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⚠ WARNING - ENGINE EXHAUST CAN BE DANGEROUS!

Engine exhaust fumes can be extremely dangerous. If, at any time, you smell exhaust fumes inside the vehicle, open the windows immediately.

- **Do not inhale exhaust fumes.**

  Exhaust fumes contain carbon monoxide, a colorless, odorless gas that can cause unconsciousness and death by asphyxiation.

- **Be sure the exhaust system does not leak.**

  The exhaust system should be checked whenever the vehicle is raised to change the oil or for any other purpose. If you hear a change in the sound of the exhaust or if you drive over something that strikes the underneath side of the vehicle, we recommend that the system be checked by an authorized Kia dealer.

- **Do not run the engine in an enclosed area.**

  Letting the engine idle in your garage, even with the garage door open, is a hazardous practice. Never run the engine in your garage any longer than it takes to start the engine and back the vehicle out.

- **Avoid idling the engine for prolonged periods with people inside the vehicle.**

  If it is necessary to idle the engine for a prolonged period with people inside the vehicle, be sure to do so only in an open area with the air intake set at "Fresh" and fan operating at one of the higher speeds so fresh air is drawn into the interior.

If you must drive with the tailgate/trunk open because you are carrying objects that make this necessary:

1. Close all windows.
2. Open side vents.
3. Set the air intake control at "Fresh", the air flow control at "Floor" or "Face" and the fan at one of the higher speeds.

To assure proper operation of the ventilation system, be sure the ventilation air intakes located just in front of the windshield are kept clear of snow, ice, leaves or other obstructions.

BEFORE DRIVING

Before entering vehicle

- Be sure that all windows, outside mirror(s), and outside lights are clean.
- Check the condition of the tires.
- Check under the vehicle for any sign of leaks.
- Be sure there are no obstacles behind you if you intend to back up.

Necessary inspections

Fluid levels, such as engine oil, engine coolant, brake fluid, and washer fluid should be checked on a regular basis, with the exact interval depending on the fluid. Further details are provided in chapter 7, “Maintenance”.

⚠ WARNING

Driving while distracted can result in a loss of vehicle control, that may lead to an accident, severe personal injury, and death. The driver’s primary responsibility is in the safe and legal operation of a vehicle, and use of any handheld devices, other equipment, or vehicle systems which take the driver’s eyes, attention and focus away from the safe operation of a vehicle or which are not permissible by law should never be used during operation of the vehicle.

Before starting

- Close and lock all doors.
- Position the seat so that all controls are easily reached.
- Adjust the inside and outside rearview mirrors.
- Be sure that all lights work.
- Check all gauges.
- Check the operation of warning lights when the ignition switch is turned to the ON position.
- Release the parking brake and make sure the brake warning light goes out.

For safe operation, be sure you are familiar with your vehicle and its equipment.

⚠ WARNING

All passengers must be properly belted whenever the vehicle is moving. Refer to "Seat belts" in chapter 3 for more information on their proper use.

⚠ WARNING

Always check the surrounding areas near your vehicle for people, especially children, before putting a vehicle into "D (Drive)" or "R (Reverse)".

⚠ WARNING - Driving under the influence of alcohol or drugs

Drinking and driving is dangerous. Drunk driving is the number one contributor to the highway death toll each year. Even a small amount of alcohol will affect your reflexes, perceptions and judgement. Driving while under the influence of drugs is as dangerous or more dangerous than driving drunk.

You are much more likely to have a serious accident if you drink or take drugs and drive.

If you are drinking or taking drugs, don't drive. Do not ride with a driver who has been drinking or taking drugs. Choose a designated driver or call a cab.

⚠ 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.**
- **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. Keep all things in the vehicle safely stored.**
- **If you do not focus on driving, it may cause an accident. Be careful when operating what may disturb driving such as audio or heater. It is the responsibility of the driver to always drive safely.**

KEY POSITIONS

Illuminated ignition switch (if equipped)



OUM054001

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

Ignition switch position

LOCK



OYP054029K

The steering wheel locks to protect against theft. The ignition key can be removed only in the LOCK position.

ACC (Accessory)

The steering wheel is unlocked and electrical accessories are operative.

✻ NOTICE

If difficulty is experienced turning the ignition switch to the ACC position, turn the key while turning the steering wheel right and left to release the tension.

ON

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

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

START

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

⚠ WARNING - Ignition key

- **Never turn the ignition switch to LOCK or ACC while the vehicle is moving. This would result in loss of directional control and braking function, which could cause an accident.**
- **The anti-theft steering column lock (if equipped) is not a substitute for the parking brake. Before leaving the driver's seat, always make sure the shift lever is engaged in 1st gear for the manual transaxle or P (Park) for the automatic transaxle, set the parking brake fully and shut the engine off. Unexpected and sudden vehicle movement may occur if these precautions are not taken.**

(Continued)

(Continued)

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

Starting the engine

⚠ WARNING

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

✻ NOTICE - Kick down mechanism (if equipped)

If your vehicle is equipped with a kick down mechanism in the accelerator pedal, it prevents you from driving at full throttle unintentionally by making the driver require increased effort to depress the accelerator pedal. However, if you depress the pedal more than approximately 82%, the vehicle can be at full throttle and the accelerator pedal will be easier to depress. This is not a malfunction but a normal condition.

Starting the gasoline engine

1. Make sure the parking brake is applied.
2. **Manual Transaxle** - Depress the clutch pedal fully and shift the transaxle into Neutral. Keep the clutch pedal and brake pedal depressed while turning the ignition switch to the start position.

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

   You can also start the engine when the shift lever is in the N (Neutral) position.
3. Turn the ignition switch to START and hold it there until the engine starts (a maximum of 10 seconds), then release the key.

   *It should be started **without depressing the accelerator pedal.***
4. Do not wait for the engine to warm up while the vehicle remains stationary.

   Start driving at moderate engine speeds. (Steep accelerating and decelerating should be avoided.)

⚠ CAUTION

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

⚠ CAUTION

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

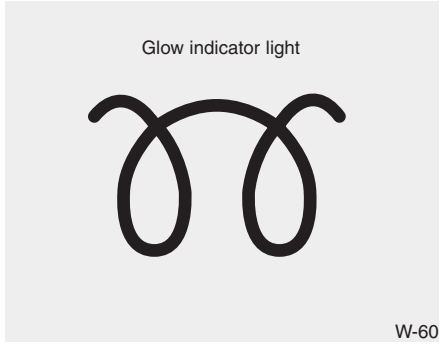
Starting the diesel engine

To start the diesel engine when the engine is cold, it has to be pre-heated before starting the engine and then have to be warmed up before starting to drive.

1. Make sure the parking brake is applied.
2. **Manual Transaxle** - Depress the clutch pedal fully and shift the transaxle into Neutral. Keep the clutch pedal and brake pedal depressed while turning the ignition switch to the start position.

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

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



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3. Turn the ignition switch to the ON position to pre-heat the engine. Then the glow indicator light will illuminate.
4. If the glow indicator light goes out, turn the ignition switch to the START position and hold it there until the engine starts (a maximum of 10 seconds), then release the key.

✻ NOTICE

If the engine does not start within 10 seconds after the preheating is completed, turn the ignition key once more to the LOCK position for 10 seconds, and then to the ON position, in order to preheat again.

Starting and stopping the engine for turbocharger intercooler

1. Do not race or accelerate the engine immediately after starting.

   If the engine is cold, idle for several seconds before sufficient lubrication is ensured in the turbocharger unit.
2. After high speed or extended driving, requiring a heavy engine load, run the engine on idle condition about 1 minute before turning it off.

   This idle time will allow the turbocharger to cool prior to shutting the engine off.

⚠ CAUTION

Do not turn off the engine immediately after it has been subjected to a heavy load. Doing so may cause severe damage to the engine or turbo charger unit.

ENGINE START/STOP BUTTON (IF EQUIPPED)

Illuminated engine start/stop button



Whenever the front door is opened, the engine start/stop button will illuminate for your convenience. The light will go off after about 30 seconds when the door is closed. It will also go off immediately when the engine start/stop button is ON position.

Engine start/stop button position

OFF



Not illuminated

With manual transaxle

To turn off the engine (START/RUN position) or vehicle power (ON position), stop the vehicle then press the engine start/stop button.

With automatic transaxle

To turn off the engine (START/RUN position) or vehicle power (ON position), press the engine start/stop button with the shift lever in the P (Park) position. When you press the engine start/stop button without the shift lever in the P (Park) position, the engine start/stop button will not change to the OFF position but to the ACC position.

Vehicles equipped with anti-theft steering column lock

The steering wheel locks when the engine start/stop button is in the OFF position to protect you against theft.

It locks when the door is opened.

If the steering wheel is not locked properly when you open the driver's door, the warning chime will sound. Try locking the steering wheel again. If the problem is not solved, we recommend that the system be checked by an authorized Kia dealer.

In addition, if the engine start/stop button is in the OFF position after the driver's door is opened, the steering wheel will not lock and the warning chime will sound. In such a situation, close the door. Then the steering wheel will lock and the warning chime will stop.

✻ 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.

⚠ CAUTION

You are able to turn off the engine (START/RUN) or vehicle power (ON), only when the vehicle is not in motion. In an emergency situation while the vehicle is in motion, you are able to turn the engine off and to the ACC position by pressing the engine start/stop button for more than 2 seconds or 3 times successively within 3 seconds. If the vehicle is still moving, you can restart the engine without depressing the brake pedal by pressing the engine start/stop button with the shift lever in the N (Neutral) position.

ACC(Accessory)



Amber

With manual transaxle

Press the engine start/stop button when the button is in the OFF position without depressing the clutch pedal.

With automatic transaxle

Press the engine start/stop button while it is in the OFF position without depressing the brake pedal.

The steering wheel unlocks (if equipped with anti-theft steering column lock) and electrical accessories are operational.

If the engine start/stop button is in the ACC position for more than 1 hour, the button is turned off automatically to prevent battery discharge.

ON



Redish orange

With manual transaxle

Press the engine start/stop button when the button is in the ACC position without depressing the clutch pedal.

With automatic transaxle

Press the engine start/stop button while it is in the ACC position without depressing the brake pedal.

The warning lights can be checked before the engine is started. Do not leave the engine start/stop button in the ON position for a long time. The battery may discharge, because the engine is not running.

START/RUN



Not illuminated

With manual transaxle

To start the engine, depress the clutch pedal and brake pedal, then press the engine start/stop button with the shift lever in the N (Neutral) position.

With automatic transaxle

To start the engine, depress the brake pedal and press the engine start/stop button with the shift lever in the P (Park) or the N (Neutral) position. For your safety, start the engine with the shift lever in the P (Park) position.

✻ NOTICE

If you press the engine start/stop button without depressing the clutch pedal for manual transaxle vehicles or without depressing the brake pedal for automatic transaxle vehicles, the engine will not start and the engine start/stop button changes as follow:
OFF ➔ACC ➔ ON ➔ OFF or ACC

✻ NOTICE

If you leave the engine start/stop button in the ACC or ON position for a long time, the battery will discharge.

⚠ 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.**
- **The anti-theft steering column lock (if equipped) is not a substitute for the parking brake. Before leaving the driver's seat, always make sure the shift lever is engaged in P (Park), set the parking brake fully and shut the engine off. Unexpected and sudden vehicle movement may occur if these precautions are not taken.**

(Continued)

(Continued)

- **Never reach for the 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.**

Starting the engine

⚠ WARNING

- **Always wear appropriate shoes when operating your vehicle. Unsuitable shoes (high heels, ski boots,etc.) may interfere with your ability to use the brake, accelerator and clutch 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 padel is released when the rpm is high.**

✻ NOTICE - Kick down mechanism (if equipped)

If your vehicle is equipped with a kick down mechanism in the accelerator pedal, it prevents you from driving at full throttle unintentionally by making the driver require increased effort to depress the accelerator pedal. However, if you depress the pedal more than approximately 82%, the vehicle can be at full throttle and the accelerator pedal will be easier to depress. This is not a malfunction but a normal condition.

Starting the gasoline engine

1. Carry the smart key or leave it inside the vehicle.
2. Make sure the parking brake is firmly applied.
3. **Manual Transaxle** - Depress the clutch pedal fully and shift the transaxle into Neutral. Keep the clutch pedal and brake pedal depressed while starting the engine.

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

   You can also start the engine when the shift lever is in the N (Neutral) position.
4. Press the engine start/stop button.

   It should be started without depressing the accelerator.
5. Do not wait for the engine to warm up while the vehicle remains stationary.

   Start driving at moderate engine speeds. (Steep accelerating and decelerating should be avoided.)

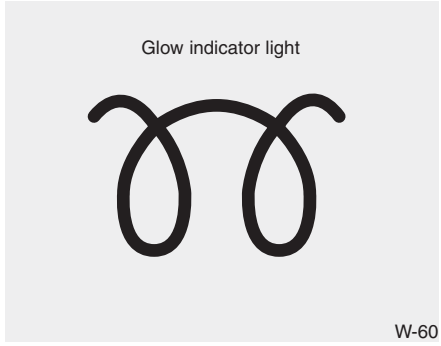
Starting the diesel engine

To start the diesel engine when the engine is cold, it has to be pre-heated before starting the engine and then have to be warmed up before starting to drive.

1. Make sure the parking brake is applied.
2. **Manual Transaxle** - Depress the clutch pedal fully and shift the transaxle into Neutral. Keep the clutch pedal and brake pedal depressed while pressing the engine start/stop button to the START position.

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

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



W-60

3. Press the engine start/stop button while depressing the brake pedal.
4. Continue depressing the brake pedal until the illuminated glow indicator goes off. (approximately 5 seconds)
5. The engine starts running when the glow indicator goes off.

✻ NOTICE

If the engine start/stop button is pressed once more while the engine is pre-heating, the engine may start.

Starting and stopping the engine for turbocharger intercooler

1. Do not race or accelerate the engine immediately after starting.

   If the engine is cold, idle for several seconds before sufficient lubrication is ensured in the turbocharger unit.
2. After high speed or extended driving, requiring a heavy engine load, idle the engine about 1 minute before turning it off.

   This idle time will allow the turbocharger to cool prior to shutting the engine off.

⚠ CAUTION

Do not turn the engine off immediately after it has been subjected to a heavy load. Doing so may cause severe damage to the engine or turbocharger unit.

- Even if the smart key is in the vehicle, if it is far away from you, the engine may not start.
- When the engine start/stop button is in the ACC position or above, if any door is opened, the system checks for the smart key. If the smart key is not in the vehicle, a message “Key is not in the vehicle” will appear on the LCD display. And if all doors are closed, the chime will sound for 5 seconds. The indicator or warning will turn off while the vehicle is moving. Always have the smart key with you.

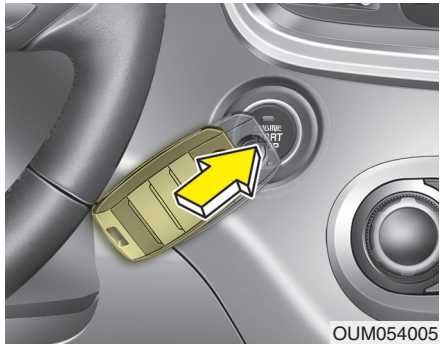
⚠ WARNING

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.

⚠ CAUTION

If the engine stalls while the vehicle is in motion, do not attempt to move the shift lever to the P (Park) position. If the traffic and road conditions permit, you may put the shift lever 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.


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✻ 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.
  The side with the lock button should be contacted directly.
  When you press the engine start/stop button directly with the smart key, the smart key should contact the button at a right angle.
  (Continued)

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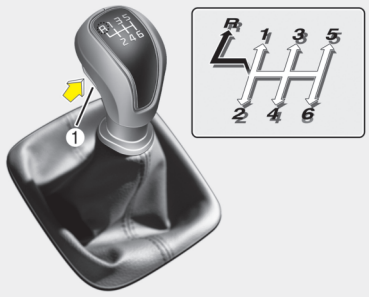
- When the stop lamp fuse is blown, you cannot start the engine normally.
  Replace the fuse with a new one. If it is not possible, you can start the engine by pressing the engine start/stop button for 10 seconds while it is in the ACC position. The engine can start without depressing the brake pedal. But for your safety always depress the brake and clutch pedal before starting the engine.

⚠ CAUTION

Do not press the engine start/stop button for more than 10 seconds except when the stop lamp fuse is blown.

MANUAL TRANSAXLE (IF EQUIPPED)

Manual transaxle operation



⇨ The shift lever can be moved without pushing the button (1).

➡ The button (1) must be pushed while moving the shift lever.

OYDDDR2101

- The manual transaxle has 6 forward gears.

  This shift pattern is imprinted on the shift knob. The transaxle is fully synchronized in all forward gears so shifting to either a higher or a lower gear is easily accomplished.

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

  If your vehicle is equipped with an ignition lock switch, the engine will not start when starting the engine without depressing the clutch pedal.

- The shift lever must return to the neutral position before shifting into R (Reverse). The button located immediately below the shift knob must be pushed upward while moving the shift lever to the R (Reverse) position.

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

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

⚠ CAUTION

- ***When downshifting from 5 (Fifth) gear to 4 (Fourth) gear, caution should be taken not to inadvertently move the shift lever sideways in such a manner that second gear is engaged. Such a drastic downshift may cause the engine speed to increase to the point that the tachometer will enter the red-zone. Such overrevving of the engine may possibly cause engine and transaxle damage.***
- ***Do not downshift more than 2 gears or downshift the gear when the engine is running at high speed (5,000 RPM or higher). Such a downshifting may damage the engine, clutch and the transaxle.***
- ***When shifting between 5th and 6th gear, you should always push the gear level all the way to the right. You could otherwise shift unintentionally into 3rd or 4th gear and damage the transaxle.***

- During cold weather, shifting may be difficult until the transaxle lubricant has warmed up. This is normal and not harmful to the transaxle.
- If you've come to a complete stop and it's hard to shift into 1 (First) or R (Reverse), put the shift lever in neutral position and release the clutch. Press the clutch pedal back down, and then shift into 1 (First) or R (Reverse) gear position.

⚠ CAUTION

- ***To avoid premature clutch wear and damage, do not drive with your foot resting on the clutch pedal. Also, don't use the clutch to hold the vehicle stopped on an uphill grade, while waiting for a traffic light, etc.***
- ***Do not use the shift lever as a handrest during driving, as this can result in premature wear of the transaxle shift forks.***
- ***When operating the clutch pedal, press the clutch pedal down fully.***

  If you don't press the clutch pedal fully, the clutch may be damaged or noise may occur.
- ***To prevent possible damage to the clutch system, do not start with the 2nd (second) gear engaged except when you start on a slippery road.***

(Continued)

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- ***Do not exceed the maximum weight limits of the loading weight. Improper loading can result in damage to clutch system.***

⚠ WARNING

- **Before leaving the driver's seat, always set the parking brake fully and shut the engine off. Then make sure the transaxle is shifted into 1 (First) gear when the vehicle is parked on a level or uphill grade, and shifted into R (Reverse) on a downhill grade.**

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

- **If your vehicle has a manual transaxle not equipped with a ignition lock switch, it may move and cause a serious accident when starting the engine without depressing the clutch pedal while the parking brake is released and the shift lever not in the neutral position.**

(Continued)

(Continued)

- **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.

Using the clutch

The clutch pedal should be depressed all the way to the floor before shifting, then released slowly. The clutch pedal should always be fully released while driving. Do not rest your foot on the clutch pedal while driving. This can cause unnecessary wear. Do not partially engage the clutch to hold the vehicle on an incline. This causes unnecessary wear. Use the foot brake or parking brake to hold the vehicle on an incline. Do not operate the clutch pedal rapidly and repeatedly.

⚠ CAUTION

- ***If half-clutch*[1] driving style is adopted, or driver's foot is placed on the pedal while the driving, the clutch may be damaged or worn out prematurely.***
- ***While parking on a steep grade, do not use half clutch method to park the vehicle. It will cause premature wear of the clutch disc.***
- ***While driving at fast speed, do not abruptly shift to low speed. It may lead to engine and transaxle damage.***

***1): Half clutch?**

A condition where the clutch is half-engaged and sliding. It may occur when the clutch pedal is partially depressed (not fully depressed), or vehicle power is transferred to the clutch before the pedal is fully let go.

⚠ WARNING

- **When starting a fully stopped vehicle, refrain to start in 2nd gear. When starting in 2nd gear, abnormal clutch disc friction heat may occur and result in clutch cover and clutch disc damage.**
- **When the vehicle is in motion, please refrain from using half clutch. The use of half clutch while the vehicle is in motion may result in early clutch disc wear, abnormal vibration or noise.**
- **The clutch pedal should be depressed fully for any operation. When letting go of the depressed pedal, make sure not to depress the pedal again before the pedal goes back to its initial position. If such unintended re-depressing occurs, the clutch system may be damaged.**

Downshifting

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

Good driving practices

- Never take the vehicle out of gear and coast down a hill. This is extremely hazardous. Always leave the vehicle in gear.
- Don't "ride" the brakes. This can cause them to overheat and malfunction. Instead, when you are driving down a long hill, slow down and shift to a lower gear. When you do this, engine braking will help slow down the vehicle.
- Slow down before shifting to a lower gear. This will help avoid over-revving the engine, which can cause damage.
- Slow down when you encounter cross winds. This gives you much better control of your vehicle.
- Be sure the vehicle is completely stopped before you attempt to shift into R (Reverse). The transaxle can be damaged if you do not. To shift into R (Reverse), depress the clutch, move the shift lever to neutral, wait three seconds, then shift to the R (Reverse) position.
- Exercise extreme caution when driving on a slippery surface. Be especially careful when braking, accelerating or shifting gears. On a slippery surface, an abrupt change in vehicle speed can cause the drive wheels to lose traction and the vehicle to go out of control.

⚠ WARNING

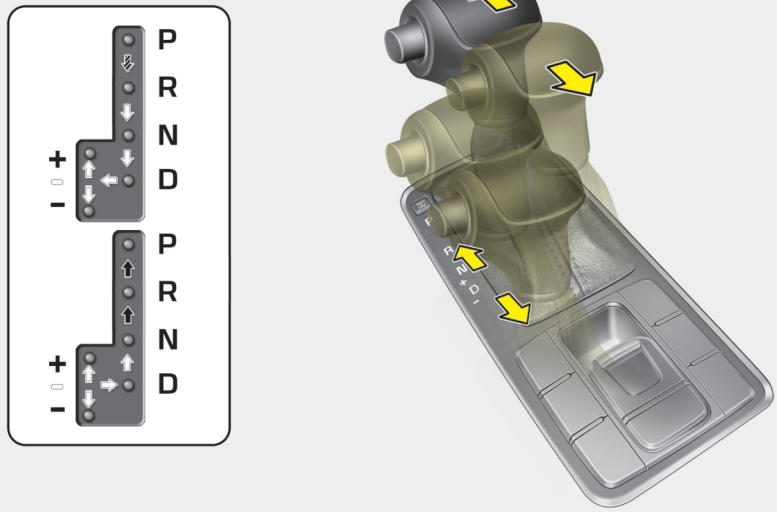
- **Always buckle-up! In a collision, an unbelted occupant is significantly more likely to be seriously injured or killed than a properly belted occupant.**
- **Avoid high speeds when cornering or turning.**
- **Do not make quick steering wheel movements, such as sharp lane changes or fast, sharp turns.**

(Continued)

(Continued)

- **The risk of rollover is greatly increased if you lose control of your vehicle at highway speeds.**
- **Loss of 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.**

AUTOMATIC TRANSAXLE (IF EQUIPPED)



Depress the brake pedal and the lock release button when shifting.
(If the shift lock system is not equipped, it is not necessary to depress the brake pedal. However, it is recommended to depress the brake pedal to avoid inadvertent movement of the vehicle.)

Press the lock release button when shifting.

The shift lever can be shifted freely.

❊ The above illustration may defer depending on different options.

OUM054007

Automatic transaxle operation

The automatic transaxle has 6 forward speeds and one reverse speed. The individual speeds are selected automatically, depending on the position of the shift lever.

✻ NOTICE

The first few shifts on a new vehicle, if the battery has been disconnected, may be somewhat abrupt. This is a normal condition, and the shifting sequence will adjust after shifts are cycled a few times by the TCM (Transaxle Control Module) or PCM (Powertrain Control Module).

For smooth operation, depress the brake pedal when shifting from N (Neutral) to a forward or reverse gear.

⚠ WARNING - Automatic transaxle

- **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 shift lever is in the P (Park) position; then set the parking brake fully and shut the engine off. Unexpected and sudden vehicle movement can occur if these precautions are not followed in the order identified.**
- **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.

⚠ CAUTION

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

Transaxle ranges

The indicator lights in the instrument cluster displays the shift lever position when the ignition switch is in the ON position.

P (Park)

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

⚠ WARNING

- **Shifting into P (Park) while the vehicle is in motion will cause the drive wheels to lock which will cause you to lose control of the vehicle.**
- **Do not use the P (Park) position in place of the parking brake. Always make sure the shift lever is latched in the P (Park) position and set the parking brake fully.**
- **Never leave a child unattended in a vehicle.**

⚠ CAUTION

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

R (Reverse)

Use this position to drive the vehicle backward.

⚠ CAUTION

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

N (Neutral)

The wheels and transaxle are not engaged. The vehicle will roll freely even on the slightest incline unless the parking brake or service brakes are applied.

⚠ WARNING

Do not drive with the shift lever in N (Neutral).

The engine brake will not work and lead to an accident.

- Parking in N (Neutral) gear

Follow below steps when parking and you want the vehicle to move when pushed.

1. After parking your vehicle, depress the brake pedal and move the shift lever to [P] with the ignition button in [ON] or while the engine is running.
2. If the parking brake is applied unlock the parking brake.
   - For EPB (Electronic Parking Brake) equipped vehicles, push the brake pedal with the ignition button in [ON] or while the engine is running to disengage the parking brake. If [AUTO HOLD] function is used while driving (If [AUTO HOLD] indicator is on in the cluster), press [AUTO HOLD] switch and [AUTO HOLD] function should be turn off.
3. While pressing the brake pedal, turn the ignition button [OFF].
   - For smart key equipped vehicles, the ignition switch can be moved to [OFF] only when the shift lever is in [P].
4. Change the gear shift lever to [N] (Neutral) while pressing the brake pedal and pushing [SHIFT LOCK RELEASE] button or inserting, pressing down a tool (e.g. flathead screw-driver) into the [SHIFT LOCK RELEASE] access hole at the same time. Then, the vehicle will move when external force is applied.

⚠ 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] gear on any slopes or gradients.***

  If parked and left in [N], the vehicle may move and cause serious damage and injury.
- ***After the ignition switch 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 ignition button has been turned [OFF], the electronic parking brake will be engaged automatically. Therefore, [AUTO HOLD] function should be turned off before the ignition button is turned off.***

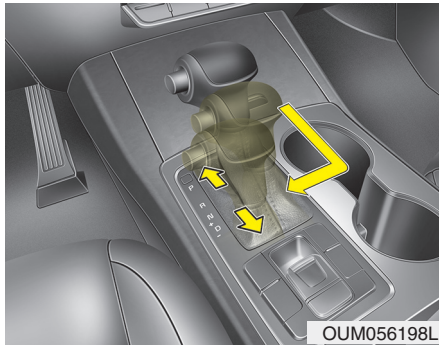
D (Drive)

This is the normal forward driving position. The transaxle will automatically shift through a 6-gear sequence, providing the best fuel economy and power.

For extra power when passing another vehicle or climbing grades, depress the accelerator pedal fully (more than 82%) until the kick down mechanism (if equipped) works with a clicking noise, at which time the transaxle will automatically downshift to the next lower gear.

✻ NOTICE

- **Always come to a complete stop before shifting into D (Drive).**
- **A clicking noise heard from the kick down mechanism by depressing the accelerator pedal fully is a normal condition.**



Manual mode

Whether the vehicle is stationary or in motion, manual mode is selected by pushing the shift lever from the D (Drive) position into the manual gate. To return to D (Drive) range operation, push the shift lever back into the main gate.

In manual mode, moving the shift lever backwards and forwards will allow you to make gearshifts rapidly.

Up (+) : Push the lever forward once to shift up one gear.

Down (-) : Pull the lever backwards once to shift down one gear.

✻ NOTICE

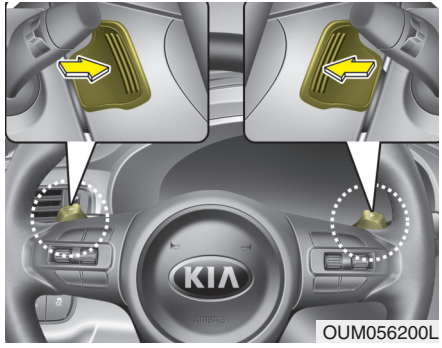
- **In manual mode, the driver must execute upshifts in accordance with road conditions, taking care to keep the engine speed below the red zone.**
- **In manual mode, only the 6 forward gears can be selected. To reverse or park the vehicle, move the shift lever to the R (Reverse) or P (Park) position as required.**
- **In manual mode, downshifts are made automatically when the vehicle slows down. When the vehicle stops, 1st gear is automatically selected.**
- **In manual mode, when the engine rpm approaches the red zone shift points are varied to upshift automatically.**
- **To maintain the required levels of vehicle performance and safety, the system may not execute certain gearshifts when the shift lever is operated.**

(Continued)

(Continued)

- **When driving on a slippery road, push the shift lever forward into the +(up) position. This causes the transaxle to shift into the 2nd gear which is better for smooth driving on a slippery road. Push the shift lever to the -(down) side to shift back to the 1st gear.**

Paddle shifter (if equipped)



The paddle shifter is available when the shift lever is in the D (Drive) position or the manual mode.

With the shift lever in the D position

The paddle shifter will operate when the vehicle speed is more than 10km/h.

Pull the [+] or [-] paddle shifter once to shift up or down one gear and the system changes from automatic mode to manual mode.

When the vehicle speed is lower than 10km/h, if you depress the accelerator pedal for more than 5 seconds or if you move the shift lever from D (Drive) to manual Mode and move it from manual Mode to D (Drive) again, the system changes from manual mode to automatic mode.

With the shift lever in the sports mode

Pull the [+] or [-] paddle shifter once to shift up or down one gear.

✻ NOTICE

If the [+] and [-] paddle shifters are pulled at the same time, gear shift may not occur.

Shift lock system (if equipped)

For your safety, the automatic transaxle has a shift lock system which prevents shifting the transaxle from P (Park) or N (Neutral) into R (Reverse) unless the brake pedal is depressed.

To shift the transaxle from P (Park) or N (Neutral) into R (Reverse):

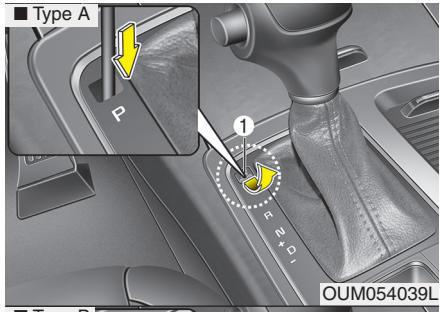
1. Depress and hold the brake pedal.
2. Start the engine or turn the ignition switch to the ON position.
3. Move the shift lever.

If the brake pedal is repeatedly depressed and released with the shift lever in the P (Park) position, a chattering noise near the shift lever may be heard. This is a normal condition.

⚠ WARNING

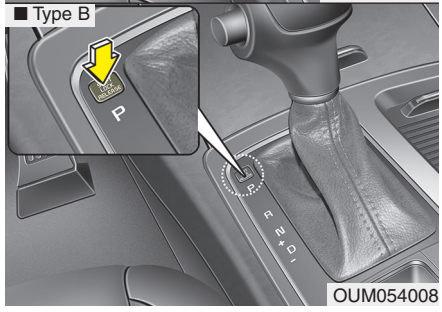
Always fully depress the brake pedal before and while shifting out of the P (Park) position into another position to avoid inadvertent motion of the vehicle which could injure persons in or around the vehicle.

■ Type A



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■ Type B



OUM054008

Shift-lock override

If the shift lever cannot be moved from the P (Park) or N (Neutral) position into R (Reverse) position with the brake pedal depressed, continue depressing the brake, then do the following:

Type A

1. Carefully remove the cap (1) covering the shift-lock override access hole.
2. Insert a screwdriver into the access hole and press down on the screwdriver.
3. Move the shift lever.
4. We recommend that the system be inspected by an authorized Kia dealer.

Type B

1. Press the shift-lock release button.
2. Move the shift lever.
3. We recommend that the system be inspected by an authorized Kia dealer.

Ignition key interlock system (if equipped)

The ignition key cannot be removed unless the shift lever is in the P (Park) position.

Good driving practices

- Never move the shift lever from P (Park) or N (Neutral) to any other position with the accelerator pedal depressed.
- Never move the shift lever into P (Park) when the vehicle is in motion.
- Be sure the vehicle is completely stopped before you attempt to shift into R (Reverse) or D (Drive).
- Never take the vehicle out of gear and coast down a hill. This may be extremely hazardous. Always leave the vehicle in gear when moving.
- Do not "ride" the brakes. This can cause them to overheat and malfunction. Instead, when you are driving down a long hill, slow down and shift to a lower gear. When you do this, engine braking will help slow down the vehicle.
- Slow down before shifting to a lower gear. Otherwise, the lower gear may not be engaged.
- Always use the parking brake. Do not depend on placing the transaxle in P (Park) to keep the vehicle from moving.
- Exercise extreme caution when driving on a slippery surface. Be especially careful when braking, accelerating or shifting gears. On a slippery surface, an abrupt change in vehicle speed can cause the drive wheels to lose traction and the vehicle to go out of control.
- Optimum vehicle performance and economy is obtained by smoothly depressing and releasing the accelerator pedal.

⚠ WARNING

- **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 rollover is greatly increased if you lose control of your vehicle at highway speeds.**
- **Loss of 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.**

⚠ WARNING

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 of backward as it becomes unstuck, causing injury or damage to nearby people or objects.

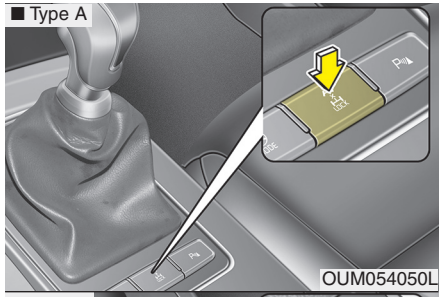
Moving up a steep grade from a standing start

To move up a steep grade from a standing start, depress the brake pedal, shift the shift lever to D (Drive). Select the appropriate gear depending on load weight and steepness of the grade, and release the parking brake. Depress the accelerator gradually while releasing the service brakes.

When accelerating from a stop on a steep hill, the vehicle may have a tendency to roll backwards. Shifting the shift lever into 2 (Second Gear) will help prevent the vehicle from rolling backwards.

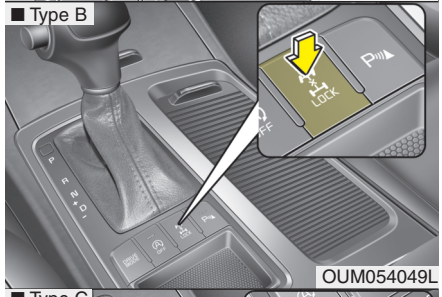
ALL WHEEL DRIVE (AWD) (IF EQUIPPED)

■ Type A



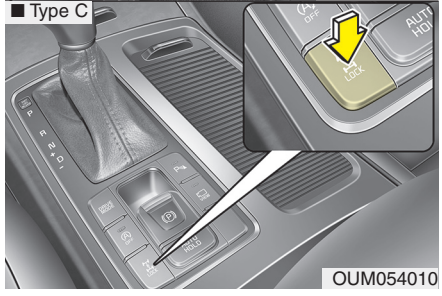
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■ Type B



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■ Type C



OUM054010

Engine power can be delivered to all front and rear wheels for maximum traction. AWD is useful when extra traction is required on road, such as, when driving on slippery, muddy, wet, or snow-covered roads. These vehicles are not designed for challenging off-road use. Occasional off-road use such as established unpaved roads and trails are OK. It is always important when traveling off-highway that the driver carefully reduces the speed to a level that does not exceed the safe operating speed for those conditions. In general, off-road conditions provide less traction and braking effectiveness than normal road conditions.

* AWD : All Wheel Drive
FWD : Front Wheel Drive

The driver must be especially alert to avoid driving on slopes which tilt the vehicle to either side.

These factors must be carefully considered when driving off-road. Keeping the vehicle in contact with the driving surface and under control in these conditions is always the driver's responsibility for the safety of him/herself and his or her passengers.

⚠ WARNING - Off road driving

This vehicle is designed primarily for on road use although it can operate effectively off road. However, it was not designed to drive in challenging off-road conditions. Driving in conditions that exceed the vehicle's intended design or the driver's experience level may result in severe injury or death.

⚠ WARNING

If the AWD system warning light ( ) illuminates, this indicates that there is a malfunction in the AWD system.

If this occurs, we recommend that the system be checked by an authorized Kia dealer.

Tight corner brake effect

⚠ CAUTION - AWD

When turning sharply on a paved road at low speed while in all wheel drive, steering control will be difficult.

Tight corner brake effect is a unique characteristic of all wheel drive vehicles caused by the difference in tire rotation at the four wheels and the zero-degree alignment of the front wheels and suspension.

Sharp turns at low speeds should be carried out with caution.

All Wheel Drive (AWD) transfer mode selection

Transfer mode	Selection button	Indicator light	Description
AWD AUTO (AWD LOCK is deactivated)		 (Indicator light is not illuminated)	• When driving in AWD AUTO mode, the vehicle operates similar to conventional FWD vehicles under normal operating conditions. However, if the system determines that there is a need for the AWD mode, the engine's driving power is distributed to all four wheels automatically without driver intervention. • When driving on normal roads and pavement, the vehicle moves similar to conventional FWD vehicles.
AWD LOCK		 (Indicator light is illuminated)	• This mode is used for climbing or descending sharp grades, off-road driving, driving on sandy and muddy roads, etc., to maximize traction. • This mode automatically begins to deactivate at speeds above 30 km/h (19 mph) and is shifted to AWD AUTO mode at speed above 40 km/h (25 mph). If the vehicle decelerates to speeds below 30 km/h (19 mph), however, the transfer mode is shifted into AWD LOCK mode again.

✻ NOTICE

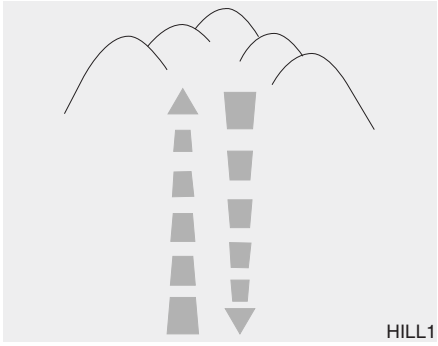
- **When driving on normal roads, deactivate the AWD LOCK mode by pushing the AWD LOCK button (the indicator light goes off). Driving on normal roads with AWD LOCK mode(especially, when cornering) may cause mechanical noise or vibration. The noise and vibration will disappear when the AWD LOCK mode is deactivated. Some parts of the power train may be damaged by prolonged driving with the noise and vibration.**
- **When the AWD LOCK mode is deactivated, a shock may be felt as the drive power is delivered entirely to the front wheels. This shock is not a mechanical failure.**

For safe all wheel drive operation

⚠ WARNING - All wheel drive

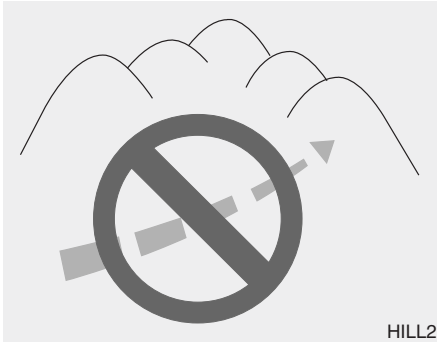
The conditions of on-road or off-road that demand all wheel drive mean all functions of your vehicle are exposed to extreme stress than under normal road conditions. Slow down and be ready for changes in the composition and traction of the surface under your tires. If you have any doubt about the safety of the conditions you are facing, stop and consider the best way to proceed. Do not exceed the ability of yourself or your vehicle to operate safely.

- Do not try to drive in deep standing water or mud since such conditions can stall your engine and clog your exhaust pipes. Do not drive down steep hills since it requires extreme skill to maintain control of the vehicle.



HILL1

- When you are driving up or down hills drive as straight as possible. Use extreme caution in going up or down steep hills, since you may flip your vehicle over depending on the grade, terrain and water/mud conditions.



HILL2

⚠ WARNING - Hills

Driving across the contour of steep hills can be extremely dangerous. This danger can come from slight changes in the wheel angle which can destabilize the vehicle or, even if the vehicle is maintaining stability under power, it can lose that stability if the vehicle stops its forward motion. Your vehicle may roll over without warning and without time for you to correct a mistake that could cause serious injury or death.

- You must consciously take the effort to learn how to corner in a AWD vehicle. Do not rely on your experience in conventional FWD vehicles in choosing safe cornering speed in AWD mode. For starters, you must drive more slowly in AWD.
- 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.

⚠ WARNING - AWD

Reduce speed when you turn corners. The center of gravity of AWD vehicles is higher than that of conventional FWD vehicles, making them more likely to roll over when you turn corners too fast.



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⚠ WARNING - Steering wheel

Do not grab the inside of the steering wheel when you are driving off-road. You may hurt your arm by a sudden steering maneuver or from steering wheel rebound due to impact with objects on the ground. You could lose control of the steering wheel.

- Always hold the steering wheel firmly when you are driving off-road.
- Make sure all passengers are wearing seat belts.

⚠ WARNING - Wind danger

If you are driving in heavy wind, the vehicle's higher center of gravity decreases your steering control capacity and requires you to drive more slowly.

- If you need to drive in the water, stop your vehicle, set your transfer to the AWD LOCK mode and drive at less than 8 km/h (5 mph).

⚠ WARNING - Driving through water

Drive slowly. If you are driving too fast in water, the water can get into the engine compartment and wet the ignition system, causing your vehicle to suddenly stop. If this happens and your vehicle is in a tilted position, your vehicle may roll over.

✻ NOTICE

- Do not drive in water if the level is higher than the bottom of the vehicle.
- Check your brake condition once you are out of mud or water. Press the brake pedal several times as you move slowly until you feel normal braking forces return.
- Shorten your scheduled maintenance interval if you drive in off-road conditions such as sand, mud or water (see “Maintenance under severe usage conditions” in section 7). Always wash your vehicle thoroughly after off-road use, especially cleaning the bottom of the vehicle.
- Since the driving torque is always applied to the 4 wheels the performance of the AWD vehicle is greatly affected by the condition of the tires. Be sure to equip the vehicle with four tires of the same size and type.
- A full time all wheel drive vehicle cannot be towed by an ordinary tow truck. Make sure that the vehicle is placed on a flat bed truck for moving.

⚠ WARNING - AWD driving

- Avoid high cornering speed.
- Do not make quick steering wheel movements, such as sharp lane changes or fast, sharp turns.
- The risk of rollover is greatly increased if you lose control of your vehicle at high speed.
- In a collision, an unbelted person is significantly more likely to die compared to a person wearing a seat belt.
- Loss of control often occurs if two or more wheels drop off the roadway and the driver over-steers to re-enter the roadway. In the event your vehicle leaves the roadway, do not steer sharply. Instead, slow down before pulling back into the travel lanes.

⚠ CAUTION - Mud or snow

If one of the front or rear wheels begins to spin in mud, snow, etc. the vehicle can sometimes be driven out by depressing the accelerator pedal further; however avoid running the engine continuously at high rpm because doing so could damage the AWD system.

Reducing the risk of a rollover

This multi-purpose passenger vehicle is defined as a Sports Utility Vehicle (SUV). SUV's have higher ground clearance and a narrower track to make them capable of performing in a wide variety of off-road 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 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 - Rollover

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.**

⚠ WARNING

Your vehicle is equipped with tires designed to provide safe ride and handling capability. Do not use a size and type of tire and wheel that is different from the one that is originally installed on your vehicle. It can affect the safety and performance of your vehicle, which could lead to 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. If you nevertheless decide to equip your vehicle with any tire/wheel combination not recommended by Kia for off road driving, you should not use these tires for highway driving.

⚠ WARNING - Jacked vehicle

While the full-time AWD vehicle is being raised on a jack, never start the engine or cause the tires to rotate.

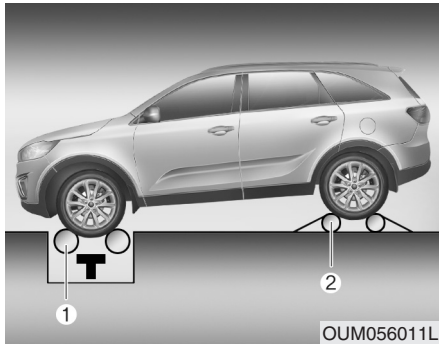
There is the danger that rotating tires touching the ground could cause the vehicle to go off the jack and to jump forward.

- Full-time AWD vehicles must be tested on a special four wheel chassis dynamometer.

✻ NOTICE

Never engage the parking brake while performing these tests.

- A full-time AWD vehicle should not be tested on a FWD roll tester. If a FWD roll tester must be used, perform the following:



1. Check the tire pressures recommended for your vehicle.
2. Place the front wheels on the roll tester (1) for a speedometer test as shown in the illustration.
3. Release the parking brake.
4. Place the rear wheels on the temporary free roller (2) as shown in the illustration.

⚠ WARNING - Dynamometer testing

Keep away from the front of the vehicle while the vehicle is in gear on the dynamometer. This is very dangerous as the vehicle can jump forward and cause serious injury or death.

⚠ CAUTION

- ***When lifting up the vehicle, do not operate front and rear wheel separately. All four wheels should be operated.***
- ***If you need to operate the front wheel and rear wheel when lifting up the vehicle, you should release the parking brake.***

BRAKE SYSTEM

Power brakes

Your vehicle has power-assisted brakes that adjust automatically through normal usage.

In the event that the power-assisted brakes lose power because of a stalled engine or some other reason, you can still stop your vehicle by applying greater force to the brake pedal than you normally would. The stopping distance, however, will be longer.

When the engine is not running, the reserve brake power is partially depleted each time the brake pedal is applied. Do not pump the brake pedal when the power assist has been interrupted.

Pump the brake pedal only when necessary to maintain steering control on slippery surfaces.

⚠ WARNING - Brakes

- **Do not drive with your foot resting on the brake pedal. This will create abnormal high brake temperatures, excessive brake lining and pad wear, and increased stopping distances.**
- **When descending a long or steep hill, shift to a lower gear and avoid continuous application of the brakes. Continuous brake application will cause the brakes to overheat and could result in a temporary loss of braking performance.**
- **Wet brakes may impair the vehicle's ability to safely slow down; the vehicle may also pull to one side when the brakes are applied. Applying the brakes lightly will indicate whether they have been affected in this way.**

(Continued)

(Continued)

Always test your brakes in this fashion after driving through deep water. To dry the brakes, apply them lightly while maintaining a safe forward speed until brake performance returns to normal.

- **Always, confirm the position of the brake and accelerator pedal before driving. If you don't check the position of the accelerator and brake pedal before driving, you may depress the accelerator instead of the brake pedal. It may cause a serious accident.**

In the event of brake failure

If service brakes fail to operate while the vehicle is in motion, you can make an emergency stop with the parking brake. The stopping distance, however, will be much greater than normal.

⚠ WARNING - Parking brake

Applying the parking brake while the vehicle is moving at normal speeds can cause a sudden loss of control of the vehicle. If you must use the parking brake to stop the vehicle, use great caution in applying the brake.

⚠ CAUTION

Do not operate the parking brake while the vehicle is moving except in an emergency situation. It could damage the vehicle system and make endanger driving safety.

Disc brakes wear indicator

When your brake pads are worn and new pads are required, you will hear a high-pitched warning sound from your front brakes or rear brakes (if equipped). You may hear this sound come and go or it may occur whenever you depress the brake pedal.

Please remember that some driving conditions or climates may cause a brake squeal when you first apply (or lightly apply) the brakes. This is normal and does not indicate a problem with your brakes.

⚠ CAUTION

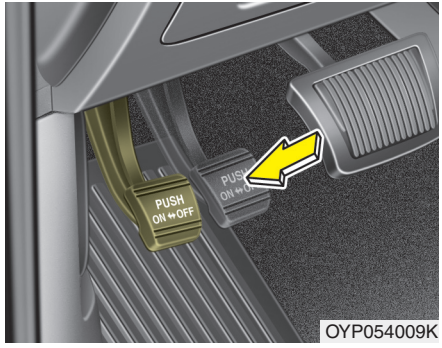
- ***To avoid costly brake repairs, do not continue to drive with worn brake pads.***
- ***Always replace the front or rear brake pads as pairs.***

⚠ WARNING - Brake wear

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

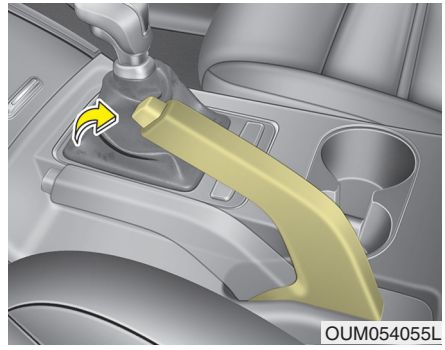
Parking brake

Applying the parking brake



Foot type

To engage the parking brake, first apply the foot brake and then depress the parking brake pedal down as far as possible.



Hand type

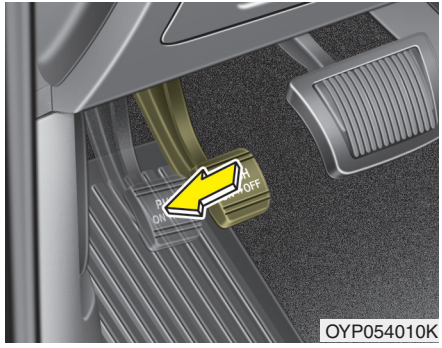
To engage the parking brake, first apply the foot brake and then pull up the parking brake lever as far as possible.

In addition it is recommended that when parking the vehicle on an incline, the shift lever should be in a low gear on manual transaxle vehicles or in the P (Park) position on automatic transaxle vehicles.

⚠ CAUTION

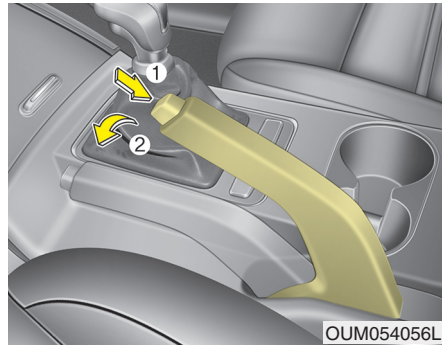
- ***Driving with the parking brake applied will cause excessive brake pad (or lining) and brake rotor wear.***
- ***Do not operate the parking brake while the vehicle is moving except in an emergency situation. It could damage the vehicle system and make endanger driving safety.***

Releasing the parking brake



Foot type

To release the parking brake, depress the parking brake pedal a second time while applying the foot brake. The pedal will automatically extend to the fully released position.



Hand type

To release the parking brake, first apply the foot brake and pull up the parking brake lever slightly. Secondly depress the release button (1) and lower the parking brake lever (2) while holding the button.

If the parking brake does not release or does not release all the way, we recommend that the system be checked by an authorized Kia dealer.

⚠ WARNING

- **To prevent unintentional movement when stopped and leaving the vehicle, do not use the shift lever instead of the parking brake. Set the parking brake AND make sure the shift lever is securely positioned in 1st (First) gear or R (Reverse) for manual transaxle equipped vehicles and in P (Park) for automatic transaxle equipped vehicles.**
- **Never allow anyone who is unfamiliar with the vehicle to touch the parking brake. If the parking brake is released unintentionally, serious injury may occur.**
- **All vehicles should always have the parking brake fully engaged when parking to avoid inadvertent movement of the vehicle which can injure occupants or pedestrians.**



WK-23_TF

Check the brake warning light by turning the ignition switch ON (do not start the engine). This light will be illuminated when the parking brake is applied with the ignition switch in the START or ON position.

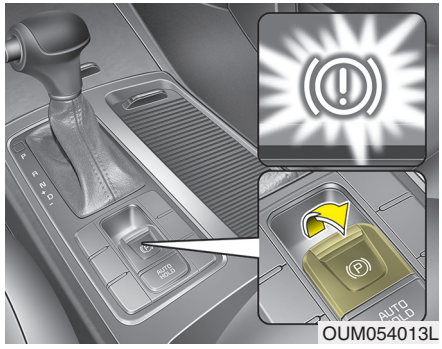
Before driving, be sure the parking brake is fully released and the brake warning light is off.

If the brake warning light remains on after the parking brake is released while the engine is running, there may be a malfunction in the brake system. Immediate attention is necessary.

If at all possible, cease driving the vehicle immediately. If that is not possible, use extreme caution while operating the vehicle and only continue to drive the vehicle until you can reach a safe location or repair shop.

Electronic parking brake (EPB) (if equipped)

Applying the parking brake



OUM054013L

To apply the EPB (electronic parking brake):

1. Depress the brake pedal.
2. Pull up the EPB switch.

Make sure the warning light comes on.

Also, the EPB is applied automatically if the Auto Hold button is on when the engine is turned off. However, if you keep pressing the EPB switch till the engine is turned off, the EPB will not be applied.

✻ NOTICE

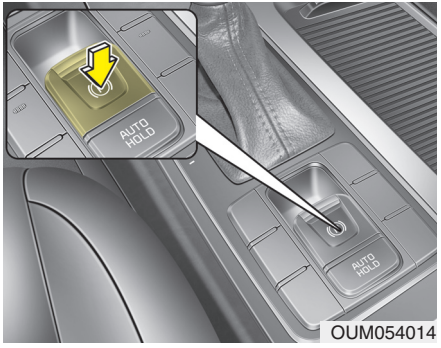
On a steep incline or when pulling a trailer if the vehicle does not stand still, do as follows:

1. **Apply the EPB.**
2. **Pull up the EPB switch for more than 3 seconds.**

⚠ CAUTION

Do not operate the parking brake while the vehicle is moving except in an emergency situation. It could damage the vehicle system and endanger driving safety.

Releasing the parking brake



OUM054014

To release the EPB (electronic parking brake), press the EPB switch in the following condition:

- Have the ignition switch or engine start/stop button in the ON position.
- Depress the brake pedal.

Make sure the brake warning light goes off.

To release EPB (electronic parking brake) automatically:

- Shift lever in P (Park)

  With the engine running depress the brake pedal and shift out of P (Park) to R (Rear) or D (Drive).
- Shift lever in N (Neutral)

  With the engine running depress the brake pedal and shift out of N (Neutral) to R (Rear) or D (Drive).
- Manual transaxle vehicle

  1. Start the engine.
  2. Fasten the driver's seat belt.
  3. Close the driver's door, engine hood and trunk.
  4. Depress the clutch pedal with the gear engaged.
  5. Depress the accelerator pedal while releasing the clutch pedal.

- Automatic transaxle vehicle
  1. Start the engine.
  2. Fasten the driver's seat belt.
  3. Close the driver's door, engine hood and trunk.
  4. Depress the accelerator pedal while the shift lever is in R (Rear), D (Drive) or Sports mode.

Make sure the brake warning light goes off.

✻ NOTICE

- **For your safety, you can engage the EPB even though the ignition switch or engine stop/start button is in the OFF position, but you cannot release it.**
- **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.**

✻ NOTICE - Manual transaxle

A vehicle towing a trailer on a hill or on an incline may slightly roll backwards when starting the vehicle. To prevent the situation follow the below instructions.

1. **Depress the clutch pedal and select a gear.**
2. **Keep pulling up the EPB switch.**
3. **Depress the accelerator pedal and slowly release the clutch pedal.**
4. **If the vehicle starts off with enough driving power release the EPB switch.**

Do not follow the above procedure when driving on a flat level ground. The vehicle may suddenly move forward.

⚠ CAUTION

- ***If the parking brake warning light is still on even though the EPB has been released, we recommend that the system be checked by an authorized Kia dealer.***
- ***Do not drive your vehicle with the EPB applied. It may cause excessive brake pad and brake rotor wear.***

EPB (electronic parking brake) may be automatically applied when:

- The EPB is overheated
- Requested by other systems

✻ NOTICE

If the driver turns the engine off by mistake while Auto Hold is operating, EPB will be automatically applied. (Vehicle's equipped with Auto Hold)

System warning



OUM054104L

- If you try to drive off depressing the accelerator pedal with the EPB applied, but doesn't release automatically, a warning will sound and a message will appear.
- If the driver's seat belt is not fastened and the engine hood or trunk is opened, a warning will sound and a message will appear.
- If there is a problem with the vehicle, a warning may sound and a message may appear.

If the above situation occurs, depress the brake pedal and release EPB by pressing the EPB switch.

⚠ WARNING

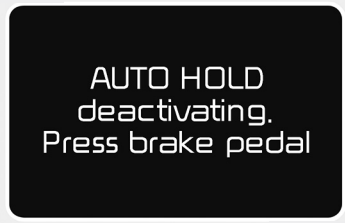
- **To prevent unintentional movement when stopped and leaving the vehicle, do not use the shift lever in place of the parking brake. Set the parking brake and make sure the shift lever is securely positioned in P (Park).**
- **Never allow anyone who is unfamiliar with the vehicle to touch the parking brake. If the parking brake is released unintentionally, serious injury may occur.**
- **All vehicles should always have the parking brake fully engaged when parking to avoid inadvertent movement of the car which can injure occupants or pedestrians.**

⚠ CAUTION

- ***A click sound may be heard while operating or releasing the EPB, but these conditions are normal and indicate that the EPB is functioning properly.***
- ***When leaving your keys with a parking lot attendant or valet, make sure to inform him/her how to operate the EPB.***
- ***The EPB may malfunction if you drive with the EPB applied.***
- ***When you automatically release EPB by depressing the accelerator pedal, depress it slowly.***

System warning

■ Type A



OUM054100L

■ Type B



OUM054101L

When the conversion from Auto Hold to EPB is not working properly a warning will sound and a message will appear.

⚠ CAUTION

Depress the brake pedal when the above message appears for the Auto Hold and EPB may not activate.

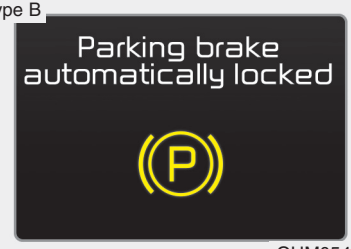
System warning

■ Type A



OUM054102L

■ Type B

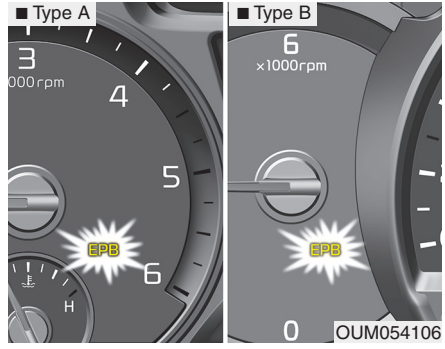


OUM054103L

If the EPB is applied while Auto Hold is activated because of ESC (Electronic Stability Control) signal, a warning will sound and a message will appear.

EPB malfunction indicator (if equipped)

■ Type A ■ Type B



OUM054106

This warning light illuminates if the engine start/stop button is changed to the ON position and goes off in approximately 3 seconds if the system is operation normally.

If the EPB malfunction indicator remains on, comes on while driving, or does not come on when the ignition switch or the engine start/stop button is changed to the ON position, this indicates that the EPB may have malfunctioned.

If this occurs, we recommend that the system be checked by an authorized Kia dealer.

The EPB malfunction indicator may illuminate when the ESC indicator comes on to indicate that the ESC is not working properly, but it does not indicate a malfunction of the EPB.

⚠ CAUTION

- ***The EPB warning light may illuminate 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, we recommend that the system be checked by an authorized Kia dealer.***
- ***If the parking brake warning light does not illuminate 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 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, we recommend that the system be checked by an authorized Kia dealer.***

Emergency braking

If there is a problem with the brake pedal while driving, emergency braking is possible by pulling up and holding the EPB switch. Braking is possible only while you are holding the EPB switch.

⚠ WARNING

Do not operate the parking brake while the vehicle is moving except in an emergency situation.

✻ NOTICE

During emergency braking by the EPB, the parking brake warning light will illuminate to indicate that the system is operating.

⚠ CAUTION

If you continuously notice a noise or burning smell when the EPB is used for emergency braking, we recommend that the system be checked by an authorized Kia dealer.

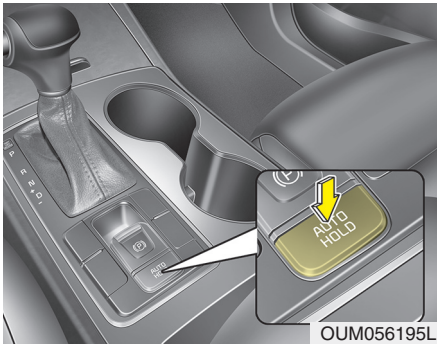
When the EPB (electronic parking brake) does not release

If the EPB does not release normally, we recommend that you contact an authorized Kia dealer by loading the vehicle on a flatbed tow truck and have the system checked.

AUTO HOLD (if equipped)

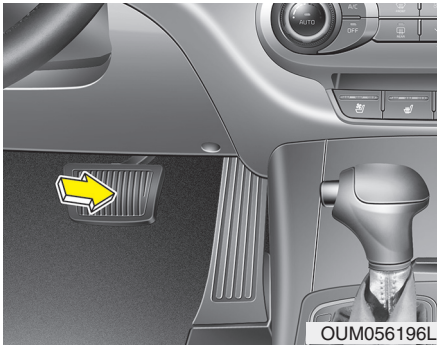
The Auto Hold maintains the vehicle in a standstill even though the brake pedal is not depressed after the driver brings the vehicle to a complete stop by depressing the brake pedal.

Set up



OUM056195L

1. With the driver's door, engine hood and trunk closed, fasten the driver's seat belt or depress the brake pedal and then press the Auto Hold button. The white AUTO HOLD indicator will come on and the system will be in the standby position.


OUM056196L

2. When you stop the vehicle completely by depressing the brake pedal, the AUTO HOLD indicator changes from white to green.
3. The vehicle will remain stationary even if you release the brake pedal.
4. If EPB is applied, Auto Hold will be released.

Leaving

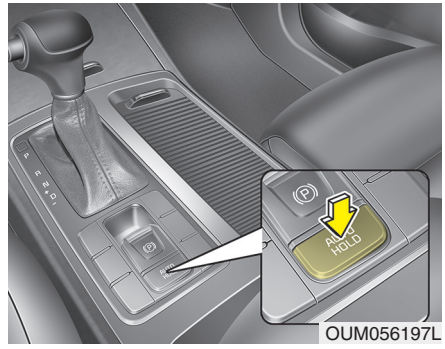
If you press the accelerator pedal with the shift lever in R (Reverse), D (Drive) or sports mode, the Auto Hold will be released automatically and the vehicle will start to move. The indicator changes from green to white.

⚠ WARNING

When driving off from Auto Hold by depressing the accelerator pedal, always check the surrounding area near your vehicle.

Slowly depress the accelerator pedal for a smooth launch.

Cancel



To cancel the Auto Hold operation, press the Auto Hold switch. The AUTO HOLD indicator will go out.

To cancel the Auto Hold operation when the vehicle is at a standstill, press the Auto Hold switch while depressing the brake pedal.

✻ NOTICE

- **The Auto Hold does not operate when:**
  - **The driver's seat belt is unfastened and driver's door is opened**
  - **The engine hood is opened**
  - **The trunk is opened**
  - **The shift lever is in P (Park)**
  - **The EPB is applied**
- **For your safety, the Auto Hold automatically switches to EPB in such cases:**
  - **The driver's seat belt is unfastened and driver's door is opened**
  - **The engine hood is opened**
  - **The trunk is opened**
  - **The vehicle is in a standstill for more than 10 minutes**
  - **The vehicle is standing on a steep slope**
  - **The vehicle moved several times**

(Continued)

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In these cases, the brake warning light comes on, the AUTO HOLD indicator changes from green to white, and a warning sounds and a message will appear to inform you that EPB has been automatically engaged. Before driving off again, press foot brake pedal, check the surrounding area near your vehicle and release parking brake manually with the EPB switch.

- If the AUTO HOLD indicator lights up yellow, the Auto Hold is not working properly. We recommend that the you contact an authorized Kia dealer.
- While operating Auto Hold, you may heard mechanical noise. However, it is normal operation noise.

⚠ WARNING

- Press the accelerator pedal slowly when you start the vehicle.
- For your safety, cancel the Auto Hold when you drive downhill or back up the vehicle or park the vehicle.

⚠ CAUTION

If there is a malfunction with the driver's door, engine hood or trunk open detection system, the Auto Hold may not work properly.

We recommend that the you contact an authorized Kia dealer.

Anti-lock brake system (ABS)

⚠ WARNING

ABS (or ESC) will not prevent accidents due to improper or dangerous driving maneuvers. Even though vehicle control is improved during emergency braking, always maintain a safe distance between you and objects ahead. Vehicle speeds should always be reduced during extreme road conditions.

The braking distance for vehicle equipped with an anti-lock braking system (or Electronic Stability Control) may be longer than for those without it in the following road conditions.

During these conditions the vehicle should be driven at reduced speeds:

- Rough, gravel or snow-covered roads.
- With tire chains installed.

(Continued)

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- **On roads where the road surface is pitted or has different surface height.**

The safety features of an ABS (or ESC) equipped vehicle should not be tested by high speed driving or cornering. This could endanger the safety of yourself or others.

The ABS continuously senses the speed of the wheels. If the wheels are going to lock, the ABS system repeatedly modulates the hydraulic brake pressure to the wheels.

When you apply your brakes under conditions which may lock the wheels, you may hear a “tik-tik” sound from the brakes, or feel a corresponding sensation in the brake pedal. This is normal and it means your ABS is active.

In order to obtain the maximum benefit from your ABS in an emergency situation, do not attempt to modulate your brake pressure and do not try to pump your brakes. Press your brake pedal as hard as possible or as hard as the situation warrants and allow the ABS to control the force being delivered to the brakes.

✻ NOTICE

A click sound may be heard in the engine compartment when the vehicle begins to move after the engine is started. These conditions are normal and indicate that the anti-lock brake system is functioning properly.

- Even with the anti-lock brake system, your vehicle still requires sufficient stopping distance. Always maintain a safe distance from the vehicle in front of you.
- Always slow down when cornering. The anti-lock brake system cannot prevent accidents resulting from excessive speeds.
- On loose or uneven road surfaces, operation of the anti-lock brake system may result in a longer stopping distance than for vehicles equipped with a conventional brake system.



W-78

⚠ CAUTION

- ***If the ABS warning light is on and stays on, you may have a problem with the ABS. In this case, however, your regular brakes will work normally.***

(Continued)

(Continued)

- ***The ABS warning light will stay on for approximately 3 seconds after the ignition switch is ON. During that time, the ABS will go through self-diagnosis and the light will go off if everything is normal. If the light stays on, you may have a problem with your ABS. We recommend that you contact an authorized Kia dealer.***

⚠ CAUTION

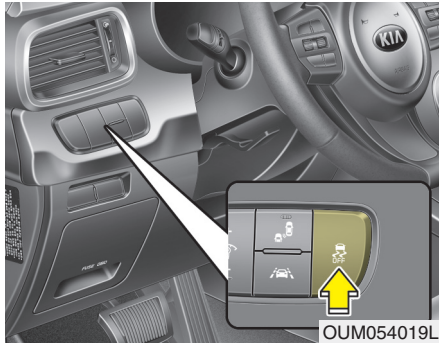
- ***When you drive on a road having poor traction, such as an icy road, and operate your brakes continuously, the ABS will be active continuously and the ABS warning light may illuminate. Pull your vehicle over to a safe place and stop the engine.***
- ***Restart the engine. If the ABS warning light is off, then your ABS system is normal. Otherwise, you may have a problem with the ABS. We recommend that you contact an authorized Kia dealer.***

✻ NOTICE

When you jump start your vehicle because of a drained battery, the engine may not run as smoothly and the ABS warning light may turn on at the same time. This happens because of the low battery voltage. It does not mean your ABS is malfunctioning.

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

Electronic stability control (ESC) (if equipped)



The Electronic Stability Control (ESC) system is designed to stabilize the vehicle during cornering maneuvers. ESC checks where you are steering and where the vehicle is actually going. ESC applies the brakes at individual wheels and intervenes with engine management system to stabilize the vehicle.

⚠ WARNING

Never drive too fast for the road conditions or too quickly when cornering. Electronic stability control (ESC) will not prevent accidents. Excessive speed in turns, abrupt maneuvers and hydroplaning on wet surfaces can still result in serious accidents. Only a safe and attentive driver can prevent accidents by avoiding maneuvers that cause the vehicle to lose traction. Even with ESC installed, always follow all the normal precautions for driving - including driving at safe speeds for the conditions.

The Electronic stability control (ESC) system is an electronic system designed to help the driver maintain vehicle control under adverse conditions. It is not a substitute for safe driving practices. Factors including speed, road conditions and driver steering input can all affect whether ESC will be effective in preventing a loss of control. It is still your responsibility to drive and corner at reasonable speeds and to leave a sufficient margin of safety.

When you apply your brakes under conditions which may lock the wheels, you may hear a “tik-tik” sound from the brakes, or feel a corresponding sensation in the brake pedal. This is normal and it means your ESC is active.

✻ NOTICE

A click sound may be heard in the engine compartment when the vehicle begins to move after the engine is started. These conditions are normal and indicate that the Electronic stability control (ESC) System is functioning properly.

ESC operation

ESC ON condition

-

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

When operating



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

- When the Electronic Stability Control is operating properly, you can feel a slight pulsation in the vehicle. This is only the effect of brake control and indicates nothing unusual.
- When moving out of the mud or slippery road, the engine rpm (revolution per minute) may not increase even if you press the accelerator pedal deeply. This is to maintain the stability and traction of the vehicle and does not indicate a problem.

ESC operation off

ESC OFF state



This car has 2 kinds of ESC off states.

If the engine stops when ESC is off, ESC remains off. Upon restarting the engine, the ESC will automatically turn on again.

■ Type A



OUM054165L

■ Type B



OUM054161L

• ESC off state 1

To cancel ESC operation, press the ESC OFF button (ESC OFF) shortly (ESC OFF indicator light (ESC OFF) illuminates). At this state, the engine control function does not operate. It means the traction control function does not operate. Brake control function only operates.

■ Type A



OUM054162L

■ Type B



OUM054163L

• ESC off state 2

To cancel ESC operation, press the ESC OFF button (ESC OFF) for more than 3 seconds. ESC OFF indicator light (ESC OFF) illuminates and ESC OFF warning chime will sound. At this state, the engine control function and brake control function do not operate. It means the car stability control function does not operate any more.

Indicator light

■ ESC indicator light



■ ESC OFF indicator light



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

The ESC indicator light blinks whenever ESC is operating or illuminates when ESC fails to operate.

ESC OFF indicator light comes on when the ESC is turned off with the button.

⚠ CAUTION

Driving with varying tire or wheel sizes may cause the ESC system to malfunction. When replacing tires, make sure they are the same size as your original tires.

⚠ WARNING

The Electronic Stability Control system is only a driving aid; use precautions for safe driving by slowing down on curved, snowy, or icy roads. Drive slowly and don't attempt to accelerate whenever the ESC indicator light is blinking, or when the road surface is slippery.

ESC OFF usage

When driving

- ESC should be turned on for daily driving whenever possible.
- To turn ESC off while driving, press the ESC OFF button while driving on a flat road surface.

⚠ WARNING

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

- **When operating the vehicle on a dynamometer, ensure that the ESC is turned off by pressing the ESC OFF button for more than 3 seconds (ESC OFF light illuminated). 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.**

Vehicle stability management (VSM) (if equipped)

This system provides further enhancements to vehicle stability and steering responses when a vehicle is driving on a slippery road or a vehicle detected changes in coefficient of friction between right wheels and left wheels when braking.

VSM operation

When the VSM is operating:

- ESC (Electronic Stability Control) ( ) light will blink.
- The steering wheel may be controlled.

When the vehicle stability management is operating properly, you can feel a slight pulsation in the vehicle. This is only the effect of brake control and indicates nothing unusual.

The VSM does not operate when:

- Driving on bank road such as gradient or incline
- Driving rearward
- ESC OFF indicator light ( ) remains on the instrument cluster
- EPS (Electronic Power Steering) indicator light remains on the instrument cluster

VSM operation off

If you press the ESC OFF button to turn off the ESC, the VSM will also cancel and the ESC OFF indicator light ( ) illuminates.

To turn on the VSM, press the button again. The ESC OFF indicator light goes out.

Malfunction indicator

The VSM can be deactivated even if you don't cancel the VSM operation by pressing the ESC OFF button. It indicates that a malfunction has been detected somewhere in the EPS (Electronic Power Steering) system or VSM system. If the ESC indicator light ( ) or EPS warning light remains on, we recommend that the system be checked by an authorized Kia dealer.

✻ NOTICE

- **The VSM is designed to function above approximately 22 km/h (13 mph) on curves.**
- **The VSM is designed to function above approximately 10 km/h (6 mph) when a vehicle is braking on a split-mu road. The split-mu road is made of surfaces which have different friction forces.**

⚠ WARNING

- **The Vehicle Stability Management system is not a substitute for safe driving practices but a supplementary function only. It is the responsibility of the driver to always check the speed and the distance to the vehicle ahead. Always hold the steering wheel firmly while driving.**
- **Your vehicle is designed to activate according to the driver's intention, even with the VSM installed. Always follow all the normal precautions for driving at safe speeds for the conditions – including driving in inclement weather and on a slippery road.**
- **Driving with varying tire or wheel sizes may cause the VSM system to malfunction. When replacing tires, make sure they are the same size as your original tires.**

Trailer stability assist (TSA) (if equipped)

Trailer stability assist is operated as vehicle stability control system. Trailer stability assist system has an effort to stabilize the vehicle and trailer when the trailer sways or oscillates. There are various reasons making vehicle sway and oscillate. Almost case it happens at high speed however, if the trailer is affected by crosswinds, buffeting, and improper overloading, it may be a risk of swaying.

Factors of swaying such as:

- High speed
- Strong crosswinds
- Improper overloading
- Sudden controlling of steering wheel
- Uneven road

Trailer stability assist system continuously analyzes the vehicle and trailer instability. When the Trailer stability assist system detects some sway, the brakes are applied automatically to stabilize the vehicle on the front wheel. However, if it is not enough to stabilize, the brakes are applied on all wheels automatically and engine power is properly reduced. When the vehicle is stable from swaying, trailer stability assist system does not operate.

Hill-start assist control (HAC) (if equipped)

A vehicle has the tendency to slip back on a steep hill when it starts to go after stopping. The Hill-start Assist Control (HAC) prevents the vehicle from slipping back by operating the brakes automatically for about 1~2 seconds. The brakes are released when the accelerator pedal is depressed or after about 1~2 seconds.

⚠ WARNING

The HAC is activated only for about 1~2 seconds, so when the vehicle is starting off always depress the accelerator pedal.

✻ NOTICE

- **The HAC does not operate when the transaxle shift lever is in the P (Park) or N (Neutral) position.**
- **The HAC activates even though the ESC is off but it does not activate when the ESC has malfunctioned.**

Emergency Stop Signal (ESS) (if equipped)

The Emergency Stop Signal system alerts the driver behind by blinking the stop light when the vehicle is braked rapidly and severely.

The system is activated when:

- The vehicle suddenly stops (vehicle speed is over 55km/h and the vehicle deceleration at greater than 7 m/s^2)
- The ABS is activating

When the vehicle speed is under 40 km/h and the ABS deactivates or the sudden stop situation is over, the stop light blinking will stop. Instead, the hazard warning flasher will turn on automatically.

The hazard warning flasher will turn off when vehicle speed is over 10km/h after the vehicle has stopped. Also, it will turn off when the vehicle is driven at low speed for some time. You can turn it off manually by pushing the hazard warning flasher switch.

⚠ CAUTION

The Emergency Stop Signal (ESS) system will not work if the hazard warning flasher is already on.

Good braking practices

⚠ WARNING

- **Whenever you leave or park your vehicle, always set the parking brake as far as possible and fully engage the vehicle's transaxle into the P (Park) position. If the parking brake is not fully engaged, the vehicle may move inadvertently and injure yourself and others.**
- **All vehicles should always have the parking brake fully engaged when parking to avoid inadvertent movement of the vehicle which can injure occupants or pedestrians.**

- Check to be sure the parking brake is not engaged and that the parking brake indicator light is out before driving away.
- Driving through water may get the brakes wet. They can also get wet when the vehicle is washed. Wet brakes can be dangerous! Your vehicle will not stop as quickly if the brakes are wet. Wet brakes may cause the vehicle to pull to one side.

  To dry the brakes, apply the brakes lightly until the braking action returns to normal, taking care to keep the vehicle under control at all times. If the braking action does not return to normal, stop as soon as it is safe to do so and we recommend that you call an authorized Kia dealer.
- Do not coast down hills with the vehicle out of gear. This is extremely hazardous. Keep the vehicle in gear at all times, use the brakes to slow down, then shift to a lower gear so that engine braking will help you maintain a safe speed.

- Do not "ride" the brake pedal. Resting your foot on the brake pedal while driving can be dangerous because it can result in the brakes overheating and losing their effectiveness. It also increases the wear of the brake components.
- If a tire goes flat while you are driving, apply the brakes gently and keep the vehicle pointed straight ahead while you slow down. When you are moving slowly enough for it to be safe to do so, pull off the road and stop in a safe place.
- If your vehicle is equipped with an automatic transaxle, do not let your vehicle creep forward. To avoid creeping forward, keep your foot firmly on the brake pedal when the vehicle is stopped.
- Be cautious when parking on a hill. Firmly engage the parking brake and place the shift lever in P (automatic transaxle) or in first or reverse gear (manual transaxle). If your vehicle is facing downhill, turn the front wheels into the curb to help keep the vehicle from rolling. If your vehicle is facing uphill, turn the front wheels away from the curb to help keep the vehicle from rolling. If there is no curb or if it is required by other conditions to keep the vehicle from rolling, block the wheels.
- Under some conditions your parking brake can freeze in the engaged position. This is most likely to happen when there is an accumulation of snow or ice around or near the rear brakes or if the brakes are wet. If there is a risk that the parking brake may freeze, apply it only temporarily while you put the shift lever in P (automatic transaxle) or in first or reverse gear (manual transaxle) and block the rear wheels so the vehicle cannot roll. Then release the parking brake.
- Do not hold the vehicle on the upgrade with the accelerator pedal. This can cause the transaxle to overheat. Always use the brake pedal or parking brake.

AUTONOMOUS EMERGENCY BRAKING (AEB) (IF EQUIPPED)

The AEB system is to reduce or to avoid accident risk. It recognizes the distance from the vehicle ahead or the pedestrian through the sensors (i.e. radar and camera), and, if necessary, warns the driver of accident risk with the warning message or the warning alarms.

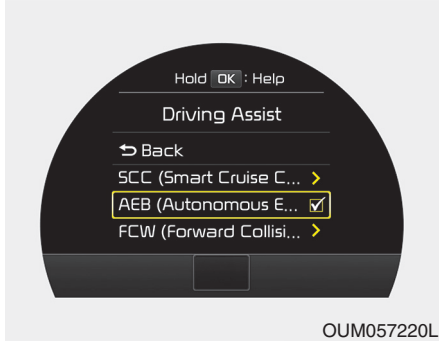
⚠ WARNING

Take the following precautions when using the Autonomous Emergency Braking (AEB):

- **This system is only a supplemental system and it is not intended to, nor does it replace the need for extreme care and attention of the driver. The sensing range and objects detectable by the 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. AEB does not stop the vehicle completely and does not avoid collisions.**

System setting and activation

System setting

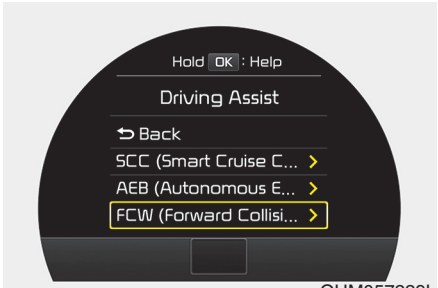


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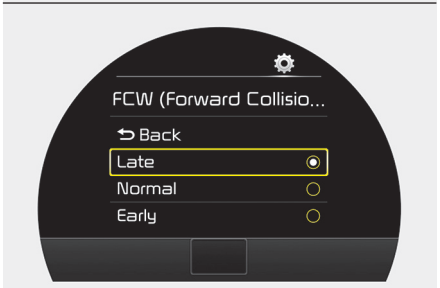
The driver can activate the AEB by placing the ignition switch to the ON position and by selecting 'User Settings', 'Driving Assist', and 'Autonomous Braking System'. The AEB deactivates, when the driver cancels the system setting.



The warning light illuminates on the LCD display, when you cancel the AEB system. The driver can monitor the AEB ON/OFF status on the LCD display. When the warning light remains ON with the AEB activated, we recommend you to have the system checked by an authorized Kia dealer.



OUM057229L



OUMA057231

The driver can select the initial warning activation time in the User Settings in the instrument cluster LCD display. The options for the initial Forward Collision Warning include the following:

- EARLY - 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 or pedestrian ahead 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 or pedestrian ahead before the initial warning occurs.
- LATE - 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 or pedestrian ahead before the initial warning occurs.

Prerequisite for activation

The AEB gets ready to be activated, when the AEB is selected on the LCD display, and when the following prerequisites are satisfied.

- The ESC is activated.
- The driving speed is over 10km/h. (However, AEB is activated within certain driving speed.)
- When recognizing the vehicle or the pedestrian in front. (However, AEB does not activate according to conditions in front and vehicle systems, but it notices only certain warnings.)

⚠ WARNING

- **The AEB automatically activates upon placing the ignition switch to the ON position. The driver can deactivate the AEB by canceling the system setting on the LCD display.**
- **The AEB automatically deactivates upon canceling the ESC. When the ESC is canceled, the AEB cannot be activated on the LCD display.**
- **Set or cancel AEB with controlling switches on steering wheel after stopping the vehicle in the safe place for your safety.**

AEB warning message and system control

The AEB 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. Also, it controls the brakes in accordance with the collision risk levels.

Forward Warning (1st warning)



OUM057235L

The warning message appears on the LCD display with the warning alarms.

Collision Warning (2nd warning)



OUM057236L

- The warning message appears on the LCD display with the warning alarms.
- The AEB controls the brakes within certain limit to release shock from the collision.

Emergency braking (3rd warning)



OUM057237L

- The warning message appears on the LCD display with the warning alarms.
- The AEB controls the brakes within certain limit to release shock from the collision.

  The AEB controls the maximum brakes just before the collision.

Brake operation

- In an urgent situation, the braking system enters into the ready status for prompt reaction against the driver's depressing the brake pedal.
- The AEB 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 brake 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

The AEB cannot avoid all collisions. The AEB 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

The AEB operates in accordance with the risk levels, such as the distance from the vehicle/passer-by in front, the speed of the vehicle/passer-by in front, and the driver's vehicle operation.

Sensor to detect the distance from the vehicle in front (front radar)


OUM054054L

The sensor is to maintain a certain distance from the vehicle in front. However, the smudged sensor lens with foreign substances, such as snow and rain, adversely affects the sensing performance. It may even temporarily cancel the AEB. Always keep the sensor lens clean.

Warning message and warning light



OUM057245L

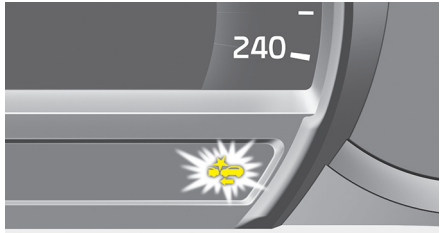
When the sensor cover or the sensor lens is smudged with the foreign substances, such as snow or rain, the AEB operation may temporarily stop. In this case, the warning message appears to warn the driver.

This is not a malfunction with the AEB. To operate the AEB again, remove the foreign substances.

✻ 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 system may not normally operate even without the warning light or message. In this case, we recommend you to have the vehicle inspected by an authorized Kia dealer.**
- **Use only the genuine Kia sensor cover. Do not arbitrarily apply paint on the sensor cover.**

System malfunction



OUM057233

OUM057244N

- When the AEB is not working properly, the AEB warning light ( ) will illuminate and the warning message will appear for a few seconds. After the message disappears, the master warning light ( ) will illuminate. In this case, we recommend you to have the vehicle inspected by an authorized Kia dealer.
- The AEB warning message may appear along with the illumination of the ESC warning light.

⚠ WARNING

- **The AEB is only a supplemental system for the driver's convenience. The driver should hold the responsibility to control the vehicle operation. Do not solely depend on the AEB system. Rather, maintain a safe braking distance, and, if necessary, depress the brake pedal to lower the driving speed.**
- **The AEB may unnecessarily produce the warning message and the warning alarms. Also, due to the sensing limitation, the AEB may not produce the warning message and the warning alarm at all.**

(Continued)

(Continued)

- **When there is a malfunction with the AEB, the braking control does not operate upon detecting a collision risk even with other braking systems normally operating.**
- **The AEB operates only for the vehicle / pedestrian in front, while driving forward. It does not operate for any animals or vehicles in the opposite direction.**
- **The AEB does not recognize the vehicle, which horizontally drives across the crossroad, or the vehicle, which is parked in the horizontal direction.**

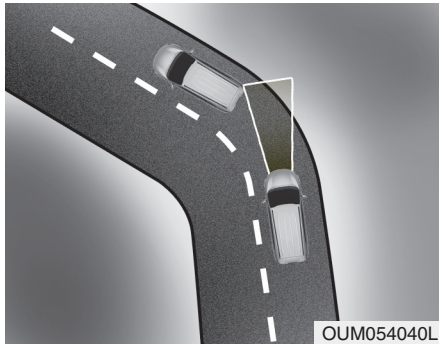
Limitation of the system

The AEB is an assistant system for a driver in a certain risky driving condition and it does not take every responsibility for all risks from driving condition.

The AEB monitors the driving situations through the radar and the camera sensor. Thus, for a situation out of the sensing range, the AEB may not normally operate. The driver should pay great caution in the following situations. The AEB operation may be limited.

Recognizing vehicles

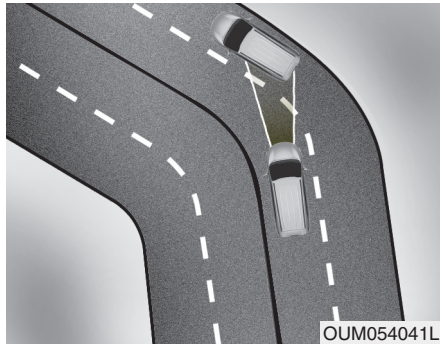
- The radar or the camera is contaminated with foreign substances.
- It heavily rains or snows.
- There is interruption by electric waves.
- There is severe irregular reflection from the radar.
- Driving on uneven road surfaces, or through sudden gradient changes.
- In construction zones or on railroad tracks
- There are metallic objects on the road.
- The vehicle in front has a narrow body. (i.e. motor cycle and bicycle)
- The driver's view is unclear due to the backlight, the reflected light, or darkness.
- The camera cannot contain the full image of the vehicle in front.
- The vehicle in front is a special vehicle, such as a heavily-loaded truck or a trailer.
- The vehicle in front does not turn ON the rear lights, does not have rear lights, has asymmetric rear lights, or has rear lights out of angle.
- The outside brightness is greatly changed, such as entering/exiting the tunnel.
- The vehicle driving is unstable.
- The radar/camera sensor recognition is limited.


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- Driving on a curve

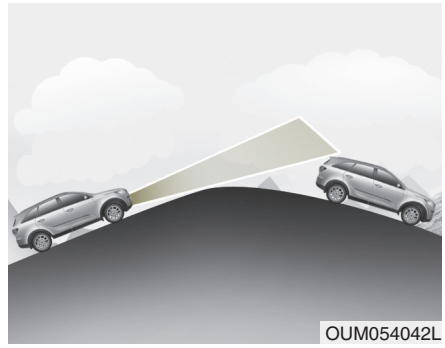
The AEB performance decreases while driving on a curve. The AEB may not recognize the vehicle in front even in the same lane. It may unnecessarily produce the warning message and the warning alarm, or it may not produce the warning message and the warning alarm at all.

While driving on a curve, pay great caution, and, if necessary, depress the brake pedal.


OUM054041L

While driving on a curve, the AEB may recognize the vehicle in front in the next lane. Pay great caution, and, if necessary, depress the brake pedal.

Or, depress the accelerator pedal to maintain the driving speed. Always, take a look around the vehicle for your safety.

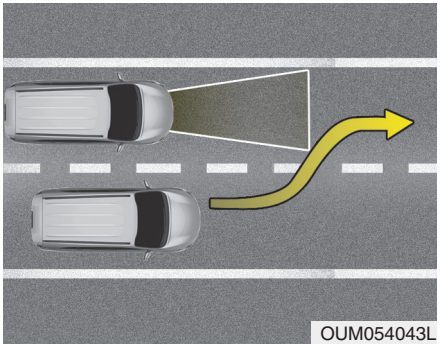

OUM054042L

- Driving on a slope

The AEB performance decreases while driving upward or downward on a slope, not recognizing the vehicle in front in the same lane. It may unnecessarily produce the warning message and the warning alarm, or it may not produce the warning message and the warning alarm at all.

When the AEB suddenly recognizes the vehicle in front while passing over a slope, you may experience sharp deceleration.

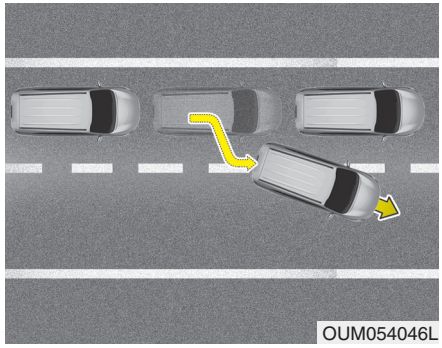
Always keep your eyes forward while driving upward or downward on a slope, and, if necessary, depress the brake pedal.



- Changing lanes

Even though the vehicle in the next lane enters into your lane, it may not be recognized by the AEB, until it enters the AEB sensing range.

Especially when the vehicle in the next lane abruptly enters into your lane, it is more likely not be recognized. Always pay great attention.



When the stopped vehicle in front gets out of the lane, it may not be recognized by your AEB. Always pay great attention.



- 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.

Recognizing pedestrians

- The pedestrian is not fully captured by the camera sensor, or the pedestrian does not walk in the upright position.
- The pedestrian moves very fast.
- The pedestrian abruptly appears in front.
- The pedestrian wears clothes in the color similar to the background.
- The outside is too bright or too dark.
- The vehicle drives at night or in the darkness.
- There is an item similar to a person's body structure.
- The pedestrian is small.
- The pedestrian has impaired mobility.
- It is difficult to distinguish the pedestrian from the surroundings.
- The sensor recognition is limited.
- There is a group of pedestrians.

⚠ WARNING

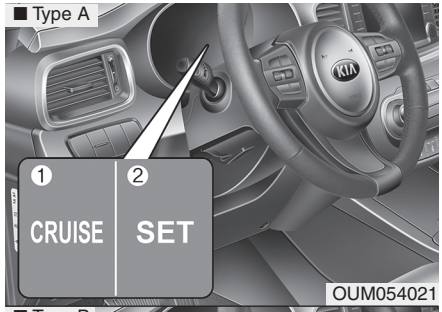
- **Cancel the AEB in the User Settings on the LCD display, before towing another vehicle. While towing, the brake application may adversely affect your vehicle safety.**
- **Pay great caution to the vehicle in front, when it has heavy loading extended rearward, or when it has higher ground clearance.**
- **The sensor only detects pedestrian, not carts, bicycles, motorcycles, luggage bags, or strollers.**
- **The AEB does not operate in a certain situation. Thus, never test-operate the AEB against a person or an object. It may cause a severe injury or even death.**

✻ NOTICE

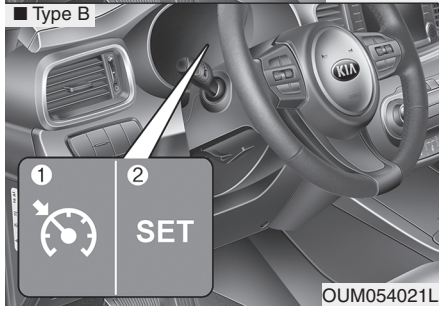
The system may temporarily cancel due to the strong electric waves.

CRUISE CONTROL SYSTEM (IF EQUIPPED)

■ Type A



■ Type B



1. Cruise indicator
2. Cruise set indicator

The cruise control system allows you to program the vehicle to maintain a constant speed without pressing the accelerator pedal.

This system is designed to function above approximately 30 km/h (20 mph).

⚠ WARNING

- **If the cruise control is left on, (cruise indicator light is illuminated), the cruise control can be switched on accidentally. Keep the cruise control system off when the cruise control is not in use, to avoid inadvertently setting a speed.**
- **Use the cruise control system only when traveling on open highways in good weather.**
- **Do not use the cruise control when 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% up-hill or down-hill roads.**

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- **Pay particular attention to the driving conditions whenever using the cruise control system.**
- **Be careful when driving downhill using the cruise control system, which may increase the vehicle speed.**

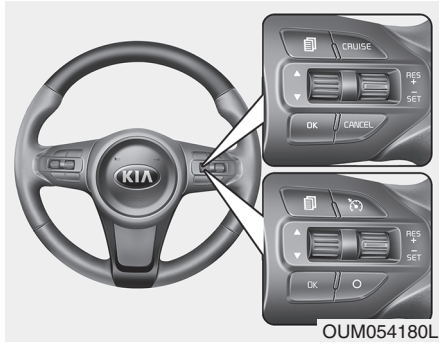
⚠ CAUTION

During cruise-speed driving of a manual transaxle vehicle, do not shift into neutral without depressing the clutch pedal, since the engine will be over-revved. If this happens, depress the clutch pedal or release the cruise control ON-OFF switch.

✻ NOTICE

- **During normal cruise control operation, when the SET switch is activated or reactivated after applying the brakes, the cruise control will energize after approximately 3 seconds. This delay is normal.**
- **To activate cruise control, depress the brake pedal at least once after turning the ignition switch to the ON position or starting the engine. This is to check if the brake switch which is important part to cancel cruise control is in normal condition.**

Cruise control switch



CANCEL/O : Cancels cruise control operation.

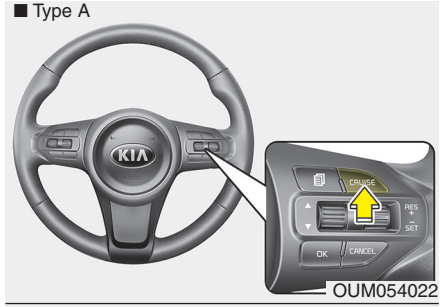
CRUISE / : Turns cruise control system on or off.

RES+ : Resumes or increases cruise control speed.

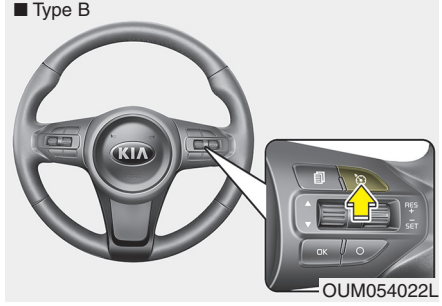
SET- : Sets or decreases cruise control speed.

To set cruise control speed:

■ Type A



■ Type B



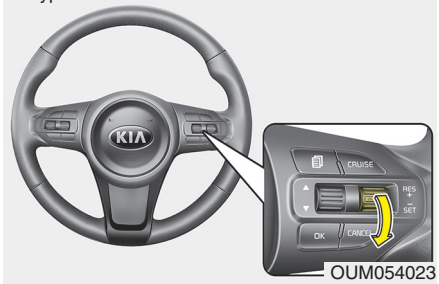
1. Press the CRUISE / button on the steering wheel, to turn the system on. The cruise indicator light will illuminate.

2. Accelerate to the desired speed, which must be more than approximately 30 km/h (20 mph).

✻ NOTICE - Manual transaxle

For manual transaxle vehicles, you should depress the brake pedal at least once to set the cruise control after starting the engine.

■ Type A



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■ Type B



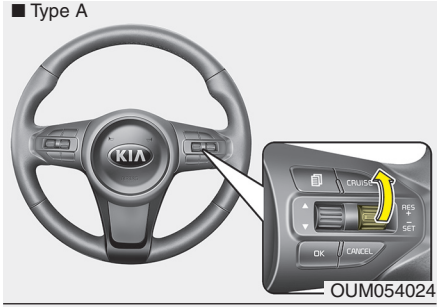
OUM054023L

3. Move the lever 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. The desired speed will automatically be maintained.

On a steep grade, the vehicle may slow down or speed up slightly while going downhill.

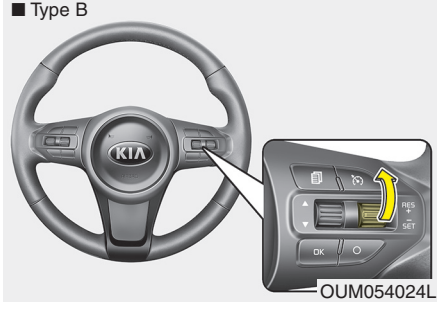
To increase cruise control set speed:

■ Type A



OUM054024

■ Type B



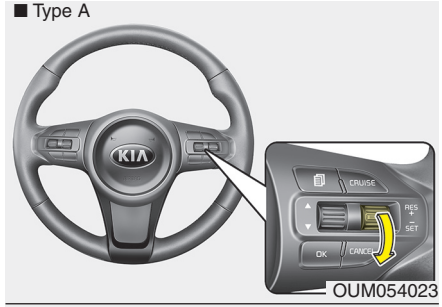
OUM054024L

Follow either of these procedures:

- Move the lever up (to RES+) and hold it. Your vehicle will accelerate. Release the lever at the speed you want.
- Move the lever up (to RES+) and release it immediately. The cruising speed will increase by 2 km/h (1 mph) each time you move the lever up (to RES+) in this manner.

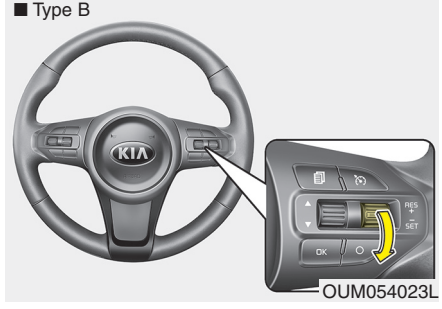
To decrease the cruising speed:

■ Type A



OUM054023

■ Type B



OUM054023L

Follow either of these procedures:

- Move the lever down (to SET-) and hold it. Your vehicle will gradually slow down. Release the lever at the speed you want to maintain.

- Move the lever down (to SET-) and release it immediately. The cruising speed will decrease by 2 km/h (1 mph) each time you move the lever down (to SET-) in this manner.

To temporarily accelerate with the cruise control on:

If you want to speed up temporarily when the cruise control is on, depress the accelerator pedal. Increased speed will not interfere with 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:

■ Type A



OUM054025

■ Type B



OUM054025L

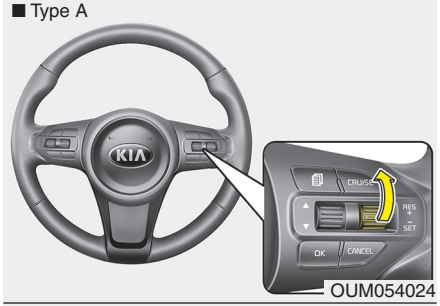
- Depress the brake pedal.
- Depress the clutch pedal if equipped with a manual transaxle.
- Shift into N (Neutral) if equipped with an automatic transaxle.

- 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 system off. If you wish to resume cruise control operation, move up the lever (to RES+) located on your steering wheel. You will return to your previously preset speed.*

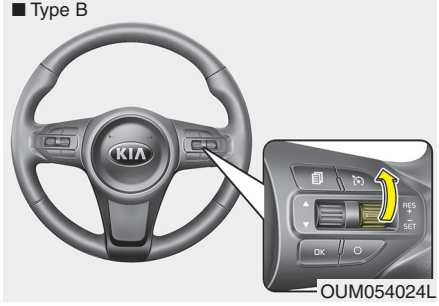
To resume cruising speed at more than approximately 30 km/h (20 mph).

■ Type A



OUM054024

■ Type B



OUM054024L

If any method other than the CRUISE / button was used to cancel cruising speed and the system 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 CRUISE/ button (the cruise indicator light will be turn off).
- If your vehicle equipped the speed limit system, press the CRUISE/ button twice. (The cruise indicator light will be turn off.)
- Turn the ignition off.

Both of these actions cancel cruise control operation. If you want to resume cruise control operation, repeat the steps provided in "To set cruise control speed" on the previous page.

SPEED LIMIT CONTROL SYSTEM (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 system operates (set speed limit will blink and chime will sound) until the vehicle speed returns within the speed limit.

✻ NOTICE

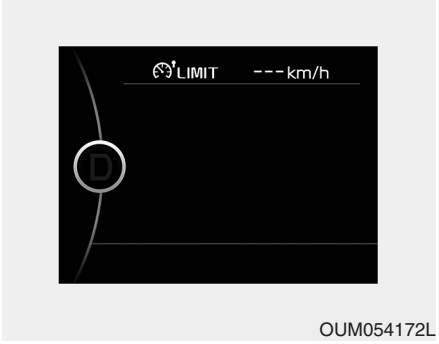
While speed limit control is in operation, the cruise control system cannot be activated.

To set speed limit :



OUM054022L

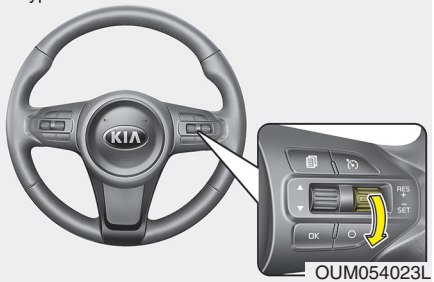
1. Press the cruise ( ) button twice on the steering wheel, to turn the system on.



OUM054172L

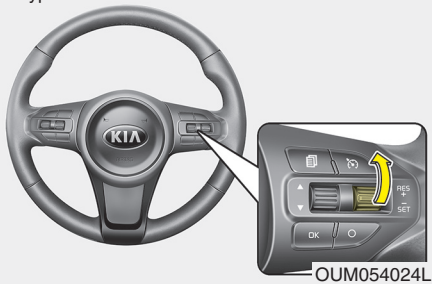
The speed limit indicator light will illuminate.

■ Type A



OUM054023L

■ Type B

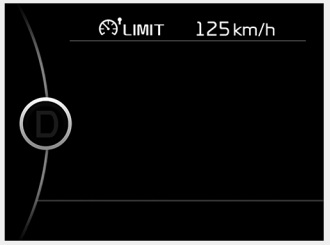


OUM054024L

2. Move the lever down (to SET-).
3. Move the lever up (to RES+) or down (to SET-), and release it at the desired speed. Move the lever up (to RES+) or down (to SET-) and hold it. The speed will increase or decrease by 5 km/h (3 mph).

Move the lever 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.



OUM054152L

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 kick down mechanism 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.**

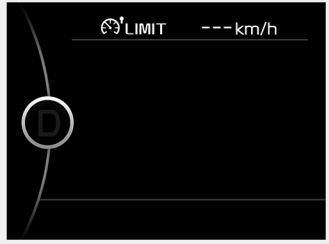
To turn off the speed limit control, do one of the following:



OUM054022L

- Press the cruise switch.
- Turn the ignition off.

If you press the cancel O switch once, the set speed limit will cancel, but it will not turn the system off. If you wish to reset the speed limit, move the lever up (to RES+) or down (to SET-) to the desired speed.



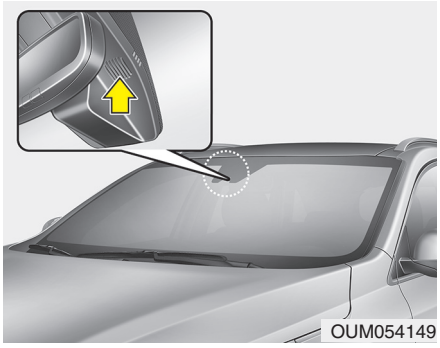
OUM054172L

⚠ CAUTION

The "---" indicator will blink if there is a problem with speed limit control system.

If this occurs, we recommend that the system be checked by an authorized Kia dealer.

SPEED LIMIT INFORMATION FUNCTION (SLIF) (IF EQUIPPED)



The system displays the information of speed limit and no passing restriction to the driver in both the instrument cluster and navigation screen. SLIF detects traffic signs with camera system attached behind the top of the windscreen.

The system considers the information stored in the navigation system and also displays speed limits present on routes without signs.

⚠ WARNING

- **Speed Limit Information Function is only an aid and is not always able to correctly display speed limits and overtaking restrictions.**
- **The driver always keeps the responsibility to not exceed the maximum allowed speed**
- **Do not place any accessories, stickers or tint the windshield near the rearview mirror.**
- **The system detects traffic signs and displays speed limit information by a camera therefore, if traffic signs are hard to detect, the system may not work properly.**

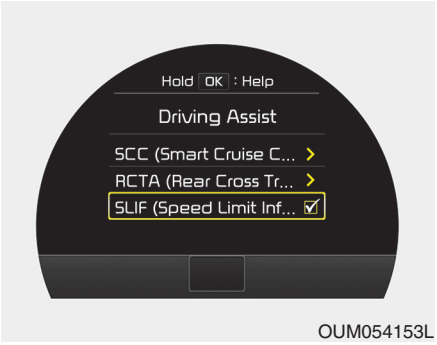
  Please refer to "Driver's Attention".
- **Do not remove any LDWS parts or apply impact.**

(Continued)

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- **Do not place objects on the dashboard that reflects light such as mirrors, white paper, etc. The system may malfunction if the sunlight is reflected.**
- **The system is not available in all countries.**

SLIF activation / deactivation

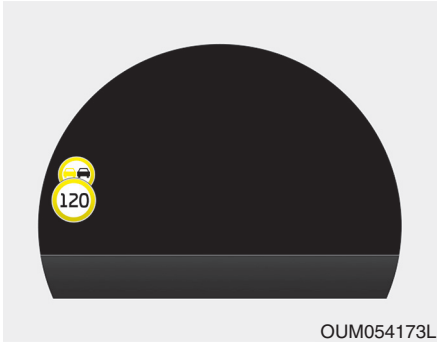


OUM054153L

- SLIF Setting method :

  Cluster User Settings → Driving Assist → SLIF (Speed Limit Information Function)
- The information of speed limit and no passing restriction will appear on the cluster using a symbol if you have activated SLIF in User Settings of cluster.
- If SLIF is activated in navigation setting, the information also displayed in navigation screen.

Operation



OUM054173L

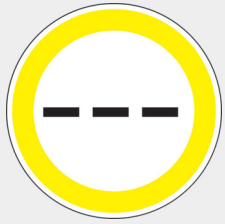
- If a traffic sign that is relevant to your vehicle is passed, the system displays the information of the speed limits and no passing restrictions to the driver.
- When the driver turn on the ignition, the system displays stored information of the speed limit before turn off the ignition.
- Sometimes 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...) are also detected and compared with vehicle interior data(e.g wiper operation, turn signal...).
- The system can update the speed limit information without visible speed limit signs in the following situations.
  - When you change your driving direction with right or left or U turning.
  - When vehicle changes roads. (e.g. from highway to country road…)
  - When you enter or exit into town or village.

✻ NOTICE

If speed limit value has the difference between cluster and navigation, check the speed unit setting in navigation.

Display

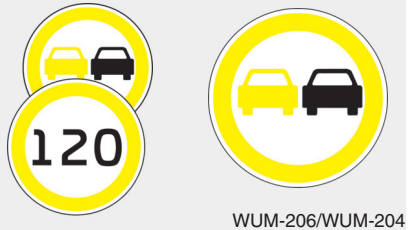
■ No reliable speed limit information



WUM-203

- If the system doesn't have a reliable speed limit information, the following symbol is displayed in both the instrument cluster and navigation screen.

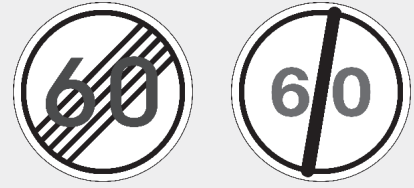
■ No passing information



WUM-206/WUM-204

- If the system detect no passing sign, no passing is displayed in both the instrument cluster and navigation screen.

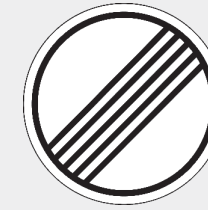
■ End of a speed limit



WUM-207/WUM-208

- After passing "end of speed limitation" sign SLIF provides information from navigation to inform driver of perhaps afterwards applicable speed limit.

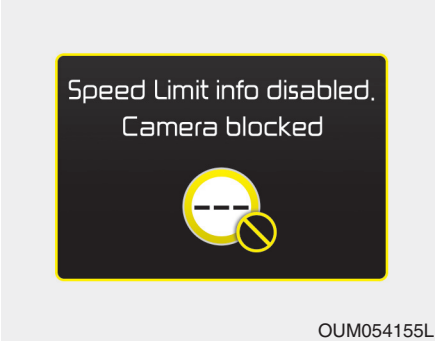
■ Unlimited speed (only in Germany)



WUM-205

- For some areas on highways in germany there's no speed limit applicable. In that case SLIF shows "end of limitation" traffic sign as long as you don't pass another speed limit sign.

Warning message

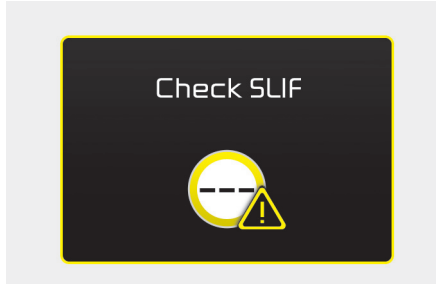


OUM054155L

The message will appear when camera's field of view is covered by some objects. The system stops until the field of view is normal.

Check the windshield around the camera view area.

If the system does not work normally even though camera's field of view is cleared, we recommend that the system be checked by an authorized Kia dealer.



OUM054154L



OUM054132

When SLIF is not working properly, the warning message will come on for a few second. After the message disappears, the master warning light will illuminate.

We recommend that the system be checked by an authorized Kia dealer.

The system may not fully operate and provide correct information in the following situations.

- Traffic signs are positioned on sharp curve.
- Poorly positioned traffic sign. (eg. Rotated, shaded by any object, damaged…)
- Concealed traffic signs by other vehicle.
- Broken LED traffic signs.
- Poor weather like snow, rain, fog
- There is glare around traffic signs by low sun in the sky.
- 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 in area or countries where navigation system is not covered.
- When a navigation system not updated latest map version.

DRIVER'S ATTENTION

The driver must be cautious in the below situations for the system 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 systems 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 system does not work in all situations but is designed merely as a supplementary aid.
- The system 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.

ADVANCED SMART CRUISE CONTROL SYSTEM (IF EQUIPPED)



OUM056156

① Cruise indicator
② Set speed
③ Vehicle-to-vehicle distance

The smart cruise control system allows you to program the vehicle to maintain constant speed and distance detecting the vehicle ahead without depressing the accelerator or brake pedal.

⚠ WARNING

For your safety, please read the owner's manual before using the smart cruise control system.

⚠ WARNING

- **If the advanced smart cruise control is left on, (cruise indicator in the instrument cluster illuminated) the smart cruise control can be activated unintentionally. Keep the smart cruise control system off (cruise indicator turn off) when the smart cruise control is not used.**
- **Set the speed within posted speed limit.**
- **Use the smart cruise control system only when traveling on open highways in good weather.**
- **Do not use the smart cruise control when it may not be safe to keep the car at a constant speed. For instance.**
  - **Highway interchange and tollgate**

(Continued)

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- **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**
- **The sensing ability decreases if the level of front and rear vehicle is changed from the factory.**

(Continued)

(Continued)

- **Pay particular attention to the driving conditions whenever using the smart cruise control system.**
- **The advanced smart cruise control system 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 the ASCC.**
- **Limited visibility (rain, snow, smog, etc)**
- **Cruise function should not be used when the vehicle is being towed to prevent any damage.**

Speed setting

To set cruise control speed:

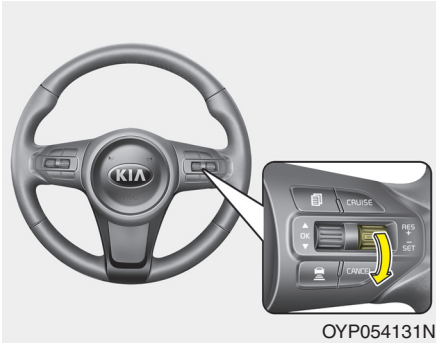


OYP054130N

1. Press the CRUISE button, to turn the system on. The CRUISE indicator in the instrument cluster will illuminate.
2. Accelerate to the desired speed.

   The smart cruise control speed can be set as follows:

   - 30 km/h (20mph) ~ 180 km/h (110 mph): when there is no vehicle in front
   - 0 km/h (0 mph) ~ 180 km/h (110 mph): when there is a vehicle in front



OYP054131N

3. Move the lever down (to SET-), and release it at the desired speed. The set speed and vehicle to vehicle distance on the LCD screen will illuminate.
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.

To increase cruise control set speed:



OYP054132N

Follow either of these procedures:

- Move the lever up (to RES+), and hold it. Your vehicle set speed will increase by 10 km/h (5 mph). Release the lever at the speed you want.
- Move the lever up (to RES+), and release it immediately. The cruising speed will increase by 1.0 km/h (1.0 mph) each time you move the lever up (to RES+) in this manner.
- You can set the speed to 180 km/h (110 mph).

⚠ CAUTION

Check the road condition before using the lever. Driving speed sharply increases when you move up and hold the lever.

To decrease the crusie control set speed:



OYP054131N

Follow either of these procedures:

- Move the lever down (to SET-), and hold it. Your vehicle set speed will decrease by 10 km/h (5 mph). Release the lever at the speed you want.
- Move the lever down (to SET-), and release it immediately. The cruising speed will decrease by 1.0 km/h (1.0 mph) each time you move the lever down (to SET-) in this manner.
- You can set the speed to 30 km/h (20 mph).

To temporarily accelerate with the cruise control on:

If you want to speed up temporarily when the cruise control is on, depress the accelerator pedal. Increased speed will not interfere with cruise control operation or change the set speed.

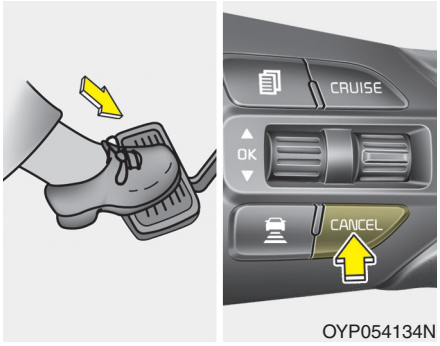
To return to the set speed, take your foot off the accelerator.

If you move the lever down (to SET-) at increased speed, the 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:



OYP054134N

Cancelled manually

- The brake pedal is depressed.
- Press the CANCEL button.

The CRUISE indicator is illuminated continuously.

Cancelled automatically

- The driver's door is opened.
- The shift lever is shifted to N (Neutral), R (Reverse) or P (Paking).
- The EPB (electronic parking brake) is applied.
- The vehicle speed is over 190 km/h (120 mph)
- The vehicle stops on a steep incline.
- The ESC, ABS or TCS is operating.
- The ESC is turned off.
- The sensor or the cover is dirty or blocked with foreign matter.
- When the vehicle is stopped for over 5 minutes.
- The driver starts the Advanced Smart Cruise Control system pushing the lever up (RES +)/down (SET -) or depressing the accelerator pedal while the vehicle has stopped with a vehicle far distance ahead.

- The driver starts driving by pushing the lever up (RES +) or down (SET -) or depressing the accelerator pedal approximately 3 seconds after the vehicle is stopped by the Smart Cruise Control System with no other vehicle ahead or a vehicle stopped far away in front.
- The accelerator pedal is continuously depressed for more than 5 minute.
- The engine speed is over 7000 RPM.
- The SCC system has malfunctioned.
- When activating the ISG mode.
- When activating the AEB (Autonomous Emergency Braking).

Each of these actions will cancel the smart cruise control operation. (the set speed and vehicle to vehicle distance on the LCD display will go off.)

In a condition the smart cruise control is cancelled automatically, the smart cruise control will not resume even though the RES+ or SET- lever is moved. Also, the EPB (electronic parking brake) will be applied when the vehicle is stopped.

⚠ CAUTION

If the smart cruise control is cancelled by other than the reasons mentioned, we recommend have the system checked by an authorized Kia dealer.



OUM054164L

If the system is automatically cancelled, the warning chime will sound and a message such as above will appear. When this occurs, immediately check the road condition ahead and driving condition. Adjust the speed manually by depressing the brake pedal if necessary. Even if the warning chime is not activated, always be cautious to prevent dangerous situations from occurring.

To resume cruise control set speed:



OYP054132N

If any method other than the CRUISE button was used to cancel cruising speed and the system is still activated, the cruising speed will automatically resume when you move the lever up (to RES+).

If you move the lever up (to RES+), the speed will resume to the recently set speed. It will not resume if the vehicle speed has dropped below approximately 30 km/h (20 mph).

⚠ CAUTION

When you move the lever up (to RES +), the driving speed might sharply increase or decrease to the most recently set speed. Always check the road condition before operating the lever, and use only when you are fully aware of the prior speed.

To turn cruise control off:



OYP054130N

Press the CRUISE button. (the CRUISE indicator in the instrument cluster will go off).

Vehicle to vehicle distance setting

To set vehicle to vehicle distance:



OYP054136N

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 to vehicle distance will automatically activate when the smart cruise control system is on.

Select the appropriate distance according to road conditions and vehicle speed.

Each time the button is pressed, the vehicle to vehicle distance changes as follows:

Distance 4 → Distance 3 → Distance 2
Distance 1 ←

For example, if you drive at 90 km/h (56 mph), the distance maintain as follows;

Distance 4 - approximately 52.5 m
Distance 3 - approximately 40 m
Distance 2 - approximately 32.5 m
Distance 1 - approximately 25 m

✻ NOTICE

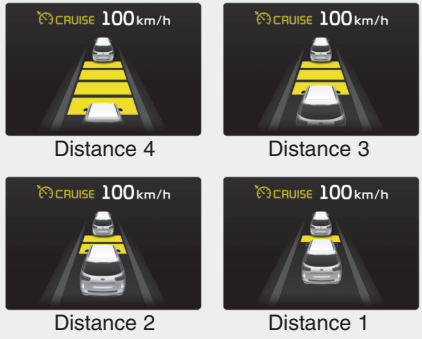
The 'last vehicle to vehicle distance' is set when the system is used after starting the engine.

When the lane ahead is clear:



OUM056192

The vehicle speed will maintain the set speed.



OYP056137C

- 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.

⚠ CAUTION



OUM056189

- ***The warning chime sounds and LCD display blinks if it is hard to maintain the selected distance to the vehicle ahead.***
- ***If the warning chime sounds, actively adjust the vehicle speed by depressing the brake pedal according to the road condition ahead and driving condition.***
- ***Even if the warning chime is not activated, always pay attention to the driving conditions to prevent dangerous situations from occurring.***

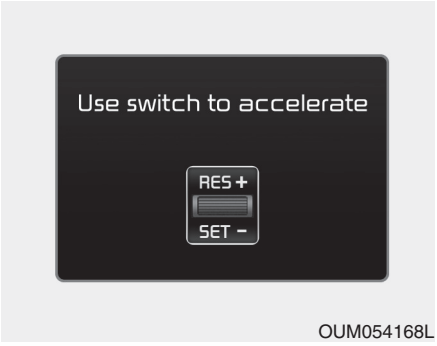


OUM057169L

⚠ CAUTION

If the vehicle ahead (vehicle speed: less than 30km/h) 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



OUM054168L

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 move up/down the lever (to RES+ or SET-) to start driving.

Radar to detect distance to the vehicle ahead



OUM054054L

The sensor detects the distance to the vehicle ahead.

If the sensor is covered with dirt or other foreign matter, the vehicle to vehicle distance control may not operate correctly.

Always keep the area in front of the sensor clean.

Radar check message



OUM057226L

If the radar or cover is dirty or obscured with foreign matter such as snow, this message will appear. In this case, the system may not function temporarily, but it does not indicate a malfunction of the Smart Cruise Control System. Clean the radar or cover by using a soft cloth.

SCC (Smart Cruise Control) malfunction message



OUM054187L

The message will appear when the vehicle to vehicle distance control system is not functioning normally.

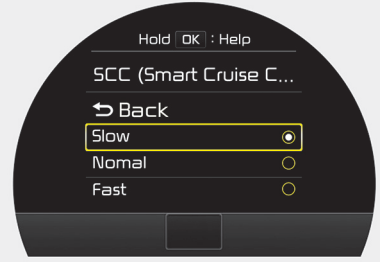
We recommend have the system checked by an authorized Kia dealer.

⚠ 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, the smart cruise control system will not operate correctly.***

  If this occurs, we recommend that the system be checked by an authorized Kia dealer.
- ***Use only a genuine Kia sensor cover for your vehicle. Do not paint anything on the sensor cover.***

To adjust the sensitivity of Smart Cruise Control



OUM054157L

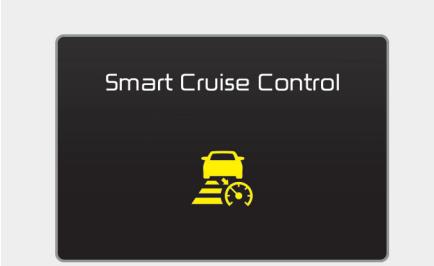
The sensitivity of vehicle speed when following the front vehicle to maintain the set distance can be adjusted. Go to the User Settings Mode (Driving Assist) and select SCC (Smart Cruise Control). You may select one of the three stages you prefer.

- 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.

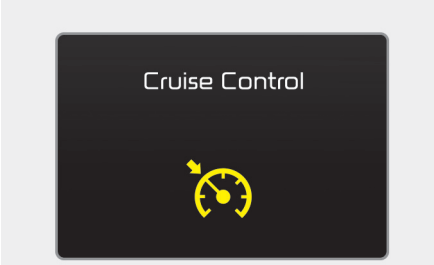
✻ NOTICE

The last selected mode is remained in the system

To convert to cruise control mode:



OUM054167L



OUM054166L

The driver may choose to only use the cruise control mode (speed control function) by doing as follows:

1. Turn the smart cruise control system on (the cruise indicator light will be on but the system will not be activated).
2. Push the distance to distance switch for more than 2 seconds.
3. Choose between "Smart cruise control(SCC) mode" and "Cruise control(CC) mode".

To set the speed, follow the same procedures operated to set the Advanced Smart Cruise Control speed.

If the CRUISE button is used to cancel the system, or you press the CRUISE button after restarting the engine, the Advanced Smart cruise control system function will resume automatically.

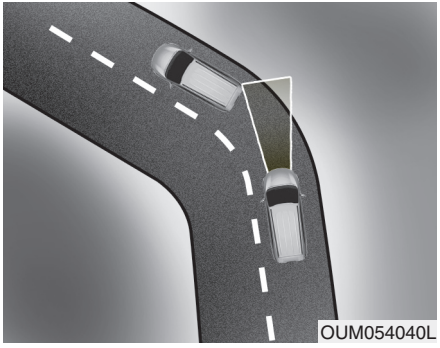
⚠ WARNING

When using the cruise control mode, you must manually access the distance to other vehicles as the system will not automatically brake to slow down for other vehicles.

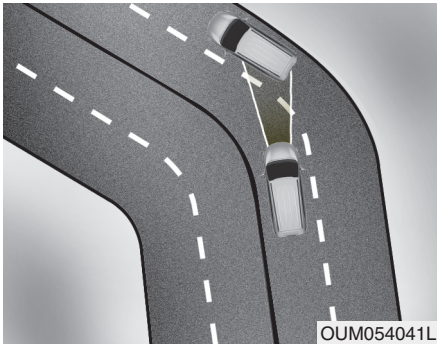
Limitations of the system

The smart cruise control system may have limits to its ability to detect distance to the vehicle ahead due to road and traffic conditions.

On curves

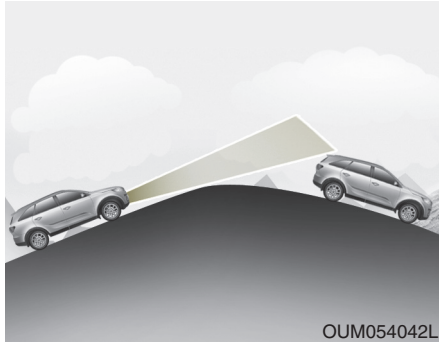

OUM054040L

- On curves, the smart cruise control system 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 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.


OUM054041L

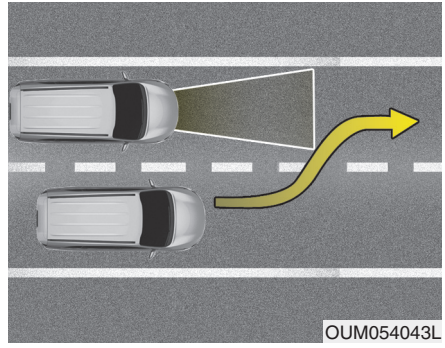
- Your vehicle speed can be reduced due to a vehicle in the adjacent lane. Adjust your vehicle speed by depressing the brake pedal according to the road condition ahead and driving condition. Apply the accelerator pedal and select the appropriate set speed. Check to be sure that the road conditions permit safe operation of the smart cruise control.

On inclines

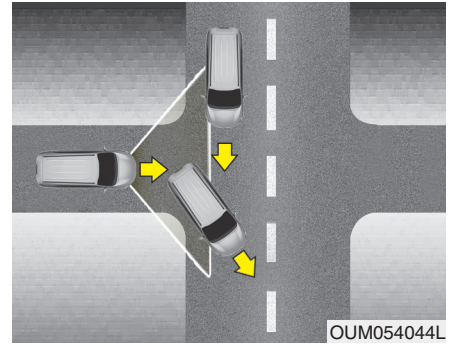

OUM054042L

- During uphill or downhill driving, the smart cruise control system 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.

Lane changing

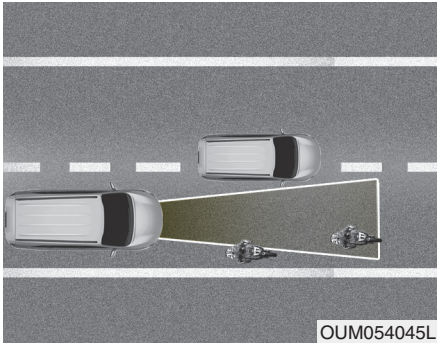

OUM054043L

- 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.
- 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.


OUM054044L

- 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.

Vehicle recognition


OUM054045L

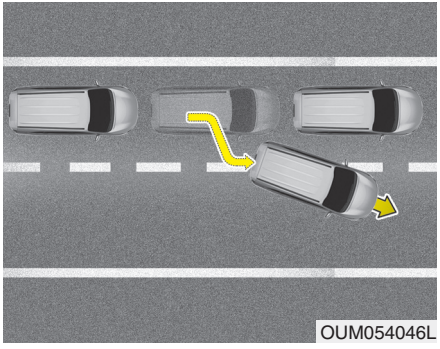
Some vehicles ahead in your lane cannot be recognized by the sensor as follows:

- 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

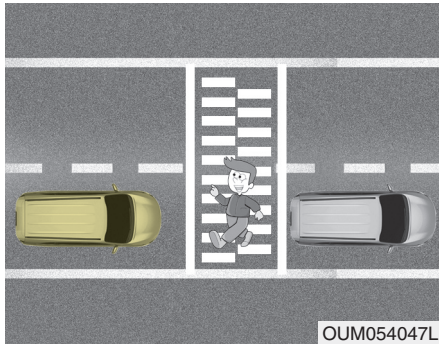
A vehicle ahead cannot be recognized correctly by the sensor if any of following occurs:

- When the vehicle is pointing upwards due to overloading in the trunk
- While making turns by steering
- When driving to one side of the lane
- When driving on narrow lanes or on curves

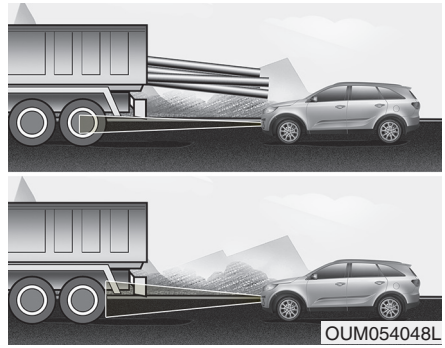
Adjust your vehicle speed by depressing the brake pedal according to the road condition ahead and driving condition.


OUM054046L

- 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.



- 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

- **The smart cruise control system 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 to vehicle distance is too close during a high-speed driving, a serious collision may result.**
- **The smart cruise control system cannot recognize a stopped vehicle, pedestrians or an oncoming vehicle. Always look ahead cautiously to prevent unexpected and sudden situations from occurring.**
- **SCC system may have difficulty in maintaining the correct distance or speed, if the vehicle is driving on a steep incline or towing a trailer.**

(Continued)

(Continued)

- When other vehicles are changing lanes in front of you frequently, the smart cruise control system may not operate appropriately. Always look ahead cautiously to prevent unexpected and sudden situations from occurring.
- The smart cruise control system 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.
- Do not use cruise control when towing a trailer.
- Always be aware of the selected speed and vehicle to vehicle distance.
- Always maintain sufficient braking distance and decelerate your vehicle by applying the brakes if necessary.

(Continued)

(Continued)

- As the smart cruise control system 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.
- After an engine start, please stop for several seconds. If system initialization is not completed, the SCC does not normally operate.
- After an engine start, if any objects are not detected or the sensor cover is obscured with foreign substances, there is a possibility that the SCC system may not work.
- Below conditions are not allowed: over baggage loading in a trunk, suspension remodeling, tire replacement with unauthorized tires or tires with different worn-out and pressure levels.

⚠ CAUTION

The smart cruise control system may not operate temporarily due to electrical interference.

⚠ WARNING

The advanced smart cruise control system may not detect a vehicle which stops farther than 180 m ahead from your vehicle. Therefore, never solely rely on the system and pay attention when driving to avoid a collision.

ISG (IDLE STOP AND GO) SYSTEM (IF EQUIPPED)

Your vehicle may be equipped with the ISG system, which reduces fuel consumption by automatically shutting down the engine, when the vehicle is at a standstill. (For example : red light, stop sign and traffic jam)

The engine starts automatically as soon as the starting conditions are met.

The ISG system is ON whenever the engine is running.

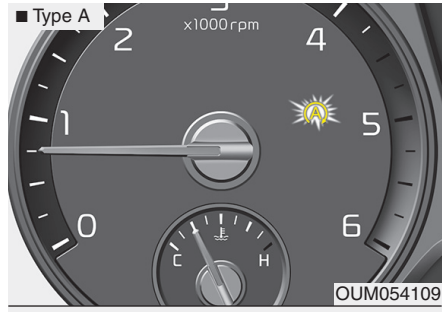
✻ NOTICE

When the engine automatically starts by the ISG system, some warning lights (ABS, ESC, ESC OFF, EPS or Parking brake warning light) may turn on for a few seconds.
This happens because of low battery voltage. It does not mean the system has malfunctioned.

Auto stop

To stop the engine in idle stop mode

■ Type A



OUM054109

■ Type B



OUM054110

With manual transaxle

1. Decrease the vehicle speed to less than 5 km/h (3 mph).
2. Shift into N (Neutral) position.
3. Release the clutch pedal.

With automatic transaxle

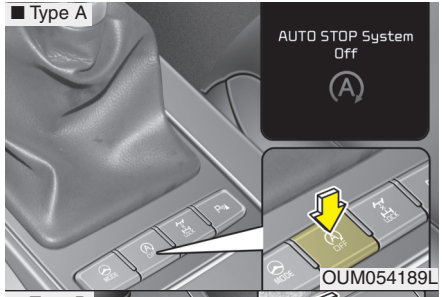
1. Decrease the vehicle speed to 0 km/h.
2. Shift at D (Drive) / N (Neutral) position.
3. Press the brake pedal.

The engine will stop and the green AUTO STOP(Ⓐ) indicator on the instrument cluster will illuminate.

✻ NOTICE

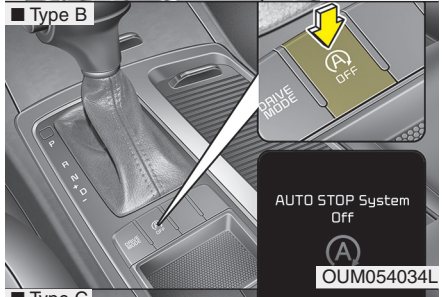
You must reach a speed of at least 10 km/h (6 mph) since last idle stop. (With manual transaxle)
You must reach a speed of at least 8 km/h (5 mph) since last idle stop. (With automatic transaxle)

■ Type A



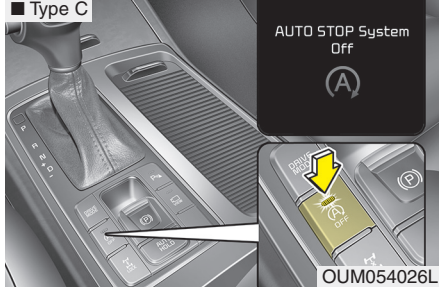
OUM054189L

■ Type B



OUM054034L

■ Type C



OUM054026L

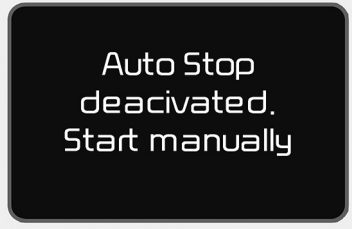
✻ NOTICE

If you unfasten the seatbelt or open the driver's door (or engine hood) in auto stop mode, the following will happen (With manual transaxle):
If you open the engine hood in auto stop mode, the following will happen (With automatic transaxle):

- **The ISG system will deactivate (the light on the ISG OFF button will illuminate).**

(Continued)

■ Type A



OUM054174L

■ Type B



OUM054120L

(Continued)

- **A message "Auto Stop deactivated Start manually" will appear on the LCD display.**

Auto start

To restart the engine from idle stop mode

■ M/T



OUM054175L

With manual transaxle

- Press the clutch pedal when the shift lever is in the N (Neutral) position.
- A message "Press clutch pedal for Auto Start" will appear on the LCD display.
- The engine will start and the green AUTO STOP (Ⓐ) indicator on the instrument cluster will go out.

With automatic transaxle

- Release the brake pedal.

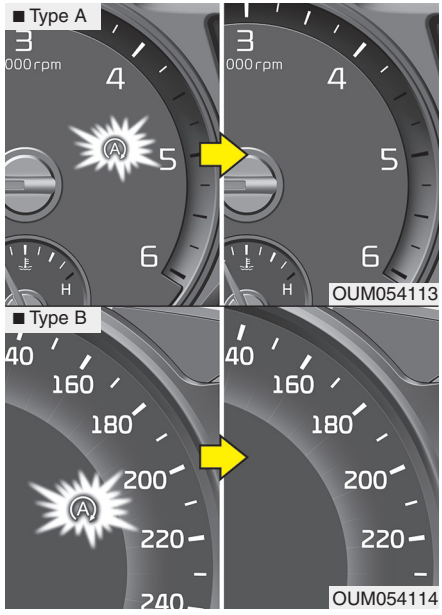
or

- When AUTO HOLD is operating, if you release the brake pedal, the engine keeps the stop state. But if you press the accelerator pedal, the engine will start again.

The engine will start and the green AUTO STOP indicator (Ⓐ) on the instrument cluster will go out.

The engine will also restart automatically without the driver's any actions if the following occurs:

- The fan speed of manual climate control system is set above the 3rd position when the air conditioning is on.
- The fan speed of automatic climate control system is set above the 6th position when the air conditioning is on.
- When a certain amount of time has passed with the climate control system on.
- When the defroster is on.
- The brake vaccum pressure is low.
- The battery charging status is low.
- The vehicle speed exceeds 5 km/h (3 mph). (With manual transaxle)
- The vehicle speed exceeds 2 km/h (1.2 mph). (With automatic transaxle)
- You shift the gear to P (park) position or you press the EPB switch in the AUTO HOLD state. (With automatic transaxle)



The green AUTO STOP (Ⓐ) indicator on the instrument cluster will blink for 5 seconds.

Condition of ISG system operation

The ISG system will operate under the following condition:

- The driver's seat belt is fastened.
- The driver's door and engine hood are closed.
- The brake vaccum pressure is adequate.
- The battery is sufficiently charged.
- The outside temperature is between -10°C to 35°C (14°F to 95°F).
- The engine coolant temperature is not too low.
- The slope way is gentle. (With automatic transaxle)

✻ NOTICE

- **If the ISG system does not meet the operation condition, the ISG system is deactivated. The light on the ISG OFF button will illuminate and the yellow AUTO STOP (Ⓐ) indicator on the instrument cluster will illuminate.**
- **If the light comes on continuously, please check the operation condition.**

ISG system deactivation

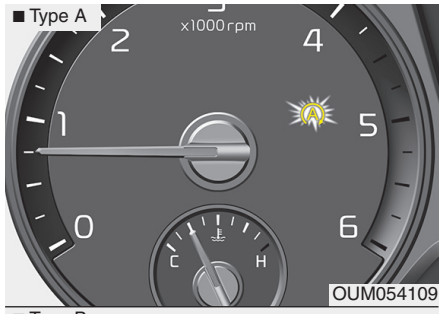


- If you wish to deactivate the ISG system, press the ISG OFF button. The light on the ISG OFF button will illuminate and a message "Auto Stop OFF" will appear on the LCD display.
- If you press the ISG OFF button again, the system will be activated and the light on the ISG OFF button will turn off.

ISG system malfunction

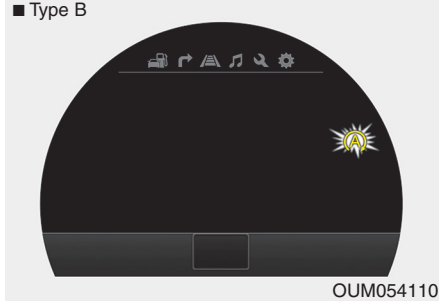
The system may not operate when:

■ Type A



OUM054109

■ Type B



OUM054110

The ISG related sensors or system error occurs.

The following will happen:

- The yellow AUTO STOP (Ⓐ) indicator on the instrument cluster will stay on after blinking for 5 seconds.
- The light on the ISG OFF button will illuminate.

✻ NOTICE

- **If the ISG OFF button light is not turned off by pressing the ISG OFF button again or if the ISG system continuously does not work correctly, we recommend that you contact an authorized Kia dealer as soon as possible.**
- **When the ISG OFF button light comes on, it may stop illuminating after driving your vehicle at approximately 80 km/h for a maximum of two hours and setting the fan speed control knob below the 2nd position. If the ISG OFF button light continues to be illuminated in spite of the procedure, we recommend that you contact an authorized Kia dealer as soon as possible.**

⚠ WARNING

When the engine is in Idle Stop mode, it's possible to restart the engine without the driver taking any action.

Before leaving the car or doing anything in the engine room area, stop the engine by turning the ignition switch to the LOCK/OFF position or removing the ignition key.

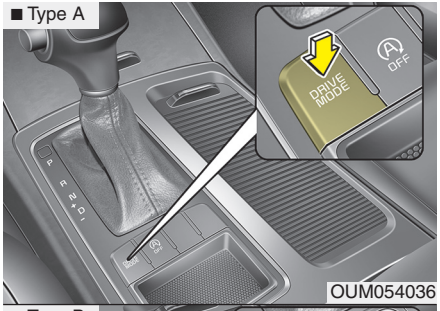
✻ NOTICE

If the AGM battery is reconnected or replaced, ISG function will not operate immediately.
If you want to use the ISG function, the battery sensor needs to be calibrated for approximately 4 hours with the ignition off and then, turn the engine on and off 2 or 3 times.

DRIVE MODE INTEGRATED CONTROL SYSTEM (IF EQUIPPED)

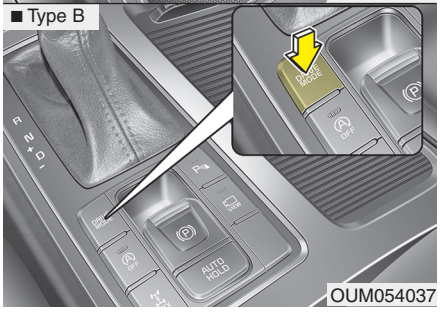
DRIVE mode

■ Type A



OUM054036

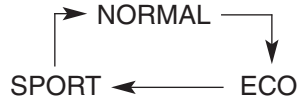
■ Type B



OUM054037

The drive mode may be selected according to the driver's preference or road condition.

The mode changes whenever the DRIVE MODE button is pressed.



❈ When normal mode is selected, it is not displayed on the cluster.

ECO mode (Active ECO)

ECO

Active ECO helps improve fuel efficiency by controlling certain engine and transaxle system operating parameters. Fuel efficiency depends on the driver's driving habit and road condition.

- When the DRIVE MODE button is pressed and the ECO mode is selected, the ECO indicator (green) will illuminate to show that the Active ECO is operating.
- When the Active ECO is activated, it does not turn off even though the engine is restarted again. To turn off the system, press the DRIVE MODE button again.

When Active ECO is activated:

- The acceleration may slightly be reduced eventhough you depress the accelerator fully.
- The air conditioner performance may be limited
- The shift pattern of the automatic transaxle may change.
- The engine noise may get louder.

The above situations are normal conditions when the active eco system is activated to improve fuel efficiency.

Limitation of Active ECO operation:

If the following conditions occur while Active ECO is operating, the system operation is limited even though there is no change in the ECO indicator.

- When the coolant temperature is low:

  The system will be limited until engine performance becomes normal.
- When driving up a hill:

  The system will be limited to gain power when driving uphill because the engine torque is restricted.
- When using manual mode:

  The system will be limited according to the shift location.
- When the accelerator pedal is deeply depressed for a few seconds:

  The system will be limited, judging that the driver wants to speed up.

SPORT mode

SPORT

SPORT mode focuses on dynamic driving by automatically controlling the steering wheel, engine and transaxle system.

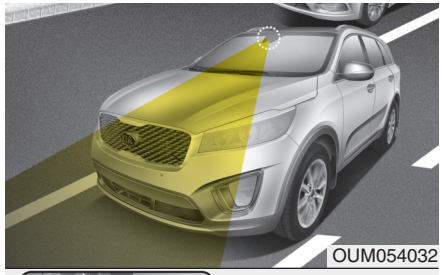
- When the DRIVE MODE button is pressed and the SPORT mode is selected, the SPROT indicator (yellow) will illuminate.
- When the SPORT mode is activated, and the engine start/stop button is turned off and on it will change to NORMAL mode. To turn on the SPORT mode press DRIVE MODE button again.

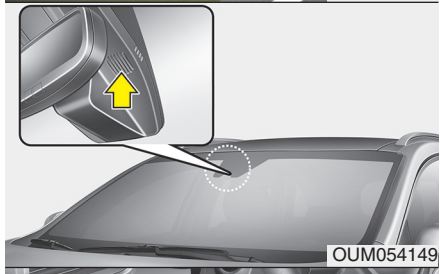
• If the system is activated:
  - After speeding, it maintains the gear and RPM for some time even though the accelerator pedal is not depressed.
  - Up-shifting is delayed.

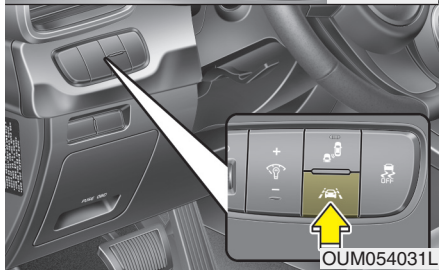
✻ NOTICE

In Sport drive mode, the fuel efficiency may decrease.

LANE DEPARTURE WARNING SYSTEM (LDWS) (IF EQUIPPED)


OUM054032


OUM054149


OUM054031L

This system detects the lane with the sensor at the front windshield and warns you when your vehicle leaves the lane.

⚠ WARNING

- **The LDWS does not make the vehicle change lanes. It is the driver's responsibility to always check the road conditions.**
- **Do not turn the steering wheel suddenly, when the LDWS warns you that your vehicle is leaving the lane.**
- **If the sensor can not detect the lane or if the vehicle speed does not exceed 60km/h, the LDWS won't warn you even though the vehicle leaves the lane.**
- **If your vehicle has window tint or other types of coating and accessory on the front windshield, the LDWS may not work properly.**

(Continued)

(Continued)

- **Do not let water or any kind of liquid come in contact with the LDWS sensor.**
- **Do not remove the LDWS parts and do not affect the sensor by a strong impact.**
- **Do not put objects that reflect light on the dash board.**
- **Always check road conditions because you may not hear the warning chime because of audio and external conditions.**



OUM054133L

To operate the LDWS, press the switch with the ignition in the ON position. The indicator illuminates on the cluster. To cancel the LDWS, press the switch again.



OUM054126L

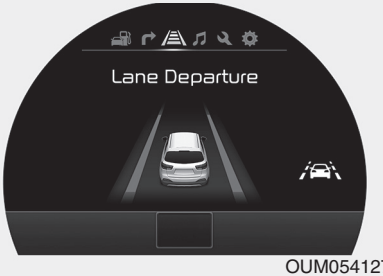
If you select this symbol, the LDWS mode on the LCD display will appear.

■ When the sensor detects the lane line



OUM054126L

■ When the sensor doesn't detect the lane line



OUM054127L

If your vehicle leaves the lane when the LDWS is operating and vehicle speed exceeds 60km/h, the warning operates as follows:

■ Left lane departure warning



OUM054128L

■ Right lane departure warning



OUM054129L

1. Visual warning

If you leave the lane, the lane you leave on the LCD display blinks yellow with 0.8 second of interval.

2. Auditory warning

If you leave the lane, the warning sound operates with 0.8 second of interval.

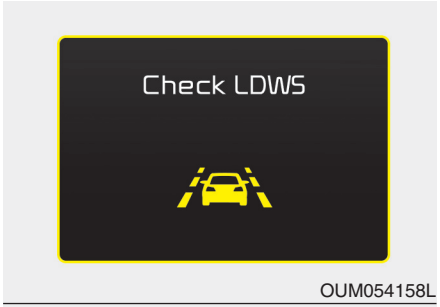


OUM054133L

The color of symbol will change depend on the condition of LDWS system.

- White color : It means the sensor does not detect the lane line.
- Green color : It means the sensor detects the lane line.

Warning indicator



When the LDWS is not working properly, the warning light will illuminate and the warning message will come on for a few second. After the message disappears, the master warning light will illuminate.

We recommend that the system be checked by an authorized Kia dealer

The LDWS does not operate when:

- The driver turns on the turn signal to change lane.

  But, when the hazard warning flasher is operating, the LDWS operates normally.
- Driving on the lane line.

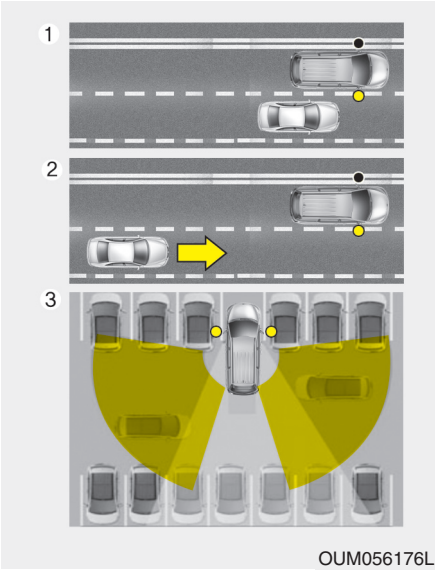
✻ NOTICE

To change lanes, operate the turn signal switch, then change the lane.

The LDWS may not warn you even if the vehicle leaves the lane, or may warn you even if the vehicle does not leave the lane when:

- The lane is not visible due to snow, rain, stain, a puddle or many other things.
- The brightness of the outside changes suddenly.
- The headlights are off at night or in a tunnel.
- The color of the lane marking from the road is difficult to distinguish.
- Driving on a steep grade or a curve.
- Light reflects from the water on the road.
- The lens or windshield is stained with foreign matter.
- The sensor can not detect the lane because of fog, heavy rain or heavy snow.
- The surrounding temperature of the inside rear view mirror is high due to a direct ray of light.
- The lane is very wide or narrow.
- The lane line is damaged or indistinct.
- The shadow is on the lane line by a median strip.
- There is a mark similar to a lane line.
- There is a boundary structure.
- The distance from vehicle ahead is very short or the vehicle ahead hides the lane line.
- The vehicle shakes heavily.
- The lane number increases or decreases or the lane lines are crossing complicatedly.
- Putting something on the dashboard.
- Driving with the sun in front of you.
- Driving in areas under construction.
- The lane line is more than two in either side (Left/Right).

BLIND SPOT DETECTION SYSTEM (BSD) (IF EQUIPPED)



The BSD (Blind spot detection) system uses a radar sensor to alert the driver while driving.

It senses the rear side territory of the vehicle and provides information to the driver.

① BSD(Blind spot detection)

Warning range is dependent on your vehicle speed. However, if your vehicle speed is speedy about 10km/h than other vehicle, the warning is not operated.

② LCA(Lane change assist)

When the vehicle is approaching to your vehicle at high speed, the warning is operated.

③ RCTA(Rear cross traffic alert)

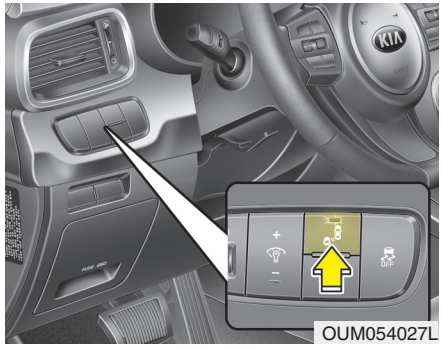
When your vehicle moves backward, the sensor detects the approaching vehicles to the left or right side direction and warning is operated.

⚠ WARNING

- **Always check the road condition while driving for unexpected situations even though the BSD (Blind spot detection) system is operating.**
- **BSD (Blind spot detection) system is a system made for convenience. Do not solely rely on the system but always pay attention to drive safely.**

BSD (Blind Spot Detection) / LCA (Lane Change Assist)

Operating conditions



The indicator on the switch will illuminate when the BSD (Blind spot detection) system switch is pressed with the ignition switch ON. If vehicle speed exceeds 30 km/h (18.6 mph), the system will activate.

If you press the switch again, the switch indicator and system will be turned off.

If the ignition switch is turned OFF and ON the system returns to the previous state.

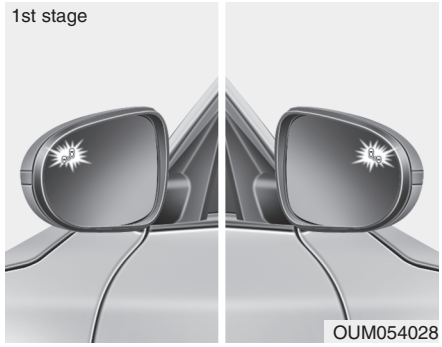
When the system is not used turn the system off by turning off the switch.

When the system is turned on the warning light will illuminate for 3 seconds on the outside rearview mirror.

Warning type

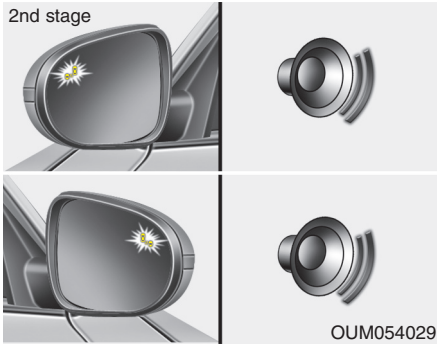
The system will activate when:

1. The system is on
2. Vehicle speed is above 30 km/h (18.6 mph)
3. Other vehicles are detected in the rear side



If a vehicle is detected within the boundary of the system, a warning light will illuminate on the outside rearview mirror.

If the detected vehicle is not in detecting range, the warning will be turned off by driving conditions.



The second stage alarm will activate when:

1. The first stage alert is on
2. The turn signal is on to change a lane

When the second stage alert is activated, a warning light will be blinking on the outside rearview mirror and a alarm will sound.

If you move the turn signal switch to origin position, the second stage alert will be deactivated.

- The second stage alarm may be deactivated.

• To activate the alarm:

Go to the User Settings Mode → Sound and select "BSD" on the LCD display.

• To deactivate the alarm:

Go to the User Settings Mode → Sound and deselect "BSD" on the LCD display.

⚠ CAUTION

The alarm function helps alert the driver. Deactivate this function only when it is necessary

Detecting sensor



The sensors are located on inside of the rear bumper.

Always keep the rear bumper clean for the system to work properly.

Warning message



OUM057227L

The sensors are unable to operate normally in the following situations. The system will turn off automatically and a warning message will appear on the instrument panel:

- There are foreign substances on or inside the rear bumper.
- If a trailer or carrier, or other equipment is installed.
- When driving through the desert or wide area with few vehicles passing by.
- Under certain weather conditions such as heavy rain or snowfall

When using a trailer, carrier or other equipment, turn off the system. Remove the installed trailer, carrier or other equipment to operate the Blind spot detection system.

Remove foreign substances on the rear bumper. After the foreign substance is removed, the system will work normally after driving for approximately 10 minutes.

If the system does not work normally even though the foreign substance, trailer or carrier, or other equipment is removed, take your vehicle to an authorized Kia dealer and have the system checked.



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If the system does not work properly, a warning message will appear and the light on the switch will turn off. The system will turn off automatically.

We recommend have the system checked by an authorized Kia dealer.

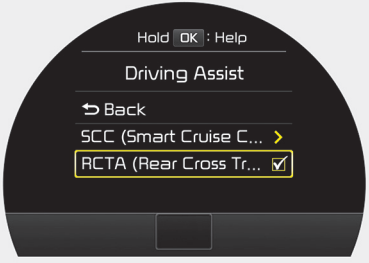
RCTA (Rear cross traffic alert)



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When your vehicle moves backwards from a parking position, the sensor detects approaching vehicles to the left or right side direction and gives information driver.

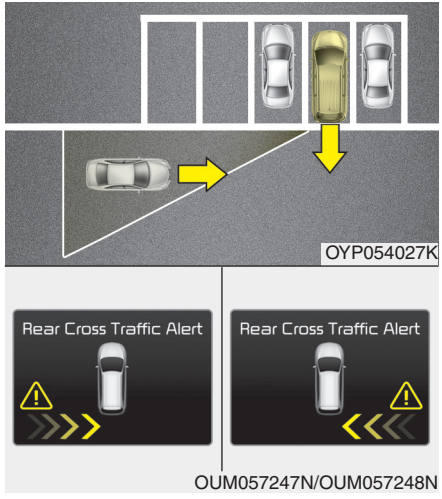
Operating conditions



OUM054124L

- Select RCTA (Rear Cross Traffic Alert) in "User Settings" under "Driving Assist" on the instrument cluster. The system will turn on and standby to activate.
- Select RCTA again, to turn the system off.
- If the vehicle is turned off and on again, the RCTA system will return to the state right before the vehicle was turned off. Always turn the RCTA system off when not in use.
- The system is operated when the vehicle speed is below 10km/h with the shift lever in R (Reverse).
- The RCTA (Rear Cross Traffic Alert) detecting range is 0.5m~20m based on side direction. If the approaching vehicle speed is 4 km/h~36 km/h in sensing range, it is detected. However, the system sensing range is different base on conditions. Always pay attention to surrounding.

Warning type



- If the vehicle detected by sensors approaches your vehicle, the warning is chime and the warning light will blink on the outside rearview mirror.
- If the detected vehicle is got out from sensing range, behind your vehicle, moving opposite direction away from your vehicle or moving slow, the warning is cancelled.
- The system operating is not working properly due to other factors or circumstances, always pay attention to your surrounding.

❊ If your vehicle's left or right side bumper is blinded by barrier or vehicles, the system sensing ability may be deteriorated.

⚠ WARNING

- **The warning light on the outside rearview mirror will illuminate whenever a vehicle is detected at the rear side by the system.**

  To avoid accidents, do not focus only on the warning light and neglect to see the surrounding of the vehicle.
- **Drive safely even though the vehicle is equipped with a BSD (Blind spot detection) system. Do not solely rely on the system but check for yourself before changing lanes.**

  The system may not alert the driver in some conditions so always check the surroundings while driving.

⚠ CAUTION

- ***The system may not work properly if the bumper has been replaced or if a repair work has been done near the sensor.***
- ***The detection area differs according to the roads width. If the road is narrow the system may detect other vehicles in the next lane.***
- ***On the contrary, if the road is very wide the system may not detect other vehicles.***
- ***The system may turn off due to strong electromagnetic waves.***

Non-operating condition

Driver's Attention

The driver must be cautious in the below situations for the system may not assist the driver and may not work properly.

- Curved roads, tollgates, etc.
- The surrounding of the sensor is polluted with rain, snow, mud, etc
- The rear bumper near the sensor is covered or hidden with a foreign matter such as a sticker, bumper guard, bicycle stand etc.
- The rear bumper is damaged or the sensor is out of place.
- The height of the vehicle shows much change such as when the trunk is loaded with heavy objects, abnormal tire pressure etc.
- Due to bad weather such as heavy rain or snow.
- A fixed object is near such as a guardrail, etc.
- A lot of amount of metal substances are near the vehicles such as a construction area.
- A big vehicle is near such as a bus or truck.
- A motorcycle or bicycle is near.
- A flat trailer like vehicle is near.
- If the vehicle has started at the same time as the vehicle next to it and has accelerated.
- When the other vehicle passes by very fast.
- When changing lanes.
- When going down or up a steep, uneven road.
- When the other vehicle drives at the rear very nearby or drives very close.
- When a trailer or carrier is installed.
- When the temperature of the rear bumper is very high or low.
- When the sensors are covered by the vehicle, wall and pillar of parking lot.
- When exiting rearward from a parking space with pillars or metal structures.
- When driving on wet surface.
- When your vehicle moves back, if the detected vehicle also moves back.
- If there is small things like shopping cart and baby carriage.
- If there is low height vehicle like sport vehicle.
- When the vehicle is closing to your vehicle.
- When driving through a narrow road with many plants.

Outside rearview mirror may not alert the driver when:

- The outside rearview mirror housing is severely polluted.
- The window is severely polluted.
- The windows are severely tinted.

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. Accelerate at a moderate rate. Do not make "jackrabbit" starts or full-throttle shifts and maintain a steady cruising speed. Do not race between stoplights. Try to adjust your speed to the traffic so you do not have to change speeds unnecessarily. Avoid heavy traffic whenever possible. Always maintain a safe distance from other vehicles so you can avoid unnecessary braking. This also reduces brake wear.
- Drive at a moderate speed. The faster you drive, the more fuel your vehicle uses. Driving at a moderate speed, especially on the highway, is one of the most effective ways to reduce fuel consumption.
- Do not "ride" the brake or clutch pedal. This can increase fuel consumption and also increase wear on these components. In addition, driving with your foot resting on the brake pedal may cause the brakes to overheat, which reduces their effectiveness and may lead to more serious consequences.
- Take care of your tires. Keep them inflated to the recommended pressure. Incorrect inflation, either too much or too little, results in unnecessary tire wear. Check the tire pressures at least once a month.
- Be sure that the wheels are aligned correctly. Improper alignment can result from hitting curbs or driving too fast over irregular surfaces. Poor alignment causes faster tire wear and may also result in other problems as well as greater fuel consumption.
- Keep your vehicle in good condition. For better fuel economy and reduced maintenance costs, maintain your vehicle in accordance with the maintenance schedule in section 7. If you drive your vehicle in severe conditions, more frequent maintenance is required (see section 7 for details).
- Keep your vehicle clean. For maximum service, your vehicle should be kept clean and free of corrosive materials. It is especially important that mud, dirt, ice, etc. not be allowed to accumulate on the underside of the vehicle. This extra weight can result in increased fuel consumption and also contribute to corrosion.
- Travel lightly. Do not carry unnecessary weight in your vehicle. Weight reduces fuel economy.
- Do not let the engine idle longer than necessary. If you are waiting (and not in traffic), turn off your engine and restart only when you're ready to go.

- Remember, your vehicle does not require extended warm-up. After the engine has started, allow the engine to run for 10 to 20 seconds prior to placing the vehicle in gear. In very cold weather, however, give your engine a slightly longer warm-up period.
- Do not "lug" or "over-rev" the engine. Lugging is driving too slowly in too high a gear resulting engine bucking. If this happens, shift to a lower gear. Over-revving is racing the engine beyond its safe limit. This can be avoided by shifting at the recommended speeds.
- Use your air conditioning sparingly. The air conditioning system is operated by engine power so your fuel economy is reduced when you use it.
- Open windows at high speeds can reduce fuel economy.
- Fuel economy is less in crosswinds and headwinds. To help offset some of this loss, slow down when driving in these conditions.

Keeping a vehicle in good operating condition is important both for economy and safety. Therefore, we recommend that the system be serviced by an authorized Kia dealer.

⚠ WARNING - Engine off during motion

Never turn the engine off to coast down hills or anytime the vehicle is in motion. The power steering and power brakes will not function properly without the engine running. Instead, keep the engine on and downshift to an appropriate gear for engine braking effect. In addition, turning off the ignition while driving could engage the steering wheel lock (if equipped) resulting in loss of vehicle steering which could cause serious injury or death.

SPECIAL DRIVING CONDITIONS

Hazardous driving conditions

When hazardous driving conditions are encountered such as water, snow, ice, mud, sand, or similar hazards, follow these suggestions:

- Drive cautiously and allow extra distance for braking.
- Avoid sudden braking or steering.
- When braking with non-ABS brakes pump the brake pedal with a light up-and-down motion until the vehicle is stopped.

⚠ WARNING - ABS

Do not pump the brake pedal on a vehicle equipped with ABS.

- If stalled in snow, mud, or sand, use second gear. Accelerate slowly to avoid spinning the drive wheels.
- Use sand, rock salt, tire chains, or other non-slip material under the drive wheels to provide traction when stalled in ice, snow, or mud.

⚠ WARNING - Downshifting

Downshifting with an automatic transaxle, while driving on slippery surfaces can cause an accident. The sudden change in tire speed could cause the tires to skid. Be careful when downshifting on slippery surfaces.

Reducing the risk of a rollover

This multi-purpose passenger vehicle is defined as a Sports Utility Vehicle (SUV).

SUV's have higher ground clearance and a narrower track to make them capable of performing in a wide variety of road 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. Due to this risk, driver and passengers are strongly recommended to buckle their seat belts. In a rollover crash, an unbelted person is 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 - Rollover

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.**

⚠ WARNING

Your vehicle is equipped with tires designed to provide safe ride and handling capability. Do not use a size and type of tire and wheel that is different from the one that is originally installed on your vehicle. It can affect the safety and performance of your vehicle, which could lead to 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. If you nevertheless decide to equip your vehicle with any tire/wheel combination not recommended by Kia for off road driving, you should not use these tires for highway driving.

Rocking the vehicle

If it is necessary to rock the vehicle to free it from snow, sand, or mud, first turn the steering wheel right and left to clear the area around your front wheels. Then, shift back and forth between 1 (First) and R (Reverse) in vehicles equipped with a manual transaxle or R (Reverse) and any forward gear in vehicles equipped with an automatic transaxle. Do not race the engine, and spin the wheels as little as possible. If you are still stuck after a few tries, have the vehicle pulled out by a tow vehicle to avoid engine overheating and possible damage to the transaxle.

⚠ CAUTION

Prolonged rocking may cause engine over-heating, transaxle damage or failure, and tire damage.

⚠ WARNING - Spinning tires

Do not spin the wheels, especially at speeds more than 56 km/h (35 mph). Spinning the wheels at high speeds when the vehicle is stationary could cause a tire to overheat which could result in tire damage that may injure bystanders.

✻ NOTICE

The ESC system should be turned OFF prior to rocking the vehicle.

⚠ WARNING

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.

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


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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


OUM054139L

Rain and wet roads can make driving dangerous, especially if you're not prepared for the slick pavement. Here are a few things to consider when driving in the rain:

- A heavy rainfall will make it harder to see and will increase the distance needed to stop your vehicle, so slow down.
- Keep your windshield wiping equipment in good shape. Replace your windshield wiper blades when they show signs of streaking or missing areas on the windshield.

- If your tires are not in good condition, making a quick stop on wet pavement can cause a skid and possibly lead to an accident. Be sure your tires are in good shape.
- Turn on your headlights to make it easier for others to see you.
- Driving too fast through large puddles can affect your brakes. If you must go through puddles, try to drive through them slowly.
- If you believe you may have gotten your brakes wet, apply them lightly while driving until normal braking operation returns.

Driving in flooded areas

Avoid driving through flooded areas unless you are sure the water is no higher than the bottom of the wheel hub. Drive through any water slowly. Allow adequate stopping distance because brake performance may be affected.

After driving through water, dry the brakes by gently applying them several times while the vehicle is moving slowly.

Driving off-road

Drive carefully off-road because your vehicle may be damaged by rocks of roots of trees. Become familiar with the off-road conditions where you are going to drive before you begin driving.

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.

✻ NOTICE

Never exceed the maximum tire inflation pressure shown on the tires.

⚠ WARNING

- **Underinflated or overinflated tires can cause poor handling, loss of vehicle control, and sudden tire failure leading to accidents, injuries, and even death. Always check the tires for proper inflation before driving. For proper tire pressures, refer to section 8, "Tires and wheels".**
- **Driving on tires with no or insufficient tread is dangerous. Worn-out tires can result in loss of vehicle control, collisions, injury, and even death. Worn-out tires should be replaced as soon as possible and should never be used for driving. Always check the tire tread before driving your vehicle. For further information and tread limits, refer to section 7, "Tires and wheels".**

Fuel, engine coolant and engine oil

High speed travel consumes more fuel than urban motoring. Do not forget to check both 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, Bulgarian) see the Appendix to chapter 9.

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 engine 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 and 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.

✻ NOTICE

Tire chains are not legal in all countries. Check the country 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.

⚠ WARNING - Snow tire size

Snow tires should be equivalent in size and type to the vehicle's standard tires. Otherwise, the safety and handling of your vehicle may be adversely affected.

Do not install studded tires without first checking local, state and municipal regulations for possible restrictions against their use.

Tire chains


OUM054136

Since the sidewalls of radial tires are thinner, they can be damaged by mounting some types of snow chains on them. Therefore, the use of snow tires is recommended instead of snow chains. Do not mount tire chains on vehicles equipped with aluminum wheels; snow chains may cause damage to the wheels. If snow chains must be used, use wire-type chains with a thickness of less than 12 mm (0.47 in). Damage to your vehicle caused by improper snow chain use is not covered by your vehicle manufacturers warranty.

When using tire chains, attach them to the drive wheels as follows.

FWD : Front Wheel Drive

AWD : All Wheel Drive

If a full set of chains is not available for an AWD vehicle, chains may be installed on the front wheels only.

⚠ 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.***

Chain installation

When installing chains, follow the manufacturer's instructions and mount them as tightly as you can. Drive slowly with chains installed. If you hear the chains contacting the body or chassis, stop and tighten them. If they still make contact, slow down until it stops. Remove the chains as soon as you begin driving on cleared roads.

⚠ WARNING - Mounting chains

When mounting snow chains, park the vehicle on level ground away from traffic. Turn on the vehicle Hazard Warning flashers and place a triangular emergency warning device behind the vehicle if available. Always place the vehicle in P (Park), apply the parking brake and turn off the engine before installing snow chains.

⚠ WARNING - Tire chains

- **The use of chains may adversely affect vehicle handling.**
- **Do not exceed 30 km/h (20 mph) or the chain manufacturer's recommended speed limit, whichever is lower.**
- **Drive carefully and avoid bumps, holes, sharp turns, and other road hazards, which may cause the vehicle to bounce.**
- **Avoid sharp turns or locked-wheel braking.**

⚠ CAUTION

- ***Chains that are the wrong size or improperly installed can damage your vehicle's brake lines, suspension, body and wheels.***
- ***Stop driving and retighten the chains any time you hear them hitting the vehicle.***

Use high quality ethylene glycol coolant

Your vehicle is delivered with high quality ethylene glycol coolant in the cooling system. It is the only type of coolant that should be used because it helps prevent corrosion in the cooling system, lubricates the water pump and prevents freezing. Be sure to replace or replenish your coolant in accordance with the maintenance schedule in section 7. Before winter, have your coolant tested to assure that its freezing point is sufficient for the temperatures anticipated during the winter.

Check battery and cables

Winter puts additional burdens on the battery system. Visually inspect the battery and cables as described in section 7. We recommend that the level of charge in your battery be checked by an authorized Kia dealer.

Change to "winter weight" oil if necessary

In some climates it is recommended that a lower viscosity "winter weight" oil be used during cold weather. See section 8 for recommendations. If you aren't sure what weight oil you should use, we recommend that you consult an authorized Kia dealer.

Check spark plugs and ignition system

Inspect your spark plugs as described in section 7 and replace them if necessary. Also check all ignition wiring and components to be sure they are not cracked, worn or damaged in any way.

To keep locks from freezing

To keep the locks from freezing, squirt an approved de-icer fluid or glycerine into the key opening. If a lock is covered with ice, squirt it with an approved de-icing fluid to remove the ice. If the lock is frozen internally, you may be able to thaw it out by using a heated key. Handle the heated key with care to avoid injury.

Use approved window washer anti-freeze in system

To keep the water in the window washer system from freezing, add an approved window washer anti-freeze solution in accordance with instructions on the container. Window washer anti-freeze is available from an authorized Kia dealer and most auto parts outlets. Do not use engine coolant or other types of anti-freeze as these may damage the paint finish.

Don't let your parking brake freeze

Under some conditions your parking brake can freeze in the engaged position. This is most likely to happen when there is an accumulation of snow or ice around or near the rear brakes or if the brakes are wet. If there is a risk the parking brake may freeze, apply it only temporarily while you put the shift lever in P (automatic transaxle) or in first or reverse gear (manual transaxle) and block the rear wheels so the vehicle cannot roll. Then release the parking brake.

Don't let ice and snow accumulate underneath

Under some conditions, snow and ice can build up under the fenders and interfere with the steering. When driving in severe winter conditions where this may happen, you should periodically check underneath the 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.

TRAILER TOWING

If you are considering towing with your vehicle, you should first check with your country's Department of Motor Vehicles to determine their legal requirements.

Since laws vary the requirements for towing trailers, cars, or other types of vehicles or apparatus may differ. We recommend that you ask an authorized Kia dealer.

⚠ WARNING - Towing a trailer

If you don't use the correct equipment and/or drive improperly, you can lose control when you pull a trailer. For example, if the trailer is too heavy, the brakes may not work well - or even at all. You and your passengers could be seriously or fatally injured. Pull a trailer only if you have followed all the steps in this section.

⚠ WARNING - Weight limits

Before towing, make sure the total trailer weight, GCW (gross combination weight), GVW (gross vehicle weight), GAW (gross axle weight) and trailer tongue load are all within the limits.

✻ NOTICE - For Europe

- **The technically permissible maximum load on the rear axle(s) may be exceeded by not more than 15 % and the technically permissible maximum laden mass of the vehicle may be exceeded by not more than 10 % or 100 kg (220.4 lbs), whichever value is lower. In this case, do not exceed 100 km/h (62.1 mph) for vehicle of category M1 or 80 km/h (49.7 mph) for vehicle of category N1.**

(Continued)

(Continued)

- **When towing a trailer, the additional load imposed at the trailer coupling device may cause the rear tire maximum load ratings to be exceeded, but not by more than 15%. In such a case, do not exceed 100km/h, and the rear tire pressure should be at least 20 kPa(0.2 bar) above the tire pressure(s) as recommended for normal use (i.e. without a trailer attached).**

⚠ CAUTION

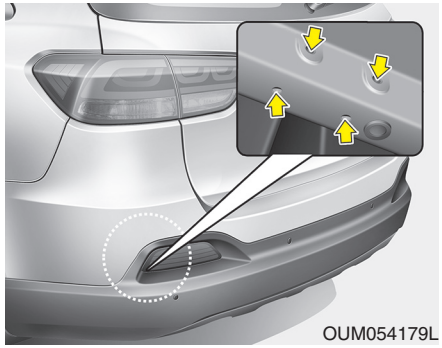
Pulling a trailer improperly can damage your vehicle and result in costly repairs not covered by your warranty. To pull a trailer correctly, follow the advice in this section.

Your vehicle can tow a trailer. To identify what the vehicle trailering capacity is for your vehicle, you should read the information in “Weight of the trailer” that appears later in this section.

Remember that trailering is different than just driving your vehicle by itself. Trailering means changes in handling, durability, and fuel economy. Successful, safe trailering requires correct equipment, and it has to be used properly.

This section contains many time-tested, important trailering tips and safety rules. Many of these are important for your safety and that of your passengers. Please read this section carefully before you pull a trailer.

Load-pulling components such as the engine, transaxle, wheel assemblies, and tires are forced to work harder against the load of the added weight. The engine is required to operate at relatively higher speeds and under greater loads. This additional burden generates extra heat. The trailer also considerably adds wind resistance, increasing the pulling requirements.



✻ NOTICE - Location of trailer mounting

The mounting hole for hitches are located on both sides of the underbody behind the rear tires.

Hitches

It's important to have the correct hitch equipment. Crosswinds, large trucks going by, and rough roads are a few reasons why you'll need the right hitch. Here are some rules to follow:

- Do you have to make any holes in the body of your vehicle when you install a trailer hitch? If you do, then be sure to seal the holes later when you remove the hitch.

  If you do not seal them, deadly carbon monoxide (CO) from your exhaust can get into your vehicle, as well as dirt and water.
- The bumpers on your vehicle are not intended for hitches. Do not attach rental hitches or other bumper-type hitches to them. Use only a frame-mounted hitch that does not attach to the bumper.
- Kia trailer hitch accessary is available at an authorized Kia dealer.

Safety chains

You should always attach chains between your vehicle and your trailer. Cross the safety chains under the tongue of the trailer so that the tongue will not drop to the road if it becomes separated from the hitch.

Instructions about safety chains may be provided by the hitch manufacturer or by the trailer manufacturer. Follow the manufacturer's recommendation for attaching safety chains. Always leave just enough slack so you can turn with your trailer. And, never allow safety chains to drag on the ground.

Trailer brakes

If your trailer is equipped with a braking system, make sure it conforms to your country's regulations and that it is properly installed and operating correctly.

If your trailer weight exceeds the maximum allowed weight without trailer brakes, then the trailer will also require its own brakes as well. Be sure to read and follow the instructions for the trailer brakes so you'll be able to install, adjust and maintain them properly.

- Do not tap into or modify your vehicle's brake system.

⚠ WARNING - Trailer brakes

Do not use a trailer with its own brakes unless you are absolutely certain that you have properly set up the brake system. This is not a task for amateurs. Use an experienced, competent trailer shop for this work.

Driving with a trailer

Towing a trailer requires a certain amount of experience. Before setting out for the open road, you must get to know your trailer. Acquaint yourself with the feel of handling and braking with the added weight of the trailer. And always keep in mind that the vehicle you are driving is now a good deal longer and not nearly so responsive as your vehicle is by itself.

Before you start, check the trailer hitch and platform, safety chains, electrical connector(s), lights, tires and mirror adjustment. If the trailer has electric brakes, start your vehicle and trailer moving and then apply the trailer brake controller by hand to be sure the brakes are working. This lets you check your electrical connection at the same time.

During your trip, check occasionally to be sure that the load is secure, and that the lights and any trailer brakes are still working.

Following distance

Stay at least twice as far behind the vehicle ahead as you would when driving your vehicle without a trailer. This can help you avoid situations that require heavy braking and sudden turns.

Passing

You'll need more passing distance up ahead when you're towing a trailer. And, because of the increased vehicle length, you'll need to go much farther beyond the passed vehicle before you can return to your lane. Due to the added load to the engine when going uphill the vehicle may also take longer to pass than it would on flat ground.

Backing up

Hold the bottom of the steering wheel with one hand. Then, to move the trailer to the left, just move your hand to the left. To move the trailer to the right, move your hand to the right. Always back up slowly and, if possible, have someone guide you.

Making turns

When you're turning with a trailer, make wider turns than normal. Do this so your trailer won't strike soft shoulders, curbs, road signs, trees, or other objects near the edge of the road. Avoid jerky or sudden maneuvers. Signal well in advance before turning or lane changes.

Turn signals when towing a trailer

When you tow a trailer, your vehicle has to have a different turn signal flasher and extra wiring. The green arrows on your instrument panel will flash whenever you signal a turn or lane change. Properly connected, the trailer lights will also flash to alert other drivers you're about to turn, change lanes, or stop.

When towing a trailer, the green arrows on your instrument panel will flash for turns even if the bulbs on the trailer are burned out. Thus, you may think drivers behind you are seeing your signals when, in fact, they are not. It is important to check occasionally to be sure the trailer bulbs are still working. You must also check the lights every time you disconnect and then reconnect the wires.

Do not connect a trailer lighting system directly to your vehicle's lighting system. Use only an approved trailer wiring harness.

An authorized Kia dealer can assist you in installing the wiring harness.

⚠ WARNING

Failure to use an approved trailer wiring harness could result in damage to the vehicle electrical system and/or personal injury.

Driving on grades

Reduce speed and shift to a lower gear before you start down a long or steep downgrade. If you don't shift down, you might have to use your brakes so much that they would get hot and no longer operate efficiently.

On a long uphill grade, shift down and reduce your speed to around 70 km/h (45 mph) to reduce the possibility of engine and transaxle overheating.

If your trailer weighs more than the maximum trailer weight without trailer brakes and you have an automatic transaxle, you should drive in D (Drive) when towing a trailer.

Operating your vehicle in D (Drive) when towing a trailer will minimize heat build up and extend the life of your transaxle.

⚠ CAUTION

- ***When towing a trailer on steep grades (in excess of 6%) pay close attention to the engine coolant temperature gauge to ensure the engine does not overheat.***

  If the needle of the coolant temperature gauge moves across the dial towards "130/H (HOT)", pull over and stop as soon as it is safe to do so, and allow the engine to idle until it cools down. You may proceed once the engine has cooled sufficiently.

- ***You must decide driving speed depending on trailer weight and uphill grade to reduce the possibility of engine and transaxle overheating.***

Parking on hills

Generally, if you have a trailer attached to your vehicle, you should not park your vehicle on a hill. People can be seriously or fatally injured, and both your vehicle and the trailer can be damaged if they unexpectedly roll down hill.

⚠ WARNING - Parking on a hill

Parking your vehicle on a hill with a trailer attached could cause serious injury or death, should the trailer break loose or the brake stops working.

However, if you ever have to park your trailer on a hill, here is how to do it:

1. Pull the vehicle into the parking space. Turn the steering wheel in the direction of the curb (right if headed down hill, left if headed up hill).
2. If the vehicle has a manual transaxle, place the car in neutral. If the vehicle has an automatic transaxle, place the car in P (Park).
3. Set the parking brake and shut off the vehicle.
4. Place chocks under the trailer wheels on the down hill side of the wheels.
5. Start the vehicle, hold the brakes, shift to neutral, release the parking brake and slowly release the brakes until the trailer chocks absorb the load.
6. Reapply the brakes, reapply the parking brake and shift the vehicle to R (Reverse) for manual transaxle or P (Park) for automatic transaxle.
7. Shut off the vehicle and release the vehicle brakes but leave the parking brake set.

⚠ WARNING - Parking brake

It can be dangerous to get out of your vehicle if the parking brake is not firmly set.

If you have left the engine running, the vehicle can move suddenly. You or others could be seriously or fatally injured.

When you are ready to leave after parking on a hill

1. With the manual transaxle in Neutral or automatic transaxle in P (Park), apply your brakes and hold the brake pedal down while you:
   - Start your engine;
   - Shift into gear; and
   - Release the parking brake.
2. Slowly remove your foot from the brake pedal.
3. Drive slowly until the trailer is clear of the chocks.
4. Stop and have someone pick up and store the chocks.

Maintenance when trailer towing

Your vehicle will need service more often when you regularly pull a trailer. Important items to pay particular attention to include engine oil, automatic transaxle fluid, axle lubricant and cooling system fluid. Brake condition is another important item to frequently check. Each item is covered in this manual, and the Index will help you find them quickly. If you're trailering, it is a good idea to review these sections before you start your trip.

Do not forget to also maintain your trailer and hitch. Follow the maintenance schedule that accompanied your trailer and check it periodically. Preferably, conduct the check at the start of each day's driving. Most importantly, all hitch nuts and bolts should be tight.

⚠ CAUTION

- ***Due to higher load during trailer usage, overheating might occur in hot days or during uphill driving. If the coolant gauge indicates overheating, switch off the air conditioner and stop the vehicle in a safe area to cool down the engine.***
- ***When towing check transaxle fluid more frequently.***
- ***If your vehicle is not equipped with an air conditioner, you should install a condenser fan to improve engine performance when towing a trailer.***

If you do decide to pull a trailer

Here are some important points if you decide to pull a trailer:

- Consider using a sway control. You can ask a hitch dealer about sway control.
- Do not do any towing with your car during its first 2,000 km (1,200 miles) in order to allow the engine to properly break in. Failure to heed this caution may result in serious engine or transaxle damage.
- When towing a trailer, we recommend that you consult an authorized Kia dealer on additional requirements such as a towing kit, etc.
- Always drive your vehicle at a moderate speed (less than 100 km/h (60 mph)).
- On a long uphill grade, do not exceed 70 km/h (45 mph) or the posted towing speed limit, whichever is lower.
- The chart contains important considerations that have to do with weight:

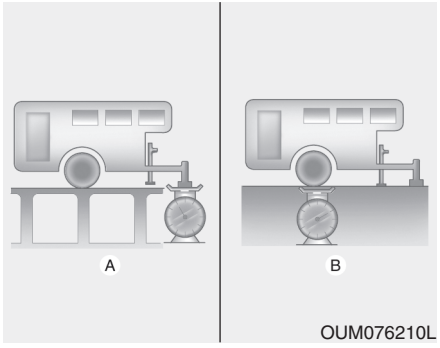
For Europe

<table>
<tr><td colspan="3" rowspan="2">Item</td><td colspan="2">Gasoline Engine</td><td colspan="2">Diesel Engine</td></tr>
<tr><td>Theta II 2.4</td><td>Lambda II 3.3</td><td>R2.0</td><td>R2.2</td></tr>
<tr><td rowspan="3">Maximum trailer weight</td><td colspan="2">Without brake System</td><td colspan="4">750 kg (1,653 lbs.)</td></tr>
<tr><td rowspan="2">With brake System</td><td>M/T</td><td colspan="4">2,500 kg (5,511 lbs.)</td></tr>
<tr><td>A/T</td><td colspan="4">2,000 kg (4,409 lbs.)</td></tr>
<tr><td colspan="3">Maximum permissible static vertical load on the coupling device</td><td colspan="4">100 kg (220 lbs.)</td></tr>
<tr><td colspan="3">Recommended distance from rear wheel center to coupling point</td><td colspan="4">1,130 mm (44.5 inch)</td></tr>
</table>

M/T : Manual transaxle

A/T : Automatic transaxle

Weight of the trailer

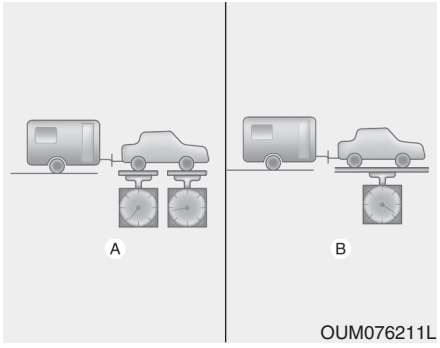


A : Tongue Load
B : Total Trailer Weight

What is the maximum safe weight of a trailer? It should never weigh more than the maximum trailer weight with trailer brakes. But even that can be too heavy.

It depends on how you plan to use your trailer. For example, speed, altitude, road grades, outside temperature and how often your vehicle is used to pull a trailer are all important. The ideal trailer weight can also depend on any special equipment that you have on your vehicle.

Weight of the trailer tongue



A : Gross Axle Weight
B : Gross Vehicle Weight

The tongue load of any trailer is an important weight to measure because it affects the total gross vehicle weight (GVW) of your vehicle. This weight includes the curb weight of the vehicle, any cargo you may carry in it, and the people who will be riding in the vehicle. And if you will tow a trailer, you must add the tongue load to the GVW because your vehicle will also be carrying that weight.

The trailer tongue should weigh a maximum of 10% of the total loaded trailer weight, within the limits of the maximum permissible trailer tongue load.

After you've loaded your trailer, weigh the trailer and then the tongue, separately, to see if the weights are proper. If they aren't, you may be able to correct them simply by moving some items around in the trailer.

⚠ WARNING - Trailer

- **Never load a trailer with more weight in the rear than in the front. The front should be loaded with approximately 60% of the total trailer load; the rear should be loaded with approximately 40% of the total trailer load.**
- **Never exceed the maximum weight limits of the trailer or trailer towing equipment. Improper loading can result in damage to your vehicle and/or personal injury. Check weights and loading at a commercial scale or highway patrol office equipped with scales.**
- **An improperly loaded trailer can cause loss of vehicle control.**

✻ NOTICE

With increasing altitude the engine performance decreases. From 1,000m above sea level and for every 1,000m thereafter 10% of vehicle/trailer weight (trailer weighter + gross vehicle weight) must be deducted.

VEHICLE WEIGHT

This section will guide you in the proper loading of your vehicle and/or trailer, to keep your loaded vehicle weight within its design rating capability, with or without a trailer. Properly loading your vehicle will provide maximum return of the vehicle design performance. Before loading your vehicle, familiarize yourself with the following terms for determining your vehicle's weight ratings, with or without a trailer, from the vehicle's specifications and the 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.

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.

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.

Overloading

⚠ WARNING - 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.