OFF	-	-
High	30 minutes	continuous
Medium	60 minutes	-
Low	continuous	continuous

\* Rear seats does not have the medium temperature.

### **⚠ WARNING**

#### Seat warmer burns

Passengers should use extreme caution when using seat warmers due to the possibility of excess heating or burns.

The seat warmer may cause burns even at low temperatures, especially if used for long periods of time. In particular, the driver must exercise extreme care for the following types of passengers:

- Infants, children, elderly or handi-capped persons, or hospital outpa-tients
- Persons with sensitive skin or those that burn easily
- Fatigued individuals
- Intoxicated individuals
- Individuals taking medication that can cause drowsiness or sleepiness (sleeping pills, cold tablets, etc.)

### **⚠ CAUTION**

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

**\* NOTICE**

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

**Sun visor**



**Operation**

1. Pull down, unsnap it from the bracket (1).
2. Swing it to the side (2).
  - Pull down the visor and slide the mirror cover (3) to use the vanity mirror.
  - The ticket holder (4) is provided for holding a tollgate ticket.

**⚠ WARNING**

For your safety, do not block your view when using the sun visor.

**\* NOTICE**

Do not put several tickets in the ticket holder at one time. This could cause damage to the ticket holder.

**USB charger**

Center console



Center console storage



The USB car charger allows drivers and passengers to charge their digital devices like smartphones, and PC tablets.

**⚠ CAUTION**

- Use the USB car charger with the ignition on. Otherwise, Vehicle battery can be discharged.
- Use the official USB cable of the manufacturer of the digital device to be charged.
- Make sure that any foreign object, drinks, and water do not come into contact with the USB car charger. Water or foreign object can damage the USB charger.
- Do not use the device those current consumption exceeds 2.1 A.
- Do not connect an electrical device that generates excessive electromagnetic noise to the USB car port. If you do so, noise can be caused or vehicle electronic devices can be interrupted while audio or AV is on.

- If the charger is connected incorrectly, it can cause serious damage on the devices. Please note that damages due to incorrect usage are not covered by warranty service.
- Push the plug in as far as it will go. If good contact is not made, the plug may overheat and the fuse may open.
- Plug in battery equipped electronic devices with reverse current protection. The current from the battery may flow into the vehicle's electrical/electronic system and cause system malfunction.

## Power outlet



The power outlet allows drivers and passengers to charge their digital devices like smartphones, and PC tablets.

## Operating condition(s)

- The devices should draw less than 15 A when the vehicle is in ON position.

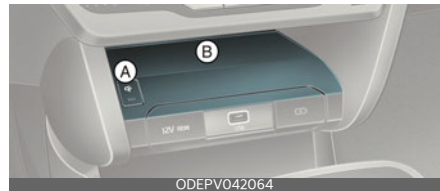
### **⚠ WARNING**

- Use the power outlet only when the vehicle is on and remove the accessory plug after use. Using the accessory plug for prolonged periods of time with the vehicle off could cause the battery to discharge.
- Only use 12 V electric accessories which are less than 15 A in electric capacity.
- Adjust the air-conditioner or heater to the lowest operating level when using the power outlet.
- Close the cover when not in use.
- Some electronic devices can cause electronic interference when plugged into a vehicle's power outlet. These devices may cause excessive audio static and malfunctions in other electronic systems or devices used in your vehicle.

## • Electric shock

Do not put a finger or a foreign object (pen, etc.) into a power outlet and do not touch with a wet hand. You may get an electric shock.

## Wireless smart phone charging system (if equipped)



- A: Indicator
- B: Charging pad

## Operation

- Place the smart phone on the center of the wireless charging pad.
- The indicator light will change to orange once the wireless charging begins.
- You can choose to turn the wireless charging function ON or OFF from the Settings menu.

## Operating condition(s)

- The wireless charging system is designed for one smart phone equipped with Qi only.

### \* INFORMATION

- If the wireless charging does not work, gently move your smart phone around the pad until the charging indicator light turns orange. Depending on the smart phone, the charging indicator light may not turn green even after the charging is complete.
- If the wireless charging is not functioning properly, the orange light will blink and flash for ten seconds then turn off. In such cases, remove the smart phone from the pad and replace it on the pad again, or double check the charging status.
- The system warns you with a message on the instrument cluster if the smart phone is still on the wireless charging unit after the vehicle is turned OFF and the front door is opened.

### ⚠ WARNING

If any metallic object such as coins is located between the wireless charging system and the smart phone, the charging may be disrupted. Also, the metallic object may heat up.

### ⚠ CAUTION

- When the interior temperature of the wireless charging system rises above a set temperature, the wireless charging will cease to function. After the interior temperature drops below the threshold, the wireless charging function will resume.
- If there is any metallic object between the smart phone and the wireless charging pad, immediately remove the smart phone. Remove the metallic

object after it has completely cooled down.

- The wireless charging may not function properly when there is a heavy accessory cover on the smart phone.
- The wireless charging will stop when using the wireless smart key search function to prevent radio wave disruption.
- The wireless charging will stop when the smart key is moved out of the vehicle with the ignition in ON.
- The wireless charging will stop when any of the doors is opened (applicable for vehicles equipped with smart keys).
- The wireless charging will stop when the vehicle is turned OFF.
- The wireless charging will stop when the smart phone is not in complete contact with the wireless charging pad.
- Items equipped with magnetic components such as credit card, telephone card, bankbook, any transportation ticket and such may become damaged during wireless charging.
- Place the smart phone on the center of the charge pad for best results. The smart phone may not charge when placed near the rim of the charging pad. When the smart phone does get charged, it may heat up excessively.
- For smart phones without built-in wireless charging system, an appropriate accessory has to be equipped.
- Smart phones of some manufacturers may display messages on weak current. This is due to the particular characteristic of the smart phone and does not imply a malfunction on wireless charging function.

- The indicator light of some manufacturers' smart phones may still be yellow after the smart phone is fully charged. This is due to the particular characteristic of the smart phone and not a malfunction of the wireless charging.
- When any smart phone without a wireless charging function or a metallic object is placed on the charging pad, a small noise may sound. This small sound is due to the vehicle discerning compatibility of the object placed on the charging pad. It does not affect your vehicle or the smart phone in any way.
- The wireless cellular phone charging system may not support certain cellular phones, which are not verified for the Qi specification (Qi).
- For certain cellular phones with their own protection, the wireless charging speed may decrease and the wireless charging may stop.

#### \* NOTICE

For some manufacturers' smart phones, the system may not warn you even though the smart phone is left on the wireless charging unit. This is due to the particular characteristic of the smart phone and not a malfunction of the wireless charging.

## Coat hook

Rear grab handle



ODEPV042065

B-pillar



ODEPV042075

A coat hook is located on the rear grab handle and the B-pillar.

The B-pillar grab handle can also be used for easier access to the vehicle.

#### ⚠ WARNING

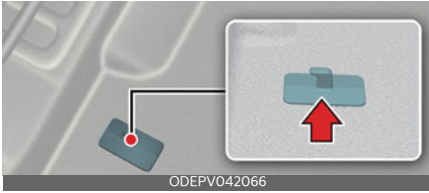
Do not hang other objects such as hangers or hard objects except clothes. Also, do not put heavy, sharp or breakable objects in the clothing's pockets. In an accident or when the curtain air bag is inflated, it may cause vehicle damage or body injury.

#### ⚠ CAUTION

##### Hanging clothing

Do not hang heavy clothes, since they may damage the hook.

## Floor mat anchors



Make sure the floor mat attaches to the anchors to keep the floor mat from sliding forward.

### **⚠ WARNING**

#### • After market floor mat

- Do not install after market floor mats that are not capable of being securely attached to the vehicle's floor mat anchors. Unsecured floor mats can interfere with pedal operation.
- Use floor mats not too thick and designed to be properly secured on the floor to avoid the interference with pedals. Make sure that installing the floor mats without removing plastic films on carpets may damage or break floor mat fix rings, resulting in the mats to be unsecured

Especially for a driver's seat, the unsecured mats may cause unintended acceleration/brake. Ensure to remove all the plastic films on the carpets before installing the mats.

## Audio system

### Antenna



#### • Shark-fin Antenna

- The shark-fin antenna transmits and receives wireless signals such as AM/FM, DAB, GNSS, LTE etc.

\* The signals which antenna can transmit and receive vary by the vehicle option.

### **⚠ CAUTION**

- Be careful of antenna damage by checking the height of the vehicle before entering low-ceiling spaces such as automated parking lots or automated washing machines.
- Be careful not to contact the antenna when loading cargo on the roof rack. Antenna transmission/reception performance may be degraded.

## USB port



You can use the USB port to plug in an USB.

### **⚠ WARNING**

#### Cell phone use

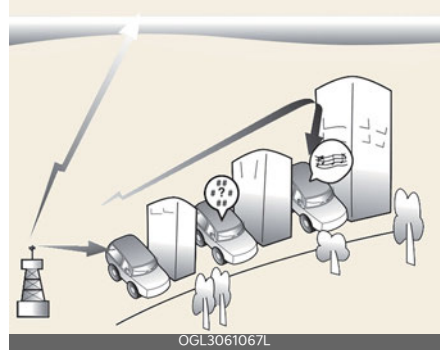
Do not use a cellular phone while driving. Stop at a safe location to use a cellular phone.

### **⚠ CAUTION**

- Depending on the size, length, or shape of the USB stick, if you forcibly close the tray cover, the USB device may be damaged or deformed or the cover may not reopen as the device is stuck. When the stick is stuck, forcibly opening the cover can also cause damage to the device. If the USB stick does not fit into the space, do not close the cover and try another USB stick with different specifications.
- When using a communication system such as a cellular phone or a radio set inside the vehicle, a separate external antenna must be fitted. When a cellular phone or a radio set is used with only the internal antenna, it may interfere with the vehicle's electrical system and adversely affect the safe operation of the vehicle.

## How vehicle radio works

### FM reception

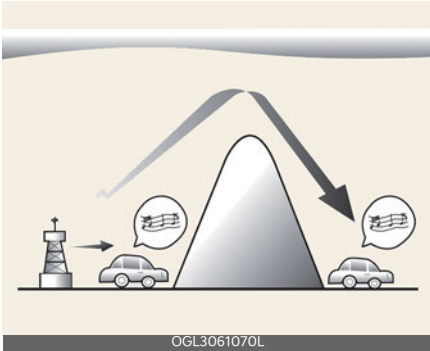


AM and FM radio signals are broadcast from transmitter towers located around your city. They are intercepted by the radio antenna on your vehicle. This signal is then processed by the radio and sent to your vehicle speakers.

However, in some cases the signal coming to your vehicle may not be strong and clear.

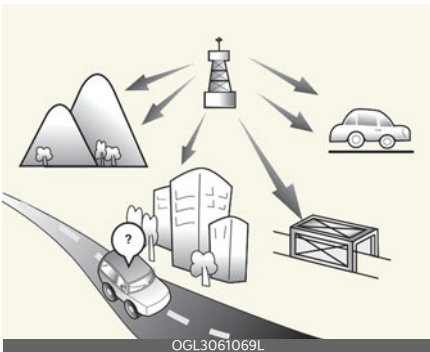
This can be due to factors, such as the distance from the radio station, closeness of other strong radio stations or the presence of buildings, bridges or other large obstructions in the area.

## 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 distance, low frequency radio waves can follow the curvature of the earth rather than traveling straight. In addition, they curve around obstructions resulting in better signal coverage.

## FM radio station

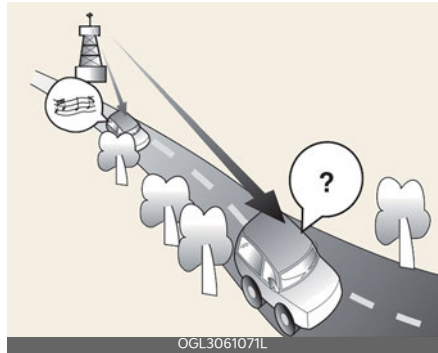


FM broadcasts are transmitted at high frequencies and do not bend to follow the earth's surface. Because of this, FM broadcasts generally begin to fade within short distances from the station. Also, FM signals are easily affected by buildings, mountains, and obstructions.

This can lead to undesirable or unpleasant listening conditions which might lead you to believe a problem exists with your radio.

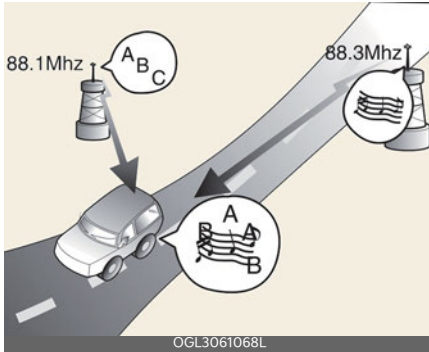
The following conditions are normal and do not indicate radio trouble:

- **Fading** - As your vehicle moves away from the radio station, the signal will weaken and sound will begin to fade. When this occurs, we suggest that you select another station with a stronger signal.



- **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 an 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 system. This does not mean that something is wrong with the audio equipment. In such a case, try to operate mobile devices as far from the audio equipment as possible.

### ⚠ CAUTION

When using a communication system such as a cellular phone or a radio set inside the vehicle, a separate external antenna must be fitted. When a cellular phone or a radio set is used with only the internal antenna, it may interfere with the vehicle's electrical system and adversely affect the safe operation of the vehicle.

### ⚠ WARNING

#### Cell phone use

Do not use a cellular phone while driving. Stop at a safe location to use a cellular phone.



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## Driving your vehicle

### Before driving

#### Necessary vehicle inspections

Be sure to check the following fluid levels on a regular basis at the exact interval:

- Engine oil
- Engine coolant
- Brake fluid
- Washer fluid

For more details, refer to "Maintenance" on page 8-4.

#### WARNING

Focus on the road while driving. The driver's primary responsibility is in the safe and legal operation of a vehicle. Any use of handheld devices, other equipment, or vehicle systems that take the driver's eyes, attention, and focus away from the safe operation of a vehicle are not permissible by law. These should never be used during the operation of the vehicle.

#### Checking the exhaust system

Be sure the exhaust system does not leak.

The exhaust system should be checked whenever the vehicle is raised for oil replacement or for any other purpose.

If you hear a change in the exhaust sound or if something strikes the undercarriage, Kia recommends to visit an authorized Kia dealer/service partner or a professional workshop and have the exhaust system checked as soon as possible.

#### WARNING

Do not inhale exhaust fumes or leave your engine running in an enclosed area for a prolonged time. Exhaust fumes contain carbon monoxide, a colorless and odorless gas that can cause unconsciousness and death by asphyxiation.

#### Before entering vehicle

- Be sure that all windows, outside mirrors, 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.

#### Before starting vehicle

- Close and lock all doors.
- Position the seat so that all controls are easily reached.
- Buckle your seat belt.
- Adjust both inside and outside rear view mirrors.
- Be sure that all lights work.
- Check all gauges.
- Check the operation of warning lights when the vehicle is in the ON position.
- Release the parking brake and make sure the brake warning light is off.

#### WARNING

- When you intend to park or stop the vehicle with the engine on, be careful not to depress the accelerator pedal for a long period of time. It may overheat the engine or exhaust system and cause fire.

- Always check the surrounding areas near your vehicle for people, especially children, before putting a vehicle into D (Drive) or R (Reverse).
- Securely store items in your vehicle. When you make a sudden stop or turn the steering wheel rapidly, loose objects may drop on the floor and it could interfere with the operation of the foot pedals, possibly causing an accident.
- Do not drive while under the influence of alcohol, drugs, or other impairing substances. Drinking and driving is dangerous. Even a small amount of alcohol will affect your reflexes, perceptions and judgment.  
Driving while under the influence of drugs or other impairing substances is as dangerous as or more dangerous than driving drunk.
- Always wear appropriate shoes when operating your vehicle. Unsuitable shoes (high heels, ski boots, sandals, etc.) may interfere with your ability to use the brake and accelerator pedals.
- Do not "ride" the brakes. It may cause the brake to overheat and malfunction. Use the engine brake to drive down the long hill.
- Slow down before shifting to a lower gear.
- Always use the parking brake. Do not depend on P (Park) to keep the vehicle from moving.
- Exercise extreme caution when driving on a slippery surface. Be especially careful when braking, accelerating or shifting gears. The vehicle speed can change abruptly, causing the tires to lose traction and the vehicle go out of control.
- Obtain the optimum vehicle performance by driving smoothly.

### **WARNING**

## Good driving practices

- Never change the gear from P (Park) or N (Neutral) to any other position with the accelerator pedal depressed.
- Never change the gear into P (Park) when the vehicle is moving.
- Stop the vehicle completely before changing the gear into R (Reverse) or D (Drive).
- Never change the gear to N (Neutral) and coast down the hill. This is extremely hazardous. Always change the gear to R (Reverse) or D (Drive) when the vehicle is moving.
- If your vehicle becomes stuck in snow, mud, sand, etc., then you may attempt to rock the vehicle free by moving it forward and backward. Do not attempt this procedure if people or objects are anywhere near the vehicle. During the rocking operation the vehicle may suddenly move forward or backward as it becomes unstuck, causing injury or damage to nearby people or objects.
- When driving uphill or downhill, always shift to D (Drive) for driving forward or shift to R (Reverse) for driving backwards, and check the gear position indicated on the cluster before driving. Driving in the opposite direction of the selected gear can lead to a dangerous situation by shutting off the engine and affecting the braking performance.
- Always buckle-up! In a collision, an unbelted occupant is significantly more likely to be seriously injured or



- killed than a properly belted occupant.
- Avoid high speeds when cornering or turning.
  - Do not make quick steering wheel movements, such as sharp lane changes or fast, sharp turns.
  - The risk of a rollover is greatly increased if you lose control of your vehicle at highway speeds.
  - Losing control often occurs if two or more wheels drop off the roadway and the driver oversteers to reenter the roadway.
  - In the event your vehicle leaves the roadway, do not steer sharply. Instead, slow down before pulling back into the travel lanes.
  - Never exceed posted speed limits.

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### Good braking practices

- Be sure the parking brake is not engaged and the parking brake indicator light is off before driving.
- The vehicle will not stop as quickly if the brakes are wet. Apply the brakes lightly until the braking action returns to normal.
- Don't "ride" the brake pedal. Resting your foot on the brake pedal while driving can be dangerous because the brakes might overheat and lose their effectiveness. It also increases the wear of the brake components.
- If a tire goes flat while driving, apply the brakes gently and keep the vehicle pointed straight-ahead while slowing down the vehicle. Pull the vehicle slowly and safely off the road and stop in a safe place.
- Be cautious when parking on a hill. Firmly engage the parking brake and change the gear in P.
- If your vehicle is facing downhill, turn the front wheels into the curb to help keep the vehicle from rolling. If your vehicle is facing uphill, turn the front wheels away from the curb to help keep the vehicle from rolling.
- Block the wheels if there is no curb or if it is required by other conditions to keep the vehicle from rolling.
- Parking brake can freeze in the engaged position under certain conditions such as snow or ice around or near the rear brakes or if the brakes are wet. If there is a risk that the parking brake may freeze, apply it only temporarily while you change the gear in P and block the rear wheels so the vehicle cannot roll. Then release the parking brake.
- Do not hold the vehicle on an incline with the accelerator pedal. This can cause the transmission to overheat. Always use the brake pedal or parking brake.
- Do not pump the brake pedal as the vehicle is equipped with ABS.
- When the brake pedal is depressed under certain driving conditions or weather conditions, the vehicle may experience a temporary "squeak" or other noise. This is not a malfunction in brake operation and is normal.
- Driving on roads with snow removal agents can cause brake noise or abnormal wear on tires. Set the regenerative braking system level to "0" in a safe traffic environment and apply the brakes several times to remove the

snow removal agent from the brake discs and pads.

- The vehicle is equipped with electronic hydraulic brake. Due to malfunction or power instability, the brake booster may not operate normally and cause the brake pedal to feel stiff, resulting in longer braking distances. In this case, stop the vehicle by depressing the brake pedal stronger than usual. Have the system inspected by a professional workshop. Kia recommends visiting an authorized Kia dealer/service partner.
- The sound of electronic hydraulic brake operating or its motor may be heard temporarily when:
  - Repeatedly depressing the brake pedal
  - Releasing the brake pedal after depressing the brake pedal when the engine is off.
  - Opening driver's door
- The brake pedal may feel abnormal when:
  - Rapidly depressing the brake pedal
  - Repeatedly depressing the brake pedal several times
  - ABS operates when stopping

## Starting the vehicle

### Ignition switch (if equipped)



- 1 LOCK
- 2 ACC
- 3 ON
- 4 START

### Operation

- LOCK
  - The ignition key can be removed.
- ACC (Accessory)
  - The electrical accessories can be operated.
- ON
  - The warning lights can be checked.
- START
  - Turn the ignition switch to start the engine. The brake warning light can be checked.

### **WARNING**

- 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 accident.
- Do not attach small purses, multiple keys, or any other heavy accessories to the driver's key chain used to start the vehicle. This may cause the driver to accidentally make the key inserted in the vehicle to change the ignition position to the ACC position while the vehicle is moving thereby increasing

the risk of an accident and causing the deactivation of several safety features.



- Never reach through the steering wheel for the ignition switch, or any other control, while the vehicle is in motion. The presence of your hand or arm in this area may cause a loss of vehicle control resulting in an accident.
- Do not place movable objects by the driver's seat. Not only does it interfere with driving, but it could also cause an accident.
- To avoid unexpected or sudden vehicle movement, never leave your vehicle if the gear is not locked in the P (Park) position and the parking brake is fully engaged. Before leaving the driver's seat, always make sure the gear is shifted to P (Park) position, set the parking brake fully and shut the engine off.

#### \* NOTICE

If you leave the ignition switch to the ACC or ON position for a long time, the battery may discharge.

## ENGINE START/STOP button (if equipped)



### Operation

- OFF
  - Press the ENGINE START/STOP button in P to turn the vehicle off.
- ACC (Accessory)
  - Press the ENGINE START/STOP button once without depressing the brake pedal.
  - The electrical accessories can be operated.
  - Turns off automatically after approximately 1 hour to prevent battery discharge.
- ON
  - Press the ENGINE START/STOP button twice without depressing the brake pedal.
  - The warning lights can be checked.
- START/RUN
  - Press the ENGINE START/STOP button while depressing the brake pedal in P (Park).
  - Start the engine in P for the safety.

### ⚠ WARNING

- Never press the ENGINE START/STOP button while the vehicle is in motion. This would result in loss of directional control and braking function, which could cause an accident.
- Before leaving the driver's seat, always make sure the gear is shifted

to P (Park) position, set the parking brake fully and shut the engine off. Unexpected and sudden vehicle movement may occur if these precautions are not taken.

- Never reach for the ENGINE START/STOP button or any other controls through the steering wheel while the vehicle is in motion. The presence of your hand or arm in the area could cause 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.

#### \* NOTICE

- If you leave the ENGINE START/STOP button in the ACC or ON position for a long time, the battery will discharge.
- If you press the ENGINE START/STOP button without pressing the brake pedal, the engine will not start and the ENGINE START/STOP button changes as follow:
  - OFF → ACC → ON → OFF or ACC

#### ENGINE START/STOP button interlock system (if equipped)

The ENGINE START/STOP button will not change to the OFF position unless the vehicle is in P (Park).

#### Vehicles equipped with anti-theft steering column lock

- The vehicle is in the OFF position
- The doors are opened

#### ⚠ CAUTION

In an emergency situation while the vehicle is in motion, you are able to turn the engine off and to the ACC position by pressing the ENGINE START/STOP button for more than 2 seconds or 3 times repeatedly within 3 seconds

If the vehicle is still moving, to restart the vehicle:

- Press the ENGINE START/STOP button when vehicle speed is 5 km/h (3 mph) or over


#### \* NOTICE

- If the steering wheel doesn't unlock properly, the ENGINE START/STOP button will not work. Press the ENGINE START/STOP button while turning the steering wheel right and left to release the tension.
- You are able to turn off the engine (START/RUN) or vehicle power (ON), only when the vehicle is not in motion.

#### Starting the engine with smart key

The vehicle will check for the smart key when:

- The vehicle doors are opened
- The ENGINE START/STOP button is pressed

If the smart key is not in the vehicle, the indicator  and the message will appear on the instrument cluster.

**⚠ WARNING**

The engine will start, only when the smart key is in the vehicle. Never allow children or any person who is unfamiliar with the vehicle touch the ENGINE START/STOP button or related parts. Pushing the ENGINE START/STOP button while the smart key is in the vehicle may result in unintended engine activation and/or unintended vehicle movement.

**⚠ CAUTION**

- If the engine stalls while the vehicle is in motion, do not attempt to move the gear to the P (Park) position. If the traffic and road conditions permit, you may put the gear in the N (Neutral) position while the vehicle is still moving and press the ENGINE START/STOP button in an attempt to restart the engine.
- Do not press the ENGINE START/STOP button for more than 10 seconds except when the stop lamp fuse is blown.
- Do not turn the ignition switch to the START position with the engine running. It may damage the starter.

**\* NOTICE**

- If the battery is weak or the smart key does not work correctly, you can start the engine by pressing the ENGINE START/STOP button with the smart key. When you press the ENGINE START/STOP button directly with the smart key, the smart key should contact the button at a right angle.



- When the stop lamp fuse is blown, you cannot start the engine normally. Replace the fuse with a new one. If it is not possible, you can start the engine by pressing the ENGINE START/STOP button for 10 seconds while it is in the ACC position. The engine can start without pressing the brake pedal. But for your safety always press the brake pedal before starting the engine.

## Starting the engine

### Operation

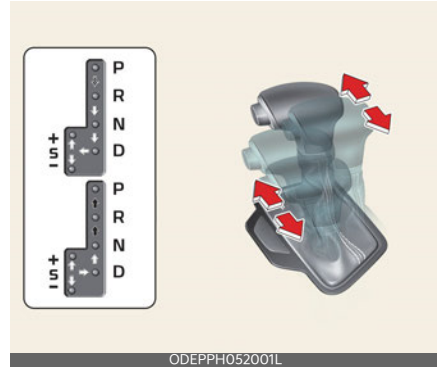
1. Make sure the parking brake is applied.
2. Make sure the gear is in P (Park).
3. Fully depress the brake pedal.
4. Turn the key to START position or press the ENGINE START/STOP button.


### **⚠ 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.
- Do not start the vehicle with the accelerator pedal depressed. The vehicle can move and lead to an accident.
- Wait until the engine rpm is normal. The vehicle may suddenly move if the brake pedal is released when the rpm is high.


## Transmission

### Dual clutch transmission (if equipped)



 Depress the brake pedal and the lock release button when shifting.

 Press the unlock button when shifting.

 The shift lever can be shifted freely.

- P (Park)
- R (Reverse)
- N (Neutral)
- D (Drive)

### Operation

- Depress the brake pedal and shift the lever.

## Manual mode



### Operation

1. Push the shift lever from D (Drive) position into the manual gate.
  - Up (+): Push the lever forward once to shift up one gear.
  - Down (-): Pull the lever backwards once to shift down one gear.
2. Push the shift lever back into D (Drive) position to return to automatic mode.

### Shift lock

Shift lock prevents shifting from P (Park) into R (Reverse) unless the brake pedal is depressed.

### Operation

1. Depress and hold the brake pedal.
2. Turn the vehicle to the ON position.
3. Move the shift lever.

### \* INFORMATION

If the brake pedal is repeatedly depressed and released with the shift lever in the P (Park), a chattering noise near the shift lever may be heard. This is a normal condition.

## Overriding shift lock

If the shift lever cannot be moved from the P (Park) position into R (Reverse) position.

### Type A



### Type B



### Operation

1. Continue depressing the brake.
2. Turn the vehicle to the OFF position.
3. Make sure the parking brake is applied.
4. While pressing the brake pedal, Push SHIFT LOCK RELEASE button (Type A) or remove the cover and press a tool down (e.g. flathead screw-driver) into the SHIFT LOCK RELEASE access hole (Type B) at the same time.
5. Move the shift lever.

If the shift lever does not move even after performing this procedure, have the system inspected by a professional workshop. Kia recommends to visit an authorized Kia dealer/service partner

## Parking in N (Neutral) gear

Follow below steps when parking and you want the vehicle to move when pushed.

### Operation

1. Continue depressing the brake.
2. Turn the vehicle to the OFF position.
3. Make sure the parking brake is applied.
4. While pressing the brake pedal, Push SHIFT LOCK RELEASE button (Type A) or remove the cover and press a tool down (e.g. flathead screw-driver) into the SHIFT LOCK RELEASE access hole (Type B) at the same time.
5. Move the shift lever.

If the shift lever does not move even after performing this procedure, have the system inspected by a professional workshop. Kia recommends to visit an authorized Kia dealer/service partner

### CAUTION

- With the exception of parking in neutral gear, always park the vehicle in P (Park) for safety and engage the parking brake.
- Before parking in N (Neutral) gear, first make sure the parking ground is level and flat. Do not park in N (Neutral) gear on any slopes or gradients. If parked and left in N (Neutral), the vehicle may move and cause serious damage and injury.

## When the battery is discharged

### Operation

1. Connect the battery cables to the jump-starting terminals inside the engine compartment. For more details, refer to "Jump-starting" on page 7-6.
2. Release the parking brake when the vehicle is in ON position.
3. Shift to N (Neutral).

### Characteristics of Dual clutch transmission



The dual clutch transmission has 6 forward speeds and one reverse speed. The individual speeds are selected automatically when the shift lever is in the D (Drive) position.


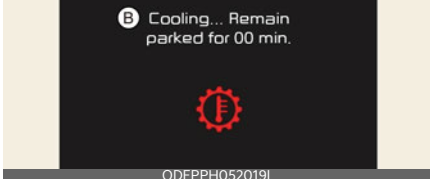

- The dual clutch transmission can be thought of as an automatically shifting manual transmission. It gives the driving feel of a manual transmission, yet provides the ease of a fully automatic transmission.
- When D (Drive) is selected, the transmission will automatically shift through the gears similar to a conventional automatic transmission. Unlike a traditional automatic transmission, the gear shifting can sometimes be felt and heard as the actuators engage the clutches and the gears are selected.



- The dual clutch transmission incorporates a dry-type dual clutch mechanism, which allows for better acceleration performance and increased fuel efficiency while driving. But it differs from a conventional automatic transmission because it does not incorporate a torque converter. Instead, the transition from one gear to the next is managed by clutch slip, especially at lower speeds. As a result, shifts are sometimes more noticeable, and a light vibration can be felt as the transmission shaft speed is matched with the engine shaft speed. This is a normal condition of the dual clutch transmission.
- The dry-type clutch transfers torque more directly and provides a direct-drive feeling which may feel different from a conventional automatic transmission. This may be more noticeable when launching the vehicle from a stop or when traveling at low, stop-and-go vehicle speeds.
- When rapidly accelerating from a lower vehicle speed, the engine rpm may increase dramatically as a result of clutch slip as the dual clutch transmission selects the correct gear. This is a normal condition.
- When accelerating from a stop on an incline, press the accelerator smoothly and gradually to avoid any shudder feeling or jerkiness.
- When traveling at a lower vehicle speed, if you release the accelerator pedal quickly, you may feel engine braking before the transmission changes gears. This engine braking feeling is similar to operating a manual transmission at low speed.
- When driving downhill, you may wish to move the gear shift lever to Manual Shift mode and downshift to a lower gear in order to control your speed without using the brake pedal excessively.
- When you turn the engine on and off, you may hear clicking sounds as the system goes through a selftest. This is a normal sound for the dual clutch transmission.
- During the first 1,500 km (1000 miles), you may feel that the vehicle may not be smooth when accelerating at low speed. During this break-in period, the shift quality and performance of your new vehicle is continuously optimized.

## LCD display messages

Message	Content
	<p>A: Steep grade! Press brake pedal</p> <ul style="list-style-type: none"> <li>To hold the vehicle on an incline use the foot brake or the parking brake.</li> <li>When in stop-and-go traffic on an incline, allow a gap to form ahead of you before moving the vehicle forward. Then hold the vehicle on the incline with the foot brake.</li> <li>If the vehicle is held on a hill by applying the accelerator pedal or by creeping with brake pedal disengaged, the clutch and transmission may overheat which can result in damage. At this time, a warning message will appear on the LCD display.</li> <li>If the LCD warning is active, the foot brake must be applied.</li> <li>Ignoring the warnings can lead to damage to the transmission.</li> </ul>
	<p>A: Transmission temp. is high! Stop safely</p> <ul style="list-style-type: none"> <li>Under certain conditions, such as repeated stop-and-go launches on steep grades, sudden take off or acceleration, or other harsh driving conditions, the transmission clutch temperatures will increase excessively. Finally the clutch in transmission could be overheated.</li> </ul> <p><b>* NOTICE</b></p> <ul style="list-style-type: none"> <li>When driving in stop-and-go traffic or in stop condition, move the shift lever to N (Neutral) or P (Park) position to reduce the driving stress and have better transmission operation.</li> </ul> <hr/> <ul style="list-style-type: none"> <li>When the clutch is overheated, the safe protection mode engages and the gear position indicator on the cluster blinks with a chime. At this time, <b>Transmission temp. is high! Stop safely</b> warning message will appear on the LCD display and driving may not be smooth.</li> <li>If this occurs, pull over to a safe location, stop the vehicle with the engine running, apply the parking brake after shifting the vehicle to N (Neutral) with the brake pedal depressed, and allow the transmission to cool.</li> <li>If you ignore this warning, the driving condition may become worse. You may experience abrupt shifts, frequent shifts, or jerkiness. To return to the normal driving condition, stop the vehicle and apply the foot brake or shift into P (Park). Then allow the transmission to cool for a few minutes with engine on, before driving off.</li> <li>When possible, drive the vehicle smoothly.</li> </ul>

Message	Content
 <p>A Transmission hot! Park with engine On</p> <p>ODEPPH052018L</p>	<p>A: Transmission Hot! Park with engine on</p>
 <p>B Cooling... Remain parked for 00 min.</p> <p>ODEPPH052019L</p>	<p>B: Cooling... Remain parked for 00 min.</p>
 <p>C Transmission cooled down. Resume driving</p> <p>ODEPPH052020L</p>	<p>C: Transmission cooled down. Resume driving</p> <ul style="list-style-type: none"> <li>If the vehicle continues to be driven and the clutch temperatures reach the maximum temperature limit, the <b>Transmission hot! Park with engine On</b> warning will be displayed. When this occurs the clutch is disabled until the clutch cools to normal temperatures.</li> <li>The warning will display a time to wait for the transmission to cool.</li> <li>If this occurs, pull over to a safe location, stop the vehicle with the engine running, apply the brakes and shift the vehicle to P (Park), and allow the transmission to cool.</li> <li>When the <b>Trans cooled. Resume driving</b>, warning message appears, you can continue to drive your vehicle.</li> <li>When possible, drive the vehicle smoothly.</li> </ul> <p>If any of the warning messages in the LCD display continue to blink, for your safety, We recommend have the system checked by an authorized Kia dealer/service partner.</p>

**⚠ WARNING**

To reduce the risk of serious injury or death:

- Always check the surrounding areas near your vehicle for people, especially children, before shifting a vehicle into D (Drive) or R (Reverse).
- Before leaving the driver's seat, always make sure the gear is in the P (Park) position; then set the parking brake, and place the vehicle in the LOCK/OFF position. Unexpected and sudden vehicle movement can occur if these precautions are not followed.
- Always fully depress the brake pedal before and while shifting out of the P (Park) into another position to avoid inadvertent motion of the vehicle which could injure persons in or around the vehicle.

- After the vehicle has stopped, always make sure the gear is in P (Park), apply the parking brake, and turn the vehicle off.
- Do not use the P (Park) position in place of the parking brake. Always make sure the gear is in P (Park) position and set the parking brake fully.
- Never leave a child unattended in a vehicle.
- Do not drive with the gear in N (Neutral). The engine brake will not work and lead to an accident.
- To avoid damage to your transmission, do not try to accelerate with the shift lever in R (Reverse) or any forward gear position with the brake engaged.
- Do not use the engine brake (shifting from a high gear to lower gear) rapidly on slippery roads. The vehicle may slip causing an accident.

- 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.
  - When parking on an incline, block the wheels to prevent the vehicle from rolling down.
  - For safety, always engage the parking brake with the gear in the P (Park) position except for the case of emergency parking.
  - **DCT failure**
    - Do not use aggressive engine braking (shifting from a higher gear to a lower gear) on slippery roads. This could cause the tires to slip and may result in an accident.
    - Do not shift into gear unless your foot is firmly on the brake pedal. Shifting into gear when the engine is running at high speed can cause the vehicle to move very rapidly. You could lose control of the vehicle and hit people or objects.
    - When stopped on a slope, do not hold the vehicle with accelerator pedal. Engage the service brake or the parking brake.
    - If the transmission cannot shift into D (Drive) or R (Reverse), the position indicator (D or R) on the cluster will blink. We recommend that you contact an authorized Kia dealer/ service partner to have the system checked.
- 

### CAUTION

- Always come to a complete stop before shifting into or out of R (Reverse); you may damage the transmission if you shift into R (Reverse) while the vehicle is in motion, except as explained in "Rocking the vehicle" on page 6-109.
  - Always park the vehicle in P (Park) for safety and engage the parking brake. If left in N (Neutral), the vehicle may move and cause serious damage and injury.
  - After the vehicle has been turned off, the electronic parking brake cannot be disengaged.
  - For EPB (Electronic Parking Brake) equipped vehicles with AUTO HOLD function used while driving, if the vehicle is in OFF position, the electronic parking brake will be engaged automatically. Therefore, AUTO HOLD function should be turned off before the vehicle is in OFF position.
  - Do not shift from N (Neutral) or P (Park) into D (Drive), or R (Reverse) when the engine is above idle speed. The transmission may be damaged if you shift into P (Park) while the vehicle is in motion.
-

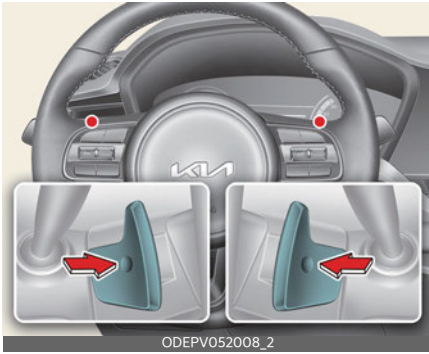
## \* NOTICE

### Manual mode

- The driver must execute upshifts in accordance with road conditions, taking care to keep the engine speed below the red zone.
  - Downshifts are made automatically when the vehicle slows down. When the vehicle stops, 1st gear is automatically selected.
  - When the engine rpm approaches the red zone shift points are varied to upshift automatically.
  - To maintain the required levels of vehicle performance and safety, the system may not execute certain gearshifts when the gear is operated.
  - When driving on a slippery road, shift into the 2nd gear which is better for smooth driving on a slippery road.
  - Always come to a complete stop before shifting into D (Drive) or R (Reverse).
  - Do not put the shift lever in N (Neutral) while driving.
  - The driver must execute upshifts in accordance with road conditions, taking care to keep the engine speed below the red zone.
  - Only the 6 forward gears can be selected. To reverse or park the vehicle, move the gear to the R (Reverse) or P (Park) position as required.
  - Downshifts are made automatically when the vehicle slows down. When the vehicle stops, 1st gear is automatically selected.
  - The fuel efficiency may decrease.
  - If the driver presses the lever to + (Up) or - (Down) position, the transmission may not make the requested gear change if the next gear is outside of the allowable engine rpm range.
  - When manual mode is activated:  
The engine rpm will tend to remain raised over a certain length of time even after releasing the accelerator. Upshifts are delayed when accelerating.
-

## Paddle shifter

### Regenerative braking mode



### Operation

- Pull the left side (-) of the paddle shifter to increase regenerative braking and deceleration.
- Pull the right side (+) of the paddle shifter to decrease regenerative braking and deceleration.
- The selected regenerative braking level is displayed on the instrument cluster.



\* The paddle shifter function changes by selecting Drive mode.

Drive Mode	Paddle shifter operation	Paddle shifter function
ECO	+	Decrease regenerative braking level
	-	Increase regenerative braking level
SPORT	+	Manual shift (+)
	-	Manual shift (-)

### Non-operating condition(s)

- The (-) and (+) paddle shifters are pulled at the same time.
- The vehicle is decelerating by depressing the brake pedal.
- Cruise Control or Smart Cruise Control is activated.

### ⚠ WARNING

Usage of the function may be limited according to the battery and motor's condition. (over charge, high and low temperature) Check traffic and driving condition. If necessary, control the vehicle speed by yourself using brake pedal.

### \* NOTICE

- The control level will be started at 0 when the engine starts. It will activate only in D (Drive) range.
- If you operate the shift lever (to P, R, N/Sport), Regen B mode will be canceled and if you return to D (Drive) range, the Regen B mode will be returned to 0 level.
- Regen B mode will be canceled when ABS and ESC operates.
- The speed decrement may different depends on the vehicle speed even in the same Regen B level. (The speed decrement in each level is bigger in the city driving than that of highway driving.)
- The vehicle does not completely stop by using paddle shifter lever. When the Regen B power reduced, the vehicle slowly moves about 10 km/h (6 mph). In order to stop the vehicle, depress the brake pedal.

## Regeneration unavailable. Battery full



### A: Regenerative braking not available. Battery fully charged.

If SOC (State of High voltage battery Charge) is high, it is not possible to enable Regen B mode. Use the function again after normal driving.

## Regeneration conditions not met



### A: Recuperation shift paddle conditions not met

If the motor and battery is in high/low temperature status or if there is a malfunction on battery and transmission, the warning message will be displayed.

If the vehicle entering the Regen B mode during the activation of ABS/Cruise Control/Smart Cruise Control, the warning message will be displayed.

Once the warning message is displayed, the usage of function will be temporarily limited. Use the function again after normal driving.

## Brake system

### In the event of brake failure

#### Operation

- Make an emergency stop with the parking brake.

#### Operating condition(s)

- The brake has failed

#### **⚠ WARNING**

Avoid applying the parking brake to stop the vehicle while it is moving except in an emergency situation. Applying the parking brake while the vehicle is moving at normal speeds can cause a sudden loss of control of the vehicle. If you must use the parking brake to stop the vehicle, use great caution in applying the brake.

### Power-assisted brakes

#### Operation

- Apply greater force to the brake pedal.

#### Operating condition(s)

- The vehicle is stalled

#### **⚠ WARNING**

Avoid continuous application of the brakes when descending a long or steep hill by shifting to a lower gear. Continuous brake application will cause the brakes to overheat and could result in a temporary loss of braking performance.

**⚠ CAUTION**

Do not drive with your foot resting on the brake pedal. This will create abnormally high brake temperatures which can cause excessive brake lining and pad wear.

**\* NOTICE**

- When stepping on the brake pedal under a certain driving or weather condition, you may witness your car make a sound of squealing or some other noises. This is not a brake malfunction but a normal phenomenon.
- When driving on the road to which deicing chemicals are applied, the vehicle may witness noises from the brake or abnormal abrasion of tires because of such deicing chemicals. You should operate brake additionally so that you would be able to remove the deicing chemicals on the brake disk and pad under a safe traffic condition.

**Brake over accelerator****Operation**

1. Apply the brakes steady and firmly.
2. Stop the vehicle safely.
3. Shift to P. Turn the engine off and apply the parking brake.
4. Inspect the accelerator pedal for any interference.

**Operating condition(s)**

- The accelerator pedal is stuck

**\* NOTICE**

If none are found and the condition persists, have your vehicle towed to a professional workshop and inspected. Kia recommends to visit an authorized Kia dealer/service partner.

**Disc brake wear indicator**

The front or rear brakes will squeal when the brake pads are worn. Always replace the front or rear brake pads as pairs.

**⚠ WARNING**

Do not ignore high pitched wear sounds from your brakes. If you ignore this audible warning, you will eventually lose braking performance, which could lead to a serious accident.

**⚠ CAUTION**

Do not continue to drive with worn brake pads. Continuing to drive with worn brake pads can damage the braking system and result in costly brake repairs.

**\* NOTICE**

Brake dust may accumulate on the wheels, even under normal driving conditions. Some dust is inevitable as the brakes wear and contribute to brake noise.

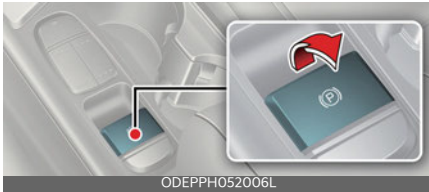
**Parking brake**

Check if the brake warning light (ⓘ) appears when the vehicle is in the START or ON position. Be sure the parking brake is fully released and the brake warning light (ⓘ) is off before driving.



## Electronic Parking Brake (EPB)

### Applying EPB manually



### Operation

- Depress the brake pedal and pull the EPB switch up to apply the parking brake.
- Depress the brake pedal. Make sure the gear is in P and push the EPB switch down to release the parking brake.

### **⚠ WARNING**

- Risk of accident and injury due to children left unattended in the vehicle. If you leave children unaccompanied in the vehicle, they may be able to set the vehicle in motion, for example by:
  - Releasing the parking brake.
  - Shifting the transmission out of P (Park) position.
  - Starting the engine. In addition, they may operate vehicle equipment.
- Never leave children and animals unattended in the vehicle.
- When leaving the vehicle, always take the smart key with you and lock the vehicle.

### **\* NOTICE**

- On a steep incline or when pulling a trailer, if the vehicle does not remain at a standstill, do as follows:
  - Apply the EPB.
  - Pull up the EPB switch for more than 3 seconds.
- A click or electric brake motor whine sound may be heard while operating or releasing the EPB. These conditions are normal and indicate that the EPB is functioning properly.

### Applying EPB automatically

#### Operating condition(s)

- The EPB is overheated
- Requested by other systems
- The hybrid system is turned off with the EPB applied

### **\* NOTICE**

For Electronic Parking Brake (EPB) equipped vehicles with AUTO HOLD function used while driving, if the vehicle has been turned OFF, the EPB will be engaged automatically. Therefore, AUTO HOLD function should be turned off before the vehicle is turned off.

### Releasing EPB automatically

#### Operation

- The EPB is released automatically under following conditions when you shift the gear.
  1. With the engine running depress the brake pedal and shift out of P (Park) or N (Neutral) to R (Reverse) or D (Drive).

- The EPB is released automatically under following conditions when you start driving,
  1. Ensure seat belts are fastened and the doors, hood and tailgate are closed.
  2. With the engine running, depress the brake pedal and shift out of P (Park) to R (Reverse), D (Drive) or Manual shift mode.
  3. Depress the accelerator pedal.
  4. Make sure the Parking Brake warning light goes off.

### ⚠ CAUTION

Do not drive your vehicle with the EPB applied. It may cause excessive brake pad and brake rotor wear.

### \* NOTICE

- For the Middle East, EPB is released regardless of seat belt fastening.
- Do not follow these procedures when driving on a flat level ground. The vehicle may suddenly move forward:
  - For your safety, depress the brake pedal and release the parking brake manually with the EPB switch when you drive downhill or when backing up the vehicle.
  - For your safety, you can engage the EPB even though the vehicle is in the OFF position, but you cannot release it.
- If the parking brake warning light is still on even though the EPB has been released, have the system checked by a professional workshop. Kia recommends to visit an authorized Kia dealer/service partner.

## EPB warning message

### Operating condition(s)

- Attempting to drive off while engaging the accelerator pedal with the EPB applied
- Driver's seat belt is not fastened and the vehicle hood, driver's door or tailgate is opened
- There is a problem with the vehicle
- Conversion from AUTO HOLD to EPB is not working properly
- EPB is applied while AUTO HOLD is activated due to Electronic Stability Control (ESC) signal

### EPB malfunction indicator



If the EPB malfunction indicator remains on, appears while driving, or does not appear when the vehicle is in the ON position, this indicates the EPB may malfunction.

Have your vehicle checked by a professional workshop as soon as possible. Kia recommends to visit an authorized Kia dealer/service partner.

### \* NOTICE

- The EPB warning light may appear if the EPB switch operates abnormally. Shut the engine off and turn it on again after a few minutes. The warning light will go off and the EPB switch will operate normally. However, if the EPB warning light is still on, have the system checked by a professional

workshop. Kia recommends to visit an authorized Kia dealer/ service partner.

- If the parking brake warning light does not appear or blinks even though the EPB switch was pulled up, the EPB is not applied.
- If the parking brake warning light blinks when the EPB warning light is on, press the EPB switch, then pull it up. Once more press it back to its original position and pull it back up. If the EPB warning does not go off, have the system checked by a professional workshop. Kia recommends to visit an authorized Kia dealer/service partner.

### Emergency braking with the EPB switch

Pull and hold the EPB switch up to engage the emergency brake.

#### **WARNING**

Do not operate the Electronic Parking Brake (EPB) while the vehicle is moving except in an emergency situation. Applying the EPB while the vehicle is moving at normal speeds can cause a sudden loss of control of the vehicle. If you must use the EPB to stop the vehicle, use great caution in applying the brake.

#### **NOTICE**

During emergency braking by the EPB, the parking brake warning light will appear to indicate that the system is operating.

### When the EPB does not release properly

Load the vehicle on a flatbed tow truck and take your vehicle to a professional workshop to check the system. Kia recommends to visit an authorized Kia dealer/service partner.

### Brake Disc Cleaning (BDC)

If there is a surface rust on the brake disc or squeal can be heard, use Brake Disc Cleaning function to reduce noise and rust. While using Brake Disc Cleaning function, the regenerative brake system will be temporarily deactivated and the fuel economy may be reduced.

### Operation

- Press AUTO HOLD button for more than 3 seconds.
  - If the message is shown on the cluster, Brake Disc Cleaning function is activated.
  - Depress the brake pedal around 10 times and the regenerative braking will be temporarily deactivated. The rust and noise will be reduced. Brake Disc Cleaning operation time can change per braking conditions.
  - Brake Disc Cleaning function will be automatically deactivated after operation. To manually turn off, turn the vehicle to OFF position or press AUTO HOLD button for more than 3 seconds

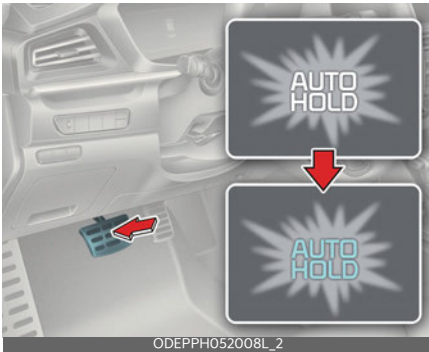
## AUTO HOLD

The AUTO HOLD maintains the vehicle in a stopped position without depressing the brake pedal.

### Applying AUTO HOLD

#### Operation

1. Press the AUTO HOLD button. The AUTO HOLD indicator will appear white.
2. The AUTO HOLD indicator changes from white to green when the vehicle is stopped.



3. AUTO HOLD will be released automatically when the accelerator pedal is depressed in D, R or in the manual mode. the AUTO HOLD indicator changes from green to white.
4. Press the AUTO HOLD button again while depressing the brake pedal to cancel the AUTO HOLD operation.



### Non-operating condition(s)

- The gear is in P (Park)
- The EPB is applied

#### \* INFORMATION

If the vehicle is restarted with the AUTO HOLD button pressed, AUTO HOLD will be in the standby state.

#### ⚠ WARNING

- To reduce the risk of an accident, do not activate AUTO HOLD while driving downhill, backing up or parking your vehicle.
- For shift lever type, AUTO HOLD will not be activated when the gear is in R (Reverse).

#### \* NOTICE

- If the AUTO HOLD indicator lights up yellow, the AUTO HOLD is not working properly. Take your vehicle to a professional workshop and have the system checked. Kia recommends to visit an authorized Kia dealer/service partner.
- A click or electric brake motor whine sound may be heard while operating or releasing the EPB, but these conditions are normal and indicate that the EPB is functioning properly.
- The AUTO HOLD indicator does not change from white to green when the vehicle is stopped by regenerative braking mode.

## AUTO HOLD warning messages


The AUTO HOLD function will display a warning message with sound under certain conditions:

- When the EPB is automatically applied from AUTO HOLD
- AUTO HOLD to EPB conversion is not working properly
- Brake pedal is not applied when the AUTO HOLD button is pressed

## Vehicle safety system

### Anti-lock Brake System (ABS)

The Anti-lock Brake System (ABS) prevents the wheels from locking to steer and stabilize the vehicle.

If the ABS warning light () stays on, contact a professional workshop as soon as possible. Kia recommends to visit an authorized Kia dealer/service partner.

#### \* NOTICE

- A click sound may be heard in the vehicle compartment when the vehicle begins to move after the vehicle is started. These conditions are normal and indicate that the Anti-lock Brake System is functioning properly.
- When you jump start your vehicle because of a drained battery, the vehicle may not run as smoothly and the ABS warning light may turn on at the same time. This happens because of low battery voltage. It does not mean your ABS has malfunctioned.
  - Do not pump your brakes!
  - Have the battery recharged before driving the vehicle.

### Electronic Stability Control (ESC)

Electronic Stability Control (ESC) is designed to stabilize the vehicle during cornering maneuvers.

ESC is not a substitute for safe driving practices. Factors including speed, road conditions and driver steering input can all affect whether ESC will be effective in preventing a loss of control.

## Operating ESC OFF button



### Operation

1. Press the ESC OFF button for approximately half a second to turn ESC off. ESC OFF (OFF) indicator light will appear and the warning chime will sound.
2. Press and hold the ESC OFF button again for approximately 3 second to turn ESC and traction control off. ESC OFF (OFF) indicator light will appear and the warning chime will sound.
3. To turn ESC on again, press the ESC OFF button. ESC OFF (OFF) indicator light will go off.

### ⚠ WARNING

- For maximum protection, always wear your seat belt. No system, no matter how advanced, can rectify all driver error and/or driving conditions. Always drive responsibly.
- Drive carefully even though your vehicle has Electronic Stability Control. It can only assist you in maintaining control under certain circumstances.
- Never press the ESC OFF button while ESC is operating (ESC indicator light blinks). If ESC is turned off while ESC is operating, the vehicle may slip out of control.

### \* NOTICE

- A click sound may be heard in the vehicle compartment when the vehicle begins to move after the vehicle is started. These conditions are normal and indicate that the Electronic Stability Control system is functioning properly.
- When operating the vehicle on a dynamometer, ensure that the ESC is turned off (ESC OFF light appeared). If the ESC is left on, it may prevent the vehicle speed from increasing, and result in false diagnosis.
- Turning the ESC off does not affect ABS or brake system operation.

### Hill-start Assist Control (HAC)

Hill-start Assist Control (HAC) prevents the vehicle from rolling back by applying the brakes automatically for approximately 2 seconds.

The brakes are released when the accelerator pedal is engaged or after approximately 2 seconds.

### ⚠ WARNING

HAC does not replace the need to apply brakes while stopped on an incline. While stopped, make sure you maintain brake pressure sufficient to prevent your vehicle from rolling backward and causing an accident. Don't release the brake pedal until you are ready to accelerate forward.

### Vehicle Stability Management (VSM)

Vehicle Stability Management (VSM) provides further enhancements to vehicle stability and steering responses.

## Operating VSM

### Operation

- Press the ESC OFF button to turn VSM off and the ESC OFF indicator light (OFF) is appeared.
- Press the ESC OFF button again to turn VSM on and the ESC OFF indicator light (OFF) will go off.

### Operating condition(s)

- Driving on a slippery road
- Friction change of left and right wheels is detected

### Non-operating condition(s)

- Driving on a gradient or inclined surface
- Driving in R (Reverse)
- ESC OFF indicator light (OFF) remains appeared
- MDPS warning light (⚠) remains appeared

### WARNING

- When replacing tires and wheels, make sure they are the same size as the original tires and wheels installed. Driving with varying tire or wheel sizes may diminish any supplemental safety benefits of the VSM system.

#### • **Vehicle Stability Management**

Drive carefully even though your vehicle has Vehicle Stability Management. It can only assist you in maintaining control of the vehicle under certain circumstances.

## VSM malfunction indicator

VSM can be deactivated when the malfunction has been detected in the Electronic Power Steering system or VSM system. If the ESC indicator light (OFF) or MDPS warning light (⚠) remains on, take your vehicle to a professional workshop and have the system checked. Kia recommends to visit an authorized Kia dealer/service partner.

## Emergency Stop Signal (ESS) (if equipped)

Emergency Stop Signal (ESS) alerts the driver behind by blinking the brake lights while braking sharply and severely.

### Operating condition(s)

- The vehicle suddenly stops.
- ABS is activated and the driving speed is over 55 km/h (34 mph).
- The hazard warning flasher automatically turns ON after blinking the brake lights when:
  - The driving speed is under 40 km/h (25 mph)
  - The ABS is deactivated
  - The sudden braking is over
- The hazard warning flasher turns OFF when:
  - The vehicle drives at a low speed for a certain period of time.

### NOTICE

The Emergency Stop Signal (ESS) system will not activate, when the hazard warning flashers are already on.

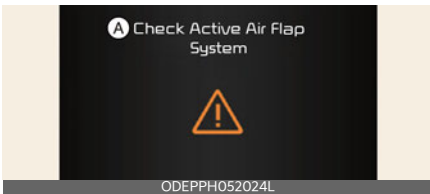
## Active air flap



ODEPPH052056L

Active air flap system controls the air flap below the front bumper to cool the vehicle parts and improve energy efficiency.

## Active air flap malfunction



ODEPPH052024L

### A: Check Active Air Flap System

The active air flap system may not operate normally if the air flap is temporarily opened due to foreign factors or if the controller is contaminated by snow or rain, etc.

When the message is popped up on the display, stop the vehicle in a safe place and check the status of the air flap.

Start the vehicle after performing the necessary work like foreign matter removal and waiting 10 minutes. If the pop-up remains up, have the vehicle inspected by a professional workshop. Kia recommends visiting an authorized Kia dealer/service partner.

### ⚠ CAUTION

- Regardless of the pop-up, if the air flaps aren't in the same position, stop the vehicle and wait for 10 minutes and start the vehicle and inspect the air flap.
- The active air flap system is actuated by motors. Do not disturb actuation or apply force excessively. It may cause failure.

### \* NOTICE

Active air flap system could be activated regardless of the vehicle condition.(Parking, driving, charging, etc.)



## Forward Collision-Avoidance Assist (FCA) (Sensor Fusion) (if equipped)

Forward Collision-Avoidance Assist is to reduce or to avoid accident risk. It recognizes the distance from a vehicle ahead, a pedestrian or a cyclist through the sensors (i.e. front view camera and front radar), and, if necessary, warns the driver of accident risk with the warning message or the warning alarms and apply emergency braking.

\* Sensor fusion (front view camera + front radar) Forward Collision-Avoidance Assist operates for the vehicle ahead, the pedestrian or the cyclist in front.

### WARNING

Take the following precautions when using Forward Collision Avoidance Assist:

- This function is only a supplemental function and it is not intended to, nor does it replace the need for the extreme care and attention of the driver. The sensing range and objects detectable by the sensors are limited. Pay attention to the road conditions at all times.
- Never drive too fast in accordance with the road conditions or while cornering.
- Always drive cautiously to prevent unexpected and sudden situations from occurring. Forward Collision-Avoidance Assist does not stop the vehicle completely and is only intended to help mitigate an imminent collision.


## Forward Collision-Avoidance Assist setting and activation

### Forward Collision-Avoidance Assist setting

The driver can activate Forward Collision-Avoidance Assist by placing the vehicle to the ON position and by selecting:

**User settings** → **Driver assistance** → **Forward Safety**

- If you select **Assist**, Forward Collision-Avoidance Assist activates. Forward Collision-Avoidance Assist produces warning messages and warning alarms in accordance with the collision risk levels. Braking assist will be applied in accordance with the collision risk.
- If you select **Warning only**, Forward Collision-Avoidance Assist activates and produces only warning alarms in accordance with the collision risk levels. Braking assist will not be applied in this setting.
- If you select **Off**, Forward Collision-Avoidance Assist deactivates.

The warning light () appears on the LCD display, when you cancel Forward Collision-Avoidance Assist. The driver can monitor the Forward Collision-Avoidance Assist ON/OFF status on the LCD display. Also, the warning light appears when the ESC (Electronic Stability Control) is turned off. When the warning light remains ON with Forward Collision-Avoidance Assist activated, have the function checked by a professional workshop. Kia recommends to visit an authorized Kia dealer/service partner.

## Warning Timing

The driver can select the initial warning activation time on the LCD display.

Go to the **User settings** → **Driver assistance** → **Forward collision warning** → **Fast/Normal/Slow**

The options for the initial Forward Collision Warning includes the following:

- **Fast:**

When this condition is selected, the initial Forward Collision Warning is activated earlier than Normal. This setting maximizes the amount of distance between the vehicle ahead, the pedestrian or the cyclist before the initial warning occurs.

- **Normal:**

When this condition is selected, the initial Forward Collision Warning is activated normally. This setting allows for a nominal amount of distance between the vehicle ahead before the initial warning occurs.

- **Slow:**

When this condition is selected, the initial Forward Collision Warning is activated later than normal. This setting reduces the amount of distance between the vehicle ahead, the pedestrian or the cyclist before the initial warning occurs.

Select Slow when traffic is light and when driving speed is slow.

If the vehicle in front puts on a burst of speed, the driver can notice the warning alarm is early even though the later option is selected.

## Prerequisite for activation

Forward Collision-Avoidance Assist gets ready to be activated, when **Forward Collision-Avoidance Assist** is selected on the LCD display, and when the following prerequisites are satisfied.

- The ESC is activated.
- The driving speed is over 10 km/h (6 mph). (However, Forward Collision-Avoidance Assist is activated within certain driving speed.)
- When recognizing a vehicle or a pedestrian or a cyclist in front. (However, Forward Collision-Avoidance Assist does not activate according to conditions in front and vehicle functions, but it notices only certain warnings.)
- Forward Collision-Avoidance Assist does not operate properly or it only produces a warning alarms in accordance with the driving or vehicle condition.
- If the warning only under the Forward Safety system is selected, Forward Collision-Avoidance Assist produces only warning alarms in accordance with the collision risk levels.

### \* NOTICE

Forward Collision-Avoidance Assist may not operate properly according to the frontal situation, the direction of pedestrian or cyclist and speed.

### ⚠ WARNING

- Completely stop the vehicle in a safe location before operating the switch on the steering wheel to activate/deactivate Forward Collision-Avoidance Assist.

- Forward Collision-Avoidance Assist automatically activates upon placing the vehicle to the ON position. The driver can deactivate Forward Collision-Avoidance Assist by canceling the function setting on the LCD display.
- Forward Collision-Avoidance Assist automatically deactivates upon canceling the ESC. When the ESC is canceled, Forward Collision-Avoidance Assist cannot be activated on the LCD display.

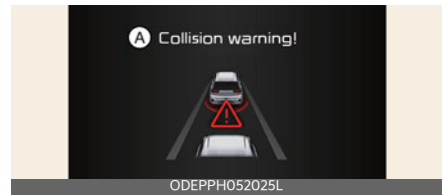
Forward Collision-Avoidance Assist warning light will appear, which is normal.

### Forward Collision-Avoidance Assist warning message and control

Forward Collision-Avoidance Assist produces warning messages and warning alarms in accordance with the collision risk levels of followings like vehicle's sudden braking in front or lack of vehicle to vehicle distance or collision to pedestrians or cyclist. Also, it controls the brakes in accordance with the collision risk levels.

The driver can select the initial warning activation time in the User Settings in the LCD display. The options for the initial Forward Collision Warning include Fast, Normal or Slow initial warning time.

## Collision Warning



### A: Collision warning!

- The warning message appears on the LCD display with the warning alarms.
- The Vehicle may slow down slightly
  - It will operate if the vehicle speed is greater than 10 km/h (6 mph) and less than or equal to 180 km/h (112 mph) on a forward vehicle. (Depending on the condition of the vehicle ahead and the environment surrounding it, the possible maximum operating speed may be reduced.)
  - For pedestrian and cyclist, the vehicle speed is greater than or equal to 10 km/h (6 mph) and less than 85 km/h (53 mph). (Depending on the condition of pedestrian and cyclist and the surrounding environment the possible maximum operating speed may be reduced.)
- Forward Collision-Avoidance Assist controls the brakes within certain limit to release shock from the collision.

## Emergency braking



### A: Emergency braking

- The warning message appears on the LCD display with the warning alarms.
- The brake control is maximized just before a collision, reducing impact when it strikes a forward vehicle.
  - It will operate if the vehicle speed is greater than 10 km/h (6 mph) and less than or equal to 85 km/h (53 mph) on a forward vehicle. (Depending on the condition of the vehicle ahead and the environment surrounding it, the possible maximum operating speed may be reduced.)
  - For pedestrian and cyclist, the vehicle speed is greater than or equal to 10 km/h (6 mph) and less than 65 km/h (40 mph). (Depending on the condition of pedestrian and bike riders and the surrounding environment the possible maximum operating speed may be reduced.)
- Forward Collision-Avoidance Assist controls the brakes within certain limit to release shock from the collision. Forward Collision-Avoidance Assist controls the maximum brakes just before the collision.

### \* NOTICE

- In an urgent situation, the braking system enters into the ready status for prompt reaction to assist the driver in depressing the brake pedal.

- Forward Collision-Avoidance Assist provides additional braking power for optimum braking performance, when the driver depresses the brake pedal.
- The braking control is automatically deactivated, when the driver sharply depresses the accelerator pedal, or when the driver abruptly operates the steering wheel.
- The braking control is automatically canceled, when risk factors disappear.

### ⚠ CAUTION

The driver should always pay great caution to vehicle operation, even though there is no warning message or warning alarm.

### ⚠ WARNING

Forward Collision-Avoidance Assist cannot avoid all collisions. Forward Collision-Avoidance Assist might not completely stop the vehicle before collision, due to ambient, weather and road conditions. The driver has the responsibility to drive safely and control the vehicle.

### ⚠ WARNING

Forward Collision-Avoidance Assist operates in accordance with the risk levels, such as the distance from the vehicle/passers-by in front, the speed of the vehicle/passers-by in front, and the driver's vehicle operation. For the function to activate, do not attempt risky driving.

## Detecting sensors

Front view camera



Front radar



The sensors are detecting the distance to vehicle ahead, pedestrian or cyclist. In bad weather conditions such as heavy rain, heavy snow, and fog, or when sensor is covered by foreign material, dust, etc., the sensors will be degraded and the function will be temporarily disabled. Always keep the sensor clean.

### \* NOTICE

- Do not install any accessories, such as license plate molding or sticker, on the sensor area. Nor arbitrarily replace the bumper. Those may adversely affect the sensing performance.
- Always keep the sensor/bumper area clean.
- Use only soft clothes to wash the vehicle. Also, do not spray highly pressurized water on the sensor installed on the bumper.
- Be careful not to apply unnecessary force on the frontal sensor area. When the sensor moves out of the correct position due to external force, the function may not normally operate even without the warning light or message. In this case, have the vehicle inspected by a professional workshop. Kia recommends to visit an authorized Kia dealer/service partner.
- The genuine Kia front radar sensor covers are parts with quality and performance ensured. If arbitrarily applying paint on or changing the cover, Forward Collision-Avoidance Assist may not function properly. Use only Kia Genuine Parts or those of an equivalent standard with proven quality and performance to repair or replace the radar sensor covers.
- Do not tint the window or install stickers, accessories around the inside mirror where the camera is installed.
- Make sure the frontal camera installation point does not get wet.
- Do not impact or arbitrarily remove any radar/camera components.
- Do not place reflective objects (white paper or mirror etc.) on the crash pad. The function may activate unnecessarily due to reflect of the sunlight.
- Excessive audio volume may disturb the sound of the function warning alarm.
- For more cautions for the camera sensor, refer to "Lane Keeping Assist (LKA) (if equipped)" on page 6-43.

## Forward Collision-Avoidance Assist disabled



### A: Forward safety system disabled. Radar blocked

When the sensor cover is blocked with dirt, snow, or debris, Forward Collision-Avoidance Assist operation may temporarily stop. In this case, the warning message appears to warn the driver.

This is not a malfunction with Forward Collision-Avoidance Assist. To operate Forward Collision-Avoidance Assist again, remove the foreign substances.

Forward Collision-Avoidance Assist may not properly operate in an area (e.g. open terrain), where any substances are not detected after turning ON the vehicle.

### **⚠ WARNING**

Forward Collision-Avoidance Assist may be inactive without any warning messages according to driving condition, traffic on the road, weather, road condition, etc.

## Forward Collision-Avoidance Assist malfunction



### A: Check forward safety systems

- When Forward Collision-Avoidance Assist is not working properly, the Forward Collision-Avoidance Assist warning light (⚠) will appear and the warning message will appear for a few seconds. After the message disappears, the master warning light (⚠) will appear. In this case, have the vehicle inspected by a professional workshop. Kia recommends to visit an authorized Kia dealer/service partner.
- The Forward Collision-Avoidance Assist warning message may appear along with the illumination of the ESC warning light.

### **⚠ WARNING**

- Forward Collision-Avoidance Assist is only a supplemental function for the driver's convenience. The driver should hold the responsibility to control the vehicle operation. Do not solely depend on Forward Collision-Avoidance Assist. Rather, maintain a safe braking distance, and, if necessary, depress the brake pedal to lower the driving speed.
- In certain instances and under certain driving conditions, Forward Collision-Avoidance Assist may activate unintentionally. This initial warning mes-

sage appears on the LCD display with a warning chime.

Also, in certain instances the front radar sensor or camera recognition function may not detect the vehicle, pedestrian or cyclist ahead. Forward Collision-Avoidance Assist may not activate and the warning message will not be displayed.

- Forward Collision-Avoidance Assist may unnecessarily produce the warning message and the warning alarms. Also, due to the sensing limitation, Forward Collision-Avoidance Assist may not produce the warning message and the warning alarm at all.
- When there is a malfunction with Forward Collision-Avoidance Assist, the braking control does not operate upon detecting a collision risk even with other braking systems normally operating.
- Forward Collision-Avoidance Assist operates only for the vehicle/pedestrian in front, while driving forward. It does not operate for any animals or vehicles in the opposite direction.
- Forward Collision-Avoidance Assist does not recognize the vehicle, which horizontally drives across the crossroad, or the vehicle, which is parked in the horizontal direction.
- If the vehicle in front stops suddenly, you may have less control of the brake system. Therefore, always keep safe distance between your vehicle and the vehicle in front of you.
- Forward Collision-Avoidance Assist may activate during braking and the vehicle may stop suddenly. And the load in the vehicle may endanger passengers. Therefore, always be mindful of the load volume in the vehicle.

- Forward Collision-Avoidance Assist may not activate if the driver applies the brake pedal to avoid risk of collision.
- Forward Collision-Avoidance Assist does not operate when the vehicle is in reverse. In these cases, you must maintain a safe braking distance, and if necessary, depress the brake pedal to reduce the driving speed in order to maintain a safe distance.
- The regular braking function will operate normally even if There is a problem with Forward Collision-Avoidance Assist brake control system or other functions. In this case, the braking control will not operate in the risk of a collision.
- Forward Collision-Avoidance Assist may not activate according to driving condition, traffic on the road, weather, road condition, etc.
- Forward Collision-Avoidance Assist may not activate to all types of vehicles.

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### Limitation of Forward Collision-Avoidance Assist

Forward Collision-Avoidance Assist is an assistant function for a driver in a certain risky driving condition and it does not take every responsibility for all risks from driving condition.

Forward Collision-Avoidance Assist recognizes the driving situations through front view camera and front radar. Thus, for a situation out of the sensing range, Forward Collision-Avoidance Assist may not normally operate. The driver should pay great caution in the following situations. Forward Collision-Avoidance Assist operation may be limited.

## Recognizing vehicles

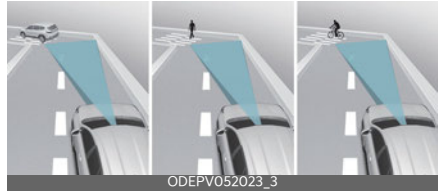
The sensor may be limited when:

- The front view camera or front radar sensor is blocked with a foreign object or debris
- The camera lens is contaminated due to tinted, filmed or coated windshield, damaged glass, or stuck of foreign matter (sticker, bug, etc.) on the glass
- Inclement weather such as heavy rain or snow obscures the field of view of the radar sensor or camera
- There is interference by electromagnetic waves
- There is severe irregular reflection from the radar sensor
- The front view camera/front radar sensor recognition is limited
- The vehicle in front is too small to be detected (for example a motorcycle etc.)
- The vehicle in front is an oversize vehicle or trailer that is too big to be detected by the camera recognition function (for example a tractor trailer, etc.)
- The front view camera's field of view is not well illuminated (either too dark or too much reflection or too much backlight that obscures the field of view)
- The vehicle in front does not have their rear lights or their rear lights does not turned ON or their rear lights are located unusually.
- The outside brightness changes suddenly, for example when entering or exiting a tunnel
- When light coming from a street light or an oncoming vehicle is reflected on a wet road surface such as a puddle in the road
- The field of view in front is obstructed by sun glare
- The vehicle in front is driving erratically
- The vehicle is on unpaved or uneven rough surfaces, or road with sudden gradient changes.
- The vehicle is driven near areas containing metal substances as a construction zone, railroad, etc.
- The vehicle drives inside a building, such as a basement parking lot
- The front view camera does not recognize the entire vehicle in front.
- The front view camera is damaged.
- The brightness outside is too low such as when the headlamps are not on at night or the vehicle is going through a tunnel.
- There is a shadow is on the road by a median strip, trees, etc.
- The vehicle drives through a tollgate.
- The windshield glass is fogged up; a clear view of the road is obstructed.
- The rear part of the vehicle in front is not normally visible. (the vehicle turns in other direction or the vehicle is overturned.)
- The adverse road conditions cause excessive vehicle vibrations while driving
- The sensor recognition changes suddenly when passing over a speed bump
- The vehicle in front is moving longitudinally to the driving direction
- The vehicle in front is stopped longitudinally
- The vehicle in front is driving towards your vehicle or reversing



- You are on a roundabout and the vehicle in front circles
- It is difficult to secure the field of view of the front view camera such as backlight, reflected light, and darkness.
- When the front camera is blocked by continuous washer spray and wiper operation.
- The vehicle in front is a special purpose vehicle, a trailer, or a truck load with unusual shape of luggage.
- The ambient light is too high or low.
- The front view camera is contaminated by front glass tinting, attaching film, water proof coating, foreign material such as a sticker, insects, etc.
- When the front view camera (including lens) or front radar is damaged.
- If not using headlamp or using low beam in the night or in a tunnel.
- Backlight is shining in the driving direction of the vehicle. (Including oncoming vehicle headlights.)
- When the rear part of the vehicle in front is small or low.
- When a trailer or other vehicle is towing the vehicle in front.
- When the ground clearance of the vehicle in front is high.
- When a vehicle in front makes sudden lane changes unexpectedly.

- Driving on a curved road



The performance of Forward Collision-Avoidance Assist may be limited when driving on a curved road.

The front view camera or front radar sensor recognition function may not detect the vehicle, pedestrian or cyclist traveling in front on a curved road.

This may result in no alarm and braking when necessary.

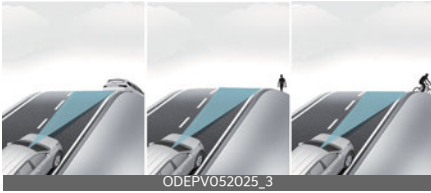
Always pay attention to road and driving conditions, and if necessary, depress the brake pedal to reduce your driving speed in order to maintain a safe distance.



Forward Collision-Avoidance Assist may recognize a vehicle or pedestrian or cyclist in the next lane or outside the lane when driving on a curved road.

If this occurs, the function may unnecessarily alarm the driver and apply the brake. Always pay attention to road and driving conditions, while driving.

- Driving on an inclined road



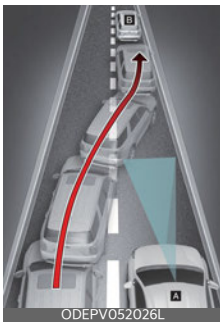
The performance of Forward Collision-Avoidance Assist may be decreased while driving upward or downward on a slope. The front view camera or front radar sensor recognition may not detect the vehicle, pedestrian or cyclist in front.

This may result in unnecessary alarm and braking or no alarm and braking when necessary.

When the function suddenly recognizes the vehicle, pedestrian or cyclist in front while passing over a slope, you may experience sharp deceleration.

Always keep your eyes forward while driving upward or downward on a slope, and, if necessary, depress the brake pedal to reduce your driving speed in order to maintain distance.

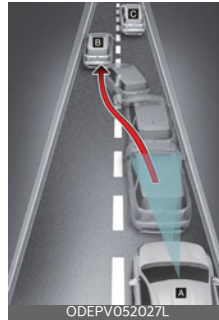
- Changing lanes



[A]: Your vehicle, [B]: Lane changing vehicle

Even though the vehicle in the next lane enters into your lane, it may not be recognized by Forward Collision-Avoidance Assist, until it enters Forward Collision-Avoidance Assist sensing range.

Especially when the vehicle in the next lane abruptly enters into your lane, it is more likely not to be recognized. Always pay great attention.



[A]: Your vehicle, [B]: Lane changing vehicle, [C]: Same lane vehicle

When driving in stop-and-go traffic, and a stopped vehicle in front of you merges out of the lane, Forward Collision-Avoidance Assist may not immediately detect the new vehicle that is now in front of you. In this case, you must maintain a safe braking distance, and if necessary, depress the brake pedal to reduce your driving speed in order to maintain a safe distance.

- Recognizing the vehicle



When the vehicle in front has heavy loading extended rearward, or when the vehicle in front has higher ground clearance, it may induce a hazardous situation. Always pay attention to road and driving conditions, while driving and, if necessary, depress the brake pedal to reduce your driving speed in order to maintain distance.

### Detecting pedestrian or cyclist

The sensor may be limited when:

- The pedestrian or cyclist is not fully detected by the camera recognition function, for example, if the pedestrian is leaning over or is not fully walking upright
- The pedestrian or cyclist is moving very quickly or appears abruptly in the front view camera detection area
- The pedestrian or cyclist is wearing clothing that easily blends into the background, making it difficult to be detected by the front view camera recognition function
- The outside lighting is too bright (e.g. when driving in bright sunlight or in sun glare) or too dark (e.g. when driving on a dark rural road at night)
- It is difficult to detect and distinguish the pedestrian or cyclist from other objects in the surroundings, for example, when there is a group of pedestrians, cyclists or a large crowd
- There is an item similar in shape or appearance to a person
- The pedestrian or cyclist is below the sensor's viewing range
- The sensor can not identify the pedestrian's outline because of other items changing their profile, such as mobility assistance devices
- The front view camera or front radar is obstructed by a foreign object or debris
- Inclement weather such as heavy rain or snow obscures the field of view of the radar sensor or camera
- When light coming from a street light or an oncoming vehicle is reflected on a wet road surface such as a puddle in the road
- The field of view in front is obstructed by sun glare
- The windshield glass is fogged up; a clear view of the road is obstructed
- The adverse road conditions cause excessive vehicle vibrations while driving
- When the pedestrian or cyclist suddenly enters the path of travel of the vehicle
- When the cyclist in front is riding perpendicular to the direction of travel
- When there is any electromagnetic interference
- When the cyclist is near areas containing metal objects such as a construction zone, railroad, etc.
- If the bicycle material is not reflected well on the radar

- When a pedestrian or cyclist's height is small.
- When a pedestrian or cyclist's behavior is unstable.
- When a pedestrian or cyclist suddenly interrupts in front of the vehicle.
- When there are many pedestrians or cyclists.
- When there is an object that reflects radar well. (such as a guardrail or a nearby vehicle)
- If the front bumper, front glass, front view camera or front radar have been replaced or repaired, have the vehicle inspected by a professional workshop. Kia recommends to visit an authorized Kia dealer/service partner.
- If the function detects an object that has a similar shape or characteristics of a vehicle or a pedestrian, Forward Collision-Avoidance Assist may operate.

### WARNING

- Do not use Forward Collision avoidance Assist when towing a vehicle. Application of Forward Collision-Avoidance Assist while towing may adversely affect the safety of your vehicle or the towing vehicle.
- Use extreme caution when the vehicle in front of you has cargo that extends rearward from the cab, or when the vehicle in front of you has higher ground clearance.
- Forward Collision-Avoidance Assist is designed to detect and monitor the vehicle ahead or detect a pedestrian or cyclist in the roadway through front view camera recognition and front radar signals. It may not always detect bicycles, motorcycles, or smaller wheeled objects such as luggage bags, shopping carts, or strollers.
- Never try to test the operation of Forward Collision-Avoidance Assist. Doing so may cause severe injury or death.

### NOTICE

In some instances, Forward Collision-Avoidance Assist may be canceled when subjected to electromagnetic interference.

## Lane Keeping Assist (LKA) (if equipped)



Lane Keeping Assist detects the lane markers and road edge on the road with a front view camera at the front windshield, and assists the driver's steering to help keep the vehicle in the lanes.

When the function detects the vehicle straying from its lane or road, it alerts the driver with a visual and audible warning, while applying a slight counter-steering torque, trying to prevent the vehicle from moving out of its lane.

### **⚠ WARNING**

- Driver is responsible for being aware of surroundings and steering the vehicle for safe driving practices.
- Do not steer the steering wheel suddenly when the steering wheel is being assisted by the function.
- Lane Keeping Assist helps prevent the driver from moving out of the lane or road unintentionally by assisting the driver's steering. If the driver intentionally drive on one side of the driving lane, a continuous steering force may occur.

However, Lane Keeping Assist is just a convenience function and the steering wheel is not always controlled. While driving, the driver should pay attention to the steering wheel.

- The operation of Lane Keeping Assist can be canceled or not work properly according to road condition and surroundings. Always be cautious when driving.
- Do not disassemble a front view camera temporarily for tinted window or attaching any types of coatings and accessories.

If you disassemble the camera and assemble it again, have the function checked by a professional workshop. Kia recommends to visit an authorized Kia dealer/service partner and have the function checked to need a calibration.

- When you replace the windshield glass, front view camera or related parts of the steering, have the function checked by a professional workshop.

Kia recommends to visit an authorized Kia dealer/service partner and have the function checked to need a calibration.


- The function detects lane markers and controls the steering wheel by a front view camera, therefore, if the lane markers and road edge are hard to detect, the function may not work properly. Always be cautious when using the function.
- When the lane markers and road edge are hard to detect, please refer to "Limitations of Lane Keeping Assist" on page 6-47.
- Do not remove or damage the related parts of Lane Keeping Assist.
- Do not place objects on the crash pad that reflects light such as mirrors, white paper, etc. it may cause malfunction of Lane Keeping Assist if the sunlight is reflected.

- You may not hear warning sound of Lane Keeping Assist because of the excessive audio sound.
- While other beeps such as the seat belt warning sound are in operation and override Lane Keeping Assist alarming function, Lane Keeping Assist beeps may not occur.
- If the vehicle speed is high, steering torque for assistance will not be enough to keep your vehicle within the lane. If so, the vehicle may move out of its lane. Obey speed limit when using Lane Keeping Assist.
- If you attach objects to the steering wheel, the function may not assist steering.
- If you attach objects to the steering wheel, hands off alarm may not work properly.

### To activate/deactivate Lane Keeping Assist



To activate/deactivate Lane Keeping Assist, with the vehicle in the ON position, press and hold the Lane Driving Assist button located on the steering wheel to turn off Lane Keeping Assist. Press and hold the button again to turn on the function.

The indicator (  ) in the cluster display will initially appear white or green. If you press and hold the Lane Driving Assist button located on the steering wheel, Lane Keeping Assist will be

turned off and the indicator on the cluster display will go off.

### \* NOTICE

When Lane Keeping Assist is turned off with the Lane Driving Assist button, Lane Safety settings will turn off.

### Lane Keeping Assist settings


With the vehicle in ON position, select or deselect **User settings** → **Driver assistance** → **Lane safety** from the Settings menu to set whether or not to use each function.

- If you select **Lane Keeping Assist**, Lane Keeping Assist guides the driver to keep the vehicle within the lanes. It rarely controls the steering wheel, when the vehicle drives well inside the lanes. However, it starts to control the steering wheel, when the vehicle is about to deviate from the lanes.
- If you select **Lane Departure Warning**, Lane Departure Warning alerts the driver with a visual and acoustic warning when the function detects the vehicle leaving the lane. In this mode, the steering wheel will not be controlled. When the vehicle's front wheel contacts the inside edge of lane line, Lane Keeping Assist issues the lane departure warning.
- If you select **Off**, Lane Keeping Assist deactivates.

## Lane Keeping Assist activation



### A: Lane Keep Assist

- To see Lane Keeping Assist screen on the LCD display in the cluster, Tab to the Driving Assist mode (  ).
- For further details, refer to "LCD display" on page 5-38.
- After Lane Keeping Assist is activated, if lane maker is detected, vehicle speed is over 60 km/h (37 mph) and all the activation conditions are satisfied, a green steering wheel indicator will illuminate and the steering wheel will be controlled.

## WARNING

Lane Keeping Assist is a function to help prevent the driver from leaving the lane. However, the driver should not solely rely on the function but always check the road conditions when driving.



### A: Lane Keep Assist



### A: Lane Keep Assist

If the speed of the vehicle is over 60 km/h (37 mph) and the function detects lane markers, the color changes from gray to white.


## Warning



### A: Lane Keep Assist



### A: Lane Keep Assist

To warn the driver that the vehicle is departing from the projected lane in front, the green (  ) indicator light will blink on the cluster, the lane line will blink on the cluster depending on which direction the vehicle is veering, and an audible warning will sound.



**A: Keep hands on steering wheel**

If the driver takes hands off the steering wheel for several seconds while Lane Keeping Assist is activated, the function will warn the driver.

**⚠ WARNING**

- The hands-off warning message may appear late according to road conditions. Therefore, always have your hands on the steering wheel while driving.
- If you hold the steering wheel lightly, the function would generate hands off warning because Lane Keeping Assist can treat the situation as you do not grab the wheel.

**⚠ WARNING**

- The driver is responsible for accurate steering.
- Even though the steering is assisted by the function, the driver may control the steering wheel.
- Turn off the function and drive the vehicle in below situations.
  - In bad weather
  - In bad road condition
  - When the steering wheel needs to be controlled by the driver frequently.
  - When towing a vehicle or trailer.

- The steering wheel may feel heavier when the steering wheel is assisted by the function than when it is not.

**\* NOTICE**

- Even though the steering is assisted by the function, the driver may control the steering.
- The steering wheel may feel heavier when the steering wheel is assisted by the function than when it is not.

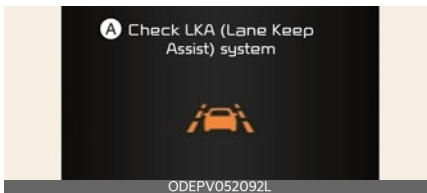
**Non-operating conditions of Lane Keeping Assist**

- You change lanes with the turn signal.
  - Using the turn signal to change lanes.
  - If you change lanes without the turn signal on, the steering wheel might be controlled.
- Lane Keeping Assist can transit to steering assist mode when the car is near to middle of the lane after function on or the lane was changed. Lane Keeping Assist can not assist steering if the vehicle follows lane marker too close continuously before transition to steering assist mode.
- The control of ESC (Electronic Stability Control) or VSM (Vehicle Stability Management) is activated.
- The steering will not be assisted when your drive fast on a sharp curve.
- The steering will not be assisted when vehicle speed is below 55 km/h (34 mph) and over 200 km/h (125 mph).
- The steering will not be assisted when you change lanes fast.
- The steering will not be assisted when you brake suddenly.



- The steering will not be assisted when the lane is very wide or narrow.
- The steering will not be assisted when only one side lane marker is detected.
- There are more than two lane markers such as a construction area.
- Radius of a curve is too small.
- When you turn steering wheel suddenly, Lane Keeping Assist will be disabled temporarily.
- Driving on a steep slope or hill.

### Lane Keeping Assist malfunction



#### A: Check LKA (Lane Keep Assist) system

If there is a problem with the function a message will appear. If the problem continues Lane Safety indicator will appear. Lane Safety indicator (yellow) will appear if Lane Keeping Assist is not working properly.

In this case, have the function checked by a professional workshop. Kia recommends to visit an authorized Kia dealer/service partner.

### Limitations of Lane Keeping Assist

The driver must be cautious in the below situations may not work properly when recognition of the lane marker is poor or limited:

#### When lane and road condition is poor

- It is difficult to distinguish the lane marker or road edge from road when the lane marker or road edge is covered with dust or sand.
- It is difficult to distinguish the color of the lane marker from road.
- There is something looks like a lane marker.
- The lane marker or road edge is indistinct or damaged.
- The number of lanes increases/ decreases or the lane lines are crossing (Driving through a toll plaza/toll gate, merged/divided lane).
- There are more than two lane markers.
- The lane marker is very thick or thin.
- The lane marker or road edge is not visible due to snow, rain, stain, a puddle or other factors.
- A shadow is on the lane marker or road edge because of a median strip, guardrail, noise barriers and others.
- When the lane markers are complicated or a structure substitutes for the lines such as a construction area.
- There are crosswalk signs or other symbols on the road.
- The lane suddenly disappears such as at the intersection.
- The lane marker or road edge in a tunnel is covered with dirt or oil and etc.
- The lane is very wide or narrow.

#### When external condition is intervened

- The brightness of outside changes suddenly when entering/existing a tunnel or passing under a bridge.
- The headlamps are not on at night or in a tunnel, or light level is low.

- There is a boundary structure in the roadway.
- The light of street, sun, oncoming vehicle and so on reflects from the water on the road.
- When light shines brightly in the reverse direction you drive.
- Road surface is not even.
- The distance from the vehicle ahead is very short or the vehicle ahead drives hiding the lane line or road edge.
- You drive on a steep grade or a sharp curve.
- The vehicle vibrates heavily.
- The temperature near inside mirror is very high due to direct sun light and etc.

#### When front visibility is poor

- The lens or windshield is covered by strange materials.
- The sensor cannot detect the lane because of fog, heavy rain or snow.
- The windshield is fogged by humid air in the vehicle.
- Putting something on the crash pad and etc.

#### **WARNING**

Lane Keeping Assist is a function to help prevent the driver from leaving the lane. However, the driver should not solely rely on the function but always take the necessary actions for safe driving practices.

---

#### When there is a problem with the function do one of the following:

- Turn the function on after turning the vehicle off and on again.
- Check if the vehicle is in ON position.
- Check if the function is affected by the weather. (ex: fog, heavy rain, etc.)
- Check if there is foreign matter on the camera lens

If the problem is not solved, have the function checked by a professional workshop. Kia recommends to visit an authorized Kia dealer/service partner.

## Blind-Spot Collision Warning (BCW) (if equipped)

Blind-Spot Collision Warning uses rear corner radar sensors in the rear bumper to monitor and warn the driver of an approaching vehicle in the driver's blind spot area.

### 1. Blind-Spot Area

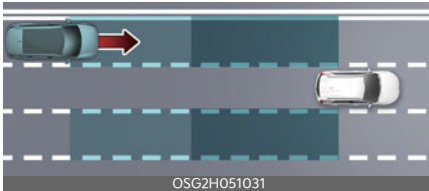


It warns by detecting the vehicles in the blind spots.

The blind spot detection range varies relative to vehicle speed.

Note that if your vehicle is traveling much faster than the vehicles around you, the warning will not occur.

### 2. Closing at high speed



Blind-Spot Collision Warning will warn you when a vehicle is approaching in an adjacent lane at a high rate of speed. If the driver activates the turn signal when the function detects an oncoming vehicle, the function sounds an audible warn.

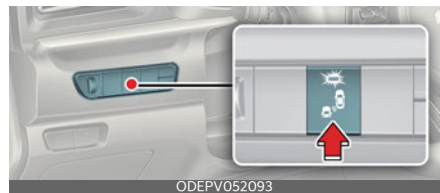
## ⚠ WARNING

- Blind-Spot Collision Warning is a supplemental function to assist you. Do not entirely rely on the function. Always pay attention, while driving, for your safety.
- Always be aware of road conditions while driving and be warn for unexpected situations even though Blind-Spot Collision Warning is operating.
- Blind-Spot Collision Warning is not a substitute for proper and safe driving. Always drive safely and use caution when changing lanes or backing up the vehicle. Blind-Spot Collision Warning may not detect every object alongside the vehicle.

## Blind-Spot Collision Warning setting and activation

### Settings

- The driver can activate the function by placing the vehicle to the ON position.
- If you press the Blind-Spot Safety button the indicator on the button extinguishes and the function deactivates.



- If you press the Blind-Spot Safety button while the function is canceled the indicator on the button appears and the function activates. In this case, the function returns to the state before the vehicle turned off. When the function is initially turned on and when the motor is turned off then on again

while the function is in activation, the warning light will appear for 3 seconds on the outside rear view mirror.

- If the vehicle is turned off then on again, the function maintains the previous state.

### Setting the warning sound of Blind-Spot Collision Warning

The driver can select the warning sound of Blind-Spot Collision Warning in the User settings in the LCD display by selecting **User settings** → **Driver assistance** → **BCW sound (Blind-Spot Collision Warning)**.

### Operating conditions

The function enters the ready status, and the following conditions are satisfied:

The function will activate when:

- The function is on
- Vehicle speed is above 30 km/h (18.6 mph)
- Other vehicles are detected in the rear side

### **⚠ WARNING**

- Always check the road condition while driving for unexpected situations even though Blind-Spot Collision Warning is operating.
- Blind-Spot Collision Warning is a supplemental function to assist you. Do not entirely rely on the function. Always pay attention, while driving, for your safety.
- Blind-Spot Collision Warning is not a substitute for proper and safe driving. Always drive safely and use caution when changing lanes or backing the vehicle up. Blind-Spot Collision Warn-

ing may not detect every object alongside the vehicle.

### Warning message and function control

### Blind-Spot Collision Warning

#### Vehicle detection



If a vehicle is detected within the boundary of the function, a warning light will appear on the outside rear view mirror.

Once the detected vehicle is no longer within the blind spot area, the warning will turn off according to the driving conditions of the vehicle.

#### Collision warning



A warning chime to warn the driver will activate when:

1. At the First stage warning (the warning light appear on the outside review mirror AND

- The turn signal is applied (same side as where the vehicle is being detected).

When this warning is activated, the warning light on the outside rear view mirror will also blink. And a warning chime will sound.

If you turn off the turn signal indicator, the second stage warning will be deactivated.

Once the detected vehicle is no longer within the blind spot area, the warning will turn off according to the driving conditions of the vehicle.

### **WARNING**

- The warning light on the outside rear view mirror will appear whenever a vehicle is detected at the rear side by the function.

To avoid accidents, do not focus only on the warning light and neglect to check the vehicle surroundings.

- Drive safely even though the vehicle is equipped with Blind-Spot Collision Warning. Do not solely rely on the function but check your surroundings before changing lanes or backing the vehicle up.
- The function may not alert the driver in some situations so always check your surroundings while driving.

### **CAUTION**

- The driver should always use extreme caution while operating the vehicle, whether or not the warning light on the outside rear view mirror illuminates or there is a warning alarm.
- Playing the vehicle audio system at high volume may offset Blind-Spot Collision Warning warning sounds.

- The warning of Blind-Spot Collision Warning may not sound while other function's warning sounds.

## Detecting sensor

Rear corner radar



The rear corner radars are the sensors inside the rear bumper for detecting the side/rear areas. Always keep the rear bumper clean for proper operation of the function.

### **CAUTION**

- The function may not work properly when the bumper has been damaged, or if the rear bumper has been replaced or repaired.
- The sensing range differs somewhat according to the width of the road. When the road is narrow, the function may detect other vehicles in the next lane.
- The function may turn off due to strong electromagnetic waves.
- Always keep the sensor or near the sensor clean.
- Never arbitrarily disassemble the sensor component nor apply any impact on the sensor component.
- Be careful not to apply unnecessary force on the radar sensor or sensor cover. If the sensor is forcibly moved out of proper alignment, the function may not operate correctly. In this case, a warning message may not be displayed. Take your vehicle to

a professional workshop and have the function checked. Kia recommends to visit an authorized Kia dealer/service partner.

- Do not apply foreign objects such as a bumper sticker or a bumper guard near the radar sensor or apply paint to the sensor area. Doing so may adversely affect the performance of the sensor.
- Never install any accessories or stickers on the front windshield, nor tint the front windshield.
- Pay extreme caution to keep the camera sensor out of water.
- Never locate any reflective objects (i.e. white paper, mirror) over the crash pad. Any light reflection may cause a malfunction of the function.
- The genuine Kia rear bumpers which the Rear corner radar sensors are mounted are parts with quality and performance ensured. If arbitrarily applying paint on or changing the bumper, the Blind-Spot Collision Warning may not function properly. Use only Kia Genuine Parts or those of an equivalent standard with proven quality and performance to repair or replace the bumper.

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### Turning off Blind-Spot Collision Warning when a trailer or carrier is installed

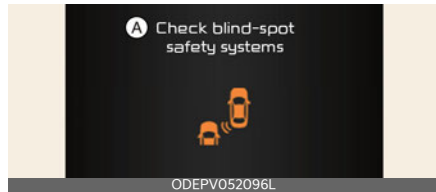
- Press the Blind-Spot Safety button (the indicator on the button extinguish)
- Deactivate Blind-Spot Collision Warning by selecting **User settings** → **Driver assistance** → **Blind-spot safety** → **Off**.

If you use Blind-Spot Collision Warning, remove a trailer or carrier.

When Blind-Spot Collision Warning canceled warning message is displayed in the cluster, check to make sure that the rear bumper is free from any dirt or snow in the areas where the sensor is located. Remove any dirt, snow, or foreign material that could interfere with the radar sensors.

After any dirt or debris is removed, Blind-Spot Collision Warning should operate normally after about 10 minutes of driving the vehicle.

If the function still does not operate normally, Kia recommend that you have your vehicle inspected by an authorized Kia dealer/service partner.



### A: Check blind-spot safety systems

If there is a problem with Blind-Spot Collision Warning, a warning message will appear and the light on the switch will turn off. The function will turn off automatically.

In this case, have the function checked by a professional workshop. Kia recommends to visit an authorized Kia dealer/service partner.

## Blind-Spot Collision Warning malfunction and limitations

### Blind-Spot Collision Warning disabled



#### A: Blind-spot safety systems disabled. Radar blocked

This warning message may appear when:

- One or both of the sensors on the rear bumper is blocked by dirt or snow or a foreign object.
- Driving in rural areas where the sensor does not detect another vehicle for an extended period of time.
- When there is inclement weather such as heavy snow or rain.

If any of these conditions occur, the light on the Blind-Spot Safety button and the function will turn off automatically.

### Limitations of Blind-Spot Collision Warning

The driver must be cautious in the below situations, because the function may not detect other vehicles or objects in certain circumstances.

- When a trailer or carrier is installed.
- The vehicle drives in inclement weather such as heavy rain or snow.
- The sensor is polluted with rain, snow, mud, etc.
- The rear bumper where the sensor is located is covered with a foreign object such as a bumper sticker, a bumper guard, a bike rack, etc.

- The rear bumper is damaged, or the sensor is out of the original default position.
- The vehicle height gets lower or higher due to heavy loading in a tailgate, abnormal tire pressure, etc.
- When the temperature of the rear bumper is high.
- When the sensors are blocked by other vehicles, walls or parking-lot pillars.
- The vehicle drives on a curved road.
- The vehicle drives through a tollgate.
- The road pavement (or the peripheral ground) abnormally contains metallic components (i.e. possibly due to subway construction).
- There is a fixed object near the vehicle, such as a guardrail.
- While going down or up a steep road where the height of the lane is different.
- Driving on a narrow road where trees or grass or overgrown.
- Driving in rural areas where the sensor does not detect another vehicle or structure for an extended period of time.
- Driving on a wet road.
- Driving on a road where the guardrail or wall is in double structure.
- A big vehicle is near such as a bus or truck.
- When the other vehicle approaches very close.
- When the other vehicle passes at a very fast speed.
- While changing lanes.
- If the vehicle has started at the same time as the vehicle next to you and has accelerated.

- When the vehicle in the next lane moves two lanes away from you OR when the vehicle two lanes away moves to the next lane from you.
- A motorcycle or bicycle is near.
- A flat trailer is near.
- If there are small objects in the detecting area such as a shopping cart or a baby stroller.
- If there is a low height vehicle such as a sports car.
- The brake pedal is depressed.
- ESC (Electronic Stability Control) is activated.
- ESC (Electronic Stability Control) malfunctions.
- The tire pressure is low or a tire is damaged.
- The brake is reworked.
- The vehicle abruptly changes driving direction.
- The vehicle makes sharp lane changes.
- The vehicle sharply stops.
- Temperature is extremely low around the vehicle.
- The vehicle severely vibrates while driving over a bumpy road, uneven/bumpy road, or concrete patch.
- The vehicle drives on a slippery surface due to snow, water puddle, or ice.

- Driving on a curved road



Blind-Spot Collision Warning may not operate properly when driving on a curved road. In certain instances the function may not detect the vehicle in the next lane.

Always pay attention to road and driving conditions, while driving.



Blind-Spot Collision Warning may not operate properly when driving on a curved road. In certain instances the function may recognize a vehicle in the same lane.

Always pay attention to road and driving conditions, while driving.

- Driving where the road is merging/dividing

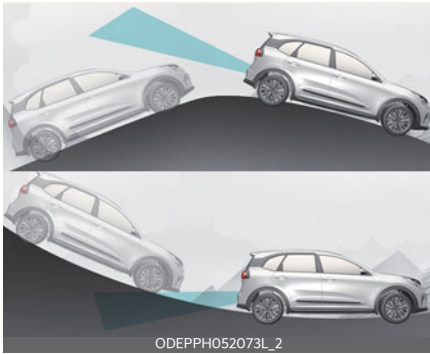


Blind-Spot Collision Warning may not operate properly when driving where the road is merging/dividing. In certain instances the function may not detect the vehicle in the next lane.



Always pay attention to road and driving conditions, while driving.

- Driving on a sloped road

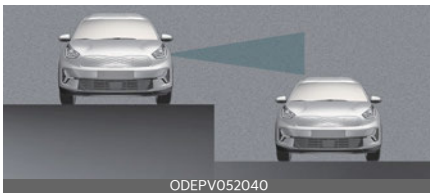


Blind-Spot Collision Warning may not operate properly when driving on a slope. In certain instances the function may not detect the vehicle in the next lane.

Also, in certain instances the function may wrongly recognize the ground or structures.

Always pay attention to road and driving conditions, while driving.

- Driving where the heights of the lanes are different



Blind-Spot Collision Warning may not operate properly when driving where the heights of the lanes are different. In certain instances, the function may not detect the vehicle on a road with different lane heights (underpass joining section, grade separated intersections, etc.). Always pay attention to

road and driving conditions, while driving.

- Driving where there is a structure beside the road



[A]: noise barrier, [B]: guardrail

Blind-Spot Collision Warning may not operate properly when driving where there is structure beside the road.

In certain instances, the function may wrongly recognize the structures (noise barriers, guardrail, double guardrail, median strip, bollard, street light, road sign, tunnel wall, etc.) beside the road.

Always pay attention to road and driving conditions, while driving.

### Manual Speed Limit Assist (MSLA) (if equipped)

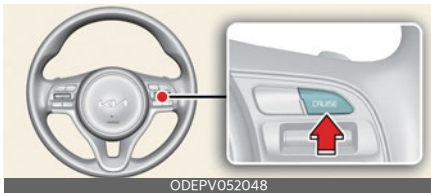
You can set the speed limit when you do not want to drive over a specific speed. If you drive over the preset speed limit, the warning function operates (set speed limit will blink and chime will sound) until the vehicle speed returns within the speed limit.

#### \* NOTICE

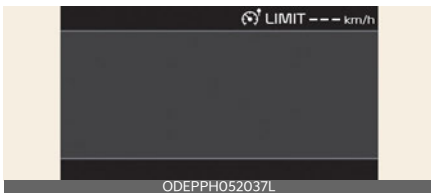
While Manual Speed Limit Assist is in operation, Cruise Control cannot be activated.

#### To set speed limit:

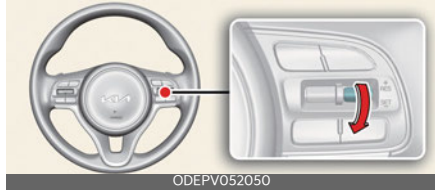
1. Press the Driving Assist button twice on the steering wheel, to turn the function on.



The speed limit indicator light will appear.



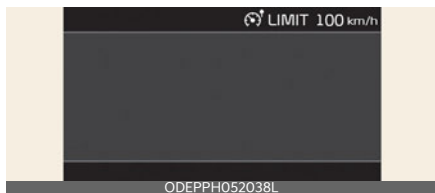
2. Push the switch down (to SET-).



3. Push the switch up (to RES+) or down (to SET-), and release it at the desired speed. Push the switch up (to RES+) or down (to SET-) and hold it. The speed will increase or decrease by 5 km/h (3 mph).



Push the switch up (to RES+) or down (SET-) and release it immediately. The speed will increase or decrease by 1 km/h. The set speed limit will display on the instrument cluster.

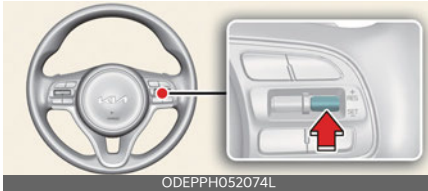


The set speed limit will be displayed. To drive over the preset speed limit you must depress hard on the accelerator pedal (more than approximately 80%) until the kickdown mechanism (if equipped) works with a clicking noise. Then the set speed limit will blink and chime will sound until you return the vehicle speed within the speed limit.

**\* NOTICE**

- Depressing the accelerator pedal less than approximately 50%, the vehicle will not speed over the preset speed limit but maintain the vehicle speed within the speed limit.
- A clicking noise heard from the kick down mechanism by depressing the accelerator pedal fully is a normal condition.

**Temporarily pausing Manual Speed Limit Assist**



Press the (|||) switch to temporarily pause the set speed limit. The set speed limit will turn off but the Speed Limit (LIMIT) indicator will stay on.

**Resuming Manual Speed Limit Assist**



To resume Manual Speed Limit Assist after the function was paused, operate the (+), (-), (|||) switch.

If you push the (+) switch up or (-) switch down, vehicle speed will be set to the current speed on the cluster.

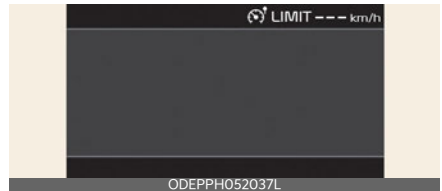
If you press the (|||) switch, vehicle speed will resume to the preset speed.

**To turn off Manual Speed Limit Assist, do one of the following:**



- Press the Driving Assist button.
- Turn the vehicle off.

If you press the CANCEL (O) button once, the set speed limit will cancel, but it will not turn the function off. If you wish to reset the speed limit, push the switch up (to RES+) or down (to SET-) to the desired speed.



**CAUTION**

The "---" indicator will blink if there is a problem with Manual Speed Limit Assist. In this case, have the function checked by a professional workshop. Kia recommends to visit an authorized Kia dealer/service partner.

## Intelligent Speed Limit Warning (ISLW) (if equipped)



The function displays the information of speed limit and no passing restriction to the driver in both the instrument cluster and navigation screen. Intelligent Speed Limit Warning detects traffic signs with camera function attached on the top of the windscreen.

Intelligent Speed Limit Warning also utilizes the navigation information to display the speed limit information.

### ⚠ WARNING

- Intelligent Speed Limit Warning is only an aid and is not always able to correctly display speed limits and overtaking restrictions.
- The driver always keeps the responsibility not to exceed the maximum allowed speed
- Do not place any accessories, stickers or tint the windshield near the rear view mirror.
- The function detects traffic signs and displays speed limit information by a camera therefore, if traffic signs are hard to detect, the function may not work properly.

Please refer to "Driver's Attention" on page 6-61.

- Do not remove any camera parts or apply impact.
- Do not place objects on the dashboard that reflects light such as mirrors, white paper, etc. The function

may malfunction if the sunlight is reflected.

- The function is not available in all countries.

## Intelligent Speed Limit Warning activation/deactivation

- Intelligent Speed Limit Warning Setting method:  
Cluster **User settings** → **Driver assistance** → **Speed Limit Warning**
- The information of speed limit and no passing restriction will appear on the cluster using a symbol if you have activated **Speed Limit Warning** in User Settings of cluster.
- If Intelligent Speed Limit Warning is activated in the navigation settings, the information is also displayed on the navigation screen.

## Operation

- If a traffic sign that is relevant to your vehicle is passed, the function displays the information of the speed limits and no passing restrictions to the driver.
- When the driver turns on the ignition, the function displays the information of the speed limit that was stored before the vehicle has been turned off.

Type A



Type B



- Sometimes different speed limits are displayed for the same road. The information displayed depending on the situation, because, traffic signs with additional sign (e.g rainy, arrow, etc.) are also detected and compared with an additional interior data (e.g wiper operation, turn signal, etc.).
- The function can update the speed limit information without visible speed limit signs in the following situations.
  - When you change your driving direction by turning right or left or by a U-turn.
  - When the road changes. (e.g. from highway to country road, etc.)
  - When you enter or exit a into town or village.

**\* NOTICE**

If the speed limit unit is different between cluster and navigation, check the speed unit setting in the navigation menu.

**Display**

- If the function doesn't have a reliable Speed Limit, the following symbol is displayed in both the instrument cluster and navigation screen.

No reliable speed limit information



- If the function detect no passing sign, no passing is displayed in both the instrument cluster and navigation screen.

No passing sign

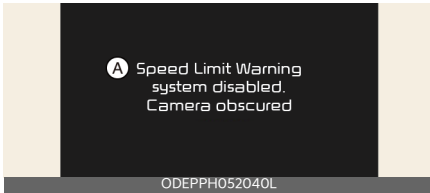


- After passing 'end of a speed limit' sign, Intelligent Speed Limit Warning provides information from navigation to inform driver of perhaps afterwards applicable speed limit.

End of a speed limit sign



## Warning message

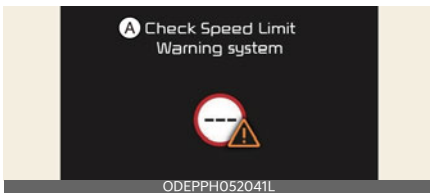


### A: Speed Limit Warning system disabled. Camera obscured

The message will appear when camera's field of view is covered by some objects. The function stops until the field of view is normal.

Check the windshield around the camera view area.

If the function does not work normally even though camera's field of view is cleared, have the function checked by a professional workshop. Kia recommends to visit an authorized Kia dealer/service partner.



### A: Check Speed Limit Warning system

When Intelligent Speed Limit Warning is not working properly, the warning message will come on for a few second. After the message disappears, the master warning light will appear.

In this case, have the function checked by a professional workshop.

Kia recommends to visit an authorized Kia dealer/service partner.

The function may not fully operate and provide correct information in the following situations.

- Traffic signs are positioned on sharp curve.
- Poorly positioned traffic sign. (e.g. Rotated, shaded by any object, damaged, etc.)
- Concealed traffic signs by other vehicle.
- Broken LED traffic signs.
- Poor weather like snow, rain, fog
- Reflected glare around and/or on the traffic sign.
- There is insufficient illumination of the traffic signs in the night.
- There is bright lights around traffic signs.
- There is dirt, ice or frost on the windshield in the area of the camera.
- When camera field of view is covered by objects such as a sticker, paper, leaf fall.
- When driving very close to the vehicle in front of you.
- When navigation system has malfunction.
- When bus or trucks attached with a speed sticker are passing you.
- When you are at a certain location not covered by the navigation function.
- When the navigation function is not updated to the latest map version.

## Driver's Attention

The driver must be cautious in the below situations for the function may not assist the driver and may not work properly.

- Do not stick or attach anything to the windshield in front of the camera as this may reduce effectiveness or cause one more of the function dependent on the camera to stop working.
- Keep the windshield in the area behind the interior rear view mirror clean.
- Do not place reflective materials, such as white paper or a mirror, on the instrument panel.
- Do not strike or damage the areas around the camera unit.
- Do not touch the camera lens or remove the screw located on the camera unit.
- The function does not work in all situations but is designed merely as a supplementary aid.
- The function assists the driver and does not replace the human eye.
- The driver always bears ultimate responsibility for ensuring that the vehicle is driven safely and that applicable road traffic rules and regulations are followed.

## Driver Attention Warning (DAW) (if equipped)

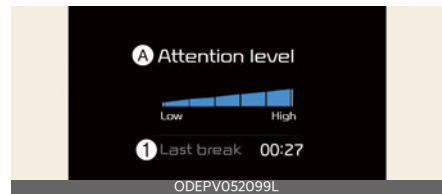
Driver Attention Warning is to warn the driver with any hazardous driving situations upon detecting the driver's attention level or inattentive driving practices.

### Driver Attention Warning

#### Settings

- Driver Attention Warning is set to be in the OFF position, when your vehicle is first delivered to you from the factory.
- To turn ON Driver Attention Warning, turn on the vehicle, and then select **User settings** → **Driver assistance** → **Driver Attention Warning** → **Attention warning** on the LCD display.
- The set-up of Driver Attention Warning will be maintained, as selected, when the vehicle is restarted.

#### Display of the driver's attention level



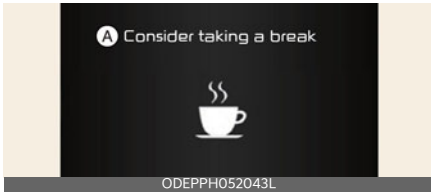
#### A: Attention level

#### 1 Last Break

- The driver can monitor their driving conditions on the LCD display.
  - Select **User settings** mode and then **Driver assistance** on the LCD display. (For more information, refer to "LCD display" on page 5-38.)
- Driver's attention level is displayed on the scale of 1 to 5. The lower the level is, the more inattentive the driver is.

- The level decreases when the driver does not take a break for a certain period of time.
- When the driver turns on the function while driving, it displays **Last Break time** and level reflected that.

**Take a break**



**A: Consider taking a break**

- The message appears on the LCD display and a warning sounds in order to suggest the driver to take a break, when the driver's attention level is below 1.
- Driver Attention Warning does not suggest the driver to take a break, when the total driving time is shorter than 10 minutes.

**Resetting the function**

- The last break time is set to 00:00 and the driver's attention level is set to 5 (very attentive) when the driver resets Driver Attention Warning.
- Driver Attention Warning resets in the following situations.
  - The vehicle is turned OFF.
  - The driver unfastens the seat belt and then opens the driver's door.
  - Stop lasting more than 10 minutes.
- Driver Attention Warning operates again, when the driver restarts driving.

**Function standby**



**A: Driver Attention Warn.**

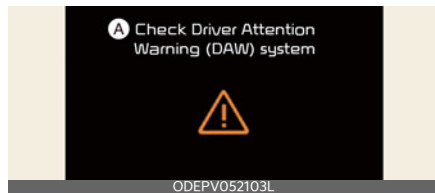
**1 Standby**

**2 Last Break**

Driver Attention Warning enters the ready status and displays the **Standby** screen in the following situations.

- The camera sensor keeps failing to detect the lanes.
- Driving speed remains 0~180 km/h (0~112 mph)

**Driver Attention Warning malfunction**



**A: Check Driver Attention Warning (DAW) system**

When the warning message appears, the function is not working properly. In this case, have the function checked by a professional workshop. Kia recommends to visit an authorized Kia dealer/service partner.

**⚠ WARNING**

- Driver Attention Warning is not a substitute for safe driving practices, but a convenience function only. It is the responsibility of the driver to always drive cautiously to prevent unex-



pected and sudden situations from occurring. Pay attention to the road conditions at all times.

- It may suggest a break according to the driver's driving pattern or habits even if the driver doesn't feel fatigued.
- The driver, who feels fatigued, should take a break, even though there is no break suggestion by Driver Attention Warning.

### \* NOTICE

Driver Attention Warning utilizes the front view camera on the front windshield for its operation. To keep the front view camera in the best condition, you should observe the followings:

- Do not disassemble front view camera temporarily for tinted window or attaching any types of coatings and accessories. If you disassemble a camera and assemble it again, have the function checked by a professional workshop. Kia recommends to visit an authorized Kia dealer/service partner and have the function checked to need a calibration.
- Do not locate any reflective objects (i.e. white paper, mirror) over the dashboard. Any light reflection may cause a malfunction of Driver Attention Warning.
- Pay extreme caution to keep the front view camera out of water.
- Do not arbitrarily disassemble the front view camera assembly, nor apply any impact on the front view camera assembly.
- Playing the vehicle audio system at high volume may offset Driver Attention Warning warning sounds.

### ⚠ CAUTION

Driver Attention Warning may not properly operate with limited alerting in the following situations:

- The lane detection performance is limited. (For more information, refer to "Lane Keeping Assist (LKA) (if equipped)" on page 6-43.)
- The vehicle is violently driven or is abruptly turned for obstacle avoidance (e.g. construction area, other vehicles, fallen objects, bumpy road).
- Forward drivability of the vehicle is severely undermined (possibly due to wide variation in tire pressures, uneven tire wear-out, toe-in/toe-out alignment).
- The function will not operate for about 15 seconds when restarting the vehicle or initializing the front camera such as rebooting, etc.
- Intentionally frequent lane cut-in.
- The vehicle drives on a curvy road.
- The vehicle drives on a bumpy road.
- The vehicle drives through a windy area.
- The vehicle is controlled by the following driving assist functions:
  - Forward Collision-Avoidance Assist
  - Lane Keeping Assist
  - Smart Cruise Control

### Leading vehicle departure warning

This function reminds the driver the leading vehicle's driving departure after stopping.

### Function setting and operating conditions

With the vehicle ON, the Leading vehicle departure warning function turns on and gets ready to be activated when the **User settings → Driver assistance → Driver Attention Warning → Leading vehicle departure alert** is selected on the cluster. The function stops operation when the setting is deactivated. However, if the vehicle is turned off then on again, the function maintains the previous state.

### Function activation

If the driver does not take action for a certain period of time after the vehicle in front departs, **Leading vehicle is driving away** message is displayed on the cluster.

#### **⚠ WARNING**

- The function is a driver assistant device and it may not warn the driver even warn the leading vehicle's departure.
- Even the function warn the driver the leading vehicle's departure, always check the traffic condition by yourself before moving the vehicle.

#### **\* NOTICE**

The function may not warn or may not work properly when:

- A pedestrian or a bicycle is ahead
- A car cut in ahead.
- Meet a traffic jam during the curve or right turn driving.
- Busy road such as reducing lanes.
- Stopping at a shoulder, rest area or a parking lot.

### Cruise Control (CC) (if equipped)

Type A



Type B



- 1 CRUISE indicator
- 2 Cruise set indicator

Cruise Control allows you to program the vehicle to maintain a constant speed without depressing the accelerator pedal.

This function is designed to function above approximately 30 km/h (20 mph).

#### **⚠ WARNING**

- If Cruise Control is left on, (CRUISE indicator light appears), Cruise Control can be switched on accidentally. Keep Cruise Control off when Cruise Control is not in use, to avoid inadvertently setting a speed.
- Use Cruise Control only when traveling on open highways in good weather.
- Do not use Cruise Control when it may not be safe to keep the vehicle at a constant speed, for instance, driving in heavy or varying traffic, or on slippery (rainy, icy or snow covered) or

winding roads or over 6% uphill or downhill roads.

- Pay particular attention to the driving conditions whenever using Cruise Control.
- Be careful when driving downhill using Cruise Control, which may increase the vehicle speed.

**\* NOTICE**

- During normal Cruise Control operation, when the SET switch is activated or reactivated after applying the brakes, Cruise Control will energize after approximately 3 seconds. This delay is normal.
- To activate Cruise Control, depress the brake pedal at least once after turning the vehicle to the ON position or starting the vehicle. This is to check if the brake switch which is important part to cancel Cruise Control is in normal condition.

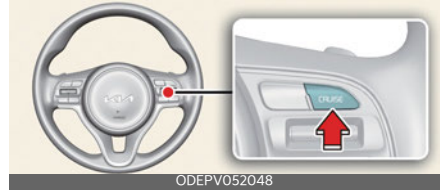
**Cruise Control operation switches**



- 1 Driving Assist button: Turns Cruise Control on or off.
- 2 RES+: Resumes or increases Cruise Control speed.
- 3 SET-: Sets or decreases Cruise Control speed.
- 4 CANCEL (O): Cancels Cruise Control operation.

**To set Cruise Control speed:**

1. Press the Driving Assist button on the steering wheel to turn the function on. CRUISE indicator light will appear.



2. Accelerate to the desired speed, which must be more than approximately 30 km/h (20 mph).
3. Push the switch down (to SET-), and release it at the desired speed. The cruise set indicator light will illuminate. Release the accelerator pedal at the same time. Set speed will automatically be maintained.



On a steep grade, the vehicle may slow down or speed up slightly while going downhill.

**To increase Cruise Control set speed:**



Follow either of these procedures:

- Push the switch up (to RES+) and hold it. Your vehicle will accelerate. Release the switch at the speed you want.

- Push the switch up (to RES+) and release it immediately. The cruising speed will increase by 1 km/h (1 mph) each time you push the switch up (to RES+) in this manner.

### To decrease the cruising speed:



Follow either of these procedures:

- Push the switch (to SET-) and hold it. Your vehicle will gradually slow down. Release the switch at the speed you want to maintain.
- Push the switch down (to SET-) and release it immediately. The cruising speed will decrease by 1 km/h (1 mph) each time you push the switch down (to SET-) in this manner.

### To temporarily accelerate with Cruise Control on:

If you want to speed up temporarily when 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 pedal.

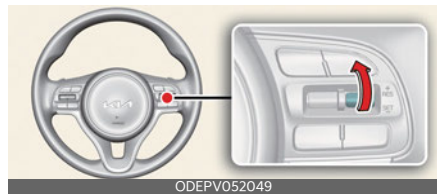
### To cancel Cruise Control, do one of the following:



- Depress the brake pedal.
- Press the CANCEL (O) button located on the steering wheel.
- Decrease the vehicle speed lower than the memory speed by approximately 20 km/h (12 mph).
- Decrease the vehicle speed to less than approximately 25 km/h (15 mph).

Each of these actions will cancel Cruise Control operation (the cruise set indicator light will go off), but it will not turn the function off. If you wish to resume Cruise Control operation, push up the switch (to RES+) located on your steering wheel. You will return to your previously preset speed.

### To resume cruising speed at more than approximately 30 km/h (20 mph).



If any method other than the Driving Assist button was used to cancel cruising speed and the function is still activated, the most recent set speed will automatically resume when the (RES+) switch is pushed.

It will not resume, however, if the vehicle speed has dropped below approximately 30 km/h (20 mph).

### To turn Cruise Control off, do one of the following:

- Press the Driving Assist button (CRUISE indicator will turn off).
- If your vehicle equipped the speed limit, press the Driving Assist button twice. (CRUISE indicator will turn off.)
- Turn the vehicle off.


Both of these actions cancel Cruise Control operation. If you want to resume Cruise Control operation, repeat the steps provided on the previous page.

## Smart Cruise Control (SCC) (if equipped)



- 1 CRUISE indicator
- 2 Set speed
- 3 Vehicle distance

Smart Cruise Control allows you to program the vehicle to maintain constant speed and distance detecting the vehicle ahead without depressing the accelerator or brake pedal.

To see the Smart Cruise Control screen on the LCD display on the cluster, select Driving Assist mode (  ). For more informations, refer to "LCD display" on page 5-38.

### WARNING

For your safety, please read the owner's manual before using Smart Cruise Control.

### NOTICE

To activate Smart Cruise Control, depress the brake pedal at least once after turning the vehicle to the ON position or starting the vehicle. This is to check if the brake switch which is important part to cancel Smart Cruise Control is in normal condition.

### Smart Cruise Control operation switches

Driving Assist button: Turns Smart Cruise Control on or off.

RES+: Resumes or increases Smart Cruise Control speed.

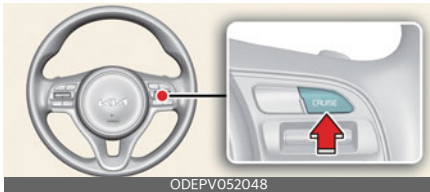
SET-: Sets or decreases Smart Cruise Control speed.

(

CANCEL (O): Cancels Smart Cruise Control operation.

### To set Smart Cruise Control Speed:

1. Press the Driving Assist button to turn the function on. CRUISE indicator in the instrument cluster will appear.



2. Accelerate to the desired speed. Smart Cruise Control speed can be set as follows:

- 10~160 km/h (5~100 mph): when there is no vehicle in front
- 0~160 km/h (0~100 mph): when there is a vehicle in front

3. Push the switch down (to SET-), and release it at the desired speed. The set speed and vehicle to vehicle distance on the LCD screen will appear.



4. Release the accelerator pedal. The desired speed will automatically be maintained.

If there is a vehicle in front of you, the speed may decrease to maintain the distance to the vehicle ahead.

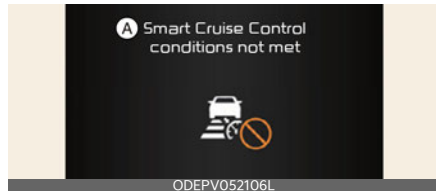
On a steep grade, the vehicle may slow down or speed up slightly while going uphill or downhill.

Vehicle speed may decrease on a downward slope and increase on an onward slope.

The speed will be set to 30 km/h (20 mph) when there is a vehicle ahead and your vehicle speed is 0~30 km/h (20 mph).

Also, the speed will be set to 30 km/h (20 mph) when there is no vehicles ahead and your vehicle speed is 10~30 km/h (5~20 mph).

### Smart Cruise Control not operating conditions



#### A: SCC (Smart Cruise Ctrl.) conditions not met

- The driver's door is opened.
- The vehicle is shifted to N (Neutral)/R (Reverse)/P (Park).
- The parking brake is applied.
- The vehicle speed is not within the specified SCC range.
- The ESC (Electronic Stability Control), TCS (Traction Control System) or ABS is operating.

- The ESC (Electronic Stability Control), TCS (Traction Control System) or ABS is off.
- The sensor cover is extremely contaminated.
- The engine performance is abnormal.
- Forward Collision-Avoidance Assist is activated.
- The engine RPM is in the red zone.
- The front radar sensing data is out of limit.

### To increase Smart Cruise Control set speed:



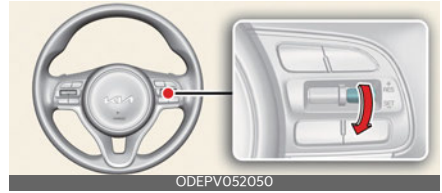
Follow either of these procedures:

- Push the switch up (to RES+), and hold it. Your vehicle set speed will increase by 10 km/h (5 mph). Release the switch at the speed you want.
- Push the switch up (to RES+), and release it immediately. The cruising speed will increase by 1 km/h (1 mph) each time you push the switch up (to RES+) in this manner.
- You can increase the set speed to 160 km/h (100 mph).

#### **CAUTION**

Check the driving condition before using the toggle switch. Driving speed sharply increases, when you push up and hold the switch.

### To decrease Smart Cruise Control set speed:



Follow either of these procedures:

- Push the switch down (to SET-), and hold it. Your vehicle set speed will decrease by 10 km/h (5 mph). Release the switch at the speed you want.
- Push the switch down (to SET-), and release it immediately. The cruising speed will decrease by 1 km/h (1 mph) each time you push the switch down (to SET-) in this manner.
- You can decrease the set speed to 30 km/h (20 mph).

### To temporarily accelerate with Smart Cruise Control on:

If you want to speed up temporarily when Smart Cruise Control is on, depress the accelerator pedal. Increased speed will not interfere with Smart Cruise Control operation or change the set speed.

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

If you push the switch down (to SET-) at increased speed, the increased cruising speed will be set again.

#### **\* NOTICE**

Be careful when accelerating temporarily, because the speed is not controlled automatically at this time even if there is a vehicle in front of you.



### Smart Cruise Control will be temporarily canceled when:

#### Canceled manually



Smart Cruise Control is temporarily canceled when the brake pedal is depressed or the CNCL (O) switch is pressed. Depress the brake pedal and press the CNCL (O) switch at the same time, when the vehicle is at a standstill. The speed and vehicle distance indicator on the cluster is disappeared and CRUISE indicator is appeared continuously.

#### Canceled automatically

SCC will automatically cancel in the following situations:

- The driver's door is opened.
- The gear is shifted to N (Neutral), R (Reverse) or P (Parking).
- The EPB (Electronic Parking Brake) is applied.
- The vehicle speed is over 170 km/h (110 mph)
- The ESC, ABS or TCS is operating.
- The ESC is turned off.
- The sensor or the cover is dirty or blocked with foreign matter.
- The accelerator pedal is continuously depressed for long time.
- The speed is in dangerous range.
- Smart Cruise Control has malfunctioned.

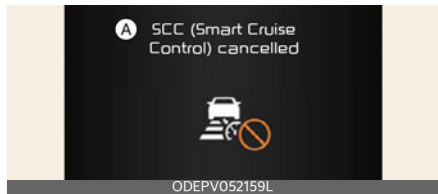
- When the braking control is operated for Forward Collision-Avoidance Assist
- The vehicle is stopped for more than 5 minutes.
- The vehicle stops and goes repeatedly for a long period of time.
- When the parking brake is locked.
- Vehicle has some problems.

Each of these actions will cancel Smart Cruise Control operation. (the set speed and vehicle distance on the LCD display will go off.) In a condition Smart Cruise Control is canceled automatically, Smart Cruise Control will not resume even though the (RES+) or (SET-) switch is pushed.

In a condition Smart Cruise Control is canceled automatically when the vehicle stops, the EPB will activate and the parking brake will be locked.

#### CAUTION

If Smart Cruise Control is canceled by other than the reasons mentioned, have the function checked by a professional workshop. Kia recommends to visit an authorized Kia dealer/service partner.



#### A: SCC (Smart Cruise Control) cancelled

#### CAUTION

If the function is automatically canceled, the warning chime will sound and a message will appear for a few seconds.



You must adjust the vehicle speed by depressing the accelerator or brake pedal according to the road condition ahead and driving condition.

Always check the road conditions. Do not rely on the warning chime.

### To resume Smart Cruise Control set speed:



If any method other than the CANCEL (O) button was used to cancel cruising speed and the function is still activated, the cruising speed will automatically resume when you push the switch up (to RES+).

If you push the switch up (to RES+), the speed will resume to the recently set speed. However, if vehicle speed drops below 10 km/h (5 mph), it will resume when there is a vehicle in front of your vehicle.

#### \* NOTICE

To reduce the risk of an accident, always check the road conditions when reactivating Smart Cruise Control using the (RES+) switch to ensure the road conditions permit safe use of Cruise Control.

### To turn Smart Cruise Control off:

Press the Driving Assist button. (CRUISE indicator in the instrument cluster will go off).

When Smart Cruise Control is not needed, press the Driving Assist button and deactivate the function.

#### \* NOTICE

The mode changes, as below, whenever the Driving Assist button is pressed.

- Function off → Smart Cruise Control → Manual Speed Limit Assist → Function off

#### ⚠ WARNING

Take the following precautions:

- If Smart Cruise Control is left on, (CRUISE indicator in the instrument cluster appeared) Smart Cruise Control can be activated unintentionally. Keep Smart Cruise Control off (CRUISE indicator off) when Smart Cruise Control is not used.
- Do not leave the vehicle when it stop by Smart Cruise Control. If necessary to leave the vehicle, turn off Smart Cruise Control and change the gear to P (Parking) and engage the parking brake and off the vehicle while depressing the brake pedal.  
Do not leave the vehicle when it was stopped by Smart Cruise Control. If it is necessary to leave the vehicle, turn off the Smart Cruise Control, change the gear shift to P (Parking), engage the parking brake and turn off the motor while depressing the brake pedal.
- Use Smart Cruise Control only on the good traffic condition road. Do not use Smart Cruise Control in the fol-

lowing situations because the high risk of an accident.

- Highway interchange and tollgate
- Road surrounded by abnormally multiple steel constructions (subway construction, steel tunnel, etc.)
- Parking lot
- Lanes beside guard rail on a road
- Slippery road with rain, ice, or snow covered
- Abrupt curved road
- Steep hills
- Windy roads
- Off roads
- Rods under construction
- Rumble strip
- When driving near crash barriers
- When the vehicle sensing ability decreases due to vehicle modification resulting level difference of the vehicle's front and rear
- When driving with limited view (possibly due to bad weather, such as fog, snow, rain or sandstorm)
- Pay particular attention to the driving conditions whenever using Smart Cruise Control.
- Smart Cruise Control is not a substitute for safe driving. It is the responsibility of the driver to always check the speed and distance of the vehicle ahead.
- Be careful when driving downhill using Smart Cruise Control.
- Smart Cruise Control should not be used when the vehicle is being towed to prevent any damage.
- Always set the vehicle speed under the speed limit in your country.
- Unexpected situations may lead to possible accidents. Pay attention con-

tinuously to road conditions and driving even when Smart Cruise Control is being operated.

---

### Set Smart Cruise Control reaction

The sensitivity of vehicle speed when following the front vehicle to maintain the set distance can be adjusted. Go to the **User settings** mode (Driver Assistance) and select Smart Cruise Control reaction. You may select 1 of the 3 stages you prefer.

- **Slow:**

Vehicle speed following the front vehicle to maintain the set distance is slower than normal speed.

- **Normal:**

Vehicle speed following the front vehicle to maintain the set distance is normal

- **Fast:**

Vehicle speed following the front vehicle to maintain the set distance is faster than normal speed.

### \* NOTICE

The last selected mode remains in the function.

### Vehicle distance setting

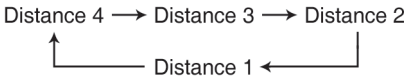
#### To set vehicle distance:

This function allows you to program the vehicle to maintain relative distance to the vehicle ahead without depressing the accelerator pedal or brake pedal.

The vehicle distance will automatically activate when Smart Cruise Control is on.

Select the appropriate distance according to road conditions and vehicle speed.

Each time the button is pressed, the vehicle distance changes as follows:



For example, if you drive at 90 km/h (56 mph), the distance maintain as follows:

- Distance 4 - approximately 52.5 m (172 ft.)
- Distance 3 - approximately 40 m (130 ft.)
- Distance 2 - approximately 32.5 m (106 ft.)
- Distance 1 - approximately 25 m (82 ft.)

**\* NOTICE**

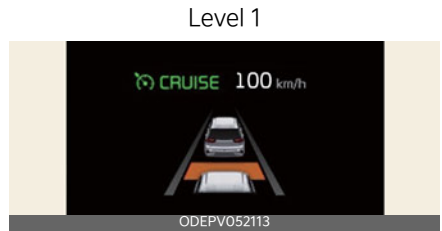
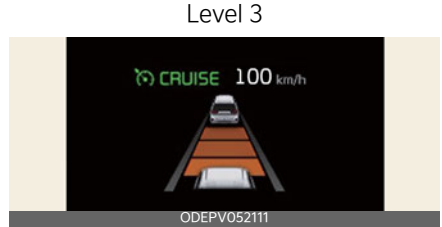
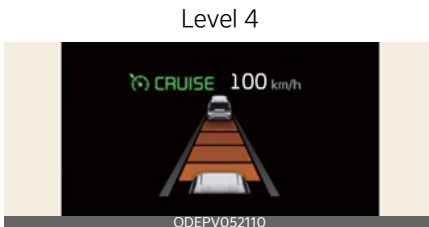
The distance is set to the last set distance when the function is used for the first time after starting the vehicle.

**When the lane ahead is clear:**



The vehicle speed will maintain the set speed.

**When there is a vehicle ahead of you in your lane:**



- The vehicle will maintain the set speed, when the lane ahead is clear.
- The vehicle will slow down or speed up to maintain the selected distance, when there is a vehicle ahead of you in the lane. (A vehicle will appear in front of your vehicle in the LCD display only when there is an actual vehicle in front of you)
- If the vehicle ahead speeds up, your vehicle will travel at a steady cruising speed after accelerating to the selected speed.
- If you turn on the driver's side turn signal when there is a vehicle ahead, your vehicle may temporarily accelerate to assist you in changing lanes.

## Collision Warning



### A: Collision warning!

If there is a high risk of collision due to sudden braking of the front vehicle or lack of safety distance with the vehicle ahead during Smart Cruise Control driving, so that if the driver's brake or steering wheel operation is required, the Distance Step with the vehicle ahead will blink on the cluster and a collision warning will sound.

In this case, immediately reduce the speed.

### CAUTION

- Even if the warning message does not appear and warning chime does not sound, always pay attention to driving conditions to prevent dangerous situations from occurring.
- Playing the vehicle audio system at high volume may cause the occupants to not hear the function warning sounds.
- If the vehicle cannot keep the enough set distance, the warning will sound and blink on the cluster. If a warning sounds, check the nearby traffic condition and if necessary, control the speed by depressing the brake pedal. Always pay attention in case of danger, even if there is no warning sound.

### WARNING

- If the speed of the vehicle ahead is similar to or faster than your vehicle, the function may not warn you as you do not maintain enough set distance. Always pay attention in case of danger, even if there is no warning sound.
- If the speed of the vehicle ahead is too slow, the function may not warn you as you do not maintain enough set distance. Always pay attention in case of danger, even if there is no warning sound.
- If you set Smart Cruise Control speed and depress the accelerator pedal, the function may not warn you as you do not maintain enough set distance. Always pay attention in case of danger, even if there is no warning sound.



### A: Watch for surrounding vehicles

### CAUTION

If the vehicle ahead (vehicle speed: less than 30 km/h (20 mph)) disappears to the next lane, the warning chime will sound and a message will appear. Adjust your vehicle speed for vehicles or objects that can suddenly appear in front of you by depressing the brake pedal according to the road condition ahead and driving condition.

## In traffic situation



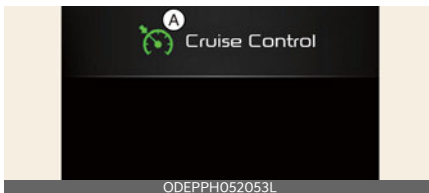
### A: Use switch or pedal to accelerate

- In traffic, your vehicle will stop if the vehicle ahead of you stops. Also, if the vehicle ahead of you starts moving, your vehicle will start as well. However, if the vehicle stops for more than 3 seconds, you must depress the accelerator pedal or push up the switch (RES+/SET-) to start driving.
- If you push Smart Cruise Control switch (RES+ or SET-) while AUTO HOLD and Smart Cruise Control is operating the AUTO HOLD will be released regardless of accelerator pedal operation and the vehicle will start to move. The AUTO HOLD indicator changes from green to white.

## To convert to Cruise Control mode:

The driver may choose to only use Cruise Control mode (speed control function) by doing as follows:

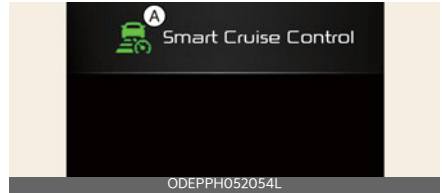
1. Turn Smart Cruise Control on (CRUISE indicator light will be on but the function will not be activated).



### A: Cruise Control

2. Push the distance to distance switch for more than 2 seconds.

3. Choose between **Smart Cruise Control mode** and **Cruise Control mode**.



### A: Smart Cruise Control

When the function is canceled using the Driving Assist button or the Driving Assist button is used after the vehicle is turned on, the Smart Cruise Control mode will turn on.

## ⚠ WARNING

When using Cruise Control mode, you must manually access the distance to other vehicles as the function will not automatically brake to slow down for other vehicles.

## Detecting sensor

Front view camera



Front view camera is a sensor for detecting lanes and the vehicles in front.

If the sensor is covered with dirt, snow or other foreign matter, the sensor's detection performance will be degraded and Smart Cruise Control will be temporarily canceled so that it does not properly work until it is cleaned.

Always keep the area in front of the sensor clean.

For more information of front view camera, refer to "Lane Keeping Assist (LKA) (if equipped)" on page 6-43.

Front radar

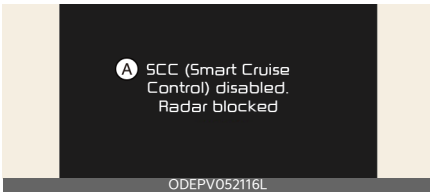


Front radar detects the distance to the vehicle ahead.

If the sensor or sensor cover is covered with dirt, snow or other foreign matter, the sensor's detection performance will be degraded and Smart Cruise Control will be temporarily canceled so that it does not properly work until it is cleaned. Always keep the area in front of the sensor clean.

### Smart Cruise Control malfunction and limitations

#### Smart Cruise Control disabled

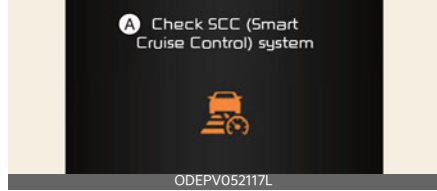


#### A: SCC (Smart Cruise Control) disabled. Radar blocked

When the sensor cover is blocked with dirt, snow, or debris, Smart Cruise Control operation may stop temporarily. If this occurs, a warning message will appear on the LCD display. Remove any dirt, snow, or debris and clean the radar sensor cover before operating Smart Cruise Control. Smart Cruise Control may not properly activate, if the radar is

totally contaminated, or if any substance is not detected after turning ON the motor (e.g. in an open terrain).

#### Smart Cruise Control malfunction



#### A: Check SCC (Smart Cruise Control) system

The message will appear when the vehicle distance control is not functioning normally.

In this case, have the system checked by a professional workshop. Kia recommends to visit an authorized Kia dealer/service partner.

#### CAUTION

- Do not install accessories around the sensor and do not replace the bumper by yourself. It may interfere with the sensor performance.
- Always keep the sensor and bumper clean.
- To prevent sensor cover damage from occurring, wash the car with a soft cloth.
- Do not damage the sensor or sensor area by a strong impact. If the sensor moves slightly off position, Smart Cruise Control will not operate correctly without any warning or indicator from the cluster. If this occurs, have the function checked by a professional workshop. Kia recommends to visit an authorized Kia dealer/service partner.

- Use only a genuine Kia sensor cover for your vehicle. Do not paint anything on the sensor cover.
- If the front bumper becomes damaged in the area around the radar sensor, Smart Cruise Control may not operate properly.
- Do not tint the window or install stickers, accessories around the inside mirror where the camera is installed.
- Make sure the frontal camera installation point does not get wet.
- Do not place reflective objects (white paper or mirror etc.) on the crash pad. Forward Collision-Avoidance Assist may activate unnecessarily due to reflect of the sunlight.
- Do not impact or arbitrarily remove any front view camera components.

## Limitations of Smart Cruise Control

Smart Cruise Control may have limits to its ability to detect distance to the vehicle ahead due to road and traffic conditions.

### Driving on a curved road

- On curves, Smart Cruise Control may not detect a moving vehicle in your lane, and then your vehicle could accelerate to the set speed. Also, the vehicle speed will rapidly slow down when the vehicle ahead is recognized suddenly.



- Select the appropriate set speed on curves and adjust your vehicle speed by depressing the accelerator or brake pedal according to the road condition ahead and driving condition.
- Your vehicle speed can be reduced due to a vehicle in the adjacent lane. Adjust your vehicle speed by depressing the brake pedal according to the road condition ahead and driving condition. Apply the accelerator pedal and select the appropriate set speed. Check to be sure that the road conditions permit safe operation of Smart Cruise Control.



### Driving on an inclined road

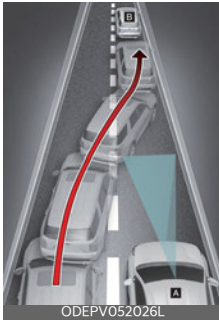
- During uphill or downhill driving, Smart Cruise Control may not detect a moving vehicle in your lane, and cause your vehicle to accelerate to the set speed. Also, the vehicle speed will rapidly down when the vehicle ahead is recognized suddenly.



- Select the appropriate set speed on inclines and adjust your vehicle speed by depressing the accelerator or brake pedal according to the road condition ahead and driving condition.

## Changing lanes

- A vehicle which moves into your lane from an adjacent lane cannot be recognized by the sensor until it is in the sensor's detection range.



[A]: Your vehicle, [B]: Lane changing vehicle

- The sensor may not detect immediately when a vehicle cuts in suddenly. Always pay attention to the traffic, road and driving conditions.
- If a vehicle which moves into your lane is slower than your vehicle, your speed may decrease to maintain the distance to the vehicle ahead.
- If a vehicle which moves into your lane is faster than your vehicle, your vehicle will accelerate to the selected speed.
- Your vehicle may accelerate when a vehicle ahead of you disappears.
- When you are warned that the vehicle ahead of you is not detected, drive with caution.



## Recognizing the vehicle

Some vehicles ahead in your lane cannot be recognized by the sensor as follows:

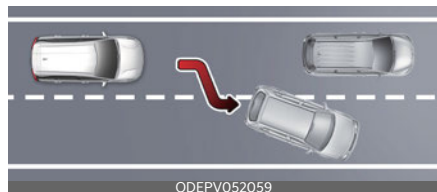
- Narrow vehicles such as motorcycles or bicycles
- Vehicles offset to one side
- Slow-moving vehicles or sudden decelerating vehicles
- Stopped vehicles
- Vehicles with small rear profile such as trailers with no loads

A vehicle ahead cannot be recognized correctly by the sensor if any of following occurs:

- When the vehicle is pointing upwards due to overloading in the tailgate
- While making turns by steering
- When driving to one side of the lane
- When driving on narrow lanes or on curves

Adjust your vehicle speed by depressing the brake pedal according to the road condition ahead and driving condition.

- When vehicles are at a standstill and the vehicle in front of you changes to the next lane, be careful when your vehicle starts to move because it may not recognize the stopped vehicle in front of you.



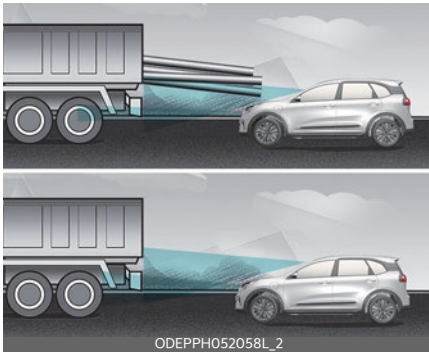
In this case, you must maintain a safe braking distance, and if necessary, depress the brake pedal to reduce your driving speed in order to maintain a safe distance.



- Always look out for pedestrians when your vehicle is maintaining a distance with the vehicle ahead.



- Always be cautious for vehicles with higher height or vehicles carrying loads that sticks out to the back of the vehicle.



**WARNING**

- Smart Cruise Control cannot guarantee the stop for every emergency situation.  
If an emergency stop is necessary, you must apply the brakes.
- Keep a safe distance according to road conditions and vehicle speed. If the vehicle distance is too close during a high-speed driving, a serious collision may result.
- Smart Cruise Control cannot recognize a stopped vehicle, pedestrians or an oncoming vehicle. Always look ahead cautiously to prevent unexpected and sudden situations from occurring.

- Smart Cruise Control may have difficulty in maintaining the correct distance or speed, if the vehicle is driving on a steep incline or towing a trailer.
- When other vehicles are changing lanes in front of you frequently, Smart Cruise Control may not operate appropriately. Always look ahead cautiously to prevent unexpected and sudden situations from occurring.
- Smart Cruise Control is not a substitute for safe driving practices but a convenience function only. It is the responsibility of the driver to always check the speed and the distance to the vehicle ahead.
- Always be aware of the selected speed and vehicle distance.
- Always maintain sufficient braking distance and decelerate your vehicle by applying the brakes if necessary.
- As Smart Cruise Control may not recognize complex driving situations, always pay attention to driving conditions and control your vehicle speed.
- For safe operation, carefully read and follow the instructions in this manual before use.
- While other warning sound is played such as not fastening the seat belt, Smart Cruise Control warning sound may not occur.
- When driving with Smart Cruise Control set speed it may be possible that a vehicle which is parked ahead is not detected. Be careful if you fully rely on Smart Cruise Control in such case, you may encounter a risk of collision.
- Please turn off Smart Cruise Control while towing.
- If the vehicle ahead disappears while driving and maintaining the set distance, the vehicle may accelerate until

it reaches to set speed. Be careful for a possible dangerous situation.

- When driving on a slippery road, be careful for possible dangerous situations.
- Beware of dangerous situations as you may quickly pass vehicles driving in the next lane.

**⚠ CAUTION**

Smart Cruise Control may not operate temporarily due to electrical interference.

### Lane Following Assist (LFA) (if equipped)



Lane Following Assist is designed to center the vehicle in the chosen lane by using a front view camera on top of the windshield.

\* LFA stands for Lane Following Assist.

### Lane Following Assist settings

#### Activating Lane Following Assist



With the vehicle ON, press the Lane Driving Assist button located on the steering wheel to turn on Lane Following Assist. The white or green indicator light (🚦) will appear on the cluster.

Press the Lane Driving Assist button again to turn off the function.

- Green: steering assist mode on
- White: steering assist mode off

**⚠ WARNING**

- It is the driver's responsibility to operate the steering wheel for safe driving.
- Do not turn the steering wheel hastily if Lane Following Assist is in work.
- Lane Following Assist assists the steering wheel control over the direction so that the vehicle can stay in the center of the lane. Lane Following Assist does not automatically control the steering wheel of at all times, which means the driver must not hands off the wheel while driving.
- When using Lane Following Assist, always be aware of your surroundings and road conditions that may interrupt or stop Lane Following Assist.

**⚠ CAUTION**

- Do not attach glass tinting, stickers, accessories to the windshield where the front view camera near the indoor mirror is placed.
- The removal or re-assembly of the front view camera to attach tinting, stickers, accessories may require Lane Following Assist to be thoroughly inspected and modified. In such case, Kia recommend that you have your vehicle inspected by an authorized Kia dealer/service partner.
- Inspection or modification may be required when replacing parts related to the windshield or front view camera, steering, have the system checked by a professional workshop. Kia recommends to visit an authorized Kia dealer/service partner.
- Depending on your surroundings and road conditions, Lane Following Assist could fail to recognize the lane and stop working. In turn, extra caution is

required while driving with Lane Following Assist on.

- Be sure to check the non-operating conditions and cautions for the driver before using Lane Following Assist.
- Do not place reflective materials such as white paper or mirror on the crash pad. Sunlight reflections can cause a malfunction in Lane Following Assist.
- Too big sound from the sound system can interrupt the alarming sound from Lane Following Assist.
- Keeping your hands off the wheel while driving will trigger the hands-off warning and deactivate the steering-assist. Put your hands back on the wheel, then the steering-assist will be re-activated.
- When driving at a high speed, the steering assist force can become weak and the vehicle can drive out of its lane. Extra caution is required, and comply with the speed limit.
- Attaching an object to the steering wheel could deter steering assistance.
- Attaching an object to the steering wheel could deter the hands-off alarming system.

**Steering assist**

If the vehicle is inside the lane with both lanes recognized by the function, and there is no steep steering made by the driver, Lane Following Assist changes into steering assist mode. The indicator light will come on green, and the function helps the vehicle stay in line by controlling the steering wheel.

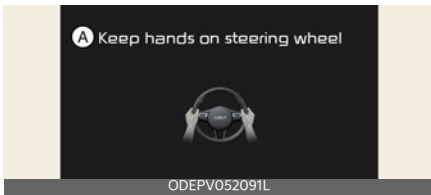
When the steering wheel is not controlled temporarily, the indicator light will flash green and changes to white.

When the both lanes are not recognized by the function, the function controls the steering wheel limitedly whether there is a vehicle in front or not.

**⚠ WARNING**

Lane Following Assist ensures the vehicle stays in its lane. Lane Following Assist does not guarantee 100% safety. Make sure you make decisions on the road after checking the road conditions and safety matters while driving. Never completely rely on your Lane Following Assist.

**Hands-off warning**



**A: Keep hands on steering wheel**

- If you keep your hands off the wheel while driving with Lane Following Assist assisting the steering, the hands-off warning will be triggered.
- If the driver still does not have their hands on the steering wheel after the hands-off warning, the **Lane Following Assist (LFA) canceled** warning message will appear and Lane Following Assist will be automatically canceled.

If the driver keeps hands off the wheel even with the hands-off warning on, the steering assist is temporarily released automatically.

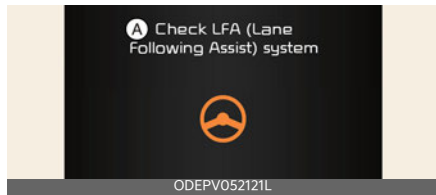
If you put your hands back on the wheel with Lane Following Assist released, the steering assist will restart.

**⚠ CAUTION**

- Hands-off warnings may be delayed depending on road conditions. Always keep your hands on the steering wheel while driving.
- Hold the steering wheel tight. Otherwise, Lane Following Assist could misjudge that the driver hands off the wheel, and a hands-off warning may occur.

**Lane Following Assist malfunction and limitations**

**Lane Following Assist malfunction**



**A: Check LFA (Lane Following Assist) system**

The warning message popped up (turned off after a certain period of time) means a problem with Lane Following Assist. In this case, have the system checked by a professional workshop. Kia recommends to visit an authorized Kia dealer/service partner.

**⚠ CAUTION**

- It is the driver's responsibility to operate the steering wheel while driving.
- With Lane Following Assist on, the driver can steer the vehicle by operating the wheel on his own.
- We recommend that the driver turns off Lane Following Assist and operates the steering wheel by himself in the following cases

- Bad weather
- Bad road conditions
- When frequent operation of the steering wheel is required
- When towing other vehicle or trailers
- The steering wheel can feel heavy or light if Lane Following Assist is assisting the steering.
- If the vehicle suddenly stops, it does not assist the steering.
- If the lane is too narrow or too wide, steering is not assisted.
- If the function is not able to recognize a vehicle in front and either of the lanes is not recognized, the steering is not assisted
- If the radius is too small for the curve

### Limitation of Lane Following Assist

- If the driver turns on the turn signal light or the emergency warning light to change the lane
  - Operate the turn signal light switch before changing the lane
  - If you change the lane without operating the turn signal lights, steering reaction force of the wheel may occur.
- Once Lane Following Assist is turned on or the lane is changed, the vehicle should be in the center of the road to switch to the steering assist mode. If the driver keeps driving along the lane, Lane Following Assist will not assist the steering.
- When the ESC or VSM is activated, the function does not assist steering.
- When driving on a curved road at a high speed, steering assist mode may not work.
- When driving at a speed faster than 150 km/h (90 mph), steering assist mode may not work.
- When sudden steering is made, the function could be temporarily deactivated.
- If you change the lane in a hurry, the function does not assist the steering.

### Cautions for the driver

If the lane recognition is difficult or limited for Lane Following Assist as shown below, the driver may need to be careful because it may not operate or may cause unnecessary operation.

### Roads or lane markings in bad condition

- When The lane is tainted or invisible
- When the driver cannot see the lane due to rain, snow, dust, sand, oil, puddles, etc
- When roads are set or the colors of the lane and road are not distinctive
- If there is a sign other than the lane near the lane or a mark similar to the lane
- When the lane is not clear or damaged
- If the road is covered in the shadows of objects around the road, such as medians, guard rails, noise walls, and trees
- If the number of lanes increases or decreases, or if the lanes intersect with each other more intensely (toll-gate entry section, road section/joining section, etc.)
- When there are two or more lane markings such as a construction section, a designated lane, etc.

- When the lane is crowded such as the construction section or the lane is replaced by some structures
- If there is a road marking such as a zigzag lane, crosswalk mark, or road surface milestone
- When a lane suddenly becomes invisible or disappears from an intersection

### The external environment affecting the function

- If the outside brightness of the vehicle suddenly changes, such as when entering or exiting the tunnel or passing under the bridge
- If the vehicle's headlights are not used at night or in the tunnel, or the brightness of the headlights is too weak
- If there are boundary structures such as tollgate booths and sidewalk blocks
- If it is difficult to distinguish lanes due to the reflection on the wet road made by sunlight, streetlight, and oncoming traffic.
- When the backlight is strongly reflected in the direction of the vehicle
- When Driving to the left or right lane by bus lane or on the bus lane
- If there is no enough distance between the front car or if the lane is covered by the car ahead of me
- When the lane change is large, such as a steep curve or a continuous curve
- When passing through speed bump, sudden up/down or left/right slope
- If the vehicle is severely shaken
- When the temperature around the mirror is very high due to direct sunlight

### When the front view camera has poor visibility

- If the windshield of the vehicle and the camera lens are covered with dust, fingerprints, or tinting.
- If the camera has poor visibility due to bad weather such as fog, heavy rain, heavy snow.
- If moisture is not completely removed from the windscreen.
- When placing objects on the dashboard, etc.

## Rear View Monitor (RVM)



ODEPPH052062L



ODEPPH052063L

Rear View Monitor will activate when the vehicle is on and the shift to R (Reverse) position.

This is a supplemental function that shows the area behind the vehicle through the audio or multi media screen display while backing-up.

### **⚠ WARNING**

- This function is a supplementary function only. It is the responsibility of the driver to always check the inside/outside rearview mirror and the area behind the vehicle before and while backing up because there is a dead zone that can't be seen by the camera.
- If the camera lens is covered with foreign material, the Rear View Monitor may not operate normally. Always keep the camera lens clean. However, do not use chemical solvents such as strong detergents containing high alkaline or volatile organic solvents (gasoline, acetone etc.). This may damage the camera lens.

\* If your vehicle is equipped with Infotainment system, Rear View Monitor will show behind the vehicle through the Infotainment system monitor while backing up. Refer to a separately supplied manual for detailed information.

## Rear View While Driving (if equipped)



ODEPPH052064L\_2



ODEPPH052065L

Rear View While Driving will activate when the back up lamp is ON with the vehicle ON and the shift lever in the R (Reverse) position. Driving Rear View assists you to drive safely by allowing you to check the rear view through the screen while driving.

The function is activated when:

- The vehicle is ON
- The shift lever is in D (Drive) or N (Neutral) and you press the Parking/View button.

The function is deactivated when:

- You press the Parking/View button again.
- You press the audio or Infotainment system button.

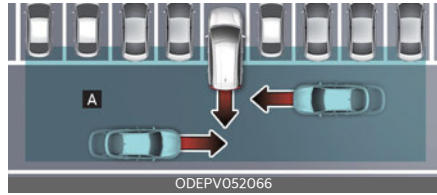
When the vehicle is reversing the screen switches to Rear View screen. Warning indicator in the screen is indicated when:

- The tailgate is open.
- The driver/passenger's door is open.

### **⚠ WARNING**

- Rear View While Driving is a supplementary driving assist function. Make sure to check the rear view directly for safety. What you see on the screen may differ from the actual vehicle's location.
- The camera may not operate properly if any foreign substance is on the rear camera lens. Always keep the lens clean.
- When the rear view is displayed while driving, an icon is indicated on the upper right side of the screen.

## Rear Cross-Traffic Collision Warning (RCCW) (if equipped)



[A]: Rear Cross-Traffic Collision Warning operating range

Rear Cross-Traffic Collision Warning uses rear corner radar sensors to monitor the approaching cross traffic from the left and right side of the vehicle when your vehicle is in reverse.

The blind spot detection range varies relative to the approaching vehicle speed.

### **⚠ WARNING**

- Always be aware of road conditions while driving and be alert for unexpected situations even though Rear Cross-Traffic Collision Warning is operating.
- Rear Cross-Traffic Collision Warning is supplemental functions to assist you. Do not entirely rely on the functions. Always pay attention, while driving, for your safety.
- Rear Cross-Traffic Collision Warning is not substitutes for proper and safe driving. Always drive safely and use caution when backing up the vehicle.



## Setting and activating Rear Cross-Traffic Collision Warning

### Settings

- The driver can activate the function by placing the vehicle to the ON position and by selecting **User settings** → **Driver assistance** → **Rear Cross-Traffic Safety**. Rear Cross-Traffic Collision Warning will turn on and get activated.
- When the vehicle is turned off then on again, the functions always get ready to be activated.
- When the function is initially turned on and when the vehicle is turned off then on again, the warning light will appear for 3 seconds on the outside rear view mirror.

### Operating conditions

The function will activate when vehicle speed is below 10 km/h and with the shift lever in R (Reverse).

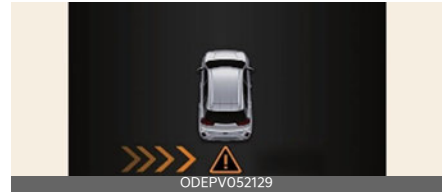
- The function will not activate when the vehicle speed exceeds 10 km/h (6 mph). The function will activate again when the speed is below 8 km/h (5 mph).

The function's detecting range is approximately 0.5~20 m (1.6~60 ft.). An approaching vehicle will be detected if their vehicle speed is within 8~36 km/h (5~20 mph).

Note that the detecting range may vary under certain conditions. As always, use caution and pay close attention to your surroundings when backing up your vehicle.

## Rear Cross-Traffic Collision Warning

Left



Right



If the vehicle detected by the sensors approaches from the rear left/right side of your vehicle, the warning chime will sound, the warning light on the outside rear view mirror will blink and a message will appear on the LCD display.

The warning will stop when:

- The vehicle moving at the rear left/right side of your vehicle is not in the detection range.
- The vehicle is right behind your vehicle.
- The vehicle is not driving towards your vehicle.
- The vehicle's approaching speed is decreased.

### ⚠ CAUTION

- When the operation condition of Rear Cross-Traffic Collision Warning is met, the warning will occur every time a vehicle approaches the side or rear of your stopped (0 km/h (0 mph) vehicle speed) vehicle.

- The function's warning or brake may not operate properly if the left or right of your vehicle's rear bumper is blocked by a vehicle or obstacle.
- The driver should always use extreme caution while operating the vehicle, whether or not the warning light on the outer side view mirror appears or there is a warning alarm.
- Playing the vehicle audio system at high volume may prevent occupants from hearing the function's warning sounds.
- If any other warning sound such as seat belt warning chime is already generated, the Rear Cross-Traffic Collision Warning may not sound.

**⚠ WARNING**

- Drive safely even though the vehicle is equipped with Rear Cross-Traffic Collision Warning. Do not solely rely on the function but check your surrounding when backing the vehicle up.
- The driver is responsible for accurate brake control.
- Always pay extreme caution while driving. Rear Cross Traffic Collision Warning may not operate properly or unnecessarily operate depending on traffic and driving conditions.

**Detecting sensor**

Rear corner radar



The rear corner radars are located inside the rear bumper for detecting the side and rear areas.

Always keep the rear bumper clean for proper operation of the function.

**⚠ CAUTION**

- The function may not work properly when the bumper has been damaged, or if the rear bumper has been replaced or repaired.
- The function may turn off due to strong electromagnetic waves.
- Always keep the sensors clean.
- Never arbitrarily disassemble the sensor component nor apply any impact on the sensor component.
- Be careful not to apply unnecessary force on the radar sensor or sensor cover. If the sensor is forcibly moved out of proper alignment, the function may not operate correctly. In this case, a warning message may not be displayed.

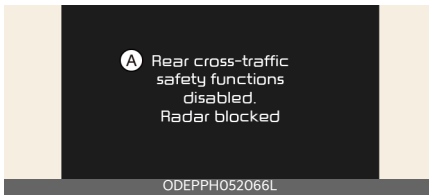
Take your vehicle to a professional workshop and have the function checked. Kia recommends to visit an authorized Kia dealer/service partner.

- Do not apply foreign objects such as a bumper sticker or a bumper guard near the radar sensor or apply paint to the sensor area. Doing so may

adversely affect the performance of the sensor.

## Rear Cross-Traffic Collision Warning malfunction and limitations

### Rear Cross-Traffic Collision Warning disabled



#### A: Rear cross-traffic safety functions disabled. Radar blocked

This warning message may appear when:

- One or both of the sensors on the rear bumper is blocked by dirt or snow or a foreign object.
- Driving in rural areas where the sensor does not detect another vehicle for an extended period of time.
- When there is inclement weather such as heavy snow or rain.

A trailer or carrier is installed. (To use Rear Cross-Traffic Collision Warning, remove the trailer or carrier from your vehicle.)

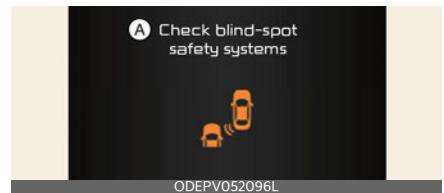
If any of these conditions occur, the light on the Blind-Safety button and the function will turn off automatically.

If any of these conditions occur, the light on the Blind-Safety button and the function will turn off automatically.

When **Rear Cross-Traffic Collision Warning canceled** warning message is displayed in the cluster, check to make sure that the rear bumper is free from any dirt or snow in the areas where the

sensor is located. Remove any dirt, snow, or foreign material that could interfere with the radar sensors.

After any dirt or debris is removed, Rear Cross-Traffic Collision Warning should operate normally after about 10 minutes of driving the vehicle. If the function does not work normally even though the foreign substance, trailer or carrier, or other equipment is removed, take your vehicle to a professional workshop and have the function checked. Kia recommends to visit an authorized Kia dealer/service partner.



#### A: Check blind-spot safety systems

If there is a problem with Rear Cross-Traffic Collision Warning, a warning message will appear and the light on the switch will turn off. The function will turn off automatically.

In this case, have the function checked by a professional workshop. Kia recommends to visit an authorized Kia dealer/service partner.

### Non-operating conditions

Outside rear view mirror may not alert the driver when:

- The outside rear view mirror housing is damaged or covered with debris.
- The window is covered with debris.
- The windows are severely tinted.
- The mirror is covered with dirt, snow, or debris.

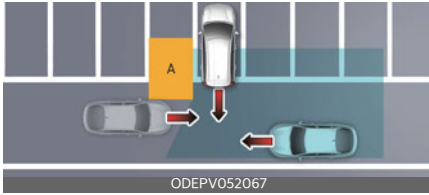
## Limitations of Rear Cross-Traffic Collision Warning

The driver must be cautious in the below situations, because the function may not detect other vehicles or objects in certain circumstances.

- When a trailer or carrier is installed.
- The vehicle drives in inclement weather such as heavy rain or snow.
- The sensor is polluted with rain, snow, mud, etc.
- The rear bumper where the sensor is located is covered with a foreign object such as a bumper sticker, a bumper guard, a bike rack, etc.
- The rear bumper is damaged, or the sensor is out of the original default position.
- The vehicle height gets lower or higher due to heavy loading in a tailgate, abnormal tire pressure, etc.
- When the temperature of the rear bumper is high.
- When the sensors are blocked by other vehicles, walls or parking-lot pillars.
- The vehicle drives on a curved road.
- The road pavement (or the peripheral ground) abnormally contains metallic components (i.e. possibly due to subway construction).
- There is a fixed object near the vehicle, such as a guardrail.
- While going down or up a steep road where the height of the lane is different.
- Driving on a narrow road where trees or grass or overgrown.
- Driving in rural areas where the sensor does not detect another vehicle for an extended period of time.
- Driving on a wet road.
- Driving on a road where the guardrail or wall is in double structure.
- A big vehicle is near such as a bus or truck.
- When the other vehicle approaches very close.
- When the other vehicle passes at a very fast speed.
- While changing lanes.
- If the vehicle has started at the same time as the vehicle next to you and has accelerated.
- When the vehicle in the next lane moves two lanes away from you OR when the vehicle two lanes away moves to the next lane from you.
- A motorcycle or bicycle is near.
- A flat trailer is near.
- If there are small objects in the detecting area such as a shopping cart or a baby stroller.
- If there is a low height vehicle such as a sports car.
- The brake pedal is depressed.
- ESC (Electronic Stability Control) is activated.
- ESC (Electronic Stability Control) malfunctions.
- The tire pressure is low or a tire is damaged.
- The brake is reworked.
- The vehicle sharply stops.
- Temperature is extremely low around the vehicle.
- The vehicle severely vibrates while driving over a bumpy road, uneven/bumpy road, or concrete patch.
- The vehicle drives on a slippery surface due to snow, water puddle, or ice.

## Driving your vehicle

- Driving where there is a vehicle or structure near.



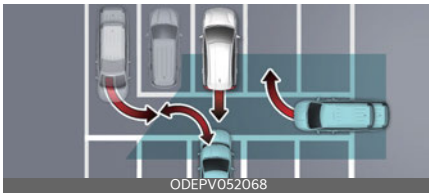
### [A]: Structure

The function may not operate properly when driving where there is a vehicle or structure near.

In certain instances, the function may not detect the vehicle approaching from behind and the warning or brake may not operate properly.

Always pay attention to your surrounding while driving.

- When the vehicle is in a complex parking environment.



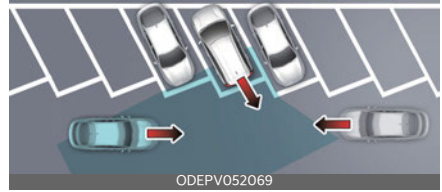
The function may not operate properly when the vehicle is in a complex parking environment.

In certain instances, the function may not be able to exactly determine the risk of collision for the vehicles which are parking or pulling out near your vehicle (e.g. a vehicle escaping beside your vehicle, a vehicle parking or pulling out in the rear area, a vehicle approaching your vehicle making a turn, etc.).

In this case, the warning or brake may not operate properly.

- When the vehicle is parked diagonally

## Rear Cross-Traffic Collision Warning (RCCW)



### [A]: Vehicle

The function may not operate properly when the vehicle is parked diagonally.

In certain instances, when the diagonally parked vehicle is pulled out of the parking space, the function may not detect the vehicle approaching from the rear left/right of your vehicle. In this case, the warning or brake may not operate properly.

Always pay attention to your surrounding while driving.

- When the vehicle is on/near a slope

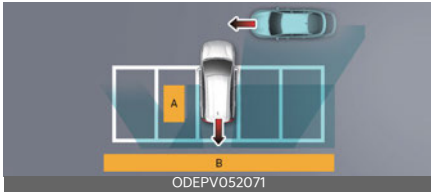


The function may not operate properly when the vehicle is on/near a slope.

In certain instances, the function may not detect the vehicle approaching from the rear left/right and the warning or brake may not operate properly.

Always pay attention to your surrounding while driving.

- Pulling into the parking space where there is a structure



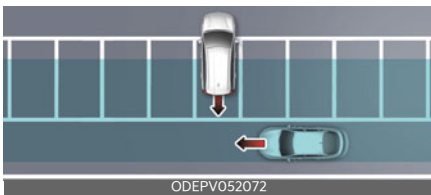
[A]: Structure, [B]: Wall

The function may not operate properly when pulling in the vehicle to the parking space where there is a structure at the back or side of your vehicle.

In certain instances, when backing into the parking space, the function may not detect the vehicle moving in front of your vehicle. In this case, the warning or brake may not operate properly.

Always pay attention to the parking space while driving.

- When the vehicle is parked rearward



If the vehicle is parked rearward and the sensor detects the another vehicle in the rear area of the parking space, the function can warn or control braking. Always pay attention to the parking space while driving.

## Reverse Parking Distance Warning (PDW) (if equipped)



Reverse Parking Distance Warning assists the driver during backward movement of the vehicle by chiming if any object is sensed within a distance of 120 cm (48 inches) behind the vehicle.

This function is a supplemental function and it is not intended to nor does it replace the need for extreme care and attention of the driver. The sensing range and objects detectable by rear ultrasonic sensors are limited. Whenever backing-up, pay as much attention to what is behind you as you would in a vehicle without a Reverse Parking Distance Warning.

### **WARNING**

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

## Operation of Reverse Parking Distance Warning

### Parking Safety button (if equipped)



Press the Parking Safety (P) button to turn on or off Reverse Parking Distance Warning.

- When Reverse Parking Distance Warning is off (button indicator light off), if you shift the gear to R (Reverse), Reverse Parking Distance Warning will automatically turn on.
- If you shift the gear to R (Reverse), Reverse Parking Distance Warning will not turn off even if you press the Parking Safety (P) button for your safety.

### Operating conditions

- This function will activate when backing up with the vehicle is ON position. If the vehicle is moving at a speed over 5 km/h (3 mph), the function may not be activated correctly.
- The sensing distance while Reverse Parking Distance Warning is in operation is approximately 120 cm (48 inches).
- When more than two objects are sensed at the same time, the closest one will be recognized first.

\*: if equipped

Types of warning sound	Indicator*
When an object is 60~120 cm (24~48 inches) from the rear bumper: Buzzer beeps intermittently.	
When an object is 30~60 cm (12~24 inches) from the rear bumper: Buzzer beeps more frequently	
When an object is within 30 cm (12 inches) of the rear bumper: Buzzer sounds continuously	

### \* NOTICE

The indicator may differ from the illustration as objects or sensors status. If the indicator blinks, have the function checked by a professional workshop. Kia recommends to visit an authorized Kia dealer/service partner.

### Non-operational conditions of Reverse Parking Distance Warning

#### Reverse Parking Distance Warning may not operate properly when:

1. Moisture is frozen to the sensor. (It will operate normally when the moisture has been cleared.)
2. The sensor is covered with foreign matter, such as snow or water, or the sensor cover is blocked. (It will operate normally when the material is removed or the sensor is no longer blocked.)
3. Driving on uneven road surfaces (unpaved roads, gravel, bumps, gradient).
4. Objects generating excessive noise (vehicle horns, loud motorcycle)

engines, or truck air brakes) are within range of the sensor.

5. Heavy rain or water spray exists.
6. Wireless transmitters or mobile phones are within range of the sensor.
7. The sensor is covered with snow.
8. Trailer towing

### The detecting range may decrease when:

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

### The following objects may not be recognized by the sensor:

1. Sharp or slim objects such as ropes, chains or small poles.
2. Objects which tend to absorb the sensor frequency such as clothes, spongy material or snow.
3. Undetectable objects smaller than 100 cm (40 inches) in height and narrower than 14 cm (6 inches) in diameter.

### Reverse Parking Distance Warning

- Reverse Parking Distance Warning may not sound consistently depending on the speed and shapes of the objects detected.
- Reverse Parking Distance Warning may malfunction if the vehicle bumper height or sensor installation has been modified or damaged. Any non-factory installed equipment or accessories may also interfere with the sensor performance.

- The sensor may not recognize objects less than 30 cm (12 inches) from the sensor, or it may sense an incorrect distance. Use caution.
- When the sensor is frozen or stained with snow, dirt, or water, the sensor may be inoperative until the stains are removed using a soft cloth.
- Do not push, scratch or strike the sensor. Sensor damage could occur.

#### \* NOTICE

This function can only sense objects within the range and location of the sensors; It can not detect objects in other areas where sensors are not installed. Also, small or slim objects, such as poles or objects located between sensors may not be detected by the sensors.

Always visually check behind the vehicle when backing up.

Be sure to inform any drivers of the vehicle that may be unfamiliar with the function regarding the functions capabilities and limitations.

#### ▲ WARNING

Pay close attention when the vehicle is driven close to objects on the road, particularly pedestrians, and especially children. Be aware that some objects may not be detected by the sensors, due to the object's distance, size or material, all of which can limit the effectiveness of the sensor. Always perform a visual inspection to make sure the vehicle is clear of all obstructions before moving the vehicle in any direction.

### Self-diagnosis

If you don't hear an audible warning sound or if the buzzer sounds intermittently when shifting the gear to the R



(Reverse) position, this may indicate a malfunction in Reverse Parking Distance Warning. If this occurs, have the function checked by a professional workshop. Kia recommends to visit an authorized Kia dealer/service partner.

### **⚠ WARNING**

Your new vehicle warranty does not cover any accidents or damage to the vehicle or injuries to its occupants due to a Reverse Parking Distance Warning malfunction. Always drive safely and cautiously.

## Forward/Reverse Parking Distance Warning (PDW) (if equipped)

Front ultrasonic sensors



Rear ultrasonic sensors



Forward/Reverse Parking Distance Warning assists the driver during movement of the vehicle by chiming if any object is sensed within the distance of 100 cm (40 inches) in front and 120 cm (48 inches) behind the vehicle.

This function is a supplemental function and it is not intended to nor does it replace the need for extreme care and attention of the driver.

The sensing range and objects detectable by the sensors are limited. Whenever moving pay as much attention to what is in front and behind of you as you would in a vehicle without a Forward/Reverse Parking Distance Warning.

### **⚠ WARNING**

Forward/Reverse Parking Distance Warning should only be considered as a supplementary function. The driver must check the front and rear view. The operational function of Forward/Reverse Parking Distance Warning can be

affected by many factors and conditions of the surroundings, so the responsibility rests always with the driver.

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## Operation of Forward/Reverse Parking Distance Warning

### Operating condition





- This function activates when the Parking Safety button is pressed with the vehicle is ON position.
- The indicator of the Parking Safety button turns on automatically and activates Forward/Reverse Parking Distance Warning when you shift the gear to the R (Reverse) position.
- The sensing distance while backing up is approximately 120 cm (48 inches) when you are driving less than 10 km/h (6 mph).
- The sensing distance while moving forward is approximately 100 cm (40 inches) when you are driving less than 10 km/h (6 mph).
- When more than two objects are sensed at the same time, the closest one will be recognized first.
- The side sensors are activated when you shift the gear to the R (Reverse) position.
- If the vehicle speed is above 20 km/h (12 mph), the function automatically turns off. To activate again, push the button.

### \* NOTICE

It may not operate if it's distance from the object is already less than approximately 25 cm (10 inches) when the function is ON.

---

## Type of warning indicator and sound

Distance from object		Warning indicator		Warning sound
		When driving forward	When driving rearward	
60-100 cm (24-40 inches)	Front		-	Buzzer beeps intermittently
	Rear	-		Buzzer beeps intermittently
30-60 cm (12-24 inches)	Front			Buzzer beeps frequently
	Rear	-		Buzzer beeps frequently
Within 30 cm (12 inches)	Front			Buzzer sounds continuously
	Rear	-		Buzzer sounds continuously

### \* NOTICE

- The actual warning sound and indicator may differ from the illustration according to objects or sensor status.
- Do not wash the vehicle's sensor with high pressure water.

### ⚠ CAUTION

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

## Non-operational conditions of Forward/Reverse Parking Distance Warning

### Forward/Reverse Parking Distance Warning may not operate normally when:

1. Moisture is frozen to the sensor. (It will operate normally when moisture melts.)
2. Sensor is covered with foreign matter, such as snow or water, or the sensor cover is blocked. (It will operate normally when the material is removed or the sensor is no longer blocked.)
3. Sensor is stained with foreign matter such as snow or water. (Sensing range will return to normal when removed.)
4. The Parking Safety button is off.

### There is a possibility of Forward/Reverse Parking Distance Warning malfunction when:

1. Driving on uneven road surfaces such as unpaved roads, gravel, bumps, or gradient.
2. Objects generating excessive noise such as vehicle horns, loud motorcycle engines, or truck air brakes can interfere with the sensor.
3. Heavy rain or water spray.
4. Wireless transmitters or mobile phones present near the sensor.
5. Sensor is covered with snow.

### Detecting range may decrease when:

1. Outside air temperature is extremely hot or cold.
2. Undetectable objects smaller than 1 m (40 inches) and narrower than 14 cm (6 inches) diameter.

### The following objects may not be recognized by the sensor:

1. Sharp or slim objects such as ropes, chains or small poles.
2. Objects, which tend to absorb sensor frequency such as clothes, spongy material or snow.

### \* NOTICE

1. The warning may not sound sequentially depending on the speed and shapes of the objects detected.
  2. Forward/Reverse Parking Distance Warning may malfunction if the vehicle bumper height or sensor installation has been modified. Any non-factory installed equipment or accessories may also interfere with the sensor performance.
  3. Sensor may not recognize objects less than 30 cm (12 inches) from the sensor, or it may sense an incorrect distance. Use with caution.
  4. When the sensor is frozen or stained with snow or water, the sensor may be inoperative until the stains are removed using a soft cloth.
  5. Do not push, scratch or strike the sensor with any hard objects that could damage the surface of the sensor. Sensor damage could occur.
-

**\* NOTICE**

This function can only sense objects within the range and location of the sensors, it can not detect objects in other areas where sensors are not installed. Also, small or slim objects, or objects located between sensors may not be detected.

Always visually check in front and behind the vehicle when driving.


Be sure to inform any drivers in the vehicle that may be unfamiliar with the function regarding the functions capabilities and limitations.

**⚠ WARNING**

Pay close attention when the vehicle is driven close to objects on the road, particularly pedestrians, and especially children. Be aware that some objects may not be detected by the sensors, due to the objects distance, size or material, all of which can limit the effectiveness of the sensor. Always perform a visual inspection to make sure the vehicle is clear of all obstructions before moving the vehicle in any direction.

**Self-diagnosis**

When you shift the gear to the R (Reverse) position and if one or more of the below occurs you may have a malfunction in Forward/Reverse Parking Distance Warning.

- You don't hear an audible warning sound or if the buzzer sounds intermittently.
-  is displayed. (if equipped)

If this occurs, have the function checked by a professional workshop. Kia recommends to visit an authorized Kia dealer/service partner.

**⚠ WARNING**

Your new vehicle warranty does not cover any accidents or damage to the vehicle or injuries to its occupants related to a Forward/Reverse Parking Distance Warning.


Always drive safely and cautiously.

## Declaration of conformity (if equipped)

The radio frequency components (Front Radar) complies:

For Europe and countries subject to CE certification

Declaration of Conformity  
Radiocontrolled Vehicle components



Hereby, APTIV, 46902 Kokomo declares that this L2C0051TR is in compliance with the essential requirements and other relevant provisions of Directive 2014/53/EU (RED). The original declaration of conformity can be accessed at the following link : [www.aptiv.com/automotive-homologation](http://www.aptiv.com/automotive-homologation)

frequency band 76-77 GHz  
Maximum Output Power 30 dBm (1,0 W)

ODEPPH052077L

## For Japan

This device is granted pursuant to the Japanese Radio Law under the grant ID n° : 209-J00039  
This device should not be modified (otherwise the granted designation number will become invalid)

本製品は、電波法に基づく特定無線設備の技術基準適合証明などを受けております。認証番号: 209-J00039  
本製品の改造は禁止されています。(適合証明番号などが無効となります。)

ODEPPH052078L

## For South Korea



KCC-CRI-DPH-L2C0051TR

- 상호 : Aptiv Safety & Mobility Services Singapore Pte Ltd
- 기기명칭 및 모델명  
- 기기명칭: 특정소출력 무선기기(자랑 중출방지용 레이더 무선기기)  
- 모델명: L2C0051TR
- 제조자 및 제조국가  
- 제조자: Aptiv Safety & Mobility Services Singapore Pte Ltd  
- 제조국가: 싱가포르

ODEPPH052079L

## For Paraguay



NR: 2013-02-I-0037

ODEPPH052080L

## For United States and United States territories



ODEPPH052081L

FCC ID : L2C0051TR

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.

**CAUTION TO USERS**

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

ODEPPH052082L

## For Canada

Model: L2C0051TR

IC: 3432A-0051TR

This device complies with Industry Canada licence-

exempt RSS standard(s). Operation is subject to the following two conditions:

- (1) this device may not cause interference, and
- (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils

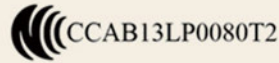
radio exempts de licence. L'exploitation est autorisée

aux deux conditions suivantes:

- (1) l'appareil ne doit pas produire de brouillage, et
- (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

ODEPPH052083L

## For Taiwan



電信法第 48 條。低功率電波輻射性電機管理辦法

## 第十二條

經型式認證合格之低功率射頻電機，非經許可，公司、商號或使用者均不得擅自變更頻率、加大功率或變更原設計之特性及功能。

## 第十四條

低功率射頻電機之使用不得影響飛航安全及干擾合法通信；經發現有干擾現象時，應立即停用，並改善至無干擾時方得繼續使用。前項合法通信，指依電信法規定作業之無線電通信。低功率射頻電機須忍受合法通信或工業、科學及醫療用電波輻射性電機設備之干擾。

## Article 12

Without permission, any company, firm or user shall not alter the frequency, increase the power, or change the characteristics and functions of the original design of the certified lower power frequency electric machinery.

## Article 14

The application of low power frequency electric machineries shall not affect the navigation safety nor interface a legal communication, if an interference is found, the service will be suspended until improvement is made and the interference no longer exist.

ODEPPH052084L

## For Indonesia

45445/SDPPI/2016

4927

ODEPPH052085L

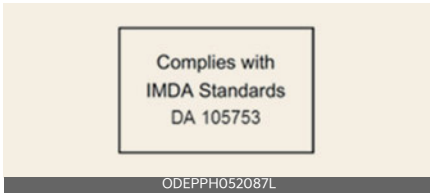
## For Malaysia



CIDF17000143

ODEPPH052086L

### For Singapore



### For Moldova



### For Brazil



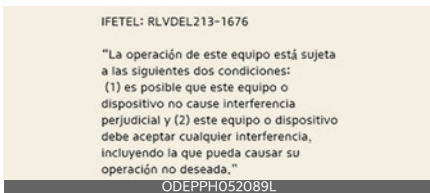
### For Jordan

TRC/LPD/2012/191

### For UAE



### For Mexico



### For Serbia



### For Ukraine



### For Republic of South Africa





### For Thailand



ODEPPH052095L

### For Israel

14. המסמך מפרט את תנאי השימוש וההגבלות של הארזור המוגדרת של המוצר יודעת מדויקת, בה ייתר רישום כי  
 א. השימוש במכשיר זה על בסיס "שנתי" מסור מרשון הפעלה אלוטרי.  
 ב. רק "בעלות בוקר" לשימוש עממי של הלקוח בלבד, הרישום מסור מרשון הפעלה אלוטרי.  
 ג. מספר "שירות בוקר" בלבד ב מחרוזת הרישום המסור המסומנת.

תיק מספר : 51-72164

א. השימוש במכשיר זה על בסיס "שנתי" מסור מרשון הפעלה אלוטרי.  
 ב. רק "בעלות בוקר" לשימוש עממי של הלקוח בלבד, הרישום מסור מרשון הפעלה אלוטרי.  
 ג. מספר "שירות בוקר" בלבד ב מחרוזת הרישום המסור המסומנת.  
 ד. האישור הכללי תקף אך ורק עבור ציוד אלוטרי, "operating frequencies of the device".  
 ה. הפועל בתחום חדרים של.  
 הספק השידור שלה אינו נלווה על "output power of the device".

ODEPPH052096L

### For China

车辆型号: 射频功率计 (LZC0051TR)  
 执行标准: 信部无[2005]423号  
 频率范围: 76-77 GHz  
 发射功率: 等效全向辐射功率(EIRP) 30dBm  
 天线类型: 印刷阵列天线  
 用户控制: 不可  
 使用温度: -40° C ~ +85° C  
 电压: DC 12.0V

不得擅自更改发射频率、发射功率(包括额外  
 加装射频功率放大器), 不得擅自外接天线或改  
 用其它发射天线

使用时不得对各种合法的无线电通信业务产生有  
 害干扰; 一旦发现有干扰现象时, 应立即停止使  
 用, 并采取措施消除干扰后方可继续使用

使用大功率无线电子设备, 必须避免各种无线电业  
 务的干扰或工业、科学及医疗应用设备的辐射干  
 扰

机场等的电磁环境保护区域内使用大功率设备,  
 应当遵守电磁环境保护及相关行业主管部门的规  
 定

ODEPPH052097L

### The radio frequency components (Rear Corner Radar) complies:

### For United States and United States territories



ODEPV052161L

UR8 303919

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.

#### CAUTION TO USERS

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

ODEPV052184L

### For Canada

This Category II radiocommunication device complies with Industry Canada Standard RSS-310.

Ce dispositif de radiocommunication de catégorie II respecte la norme CNR-310 d'Industrie Canada.

This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :

(1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

ODEPV052185L

電信法第 48 條, 低功率電波輻射性電機管理辦法

第十二條

經型式認證合格之低功率射頻電機, 非經許可, 公司、商號或使用者均不得擅自變更頻率、加大功率或變更原設計之特性及功能。

第十四條

低功率射頻電機之使用不得影響飛航安全及干擾合法通信; 經發現有干擾現象時, 應立即停用, 並改善至無干擾時方得繼續使用。前項合法通信, 指依電信法規定作業之無線電通信。低功率射頻電機須忍受合法通信或工業、科學及醫療用電波輻射性電機設備之干擾。

Article 12

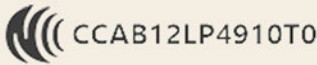
Without permission, any company, firm or user shall not alter the frequency, increase the power, or change the characteristics and functions of the original design of the certified lower power frequency electric machinery.

Article 14

The application of low power frequency electric machineries shall not affect the navigation safety nor interface a legal communication, if an interference is found, the service will be suspended until improvement is made and the interference no longer exist.

ODEPV052187L

### For Taiwan



ODEPV052186L

### For Malaysia



RALM/26A/0216/S(16-0211)

ODEPV052188L

### For Mongolia



APPROVED IN MONGOLIA ID: A18000202

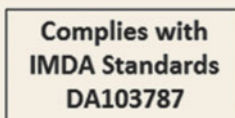
ODEPV052189L

## For Philippines



ODEPV052190L

## For Singapore



N0407-13

ODEPV052191L

## For Vietnam



ODEPV052192L

## For Brazil



0772-13-4942

Este equipamento opera em caráter secundário, isto é, não tem direito à proteção contra interferência prejudicial, mesmo de estações do mesmo tipo, e não pode causar interferência a sistemas operando em caráter primário.

ODEPV052193L

## For Mexico

IFETEL: RCPVAXT 12-1288

"La operación de este equipo está sujeta a las siguientes dos condiciones:  
(1) es posible que este equipo o dispositivo no cause interferencia perjudicial y (2) este equipo o dispositivo debe aceptar cualquier interferencia, incluyendo la que pueda causar su operación no deseada."

ODEPV052194L

## For Paraguay



ODEPV052195L

## For Ukraine



ODEPV052174L

Valeo Schalter und Sensoren GmbH заявляє, що тип радіообладнання MBHL2 відповідає технічним регламентам радіотехнічного обладнання; повний текст декларації від відповідності доступна на веб-сайті за адресою: <[https://valeo.com/declaration-of-conformity/files/MBHL\\_TypeA\\_DoC\\_TR-RED\\_WUE.PDF](https://valeo.com/declaration-of-conformity/files/MBHL_TypeA_DoC_TR-RED_WUE.PDF)>

ODEPV052196L

### For Moldova



ODEPV052197L

### For Mozambique

Approval No : N 3/R/SRA/2018  
Valeo MBHL TypeA Radar

ODEPV052202L

### For Algeria

CE + Agréé par l'ARPT:  
<1247/1-LG408/DT/DGARPT/18>

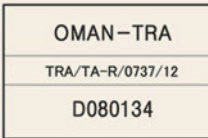
ODEPV052198L

### For Zambia



ODEPV052203L

### For Oman



ODEPV052199L

### For Argentina



CNC ID: C-20215

ODEPV052204L

### For United Arab Emirates



ODEPV052200L

### For Jamaica

This product contains a Type Approved  
Module by Jamaica: SMA – "MBHL1 TypeA"

ODEPV052205L

### For Indonesia

55642/SDPPI/2018  
1437

ODEPV052201L

## For Europe and countries subject to CE certification

Declaration of Conformity  
Radiocontrolled Vehicle components



The radio frequency components of the vehicle comply with requirements and other relevant provisions of Directive 1995/5/EC.

Further information including the manufacturer's declaration of conformity is available on as follow ;  
<https://valeo.com/declaration-of-conformity>

ODEPV052206L

## 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:

- Drive smoothly.
- Drive at a moderate speed.
- Take care of your tires.
- Be sure that the wheels are aligned correctly.
- Maintain your vehicle in accordance with the maintenance schedule.
- Don't carry unnecessary weight in your vehicle.
- Don't let the engine idle longer than necessary.
- Don't "lug" or "over-rev" the engine.
- Don't open the windows at high speeds.
- Slow down when driving in crosswinds and headwinds.

### **WARNING**

Never turn off the vehicle to coast down hills or anytime the vehicle is in motion. The power steering and power brakes will not function properly with turning off the vehicle. In addition, turning off the vehicle while driving could make the steering wheel heavy due to the power steering system not operating, turn the steering wheel stronger than usual.

## Special driving conditions

If driving conditions deteriorate due to poor weather or road conditions, you should pay even more attention than usual.

### Hazardous driving conditions

When hazardous driving conditions are encountered such as water, snow, ice, mud, sand, or similar hazards, follow these suggestions:

- Drive cautiously and allow extra distance for braking.
- Avoid sudden braking or steering.
- Do not pump the brake pedal on a vehicle equipped with ABS.
- If stalled in snow, mud, or sand, use the second gear. Accelerate slowly to avoid spinning the drive wheels.
- Use sand, rock salt, or other nonslip material under the drive wheels to provide traction when stalled in ice, snow, or mud.

### Reducing the risk of a rollover

This multi-purpose passenger vehicle is defined as a Sports Utility Vehicle (SUV). Utility vehicles have a significantly higher rollover rate than other types of vehicles. SUVs have higher ground clearance and a narrower track to make them capable of performing in a wide variety of offroad applications.

Specific design characteristics give them a higher center of gravity than ordinary vehicles. An advantage of the higher ground clearance is a better view of the road, which allows you to anticipate problems.

They are not designed for cornering at the same speeds as conventional passenger vehicles, any more than low-

slung sports vehicles are designed to perform satisfactorily in off-road conditions. Due to this risk, driver and passengers are strongly recommended to buckle their seat belts.

In a rollover crash, an unbelted person is significantly more likely to die than a person wearing a seat belt. There are steps that a driver can make to reduce the risk of a rollover.

If at all possible, avoid sharp turns or abrupt maneuvers, do not load your roof rack with heavy cargo, and never modify your vehicle in any way.

### WARNING

- Your vehicle is equipped with tires designed to provide safe ride and handling capability. Do not use tires and wheels that are different in size and type from the originally installed ones. It can affect the safety and performance of your vehicle, which could lead to steering 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.
- As with other Sports Utility Vehicle (SUV), failure to operate this vehicle correctly may result in loss of control, an accident or vehicle rollover.
  - Utility vehicles have a significantly higher rollover rate than other types of vehicles.
  - Specific design characteristics (higher ground clearance, narrower track, etc.) give this vehicle a higher center of gravity than ordinary vehicles.
  - A SUV is not designed for cornering at the same speeds as conventional vehicles.

- Avoid sharp turns or abrupt maneuvers.
- In a rollover crash, an unbelted person is significantly more likely to die than a person wearing a seat belt. Make sure everyone in the vehicle is properly buckled up.

## 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 R (Reverse) and any forward gear.

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 transmission.

### WARNING

Do not attempt to rock the vehicle if people or objects are nearby. The vehicle may suddenly move forward or backwards as it becomes unstuck.

### CAUTION

- Prolonged rocking may cause vehicle overheating, transmission damage or failure, and tire damage.
- Do not spin the wheels, especially at speeds more than 56 km/h (35 mph). Spinning the wheels at high speeds when the vehicle is stationary could overheat and damage tires, and the rotating wheels may fly away and injure bystanders.

### \* NOTICE

The Electronic Stability Control (ESC) should be turned OFF prior to rocking the vehicle.

## Smooth cornering

Avoid braking or gear changing in corners, especially when roads are wet. Ideally, corners should always be taken under gentle acceleration. If you follow these suggestions, tire wear will be held to a minimum.

## 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.

## Hydroplaning

If the road is wet enough and you are going fast enough, your vehicle may have little or no contact with the road surface and actually ride on the water. The best advice is SLOW DOWN when the road is wet.

The risk of hydroplaning increases as the depth of tire tread decreases, refer to "Tire replacement" on page 8-36.

## 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.

## Driving off-road

Drive carefully off-road because your vehicle may be damaged by rocks or roots of trees. Become familiar with the off-road conditions where you are going to drive before you begin driving.

## Highway driving

### Tires

Adjust the tire inflation pressures to specification. Low tire inflation pressures will result in overheating and possible failure of the tires.

Avoid using worn or damaged tires which may result in reduced traction or tire failure.



Never exceed the maximum tire inflation pressure shown on the tires.

### **WARNING**

- Always check the tires for proper inflation before driving. Underinflated or overinflated tires can cause poor handling, loss of vehicle control, and sudden tire failure, leading to accidents, injuries, and even death. For proper tire pressures, refer to "Tires and wheels" on page 9-5.
- Always check the tire tread before driving your vehicle. Worn-out tires can result in loss of vehicle control. Worn-out tires should be replaced as soon as possible. For further information and tread limits, refer to "Tires and wheels" on page 8-34.

## Fuel, engine coolant and engine oil

High speed travel consumes more fuel than urban motoring. Do not forget to check both the engine coolant and engine oil.

## Drive belt

A loose or damaged drive belt may result in overheating of the engine.

## Winter driving

Severe weather conditions in the winter result in greater wear and other problems.

To minimize the problems of winter driving, you should follow these suggestions:

- \* Snow tires and tire chains for the national language (Icelandic) see the Appendix.

## Snowy or icy conditions

To drive your vehicle in deep snow, it may be necessary to use snow tires or to install tire chains on your tires.

If snow tires are needed, it is necessary to select tires equivalent in size and type of the original equipment tires. Failure to do so may adversely affect the safety and handling of your vehicle. Furthermore, speeding, rapid acceleration, sudden brake applications, and sharp turns are potentially very hazardous practices. During deceleration, use vehicle braking to the fullest extent. Sudden brake applications on snowy or icy roads may cause skids to occur. You need to keep sufficient distance between the vehicle in operation in front of your vehicle. Also, apply the brake gently. It should be noted that installing tire chains on the tire will provide a greater driving force, but will not prevent side skids.

Tire chains are not legal in all states. Check state laws before fitting tire chains.

## Snow tires

If you mount snow tires on your vehicle, make sure they are radial tires of the same size and load range as the original tires. Mount snow tires on all four wheels

to balance your vehicle's handling in all weather conditions. Keep in mind that the traction provided by snow tires on dry roads may not be as high as your vehicle's original equipment tires. You should drive cautiously even when the roads are clear. Check with the tire dealer for maximum speed recommendations.

Do not install studded tires without first checking local, state and municipal regulations for possible restrictions against their use.

### **⚠ WARNING**

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.

## Tire chains



Because 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.

Damage to your vehicle caused by improper snow chain use is not covered by your vehicle manufacturer's warranty.

When using tire chains, attach them to the drive wheels as follows.

- Front wheel drive vehicle moves the front wheel as a power source. Thus, snow chains must be mounted to front tires.
- After mounting snow chains, drive slowly. If you hear noise caused by chains contacting the body, slow down until the noise stops and remove the chain as soon as you begin driving on cleared roads to prevent damage.
- Chains of the wrong size or which are improperly installed can damage your vehicle's brake lines, suspension, body, and wheels. Therefore, when installing snow chains, follow the manufacturer's instructions and mount them as tightly possible. Drive slowly with chains installed, staying under 30 km/h (20 mph).
- Install tire chains that meet the specifications of each tire size to prevent damage your vehicle.
  - 17-inch tires use fabric snow chain.

### **⚠ 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 0.5 to 1 km (0.3 to 0.6 miles) to ensure safe mounting. Retighten or remount the chains if they are loose.

## Use high quality ethylene glycol coolant

Your vehicle is delivered with high quality ethylene glycol coolant in the cooling system. It is the only type of coolant that should be used because it helps prevent corrosion in the cooling system, lubricates the water pump and prevents freezing. Be sure to replace or replenish your coolant in accordance with the maintenance schedule in section 8.

Before winter, have your coolant tested to assure that its freezing point is sufficient for the temperatures anticipated during the winter.

## Check battery and cables

Winter puts additional burdens on the battery system. Visually inspect the battery and cables as described in section 8. Have the level of charge in your battery checked by a professional workshop. Kia recommends to visit an authorized Kia dealer/service partner. If the vehicle is not used for a long time, park the vehicle indoors if possible.

## Change to "winter weight" oil if necessary

In some climates it is recommended that a lower viscosity "winter weight" oil be used during cold weather. See "Recommended lubricants and capacities" on page 9-6. If you aren't sure what weight oil you should use, Kia recommends to consult an authorized Kia dealer/service partner.

## Check spark plugs and ignition system

Inspect your spark plugs as described in "Scheduled maintenance service" on

page 8-8 and replace them if necessary. Also check all ignition wiring and components to be sure they are not cracked, worn or damaged in any way.

## To keep locks from freezing

To keep the locks from freezing, squirt an approved de-icer fluid or glycerine into the key opening. If a lock is covered with ice, squirt it with an approved de-icing fluid to remove the ice. If the lock is frozen internally, you may be able to thaw it out by using a heated key. Handle the heated key with care to avoid injury.

## Use approved window washer anti-freeze in system

To keep the water in the window washer system from freezing, add an approved window washer anti-freeze solution in accordance with instructions on the container. Window washer anti-freeze is available from an authorized Kia dealer/service partner and most auto parts outlets. Do not use engine coolant or other types of anti-freeze as these may damage the paint finish.

## Don't let your parking brake freeze

Under some conditions your parking brake can freeze in the engaged position. This is most likely to happen when there is an accumulation of snow or ice around or near the rear brakes or if the brakes are wet. If there is a risk the parking brake may freeze, temporarily apply it with the gear in P (Park). Also, block the rear wheels in advance, so the vehicle may not roll. Then release the parking brake.

## Don't let ice and snow accumulate underneath

Under some conditions, snow and ice can build up under the fenders and interfere with the steering. When driving in severe winter conditions where this may happen, you should periodically check underneath the vehicle to be sure the movement of the front wheels and the steering components is not obstructed.

## Carry emergency equipment

Depending on the severity of the weather, you should carry appropriate emergency equipment. Some of the items you may want to carry include tire chains, tow straps or chains, flashlight, emergency flares, sand, shovel, jumper cables, window scraper, gloves, ground cloth, coveralls, blanket, etc.

## Drive your vehicle when water vapor condenses and accumulates inside the exhaust pipes

When the vehicle is stopped for a long time in winter while the engine is running, water vapor may condense and accumulate inside the exhaust pipes. Water in the exhaust pipes may cause noise, etc., but it is drained driving at medium to high speed.

## Vehicle weight

This section will guide you in the proper loading of your vehicle, to keep your loaded vehicle weight within its design rating capability. 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, from the vehicle's specifications and the certification 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. (if equipped)

### 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 certification label. (if equipped)

The total load on each axle must never exceed its GAWR.

### GVW (Gross vehicle weight)

This is the Base Curb Weight plus actual Cargo Weight plus passengers.

## GVWR (Gross vehicle weight rating)

This is the maximum allowable weight of the fully loaded vehicle (including all options, equipment, passengers and cargo). The GVWR is shown on the certification label located on the driver's (or front passenger's) door sill. (if equipped)

## Overloading

### Vehicle weight

The gross axle weight rating (GAWR) and the gross vehicle weight rating (GVWR) for your vehicle are on the certification label attached to the driver's (or front passenger's) door. Exceeding these ratings can cause an accident or vehicle damage. You can calculate the weight of your load by weighing the items (and people) before putting them in the vehicle. Be careful not to overload your vehicle.

### Loading Your Vehicle (if equipped)

Certification Label



Tire Label



The Certification/Tire label is found on the front edge of the RH (or LH) "B" pil-

lar. The label shows the size of your original tires and inflation pressures needed to obtain the gross weight capacity of your vehicle.

This is called the GVWR (Gross Vehicle Weight Rating). The GVWR includes the weight of the vehicle, all occupants and cargo. The Certification/Tire label also tells you the maximum weights for the front and rear axles, called Gross Axle Weight Rating (GAWR).

Never exceed the GVWR for your vehicle, or the Gross Axle Weight Rating (GAWR) for either the front or rear axle. And, if you do have a heavy load, you should spread it out.

Your warranty does not cover parts or components that fail because of overloading.

Do not load your vehicle any heavier than the GVWR or the maximum front and rear GAWRs. If you do, change to the vehicle may occur, or it can change the way your vehicle handles. These could cause you to lose control. Also, overloading can shorten the life of your vehicle.



# What to do in an emergency

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## What to do in an emergency

### Road warning

When in an emergency situation occurs while driving or when you park by the edge of the roadway, you must alert approaching or passing vehicles to be careful as they pass. For this, you should use the hazard warning flasher.

### 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.



### Condition(s)

- When in an emergency situation occurs while driving
- Parking by the edge of the roadway

### Operation

- Push the hazard warning flasher switch.

### \* INFORMATION

- The hazard warning flasher operates whether your vehicle is running or not.
- The turn signals do not work when the hazard flasher is on.
- Care must be taken when using the hazard warning flasher while the vehicle is being towed.

## In case of an emergency while driving

### If the vehicle stalls while driving

#### Operation

1. Reduce the speed and keep a straight line.
2. Stop the vehicle to a safe place.
3. Turn the hazard warning flasher on.
4. Start the vehicle again.

If the engine still does not start, contact a professional workshop or seek other qualified assistance. Kia recommends to call an authorized Kia dealer/service partner.

### If the engine stalls at a crossroad or crossing

#### Operation

1. Change the gear to N (Neutral).
2. Push the vehicle to a safe place.

### If you have a flat tire while driving

#### Operation

1. Reduce the speed slowly and keep a straight line.
2. Stop the vehicle to a safe leveled place away from traffic.
3. Turn the hazard warning flasher on.
4. Set the parking brake.
5. Change the gear to P (Park).
6. Have all passengers get out of the vehicle away from traffic.

Refer to "If you have a flat tire (with spare tire) (if equipped)" on page 7-14 or "If you have a flat tire (with Tire Mobility Kit) (if equipped)" on page 7-22.

## If the engine does not start

### \* INFORMATION

When the engine does not start, first check to see how much fuel there is and whether the battery is discharged.

---

## If engine does not turn over or turns over slowly

### Operation

1. Set the parking brake.
2. Change the gear to P (Park) or N (Neutral).
3. Check if the battery and starter connections are clean and tight.
  - The battery is discharged if the interior light dims or goes out when you start the vehicle.

### ⚠ WARNING

If the engine does not start, do not push or pull the vehicle to start it. This could result in a collision or cause other damage. In addition, push or pull starting may cause the catalytic converter to be overloaded and create a fire hazard.

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### \* NOTICE

Do not start the vehicle by pulling or pushing. Refer to "Jump-starting" on page 7-6.

---

## If engine turns over normally but does not start

### Operation

1. Check the following:
  - Fuel level. Add fuel if necessary.
  - Ignition coils and spark plug connectors. Reconnect any that may be disconnected or loose.
  - Fuel line in the engine compartment.

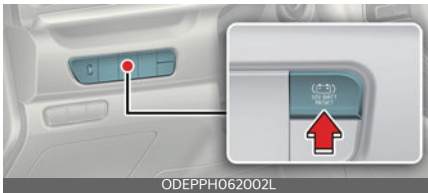
If the engine still does not start, contact a professional workshop or seek other qualified assistance. Kia recommends to call an authorized Kia dealer/service partner.

## Emergency starting


### Before jump starting (for hybrid vehicle)

This vehicle does not have a regular 12V battery that needs periodic replacement. It is lithium ion polymer type integrated into the HEV high voltage battery. The vehicle has a 12V battery protection system that cuts 12V battery from vehicle draw to prevent full discharge.

### Using the 12V battery reset switch



### Operation


1. Press the 12V Battery Reset switch to reconnect the 12V battery.
2. Start the vehicle within 15 seconds of pressing the 12V Battery Reset switch.
3. After starting the vehicle (() indicator on), operate the vehicle safely outdoors in ready mode stopped and/or drive it for 30 minutes total to charge the 12V battery fully.

If you do not start the vehicle immediately after pressing the 12V Battery Reset switch, the power of 12V battery is automatically disconnected after few seconds to save the 12V battery from additional discharge. If the 12V battery is disconnected prior to starting the vehicle, press the 12V Battery Reset switch again and then immediately start the vehicle as explained.

Repeated use of the 12V Battery Reset switch without a sufficient vehicle ON

cycle (30 Min+) may cause over discharge of the 12V battery, which will prevent the vehicle from starting. If the 12V battery is over discharged to a point that the reset does not work, try to jump start the vehicle.

### \* NOTICE

After starting the vehicle (() indicator on), the 12V battery is being charged whether the engine is running or not. Although there is no engine sound, it is unnecessary to depress the accelerator pedal.

The following items may need to be reset after the battery has been discharged or the battery has been disconnected.

See chapter 4 and 5 for:

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

### \* NOTICE

#### External power source using 12V battery

The use of external power accessories may reduce performance and function of the vehicle. Especially, the use of dash cameras may shut off the power of the vehicle prior to the dash camera's automatic shut-down.

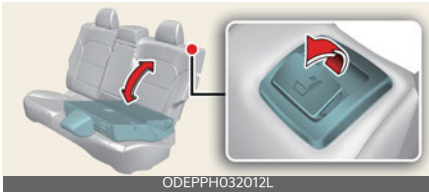
If the power of the vehicle is shut off, start the vehicle as explained. (refer to "Using the 12V battery reset switch" on page 7-5)

### Method to disconnect the (-) cable for regular maintenance (for hybrid vehicle)

When the vehicle is under regular maintenance, make sure to separate the (-) cable inside the luggage room before maintenance.

#### Operation

1. Fold the rear left side seat.



2. Using the key or (-) screwdriver, remove the service cover (A) on the luggage trim.



3. Separate the (-) cable (B). Reassemble in the reverse order of disassembly.



### Jump-starting



#### Condition(s)

- When the vehicle will not start due to low battery power, you may need to jump start the vehicle.

#### Operation

1. Turn off all unnecessary electrical loads.
2. Make sure the booster battery is 12-volt and that its negative terminal is grounded. If the booster battery is in another vehicle, do not allow the vehicles to come in contact.
3. Connect the jumper cables in the exact sequence shown in the illustration.
  - Connect one end of a jumper cable to the charging terminal inside the engine compartment fuse panel (1).
  - Connect the other end to the positive terminal of 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 away from the battery (4). 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.

4. If connected with the other vehicle, start the vehicle with the booster battery first and let it run at 2,000 rpm for several minutes.
5. For hybrid vehicle, press 12V BATT RESET button.  
For plug-in hybrid vehicle, start the vehicle with the discharged battery.
6. If the vehicle starts, disconnect one end of the negative terminal of the booster battery (3), then other end of the positive terminal of the booster battery (2) and the charging terminal inside the engine compartment fuse panel (1).  
If the cause of your battery discharging is not apparent, you should have your vehicle checked by a professional workshop. Kia recommends to visit an authorized Kia dealer/service partner.
7. Let the vehicle run for at least approximately 30 minutes.

**⚠ WARNING**

Never attempt to check the electrolyte level of the battery as this may cause the battery to rupture or explode causing serious injury.

- Keep all flames or sparks away from the battery. The battery produces hydrogen gas which may explode if exposed to flame or sparks. If these instructions are not followed exactly, serious personal injury and damage to the vehicle may occur! If you are not sure how to follow this procedure, seek qualified assistance. Automobile batteries contain sulfuric acid. This is poisonous and highly corrosive. When jump starting, wear protective glasses and be careful not to get acid on yourself, your clothing or on the vehicle.

- 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.
- Do not allow the (+) and (-) jumper cables to touch. It may cause sparks.
- The battery may rupture or explode when you jump start with a low or frozen battery.

**⚠ 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).
- Do not connect the jumper cable from the negative terminal of the booster battery to the negative terminal of the discharged battery. This can cause the discharged battery to overheat and crack, releasing battery acid. Make sure to connect one end of the jumper cable to the negative terminal of the booster battery, and the other end to a metallic point, far away from the battery.

**Push-starting**

Vehicles equipped with dual clutch transmission cannot be push-started, and only jump-starting can be applied. Refer to "Jump-starting" on page 7-6.

**⚠ WARNING**

Never tow a vehicle to start it. When the engine starts, the vehicle can suddenly surge forward and could cause a collision with the tow vehicle.

## If the engine overheats

### \* INFORMATION

When the temperature gauge indicates overheating, loss of power or a loud pinging, knocking noise will occur, being the engine too hot.

## Cooling down the vehicle

### Operation

1. Stop the vehicle to a safe place.
2. Turn the hazard warning flasher on.
3. Set the parking brake.
4. Change the gear to P (Park).
5. If the air conditioning is on, turn it off.
6. Check the following:
  - Engine cooling fan
  - Water pump drive belt
  - Belt tension
  - Leaks of the radiator, hoses or under the vehicle (If the air conditioning had been in use, it is normal for cold water to be draining from it when you stop).
7. Wait until the engine temperature returns normal.
8. Proceed with caution and keep an eye on further signs of overheating.

## If the cooling fan does not work

### Operation

- Stop the engine.

## If the coolant is running out

### Operation

1. Stop the engine.
2. Do not open the hood.
3. Wait until coolant has stopped running or the steam stops.
4. Add enough coolant to the reservoir.

## If the water pump drive belt is broken

### Operation

1. Stop the engine.
2. Contact a professional workshop or seek other qualified assistance. Kia recommends to call an authorized Kia dealer/service partner.

## If overheating happens again

### Operation

- Contact a professional workshop or seek other qualified assistance. Kia recommends to call an authorized Kia dealer/service partner.

### ⚠ WARNING



• While the engine is running, keep hair, hands and clothing away from the fan and drive belts to prevent injury.

• Do not remove the radiator cap when the engine is hot. This may result in coolant being blown out of the opening and cause serious burns.

**CAUTION**

- Serious loss of coolant indicates there is a leak in the cooling system and this should be checked as soon as possible by a professional workshop. Kia recommends to visit an authorized Kia dealer/service partner.
- When the engine overheats from low engine coolant, suddenly adding engine coolant may cause cracks in the engine. Add engine coolant slowly in small quantities to prevent damage.

**Tire Pressure Monitoring System (TPMS) (if equipped)**



- 1 Low tire pressure telltale /TPMS malfunction indicator
- 2 Low tire pressure position telltale (Shown on the LCD display)

**Check tire pressure**

- You can check the tire pressure in the assist mode on the cluster.
  - Refer to "LCD display modes" on page 5-38.
- Tire pressure is displayed 1~2 minutes later after driving.
- If tire pressure is not displayed when the vehicle is stopped, "Drive to display" message displays. After driving, check the tire pressure.
- You can change the tire pressure unit in the user settings mode on the cluster.
  - psi, kpa, bar (Refer to "User settings mode" on page 5-42.

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 appears a low tire pressure telltale when one or more of your tires is significantly under-inflated. Accordingly, when the low tire pressure telltale appears, you should stop and check your tires as soon as possible, and inflate them to the proper pressure. Driving on a significantly under-inflated tire causes the tire to overheat and can lead to tire failure. Under-inflation also reduces fuel efficiency and tire tread life, and may affect the vehicle's handling and stopping ability.

Please note that the TPMS is not a substitute for proper tire maintenance, and it is the driver's responsibility to maintain correct tire pressure, even if under-inflation has not reached the level to trigger illumination of the TPMS low tire pressure telltale.

Your vehicle has also been equipped with a TPMS malfunction indicator to indicate when the system is not operating properly. The TPMS malfunction indicator is combined with the low tire pressure telltale. When the system detects a malfunction, the telltale will flash for approximately 1 minute and then remain continuously appeared. This sequence will continue upon subsequent vehicle start-ups as long as the malfunction exists. When the TPMS malfunction indicator remains appeared after blinking for approximately 1 minute, 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.

**\* NOTICE**

If any of the below happens, have the system checked by a professional workshop. Kia recommends to visit an authorized Kia dealer/service partner.

1. The low tire pressure telltale/ TPMS malfunction indicator do not appear for 3 seconds when the ignition switch is turned to the ON position or engine is running.
2. The TPMS malfunction indicator remains appeared after blinking for approximately 1 minute.
3. The Low tire pressure position telltale remains appeared.

**Low tire pressure telltale (!)**

**Low tire pressure position telltale**



**A: Low tyre pressure**

When the tire pressure monitoring system warning indicators are appeared



and warning message displayed on the cluster LCD display, one or more of your tires is significantly under-inflated. The low tire pressure position telltale light will indicate which tire is significantly under-inflated by appearing the corresponding position light.

If either telltale appears, 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 a spare tire.

If you drive the vehicle for about 10 minutes at speeds above 25 km/h after replacing the low pressure tire with the spare tire, one of the following will happen:

- The TPMS malfunction indicator may blink for approximately 1 minute and then remain continuously appeared because the TPMS sensor is not mounted on the spare wheel.  
(changed tire equipped with a sensor not in the vehicle)
- The TPMS malfunction indicator will remain continuously appeared while driving because the TPMS sensor is not mounted on the spare wheel.  
(changed tire equipped with a sensor in the vehicle)

### 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.

### CAUTION

- In winter or cold weather, the low tire pressure telltale may appear 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 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 higher or lower, you should check the tire inflation pressure and adjust the tires to the recommended tire inflation pressure.
- When filling tires with more air, conditions to turn off the low tire pressure telltale may not be met. This is because a tire inflator has a margin of error in performance. The low tire pressure telltale will be turned off if the tire pressure is above the recommended tire inflation pressure.

### Tire Pressure Monitoring System (TPMS) malfunction indicator

The TPMS malfunction indicator will appear after it blinks for approximately one minute when there is a problem with the Tire Pressure Monitoring System. In this case, have the system checked by a professional workshop to determine the cause of the problem. Kia recommends to visit an authorized Kia dealer/service partner.

**⚠ CAUTION**

- The TPMS malfunction indicator may blink for approximately 1 minute and then remain continuously appeared if the vehicle is moving around electric power supply cables or radios transmitter such as at police stations, government and public offices, broadcasting stations, military installations, airports, or transmitting towers, etc. This can interfere with normal operation of the Tire Pressure Monitoring System (TPMS).
- The TPMS malfunction indicator may blink for approximately 1 minute and then remain continuously appeared if snow chains are used or some separate electronic devices such as notebook computer, mobile charger, remote starter or navigation etc., are used in the vehicle.  
This can interfere with normal operation of the Tire Pressure Monitoring System (TPMS).

**\* NOTICE**

If there is a malfunction with the TPMS, the low tire pressure position telltale will not be displayed even though the vehicle has an underinflated tire.

**Changing a tire with TPMS**

If you have a flat tire, the low Tire Pressure and Position telltales will come on. In this case, have the system checked by a professional workshop. Kia recommends to visit an authorized Kia dealer/service partner.

**⚠ CAUTION**

We recommend that you use the sealant approved by Kia.  
The sealant on the tire pressure sensor and wheel shall be eliminated when you replace the tire with a new one.

Each wheel is equipped with a tire pressure sensor mounted inside the tire behind the valve stem. You must use TPMS specific wheels. Have your tires serviced by a professional workshop. Kia recommends to visit an authorized Kia dealer/service partner.

If you drive the vehicle for about 10 minutes at speeds above 25 km/h after replacing the low pressure tire with the spare tire, one of the following will happen:

- The TPMS malfunction indicator may blink for approximately 1 minute and then remain continuously appeared because the TPMS sensor is not mounted on the spare wheel. (changed tire equipped with a sensor not in the vehicle)
- The TPMS malfunction indicator will remain continuously appeared while driving because the TPMS sensor is not mounted on the spare wheel. (changed tire equipped with a sensor in the vehicle)

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).

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. Allow the tire to cool before measuring the inflation pressure. Always be sure the tire is cold before inflating to the recommended pressure.

### **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.

#### **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. Tampering with, modifying, or disabling the Tire Pressure Monitoring System (TPMS) components may void the warranty for that portion of the vehicle.

#### **For EUROPE**

- Do not modify the vehicle, it may interfere with the TPMS function.
- The wheels on the market do not have a TPMS sensor. For your safety, use parts for replacement from a professional workshop. Kia recommends to visit an authorized Kia dealer/service partner.
- If you use the wheels on the market, use a TPMS sensor approved by an authorized Kia dealer.

If your vehicle is not equipped with a TPMS sensor or TPMS does not work properly, you may fail the periodic vehicle inspection conducted in your country.

- All vehicles sold in the EUROPE market during below period must be equipped with TPMS.
- New model vehicle: Nov. 1, 2012 ~
- Current model vehicle: Nov. 1, 2014~ (Based on vehicle registrations)

### **CAUTION**

We recommend that you use the sealant approved by Kia if your vehicle is equipped with a Tire Pressure Monitoring System. The liquid sealant can damage the tire pressure sensors.

## If you have a flat tire (with spare tire) (if equipped)

### Jack and tools



- 1 Jack handle
- 2 Jack
- 3 Wheel lug nut wrench

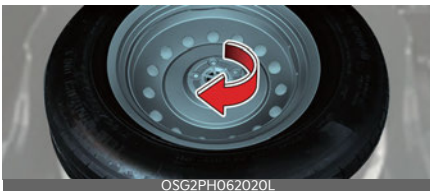
### Removing and storing the spare tire

#### Operation

1. Remove the luggage board cover (1).



2. Turn the tire hold-down wing bolt counterclockwise.



3. 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.

### **WARNING**

- Be cautious as the minimum ground clearance gets lower when you store the original tire in the bottom of the vehicle after replacing it with a spare tire. In particular, drive below 30 km/h (18 mph) when driving over a speed bump and on uphill/downhill/uneven road.
- Never attempt vehicle repairs in the traffic lanes of a public road or highway.
- Always move the vehicle completely off the road and onto the shoulder before trying to change a tire. The jack should be used on firm level ground. If you cannot find a firm level place off the road, call a towing service company for assistance.
- Be sure to use the correct front and rear jacking positions on the vehicle; never use the bumpers or any other part of the vehicle for jacking support.
- The vehicle can easily roll off the jack causing serious injury or death.
- Do not get under a vehicle that is supported by a jack.
- Do not start or run the engine while the vehicle is on the jack.
- Do not allow anyone 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.
- Ensure the spare tire retainer is properly aligned with the center of the spare tire to prevent the spare tire from "rattling". Otherwise, it may cause the spare tire to fall off the carrier and lead to an accident.

**CAUTION**

Check whether the tire hold-down wing bolt is fixed on the center of the tire wheel. If the tire hold-down wing bolt is not fixed securely, the tire may move around during driving and noise may sound.

**Changing tires**

**Operation**

1. Stop the vehicle to a safe leveled place away from traffic.



2. Turn the hazard warning flasher on.
3. Change the gear to P (Park) and turn the vehicle off.
4. Set the parking brake.
5. Remove the jack, wheel lug nut wrench and the spare tire from the vehicle.
6. Block both the front and rear of wheel that is diagonally opposite the jack position.



7. Loosen the wheel lug nuts counter-clockwise one turn each. Do not remove any wheel lug nuts until the tire has been raised off the ground.



8. Place the jack at the front (1) or rear (2) designated jacking positions. The jacking positions are plates that are welded to the frame with two tabs and a raised dot to index with the jack.



9. Insert the jack handle into the jack and turn it clockwise. Raise the vehicle until the tire just clears the ground. This measurement is approximately 30 mm (1.2 inches). Make sure the vehicle is stable and there is no chance for movement or slippage before removing the wheel lug nuts.



10. Loosen the wheel nuts and remove them by hand.
11. Slide the wheel off the studs and lay it flat so it does not roll away.
12. Pick up the spare tire, line up the holes with the studs and slide the wheel onto them. Tip the wheel slightly and get the top hole in the wheel lined up with the top stud. Jiggle the wheel back and forth until the wheel slides over the other studs.
13. Hold it on the studs, put the wheel nuts on the studs and tighten them by hand. Jiggle the tire to make sure it is completely seated.
14. Lower the vehicle to the ground by turning the jack handle counterclockwise.
15. Position the wheel lug nut wrench and tighten the wheel nuts. Be sure the socket is seated completely over the nut. Go around the wheel tightening every other nut until they are all tight. Double-check each nut for tightness.



After changing tires, have your vehicle checked by a professional workshop or seek other qualified assistance. Kia recommends to call an authorized Kia dealer/service partner.

**⚠ WARNING**

- To prevent vehicle movement while changing a tire, always set the parking brake fully, and always block the wheel diagonally opposite the wheel being changed.
- We recommend that the wheels of the vehicle be chocked, and that no person remain in a vehicle that is being jacked.
- 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.
- Wheels may have sharp edges. Handle them carefully to avoid possible severe injury. Before putting the wheel into place, be sure that there is nothing on the hub or wheel (such as mud, tar, gravel, etc.) that interferes with the wheel from fitting solidly against the hub. If there is, remove it. If there is not good contact on the mounting surface between the wheel and hub, the wheel nuts could come loose and cause the loss of a wheel. Loss of a wheel may result in loss of control of the vehicle. This may cause serious injury or death.

**Wheel lug nut tightening torque**

- 11~13 kgf·m (79~94 lbf·ft)

**\* INFORMATION**

If the pressure is lower than recommended, drive slowly to the nearest service station and inflate to the correct pressure. If it is too high, adjust it until it is correct.

**⚠ CAUTION**

Your vehicle has metric threads on the wheel studs and nuts. Make certain during wheel removal that the same nuts that were removed are reinstalled - or, if replaced, that nuts with metric threads and the same chamfer configuration are used. Installation of a non-metric thread nut on a metric stud or vice-versa will not secure the wheel to the hub properly and will damage the stud so that it must be replaced.

Note that most lug nuts do not have metric threads. Be sure to use extreme care in checking for thread style before installing aftermarket lug nuts or wheels. If in doubt, consult a professional workshop. Kia recommends to consult an authorized Kia dealer/service partner.

**⚠ WARNING**

- If the studs are damaged, they may lose their ability to retain the wheel. This could lead to the loss of the wheel and a collision resulting in serious injuries.
- Check the inflation pressures as soon as possible after installing the spare tire. Adjust it to the specified pressure, if necessary. Refer to "Tires and wheels" on page 9-5.

**Important - use of compact spare tire (if equipped)**

The compact spare tire is smaller than a conventional tire and is designed for temporary use only.

**Precautions**

- Do not exceed 80 km/h (50 mph).
- Drive slowly enough to avoid all hazards.
- Continuous road use 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.
- Avoid driving over obstacles.
- Do not take the vehicle through an automatic car wash.
- Do not use tire chains on the temporary compact tire.
- Do not install on the front axle if the vehicle must be driven in snow or on ice.
- Do not use on any other vehicle.
- Inspect your compact spare tire regularly and replace with the same size and design.
- The compact spare tire should not be used on any other wheels, nor should standard tires, snow tires, wheel covers or trim rings be used with the compact spare wheel.
- Do not use more than one compact spare tire at a time.
- Do not tow a trailer while the compact spare tire is installed.

**⚠ WARNING**

The compact spare tire is for emergency use only. Do not operate your vehicle on this compact spare at the speed over 80 km/h (50 mph). The original tire should be repaired or replaced as soon as possible to avoid failure of the spare possibly leading to personal injury or death.

---

**⚠ CAUTION**

- 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.
  - Check the inflation pressure after installing the spare tire. Adjust it to the specified pressure, as necessary.
-



Jack label

Type A

	Max. (A) kg	<b>JACK MODEL : (B)</b> 	
ODEPPH062023L			<b>FRONTEC CO., LTD.</b>

Type B

	Model : <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> ①		
	max. <input type="checkbox"/> <input type="checkbox"/> kg		
ONQ5061089L			<b>CO., LTD.</b>



Type C

●MAX. WEIGHT <input type="checkbox"/> <input type="checkbox"/> kg( <input type="checkbox"/> <input type="checkbox"/> lb) ② USE ONLY TO SPECIFIED CAR(지정 차량에만 사용할 것) ●CARGA MAXIMA <input type="checkbox"/> <input type="checkbox"/> kg( <input type="checkbox"/> <input type="checkbox"/> lb) USO SOLO PARA EL VEHICULO ESPECIFICADO ●Максимальная использовать только для грузоподъемность <input type="checkbox"/> <input type="checkbox"/> кг данного автомобиля ●最大质量 <input type="checkbox"/> <input type="checkbox"/> kg ( <input type="checkbox"/> <input type="checkbox"/> lb), 仅适用于指定车型 ●الوزن الأقصى <input type="checkbox"/> <input type="checkbox"/> كجم - <input type="checkbox"/> <input type="checkbox"/> رطل يستخدم فقط للسيارة المحددة	⑥	
○MAX. WEIGHT <input type="checkbox"/> <input type="checkbox"/> kg( <input type="checkbox"/> <input type="checkbox"/> lb) USE ONLY TO SPECIFIED CAR(지정 차량에만 사용할 것) ●CARGA MAXIMA <input type="checkbox"/> <input type="checkbox"/> kg( <input type="checkbox"/> <input type="checkbox"/> lb) USO SOLO PARA EL VEHICULO ESPECIFICADO ●Максимальная использовать только для грузоподъемность <input type="checkbox"/> <input type="checkbox"/> кг данного автомобиля ●最大质量 <input type="checkbox"/> <input type="checkbox"/> kg ( <input type="checkbox"/> <input type="checkbox"/> lb), 仅适用于指定车型 ●الوزن الأقصى <input type="checkbox"/> <input type="checkbox"/> كجم - <input type="checkbox"/> <input type="checkbox"/> رطل يستخدم فقط للسيارة المحددة	⑥	
ONQ5061090L		<b>CO., LTD.</b>

Type D

HYUNDAI MOTOR COMPANY		KIA CORPORATION	
<ul style="list-style-type: none"> <li>● THIS JACK FOR USE WITH HYUNDAI SONATA, GRANDEUR, i40, KONA, KIA OPTIMA, NIRO, STINGER, GENESIS G70, G80, GV70 MODELS.</li> <li>● TURN OFF IGNITION &amp; SET PARKING BRAKE, PUT GEARSHIFT IN PARK (FOR AUTOMATIC) OR IN REVERSE GEAR (FOR MANUAL TRANSMISSION). THE VEHICLE OWNER'S MANUAL SHOULD BE CONSULTED FOR JACKING AND TYRE CHANGING INSTRUCTIONS (INCLUDING WHEEL JACKING POSITIONS) PRIOR TO THE JACKING OF THE VEHICLE.</li> <li>● THE JACK SHOULD BE USED ON LEVEL FIRM GROUND WHEREVER POSSIBLE.</li> <li>● IT IS RECOMMENDED THAT THE WHEELS OF THE VEHICLE BE CHOCKED AND THAT NO PERSON SHOULD REMAIN IN THE VEHICLE THAT IS BEING JACKED.</li> </ul>			
<b>WARNING: DO NOT GET UNDER A VEHICLE THAT IS SUPPORTED BY A JACK</b>			
ODEPPH062025L			

Type E

 现代汽车有限公司  起亚汽车有限公司

- 额定负载 : (A) kg
- 车辆熄火, 启用驻车制动, 变速杆置于驻车位置 (自动变速箱), 或者置于倒档位置 (手动变速箱). 使用千斤顶前, 参考用户手册里的千斤顶使用和轮胎更换的说明 (包括车轮千斤顶升点)
- 应在平地上使用
- 使用千斤顶前, 应先检查车轮, 并确定车上无人

**注意: 在用千斤顶支撑车辆时严禁进入车底作业。**

ODEPPH062024L

\* The actual Jack label in the vehicle may differ from the illustration. For more detailed specifications, refer to the label attached to the jack.

- 1 Model Name
- 2 Maximum allowable load
- 3 When using the jack, set your parking brake.
- 4 When using the jack, stop the engine.
- 5 Do not get under a vehicle that is supported by a jack.
- 6 The designated locations under the frame
- 7 When supporting the vehicle, the base plate of jack must be vertical under the lifting point.
- 8 Move the shift position to the P (Park) position on vehicles.
- 9 The jack should be used on firm level ground.
- 10 Jack manufacturer
- 11 Production date
- 12 Representative company and address

## EC Declaration of Conformity for Jack

**CE**

**EC Declaration of Conformity**  
according to EC Machinery Directive 2006/42/EC

We, **SAMKI IND. CO., LTD.**  
# 175, Techno saneop-ro 29beon-gil, Nam-Gu, Ulsan, Korea 44776  
declare under our sole responsibility that the product

**Product** : Jack Assembly  
**Brand Name** : Pantograph Type  
**Type Designation(s)** : Jack Assembly-600kg, Jack Assembly-700kg  
Jack Assembly-800kg, Jack Assembly-1000kg  
Jack Assembly-1200kg, Jack Assembly-1500kg  
**Serial No.** : N/A (prototype)  
**Year of Manufacture** : 2020

to which this declaration relates is in conformity with the following standard(s) or other normative document(s);

EN ISO12100 (2010)	Safety of machinery - General principles of design - Risk assessment and risk reduction
EN 1494/A1 (2008)	Mobile or movable jacks and associated lifting equipment

following the provisions of Directive(s);  
2006/42/EC Directive on the approximation of the laws of Member States relating to machinery (OJ L157 Jun, 9, 2006)

Ulsan, Korea / 09\_03\_2020 Byong Suk Choi President 

(Place and date of issue)(name and signature or equivalent making of authorized person)

\* T.C.F Compiling Location  
- Address: FRIBORSKA 280, 739 42 FRYDEK MISTEK, CHLEBOVICE, CZECH REPUBLIC  
- Team: Purchase team  
- Company name: HANWHA

OSG2PH052140L

7

## If you have a flat tire (with Tire Mobility Kit) (if equipped)

Type A



Type B



- 1 Compressor
- 2 Sealant bottle

\* The tire mobility kit will be provided in the cargo area or in a dedicated bag in the tailgate in the side trim.

The Tire Mobility Kit is not designed or intended as a permanent tire repair method and is to be used for one tire only.

The system with compressor and sealing compound seals most tire punctures caused by nails or similar objects and reinflates the tire. However, larger punctures or sidewall damage cannot be sealed completely.

After ensuring that the tire is properly sealed, you can drive cautiously on the tire (for a distance of up to 200 km (120 miles)) at maximum speed of 80 km/h (50 mph) in order to reach a service station or a tire dealer to have the tire replaced.

Avoid abrupt steering or other driving maneuvers if the vehicle is heavily loaded or if a trailer is in use.

Refer to "Notes on the safe use of the Tire Mobility Kit" on page 7-26.

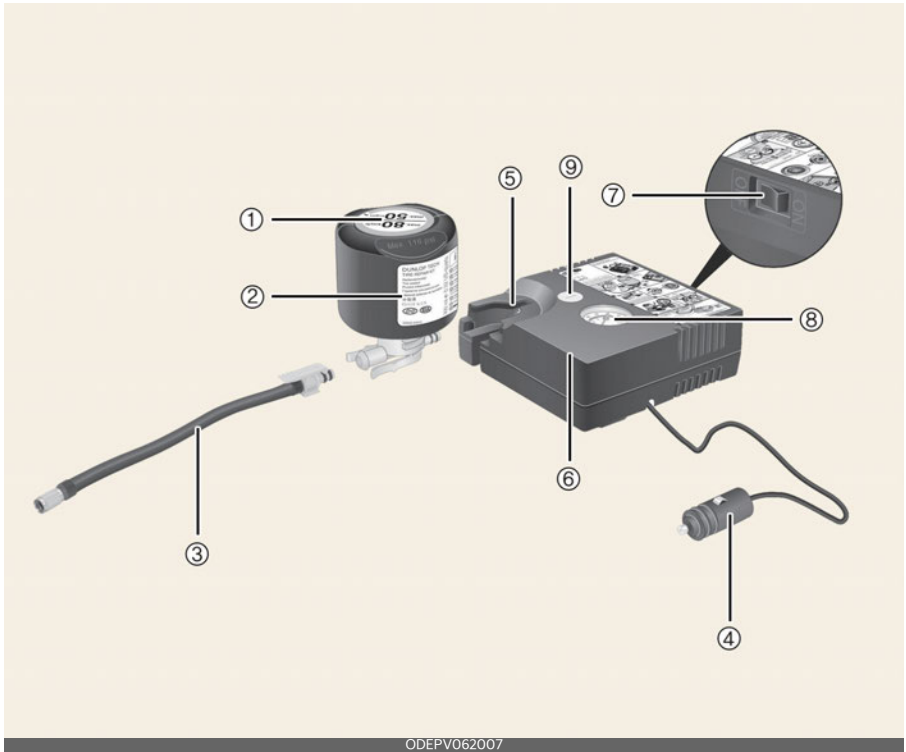
### **⚠ WARNING**

- Do not use the Tire Mobility Kit to repair punctures in the tire walls. This can result in an accident due to tire failure.
- Have your tire repaired as soon as possible. The tire may lose air pressure at any time after inflating with the Tire Mobility Kit.
- Do not use the TMK if a tire is severely damaged by driving run flat or with insufficient air pressure. Only punctured areas located within the tread region of the tire can be sealed using the TMK.
- Do not use the Tire sealant after the sealant has expired (i.e. past the expiration date on the sealant container). This can increase the risk of tire failure.
- Keep the sealant out of reach of children, avoid sealant contact with eyes and do not swallow the sealant.

### **⚠ CAUTION**

When two or more tires are flat, do not use the tire mobility kit because the supported one sealant of Tire Mobility Kit is only used for one flat tire.

## Components of the Tire Mobility Kit



ODEPV062007

\* Connectors, cable and connection hose are stored in the compressor housing.

\* Strictly follow the specified sequence, otherwise the sealant may escape under high pressure.

- 1 Speed restriction label
- 2 Sealant bottle
- 3 Sealant bottle filling hose
- 4 Power outlet connector
- 5 Sealant bottle holder
- 6 Compressor
- 7 ON/OFF switch
- 8 Tire inflation pressure gauge
- 9 Tire inflation pressure valve

7

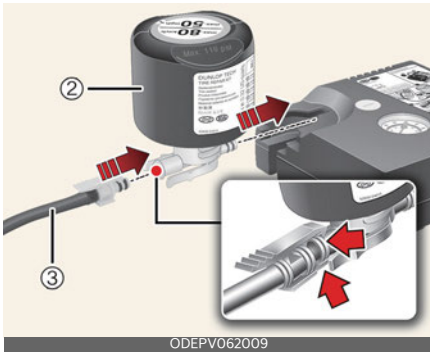
## Using the Tire Mobility Kit

### Operation

1. Shake the sealant bottle.



2. Connect the filling hose onto the connector of the sealant bottle. (A)  
Remove the sealant bottle cap and sealant bottle holder cap and connect the bottle onto the sealant bottle holder. (B)



3. Make sure the compressor valve on the filling hose is locked.
4. Unscrew the valve cap and screw the filling hose onto the tire valve.



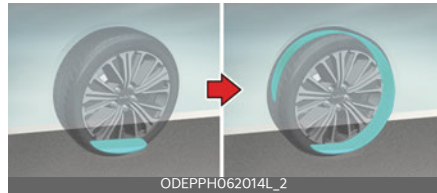
5. Make sure the compressor is turned off.

6. Connect the power outlet connector.



7. Start the vehicle.
8. Turn the compressor on and let it run for approximately 5~7 minutes to fill the sealant up to the proper pressure.
9. Turn the compressor off.
10. Detach the filling hose from the tire valve.

### Distributing the sealant



### Operation

- Immediately drive approximately 7~10 km (4~6 miles, or approximately 10 minutes) to distribute the tire sealant evenly.

### **WARNING**

- Do not leave your vehicle running in a poorly ventilated area for extended periods of time. Carbon monoxide poisoning and suffocation can occur.
- If the tire pressure is below 26 psi (180 kPa), do not drive the vehicle. The tire may cause accident.

**CAUTION**

- Securely install the sealant filling hose to the valve. If not, sealant may flow backward, possibly clogging the filling hose.
- Do not exceed a speed of 80 km/h (50 mph). If possible, do not fall below a speed of 20 km/h (12 mph). While driving, if you experience any unusual vibration, ride disturbance or noise, reduce your speed and drive with caution until you can safely pull off of the side of the road. Call for road side service or towing. When you use the Tire Mobility Kit, the wheel may be stained by sealant. Therefore, remove the wheel stained by sealant and have the vehicle inspected at a professional workshop. Kia recommends visiting an authorized Kia dealer/service partner.

## Checking tire inflation pressure

### Operation

1. After driving approximately 7~10 km (4~6 miles, or approximately 10 minutes), stop the vehicle in a safe, level place.
2. Connect the filling hose directly to the tire valve.



3. Connect the power outlet connector.
4. Adjust the tire inflation pressure to the specified value.

- Turn the compressor on to increase the inflation pressure. Turn the compressor off briefly to check the current inflation pressure.
- Turn the compressor valve to reduce the inflation pressure.

**WARNING**

- Do not let the compressor run for more than 10 minutes, otherwise the device will overheat and may be damaged.
- The tire inflation pressure must be inflated to the proper pressure (Refer to "Tires and wheels" on page 9-5). If it is not, do not continue driving. Call for road side service or towing.

**CAUTION**

- If the inflation pressure is not maintained, drive the vehicle a second time, refer to "Distributing the sealant" on page 7-24. Then repeat steps 1 to 4.
- Use of the TMK may be ineffectual for tire damage larger than approximately 4 mm (0.16 inches).
- We recommend that you contact a professional workshop if the tire cannot be made roadworthy with the Tire Mobility Kit.

**\* NOTICE**

When reinstalling the repaired or replaced tire and wheel on the vehicle, tighten the wheel lug nut to 11~13 kgf·m (79~94 lbf·ft).

## Notes on the safe use of the Tire Mobility Kit

- Stop the vehicle in a safe, level place away from traffic.
- Set the parking brake.
- Only use the Tire Mobility Kit for sealing/inflating passenger vehicle tires.
- Do not remove any foreign objects from the tire.
- Read the precautionary advice printed on the sealant bottle before using the Tire Mobility Kit.
- Leave the vehicle running. Operating the Tire Mobility Kit may drain the battery.
- Never leave the Tire Mobility Kit unattended while it is being used.
- Do not leave the compressor running for more than approximately 10 minutes at a time or it may overheat.
- Do not use the Tire Mobility Kit if the ambient temperature is below  $-30\text{ }^{\circ}\text{C}$  ( $-22\text{ }^{\circ}\text{F}$ ).
- Do not use the Tire Mobility Kit if the tire and wheel are damaged.

## Technical Data

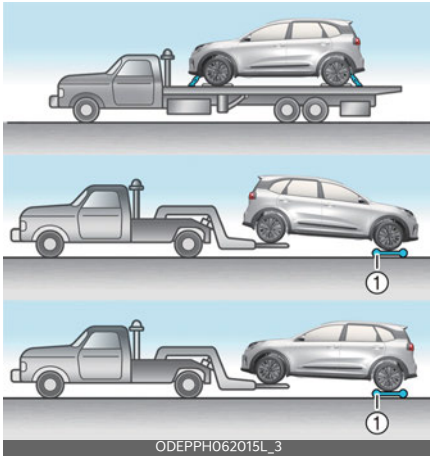
- System voltage: DC 12 V
- Working voltage: DC 12 V
- Amperage rating: max.  $15\text{ A} \pm 1\text{ A}$
- Suitable temperatures:  $-30\text{ to }70\text{ }^{\circ}\text{C}$  ( $-22\text{ to }158\text{ }^{\circ}\text{F}$ )
- Max. working pressure: 6 bar (87 psi)
- Size
  - Compressor: 161 x 150 x 55.8 mm (6.3 x 5.9 x 2.2 inches)
  - Sealant bottle: 104 x 85  $\varnothing$  mm (4.1 x 3.3  $\varnothing$  inches)
  - Compressor weight:  $665 \pm 30\text{g}$  (1.4  $\pm$  0.07 lbs.)
  - Sealant volume: 300 ml (18.3 cu. in)

\* Sealant and spare parts can be obtained and replaced at an authorized vehicle or tire dealer. Empty sealant bottles may be disposed of at home. Liquid residue from the sealant should be disposed of by your vehicle or tire dealer or in accordance with local waste disposal regulations.



# Towing

## Towing service



### 1 Wheel dolly

- Proper lifting and towing procedures are necessary to prevent damage to the vehicle. The use of wheel dolly (1) or flatbed is recommended.
- On 2WD vehicles, it is acceptable to tow the vehicle with the rear wheels on the ground (without dollies) and the front wheels off the ground.

### \* INFORMATION

If emergency towing is necessary, we recommend having it done by an authorized Kia dealer or a commercial tow-truck service.



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.

## Towing without wheel dolly

### Operation

1. Set the vehicle to ACC (Accessory).
2. Change the gear to N (Neutral).
3. Release the parking brake.

### ⚠ CAUTION

Failure to shift the gear to N (Neutral) may cause internal damage to the transmission.

## Emergency towing

Front



Rear



## Operation

1. Remove the hole cover pressing the lower part of the cover on the bumper.
2. Install the towing hook by turning it clockwise into the hole until it is fully secured.
3. Remove the towing hook and install the cover after use.

### \* INFORMATION

Towing in this manner may be done only on hard-surfaced roads for a short distance and at low speed. Also, the wheels, axles, power train, steering and brakes must all be in good condition.

- 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.
- 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.
- Before emergency towing, check if the hook is not broken or damaged.
- Fasten the towing cable or chain securely to the hook.
- Do not jerk the hook. Apply it steadily and with even force.
- To avoid damaging the hook, do not pull from the side or at a vertical angle. Always pull straight ahead.
- Change the gear to N (Neutral).
- Release the parking brake.
- To avoid serious damage to the dual clutch transmission, limit the vehicle speed to 15 km/h (10 mph) and drive less than 1.5 km (1 mile) when towing. (for dual clutch transmission)
- 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.
- The driver must be in the vehicle for steering and braking operations when the vehicle is towed and passengers other than the driver must not be allowed to be on board.

**⚠ 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 disabled vehicle is unable to be moved, do not forcibly continue the towing. We recommend that you contact an authorized Kia dealer or a commercial tow truck service for assistance.
  - Tow the vehicle as straight ahead as possible.
  - Keep away from the vehicle during towing.
- 

**⚠ 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.
  - Accelerate or decelerate the vehicle in a slow and gradual manner while maintaining tension on the tow rope or chain to start or drive the vehicle, otherwise tow hooks and the vehicle may be damaged.
  - If the car is being towed with all four wheels on the ground, it can be towed only from the front. Be sure that the transmission is in N (Neutral). A driver must be in the towed vehicle to operate the steering and brakes.
  - Before towing, check the dual clutch transmission for fluid leaks under your vehicle. If the dual clutch transmission fluid is leaking, flatbed equipment or a towing dolly must be used.
-

## Emergency commodity (if equipped)

There are some emergency commodities in the vehicle to help you respond to the emergency situation.

### Fire extinguisher

1. Pull the pin at the top of the extinguisher.
2. Aim the nozzle toward the base of the fire.
3. Stand approximately 2.5 m (8 ft) away from the fire and squeeze the handle to discharge the extinguisher. If you release the handle, the discharge will stop.
4. Sweep the nozzle back and forth at the base of the fire. After the fire appears to be out, watch it carefully since it may re-ignite.

### First aid kit

Scissors, bandage and adhesive tape and etc. in the kit is provided.

### Triangle reflector

Place the triangle reflector on the road to warn oncoming vehicles.

### Tire pressure gauge

To check the tire pressure, take the following steps:

1. Unscrew the inflation valve cap.
2. Press and hold the gauge against the tire valve.
3. A firm non-leaking push will activate the gauge.
  - Read the tire pressure on the gauge to know whether the tire pressure is low or high.
4. Adjust the tire pressures to the specified pressure.
5. Reinstall the inflation valve cap.

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# 8 Maintenance

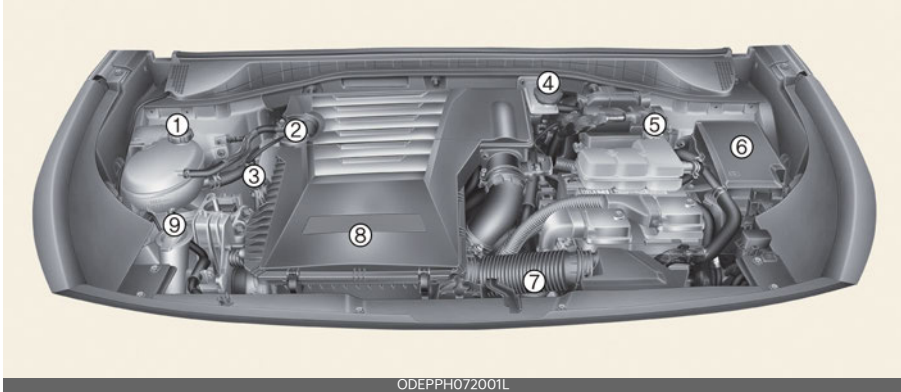
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# Maintenance

## Engine compartment

(Gasoline) 1.6 GDi



ODEPPH072001L

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

- |  |            |
|--|------------|
| 1. Engine coolant reservoir              | 8-20       |
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## Maintenance services

### Owner's responsibility

- Have your vehicle serviced by a professional workshop. Kia recommends to visit an authorized Kia dealer/service partner.
- Retain documents that show proper maintenance.
- Establish your compliance with the servicing and maintenance requirements of your vehicle warranties.
- Repairs and adjustments required as a result of improper maintenance or a lack of required maintenance are not covered when your vehicle is covered by warranty.

### \* NOTICE

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

### 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.

### ⚠ WARNING

- 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 the system serviced by a professional workshop. Kia recommends to visit an authorized Kia dealer/service partner.
- 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.
- Do not put heavy objects or apply excessive force on top of the engine cover (if equipped) or fuel related parts.
- When you inspect the fuel system (fuel lines and fuel injection devices), contact a professional workshop. Kia recommends to visit an authorized Kia dealer/service partner.
- Do not drive long time with the engine cover removed.
- When checking the engine room, do not go near fire. Fuel, washer fluid, etc. are flammable oils that may cause fire.
- Before touching the battery, ignition cables and electrical wiring, you should disconnect the (-) battery terminal (For plug-in hybrid vehicle) or the battery connector (For hybrid vehicle). You may get an electric shock from the electric current.
- When you remove the interior trim cover with a flat bed (-) driver, be careful not to damage the cover.

- Be careful when you replace and clean bulbs to avoid burns or electrical shock.

### \* NOTICE

Improper owner maintenance during the warranty period may affect warranty coverage. For details, read the separate Warranty & Maintenance book provided with the vehicle. If you're unsure about any servicing or maintenance procedure, have the system serviced by a professional workshop. Kia recommends to visit an authorized Kia dealer/service partner.

## Owner maintenance

### Owner maintenance schedule

#### When you stop for fuel

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

### ⚠ WARNING

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

#### While operating your vehicle

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

**At least monthly**

- Check the coolant level in the engine coolant reservoir.
- Check the operation of all exterior lights, including the stoplights, turn signals and hazard warning flashers.
- Check the inflation pressures of all tires including the spare for tires that are worn, show uneven wear, or are damaged.
- Check for loose wheel lug nuts.

**At least twice a year**

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

**At least once a year**

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

## Scheduled maintenance service

If your vehicle is operated in any of the severe driving conditions, you should inspect, replace or refill more frequently, using the severe usage maintenance schedule instead of the normal usage maintenance schedule.

## Normal maintenance schedule - except Europe

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.

NO.	Item	Remark
*1	Engine oil and engine oil filter	<ul style="list-style-type: none"> <li>As it is normal for engine oil to be consumed during driving, the engine oil level should be checked on regular basis.</li> <li>The engine oil change interval for normal operating conditions is based on the use of the recommended engine specification. If the recommended engine oil specification is not used, then replace the engine oil according to the maintenance schedule under severe operating conditions.</li> </ul>
*2	Coolant (Engine/Inverter)	When adding coolant, use only deionized water or soft water for your vehicle and never mix hard water in the coolant filled at the factory. An improper coolant mixture can result in serious malfunction or engine damage.
*3	HSG (Hybrid Starter & Generator) belt	Inspect HSG belt for evidence of cuts, cracks, excessive wear or oil saturation and replace if necessary.
*4	Spark plug	For your convenience, it can be replaced prior to it's interval when you do maintenance of other items.
*5	Dual clutch transmission (DCT) fluid	Dual clutch transmission (DCT) fluid should be changed anytime it has been submerged in water.
*6	Fuel additives	<p>Kia recommends that you use unleaded gasoline which has an octane rating of RON (Research Octane Number) 95/AKI (Anti Knock Index) 91 or higher (for Europe) or Octane Rating of RON (Research Octane Number) 91/AKI (Anti-Knock Index) 87 or higher (except Europe).</p> <p>For customers who do not use good quality gasolines including fuel additives regularly, and have problems starting or the engine does not run smoothly, one bottle of additives should be added to the fuel tank when the engine oil is replaced. Additives are available from a professional workshop along with information on how to use them. Kia recommends to visit an authorized Kia dealer/service partner. Do not mix other additives.</p>

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

R: Replace or change

Number of months or driving distance, whichever comes first		12	24	36	48	60	72	84	96
Months		10	20	30	40	50	60	70	80
Miles × 1,000		15	30	45	60	75	90	105	120
Km × 1,000									
Engine oil and engine oil filter <sup>1</sup>	Except Middle East, Libya, Algeria, Morocco, Tunisia, Sudan, Egypt, Iran, India, Central & South America, Brazil, Mexico, China	R	R	R	R	R	R	R	R
	For Middle East, Libya, Algeria, Morocco, Tunisia, Sudan, Egypt, Iran, India, Central & South America, Brazil	Replace every 10,000 km (6,500 miles) or 12 months							
	For Mexico	Replace every 10,000 km (6,500 miles) or 6 months							
	For China	Replace every 5,000 km (3,000 miles) or 6 months							
Coolant (Engine/Inverter) <sup>2</sup>		At first, Replace 180,000 km (120,000 miles) or 120 months After that, Replace every 30,000 km (20,000 miles) or 24 months							
HSG (Hybrid Starter & Generator) belt <sup>3</sup>	Except Middle East, Libya, Algeria, Morocco, Tunisia, Sudan, Egypt, Iran, India, Central & South America, Brazil, Mexico, China	Inspect every 15,000 km (10,000 miles) or 12 months Replace every 105,000 km (70,000 miles) or 48 months							
	For Middle East, Libya, Algeria, Morocco, Tunisia, Sudan, Egypt, Iran, India, Central & South America, Brazil, Mexico, China	Inspect every 10,000 km (6,500 miles) or 12 months Replace every 100,000 km (65,000 miles) or 48 months							
Spark plugs <sup>4</sup>	Unleaded	Replace every 150,000 km (100,000 miles)							
Dual clutch transmission (DCT) fluid <sup>5</sup>		No check, No service required							
Engine clutch actuator fluid		Replace every 40,000 km (26,000 miles) or 24 months							
Engine clutch actuator hose and line		I	I	I	I	I	I	I	I
Drive shaft and boots		-	I	-	I	-	I	-	I
Fuel additives <sup>6</sup>	Except Middle East, Libya, Algeria, Morocco, Tunisia, Sudan, Egypt, Iran, India, Central & South America, Brazil, Mexico, China	Add every 15,000 km (10,000 miles) or 12 months							
	For Middle East, Libya, Algeria, Morocco, Tunisia, Sudan, Egypt, Iran, India, Central & South America, Brazil	Add every 10,000 km (6,500 miles) or 12 months							
	For Mexico	Add every 10,000 km (6,500 miles) or 6 months							
	For China	Add every 5,000 km (3,000 miles) or 6 months							
Fuel filter (Gasoline)	For China, Brazil	-	I	-	R	-	I	-	R
Fuel lines, hoses and connections		-	-	-	I	-	-	-	I
Fuel tank air filter		-	I	-	R	-	I	-	R
Vapor hose and fuel filler cap		-	-	-	I	-	-	-	I

Number of months or driving distance, whichever comes first									
Months		12	24	36	48	60	72	84	96
Miles × 1,000		10	20	30	40	50	60	70	80
Km × 1,000		15	30	45	60	75	90	105	120
Air cleaner filter	Except China, Middle East	I	I	R	I	I	R	I	I
	For China, Middle East	R	R	R	R	R	R	R	R
Exhaust system		-	I	-	I	-	I	-	I
Cooling system		I	I	I	I	I	I	I	I
Air conditioner compressor/refrigerant		I	I	I	I	I	I	I	I
Climate control air filter	Except Australia and New Zealand	R	R	R	R	R	R	R	R
	For Australia and New Zealand	I	R	I	R	I	R	I	R
Brake discs and pads		-	I	-	I	-	I	-	I
Brake lines, hoses and connections		-	I	-	I	-	I	-	I
Brake fluid	Except Australia and New Zealand	I	I	R	I	I	R	I	I
	For Australia and New Zealand	I	R	I	R	I	R	I	R
Steering gear rack, linkage and boots		I	I	I	I	I	I	I	I
Suspension ball joints		I	I	I	I	I	I	I	I
Tire (pressure & tread wear)		I	I	I	I	I	I	I	I
Battery (12V) condition	PHEV	I	I	I	I	I	I	I	I
Air cleaner rubber packing		I	I	I	I	I	I	I	I

Fuel filter (gasoline engine): The fuel filter is considered to be maintenance free but periodic inspection is recommended for this maintenance schedule depends on fuel quality.

\* If there are some important safety matters like fuel flow restriction, surging, loss of power, hard starting problem etc, replace the fuel filter immediately regardless of maintenance schedule and consult an authorized Kia dealer/service partner for details.

## Maintenance under severe usage conditions - except Europe

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

R: Replace or change

Maintenance item	Maintenance operation	Maintenance intervals	Driving condition
Engine oil and engine oil filter	R	Except Middle East, Libya, Algeria, Morocco, Tunisia, Sudan, Egypt, Iran, India, Central & South America, Brazil, Mexico, China	A, B, C, D, E, F, G, H, I, J, K, L
		For Middle East, Libya, Algeria, Morocco, Tunisia, Sudan, Egypt, Iran, India, Central & South America, Brazil	
		For Mexico, China	
HSG (Hybrid Starter & Generator) belt	R	Except Middle East, Libya, Algeria, Morocco, Tunisia, Sudan, Egypt, Iran, India, Central & South America, Brazil, Mexico, China	B, C, D, E, I, K
	I	Every 7,500 km (5,000 miles) or 6 months	
	R	Every 45,000 km (30,000 miles) or 24 months	
	I	Every 50,000 km (32,500 miles) or 24 months	
	R	Every 5,000 km (3,000 miles) or 6 months	
Spark plugs	R	More frequently	A, B, F, G, H, I, K
Dual clutch transmission (DCT) fluid	R	Every 120,000 km (80,000 miles)	C, D, F, G, H, I, J
Drive shaft and boots	I	More frequently	C, D, E, F, G, H, I, J
Air cleaner filter	R	More frequently	C, E
Climate control air filter	R	More frequently	C, E, G
Brake discs and pads and calipers	I	More frequently	C, D, E, G, H, I, J, K
Steering gear rack, linkage and boots	I	More frequently	C, D, E, F, G
Suspension ball joints	I	More frequently	C, D, E, G, H, I

- A: Repeatedly driving short distance of less than 8 km (5 miles) in normal temperature or less than 16 km (10 miles) in freezing temperature.
- B: Extensive engine idling or low speed driving for long distances.
- C: Driving on rough, dusty, muddy, unpaved, graveled or saltspread roads.
- D: Driving in areas using salt or other corrosive materials or in very cold weather
- E: Driving in heavy dust condition.
- F: Driving in heavy traffic area.
- G: Driving on uphill, downhill, or mountain roads repeatedly.
- H: Using for towing or camping and driving with loading on the roof.
- I: Driving as a patrol car, taxi, other commercial use of vehicle towing.
- J: Frequently driving under high speed or rapid acceleration/deceleration.
- K: Frequently driving in stop-and-go conditions.
- L: Engine oil usage which is not recommended (Mineral type, Semi-synthetic, Lower grade spec, etc.)



## Normal maintenance schedule - for Australia and New Zealand

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.

NO.	Item	Remark
*1	Engine oil and engine oil filter	<ul style="list-style-type: none"> <li>As it is normal for engine oil to be consumed during driving, the engine oil level should be checked on regular basis.</li> <li>The engine oil change interval for normal operating conditions is based on the use of the recommended engine specification. If the recommended engine oil specification is not used, then replace the engine oil according to the maintenance schedule under severe operating conditions.</li> </ul>
*2	Coolant (Engine/Inverter)	When adding coolant, use only deionized water or soft water for your vehicle and never mix hard water in the coolant filled at the factory. An improper coolant mixture can result in serious malfunction or engine damage.
*3	HSG (Hybrid Starter & Generator) belt	Inspect HSG belt for evidence of cuts, cracks, excessive wear or oil saturation and replace if necessary.
*4	Spark plug	For your convenience, it can be replaced prior to it's interval when you do maintenance of other items.
*5	Dual clutch transmission (DCT) fluid	Dual clutch transmission (DCT) fluid should be changed anytime it has been submerged in water.
*6	Fuel additives	<p>Kia recommends that you use unleaded gasoline which has an octane rating of RON (Research Octane Number) 95/AKI (Anti Knock Index) 91 or higher (for Europe) or Octane Rating of RON (Research Octane Number) 91/AKI (Anti-Knock Index) 87 or higher (except Europe).</p> <p>For customers who do not use good quality petrols including fuel additives regularly, and have problems starting or the engine does not run smoothly, one bottle of additives should be added to the fuel tank when the engine oil is replaced. Additives are available from a professional workshop along with information on how to use them. Kia recommends to visit an authorized Kia dealer/service partner. Do not mix other additives.</p>

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

R: Replace or change

Number of months or driving distance, whichever comes first								
Months	12	24	36	48	60	72	84	96
Km × 1,000	15	30	45	60	75	90	105	120
Engine oil and engine oil filter <sup>1</sup>	R	R	R	R	R	R	R	R
Coolant (Engine/Inverter) <sup>2</sup>	At first, Replace 180,000 km or 120 months After that, Replace every 30,000 km or 24 months							
HSG (Hybrid Starter & Generator) belt <sup>3</sup>	Inspect every 15,000 km or 12 months Replace every 105,000 km or 48 months							
Spark plugs <sup>4</sup>	Replace every 150,000 km							
Dual clutch transmission (DCT) fluid <sup>5</sup>	No check, No service required							
Engine clutch actuator fluid	Replace every 40,000 km or 24 months							
Engine clutch actuator hose and line	I	I	I	I	I	I	I	I
Drive shaft and boots	-	I	-	I	-	I	-	I
Fuel additives <sup>6</sup>	Add every 15,000 km or 12 months							
Fuel lines, hoses and connections	-	-	-	I	-	-	-	I
Fuel tank air filter	-	I	-	R	-	I	-	R
Vapor hose and fuel filler cap	-	-	-	I	-	-	-	I
Air cleaner filter	I	I	R	I	I	R	I	I
Exhaust system	-	I	-	I	-	I	-	I
Cooling system	I	I	I	I	I	I	I	I
Air conditioner compressor/refrigerant	I	I	I	I	I	I	I	I
Climate control air filter	I	R	I	R	I	R	I	R
Brake discs and pads	-	I	-	I	-	I	-	I
Brake lines, hoses and connections	-	I	-	I	-	I	-	I
Brake fluid	I	R	I	R	I	R	I	R
Steering gear rack, linkage and boots	I	I	I	I	I	I	I	I
Suspension ball joints	I	I	I	I	I	I	I	I
Tire (pressure & tread wear)	I	I	I	I	I	I	I	I
Battery (12V) condition	PHEV							
Air cleaner rubber packing	I	I	I	I	I	I	I	I

## Maintenance under severe usage conditions- for Australia and New Zealand

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

R: Replace or change

Maintenance item	Maintenance operation	Maintenance intervals	Driving condition
Engine oil and engine oil filter	R	Every 7,500 km or 6 months	A, B, C, D, E, F, G, H, I, J, K, L
HSG (Hybrid Starter & Generator) belt	R	Every 45,000 km or 24 months	B, C, D, E, I, K
	I	Every 7,500 km or 6 months	
Spark plugs	R	More frequently	A, B, F, G, H, I, K
Dual clutch transmission (DCT) fluid	R	Every 120,000 km	C, D, F, G, H, I, J
Drive shaft and boots	I	More frequently	C, D, E, F, G, H, I, J
Air cleaner filter	R	More frequently	C, E
Climate control air filter	R	More frequently	C, E, G
Brake discs and pads and calipers	I	More frequently	C, D, E, G, H, I, J, K
Steering gear rack, linkage and boots	I	More frequently	C, D, E, F, G
Suspension ball joints	I	More frequently	C, D, E, G, H, I

A: Repeatedly driving short distance of less than 8 km in normal temperature or less than 16 km in freezing temperature.

B: Extensive engine idling or low speed driving for long distances.

C: Driving on rough, dusty, muddy, unpaved, graveled or saltspread roads.

D: Driving in areas using salt or other corrosive materials or in very cold weather

E: Driving in heavy dust condition.

F: Driving in heavy traffic area.

G: Driving on uphill, downhill, or mountain roads repeatedly.

H: Using for towing or camping and driving with loading on the roof.

I: Driving as a patrol car, taxi, other commercial use of vehicle towing.

J: Frequently driving under high speed or rapid acceleration/deceleration.

K: Frequently driving in stop-and-go conditions.

L: Engine oil usage which is not recommended (Mineral type, Semi-synthetic, Lower grade spec, etc.)

## Explanation of scheduled maintenance items

### Engine oil and filter

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

### Hybrid Starter & Generator (HSG) belt

Inspect all hybrid starter & generator belts for evidence of cuts, cracks, excessive wear or oil saturation and replace if necessary. Hybrid starter & generator belts should be checked periodically for proper tension and adjusted as necessary.

#### CAUTION

When you are inspecting the belt, place the ignition switch in the LOCK/OFF or ACC position.

### Fuel filter

Kia gasoline vehicles are equipped a lifetime fuel filter that integrated with the fuel tank. Regular maintenance or replacement is not needed but depends on fuel quality. If there are some important safety matters like fuel flow restriction, surging, loss of power, hard starting problem etc, fuel filter inspection or replace is needed.

Have the fuel filter inspected or replaced by a professional workshop. Kia recommends to visit an authorized Kia dealer/service partner.

### Fuel lines, fuel hoses and connections

Check the fuel lines, fuel hoses and connections for leakage and damage. Have the fuel lines, fuel hoses and connections replaced by a professional workshop. Kia recommends to visit an authorized Kia dealer/service partner.

### Vapor hose and fuel filler cap

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

### Air cleaner filter

Have the air cleaner filter replaced by a professional workshop. Kia recommends to visit an authorized Kia dealer/service partner.

### Spark plugs

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

When assembling parts, be sure to wipe the inside and outside of the boot bottom of the ignition coil and the insulator of the spark plug with a soft cloth to prevent contamination of the spark plug insulator.

#### WARNING

Do not disconnect and inspect spark plugs when the engine is hot. You may burn yourself.

### Cooling system

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

**Coolant/inverter coolant**

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

**Dual clutch transmission (DCT) fluid**

Inspect the dual clutch transmission fluid according to the maintenance schedule.

**Brake hoses and lines**

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

**Brake fluid**

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

**Brake discs, pads and calipers**

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

For more information on checking the pads or lining wear limit, we recommend to refer to the Kia web site.

**([www.kia-hotline.com](http://www.kia-hotline.com))**

**Suspension mounting bolts**

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

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

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

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

**Drive shafts and boots**

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

**Air conditioning refrigerant**

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

**Checking fluid levels**

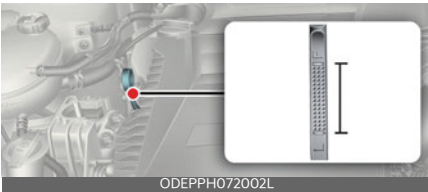
When checking engine oil, engine coolant, brake fluid, and washer fluid, always be sure to clean the area around any filler plug, drain plug, or dipstick before checking or draining any lubricant or fluid. This is especially important in dusty or sandy areas and when the vehicle is used on unpaved roads. Cleaning the plug and dipstick areas will prevent dirt and grit from entering the engine and other mechanisms that could be damaged.

## Engine oil

### Checking engine oil level

Engine oil is used for lubricating, cooling, and operating various hydraulic components in the engine. Engine oil consumption while driving is normal, and it is necessary to check and refill the engine oil regularly. Also, check and refill the oil level within the recommended maintenance schedule to prevent deterioration of oil performance.

Check the engine oil following the below procedure.



### Operation

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, remove the oil filler cap and pull the dipstick out. Wait for 15 minutes for the oil to return to the oil pan.
4. Wipe the dipstick clean and re-insert it fully.
5. Pull the dipstick out again and check between the F-L line, and if it is below the L line, add enough oil to bring the level to F line.

### Replenishing engine oil



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

Use only the specified engine oil. (Refer to "Recommended lubricants and capacities" on page 9-6.)

- Do not spill engine oil when adding or changing engine oil. Wipe off spilled oil immediately.
- The engine oil consumption may increase while you break in a new vehicle and it will be stabilized after driving 6,000 km (4,000 miles).
- The engine oil consumption can be affected by driving habits, climate conditions, traffic conditions, oil quality, etc. Therefore, it is recommended that you inspect the engine oil level regularly and refill it if necessary.

### Changing engine oil and filter

Have the engine oil and filter replaced by a professional workshop. Kia recommends to visit an authorized Kia dealer/service partner.

- If the maintenance schedule to replace engine oil is exceeded, the engine oil performance may deteriorate, and the engine condition may be affected. Therefore, replace the engine oil according to the maintenance schedule.

- To keep the engine in optimal condition, use the recommended engine oil and filter. If the recommended engine oil and filter are not used replace it according to the maintenance schedule under severe usage conditions.
- \* The purpose of the maintenance schedule for engine oil replacement is to prevent oil deterioration and it is irrelevant to oil consumption. Check and refill engine oil regularly.


### WARNING


- Be very careful not to touch the radiator hose when checking or adding the engine oil as it may be hot enough to burn you.
- 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. Do not leave used engine oil within the reach of children.

### CAUTION

- When you wipe the oil level gauge, you should wipe it with a clean cloth. When mixed with debris, it can cause engine damage.
- The engine oil is very hot immediately after the vehicle has been driven and can cause burns during replacement. Replace the engine oil after the engine oil has cooled down.

### \* NOTICE

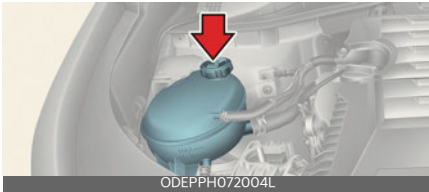
When the oil pressure is low due to insufficient engine oil, the Engine Oil Pressure () warning light will appear.

In addition, the enhanced engine protection system, which limits the engine's power is activated and the Malfunction Indicator Lamp () will appear when the vehicle is driven in this state continuously.

When oil pressure is restored, the Engine Oil Pressure warning light will turn off and the engine power will no longer be limited.

## Engine coolant

### Checking coolant level



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 MAX and MIN (F and L) marks on the side of the coolant reservoir when the engine is cool.

#### \* INFORMATION

If frequent additions are required, have the system inspected by a professional workshop. Kia recommends to visit an authorized Kia dealer/service partner.

#### ⚠ WARNING



The electric motor (cooling fan) is controlled by engine coolant temperature, refrigerant pressure and vehicle speed. It may sometimes operate even when the engine is not running. Use extreme caution when working near the blades of the cooling fan so that you are not injured by a rotating fan blades. As the engine coolant temperature decreases, the electric motor will automatically shut off. This is a normal condition. The electric motor (cooling fan) may operate until you disconnect the (-) battery terminal (For plug-in hybrid vehicle) or the battery connector (For hybrid vehicle).

#### ⚠ CAUTION



- Never attempt to remove the coolant reservoir cap while the engine is operating or hot. Doing so might lead to cooling system and engine damage. Also, hot coolant or steam could cause serious personal injury. Turn the engine off and wait until it cools down. Use extreme care when removing the coolant reservoir cap. Wrap a thick towel around it, and turn in 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 to remove it. Even if the engine is not operating, do not remove the coolant reservoir 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.

- When the engine overheats from low engine coolant, suddenly adding engine coolant may cause cracks in the engine. To prevent damage, add engine coolant slowly in small quantities.
- Do not drive with no engine coolant. It may cause water pump failure and engine seizure, etc.



**\* NOTICE**

Make sure the coolant cap is properly closed after refill of coolant. Otherwise the engine could be overheated while driving.

**Operation**

1. Check if the coolant reservoir cap label is straight In front.



2. Make sure that the tiny protrusions inside the coolant cap are securely interlocked.

**Recommended engine coolant**

- When adding coolant, use only deionized water or soft water for your vehicle and never mix hard water in the coolant filled at the factory.
- 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.

Refer to the following table for mixture percentage.

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

**⚠ WARNING**



- Do not remove the coolant reservoir cap when the engine and radiator are hot. Scalding hot coolant and steam may blow out under pressure causing serious injury.
- Do not use radiator coolant or anti-freeze 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 the paint and body trim.

**Checking the inverter coolant level (HEV)**

If frequent additions are required, we recommend that the system be inspected by a professional workshop. Kia recommends to visit an authorized Kia dealer/service partner.

The inverter coolant level should be in between MAX and MIN when the engine is cooled down.

**⚠ WARNING**

Adding other cooling substances or water might lead to inverter cooling system degradation or even failure.



- Turn the vehicle off and wait until it cools down.

- Use extreme care when removing the inverter coolant reservoir cap. Wrap a thick towel around it, and turn it 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 to remove it.
- Check the condition and connections of all cooling system hoses and heater hoses.
- Replace any swollen or deteriorated hoses.
- Check the coolant level. The coolant level should be filled between MAX and MIN marks on the side of the coolant reservoir when the engine room is cool.
- If the coolant level is low, add enough specified coolant to provide protection against freezing and corrosion. Bring the level to MAX, but do not overfill.

**⚠ WARNING**

Make sure the inverter coolant reservoir cap is properly closed after refill or coolant.

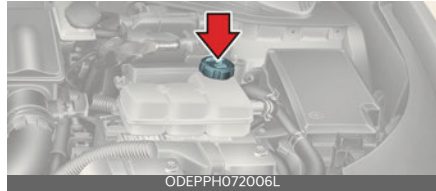
Otherwise the inverter could be overheated while driving.

1. Check if the inverter coolant reservoir cap label is straight In front.



OSG2H071055\_2

2. Make sure that the tiny protrusions inside the inverter coolant reservoir cap are securely interlocked.



**⚠ WARNING**



**Removing inverter coolant reservoir cap**

Never remove the inverter coolant reservoir cap while the engine and radiator are hot. Hot coolant and steam may blow out under pressure, causing serious injury.

**Checking the inverter coolant level (PHEV)**

If frequent additions are required, we recommend that the system be inspected by a professional workshop. Kia recommends to visit an authorized Kia dealer/service partner.

The inverter coolant level should be in between MAX and MIN when the engine is cooled down. When the coolant level (in the reservoir) is low, we recommend that you contact your authorized Kia dealer/service partner. Use only designated coolant water for electric vehicles.

**⚠ WARNING**

Adding other cooling substances or water might lead to inverter cooling system degradation or even failure.

**Changing the coolant**

We recommend that the coolant be replaced by an authorized Kia dealer according to the Maintenance Schedule at the beginning of this chapter.

**⚠ WARNING****Cooling fan**

Use caution when working near the blade of the cooling fan. The electric motor (cooling fan) is controlled by coolant temperature, refrigerant pressure and vehicle speed. It may sometimes operate even when the vehicle is not running.

**Changing coolant**

Have the coolant replaced by a professional workshop. Kia recommends to visit an authorized Kia dealer/service partner.

**⚠ CAUTION**

Put a thick cloth around the coolant reservoir cap before refilling the coolant in order to prevent the coolant from overflowing into engine parts such as the alternator.

**Hybrid starter & generator (HSG) belt****Checking the Hybrid Starter & Generator (HSG) belt**

We recommend that you have the Hybrid Starter & Generator (HSG) belt inspected or replaced according to the Maintenance Schedule in this chapter by an authorized Kia dealer/service partner.

**⚠ CAUTION**

When the HSG belt is worn out or damaged, replace the belt. Otherwise, it may cause engine overheating or battery discharge.

**⚠ WARNING**

- Turn the vehicle off while you inspect the engine or Hybrid Starter & Generator (HSG) belt. Otherwise it may result in serious injury.
- Keep hands, clothing etc. away from the Hybrid Starter & Generator (HSG) belt

## Brake fluid

### Checking brake fluid level



### Operation

1. Clean the area around the reservoir cap.
2. Periodically check that the fluid level in the brake fluid reservoir is between MIN and MAX. The level will fall with accumulated mileage. This is a normal condition associated with the wear of the brake linings.

Check the fluid level in the reservoir periodically. The fluid level should be between MAX and MIN marks on the side of the reservoir. Never mix different types of fluid.

Use only the specified brake fluid. (Refer to "Recommended lubricants and capacities" on page 9-6.)

### \* INFORMATION

If the fluid level is excessively low, have the system checked by a professional workshop. Kia recommends to visit an authorized Kia dealer/service partner.

### ⚠ WARNING

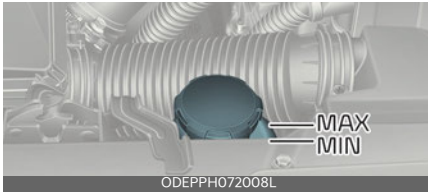
- In the event the brake system requires frequent additions of fluid, have the system inspected by a professional workshop. Kia recommends to visit an authorized Kia dealer/service partner.
- When changing and adding brake fluid, handle it carefully. Do not let it come in contact with your eyes. If brake fluid should come in contact with your eyes, immediately flush them with a large quantity of fresh tap water. Have your eyes examined by a doctor as soon as possible.

### ⚠ CAUTION

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

## Engine clutch actuator fluid

### Checking the engine clutch actuator fluid level



In normal driving conditions, the actuator fluid level does not go down rapidly. However, oil consumption rate may rise as vehicle mileage increases, and leakage in actuator related parts may result in increased consumption of the engine clutch actuator oil. Regularly check and make sure the engine clutch actuator oil fluid level is between MIN and MAX marks.

If the oil level is below MIN mark, have the vehicle checked by a professional workshop. Kia recommends to visit an authorized Kia dealer/service partner.

If the fluid level is excessively low, have the system checked by a professional workshop. Kia recommends to visit an authorized Kia dealer/service partner.

Use only the specified engine clutch actuator fluid. (Refer to "Recommended lubricants and capacities" on page 9-6.) Never mix different types of fluid.

- Check the fluid level in the engine clutch actuator fluid reservoir and add fluid if necessary.

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

### ⚠ CAUTION

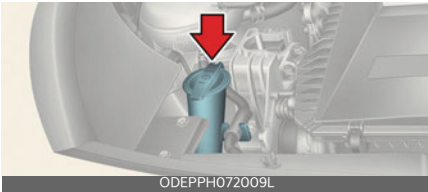
Do not allow the engine clutch actuator fluid to contact the vehicle's body paint, as paint damage will result. The engine clutch actuator fluid, which has been exposed to open air for an extended time should never be used as its quality cannot be guaranteed. It should be properly disposed. Don't put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

### ⚠ WARNING

- In the event the engine clutch system requires frequent additions of fluid, have the system inspected by a professional workshop. Kia recommends to visit an authorized Kia dealer/service partner.
- When changing and adding the engine clutch actuator fluid, handle it carefully. Do not let it come in contact with your eyes. If the engine clutch actuator 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.

## Washer fluid

### Checking washer fluid level



### Operation

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

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

### **WARNING**

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

## Air cleaner filter

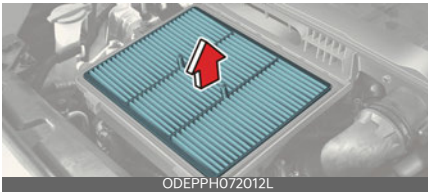
### Replacing air cleaner filter

#### Operation

1. Loosen the air cleaner cover attaching clips (1) and open the cover (2).



2. Wipe the inside of the air cleaner. Replace air cleaner filter.



3. Lock the cover with the cover attaching clips. Assemble in reverse order.

#### ⚠ CAUTION

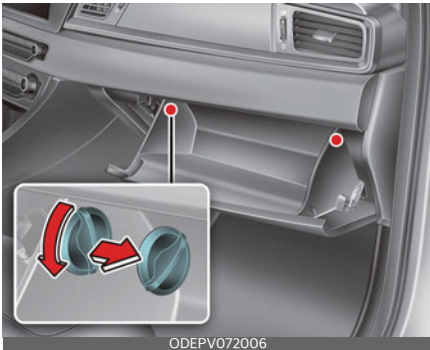
- Do not drive with the air cleaner removed; this will result in excessive engine wear.
- When removing the air cleaner filter, be careful that dust or dirt does not enter the air intake, or damage may result.
- Use parts for replacement from a professional workshop. Kia recommends to visit an authorized Kia dealer/service partner.

## Climate control air filter

### Replacing climate control air filter

#### Operation

1. Open the glove box and remove the stoppers on both sides.



2. Open the glove box and pull the support strap (1).



3. Remove the climate control air filter cover by pulling out both sides of the cover.



4. Replace the climate control air filter. Assemble in reverse order.



#### \* NOTICE

- When replacing the climate control air filter install it properly. Otherwise, the system may produce noise and the effectiveness of the filter may be reduced.
- If the vehicle is operated in extremely dusty or sandy areas, replace the element more often than the usual recommended intervals.



## Wiper blades

### Replacing front wiper blade

#### Operation

##### Type A (if equipped)

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.
5. Install the new blade assembly.



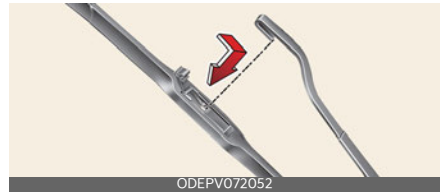
6. Return the wiper arm on the wind-shield.
7. Turn the vehicle on and wiper arms will return to the normal operating position.

##### Type B (if equipped)

1. Raise the wiper arm.
2. Lift the wiper blade clip up (1). Pull down the blade assembly and remove it (2).



3. Install the new blade assembly.



4. Upon starting the vehicle, the wiper arms will return to their normal operating position.

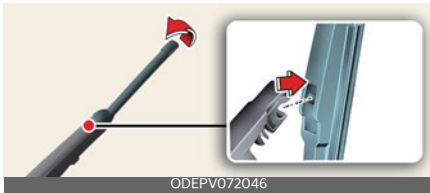
### Replacing rear wiper blade

#### Operation

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



- Lift up the wiper blade, and pull the blade to remove it.



- Install the new blade assembly by inserting the center part into the slot in the wiper arm until it clicks into place.



If the replacement is complete, put down the wiper arm to place it on the rear windshield, and turn the vehicle to ON position and operate the wipers to check the blade is installed correctly.

- Make sure the blade assembly is installed firmly by trying to pull it slightly.

**\* INFORMATION**

To prevent damage to the wiper arms or other components, have the wiper blade replaced by a professional workshop. Kia recommends to visit an authorized Kia dealer/service partner.

**⚠ CAUTION**

- Do not use gasoline, kerosene, paint thinner, or other solvents on or near them.
- Do not attempt to move the wipers manually.
- The use of a non-specified wiper blade could result in wiper malfunction and failure.
- Do not allow the wiper arm to fall against the windshield, since it may chip or crack the windshield.
- If the wiper arm receives too much force while pulling the blade, the center part may be damaged.
- The wiper could not operate for approximately 10 seconds when the wiper is operated without washer fluid or the blades are frozen. This is not a malfunction, it is a wiper protection system activated by motor overload circuit within the wiper motor.
- The front windshield should be cleaned with water hose and wiped with clean towel with wiper blades raised up. Also, the wiper blades should be wiped clean when the grease or wax is applied to the blades.

**\* NOTICE**

Commercial hot waxes applied by automatic car washes have been known to make the windshield difficult to clean. And it is the responsibility of customers to wash and manage the vehicle with adequate methods and materials.

## Battery

### Plug-in hybrid vehicle

#### For best battery service



ODEPPH072013L

\* The battery is located in the right side of the luggage room.

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

#### WARNING



Always read the following instructions carefully when handling a battery.



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



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



Keep batteries out of the reach of children because batteries contain highly corrosive SULFURIC ACID. Do not allow battery

acid to contact your skin, eyes, clothing or paint finish.



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

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



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



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

- 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 recharge the battery when the battery cables are connected.
- The electrical ignition system works with high voltage. Never touch these components with the engine running or the vehicle is in ON position.

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

#### CAUTION

If you connect unauthorized electronic devices to the battery, the battery may be discharged. Never use unauthorized devices.

## \* NOTICE

Your vehicle is equipped with maintenance free battery. If your vehicle is equipped with the battery marked with LOWER and UPPER on the side, you can check the electrolyte level. The electrolyte level should be between LOWER and UPPER. If the electrolyte level is low, it needs to add distilled (demineralized) water (Never add sulfuric acid or other electrolyte). When refill, be careful not to splash the battery and adjacent components. And do not overfill the battery cells. It can cause corrosion on other parts. Make sure that the cell caps are tightened.

Contact a professional workshop. Kia recommends to visit an authorized Kia dealer/service partner.

## Battery capacity label

Example



\* The actual battery label in the vehicle may differ from the illustration.

- 1 The Kia model name of battery
- 2 The nominal capacity (in Ampere hours)
- 3 The nominal reserve capacity (in min.)
- 4 The nominal voltage
- 5 The cold-test current in amperes by SAE/EN
- 6 The cold-test current in amperes by SAE/EN

## 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), run the engine for at least approximately 60 minutes while driving or at idle.

Also, connect the fully automatic regulated charger to the front jumper posts located in the engine compartment, or 12V battery located in the luggage room.

- If the battery gradually discharges because of high electric load while the vehicle is being used, recharge it at 20~30A for two hours.

## ⚠ WARNING

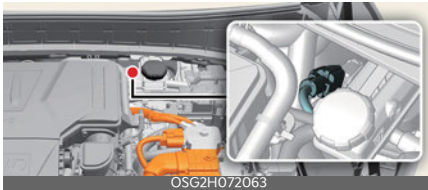
- When recharging the battery, observe the following precautions:
  - The battery must be removed from the vehicle and placed in an area with good ventilation.
  - Do not allow cigarettes, sparks, or flame near the battery.
  - Watch the battery during charging, and stop or reduce the charging rate if the battery cells begin gassing (boiling) violently or if the temperature of the electrolyte of any cell exceeds 49°C (120°F).
  - Wear eye protection when checking the battery during charging.
  - Disconnect the battery charger in the following order.
    1. Turn off the battery charger main switch.
    2. Unhook the negative clamp from the negative battery terminal.

3. Unhook the positive clamp from the positive battery terminal.
    - Before performing maintenance or recharging the battery, turn off all accessories and stop the engine.
    - The negative battery cable must be removed first and installed last when the battery is disconnected.
- Do not install unauthorized electrical devices (e.g. lamps, dashcam, etc.) to a vehicle. It may discharge the battery.
  - Do not open or remove the cap on top of the battery. This may cause leaks of internal electrolyte that could result in severe injury.

## Hybrid vehicle

The 12V auxiliary battery of the vehicle is integrated within the high-voltage battery. The high-voltage battery is located under the 2nd row seat cushion.

For battery related servicing, contact a professional workshop. Kia recommends to visit an authorized Kia dealer/service partner.



Disconnect the 12V auxiliary battery connector located inside the engine room compartment to shut down the power of the 12V auxiliary battery.

Connect the 12V auxiliary battery connector again after the battery related maintenance is finished.

### **⚠ CAUTION**

- The efficiency of the battery decreases during low temperature. If the vehicle is not used for the extended period of time, park the vehicle indoors if possible.
- Always keep the battery charged to the full capacity. The battery case may damage due to freezing if the battery capacity is low.

## Reset items

Items should be reset after the battery has been discharged or the battery terminal (For plug-in hybrid vehicle) or battery connector (For hybrid vehicle) has been disconnected.

- Auto up/down window
- Trip computer
- Climate control system
- Driver position memory system
- Integrated memory system
- Infotainment system

## 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

Type A



Type B



All specifications (sizes and pressures) can be found on a label attached to the vehicle.

### \* INFORMATION

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

### Checking tire inflation pressure

- Remove the valve cap from the tire valve stem. Press the tire gauge firmly onto the valve to get a pressure measurement. 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. Be sure to put the valve caps back on the valve stems.

### ⚠ WARNING

- 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.
- Severe underinflation (70 kPa (10 psi) or more) can lead to severe heat build-up, causing blowouts, tread separation and other tire failures that can result in the loss of vehicle control leading to severe injury or death. This risk is much higher on hot days and when driving for long periods at high speeds.
- Inspect your tires frequently for proper inflation as well as wear and damage. Always use a tire pressure gauge.
- Tires with too much or too little pressure wear unevenly causing poor handling, loss of vehicle control, and sudden tire failure leading to accidents, injuries, and even death. The recommended cold tire pressure for your vehicle can be found in this manual and on the tire label located on the driver's side center pillar.
- Worn tires can cause accidents. Replace tires that are worn, show uneven wear, or are damaged.

- Remember to check the pressure of your spare tire. Kia recommends that you check the spare every time you check the pressure of the other tires on your vehicle.

### **CAUTION**

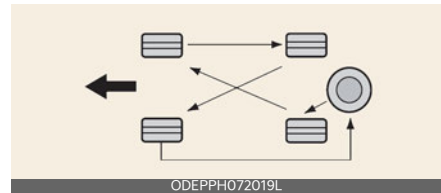
- Underinflation also results in excessive wear, poor handling and reduced fuel economy. Wheel deformation also is possible. Keep your tire pressures at the proper levels. If a tire frequently needs refilling, have the system checked by a professional workshop. Kia recommends to visit an authorized Kia dealer/service partner.
- Overinflation produces a harsh ride, excessive wear at the center of the tire tread, and a greater possibility of damage from road hazards.
- Warm tires normally exceed recommended cold tire pressures by 28 to 41 kPa (4 to 6 psi). Do not release air from warm tires to adjust the pressure or the tires will be underinflated.
- Be sure to reinstall the tire inflation valve caps. Without the valve cap, dirt or moisture could get into the valve core and cause air leakage. If a valve cap is missing, install a new one as soon as possible.
- Always observe the following:
  - Check tire pressure when the tires are cold. (After vehicle has been parked for at least three hours or hasn't been driven more than 1.6 km (one mile) since startup.)
  - Check the pressure of your spare tire each time you check the pressure of other tires.
  - Never overload your vehicle. Be careful not to overload a vehicle

luggage rack if your vehicle is equipped with one.

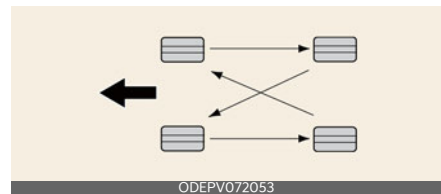
- Worn, old tires can cause accidents. If your tread is badly worn, or if your tires have been damaged, replace them.

### Tire rotation

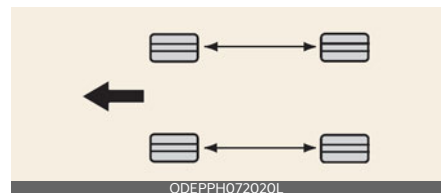
With a full-size spare tire



Without a spare tire



Directional tires



To equalize tread wear, it is recommended that the tires be rotated every 10,000 km (6,500 miles) or sooner if irregular wear develops.

**⚠ WARNING**

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

**\* NOTICE**

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

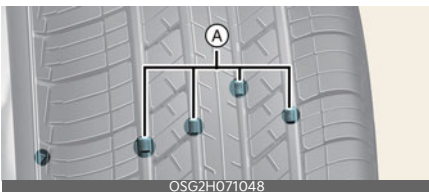
**Wheel alignment and tire balance**

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

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

**⚠ CAUTION**

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

**Tire replacement**

A: Tread wear indicator

If the tire is worn evenly, a tread wear indicator will appear as a solid band across the tread.

This shows there is less than 1.6 mm (1/16 in.) 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.

**Compact spare tire replacement (if equipped)**

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

**⚠ WARNING**

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

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

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

### CAUTION

When replacing the tires, recheck and tighten the wheel nuts after driving about 50 km (31 miles) and recheck after driving about 1,000 km (620 miles). If the steering wheel shakes or the vehicle vibrates while driving, the tire is out of balance. Align the tire balance. If the problem is not solved, contact a professional workshop. Kia recommends to visit an authorized Kia dealer/service partner.

### \* NOTICE

We recommend that when replacing tires, use the same originally supplied with the vehicles. If not, that affects driving performance.

### Wheel replacement

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

### WARNING

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

### Tire traction

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

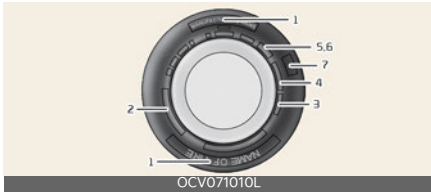
### Tire maintenance

In addition to proper inflation, correct wheel alignment helps to decrease tire wear. If you find a tire is worn unevenly, have a professional workshop check the wheel alignment. Kia recommends to visit an authorized Kia dealer/service partner.

When you have new tires installed, make sure they are balanced. This will increase vehicle ride comfort and tire life. Addi-

tionally, a tire should always be rebalanced if it is removed from the wheel.

### Tire sidewall labeling



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

### 1. Manufacturer or brand name

### 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 vehicle. 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.)

#### **P225/45 R18 108T**

- 225 - Tire width in millimeters.
- 45 - Aspect ratio. The tire's section height as a percentage of its width.
- R - Tire construction code (Radial).
- 18 - Rim diameter in inches.
- 108 - Load Index, a numerical code associated with the maximum load the tire can carry.

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

### Tire speed ratings

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

Speed Rating Symbol	Maximum Speed
S	180 km/h (112 mph)
T	190 km/h (118 mph)
H	210 km/h (130 mph)
V	240 km/h (149 mph)
W	270 km/h (168 mph)
Y	300 km/h (186 mph)

### Wheel size designation

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

Example wheel size designation:

#### **7.5JX18**

- 7.5 - Rim width in inches.
- J - Rim contour designation.
- 18 - Rim diameter in inches.

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

Any tires that are over 6 years old, based on the manufacturing date, should be replaced by new ones. You can find the manufacturing date on the tire sidewall, displaying the DOT Code. The manufacturing date is designated by the last four digits (characters) of the DOT code.

**DOT: XXXX XXXX 0000**

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 1622 represents that the tire was produced in the 16th week of 2022.

**⚠ WARNING**

Tires degrade over time, even when they are not being used. Regardless of the remaining tread, we recommend that tires be replaced after approximately six (6) years of normal service. Heat caused by hot climates or frequent high loading conditions can accelerate the aging process. Failure to follow this warning can result in sudden tire failure, which could lead to a loss of control and an accident involving serious injury or death.

**4. Tire ply composition and material**

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

**5. Maximum permissible inflation pressure**

This number is the greatest amount of air pressure that should be put in the tire. Do not exceed the maximum permissible inflation pressure. Refer to "Tires and wheels" on page 9-5.

**6. Maximum load rating**

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

**7. Uniform tire quality grading**

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

For example:

**TREADWEAR 200**

**TRACTION AA**

**TEMPERATURE A**

**⚠ WARNING**

- The traction grade assigned to this tire is based on straightahead braking traction tests, and does not include acceleration, cornering, hydroplaning, or peak traction characteristics.
- The temperature grade for this tire is established for a tire that is properly inflated and not overloaded. Excessive speed, under inflation, or excessive loading, either separately or in combination, can cause heat build-up in tire and sudden tire failure. This can cause loss of vehicle control and serious injury or death.

**Tread wear**

The tread wear grade is a comparative rating based on the wear rate of the tire when tested under controlled conditions on a specified government test course. For example, a tire graded 150 would wear one-and-a-half times (1½) as well

on the government course as a tire graded 100.

The relative performance of tires depends upon the actual conditions of their use, however, and may depart significantly from the norm due to variations in driving habits, service practices and differences in road characteristics and climate.

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

### Traction - AA, A, B & C

The traction grades, from highest to lowest, are AA, A, B and C. Those grades represent the tire's ability to stop on wet pavement as measured under controlled conditions on specified government test surfaces of asphalt and concrete. A tire marked C may have poor traction performance.

### Temperature -A, B & C

The temperature grades are A (the highest), B, and C, representing the tire's resistance to the generation of heat and its ability to dissipate heat when tested under controlled conditions on a specified indoor laboratory test wheel.

Sustained high temperature can cause the material of the tire to degenerate and reduce tire life, and excessive temperature can lead to sudden tire failure. Grades B and A represent higher levels of performance on the laboratory test wheel than the minimum required by law.

## Fuses

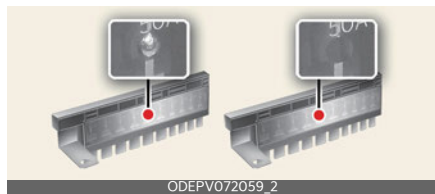
Blade type



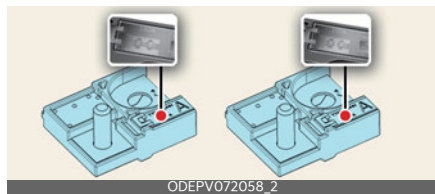
Cartridge type



Multi fuse



BFT



\* Left: Normal, Right: Blown

\* The actual fuse/relay panel label may differ.

Before replacing a blown fuse, disconnect the negative battery cable.

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 a professional workshop. Kia recommends to consult an authorized Kia dealer/service partner.

### WARNING

- Never replace a fuse with anything but another fuse of the same rating.
- A higher capacity fuse could cause damage and possibly a fire.
- Never install a wire or aluminum foil instead of the proper fuse even as a temporary repair. It may cause extensive wiring damage and a possible fire.
- Do not arbitrarily modify or add-on electric wiring of the vehicle.
- Do not plug in screwdrivers or after-market wiring into the terminal originally designed for fuse and relays only. The electrical system and wiring of the vehicle interior may be damaged or burned due to contact failure.
- If you directly connect the wire on the taillight or replace the bulb which is over the regulated capacity to install trailers etc., the inner junction block can get burned.
- Do not use a screwdriver or any other metal object to remove fuses because it may cause a short circuit and damage the system.

### CAUTION

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

### NOTICE

- When replacing fuse, turn the ignition "OFF" and turn off switches of all electrical devices then disconnect the (-) battery terminal (For plug-in hybrid vehicle) or battery connector (For hybrid vehicle).
- The actual fuse/relay panel label may differ from equipped items.
- **Window tinting precaution**  
Window tint (especially metallic film) might cause communication disorder or poor radio reception, and malfunction of the automatic lighting system due to excessive change of illumination inside the vehicle. The solution used might also flow into electric, electronic devices causing disorder and failure.

## Replacing inner panel fuse

### Operation

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



3. Pull the suspected fuse straight out. Use the removal tool (1) provided in the main fuse box in the engine compartment.



4. Check the removed fuse; replace it if it is blown. Spare fuses are provided in the instrument panel fuse panel (or in the engine compartment fuse panel).
5. Push in a new fuse of the same rating, and make sure it fits tightly in the clips.

### \* INFORMATION

If the headlights or taillights, stoplights, day time running lights (DRL) do not work and the fuses are OK, consult a professional workshop. Kia recommends to consult an authorized Kia dealer/service partner.

## Fuse switch

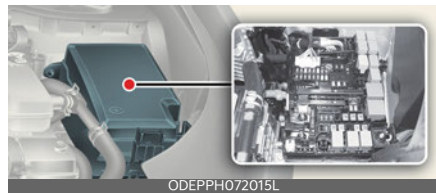


### Operation

- Always put the fuse switch in ON position.
- If you move the switch to the OFF position, some items must be reset and the remote key may not work properly. If the fuse switch is in OFF position, a warning sign will appear on the dashboard.

## Replacing engine compartment fuse

## Replacing blade/cartridge type fuses

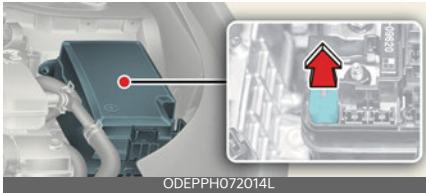


### Operation

1. Turn the vehicle and all other switches off.
2. Remove the fuse panel cover by pressing the tab and pulling the cover up.

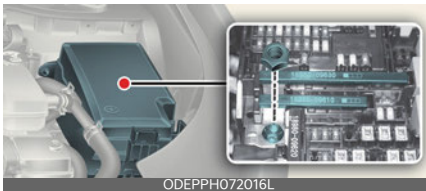
When the blade type fuse is disconnected, remove it by using the clip (1) designed for changing fuses located in the engine room fuse box. Upon

removal, securely insert reserve fuse of equal quantity.



3. Check the removed fuse; replace it if it is blown. To remove or insert the fuse, use the fuse puller in the engine compartment fuse panel.
4. Push in a new fuse of the same rating, and make sure it fits tightly in the clips. If it fits loosely, consult a professional workshop. Kia recommends to consult an authorized Kia dealer/service partner.

### Replacing main/multi fuses

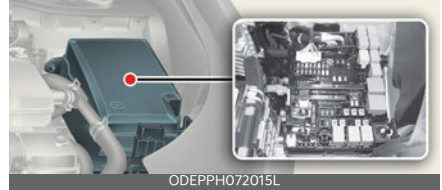


### Operation

1. Turn off the vehicle.
2. Remove the fuse panel cover by pressing the tab and pulling the cover up.
3. Disconnect the (-) battery terminal (For plug-in hybrid vehicle) or battery connector (For hybrid vehicle).
4. Remove the nuts shown in the picture above.
5. Replace the fuse with a new one of the same rating.
6. Reinstall in the reverse order of removal.

7. If it fits loosely, consult a professional workshop. Kia recommends to consult an authorized Kia dealer/service partner.

### Replacing relay



1. Turn the vehicle and all other switches off.
2. Remove the fuse panel cover by pressing the tab and pulling the cover up.
3. Replace the relay with a new one of the same rating.
4. Reinstall in the reverse order of removal.
5. If it fits loosely, consult a professional workshop. Kia recommends to consult an authorized Kia dealer/service partner.

### ⚠ CAUTION

- After checking the fuse panel in the engine compartment, securely install the fuse panel cover through the audible clicking sound. If not, electrical failures may occur from water contact.
- Visually inspect the battery cap for secure closing. If the battery cap is not securely latched, the electrical system may be damaged to due influx of moisture into the system.

**\* NOTICE**

- The electronic system may not function correctly even when the engine room and internal fuse box's individual fuses are not disconnected. In such case the cause of the problem may be disconnection of the main fuse (BFT type), which is located inside the positive battery terminal (+) cap (For plug-in hybrid vehicle). Since the main fuse is designed more intricately than other parts, visit a professional workshop. Kia recommends to visit the nearest authorized Kia dealer/service partner.
  - If the multi fuse is blown, consult a professional workshop. Kia recommends to consult an authorized Kia dealer/service partner.
- 

**Fuse/relay panel description**

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

**\* NOTICE**

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








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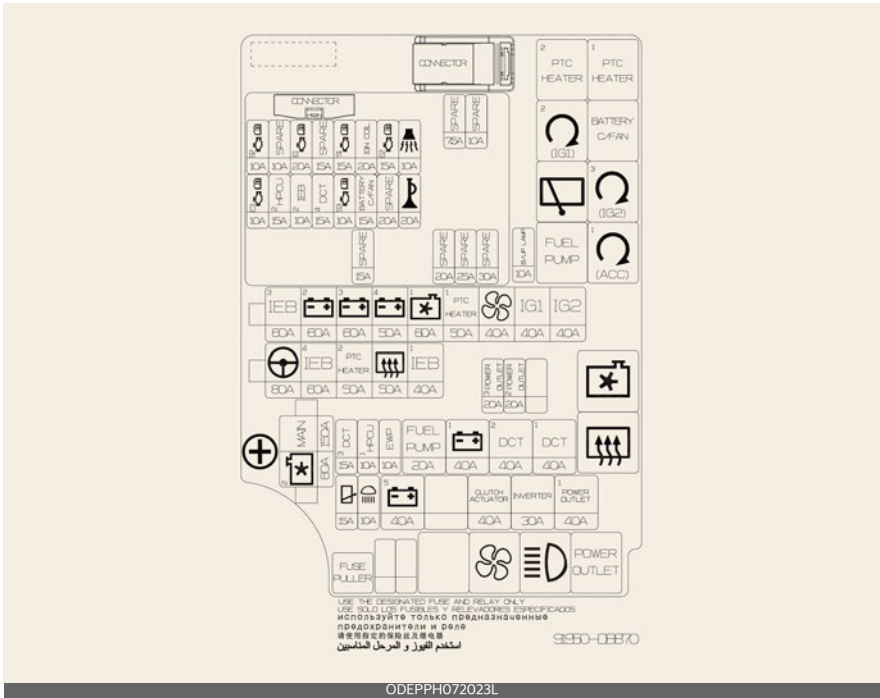


## ICU Junction Block

Fuse Name	Symbol	Fuse rating	Circuit Protected
AMP	<b>AMP</b>	30 A	AMP (Amplifier)
P/SEAT DRV		30 A	Driver Lumbar Support Switch, Driver Power Seat Switch, IMS (Integrated memory system) Control Module
P/WINDOW LH		25 A	REAR LH POWER WINDOW SWITCH/MODULE, DRIVER POWER WINDOW SWITCH/MODULE (LHD), PASSENGER POWER WINDOW SWITCH/MODULE (RHD)
P/SEAT PASS		30 A	Passenger Power Seat Switch
S/HEATER (FRONT)		20 A	Front Air Ventilation Seat Control Module, Front Seat Warmer Control Module
S/HEATER (REAR)		25 A	Rear Seat Warmer Control Module
P/WINDOW RH		25 A	REAR RH POWER WINDOW SWITCH/MODULE, DRIVER POWER WINDOW SWITCH/MODULE (RHD), PASSENGER POWER WINDOW SWITCH/MODULE (LHD)
T/GATE		15 A	Tail Gate Relay
DR LOCK		20 A	Center Door Lock/Unlock Relay, Dead Lock Relay
MULTI MEDIA	<b>MULTI MEDIA</b>	25 A	Audio/Navigation Head Unit
E-CALL	<b>E-CALL</b>	10 A	E-Call Unit
MEMORY	<b>MEMORY</b>	10 A	Instrument Cluster, Head Up Display, Mood lamp, Air Conditioner Control Module
START		7.5 A	Burglar Alarm Relay, HPCU, IBU
E-SHIFTER3	<sup>3</sup> E-SHIFTER	10 A	SCU, Electronic Shift Dial
MODULE6	<sup>6</sup> MODULE	7.5 A	IBU (INTEGRATED BODY CONTROL UNIT)
MODULE3	<sup>3</sup> MODULE	7.5 A	Overhead Console, Multifunction Switch, Stop Lamp Switch
A/BAG1	<sup>1</sup> 	15 A	SRS (Supplemental Restraint System) Control Module
WASHER		15 A	Washer control lever
MODULE1	<sup>1</sup> MODULE	10 A	KEY INTERLOCK, AIR CONDITIONER CONTROL MODULE, CHARGING LAMP (THE PLUG-IN HYBRID VEHICLE), HAZARD SWITCH, RAIN SENSOR, STEERING WHEEL REMOTE CONTROL
IBU1	<sup>1</sup> IBU	10 A	IBU (INTEGRATED BODY CONTROL UNIT), SPORT MODE SWITCH
MODULE2	<sup>2</sup> MODULE	10 A	IBU, ADAS PARKING ECU, E-CALL, AUDIO/ NAVIGATION HEAD UNIT, Engine Room Junction Block (P/OUTLET Relay)
A/BAG IND	<sup>IND</sup> 	7.5 A	INSTRUMENT CLUSTER(SRS CONTROL MODULE)



Fuse Name	Symbol	Fuse rating	Circuit Protected
IBU2	<sup>2</sup> <b>IBU</b>	7.5 A	IBU (Integrated Body Control Unit)
MODULE4	<sup>4</sup> <b>MODULE</b>	10 A	IBU, ADAS PARKING ECU, VESS UNIT, FRONT VIEW CAMERA, CRASH PAD SWITCH, CENTER CONSOL, REAR CORNER RADAR
A/CON	<b>A/C</b>	7.5 A	AIR CONDITIONER CONTROL MODULE, Engine Room Junction Block (BLOWER,PTC RELAY), A/C COMPRESSOR
A/BAG2	<sup>2</sup> 	10 A	SRS (Supplemental Restraint System) Control Module
CLUSTER	<b>CLUSTER</b>	7.5 A	INSTRUMENT CLUSTER, HEAD UP DISPLAY
MODULE5	<sup>5</sup> <b>MODULE</b>	10 A	HEAD LAMP LEVELING DEVICE, AUDIO/ NAVIGATION HEAD UNIT, WIRELESS SMART PHONE CHARGING SYSTEM, E-CALL UNIT, AIR CONDITIONER CONTROL MODULE, OVERHEAD CONSOLE LAMP, ELECTRIC CHROMIC MIRROR, AMP(AMPLIFIER),SEAT WARMER CONTROL MODULE
MODULE7	<sup>7</sup> <b>MODULE</b>	7.5 A	ADAS PARKING ECU, AC INVERTER, COOLING FAN MOTOR, SEAT WARMER CONTROL MODULE
BRAKE SWITCH	<b>BRAKE SWITCH</b>	10 A	IBU (Integrated Body Control Unit), Stop Lamp Switch
MDPS2	<sup>2</sup> 	7.5 A	MDPS (Motor Driven Power Steering) Unit
SUNROOF		20 A	SUNROOF UNIT
HEATED MIRROR		10 A	Outside Heated Mirror
IG3 2	<sup>2</sup> IG3	10 A	BATTERY MANAGEMENT SYSTEM
IG3 3	<sup>3</sup> IG3	10 A	ON BOARD CHARGER UNIT, HPCU, Engine Room Junction Block (BATTERY C/FAN Relay), A/C COMPRESSOR
IG3 4	<sup>4</sup> IG3	10 A	AUDIO/ NAVIGATION HEAD UNIT, CHARGING IND, INSTRUMENT CLUSTER, AIR CONDITIONER CONTROL MODULE, HV PTC HEATER UNIT
CHILD LOCK		15 A	Electronic child safety lock system
FRT WIPER2	<sup>2</sup> 	10 A	Front Wiper Motor
FCA		10 A	Front Radar
RR WIPER		15 A	Rear Wiper Relay, Rear Wiper Motor
E-SHIFTER4	<sup>4</sup> <b>E-SHIFTER</b>	10 A	SCU, Electronic Shift Dial
BMS	<b>BATTERY MANAGEMENT</b>	10 A	Battery Management System
USB CHARGER	<b>USB CHARGER</b>	10 A	USB CHARGER (FRONT TRAY/ SEAT DRV/ PASS)
IG1 2	<sup>2</sup> IG1	25 A	Engine Room Junction Block (PCB BLOCK FUSE - IEB4, ECU3, DCT3, EWP3)
FUEL FILLER DOOR		10 A	Opening the fuel filler door
E-SHIFTER2	<sup>2</sup> <b>E-SHIFTER</b>	10 A	SCU, Electronic Shift Dial

### Engine compartment fuse panel











## Engine Room Junction Block

Fuse Name		Symbol	Fuse rating	Circuit Protected
MULTI FUSE	C/FAN2		80 A	Cooling Fan Motor
MULTI FUSE	PTC HEATER1		50 A	PTC HEATER #1 RELAY
	B+2		60 A	ICU JUNCTION BLOCK (IPS)
MULTI FUSE	MDPS 1	 1	80 A	MDPS (Motor Driven Power Steering) Unit
	REAR HEATED		40 A	Engine Room Junction Block (Rear Heated Relay)
MULTI FUSE	POWER TAIL-GATE		40 A	Power Tail Gate Unit
	E-SHIFTER1	 1	40 A	SCU
MULTI FUSE	B+3		50 A	ICU JUNCTION BLOCK (FUSE - CHILD LOCK , E-SHIFTER3, P/WDW LH, P/WDW RH, T/GATE OPEN, AMP, P/SEAT DRV, P/SEAT PASS, S/HEATER FRT, S/HEATER RR), EWP2
MULTI FUSE	TRAILER		50 A	Trailer Module
	FUEL PUMP		20 A	Engine Room Junction Block (Fuel Pump Relay)
MULTI FUSE	BLOWER		40 A	Engine Room Junction Block (Blower Relay)
MULTI FUSE	B+4		40 A	ICU JUNCTION BLOCK (FUSE - MULTIMEDIA, E-CALL, A/BAG2, BRAKE SWITCH, MODULE1, FUEL LID, IBU1, SUNROOF, BATTERY MANAGEMENT, DOOR LOCK)
	B+1		60 A	ICU JUNCTION BLOCK (IPS)
	AMS		10 A	BATTERY SENSOR(PHEV)
FUSE	IEB2	 2	40 A	Integrated Electric Brake Unit
	IEB3	 3	60 A	Integrated Electric Brake Unit
MULTI FUSE	IEB1	 1	60 A	Integrated Electric Brake Unit
	IG3 1		20 A	IGNITION3 RELAY
FUSE	BATTERY C/FAN		15 A	Battery Cooling Fan
	HPCU		10 A	Hybrid Power Control Unit
	EWP2	 2	10 A	BATTERY ELECTRONIC WATER PUMP
FUSE	POWER OUT-LET2	 2	20 A	Front Power Outlet
	EWP1	 1	10 A	Engine Electronic Water Pump

Fuse Name		Symbol	Fuse rating	Circuit Protected
MULTI FUSE	PTC HEATER2	<sup>2</sup> PTC HEATER	50 A	PTC HEATER #2 RELAY
	DCT1	<sup>1</sup> DCT	40 A	DUAL CLUTCH TRANSMISSION
	DCT2	<sup>2</sup> DCT	40 A	DUAL CLUTCH TRANSMISSION
	C/FAN1	<sup>1</sup> 	60 A	COOLING FAN MOTOR
	B+5	<sup>5</sup> 	60 A	Engine Room PCB Junction Block
	IG2	IG2	40 A	ICU JUNCTION BLOCK (FUSE - WASHER, A/C, MODULE6, MODULE7, WIPER RR)
	IG1 1	<sup>1</sup> IG1	40 A	ICU JUNCTION BLOCK (FUSE -MODULE2, USB CHARGER, A/BAG1, IBU2, MDPS2, CLUSTER, MODULE3, A/BAG IND, MODULE4, MODULE5, E-SHIFTER2, FCA, ING1 2)
FUSE	CLUTCH ACTRUATOR	CLUTCH ACTUATOR	30 A	ENGINE CLUTCH ACTUATOR (HPCU)
	INVERTER	INVERTER	40 A	AC INVERTER
	POWER OUT-LET1	<sup>1</sup> POWER OUTLET	40 A	Front Power Outlet
	EWP4	<sup>4</sup> EWP	10 A	Engne Electronic Water Pump













PCB Block

Fuse Name	Symbol	Fuse rating	Circuit Protected
SENSOR1	<sup>S1</sup> 	15 A	Oxygen Sensor (Up/Down)
ECU2	<sup>E2</sup> 	15 A	ECM (ENGINE CONTROL MODULE)
SENSOR3	<sup>S3</sup> 	10 A	FUEL PUMP RELAY
SENSOR2	<sup>S2</sup> 	10 A	OIL CONTROL VALVE, PURGE CONTROL SOLENOID VALVE, VARIABLE OIL PUMP VALVE CONTROL, COOLING FAN MOTOR RELAY, FUEL TANK ISOLATION VALVE(PHEV)
FRT WIPER1	<sup>1</sup> 	25 A	Front Wiper Motor
ECU 3	<sup>E3</sup> 	10 A	ECM (ENGINE CONTROL MODULE)
IEB 4	<sup>4</sup> <b>IEB</b>	10 A	Integrated Electric Brake Unit
EWP 3	<sup>1</sup> <b>EWP</b>	10 A	Engine Electronic Water Pump
OBC	OBC	10 A	ON BOARD CHARGER UNIT(PHEV)
ECU1	<sup>E1</sup> 	20 A	ECM (ENGINE CONTROL MODULE)
B/ALARM HORN		15 A	BURGLAR ALARM HORN RELAY
IGN COIL	IGN COIL	20 A	Ignition Coil #1/#2/#3/#4
CHARGER	CHARGER	10 A	CHARGER LOCK/UNLOCK RELAY(PHEV)
DCT3	<sup>3</sup> DCT	15 A	DUAL CLUTCH TRANSMISSION

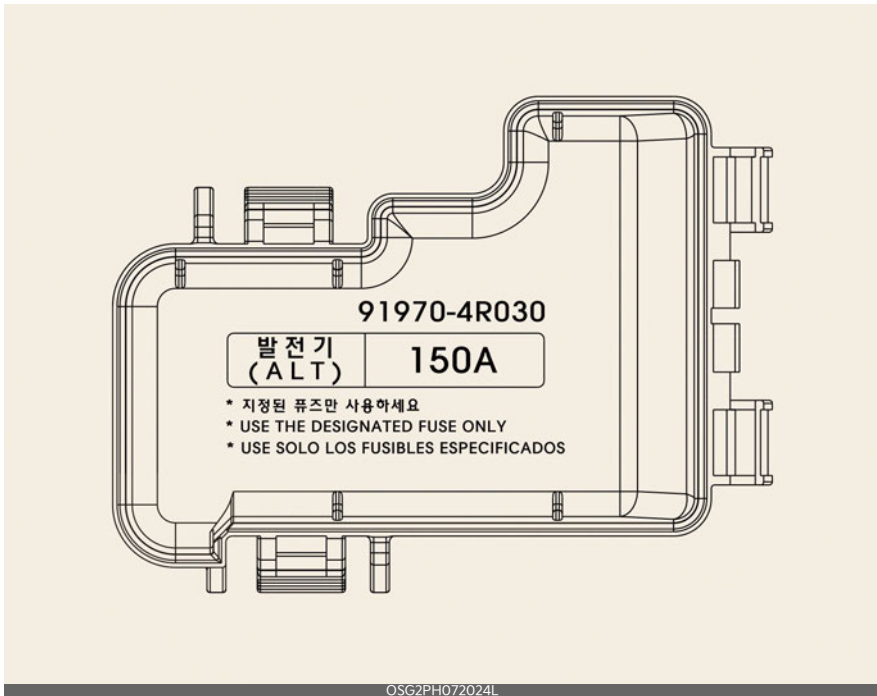


## Relay

Refer to the following table for the relay type.

Relay Name	Symbol	TYPE
Fuel Pump Relay		MICRO
PTC Heater1 Relay		MICRO
Blower Relay		MICRO
Rear Heated Relay		MINI
IG3 Relay		MICRO
Battery Cooling Fan Relay (HEV)		MICRO
PDM (IG1) RELAY		MICRO
PDM (ACC) RELAY		MICRO
PDM (IG2) RELAY		MICRO
COOLING FAN MOTOR RELAY		MICRO
PTC HEATER2 RELAY		MICRO
POWER OUTLET		MICRO

### Engine compartment fuse panel (Battery terminal cover) (For Plug-in Hybrid)



## Light bulbs

### Bulb replacement precautions

Turn off the engine at a safe place, firmly apply the parking brake and disconnect the (-) battery terminal (For plug-in hybrid vehicle) or battery connector (For hybrid vehicle). Use only the bulbs of the specified wattage.

### Lamp part malfunction due to net-work failure

The headlamp, taillight, and fog light may lit up when the head lamp switch is turned ON, and not light up when the taillight or fog light switch is turned ON. This may be caused by network failure or vehicle electrical control system malfunction. If there is a problem, have the system serviced by a professional workshop. Kia recommends to visit an authorized Kia dealer/service partner.

### Lamp part malfunction due to electrical control system stabilization

A normally functioning lamp may flicker momentarily. This momentary occurrence is due to stabilization function of the vehicle's electrical control system. If the lamp soon returns to normal, the vehicle does not require service.

However, if the lamp goes out after the momentary flickering, or the flickering continues, have the system serviced by a professional workshop. Kia recommends to visit an authorized Kia dealer/service partner.

### ⚠ WARNING

- 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.
- Be sure to replace the burned out bulb with one of the same wattage rating. Otherwise, it may cause extensive wiring damage and possible fire.

### ⚠ CAUTION

- If you don't have necessary tools, the correct bulbs and the expertise, consult a professional workshop. Kia recommends to consult an authorized Kia dealer/service partner.
- In many cases, it is difficult to replace vehicle light bulbs because other parts of the vehicle must be removed before you can get to the bulb. This is especially true if you have to remove the headlight assembly to get to the bulb(s). Removing/installing the headlight assembly can result in damage to the vehicle.
- If unauthentic parts or substandard lights are used when changing lights, it may lead to fuse disconnection and malfunction, and other wiring damages.
- Do not install extra lamps or LED to the vehicle. If supplementary lights are installed, it may lead to lamp malfunction and flickering of the lights. In addition, the fuse box and other wiring may be damaged.

### \* NOTICE

- If the light bulb or lamp connector is removed from an operating lamp activated by electricity, the fuse box's electronic device may scan it as a malfunction. Therefore, a lamp malfunction history may be recorded in Diagnostic Trouble Code (DTC) in the fuse box.
- It is normal for an operating lamp may blink temporarily. Since this occurrence is due stabilization function of the vehicle's electronic control device, if the lamp lights up normally after temporary blinking, there is no problem in the vehicle.

However, if the lamp continues to blink several times or turn off completely, there may be an error in the vehicle's electronic control device. In this case, have the vehicle checked by a professional workshop immediately. Kia recommends to visit an authorized Kia dealer/service partner.

- After an accident or after the headlight assembly is reinstalled, have the headlight aiming adjusted by a professional workshop. Kia recommends to visit an authorized Kia dealer/service partner.

- After driving in heavy rain or washing, headlamp and taillamp 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 a professional workshop. Kia recommends to visit an authorized Kia dealer/service partner.

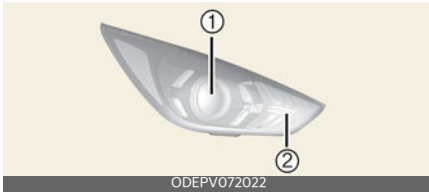
### \* NOTICE

#### Traffic Change (For Europe)

The low beam light distribution is asymmetric. If you go abroad to a country with opposite traffic direction, this asymmetric part will dazzle oncoming car driver. To prevent dazzle, ECE regulation demand several technical solutions (ex. automatic change system, adhesive sheet, down aiming). This headlamps are designed not to dazzle opposite drivers. So, you need not change your headlamps in a country with opposite traffic direction.

### Light position (Front)

Head lamp (Type A)



Head lamp (Type B)



Day time running lamp/Position lamp



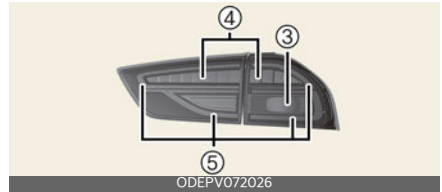
- 1 Headlamp (Low/High) (Bulb type)
- 2 Front turn signal lamp (Bulb type)
- 3 Headlamp (Low/High) (LED type)
- 4 Headlamp (Low) (LED type)
- 5 Front turn signal lamp (LED type)
- 6 Day time running lamp/Position lamp (LED type)

### Light position (Rear)

Rear combination lamp - Type A



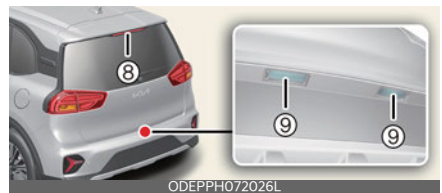
Rear combination lamp - Type B



Backup lamp/Rear fog lamp



High mounted stop lamp/License plate lamp



- 1 Tail lamp/Stop lamp (Bulb type)
- 2 Tail lamp (Bulb type)
- 3 Rear turn signal lamp (Bulb type)
- 4 Stop lamp (LED type)
- 5 Tail lamp (LED type)
- 6 Backup lamp (Bulb type)
- Rear fog lamp (LED type, Left-hand drive)

- 7 Backup lamp (Bulb type)  
Rear fog lamp (LED type, Right-hand drive)
- 8 High mounted stop lamp (LED type)
- 9 License plate lamp (Bulb type)

### Light position (Side) (if equipped)



- 1 Side repeater lamp (LED type)

### Replacing lights (LED type)

If the LED lamp does not operate, have your vehicle checked by a professional workshop. Kia recommends to visit an authorized Kia dealer/service partner.

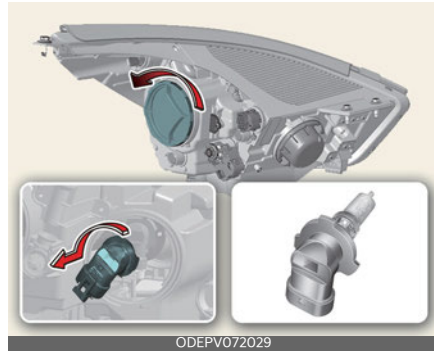
The LED lamp cannot be replaced as a single unit because it is an integrated unit. The LED lamp has to be replaced with the unit.

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

## Replacing headlamp (Low beam/ High beam) (Bulb type)

### Operation

1. Turn off vehicle and disconnect the (-) battery terminal (For plug-in hybrid vehicle) or battery connector (For hybrid vehicle).
2. Open the hood.
3. Remove the headlamp bulb cover by turning it counterclockwise.



4. Disconnect the headlamp bulb socket connector.
5. Remove the bulb socket from the headlamp assembly by turning the bulb socket counterclockwise until the tabs on the bulb socket align with the slots on the headlamp assembly.
6. Install a new bulb socket assembly in the headlamp assembly by aligning the tabs on the bulb socket with the slots in the headlamp assembly. Push the bulb socket into the headlamp assembly and turn the bulb socket clockwise.
7. Install the headlamp bulb cover by turning it clockwise.
8. Connect the (-) battery terminal (For plug-in hybrid vehicle) or battery connector (For hybrid vehicle).

### WARNING

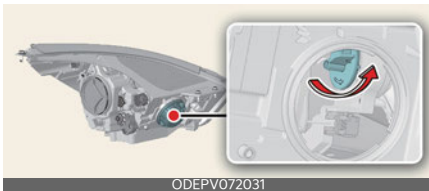
- Halogen bulbs contain pressurized gas that will produce flying pieces of glass if broken.
- Always handle them carefully, and avoid scratches and abrasions. If the bulbs are lit, avoid contact with liquids. Never touch the glass with bare hands. Residual oil may cause the bulb to overheat and burst when lit. A bulb should be operated only when installed in a headlight.



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- 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.

## Replacing front turn signal lamp (Bulb type)



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### Operation

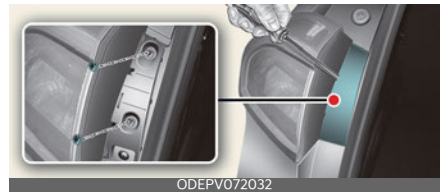
1. Turn off vehicle and disconnect the (-) battery terminal (For plug-in hybrid vehicle) or battery connector (For hybrid vehicle).
2. Open the hood.

3. Remove the dust cover (A) from the headlamp assembly then bulb socket by turning the counterclockwise until the tabs on the bulb socket align with the slots on the headlamp assembly.
4. Remove the bulb from the bulb socket by pressing it in and rotating it counterclockwise until the tabs on the bulb align with the slots in the bulb socket. Pull the bulb out of the bulb socket.
5. Insert a new bulb by inserting it into the bulb socket and rotating it until it locks into place.
6. Install the socket in the headlamp assembly by aligning the tabs on the bulb socket with the slots in the assembly. Push the bulb socket into the headlamp assembly and turn the socket clockwise.
7. Connect the (-) battery terminal (For plug-in hybrid vehicle) or battery connector (For hybrid vehicle).

## Replacing rear tail lamp, stop lamp, rear turn signal lamp (Bulb type)

### Operation

1. Open the tailgate.
2. Open the service cover.
3. Loosen the light assembly retaining screws with a cross-tip screw driver.

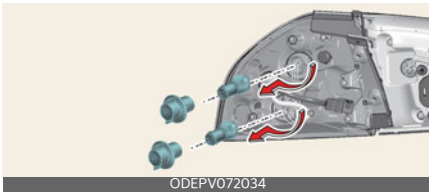


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- Remove the rear combination lamp assembly from the body of the vehicle.



- Disconnect the rear combination lamp connector.
- Remove the socket from the assembly by turning the socket counterclockwise until the tabs on the socket align with the slots on the assembly.



- Remove the bulb from the socket by pressing it in and rotating it counterclockwise until the tabs on the bulb align with the slots in the socket. Pull the bulb out of the socket.
- Insert a new bulb by inserting it into the socket and rotating it until it locks into place.
- 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.
- Install the rear combination lamp assembly to the body of the vehicle.
- Install the service cover.

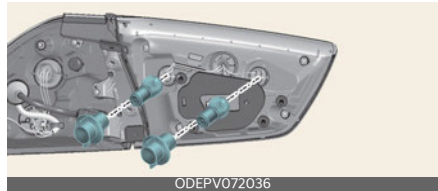
## Replacing rear tail lamp (Bulb type)

### Operation

- Open the tailgate.
- Remove the service cover.



- Remove the socket from the assembly by turning the socket counterclockwise until the tabs on the socket align with the slots on the assembly.



- Remove the bulb from the socket by pressing it in and rotating it counterclockwise until the tabs on the bulb align with the slots in the socket. Pull the bulb out of the socket.
- Insert a new bulb by inserting it into the socket and rotating it until it locks into place.
- 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.
- Install the rear combination lamp assembly to the body of the vehicle.
- Install the service cover.



## Replacing rear backup lamp (Bulb type)



If the rear backup lamp (1) does not operate, have your vehicle checked by a professional workshop. Kia recommends to visit an authorized Kia dealer/service partner.

## Replacing rear fog lamp (LED type)



If the rear fog lamp (1) does not operate, have your vehicle checked by a professional workshop. Kia recommends to visit an authorized Kia dealer/service partner.

## Replacing license plate lamp (Bulb type)



### Operation

1. Turn off vehicle and disconnect the (-) battery terminal (For plug-in hybrid

vehicle) or battery connector (For hybrid vehicle).

2. Using a screwdriver, gently pry the lamp assembly.
3. Remove the bulb by pulling it straight out.
4. Install a new bulb in the socket.
5. Install the lamp assembly.

### ⚠ CAUTION

Be careful not to dirty or damage the lens, lens tab, and plastic housings.

## Replacing map lamp (Bulb type)



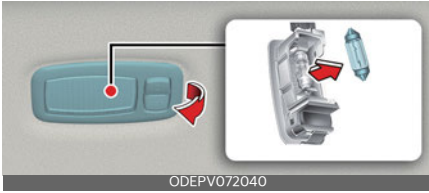
### Operation

1. Using a flat-blade screwdriver, gently pry the lens cover from lamp housing.
2. Remove the bulb by pulling it straight out.
3. Install a new bulb in the socket.
4. Align the lens cover tabs with the lamp housing notches and snap the lens into place.

### ⚠ WARNING

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

## Replacing vanity mirror lamp (Bulb type)



### Operation

1. Using a flat-blade screwdriver, gently pry the lens cover from lamp housing.
2. Remove the bulb by pulling it straight out.
3. Install a new bulb in the socket.
4. Align the lens cover tabs with the lamp housing notches and snap the lens into place.

### ⚠ WARNING

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

## Replacing room lamp (Bulb type)



### Operation

1. Using a flat-blade screwdriver, gently pry the lens cover from lamp housing.
2. Remove the bulb by pulling it straight out.
3. Install a new bulb in the socket.

4. Align the lens cover tabs with the lamp housing notches and snap the lens into place.

### ⚠ WARNING

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

## Replacing luggage lamp (Bulb type)



### Operation

1. Using a flat-blade screwdriver, gently pry the lens cover from lamp housing.
2. Remove the bulb by pulling it straight out.
3. Install a new bulb in the socket.
4. Align the lens cover tabs with the lamp housing notches and snap the lens into place.

### ⚠ WARNING

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

## Appearance care

### Exterior care

#### Exterior general caution

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

#### \* NOTICE

If you park the vehicle around a stainless signboard or windshield building etc., the plastic exterior trim (bumper, spoiler, garnish, lamp, outside mirror etc.) may be damaged by reflected sunlight from the external structure. To avoid damaging the plastic exterior trim, park the vehicle away from the areas where the reflected light may occur or use a vehicle cover. (Depending on the vehicle, the type of exterior trim applied such as spoiler may differ.)

### 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.

#### ⚠ 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.

#### ⚠ CAUTION

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

## High-pressure washing



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

### ⚠ CAUTION

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

### \* NOTICE

#### Finish damage repair

- Automatic car wash which uses rotating brushes should not be used as this can damage the surface of your vehicle. A steam cleaner which washes the vehicle surface at high temperature

may result the oil to adhere and leave stains that is difficult to remove.

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

## Waxing

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. Do not apply wax on embossed unpainted unit, as it may tarnish the unit.

### ⚠ CAUTION

- Wiping dust or dirt off the body with a dry cloth will scratch the finish.
- Do not use steel wool, abrasive cleaners, acid detergents or strong detergents containing high alkaline or caustic agents on chrome-plated or anodized aluminum parts. This may result in damage to the protective coating and cause discoloration or paint deterioration.

## Finish damage repair

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

### \* NOTICE

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

## Bright-metal maintenance

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

## Underbody maintenance

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

Thoroughly flush the vehicle underbody and wheel openings with lukewarm or cold water once a month, after off-road driving and at the end of each winter.

Pay special attention to these areas because it is difficult to see all the mud and dirt. It will do more harm than good to wet down the road grime without removing it. The lower edges of the doors, rocker panels, and frame members have drain holes that should not 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.
- Clean the wheel when it has cooled.
- Use only a mild soap or neutral detergent, and rinse thoroughly with water. Also, be sure to clean the wheels after driving on salted roads. This helps prevent corrosion.
- Avoid washing the wheels with high-speed car wash brushes.
- Do not use any alkaline or acid detergent. It may damage and corrode the aluminum wheels coated with a clear protective finish.

## Corrosion protection

### Protecting your vehicle from corrosion

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

### Common causes of corrosion

The most common causes of corrosion on your vehicle are:

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

### High-corrosion areas

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

### Moisture breeds corrosion

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

is particularly corrosive because it dries slowly and holds moisture in contact with the vehicle. Although the mud appears to be dry, it can still retain moisture and promote corrosion. High temperatures can also accelerate corrosion of parts that are not properly ventilated so the moisture can be dispersed.

For all these reasons, it is particularly important to keep your vehicle clean and free of mud or accumulations of other materials. This applies not only to the visible surfaces but particularly to the underside of the vehicle.

### To help prevent corrosion

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

### Keep your vehicle clean

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

- If you live in a high-corrosion area - where road salts are used, near the ocean, areas with industrial pollution, acid rain, etc., you should take extra care to prevent corrosion. In winter, hose off the underside of your vehicle at least once a month and be sure to clean the underside thoroughly when winter is over.
- When cleaning underneath the vehicle, give particular attention to the components under the fenders and other areas that are hidden from view. Do a thorough job; just dampening the accumulated mud rather than washing it away will accelerate corrosion rather than prevent it. Water

under high pressure and steam are particularly effective in removing accumulated mud and corrosive materials.

- When cleaning lower door panels, rocker panels and frame members, be sure that drain holes are kept open so that moisture can escape and not be trapped inside to accelerate corrosion.

### Keep your garage dry

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

### Keep paint and trim in good condition

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

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

### Don't neglect the interior

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

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

### Interior care

#### Interior general precautions

Prevent chemicals such as perfume, cosmetic oil, sun cream, hand cleaner, and air freshener from contacting the interior parts because they may cause damage or discoloration. If they do contact the interior parts, wipe them off immediately. If necessary, use a mixture of warm water and mild non-detergent cleaner (test all cleaners on a concealed area before use). Use proper car cleaner to clean interior parts.

#### CAUTION

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

## Taking care of leather seats (if equipped)

- Vacuum the seat periodically to remove dust and sand on the seat. It will prevent abrasion or damage of the leather and maintain its quality.
- Wipe the leather seat cover often with dry or soft cloth.
- Sufficient use of a leather protective may prevent abrasion of the cover and helps maintain the color. Be sure to read the instructions and consult a specialist when using leather coating or protective agents.
- Leather with bright colors (beige, cream beige) is easily contaminated and clear in appearance. Clean the seats frequently.
- Avoid wiping with wet cloth. It may cause the surface to crack.

## Cleaning the leather seats (if equipped)

- Remove all contaminations instantly. Refer to instructions below for removal of each contaminant.
- Cosmetic products (sunscreen, foundation, etc.)
  - Apply cleansing cream on a cloth and wipe the contaminated point. Wipe off the cream with a wet cloth and remove water with a dry cloth.
- Beverages (coffee, soft drink, etc.)
  - Apply a small amount of neutral detergent and wipe until contaminations do not smear.
- Oil
  - Remove oil instantly with absorbable cloth and wipe with stain remover for leather only.
- Chewing gum

- Harden the gum with ice and remove gradually.

## Fabric seat cover using precautions (if equipped)

Please clean the fabric seats regularly with a vacuum cleaner in consideration of fabric material characteristics. If they are heavily soiled with beverage stains, etc., use a suitable interior cleaner. To prevent damage to seat covers, wipe off the seat covers down to the seams with a large wiping motion and moderate pressure using a soft sponge or microfiber cloth.

Velcro closures on clothing or sharp objects may cause snagging or scratches on the surface of the seats. Make sure not to rub such objects against the surface.

## Cleaning the upholstery and interior trim

### Car interior surfaces

Remove dust and loose dirt from interior surfaces with a whisk broom or a vacuum cleaner. If necessary, clean interior surfaces with a mixture of warm water and mild non-detergent cleaner (test all cleaners on a concealed area before use).

### 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 a 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 of the rear window defroster grid.

## Emission control system (if equipped)

The emission control system of your vehicle is covered by a written limited warranty. Please see the warranty information contained in the Warranty & Maintenance book in your vehicle.

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

There are three emission control systems, as follows.

1. Crankcase emission control system
2. Evaporative emission control system
3. Exhaust emission control system

In order to assure the proper function of the emission control systems, have your vehicle inspected and maintained by a professional workshop in accordance with the maintenance schedule in this manual. Kia recommends to visit an authorized Kia dealer/service partner.

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

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

## 1. Crankcase emission control system

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

## 2. Evaporative emission control system

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

### Canister

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

### Purge Control Solenoid Valve (PCSV)

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

## 3. Exhaust emission control system

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

### Engine exhaust gas precautions (carbon monoxide)

- Carbon monoxide can be present with other exhaust fumes. Therefore, if you smell exhaust fumes of any kind inside your vehicle, have it inspected and repaired immediately. If you ever suspect exhaust fumes are coming into your vehicle, drive it only with all the windows fully open. Have your vehicle checked and repaired immediately.
- Do not operate the engine in confined or closed areas (such as garages) any more than what is necessary to move the vehicle in or out of the area.
- When the vehicle is stopped in an open area for more than a short time with the engine running, adjust the ventilation system (as needed) to draw outside air into the vehicle.
- Never sit in a parked or stopped vehicle for any extended time with the engine running.
- When the engine stalls or fails to start, excessive attempts to restart the engine may cause damage to the emission control system.

### **WARNING**

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

## Operating precautions for catalytic converters

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

Therefore, the following precautions must be observed:

- Make sure to refuel your vehicle according to the "Fuel requirements" on page 2-2.
- 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 a professional workshop. Kia recommends to visit an authorized Kia dealer/service center.
- Avoid driving with an extremely low fuel level. Running out of fuel could cause the engine to misfire, damaging the catalytic converter.

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

### WARNING


- A hot exhaust system can ignite flammable items under your vehicle. Do not park the vehicle over or near flammable objects, such as grass, vegetation, paper, leaves, etc.

- The exhaust system and catalytic system are very hot while the engine is running or immediately after the engine is turned off. Keep away from the exhaust system and catalytic, you may get burned.

Also, do not remove the heat sink around the exhaust system, do not seal the bottom of the vehicle or do not coat the vehicle for corrosion control. It may present a fire risk under certain conditions.

## Gasoline particulate filter (if equipped)

The Gasoline Particulate Filter (GPF) is the system that removes the soot from the exhaust gas. Unlike a disposable air filter, the GPF system automatically burns (oxidizes) and removes the accumulated soot while driving.

However, repeated short-distance driving or long-distance driving at a low speed can stop the accumulated soot from automatically being removed by the GPF system. If the accumulated soot reaches a certain amount, the GPF warning light () will appear. To re-operate the GPF system, the vehicle should be driven for more than 30 minutes at a speed of 80 km/h (50 mph) and faster. Ensure the following conditions are met: safe road conditions, transmission 3rd gear or above, and engine speed of 1,500~4,000 rpm. Driving at 80 km/h (50 mph) or faster for recommended hours will get the GPF system back to work and stop the GPF warning light.

If the GPF warning light stays on or the warning message (**Check exhaust system**) pops up even after driving at rec-

ommended speed and for recommended hours, visit a professional workshop and have them check the GPF system. Constant driving with the GPF warning light on can damage the GPF system and undermine fuel economy.



### Procedure for entering forced engine activation mode



If the engine needs to be kept running while the vehicle is stopped to inspect emission gas or perform vehicle maintenance, follow below procedure to enter forced engine activation mode.

1. Place the shift dial in P (Park) position with the vehicle stopped. Engage the parking brake. Then, follow the steps (1) to (5).

Below steps from (1) to (5) must be completed within 60 seconds. If not, the process is reset and you must start again from step (1).

- 1) Turn the vehicle to the ON position. Vehicles equipped with the smart key, press the ENGINE START/STOP button twice without depressing the brake pedal.
- 2) Place the shift lever in P (Park) position and depress the accelerator pedal twice.
- 3) Place the shift lever in N (Neutral) position and depress the accelerator pedal twice.
- 4) Place the shift lever in P (Park) position and depress the accelerator pedal twice.
- 5) With the brake pedal depressed, start the engine, and maintain idling state. The engine remains in idle state and the forced engine activation mode is maintained even when the gear is shifted to a different position.

2. The  indicator on the instrument cluster blinks when the vehicle is in forced engine activation mode. Check the  indicator blinking to ensure that the forced engine activation mode is correctly entered.

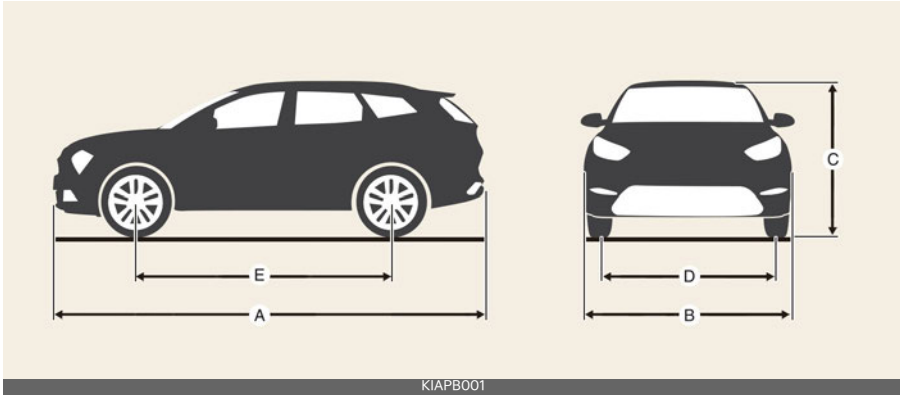
The  indicator continues blinking until the forced engine activation mode is canceled. When the mode is canceled the  indicator will stop blinking.

3. To cancel the forced engine activation mode, turn the vehicle off.

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# Specifications & Consumer information

## Dimensions



KIAPB001

Item		mm (inches)	
A	Overall length	4,385 (172.6)	
B	Overall width	1,805 (71.1)	
C	Overall height	Without antenna	1,630 (64.2)
		With antenna	1,665 (65.5)
D	Tread	Front	215/55 R17
		Rear	215/55 R17
E	Wheelbase	2,700 (106.3)	

## Engine

Item	(Gasoline) 1.6 GDI
Displacement [cc (cu in)]	1,580 (96.4)
Bore x Stroke [mm (in)]	72.0 x 97.0 (2.83 x 3.81)
Firing order	1-3-4-2
No. of cylinders	4 (inline)

## Gross vehicle weight

Item	Gross vehicle weight [kg (lbs.)]
HEV	1,930 (4,255)
PHEV	2,000 (4,409)

## Luggage volume

- Min: Behind rear seat to upper edge of the of the seatback
- Max: Behind front seat to roof

Item		Volume	
VDA [L (cu ft)]	HEV	MIN.	367 (12.9)
		MAX.	1,464 (51.7)
	PHEV	MIN.	324 (11.4)
		MAX.	1,421 (50.2)

## Air conditioning system

Please contact a professional workshop for more details. Kia recommends to contact an authorized Kia dealer/service partner.

Item	Weight of volume (g)	Classification
Refrigerant	550±25	R-134a
	550±25	R-1234yf
Compressor lubricant	130±10	POE

## Bulb wattage

\*: if equipped

Light bulb		Bulb type	Wattage (Watt)
Head lamp (Type A)	Head lamp (High/Low)	HB3	60
	Turn signal lamps	PY21W	21
Head lamp (Type B)	Head lamp (Low)	LED	LED
	Head lamp (High/Low)	LED	LED
	Turn signal lamps	LED	LED
Front and side	Position and daytime running lamps	LED	LED
	Side repeater lamps (LED type)	LED	LED
Rear combination lamp (Type A)	Stop lamp/tail lamps	P21/5W	21/5
	Tail lamps	W5W	5
	Turn signal lamps	PY21W	21
Rear combination lamp (Type B)	Stop lamps	LED	LED
	Tail lamps	LED	LED
	Turn signal lamps	P21WLL	21
Rear	High mounted stop lamp	LED	LED
	Backup lamps	P21W	21
	License plate lamps	W5W	5
	Rear fog lamp*	W16W	16
Interior	Map lamps (Bulb type)	WEDGE (W10W)	10
	Room lamps (Bulb type)	FESTOON	10
	Vanity mirror lamps*	FESTOON	5
	Luggage lamp (Bulb type)	FESTOON	10
	Ambient light	LED	LED



## Tires and wheels

\*1. Load Index

\*2. Speed Symbol

Item	Tire size	Wheel size	Load capacity		Speed capacity		Inflation pressure [bar (psi, kPa)]				Wheel lug nut torque kgf·m (lbf·ft, N·m)
			L <sup>*1</sup>	kg	SS <sup>*2</sup>	km/h	Normal load		Maximum load		
							Front	Rear	Front	Rear	
Full size tire	215/55 R17	7.0Jx17	94	670	V	240	2.5 (36, 250)				11~13 (79~94, 107~127)
Compact spare tire (steel wheel)	T125/80 D16	4Tx16	97	730	M	130	4.2 (60,420)				

### **⚠ CAUTION**


When replacing tires, use the same size originally supplied with the vehicle. Using tires of a different size can damage the related parts or make it work irregularly.

### **\* NOTICE**

- We recommend that when replacing tires, use the same originally supplied with the vehicles. If not, that affects driving performance.
- When driving in high altitude grades, it is natural for the atmospheric pressure to decrease. Therefore, please check the tire pressure and add more air when necessary.
  - Additionally required tire air pressure per km above sea level: 1.5 psi/km

## 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 (L)	Classification
Engine oil <sup>1</sup> (drain and refill) Recommends  <b>TotalEnergies</b>		3.8	SAE 5W-30, ACEA A5/B5 <sup>2</sup>
Dual clutch transmission (DCT) fluid <sup>3</sup>		1.6 ~ 1.7	HK D DCTF TGO-10 PLUS (SK) SPIRAX S6 GHDE 70W DCTF PLUS (HK SHELL) Kia genuine DCTF 70W SYNTHETIC PLUS
Coolant (Engine) <sup>4</sup>		6.5	Mixture of antifreeze and water
Coolant (Inverter) <sup>4</sup>	HEV	2.8	(Ethylene glycol base coolant for aluminum radiator)
	PHEV	3.2	
Brake fluid		As required	SAE J1704 DOT-4 LV/FMVSS 116 DOT-4/ISO4925 CLASS-6
Engine clutch actuator fluid		As required	SAE J1704 DOT-4LV/FMVSS 116 DOT-4/ISO4926 CLASS-6
Fuel	HEV	45	Gasoline
	PHEV	43	

- \* 1. Refer to "Recommended SAE viscosity number" on page 9-7.
- \* 2. Requires <API SN PLUS (or above) or ACEA A5/B5 Full synthetic> grade engine oil. If a lower grade engine oil (mineral oil including Semi-synthetic) is used, then the engine oil and engine oil filter must be replaced as indicated severe maintenance condition.
- \* 3. To maintain your vehicle's best performance, use Kia genuine oil or those of an equivalent standard oil.
- \* 4. Different type of coolant or water may damage the electrical component.

## Recommended SAE viscosity number

		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		
(Gasoline) 1.6 GDi		5W-30									



An engine oil displaying this API Certification Mark conforms to the international Lubricant Specification Advisory Committee (ILSAC). It is recommended to only use engine oils that uphold this API Certification Mark.

### **CAUTION**

Always be sure to clean the area around any filler plug, drain plug, or dipstick before checking or draining any lubricant. This is especially important in dusty or sandy areas and when the vehicle is used on unpaved roads. Cleaning the plug and dipstick areas will prevent dirt and grit from entering the engine and other mechanisms that could be damaged.

Engine oil viscosity (thickness) has an effect on fuel economy and cold weather operating (engine start and engine oil flowability). Lower viscosity engine oils can provide better fuel economy and cold weather performance, however, higher viscosity engine oils are required for satisfactory lubrication in hot weather.

Using oils of any viscosity other than those recommended could result in engine damage.

When choosing an oil, consider the range of temperature your vehicle will be operated in before the next oil change. Proceed to select the recommended oil viscosity from the chart.

### Vehicle Identification Number (VIN)

Type A



Type B



The Vehicle Identification Number (VIN) is the number used in registering your vehicle and in all legal matters pertaining to its ownership, etc.

- Type A: Engraved on the floor under the front right seat. Open the cover to check the VIN.
- Type B: Written on a plate attached to the top of the dashboard through the front windshield.

### Vehicle certification label (if equipped)



The vehicle certification label attached on the center pillar as shown gives the vehicle identification number (VIN).

### Tire specification and pressure label

Type A



Type B



The tire label located on the center pillar as shown gives the tire pressures recommended for your vehicle. The tires supplied on your new vehicle are chosen to provide the best performance for normal driving.

### Engine number



The engine number is stamped on the engine block as shown.

## Air conditioner compressor label



A compressor label informs you the type of compressor your vehicle is equipped with such as model, supplier part number, production number, refrigerant (1) and refrigerant oil (2).

## Refrigerant label



The refrigerant label is located as shown.

## Fuel label (if equipped)

The fuel label is attached on the fuel filler door.

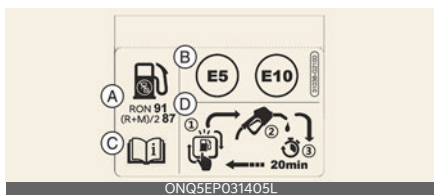
## Hybrid vehicle



- A. Octane rating of unleaded gasoline
  1. RON/ROZ: Research Octane Number
  2. (R+M)/2, AKI: Anti Knock Index
- B. Identifiers for Gasoline-type fuels
  - \* This symbol means usable fuel. Do not use any other fuel.
- C. For further details, refer to the "Fuel requirements" on page 2-2.

## Plug-in hybrid vehicle

For Europe



Except Europe



- A. Octane rating of unleaded gasoline
  1. RON/ROZ: Research Octane Number
  2. (R+M)/2, AKI: Anti Knock Index
- B. Identifiers for Gasoline-type fuels
  - \* This symbol means usable fuel. Do not use any other fuel.
- C. For further details, refer to the "Fuel requirements" on page 2-2.
- D. Add fuel into the fuel tank within 20 minutes.

## Declaration of conformity

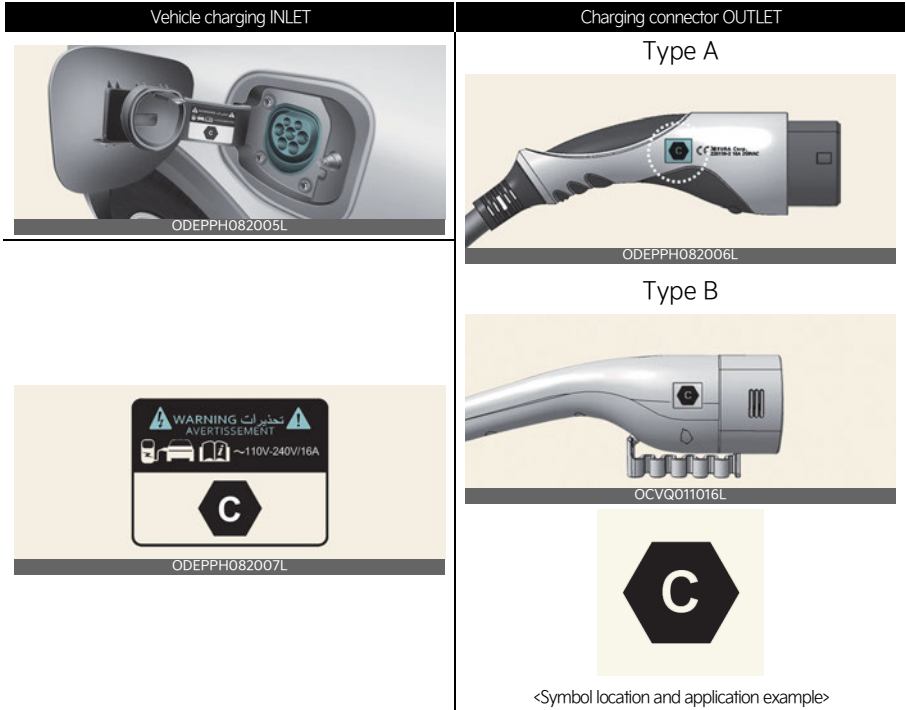
CE CE 0678

The radio frequency components of the vehicle comply with requirements and other relevant provisions of Directive 1995/5/EC.

Further information including the manufacturer's declaration of conformity is available on Kia website as follows:

<http://www.kia-hotline.com>

## How to check the symbol on the charging label (if equipped)



### Precautions for charging AC and Trickle charger (Portable charging cable) (AC charging)

1. After opening the charging door, check the charging symbol at the bottom of the warning label.
2. Check the charging connector symbol of the AC and Trickle charger cable.
3. After checking the alphabet letter of the charging symbol, proceed the charging step.
  - \* Refer to "Electric charging label symbol table" on page 9-12.
4. Risk of failure, fire, injury, etc. expected when using the charging connector with unmatched symbol.

### Electric charging label



The electric charging label is attached on the charging door.

1 ~ 3: Warning for high voltage

4: Identifier for charging door

5: For more details, refer to "How to check the symbol on the charging label (if equipped)" on page 9-11.

6: Charging voltage and current - ( ~ ) AC single phase.

7: Identifiers for charging type. For more details, refer to "Electric charging label symbol table" on page 9-12.

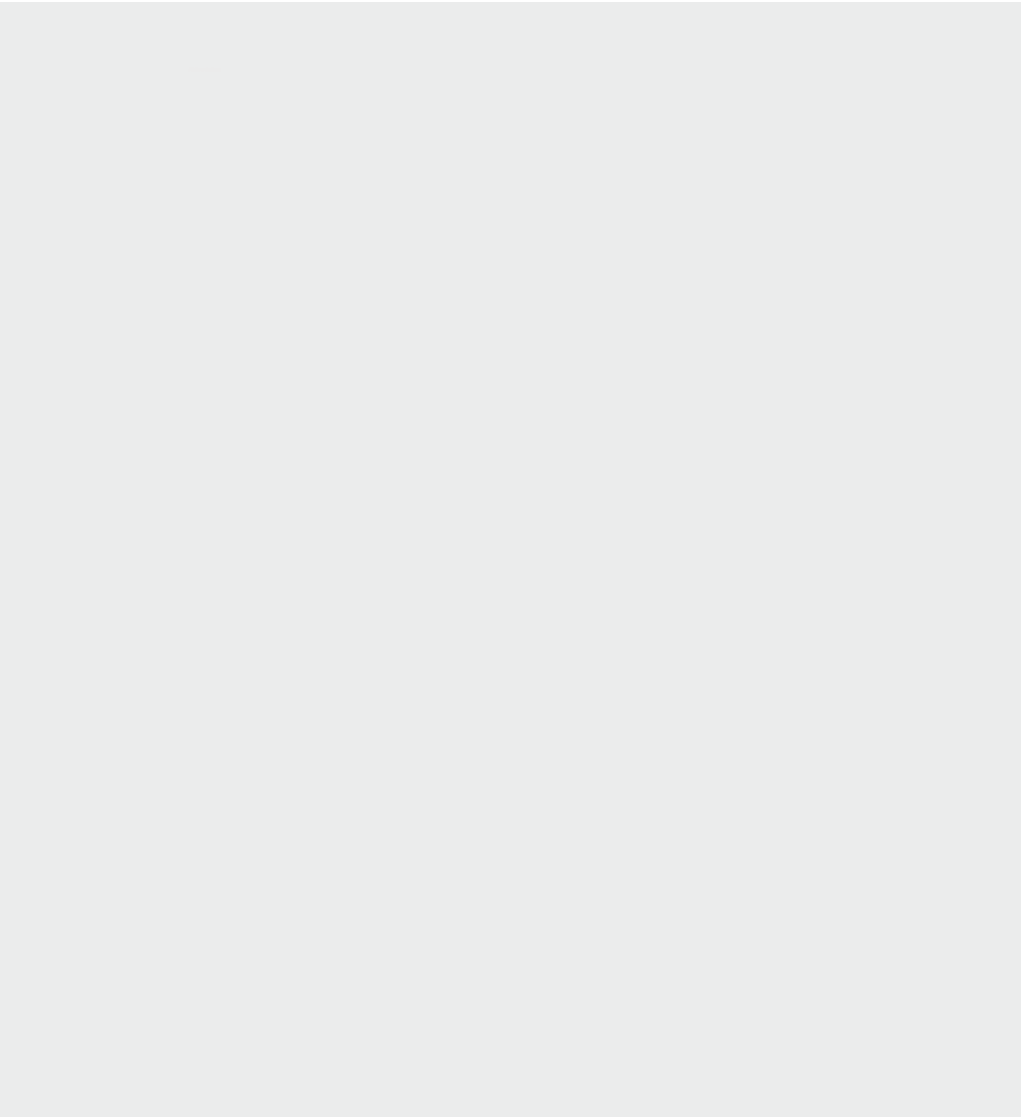
### Electric charging label symbol table

#### AC and Trickle charger charging

Supply Type	Configuration	Type of Accessory	Voltage range	Identifier
AC	7P	Vehicle connector and vehicle inlet	≤ 480V RMS	



# Abbreviation **A**



## Abbreviation

### **ABS**

Anti-lock Brake System

### **BAS**

Brake Assistant System

### **BCW**

Blind-Spot Collision Warning

### **SCC**

Smart Cruise Control

### **CRS**

Child Restraint System

### **DAW**

Driver Attention Warning

### **DRL**

Daytime Running Light

### **EBD**

Electronic Brake force Distribution

### **ECM**

Electric Chromic Mirror

### **ESC**

Electronic Stability Control

### **ESS**

Emergency Stop Signal

### **FCA**

Forward Collision-Avoidance Assist

### **HAC**

Hill-start Assist Control

### **HBA**

High Beam Assist

### **HMSL**

High Mounted Stop Lamp

### **ISLW**

Intelligent Speed Limit Warning

### **LATCH**

Lower Anchors and Tether for Children

### **LFA**

Lane Following Assist

### **LKA**

Lane Keeping Assist

### **MCB**

Multi-Collision Brake

### **MDPS**

Motor Driven Power Steering

### **MIL**

Malfunction Indicator Lamp

### **MSLA**

Manual Speed Limit Assist

### **PDW**

Reverse Parking Distance Warning

### **RCCW**

Rear Cross-Traffic Collision Warning

### **RVM**

Rear View Monitor

### **SCC**

Smart Cruise Control

### **SRS**

Supplemental Restraint System

### **SRSCM**

SRS Control Module

## **Abbreviation**

### **TBT**

Turn By Turn

### **TCS**

Traction Control System

### **TIN**

Tire Identification Number

### **TPMS**

Tire Pressure Monitoring System

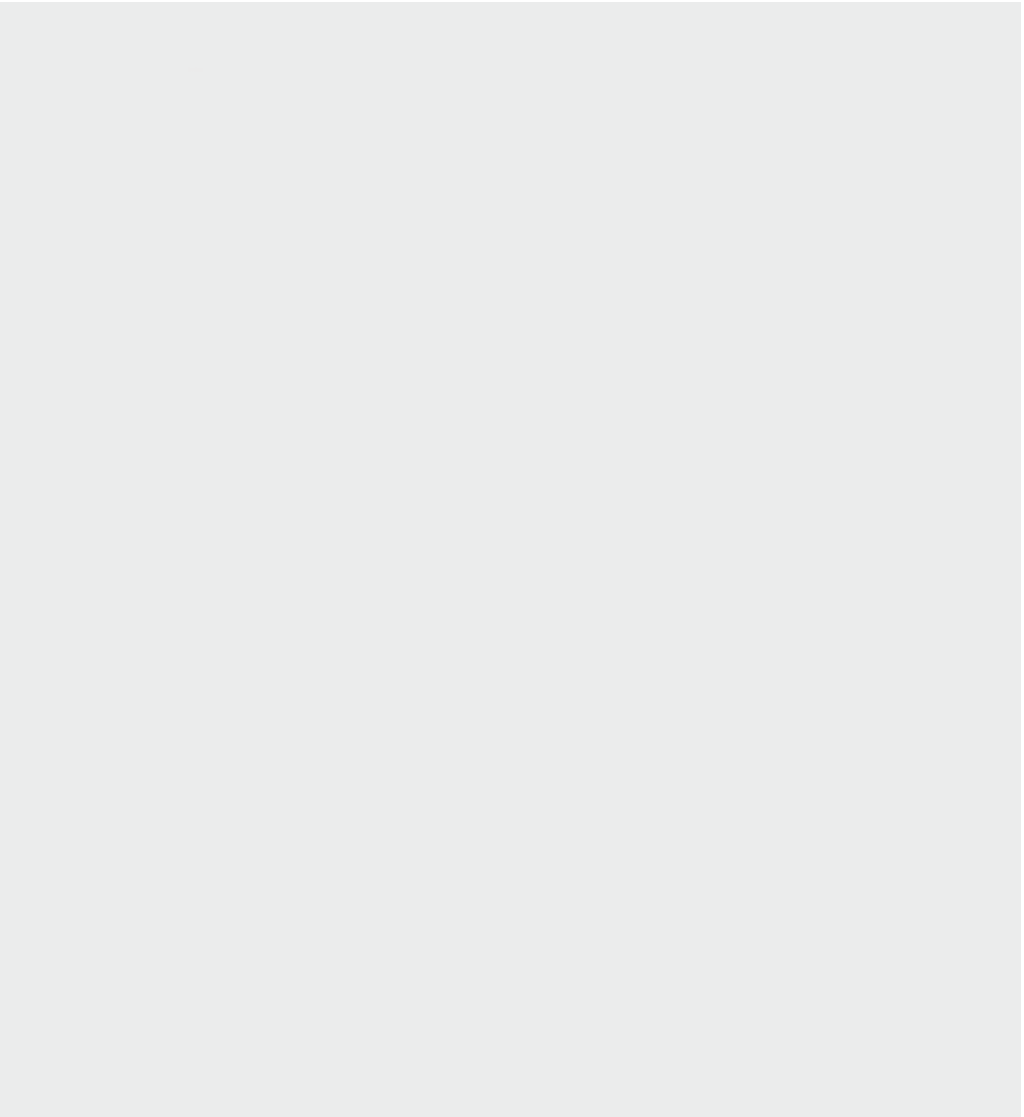
### **VIN**

Vehicle Identification Number

### **VSM**

Vehicle Stability Management





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