Driving your vehicle

Before Driving 5-5
Before Entering the Vehicle 5-5
Before Starting 5-5
Ignition Switch 5-7
Key Ignition Switch 5-7
Engine Start/Stop Button 5-10
Automatic Transmission 5-15
Automatic transmission operation 5-15
Parking 5-18
LCD display message 5-19
Good driving practices 5-20
Paddle Shifter (Manual Shift Mode) 5-22
Braking System 5-23
Power Brakes 5-23
Disc Brakes Wear Indicator 5-24
Electronic Parking Brake (EPB) 5-24
Auto Hold 5-29
Anti-lock Brake System (ABS) 5-33
Electronic Stability Control (ESC) 5-35
Vehicle Stability Management (VSM) 5-38
Hill-Start Assist Control (HAC) 5-39
Downhill Brake Control (DBC) 5-39
Trailer Stability Assist (TSA) 5-42
Good Braking Practices 5-42
All Wheel Drive (AWD) 5-43
Multi Terrain Control 5-43
AWD Operation 5-45
LCD display message 5-48
Emergency Precautions 5-49
ISG (Idle Stop and Go) System 5-51
To Activate the ISG System 5-51
To Deactivate the ISG System 5-54
ISG System Malfunction 5-54
Battery Sensor Deactivation 5-55
Drive Mode Integrated Control System (2WD) 5-56
Drive Mode 5-56
Drive Mode Integrated Control System (AWD) 5-60
Drive Mode 5-60
Forward Collision-avoidance Assist (FCA) System 5-64
System Setting and Operation 5-64
FCA Warning Message and Brake Control 5-67
FCA Sensor (Front Radar/Front Camera) 5-69
System Malfunction 5-71
Limitations of the System 5-73

Blind-Spot Collision Warning/
Blind-Spot Collision-Avoidance Assist 5-79
System Description 5-79
System Setting and Operation 5-80
Warning and System Control 5-83
Detecting Sensor (Camera and Radar) 5-85
Limitations of the System 5-88
Declaration of conformity 5-92
The radio frequency components
(Rear Corner Radar) complies: 5-92
Rear Cross-traffic Collision Warning (RCCW)/
Rear Cross-traffic Collision-avoidance Assist
(RCCA) 5-93
System Description 5-93
System Setting and Operation 5-94
Warning and System Control 5-96
Detecting Sensor 5-99
Limitations of the System 5-100
Lane Following Assist (LFA) System.....5-104
LFA Setting and Operation 5-105
Warning Message 5-106
Limitations of the System 5-108
Lane Keeping Assist (LKA) System 5-110
LKA System Operation 5-111
Warning Light and Message 5-113
Limitations of the System 5-115
LKA System Function Change 5-117
Driver Attention Warning (DAW) System.....5-118
System Setting and Operation 5-118
Resetting the System 5-119
System Standby 5-120
System Malfunction 5-120
Highway Driving Assist (HDA) System 5-122
System Setting and Operation 5-122
Warning Message 5-125
Smart Cruise Control With Stop &
Go System 5-129
Smart Cruise Control Switch 5-130
Adjusting the Sensitivity of
Smart Cruise Control 5-130
To Convert to Cruise Control Mode 5-131
Smart Cruise Control Speed 5-132
Smart Cruise Control Vehicle-to-Vehicle
Distance 5-136
Sensor to Detect Distance to the
Vehicle Ahead 5-139
Limitations of the System 5-141

Leading Vehicle Departure Alert 5-147
System Setting and Operation.....5-147
Special Driving Conditions 5-149
Hazardous Driving Conditions.....5-149
Rocking the Vehicle.....5-149
Smooth Cornering.....5-150
Driving at Night 5-150
Driving in the Rain.....5-150
Driving in Flooded Areas.....5-151
Highway Driving 5-151
Reducing the Risk of a Rollover 5-152
Winter Driving 5-153
Snow or Icy Conditions.....5-153
Winter Precautions.....5-153
Trailer Towing.....5-156
If you decide to pull a trailer.....5-156
Trailer towing equipment 5-158
Driving with a trailer 5-159
Maintenance when trailer towing 5-162
Vehicle Load Limit.....5-164
Tire Loading Information Label.....5-165

⚠ WARNING

Carbon monoxide (CO) gas is toxic. Breathing CO can cause unconsciousness and death.

Engine exhaust contains carbon monoxide which cannot be seen or smelled.

Do not inhale engine exhaust.

If at any time you smell engine exhaust inside the vehicle, open the windows immediately. Exposure to CO 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, have the exhaust system checked as soon as possible by an authorized HYUNDAI 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. Run the engine only long enough to start the engine and to move the vehicle out of the garage.

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 control set to high so fresh air is drawn into the interior.

Keep the air intakes clear.

To assure proper operation of the ventilation system, keep the ventilation air intakes located in front of the windshield clear of snow, ice, leaves, or other obstructions.

If you must drive with the tailgate open:

Close all windows.

Open instrument panel air vents.

Set the air intake control at "Fresh", the air flow control at "Floor" or "Face", and the fan control set to high.

BEFORE DRIVING

Before Entering the Vehicle

- Be sure all windows, outside mirror(s), and outside lights are clean and unobstructed.
- Remove frost, snow, or ice.
- Visually check the tires for uneven wear and damage.
- Check under the vehicle for any sign of leaks.
- Be sure there are no obstacles behind you if you intend to back up.

Before Starting

- Make sure the hood, the tailgate, and the doors are securely closed and locked.
- Adjust the position of the seat and steering wheel.
- Adjust the inside and outside rearview mirrors.
- Verify all the lights work.
- Fasten your seatbelt. Check that all passengers have fastened their seatbelts.
- Check the gauges and indicators in the instrument panel and the messages on the instrument display when the ignition switch is in the ON position.
- Check that any items you are carrying are stored properly or fastened down securely.

⚠ WARNING

To reduce the risk of SERIOUS INJURY or DEATH, take the following precautions:

- **ALWAYS wear your seat belt. All passengers must be properly belted whenever the vehicle is moving. For more detail, refer to "Seat Belts" in chapter 2.**
- **Always drive defensively. Assume other drivers or pedestrians may be careless and make mistakes.**
- **Stay focused on the task of driving. Driver distraction can cause accidents.**
- **Leave plenty of space between you and the vehicle in front of you.**

⚠ WARNING

NEVER drink or take drugs and drive.

Drinking or taking drugs and driving is dangerous and may result in an accident and SERIOUS INJURY or DEATH.

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 judgment. Just one drink can reduce your ability to respond to changing conditions and emergencies and your reaction time gets worse with each additional drink.

Driving while under the influence of drugs is as dangerous or more dangerous than driving under the influence of alcohol.

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 taxi.

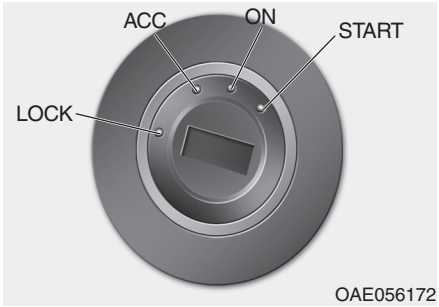
IGNITION SWITCH

Key Ignition Switch

⚠ WARNING

To reduce the risk of SERIOUS INJURY or DEATH, take the following precautions:

- **NEVER allow children or any person who is unfamiliar with the vehicle to touch the ignition switch or related parts. Unexpected and sudden vehicle movement can occur.**
- **NEVER reach through the steering wheel for the ignition switch, or any other control, while the vehicle is in motion. The presence of your hand or arm in this area may cause a loss of vehicle control resulting in an accident.**



Whenever the front door is opened, the ignition switch will illuminate, 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. (if equipped)

⚠ WARNING

NEVER turn the ignition switch to the LOCK or ACC position while the vehicle is in motion except in an emergency. This will result in the engine turning off and loss of power assist for the steering and brake systems. This may lead to loss of directional control and braking function, which could cause an accident.

Before leaving the driver's seat, always make sure the gear is in P (Park) position, apply the parking brake, and turn ignition switch to the LOCK position.

Unexpected vehicle movement may occur if these precautions are not followed.

Key ignition switch positions

Switch Position	Action	Notice
LOCK	To turn the ignition switch to the LOCK position, put the key in at the ACC position and turn the key towards the LOCK position. The ignition key can be removed in the LOCK position. The shift lever must be in the P (Park) position.	
ACC	Some of the electrical accessories are usable.	
ON	This is the normal key position when the engine has started. All features and accessories are usable. The warning lights can be checked when you turn the ignition switch from ACC to ON.	Do not leave the ignition switch in the ON position when the engine is not running in order to prevent the battery from discharging.
START	To start the engine, turn the ignition switch to the START position. The switch returns to the ON position when you let go of the key.	The engine will crank until you release the key.

Starting the engine

⚠ WARNING

Always wear appropriate shoes when operating your vehicle.

Unsuitable shoes, such as high heels, ski boots, sandals, flip-flops, etc., may interfere with your ability to use the brake and accelerator pedals.

1. Make sure the parking brake is applied.
2. Make sure the gear is in P (Park).
3. Depress the brake pedal.
4. Turn the ignition switch to the START position. Hold the key (maximum of 10 seconds) until the engine starts and release it.

i Information

- **It is best to maintain a moderate engine speed until the vehicle engine comes up to normal operating temperature. Avoid harsh or abrupt acceleration or deceleration while the engine is still cold.**
- **Whether the engine is cold or warm, always start the vehicle with your foot on the brake pedal. Do not depress the accelerator while starting the vehicle. Do not rev the engine while warming it up.**

NOTICE

To prevent damage to the vehicle:

- **Do not hold the ignition key in the START position for more than 10 seconds. Wait 5 to 10 seconds before trying again.**
- **Do not push or tow your vehicle to start the engine.**

Turning off the engine

1. Stop the vehicle and depress the brake pedal fully.
2. Shift the gear to P (Park).
3. Turn the ignition switch to the off position and apply the parking brake.

Engine Start/Stop Button

Whenever the front door is opened, the Engine Start/Stop button will illuminate and will go off 30 seconds after the door is closed.

⚠ WARNING

To reduce risk of serious injury or death, NEVER allow children or any person who is unfamiliar with the vehicle to touch the Engine Start/Stop button or related parts. Unexpected and sudden vehicle movement can occur.

⚠ WARNING

To turn the engine off in an emergency:

Press and hold the Engine Start/Stop button for more than two seconds OR rapidly press and release the Engine Start/ Stop button three times (within three 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 gear in the N (Neutral) position.

⚠ WARNING

- **NEVER press the Engine Start/ Stop button while the vehicle is in motion except in an emergency. This will result in the engine turning off and loss of power assist for the steering and brake systems.**

This may lead to loss of directional control and braking function, which could cause an accident.

- **Before leaving the driver's seat, always make sure the gear is in the P (Park) position, set the parking brake, press the Engine Start/ Stop button to the OFF position, and take the Smart Key with you. Unexpected vehicle movement may occur if these precautions are not followed.**
- **NEVER reach through the steering wheel for the Engine Start/Stop button or any other control while the vehicle is in motion. The presence of your hand or arm in this area may cause a loss of vehicle control resulting in an accident.**

Engine Start/Stop button positions

Button Position	Action	Notice
OFF	To turn off the engine, press the Engine Start/Stop button with the gear in P (Park). When you press the Engine Start/Stop button without the gear in P (Park), the Engine Start/Stop button does not turn to the OFF position, but turns to the ACC position.	
ACC	Press the Engine Start/Stop button when the button is in the OFF position without depressing the brake pedal. Some of the electrical accessories are usable.	If you leave the Engine Start/Stop button in the ACC position with the gear in P (Park) for more than one hour, the battery power will turn off automatically to prevent the battery from discharging.

Button Position	Action	Notice
ON	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 when the engine is not running to prevent the battery from discharging.
START	To start the engine, depress the brake pedal and press the Engine Start/Stop button with the gear in the P (Park) or in the N (Neutral) position. For your safety, start the engine with the gear in the P (Park) position.	If you press the Engine Start/Stop button without depressing the brake pedal, the engine does not start and the Engine Start/Stop button changes as follows: **OFF → ACC → ON → OFF** However, the engine may start if you depress the brake pedal within 0.5 second after pressing the Engine Start/Stop button from the OFF position.

Starting the engine

⚠ WARNING

- **Always wear appropriate shoes when operating your vehicle.**

  Unsuitable shoes, such as high heels, ski boots, sandals, flip-flops, etc., may interfere with your ability to use the brake and accelerator pedals.
- **Do not start the vehicle with the accelerator pedal depressed. The vehicle can move and lead to an accident.**
- **Wait until the engine rpm is normal. The vehicle may suddenly move if the brake pedal is released when the rpm is high.**

Information

- **The engine will start by pressing the Engine Start/Stop button, only when the smart key is in the vehicle.**
- **Even if the smart key is in the vehicle, if it is far away from the driver, the engine may not start.**
- **When the Engine Start/Stop button is in the ACC or ON position, if any door is open, the system checks for the smart key. If the smart key is not in the vehicle, the "🚗" indicator will blink and the warning "Key not in vehicle" will come on and if all doors are closed, the chime will also sound for about 5 seconds. Keep the smart key in the vehicle when using the ACC position or if the vehicle engine is ON.**

1. Always carry the smart key with you.
2. Make sure the parking brake is applied.
3. Make sure the gear is in P (Park).
4. Depress the brake pedal.
5. Press the Engine Start/Stop button.

Information

- **Do not wait for the engine to warm up while the vehicle remains stationary. Start driving at moderate engine speeds. (Aggressive accelerating and decelerating should be avoided.)**
- **Always start the vehicle with your foot on the brake pedal. Do not depress the accelerator while starting the vehicle. Do not rev the engine while warming it up.**

NOTICE

To prevent damage to the vehicle:

- **If the engine stalls while you are in motion, do not attempt to shift the gear to the P (Park) position.**

  If traffic and road conditions permit, you may put the gear in the N (Neutral) position while the vehicle is still moving and press the Engine Start/Stop button in an attempt to restart the engine.
- **Do not push or tow your vehicle to start the engine.**

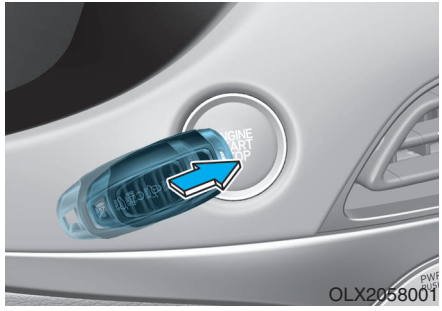
NOTICE

To prevent damage to the vehicle:

When the stop lamp switch fuse is blown, you can't start the engine normally. Replace the fuse with a new one. If you are not able to replace the fuse, you can start the engine by pressing and holding the Engine Start/Stop button for 10 seconds with the Engine Start/Stop button in the ACC position.

Do not press the Engine Start/Stop button for more than 10 seconds except when the stop lamp switch fuse is blown.

For your safety always depress the brake pedal before starting the engine.



Information

If the smart key 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 in the direction of the picture above.

Turning off the engine

1. Stop the vehicle and depress the brake pedal fully.
2. Shift the gear to P (Park).
3. Press the Engine Start/Stop button to the off position and apply the parking brake.

OLX2058003

Automatic transmission operation

The automatic transmission has eight forward speeds and one reverse speed.

The individual speeds are selected automatically in the D (Drive) position.

⚠ WARNING

The automatic transmission shift button or interior parts might get hot when a vehicle is parked outside during hot weather. Always be careful when the vehicle is hot.

Transmission ranges

The indicator in the instrument cluster displays the gear position when the ignition switch is in the ON position.

⚠ WARNING

To reduce the risk of serious injury or death:

- **ALWAYS check the surrounding areas near your vehicle for people, especially children, before shifting a vehicle into D (Drive) or R (Reverse).**
- **Before leaving the driver's seat, always make sure the gear is in the P (Park) position, then set the parking brake, and place the ignition switch in the LOCK/OFF position. Unexpected and sudden vehicle movement can occur if these precautions are not followed.**
- **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.**

P (Park)

Always come to a complete stop before shifting into P (Park).

To shift from P (Park), you must depress firmly on the brake pedal and make sure your foot is off the accelerator pedal.

The gear must be in P (Park) before turning the engine off.

⚠ WARNING

- **Shifting into P (Park) while the vehicle is in motion may cause you to lose control of the vehicle.**
- **After the vehicle has stopped, always make sure the gear is in P (Park), apply the parking brake, and turn the engine off.**
- **Do not use the P (Park) position in place of the parking brake.**

R (Reverse)

Use this position to drive the vehicle backward.

NOTICE

Always come to a complete stop before shifting into or out of R (Reverse); you may damage the transmission if you shift into R (Reverse) while the vehicle is in motion.

When the vehicle is stopped in R (Reverse) position, if you open the driver's door with the seat belt unfastened, the gear is shifted to P (Park) position automatically.

However when the vehicle moves in R (Reverse) position, if you open the driver's door with the seat belt unfastened, the gear may be not shifted to P (Park) position automatically for protecting the automatic transmission.

N (Neutral)

The wheels and transmission are not engaged.

Use N (Neutral) if you need to restart a stalled engine, or if it is necessary to stop with the engine ON. Shift into P (Park) if you need to leave your vehicle for any reason.

Always depress the brake pedal when you are shifting from N (Neutral) to another gear.

⚠ WARNING

Do not shift into gear unless your foot is firmly on the brake pedal. Shifting into gear when the engine is running at high speed can cause the vehicle to move very rapidly. You could lose control of the vehicle and hit people or objects.

D (Drive)

This is the normal driving position. The transmission will automatically shift through a 8-gear sequence, providing the best fuel economy and power.

To start the vehicle forward, push the D (Drive) button by depressing the brake pedal with the engine ON. Then depress the accelerator pedal smoothly.

For extra power when passing another vehicle or driving uphill, depress the accelerator fully. The transmission will automatically downshift to the next lower gear (or gears, as appropriate).

When the vehicle is stopped in D (Drive) position, if you open the driver's door with the seat belt unfastened, the gear is shifted to P (Park) position automatically.

However when the vehicle moves in D (Drive) position, if you open the driver's door with the seat belt unfastened, the gear may not shift to P (Park) position automatically to protect the automatic transmission.

Shift-lock system

For your safety, the automatic transmission has a shift-lock system which prevents shifting the gear from P (Park) or N (Neutral) to R (Reverse) or D (Drive) unless the brake pedal is depressed.

To shift the gear from P (Park) or N (Neutral) to R (Reverse) or D (Drive):

1. Depress and hold the brake pedal.
2. Start the engine or place the ignition switch in the ON position.
3. Depress the brake pedal and push the R (Reverse) or D (Drive) button.

When the battery is discharged:

You cannot shift the gear when the battery is discharged.

In emergencies, do the following to move the shift button to N (Neutral) on a level ground.

1. Connect the battery cables from another vehicle or from a another battery to the jump-starting terminals inside the engine compartment.

   For more detail, refer to "Jump Starting" in chapter 6.
2. Release the parking brake with the Engine Start/Stop button in the ON position.
3. Shift the gear to the N(Neutral) position. Refer to the "Stay in Neutral when vehicle is Off" in this chapter.

Parking

Always come to a complete stop and continue to depress the brake pedal. Press the P button, apply the parking brake, and place the ignition switch in the LOCK/OFF position. Take the Key with you when exiting the vehicle.

- The gear is shifted to P (Park) position automatically for safety under the following conditions.
  - When the driver unfastens the seat belt and opens the driver's door.
  - When the engine is turned off with the gear shifted to R (Reverse), D (Drive) or N (Neutral).

⚠ WARNING

When you stay in the vehicle with the engine running, be careful not to depress the accelerator pedal for a long period of time. The engine or exhaust system may overheat and start a fire.

The exhaust gas and the exhaust system are very hot. Keep away from the exhaust system components.

Do not stop or park over flammable materials, such as dry grass, paper or leaves. They may ignite and cause a fire.

LCD display message

Shifting conditions not met

The warning message appears on the LCD display, when engine RPM is too high, or when driving speed is too fast to shift the gear.

We recommend you decrease the engine speed or slow down before shifting the gear.

Press brake pedal to change gear

The warning message appears on the LCD display, when the brake pedal is not depressed while shifting the gear.

We recommend you to depress the brake pedal and then shift the gear.

Shift to P after stopping

The warning message appears on the LCD display, when the gear is shifted to P (Park) while the vehicle is moving.

Stop the vehicle before shifting to P (Park).

PARK engaged

The warning message appears on the LCD display, when the gear is shifted to P (Park) while the vehicle is moving.

Stop the vehicle before shifting to P (Park).

Press and hold OK button to stay in Neutral when vehicle is Off

The warning message appears on the LCD display, when pushing the N(Neutral) button. If you want to stay N(Neutral) after turning off the engine, press and hold the “OK” button on the steering wheel more than 1 second.

Vehicle will stay in (N). Change gear to cancel

The warning message appears on the LCD display, when pushing the "OK" button on the steering wheel after the message ("Press and hold OK button to stay in Neutral when vehicle is Off") appears on the cluster LCD display. The gear stays in N(Neutral) position after turning off the engine.

NEUTRAL engaged

The message appears on the LCD display, when the N (Neutral) position is engaged.

Gear already selected

The message appears on the LCD display, when pushing the current shift button again.

Shift button held down

The warning message appears on the LCD display, when the shift button is pressed continuously or the shift button does not properly operate. Clean the surroundings of gear shift button.

If this message appears again, we recommend you to have the vehicle inspected by an authorized HYUNDAI dealer.

Shifter system malfunction

The warning message appears on the LCD display, when the transmission or the shift button does not properly operate in the P (Park) position.

In this case, we recommend you to immediately have the vehicle inspected by an authorized HYUNDAI dealer.

Check shift controls

The warning message appears on the LCD display, when there is a malfunction with transmission shift button.

In this case, we recommend you to immediately have the vehicle inspected by an authorized HYUNDAI dealer.

Good driving practices

- Never shift the gear from P (Park) or N (Neutral) to any other position with the accelerator pedal depressed.
- Never shift the gear 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).
- Do not shift the gear to N (Neutral) when driving. Doing so may result in an accident because of a loss of engine braking and the transmission could be damaged.
- Driving uphill or downhill, always shift to D (Drive) when driving forward or to R (Reverse) when driving backwards, and check the gear position indicated on the cluster before driving. If you drive in the opposite direction of the selected gear, the engine will turn off and a serious accident might be occurred due to the degraded brake performance.

- Do not drive with your foot resting on the brake pedal. Even light, but consistent pedal pressure can result in the brakes overheating, brake wear and possibly even brake failure.
- When driving in sports mode, slow down before shifting to a lower gear. Otherwise, the lower gear may not be engaged if the engine rpms are outside of the allowable range.
- Always apply the parking brake when leaving the vehicle. Do not depend on placing the transmission 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 may cause loss of vehicle control resulting in an accident
- Optimum vehicle performance and economy is obtained by smoothly depressing and releasing the accelerator.

⚠ WARNING

To reduce the risk of SERIOUS INJURY or DEATH:

- **ALWAYS wear your seatbelt. 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 over steers 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.**
- **HYUNDAI recommends you follow all posted speed limits.**

Paddle Shifter (Manual Shift Mode)

The paddle shifter is available when the gear is in the D (Drive) position.

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

To change back to the automatic shift mode from manual shift mode, do one of the following:

- Gently depress the accelerator pedal for more than 5 seconds.
- Drive the vehicle under 10 km/h (6 mph).
- Pull and hold the right side paddle shifter.

Information

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

BRAKING SYSTEM

Power Brakes

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

If the engine is not running or is turned off while driving, the power assist for the brakes will not work. You can still stop your vehicle by applying greater force to the brake pedal than typical. The stopping distance, however, will be longer than with power brakes.

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.

⚠ WARNING

Take the following precautions:

- **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 down a long or steep hill, use the paddle shifter and manually downshift to a lower gear in order to control your speed without using the brake pedal excessively. Applying the brakes continuously 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. Always test your brakes in this fashion after driving through deep water. To dry the brakes, lightly tap the brake pedal to heat up the brakes while maintaining a safe forward speed until brake performance returns to normal. Avoid driving at high speeds until the brakes function correctly.**

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 or rear brakes. You may hear this sound come and go or it may occur whenever you depress the brake pedal.

Note 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.

NOTICE

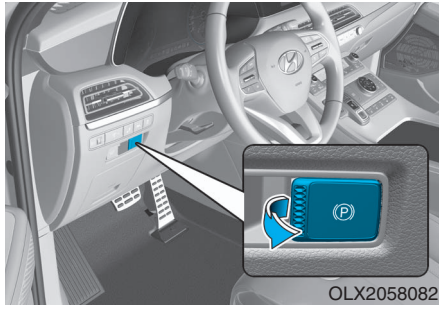
To avoid costly brake repairs, do not continue to drive with worn brake pads.

Information

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

Electronic Parking Brake (EPB)

Applying the parking brake



To apply the EPB (Electronic Parking Brake):

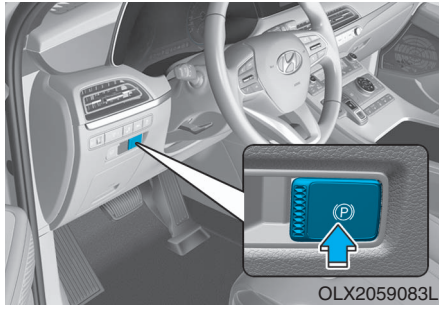
1. Depress the brake pedal.
2. Pull up the EPB switch.

Make sure the Parking Brake Warning Light comes on.

⚠ WARNING

To reduce the risk of SERIOUS INJURY or DEATH, do not operate the EPB while the vehicle is moving except in an emergency situation. It could damage the brake system and lead to an accident.

Releasing the parking brake



To release the EPB (Electronic Parking Brake):

- Place the ignition switch in the ON position.
- Depress and hold the brake pedal.
- Press the EPB switch.

Make sure the Parking Brake Warning Light goes off.

Information

- **For your safety, you can engage the EPB even though the ignition switch 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

- **If the parking brake warning light is still on even though the EPB has been released, have the system checked by an authorized HYUNDAI 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:

- Requested by other systems
- The driver turns the engine off while Auto Hold is operating.

Warning messages

OTMA058132

To release EPB, fasten seatbelt, close door, hood and liftgate

- If you try to drive with the EPB applied, a warning will sound and a message will appear.
- If the driver's seat belt is unfastened and the engine hood or tailgate 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 situation occurs, depress the brake pedal and release EPB by pressing the EPB switch.

⚠ WARNING

- **Whenever leaving the vehicle or parking, always come to a complete stop and continue to depress the brake pedal.**

  Shift the gear into the P (Park) position, press the EPB switch, and set the ignition switch to the OFF position. Take the Key with you when exiting the vehicle.

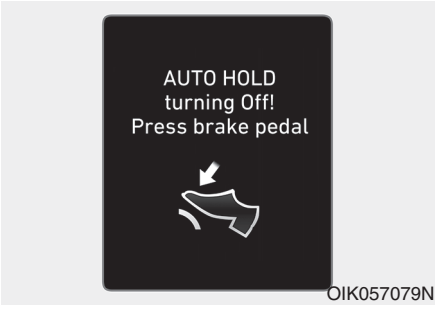
  Vehicles not fully engaged in P (Park) with the parking brake set are at risk for moving inadvertently and causing injury to yourself or others.
- **NEVER allow anyone who is unfamiliar with the vehicle to touch the EPB switch. If the EPB is released unintentionally, serious injury may occur.**
- **Only release the EPB when you are seated inside the vehicle with your foot firmly on the brake pedal.**

NOTICE

- **Do not apply the accelerator pedal while the parking brake is engaged. If you depress the accelerator pedal with the EPB engaged, a warning will sound and a message will appear. Damage to the parking brake may occur.**
- **Driving with the parking brake on can overheat the braking system and cause premature wear or damage to brake parts. Make sure the EPB is released and the Parking Brake Warning Light is off before driving.**

Information

- **A clicking sound may be heard while operating or releasing the EPB. These conditions are normal and indicate that the EPB is functioning properly.**
- **When leaving your keys with a parking attendant or assistant, make sure to inform him/her how to operate the EPB.**



OIK057079N

AUTO HOLD turning Off! Press brake pedal

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

OIK057077N

Parking brake automatically engaged

If the EPB is applied while Auto Hold is activated, a warning will sound and a message will appear.

EPB malfunction indicator

This warning light illuminates if the ignition switch is set to the ON position and goes off in approximately 3 seconds if the system is operating normally.

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

If this occurs, have the system checked by an authorized HYUNDAI 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.

NOTICE

- **If the EPB warning light is still on, have the system checked by an authorized HYUNDAI dealer.**
- **If the parking brake warning light does not illuminate or blinks even though the EPB switch was pulled up, the EPB may not be applied.**
- **If the parking brake warning light blinks when the EPB warning light is on, press the switch, and then pull it up. Repeat this one more time. If the EPB warning does not go off, have the system checked by an authorized HYUNDAI dealer.**

Parking brake warning light

Check the Parking Brake Warning Light by placing the ignition switch to the ON position (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 released and the Brake Warning Light is OFF.

If the Parking Brake Warning Light remains on after the parking brake is released while 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.

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. However, braking distance will be longer than normal.

⚠ WARNING

Do not operate the parking brake while the vehicle is moving except in an emergency situation. It could damage the brake system and lead to a severe accident.

i Information

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

NOTICE

If you continuously notice a noise or burning smell when the EPB is used for emergency braking, have system checked by an authorized HYUNDAI dealer.

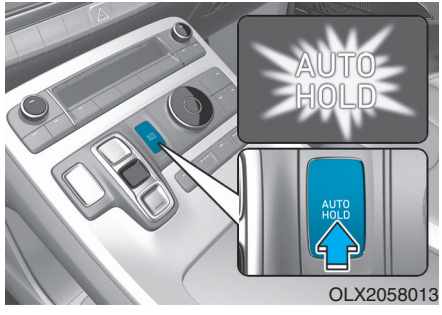
When the EPB (Electronic Parking Brake) does not release

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

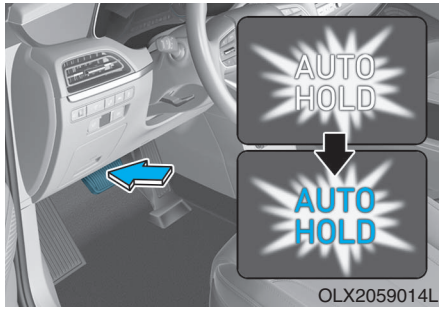
Auto Hold

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.

To apply :



1. With the driver's door and engine hood closed, depress the brake pedal and then press the [AUTO HOLD] switch. The white AUTO HOLD indicator will come on and the system will be in the standby position.



2. When you stop the vehicle completely by depressing the brake pedal, the Auto Hold maintains the brake pressure to hold the vehicle stationary. The 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.

To release :

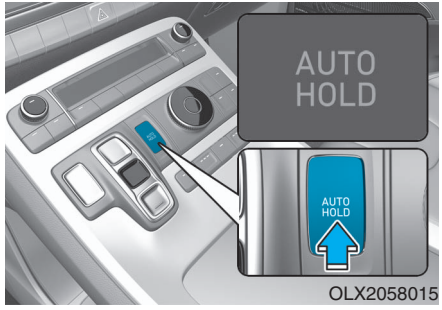
- If you press the accelerator pedal with the gear in D (Drive) or Manual shift mode, the Auto Hold will be released automatically and the vehicle will start to move. The AUTO HOLD indicator changes from green to white.
- If the vehicle is restarted using the cruise control toggle switch (RES+ or SET-) while Auto Hold and cruise control is operating, the Auto Hold will be released regardless of accelerator pedal operation. The AUTO HOLD indicator changes from green to white.

⚠ WARNING

When the AUTO HOLD is automatically released by depressing the accelerator pedal, always take a look around your vehicle.

Slowly depress the accelerator pedal for a smooth start.

To cancel :



1.Depress the brake pedal.

2.Press the [AUTO HOLD] switch.

The AUTO HOLD indicator will turn off.

⚠ WARNING

To prevent, unexpected and sudden vehicle movement, ALWAYS press your foot on the brake pedal to cancel the Auto Hold before you:

- **Drive downhill.**
- **Drive the vehicle in R (Reverse).**
- **Park the vehicle.**

Information

- The Auto Hold does not operate when:
  - The driver's door is opened
  - The engine hood is opened
  - The gear is in P (Park) or R (Reverse)
  - The EPB is applied
- For your safety, the Auto Hold automatically switches to EPB when:
  - The driver's door is opened with the gear in D (Drive) or N (Neutral)
  - The engine hood is opened with the gear in D (Drive) or N (Neutral)
  - The vehicle stops for more than 10 minutes
  - The vehicle stands on a steep slope
  - The vehicle moves several times

  In these cases, the parking brake warning light comes on, the AUTO HOLD indicator changes from green to white, and a warning sound 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.
- While operating Auto Hold, you may hear mechanical noise. However, it is normal operating noise.

NOTICE

If the AUTO HOLD indicator changes to yellow, the Auto Hold is not working properly. Contact an authorized HYUNDAI dealer.

⚠ WARNING

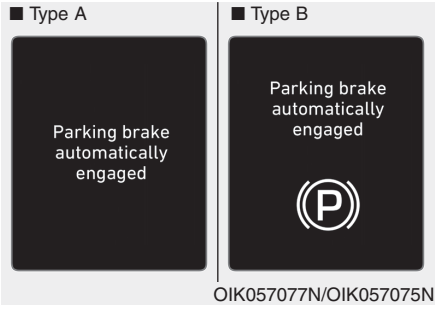
- **Depress the accelerator pedal slowly when you start the vehicle.**
- **For your safety, cancel the Auto Hold when you drive downhill, back up the vehicle or park the vehicle.**

NOTICE

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

Contact an authorized HYUNDAI dealer.

Warning messages



OIK057077N/OIK057075N

Parking brake automatically engaged

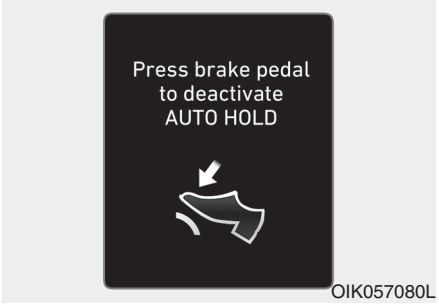
When the EPB is applied from Auto Hold, a warning will sound and a message will appear.

OIK057079N

AUTO HOLD turning Off! Press brake pedal

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

When this message is displayed, the Auto Hold and EPB may not operate. For your safety, depress the brake pedal.



OIK057080L

Press brake pedal to deactivate AUTO HOLD

If you did not apply the brake pedal when you release the Auto Hold by pressing the [AUTO HOLD] switch, a warning will sound and a message will appear.

OTM058159L

AUTO HOLD conditions not met. Close door and hood.

When you press the [AUTO HOLD] switch, if the driver's door and engine hood are not closed, a warning will sound and a message will appear on the cluster LCD display.

Press the [AUTO HOLD] switch after closing the driver's door and hood.

Anti-lock Brake System (ABS)

⚠ WARNING

An Anti-Lock Braking System (ABS) or an Electronic Stability Control (ESC) system 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 of you. Vehicle speeds should always be reduced during extreme road conditions. The braking distance for cars equipped with ABS or ESC may be longer than for those without these systems in the following road conditions.

Drive your vehicle at reduced speeds during the following conditions:

- **Rough, gravel or snow-covered roads.**
- **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.

ABS is an electronic braking system that helps prevent a braking skid. ABS allows the driver to steer and brake at the same time.

Using ABS

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. Depress your brake pedal as hard as possible.

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

ABS does not reduce the time or distance it takes to stop the vehicle.

Always maintain a safe distance from the vehicle in front of you.

ABS will not prevent a skid that results from sudden changes in direction, such as trying to take a corner too fast or making a sudden lane change. Always drive at a safe speed for the road and weather conditions.

ABS cannot prevent a loss of stability. Always steer moderately when braking hard. Severe or sharp steering wheel movement can still cause your vehicle to veer into oncoming traffic or off the road.

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.

The ABS warning light ( ) will stay on for several seconds after the ignition switch is in the ON position. 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. Contact an authorized HYUNDAI dealer as soon as possible

⚠ WARNING

If the ABS warning light ( ) is on and stays on, you may have a problem with the ABS. Your power brakes will work normally. To reduce the risk of serious injury or death, contact your HYUNDAI dealer as soon as possible.

NOTICE

When you drive on a road having poor traction, such as an icy road, and apply your brakes continuously, the ABS will be active continuously and the ABS warning light ( ) may illuminate. Pull your car over to a safe place and turn the engine off.

Restart the engine. If the ABS warning light is off, then your ABS system is normal.

Otherwise, you may have a problem with your ABS system. Contact an authorized HYUNDAI dealer as soon as possible.

Information

When you jump start your vehicle because of a drained battery, 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. Have the battery recharged before driving the vehicle.

Electronic Stability Control (ESC)

The Electronic Stability Control (ESC) system helps to stabilize the vehicle during cornering maneuvers. ESC checks where you are steering and where the vehicle is actually going. ESC applies braking pressure to any one of the vehicle's brakes and intervenes in the engine management system to assist the driver with keeping the vehicle on the intended path. It is not a substitute for safe driving practices. Always adjust your speed and driving to the road conditions.

WARNING

Never drive too fast for the road conditions or too quickly when cornering. The ESC system will not prevent accidents.

Excessive speed in turns, abrupt maneuvers, and hydroplaning on wet surfaces can result in severe accidents.

ESC operation

ESC ON condition

When the ignition switch is in the ON position, the ESC and the ESC OFF indicator lights illuminate for approximately three seconds. After both lights go off, the ESC is enabled.

When operating

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

- When you apply your brakes under conditions which may lock the wheels, you may hear sounds from the brakes, or feel a corresponding sensation in the brake pedal. This is normal and it means your ESC is active.
- When the ESC activates, the engine may not respond to the accelerator as it does under routine conditions.
- If the Cruise Control was in use when the ESC activates, the Cruise Control automatically disengages. The Cruise Control can be reengaged when the road conditions allow. See "Cruise Control System" later in this chapter. (if equipped)
- When moving out of the mud or driving on a slippery road, the engine RPM (revolutions 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 OFF condition

To cancel ESC operation :

• State 1

Press the ESC OFF button briefly. The ESC OFF indicator light and message "Traction Control disabled" will illuminate. In this state, the traction control function of ESC (engine management) is disabled, but the brake control function of ESC (braking management) still operates.

• State 2

Press and hold the ESC OFF button continuously for more than 3 seconds. The ESC OFF indicator light and message "Traction and Stability Control disabled" illuminates and a warning chime sounds. In this state, both the traction control function of ESC (engine management) and the brake control function of ESC (braking management) are disabled.

If the ignition switch is placed to the LOCK/OFF position when ESC is off, ESC remains off. Upon restarting the engine, the ESC will automatically turn on again.

Indicator lights

■ ESC indicator light (blinks)

■ ESC OFF indicator light (comes on)

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

The ESC indicator light blinks whenever the ESC is operating.

If ESC indicator light stays on, your vehicle may have a malfunction with the ESC system. When this warning light illuminates have your vehicle checked by an authorized HYUNDAI dealer as soon as possible.

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

⚠ WARNING

When the ESC is blinking, this indicates the ESC is active:

Drive slowly and NEVER attempt to accelerate. NEVER turn the ESC off while the ESC indicator light is blinking or you may lose control of the vehicle resulting in an accident.

NOTICE

Driving with wheels and tires with different sizes may cause the ESC system to malfunction. Before replacing tires, make sure all four tires and wheels are the same size. Never drive the vehicle with different sized wheels and tires installed.

ESC OFF usage

When Driving

The ESC OFF mode should only be used briefly to help free the vehicle if stuck in snow or mud by temporarily stopping operation of the ESC to maintain wheel torque.

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

NOTICE

To prevent damage to the transmission:

- **Do not allow wheel(s) of one axle to spin excessively while the ESC, ABS, and parking brake warning lights are displayed. The repairs would not be covered by the vehicle warranty. Reduce engine power and do not spin the wheel(s) excessively while these lights are displayed.**
- **When operating the vehicle on a dynamometer, make sure the ESC is turned off (ESC OFF light illuminated).**

ⓘ Information

Turning the ESC off does not affect ABS or standard brake system operation.

Vehicle Stability Management (VSM)

The Vehicle Stability Management (VSM) is a function of the Electronic Stability Control (ESC) system. It helps ensure the vehicle stays stable when accelerating or braking suddenly on wet, slippery and rough roads where traction over the four tires can suddenly become uneven.

⚠ WARNING

Take the following precautions when using the Vehicle Stability Management (VSM):

- **ALWAYS check the speed and the distance to the vehicle ahead. The VSM is not a substitute for safe driving practices.**
- **Never drive too fast for the road conditions. The VSM system will not prevent accidents. Excessive speed in bad weather, slippery and uneven roads can result in severe accidents.**

VSM operation

VSM ON condition

The VSM operates when:

- The Electronic Stability Control (ESC) is on.
- Vehicle speed is approximately above 22 km/h (13 mph) on curve roads.
- Vehicle speed is approximately above 10 km/h (6 mph) when the vehicle is braking on a two surface road.

✱The two surface road is made of surfaces which have different friction forces.

When operating

When you apply your brakes under conditions which may activate the ESC, you may hear sounds from the brakes, or feel a corresponding sensation in the brake pedal. This is normal and it means your VSM is active.

i Information

The VSM does not operate when:

- **Driving on a banked road such as gradient or incline.**
- **Driving rearward.**
- **ESC OFF indicator light is on.**
- **EPS (Electric Power Steering) warning light (⊖!) is on or blinks.**

Driving with wheels and tires with different sizes may cause the ESC system to malfunction. Before replacing tires, make sure all four tires and wheels are the same size. Never drive the vehicle with different sized tires and wheels installed.

⚠ WARNING

If ESC indicator light ( ) or EPS warning light ( ) stays on or blinks, your vehicle may have a malfunction with the VSM system. When the warning light illuminates, have your vehicle checked by an authorized HYUNDAI dealer as soon as possible.

Hill-Start Assist Control (HAC)

The Hill-Start Assist Control (HAC) helps prevent the vehicle from rolling backwards when starting a vehicle from a stop on a hill. The system operates the brakes automatically for approximately 2 seconds and releases the brake after 2 seconds or when the accelerator pedal is depressed.

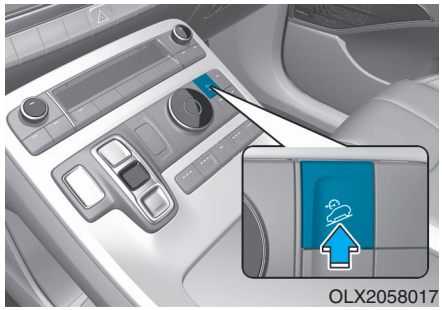
⚠ WARNING

Always be ready to depress the accelerator pedal when starting off on an incline. The HAC activates only for approximately 2 seconds.

NOTICE

- **The HAC does not operate when the vehicle is shifted to P (Park) or N (Neutral)**
- **The HAC activates even though the ESC (Electronic Stability Control) is off but does not activate when the ESC has malfunctioned.**

Downhill Brake Control (DBC) (if equipped)



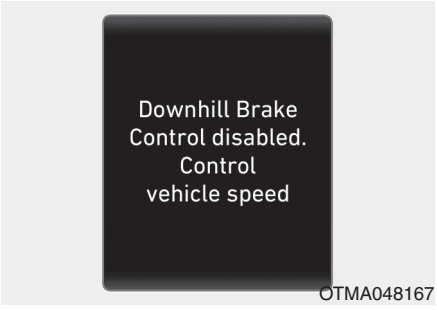
The Downhill Brake Control (DBC) feature assists the driver to descend down a steep hill without having to depress the brake pedal.

The system automatically applies the brakes to maintain the vehicle speed below a certain speed and allows the driver to concentrate on steering the vehicle down hill.

The DBC defaults to the off position whenever the ignition switch is placed to the ON position. Press the button to activate the system and press the button again to deactivate.

DBC operation

Mode	Indicator light	Description
Standby	 Green light turns on	Press the DBC button when the vehicle speed is under 60 km/h (37 mph). The DBC system will turn on and enter the standby mode. The system does not turn on if the vehicle speed is over 60 km/h (37 mph).
Activated	 Green light blinks	In the standby mode, the DBC will activate under the following conditions: • The hill is steep enough. • The accelerator pedal is not depressed. • The vehicle speed is within 4~40 km/h (2~25 mph) range (within 2.5~8 km/h (1.5~5 mph) when reversing). Within the activation speed range 4~40 km/h (2~25 mph), the driver can control the vehicle speed by depressing the brake/accelerator pedal.
Deactivated	- Green light turns off	The DBC will turn off under the following conditions: • The DBC button is pressed again. • The vehicle speed is over 60 km/h (37 mph).
	 Green light turns on (maintains standby mode)	The DBC will be deactivated but maintain the standby mode under the following conditions: • The hill is not steep enough. • The vehicle speed is between 40~60 km/h (25~37 mph).
System malfunction	 Yellow light turns on	The yellow warning light illuminates when the system may have malfunctioned or may not work properly during the activation. In this case, the DBC system is deactivated. Have the system checked by an authorized HYUNDAI dealer as soon as possible.



OTMA048167

Downhill Brake Control disabled. Control vehicle speed

When the DBC system is not working properly this warning message will appear on the LCD display and you will hear a warning sound. If this occurs, control the vehicle speed by depressing the brake pedal.

⚠ WARNING

Always turn off the DBC on normal roads. The DBC might activate inadvertently from the standby mode when driving through speed bumps or making sharp curves.

i Information

- **Noise or vibration may occur from the brakes when the DBC is activated.**
- **The rear stop light comes on when DBC is activated.**

NOTICE

- **The DBC may not deactivate on steep inclines even though the brake or accelerator pedal is depressed.**
- **The DBC system may not always maintain the vehicle speed at a certain speed.**
- **The DBC does not operate when:**
  - **The gear is in P (Park).**
  - **The ESC is activated.**

Trailer Stability Assist (TSA)

Trailer Stability Assist system helps stabilize the vehicle and trailer when the trailer sways or oscillates. There are various reasons making the vehicle sway and oscillate.

Factors of swaying are 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.

Good Braking Practices

⚠ WARNING

Whenever leaving the vehicle or parking, always come to a complete stop and continue to depress the brake pedal. Shift the gear to P (Park), then apply the parking brake, and place the ignition switch in the LOCK/OFF position.

Vehicles parked with the parking brake not applied or not fully engaged may roll inadvertently and may cause injury to the driver and others. ALWAYS apply the parking brake before exiting the vehicle.

Wet brakes can be dangerous! The brakes may get wet if the vehicle is driven through standing water or if it is washed. Your vehicle will not stop as quickly if the brakes are wet. Wet brakes may cause the vehicle to pull to one side.

To dry the brakes, apply the brakes lightly until the braking action returns to normal, taking care to keep the vehicle under control at all times. If the braking action does not return to normal, stop as soon as it is safe to do so and call an authorized HYUNDAI dealer for assistance.

DO NOT drive with your foot resting on the brake pedal. Even light, but constant pedal pressure can result in the brakes overheating, brake wear, and possibly even brake failure.

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 location.

Keep your foot firmly on the brake pedal when the vehicle is stopped to prevent the vehicle from rolling forward.

ALL WHEEL DRIVE (AWD) (IF EQUIPPED)

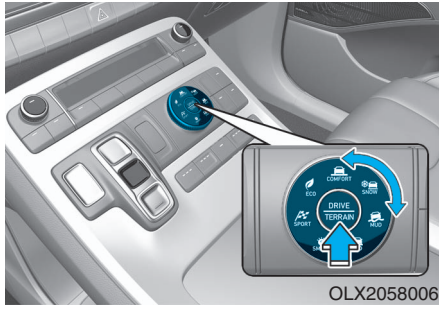
The All Wheel Drive (AWD) system delivers engine torque to both the front and rear wheels for extra traction. AWD is useful when maximum traction is required on slippery, muddy, wet, or snow-covered roads.

Occasional off-road use such as established unpaved roads and trails are OK. It is always important that the driver carefully reduces the speed to a level that does not exceed the safe operating speed for those conditions.

Multi Terrain Control

Multi Terrain Control is a system that achieves optimal driving performance by controlling four-wheel drive, engine, transmission and braking depending on terrain conditions (snow, muddy and sandy road etc.).

Multi terrain control mode



OLX2058006

If you press the DRIVE/TERRAIN mode button, the driving mode is changed from normal driving control to Multi Terrain Control. You can select SNOW, MUD or SAND mode by rotating the knob. If you press the DRIVE/TERRAIN mode button again, the driving mode is changed from Multi Terrain Control to normal driving control.

The driving mode will be set to normal driving control when the engine is restarted, if it is in Multi Terrain Control.

⚠ WARNING

To reduce the risk of SERIOUS INJURY or DEATH:

- **Do not drive in conditions that exceed the vehicles intended design such as challenging off-road conditions.**
- **Avoid high speeds when cornering or turning.**
- **Do not make quick steering wheel movements, such as sharp lane changes or fast, sharp turns.**
- **The risk of a rollover is greatly increased if you lose control of your vehicle at highway speeds.**
- **Loss of control often occurs if two or more wheels drop off the roadway and the driver over steers 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.**

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. Depress the brake pedal several times as you move slowly until you feel normal braking 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 chapter 7).**
- **Always wash your vehicle thoroughly after off road use, especially the bottom of the vehicle.**
- **Be sure to equip the vehicle with four tires of the same size and type.**
- **Make sure that a full time AWD vehicle is towed by a flat bed tow truck.**

AWD Operation

All Wheel Drive (AWD) mode selection

Transfer mode	Selection mode	Description
AWD AUTO (Normal driving)	-	In the AWD AUTO mode, under normal operating conditions, the vehicle operates similar to conventional 2WD vehicles. If the system determines there is a need for four wheel drive, the engine's driving power is distributed to all four wheels automatically. Use this mode when driving on normal roads. If you select the "Driving force distribution" in the cluster, Driving force distribution (AWD) state is displayed.
SNOW		In this mode, the vehicle can start stably by properly distributing the driving force of the vehicle on slippery roads such as snowy roads. And you can drive safely by suppressing wheel slip.
MUD		In this mode, you can drive safely by securing enough driving power at the initial start by appropriately distributing the driving force of the vehicle when driving on muddy road, unpaved road or uneven road.
SAND		In this mode, you can drive safely by distributing the driving force of the vehicle properly when driving on smooth, dry sand or deep gravel and unpaved roads.

NOTICE

Be sure to maintain AWD AUTO mode when driving on normal roads. If you drive with Multi Terrain Control mode on normal roads or curved roads, it may damage AWD parts and cause vibration and noise. However the vibration and noise are normal, not indicating any malfunction. If you select the AWD AUTO mode from the Multi Terrain Control mode, the vibration and noise disappear. And when you change to the AWD AUTO mode from the Multi Terrain Control mode, a sensation may be felt as the driving power is delivered to the rear wheel.

For safe AWD operation

Before driving

- Make sure all passengers are wearing seat belts.
- Sit upright and closer to the steering wheel than usual. Adjust the steering wheel to a position comfortable for you to drive.

Driving on snow-covered or icy roads

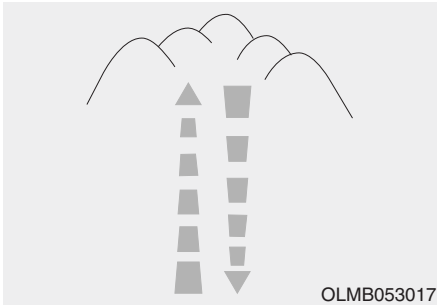
- Start off slowly by applying the accelerator pedal gently.
- Use snow tires.
- Keep sufficient distance between your vehicle and the vehicle in front of you.
- Apply engine braking during deceleration by using the paddle shifter and manually selecting a lower gear.
- Avoid speeding, rapid acceleration, sudden brake applications, and sharp turns to prevent skids.

Driving in sand or mud

- Maintain slow and constant speed.
- Keep sufficient distance between your vehicle and the vehicle in front of you.
- Reduce vehicle speed and always check the road condition.
- Avoid speeding, rapid acceleration, sudden brake applications, and sharp turns to prevent getting stuck.

⚠ CAUTION

When the vehicle is stuck in snow, sand or mud, place a non-slip material under the drive wheels to provide traction OR Slowly spin the wheels in forward and reverse directions which causes a rocking motion that may free the vehicle. However, avoid running the engine continuously at high rpm, doing so may damage the AWD system.


OLMB053017

Driving up or down hills

- Driving uphill
  - Before starting off, check if it is possible to drive uphill.
  - Drive as straight as possible.
- Driving downhill
  - Do not change gear while driving downhill. Select gear before driving downhill.
  - Drive slowly using engine braking while driving downhill.
  - Drive straight as possible.

⚠ WARNING

Exercise extreme caution when driving up or down steep hills. The vehicle may flip over depending on the grade, the terrain, and the trail conditions.

⚠ WARNING

OLMB053018

Do not drive across the contour of steep hills. A slight change in the wheel angle can destabilize the vehicle, or a stable vehicle may lose stability if the vehicle stops its forward motion. Your vehicle may roll over and lead to a serious injury or death.

Driving through water

- Try to avoid driving in deep standing water. It may stall your engine and clog your exhaust system.
- If you need to drive in water, stop your vehicle, set the vehicle in Multi Terrain Control mode and drive under 8 km/h (5 mph).
- Do not change gear while driving in water.

⚠ CAUTION

Always drive slowly in water. If you drive too fast, water may get into the engine compartment and wet the ignition system causing your vehicle to suddenly stop.

Additional driving conditions

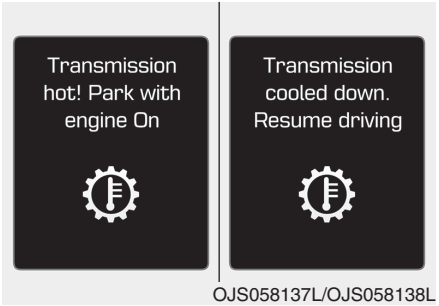
- Become familiar with the off-road conditions before driving.
- Always pay attention when driving off-road and avoid dangerous areas.
- Drive slowly when driving in heavy wind.
- Reduce vehicle speed when cornering. The center of gravity of AWD vehicles is higher than conventional 2WD vehicles, making them more likely to roll over when you rapidly turn corners.
- Always hold the steering wheel firmly when you are driving off-road.

⚠ WARNING

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 an impact with objects on the ground. You could lose control of the steering wheel which may lead to serious injury or death.

LCD display message

Transmission hot! Park with engine On



OJS058137L/OJS058138L

- Under certain conditions, such as repeated stop-and-go launches on steep grades, sudden take off or acceleration, or other harsh driving conditions (mud or sand road), the transmission temperatures will increase excessively. Finally the transmission could be overheated.

- If the vehicle continues to be driven and the automatic transmission temperatures reach the maximum temperature limit, the "Transmission hot! Park with engine On" warning will be displayed. When this occurs the automatic transmission is disabled until the automatic transmission cools to normal temperatures.
- The warning will display a time to wait for the transmission to cool.
- If this occurs, pull over to a safe location, stop the vehicle with the engine running, apply the brakes and shift the vehicle to P (Park), and allow the transmission to cool.
- When the message "Transmission cooled down. Resume driving" appears you can continue to drive your vehicle.
- When possible, drive the vehicle smoothly.

Emergency Precautions

Tires

Do not use a tire and wheel package with a different size and type from the one originally installed on your vehicle. It can affect the safety and performance of your vehicle, which could lead to steering failure or rollover causing 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 equip your vehicle with any tire/wheel combination not recommended by HYUNDAI for off-road driving, you should not use these tires for highway driving.

⚠ WARNING

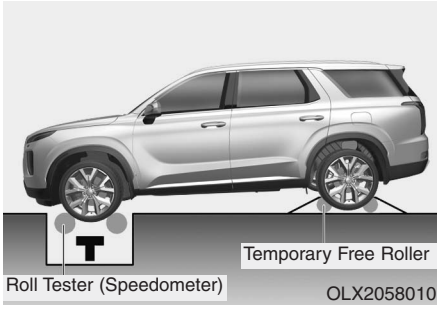
Never start or run the engine while a full-time AWD vehicle is raised on a jack. The vehicle can slip or roll off of a jack causing serious injury or death to you or those nearby.

Towing

AWD vehicles must be towed with a wheel lift and dollies or flatbed equipment with all the wheels off the ground. **For more details, refer to "Towing" in chapter 6.**

Dynamometer testing

A full-time AWD vehicle must be tested on a special four wheel chassis dynamometer.



A full-time AWD vehicle should not be tested on a 2WD roll tester. If a 2WD roll tester must be used, perform the following procedure:

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

⚠ CAUTION

- **Never engage the parking brake while performing the test.**
- **When the vehicle is lifted up, do not operate the front and rear wheel separately. All four wheels should be operated.**

⚠ WARNING

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

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

The Idle Stop and Go (ISG) system automatically and temporarily shuts down the engine when the vehicle is stopped and idling to improve fuel efficiency and reduce exhaust gas emissions (i.e. red stop light, stop sign, and traffic jam).

The engine is automatically started upon satisfying the starting conditions.

The ISG system is always active, when the engine is running.

Information

When the engine is automatically started by the ISG system, some warning lights (i.e. ABS, ESC, ESC OFF, EPS, and parking brake warning light) may illuminate for a few seconds due to the low battery voltage. However, it does not indicate a malfunction with the ISG system.

To Activate the ISG System

Prerequisite for activation

The ISG system operates in the following situations.

- The driver's seatbelt is fastened
- The driver's door and hood are closed
- The brake vacuum pressure is adequate
- The battery sensor is activated and the battery is sufficiently charged
- Outside temperature is not too low or too high
- The vehicle is driven over a constant speed and stops
- The climate control system satisfies the conditions
- The vehicle is sufficiently warmed up
- The incline is gradual
- The steering wheel is turned less than 180 degrees and then the vehicle stops

Information

- **The ISG system is not activated, when the prerequisites to activate the ISG system are unsatisfied. In this case, the ISG OFF button indicator illuminates, and the auto stop indicator (Ⓐ) illuminates in yellow on the instrument cluster.**
- **When the above indicator remains illuminated on the instrument cluster, we recommend that you have the IGS system checked by an authorized HYUNDAI dealer.**

Auto stop

To stop the engine in idle stop mode

1. Decrease the vehicle speed to 0 mph.
2. Depress the brake pedal with the shift lever in D (Drive) or N (Neutral).

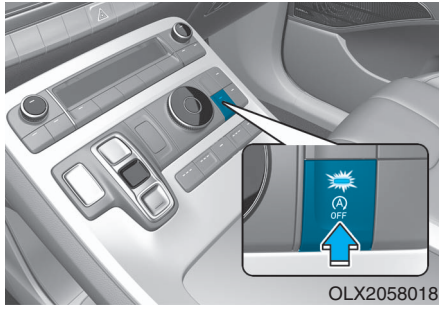
The auto stop indicator (Ⓐ) illuminates in green on the instrument cluster, when the engine stops.

Information

The driving speed must reach at least 5 km/h (3 mph) after an idle stop to stop the engine in idle stop mode again.

In auto stop mode, when the driver opens the hood, the ISG system will be deactivated.

When the system is deactivated:



The ISG OFF button indicator illuminates.

If the message "Auto Stop is Off. Start vehicle manually", appears on the LCD display with a beep sound, restart the vehicle manually by depressing the brake pedal with the vehicle shifted to P (Park) or N (Neutral). For your safety, restart the vehicle in the P (Park) position.

Auto start

To restart the engine in the auto stop mode

Release the brake pedal.

- When Auto Hold is activated, if you release the brake pedal, the engine will be in the auto stop state. However, if you depress the accelerator pedal, the engine will start again.

The auto stop indicator (Ⓐ) goes OFF on the instrument cluster, when the engine is restarted.

The engine is automatically restarted in the following situations.

- The brake vacuum pressure is low
- The engine has stopped for about 5 minutes
- The air conditioning is ON with the fan speed set to the highest position
- The front defroster is ON
- The battery is weak
- The cooling and heating performance of the climate control system is unsatisfactory
- The vehicle is shifted to P (Park) when Auto Hold is activated
- The door is opened or the seatbelt is unfastened when Auto Hold is activated
- The EPB switch is pressed when Auto Hold is activated

The auto stop indicator (Ⓐ) blinks in green for 5 seconds on the instrument cluster.

OIK057086N

The auto start is temporarily deactivated in the following situations.

When the gear is shifted from N (Neutral) to R (Reverse), D (Drive) or Manual shift mode without the brake pedal depressed. A message "Press brake pedal for Auto Start" will appear on the LCD display. To activate auto start, depress the brake pedal.

To Deactivate the ISG System

- Press the ISG OFF button to deactivate the ISG system. Then, the ISG OFF button indicator illuminates.
- Press the ISG OFF button again to reactivate the ISG system. Then, the ISG OFF button indicator turns OFF.

ISG System Malfunction

The ISG system may not operate:

When there is a malfunction with the ISG sensors or the ISG system.

The followings occur, when there is a malfunction with the ISG system:

- The auto stop indicator (Ⓐ) will blink in yellow on the instrument cluster.
- The light on the ISG OFF button will illuminate.

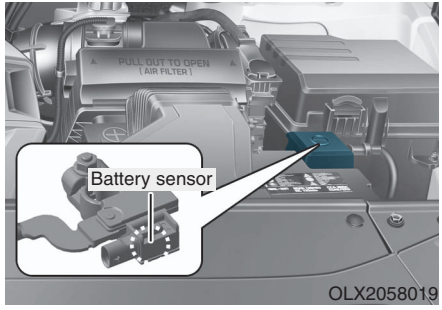
Information

- **When you cannot turn OFF the ISG OFF button indicator by pressing the ISG OFF button, or when the malfunction with the ISG system persists, contact an authorized HYUNDAI dealer.**
- **You can turn off the ISG OFF button indicator by driving over 50 mph (80 km/h) for up to 2 hours with the fan speed below the 2nd position. If the ISG OFF button indicator remains ON, contact an authorized HYUNDAI dealer.**

⚠ WARNING

When the engine is in auto stop mode, the engine may restart. Before leaving the vehicle or checking the engine compartment, stop the engine placing the ignition switch to the LOCK/OFF position or remove the ignition key.

Battery Sensor Deactivation



The battery sensor is deactivated, when the battery is disconnected from the negative pole for maintenance purpose.

In this case, the ISG system is limitedly operated due to the battery sensor deactivation. Thus, the driver needs to take the following procedures to reactivate the battery sensor after disconnecting the battery.

Prerequisites to reactivate the battery sensor

Switch "ON" and "OFF" the ignition one time. Park the vehicle for a minimum of 4 hours with the hood and all doors closed.

Pay extreme caution not to connect any accessories (i.e. navigation and black box) to the vehicle with the engine in the OFF status. If not, the battery sensor may not be reactivated.

Information

The ISG system may not operate in the following situations.

- There is a malfunction with the ISG system.

- The battery is weak.

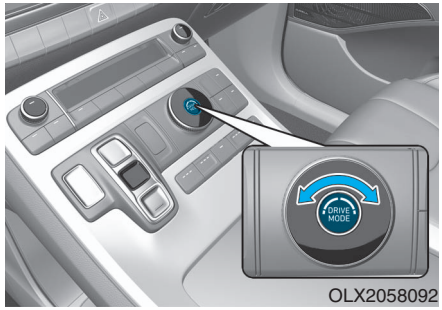
- The brake vacuum pressure is low.

If this occurs, have the ISG system checked by an authorized HYUNDAI dealer.

NOTICE

- **Use only a genuine HYUNDAI Absorbent Glass Mat (AGM) battery for replacement. If not, the ISG system may not operate normally.**
- **Do not recharge the Absorbent Glass Mat (AGM) battery with a general battery charger. It may damage or explode the Absorbent Glass Mat (AGM) battery.**
- **Do not remove the battery cap. The battery electrolyte, which is harmful to the human body, may leak out.**

DRIVE MODE INTEGRATED CONTROL SYSTEM (2WD)



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

Drive Mode

The mode changes whenever the DRIVE MODE selection knob is rotated.

- SMART mode :

  SMART mode automatically adjusts the driving mode (ECO ↔ COMFORT ↔ SPORT) in accordance with the driver's driving habits.
- SPORT mode :

  SPORT mode provides sporty but firm riding.
- ECO mode :

  ECO mode helps improve fuel efficiency for eco-friendly driving.
- COMFORT mode :

  COMFORT mode provides smooth driving and comfortable riding.

SMART mode

SMART SMART mode selects the proper driving mode among ECO, COMFORT, and SPORT by judging the driver's driving habits (i.e. Economical or Aggressive) from the brake pedal depression or the steering wheel operation.

- Rotate the DRIVE MODE selection knob to activate SMART mode. When SMART mode is activated, the indicator illuminates on the instrument cluster.
- The vehicle starts in SMART mode, when the engine was turned OFF in SMART mode.
- SMART mode automatically controls gear shifting patterns, engine torque, in accordance with the driver's driving habits.

Information

- **When you mildly drive the vehicle in SMART mode, the driving mode changes to ECO mode to improve fuel efficiency. However, the actual fuel efficiency may differ in accordance with your driving situations (i.e. upward/downward slope, vehicle deceleration/acceleration).**
- **When you dynamically drive the vehicle in SMART mode by abruptly decelerating or sharply turning the driving mode changes to SPORT mode. However, it may adversely affect fuel economy.**

Various driving situations, which you may encounter in SMART mode

- The driving mode automatically changes to ECO mode after a certain period of time, when you gently depress the accelerator pedal (Your driving is categorized to be economical.).
- The driving mode automatically changes from SMART ECO mode to SMART COMFORT mode after a certain period of time, when you sharply or repetitively depress the accelerator pedal.
- The driving mode automatically changes to SMART COMFORT mode with the same driving patterns, when the vehicle starts to drive on an upward slope of a certain angle. The driving mode automatically returns to SMART ECO mode, when the vehicle enters a leveled road.
- The driving mode automatically changes to SMART SPORT, when you abruptly accelerate the vehicle or repetitively operate the steering wheel (Your driving is categorized to be aggressive.). In this mode, your vehicle drives in a lower gear for abrupt accelerating/decelerating and increases the engine brake performance.
- You may still sense the engine braking performance, even when you release the accelerator pedal in SMART SPORT mode. It is because your vehicle remains in lower gear over a certain period of time for next acceleration. Thus, it is a normal driving situation, not indicating any malfunction.
- The driving mode automatically changes to SMART SPORT mode only in harsh driving situations. In most of the normal driving situations, the driving mode sets to be either in SMART ECO mode or in SMART COMFORT mode.

Limitation of SMART mode

The SMART mode may be limited in following situations. (The OFF indicator illuminates in those situations.)

- The driver uses the paddle shifter (manual shift mode) :

  It deactivates SMART mode. The vehicle drives, as the driver manually changes gear with the paddle shifter.

- The cruise control is activated :

  The cruise control system may deactivate the SMART mode when the vehicle is controlled by the set speed of the smart cruise control system. (SMART mode is not deactivated just by activating the cruise control system.)

- The transmission oil temperature is either extremely low or extremely high :

  The SMART mode can be active in most of the normal driving situations. However, an extremely high/low transmission oil temperature may temporarily deactivate the SMART mode, because the transmission condition is out of normal operation condition.

SPORT

SPORT SPORT mode manages the driving dynamics by automatically adjusting the steering effort, and the engine and transmission control logic for enhanced driver performance.

- When SPORT mode is selected by rotating the DRIVE MODE selection knob, the SPORT indicator will illuminate.
- Whenever the engine is restarted, the drive mode will revert back to COMFORT mode. If SPORT mode is desired, re-select SPORT mode.
- When SPORT mode is activated:
  - The engine rpm will tend to remain a little higher for a brief time even after releasing the accelerator. This is typical when the SPORT mode is activated.
  - Upshifts are delayed when accelerating

i Information

In SPORT mode, the fuel efficiency may decrease.

ECO mode

ECO When the drive mode is set to ECO mode, the engine and transmission control logic are changed to maximize fuel efficiency.

- When ECO mode is selected by rotating the DRIVE MODE selection knob, the ECO indicator will illuminate.
- The vehicle starts in ECO mode, when the engine was turned OFF in ECO mode.

i Information

Fuel efficiency depends on the driver's driving habit and road condition.

When ECO mode is activated:

- The acceleration response may be slightly reduced if the accelerator pedal is depressed moderately.
- The air conditioner performance may be limited.
- The shift pattern of the automatic transmission may change.
- The engine noise may be louder at some automatic transmission shifts as down-shift requires pressing down more on the accelerator.

The above situations are normal conditions when ECO mode is activated to help improve fuel efficiency.

Limitation of ECO mode operation:

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

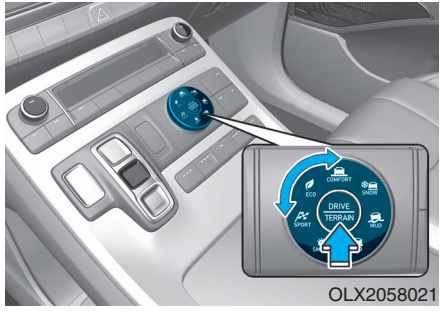
- When the coolant temperature is low:

  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 engine torque is restricted.
- When driving the vehicle in manual shift mode using the paddle shifter.

  The system will be limited according to the shift location.

DRIVE MODE INTEGRATED CONTROL SYSTEM (AWD)



OLX2058021

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

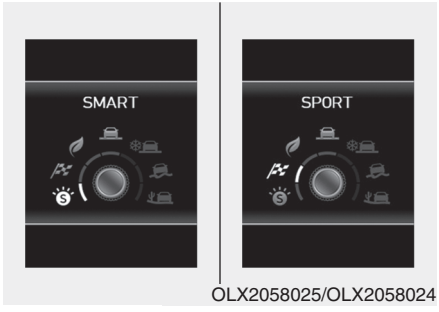
When the DRIVE MODE is activated by pressing the DRIVE/TERRAIN mode button, and then turn the knob to the desired mode.

If you want to use the terrain road mode, activate the TERRAIN MODE by pressing the DRIVE/TERRAIN mode button and turn the knob.

For more detail, refer to "All Wheel Drive (AWD)" in this chapter.

Drive Mode

The mode changes whenever the DRIVE MODE selection knob is rotated.



OLX2058025/OLX2058024

OLX2058023/OLX2058022

- SMART mode :

  SMART mode automatically adjusts the driving mode (ECO ↔ COMFORT ↔ SPORT) in accordance with the driver's driving habits.
- SPORT mode :

  SPORT mode provides sporty but firm riding.
- ECO mode :

  ECO mode helps improve fuel efficiency for eco-friendly driving.
- COMFORT mode :

  COMFORT mode provides smooth driving and comfortable riding.

SMART mode

SMART SMART mode selects the proper driving mode among ECO, COMFORT, and SPORT by judging the driver's driving habits (i.e. Economical or Aggressive) from the brake pedal depression or the steering wheel operation.

- Rotate the DRIVE/TERRAIN mode selection knob to activate SMART mode. When SMART mode is activated, the indicator illuminates on the instrument cluster.
- The vehicle starts in SMART mode, when the engine was turned OFF in SMART mode.
- SMART mode automatically controls gear shifting patterns, engine torque, in accordance with the driver's driving habits.
- SMART mode automatically controls the vehicle driving, such as gear shifting patterns, engine torque, riding quality (if equipped with the electronic suspension system), and power distribution (if equipped with the All-Wheel Drive (AWD) system), in accordance with the driver's driving habits.

i Information

- **When you mildly drive the vehicle in SMART mode, the driving mode changes to ECO mode to improve fuel efficiency. However, the actual fuel efficiency may differ in accordance with your driving situations (i.e. upward/downward slope, vehicle deceleration/acceleration).**
- **When you dynamically drive the vehicle in SMART mode by abruptly decelerating or sharply turning the driving mode changes to SPORT mode. However, it may adversely affect fuel economy.**

Various driving situations, which you may encounter in SMART mode

- The driving mode automatically changes to ECO mode after a certain period of time, when you gently depress the accelerator pedal (Your driving is categorized to be economical.).
- The driving mode automatically changes from SMART ECO mode to SMART COMFORT mode after a certain period of time, when you sharply or repetitively depress the accelerator pedal.
- The driving mode automatically changes to SMART COMFORT mode with the same driving patterns, when the vehicle starts to drive on an upward slope of a certain angle. The driving mode automatically returns to SMART ECO mode, when the vehicle enters a leveled road.

- The driving mode automatically changes to SMART SPORT, when you abruptly accelerate the vehicle or repetitively operate the steering wheel (Your driving is categorized to be aggressive.). In this mode, your vehicle drives in a lower gear for abrupt accelerating/decelerating and increases the engine brake performance.
- You may still sense the engine braking performance, even when you release the accelerator pedal in SMART SPORT mode. It is because your vehicle remains in lower gear over a certain period of time for next acceleration. Thus, it is a normal driving situation, not indicating any malfunction.
- The driving mode automatically changes to SMART SPORT mode only in harsh driving situations. In most of the normal driving situations, the driving mode sets to be either in SMART ECO mode or in SMART COMFORT mode.

Limitation of SMART mode

The SMART mode may be limited in following situations. (The OFF indicator illuminates in those situations.)

- The driver uses the paddle shifter (manual shift mode) :

  It deactivates SMART mode. The vehicle drives, as the driver manually changes gear with the paddle shifter.
- The cruise control is activated :

  The cruise control system may deactivate the SMART mode when the vehicle is controlled by the set speed of the smart cruise control system. (SMART mode is not deactivated just by activating the cruise control system.)
- The transmission oil temperature is either extremely low or extremely high :

  The SMART mode can be active in most of the normal driving situations. However, an extremely high/low transmission oil temperature may temporarily deactivate the SMART mode, because the transmission condition is out of normal operation condition.

SPORT

SPORT

SPORT mode manages the driving dynamics by automatically adjusting the steering effort, and the engine and transmission control logic for enhanced driver performance.

- When SPORT mode is selected by rotating the DRIVE/TERRAIN mode selection knob, the SPORT indicator will illuminate.
- Whenever the engine is restarted, the drive mode will revert back to COMFORT mode. If SPORT mode is desired, re-select SPORT mode.
- When SPORT mode is activated:
  - The engine rpm will tend to remain a little higher for a brief time even after releasing the accelerator. This is typical when the SPORT mode is activated.
  - Upshifts are delayed when accelerating

Information

In SPORT mode, the fuel efficiency may decrease.

ECO mode

ECO

When the drive mode is set to ECO mode, the engine and transmission control logic are changed to maximize fuel efficiency.

- When ECO mode is selected by rotating the DRIVE/TERRAIN mode selection knob, the ECO indicator will illuminate.
- The vehicle starts in ECO mode, when the engine was turned OFF in ECO mode.

Information

Fuel efficiency depends on the driver's driving habit and road condition.

When ECO mode is activated:

- The acceleration response may be slightly reduced if the accelerator pedal is depressed moderately.
- The air conditioner performance may be limited.
- The shift pattern of the automatic transmission may change.
- The engine noise may be louder at some automatic transmission shifts as down-shift requires pressing down more on the accelerator.

The above situations are normal conditions when ECO mode is activated to help improve fuel efficiency.

Limitation of ECO mode operation:

If the following conditions occur while ECO mode 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 engine torque is restricted.
- When driving the vehicle in manual shift mode using the paddle shifter.

  The system will be limited according to the shift location.

FORWARD COLLISION-AVOIDANCE ASSIST (FCA) SYSTEM

The Forward Collision-Avoidance Assist (FCA) system is designed to help detect and monitor the vehicle ahead or help detect a pedestrian or cyclist in the roadway through radar signals and camera recognition to warn the driver that a collision is imminent, and if necessary, apply emergency braking.

⚠ WARNING

Take the following precautions when using the Forward Collision-Avoidance Assist (FCA) system:

- **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.**
- **Drive at posted speed limits and accordance to road conditions.**
- **Always drive cautiously to prevent unexpected and sudden situations from occurring. The Forward Collision-Avoidance system may not always stop the vehicle completely and is only intended to help mitigate a collision that is imminent.**

System Setting and Operation

System setting

OTMA058186

- Setting Forward Safety function

  The driver can activate the FCA by placing the ignition switch to the ON position and by selecting:

  'User Settings → Driver Assistance → Forward Safety'

  - If you select "Active Assist", the FCA system activates. The FCA produces warning messages and warning alarms in accordance with the collision risk levels. Braking assist will be applied in accordance with the collision risk.

- If you select 'Warning Only', the FCA system activates and produces only warning alarms in accordance with the collision risk levels. Braking assist will not be applied in this setting.
- If you select 'Off', the FCA system deactivates,

• The warning light illuminates on the LCD display, when you cancel the FCA system. The driver can monitor the FCA ON/OFF status on the LCD display. Also, the warning light illuminates when the ESC (Electronic Stability Control) is turned off. If the warning light remains ON when the FCA is activated, have the system checked by an authorized HYUNDAI dealer.

• Setting Warning Timing

The driver can select the initial warning activation time on the LCD display.

Go to the 'User Settings → Driver Assistance → Warning Timing → Normal/Later'.

The options for the initial Forward Collision Warning includes the following:

- Normal:

  When this option is selected, the initial Forward Collision Warning is activated sensitively. If you feel the warning activates too early, set the Forward Collision Warning to 'Later'.

  Even though, 'Normal' is selected if the front vehicle suddenly stops the initial warning activation time may not seem fast.

- Later:

  When this option is selected, the initial Forward Collision Warning is activated later than normal. This setting reduces the amount of distance between the vehicle, pedestrian or cyclist ahead before the initial warning occurs.

  Select 'Later' when traffic is light and when driving speed is slow.

Information

If you change the warning timing, the warning time of other systems may change. Always be aware before changing the warning timing.

Prerequisite for activation

The FCA system is on and ready when 'Active Assist' or 'Warning Only' under Forward Safety is selected in the LCD display and when the following prerequisites are satisfied:

- ESC (Electronic Stability Control) is on.
- Vehicle speed is over 8 km/h (5 mph) (The FCA is only activated within a certain speed range.).
- The system detects a pedestrian, cyclist or a vehicle in front, which may collide with your vehicle. However, FCA may not be activated or may only sound a warning alarm depending on the driving or vehicle conditions.

⚠ WARNING

- **To avoid driver distractions, do not attempt to set or cancel the FCA while driving the vehicle. Always completely stop the vehicle at a safe place before setting or canceling the system.**
- **FCA automatically activates upon placing the ignition switch to the ON position. The driver can deactivate FCA by canceling the system setting in the cluster LCD display.**
- **FCA automatically deactivates upon canceling ESC. When ESC is canceled, FCA cannot be activated in the cluster LCD display. In this situation, the FCA warning light will illuminate which is normal.**

FCA Warning Message and Brake Control

FCA produces warning messages, warning alarms, and emergency braking based on the level of risk of a frontal collision, such as when a vehicle ahead suddenly brakes, or when the system detects that a collision with a pedestrian or cyclist is imminent.

Collision Warning (First and second warning)

OLX2059026N

- The warning message appears on the cluster LCD display with a warning chime.
- Your vehicle speed may decelerate moderately.
- If FCA detects a vehicle in front, the system operates when your vehicle speed is between 8 km/h (5 mph) and 160 km/h (100 mph). Maximum vehicle speed may decrease depending on the condition of the vehicle ahead and surroundings.
- If FCA detects a pedestrian or cyclist in front, the system operates when your vehicle speed is between 8 km/h (5 mph) and 90 km/h (55 mph). Maximum vehicle speed may decrease depending on the condition of the vehicle ahead and surroundings.
- If you select 'Warning only' for the system setting, the FCA system activates and produces only warning alarms in accordance with the collision risk levels. You should control the brake directly because the FCA system will not control the brake.

Emergency Braking (Third warning)

OLX2059027N

- The warning message appears on the cluster LCD display with a warning chime.
- Additionally, some vehicle system intervention occurs by the engine management system to help decelerate the vehicle.
- The brake control is maximized just before a collision, reducing impact when it strikes a forward vehicle.
- If FCA detects a vehicle in front, the system operates when your vehicle speed is above 8 km/h (5 mph) and 80 km/h (50 mph) or under. Maximum vehicle speed may decrease depending on the condition of the vehicle ahead and surroundings.
- If FCA detects a pedestrian or cyclist in front, the system operates when your vehicle speed is 8 km/h (5 mph) or above and under 70 km/h (45 mph). Maximum vehicle speed may decrease depending on the condition of the vehicle ahead and surroundings.
- If you select 'Warning only' for the system setting, the FCA system activates and produces only warning alarms in accordance with the collision risk levels. You should control the brake directly because the FCA system do not control the brake.

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 FCA provides additional braking power for optimum braking performance, when the driver depresses the brake pedal.
- The braking control is automatically deactivated, when the driver sharply depresses the accelerator pedal, or when the driver abruptly operates the steering wheel.
- The FCA braking control is automatically canceled, when risk factors disappear.

⚠ CAUTION

- **The driver should always use extreme caution while operating the vehicle, whether or not there is a warning message or alarm from the FCA system.**
- **After the brake control is activated, the driver must immediately depress the brake pedal and check the surroundings. The brake activation by the system lasts for about 2 seconds.**
- **If any other warning sound such as seat belt warning chime is already generated, the Forward Collision-Avoidance Assist (FCA) system warning may not sound.**
- **Playing the vehicle audio system at high volume may prevent occupants from hearing the system warning sounds.**

⚠ WARNING

The FCA braking control cannot completely stop the vehicle nor avoid all collisions. The driver should hold the responsibility to safely drive and control the vehicle.

⚠ WARNING

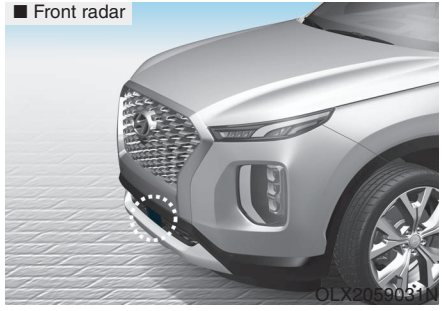
The FCA system logic operates within certain parameters, such as the distance from the vehicle, pedestrian or cyclist ahead, the speed of the vehicle ahead, and the driver's vehicle speed. Certain conditions such as inclement weather and road conditions may affect the operation of the FCA system.

⚠ WARNING

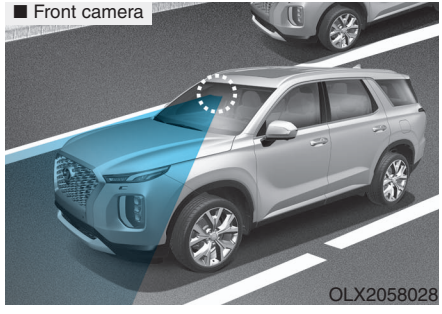
Never deliberately drive dangerously to activate the system.

FCA Sensor (Front Radar/Front Camera)

■ Front radar



■ Front camera



In order for the FCA system to operate properly, always make sure the sensor cover or sensor is clean and free of dirt, snow, and debris.

Dirt, snow, or foreign substances on the sensor cover or sensor may adversely affect the sensing performance of the sensor.

NOTICE

- **Do not apply license plate frame or foreign objects such as a bumper sticker or a bumper guard near the sensor. Doing so may adversely affect the sensing performance of the radar.**
- **Always keep the sensor and cover clean and free of dirt and debris.**
- **Use only a soft cloth to wash the vehicle. Do not spray pressurized water directly on the sensor or sensor cover.**
- **Be careful not to apply unnecessary force on the sensor or sensor cover. If the sensor is forcibly moved out of proper alignment, the FCA system may not operate correctly. In this case, a warning message may not be displayed. Have the vehicle inspected by an authorized HYUNDAI dealer.**
- **If the front bumper becomes damaged in the area around the sensor, the FCA system may not operate properly. Have the vehicle inspected by an authorized HYUNDAI dealer.**
- **Use only genuine HYUNDAI parts to repair or replace a damaged sensor or sensor cover. Do not apply paint to the sensor cover.**

NOTICE

- **NEVER install any accessories or stickers on the front windshield, or tint the front windshield.**
- **NEVER place any reflective objects (i.e. white paper, mirror) over the crash pad. Any light reflection may prevent the system from functioning properly.**
- **Pay extreme caution to keep the camera dry.**
- **NEVER disassemble the camera assembly, or apply any impact on the camera assembly.**
- **If the sensor is forcibly moved out of proper alignment, the FCA system may not operate correctly. In this case, a warning message may not be displayed. Have the vehicle inspected by an authorized HYUNDAI dealer.**

Information

Have the system checked by an authorized HYUNDAI dealer when:

- **The windshield glass is replaced.**
- **The radar sensor or cover gets damaged or replaced.**

Warning message and warning light

OIK057090L

Forward Collision-Avoidance Assist (FCA) system disabled. Radar blocked

When the sensor cover is covered with dirt, snow, or debris, the FCA system operation may not be able to detect other vehicles. If this occurs, a warning message will appear on the LCD display.

The system will operate normally when such dirt, snow or debris is removed.

FCA may not properly operate in an area (e.g. open terrain) where any objects or vehicles are not detected after turning on the engine.

⚠ WARNING

The FCA system may not activate according to road conditions, inclement weather, driving conditions or traffic conditions.

System Malfunction

OIK057091L

Check Forward Collision-Avoidance Assist system

- When FCA is not working properly, the FCA 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, have the vehicle inspected by an authorized HYUNDAI dealer.
- The FCA warning message may appear along with the illumination of the ESC (Electronic Stability Control) warning light.

Both FCA warning light and warning message will disappear once the ESC warning light issue is resolved.

⚠ WARNING

- **FCA is only a supplemental system for the driver's convenience. It is the driver's responsibility to control the vehicle operation. Do not solely depend on the FCA system. Rather, maintain a safe braking distance, and, if necessary, depress the brake pedal to reduce the driving speed or to stop the vehicle.**
- **In certain instances and under certain driving conditions, the FCA system may activate prematurely. This initial warning message appears on the LCD display with a warning chime.**

Also due to sensing limitations, in certain situations, the front radar sensor or camera recognition system may not detect the vehicle, pedestrian or cyclist ahead. The FCA system may not activate and the warning message may not be displayed.

- **If there is a malfunction with the FCA system, the Forward Collision avoidance assist system is not applied even though the braking system is operating normally.**
- **If the vehicle in front stops suddenly, you may have less control of the brake system. Therefore, always keep a safe distance between your vehicle and the vehicle in front of you.**
- **The FCA system may activate during braking and the vehicle may stop suddenly shifting loose objects toward the passengers. Always keep loose objects secured.**
- **The FCA system may not activate if the driver applies the brake pedal to avoid collision.**
- **The brake control may be insufficient, possibly causing a collision, if a vehicle in front abruptly stops. Always pay extreme caution.**
- **The FCA system may not activate according to the road conditions, inclement weather, driving conditions or traffic conditions.**
- **Occupants may get injured, if the vehicle abruptly stops by the activated FCA system. Pay extreme caution.**
- **The FCA system operates only to detect vehicles, pedestrian or cyclist in front of the vehicle.**

⚠ WARNING

- **The FCA system operates only to help detect vehicles or pedestrians in front of the vehicle.**
- **The FCA system does not operate when the vehicle is in reverse.**
- **The FCA system is not designed to detect other objects on the road such as animals.**
- **The FCA system does not detect vehicles in the opposite lane.**
- **The FCA system does not detect cross traffic vehicles that are approaching.**
- **The FCA system cannot detect the cross traffic cyclist that are approaching.**
- **The FCA system cannot detect vehicles that are stopped vertically to your vehicle at a intersection or dead end street.**

In these cases, you must maintain a safe braking distance, and if necessary, depress the brake pedal to reduce the driving speed in order to maintain a safe distance or to stop the vehicle.

Limitations of the System

The Forward Collision Avoidance Assist (FCA) system is designed to monitor the vehicle ahead or a pedestrian or cyclist on the roadway through radar signals and camera recognition to warn the driver that a collision is imminent, and if necessary, apply emergency braking.

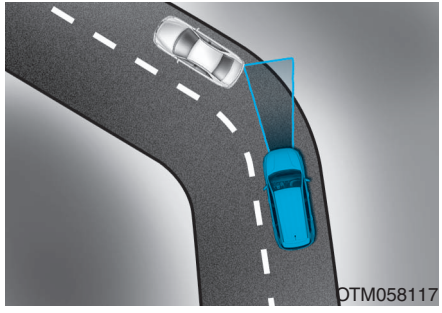
In certain situations, the radar sensor or the camera may not be able to detect the vehicle, pedestrian or cyclist ahead. In these cases, the FCA system may not operate normally. The driver must pay careful attention in the following situations where the FCA operation may be limited.

Detecting vehicles

The sensor may be limited when:

- The system may not operate for 15 seconds after the engine is started or the camera is initialized
- The radar sensor or camera is covered with a foreign object or debris
- The camera lens is contaminated due to tinted, filmed or coated windshield, damaged glass, or stuck of foreign matter (sticker, bug, etc.) on the glass
- Inclement weather such as heavy rain or snow obscures the field of view of the radar sensor or camera
- There is interference by electromagnetic waves
- There is severe irregular reflection from the radar sensor
- The radar/camera sensor recognition is limited
- The vehicle in front is too small to be detected (for example a motorcycle or a bicycle, etc.)
- The vehicle in front is an oversize vehicle or trailer that is too big to be detected by the camera recognition system (for example a tractor trailer, etc.)
- The camera's field of view is not well illuminated (either too dark or too much reflection or too much backlight that obscures the field of view)
- The vehicle in front does not have their rear lights properly turned ON or their rear lights are located unusually
- The outside brightness changes suddenly, for example when entering or exiting a tunnel
- Light coming from a street light or an oncoming vehicle is reflected on a wet road surface such as a puddle in the road
- The field of view in front is obstructed by sun glare
- The windshield glass is fogged up; a clear view of the road is obstructed
- The vehicle in front is driving erratically
- The vehicle is on unpaved or uneven rough surfaces, or road with sudden gradient changes
- The vehicle is driven near areas containing metal substances as a construction zone, railroad, etc.
- The vehicle drives inside a building, such as a basement parking lot
- The camera does not recognize the entire vehicle in front
- The camera is damaged
- The brightness outside is too low such as when the headlamps are not on at night or the vehicle is going through a tunnel
- The shadow is on the road by a median strip, trees, etc.
- The vehicle drives through a tollgate.
- The rear part of the vehicle in front is not normally visible (the vehicle turns in other direction or the vehicle is overturned.)
- The adverse road conditions cause excessive vehicle vibrations while driving
- The sensor recognition changes suddenly when passing over a speed bump

- The vehicle in front is moving vertically to the driving direction
- The vehicle in front is stopped vertically
- The vehicle in front is driving towards your vehicle or reversing
- You are on a roundabout and the vehicle in front circles



- Driving on a curve

  The performance of the FCA system may be limited when driving on a curved road.

  In certain instances on a curved road, the FCA system may activate prematurely.

  Also, in certain instances the front radar sensor or camera recognition system may not detect the vehicle traveling on a curved road.

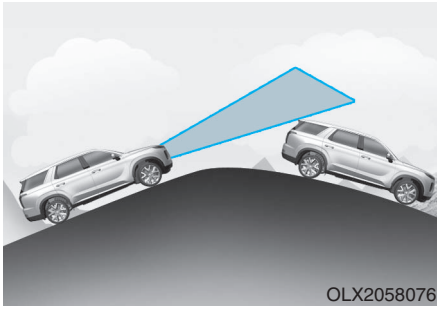
  In these cases, the driver must maintain a safe braking distance, and if necessary, depress the brake pedal to reduce your driving speed in order to maintain a safe distance.

The FCA system may recognize a vehicle in the next lane when driving on a curved road.

In this case, the system may unnecessarily alarm the driver and apply the brake.

Always pay attention to road and driving conditions, while driving. If necessary, depress the brake pedal to reduce your driving speed in order to maintain a safe distance.

Also, when necessary depress the accelerator pedal to prevent the system from unnecessarily decelerating your vehicle.

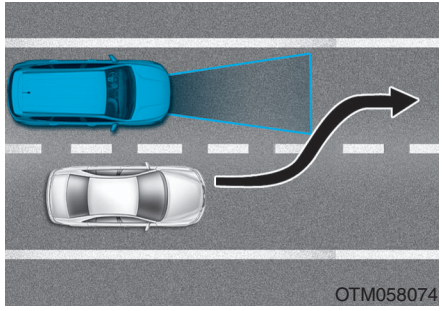

OLX2058076

- Driving on a slope

  The performance of the FCA 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.

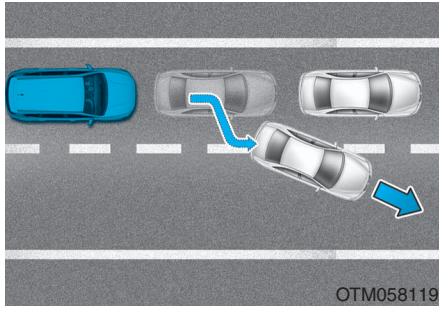
  When the FCA suddenly recognizes the vehicle in front while passing over a slope, you may experience sharp deceleration.

  Always keep your eyes forward while driving upward or downward on a slope, and, if necessary, depress the brake pedal to reduce your driving speed in order to maintain distance.


OTM058074

- Changing lanes

  When a vehicle changes lanes in front of you, the FCA system may not immediately detect the vehicle, especially if the vehicle changes lanes abruptly. In this case, you must maintain a safe braking distance, and if necessary, depress the brake pedal to reduce your driving speed in order to maintain a safe distance.


OTM058119

When driving in stop-and-go traffic, and a vehicle in front of you merges out of the lane, the FCA system may not immediately detect the new vehicle that is now in front of you. In this case, you must maintain a safe braking distance, and if necessary, depress the brake pedal to reduce your driving speed in order to maintain a safe distance.

- Detecting the vehicle in front of you

  If the vehicle in front of you has cargo that extends rearward from the cab, or when the vehicle in front of you has higher ground clearance, additional special attention is required. The FCA system may not be able to detect the cargo extending from the vehicle. In these instances, you must maintain a safe braking distance from the rearmost object, and if necessary, depress the brake pedal to reduce your driving speed in order to maintain distance.

Detecting pedestrians or cyclists

The sensor may be limited when:

- The pedestrian or cyclist is not fully detected by the camera recognition system, for example, if the pedestrian or cyclist is leaning over or is not fully walking upright
- The pedestrian or cyclist is moving very quickly or appears abruptly in the camera detection area
- The pedestrian or cyclist is wearing clothing that easily blends into the background, making it difficult to be detected by the camera recognition system
- The outside lighting is too bright (e.g. when driving in bright sunlight or in sun glare) or too dark (e.g. when driving on a dark rural road at night)
- It is difficult to detect and distinguish the pedestrian or cyclist from other objects in the surroundings, for example, when there is a group of pedestrians, cyclists or a large crowd
- There is an item similar to a person's body structure
- The pedestrian or cyclist is small
- The pedestrian has impaired mobility
- The sensor recognition is limited
- The radar sensor or camera is covered with a foreign object or debris
- The camera lens is contaminated due to tinted, filmed or coated windshield, damaged glass, or stuck of foreign matter (sticker, bug, etc.) on the glass
- The brightness outside is too low such as when the headlamps are not on at night or the vehicle is going through a tunnel
- Inclement weather such as heavy rain or snow obscures the field of view of the radar sensor or camera
- Light coming from a street light or an oncoming vehicle is reflected on a wet road surface such as a puddle in the road
- The field of view in front is obstructed by sun glare
- The windshield glass is fogged up; a clear view of the road is obstructed

- The adverse road conditions cause excessive vehicle vibrations while driving
- The sensor recognition changes suddenly when passing over a speed bump
- You are on a roundabout
- When the pedestrian or cyclist suddenly interrupts in front of the vehicle
- When the cyclist in front is riding intersected with the driving direction
- When there is any other electromagnetic interference
- When the construction area, rail or other metal object is near the cyclist
- If the bicycle material is not reflected well on the radar

⚠ WARNING

- **Do not use the Forward Collision Avoidance Assist (FCA) system when towing a vehicle. Application of the FCA system while towing may adversely affect the safety of your vehicle or the towing vehicle.**
- **Use extreme caution when the vehicle in front of you has cargo that extends rearward from the cab, or when the vehicle in front of you has higher ground clearance.**
- **The FCA system is designed to help detect and monitor the vehicle ahead to help detect a pedestrian in the roadway through radar signals and camera recognition. It is not designed to detect bicycles, motorcycles, or smaller wheeled objects such as luggage bags, shopping carts, or strollers.**
- **Never try to test the operation of the FCA system. Doing so may cause severe injury or death.**

Information

In some instances, the FCA system may be canceled when subjected to electromagnetic interference.

Information

This device complies with Industry Canada RSS-210 standard.

Operation is subject to the following two conditions:

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

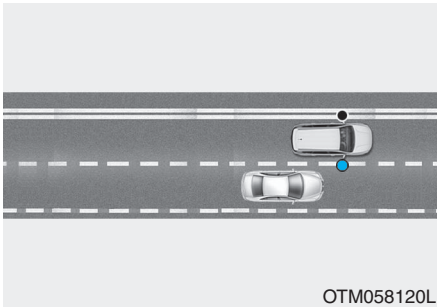
BLIND-SPOT COLLISION WARNING/BLIND-SPOT COLLISION-AVOIDANCE ASSIST (IF EQUIPPED)

System Description

Blind-Spot Collision Warning (BCW)

The Blind-Spot Collision Warning (BCW) system uses radar sensors in the rear bumper to monitor and warn the driver when it detects an approaching vehicle in the driver's blind spot area.

1) Blind-Spot Area

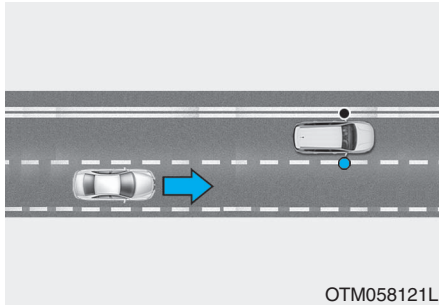


OTM058120L

The blind spot detection range varies relative to vehicle speed.

Note that if your vehicle is traveling much faster than the vehicles around you, the warning will not occur.

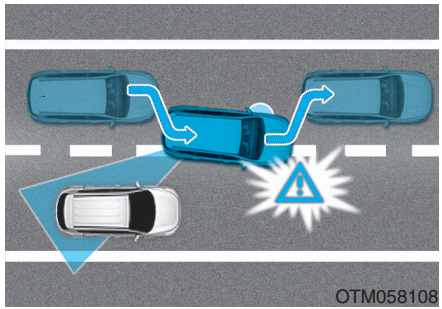
2) Closing at high speed



OTM058121L

BCW system will alert you when it detects a vehicle is approaching in an adjacent lane at a high rate of speed. If the driver activates the turn signal when the system detects an oncoming vehicle, the system sounds an audible alert.

Blind-Spot Collision-Avoidance Assist (BCA)



OTM058108

The Blind-Spot Collision-Avoidance Assist (BCA) system helps detect the front lane through the camera installed on the upper front windshield and helps detect the side/rear areas through radar sensors.

The Blind-Spot Collision-Avoidance Assist system may activate the Electronic Stability Control (ESC) if there is a possible collision with an approaching vehicle while changing lanes. It is to help mitigate the collision risk or collision damage.

⚠ WARNING

- **Always be aware of road conditions while driving and be alert for unexpected situations even though the Blind-Spot Collision Warning system and Blind-Spot Collision-Avoidance Assist system are operating.**
- **The Blind-Spot Collision Warning (BCW) system and Blind-Spot Collision-Avoidance Assist (BCA) system are supplemental systems to assist you. Do not entirely rely on the systems. Always pay attention, while driving, for your safety.**
- **The Blind-Spot Collision Warning (BCW) system and Blind-Spot Collision-Avoidance Assist (BCA) system are not substitutes for proper and safe driving. Always drive safely and use caution when changing lanes or backing up the vehicle.**

The Blind-Spot Collision Warning (BCW) system and Blind-Spot Collision-Avoidance Assist (BCA) system may not detect every object alongside the vehicle.

System Setting and Operation

System setting

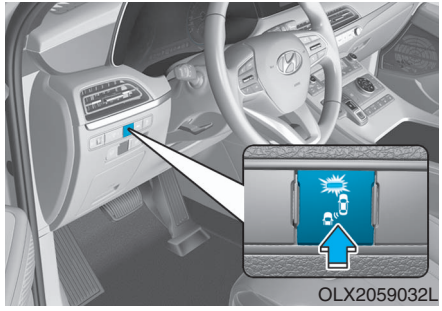
OTMA058088

- Setting Blind-Spot Safety function

  The driver can activate the system by placing the ignition switch to the ON position and by selecting 'User Settings → Driver Assistance → Blind-Spot Safety'

  - BCA and BCW turn on and are ready to be operated when 'Active Assist' is selected. Then, if a vehicle approaches the driver's blind spot area a warning sounds or braking power is applied.

- BCW turns on and is ready to be operated when 'Warning Only' is selected. Then, if a vehicle approaches the driver's blind spot area a warning sounds but braking is not applied.
- The system is deactivated and the indicator on the BCW/BCA button is turned off when 'Off' is selected.


OLX2059032L

- If you press the BCW/BCA switch while 'Active Assist' or 'Warning Only' is selected the indicator on the switch will turn off and the system will deactivate.
- If you press the BCW/BCA switch while the system is canceled the indicator on the button illuminates and the system activates.

  When the system is initially turned on and when the engine is turned off then on again while the system is in activation, the warning light will illuminate for 3 seconds on the outer side view mirror.
- If the engine is turned off then on again, the system maintains the last setting.

OTMA058089

- Selecting Warning Timing

  The driver can select the initial warning activation time in the User Settings in the LCD display by selecting 'User Settings → Driver Assistance → Warning Timing'.

- The options for the initial Blind-Spot Collision Warning includes the following:
  - Normal:

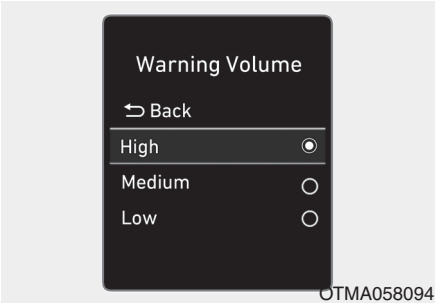
    When this option is selected, the initial Blind-Spot Collision Warning is activated normally. If this setting feels sensitive, change the option to 'Later'.

    The warning activation time may feel late if a vehicle at the side or rear abruptly accelerates.
  - Later:

    Select this warning activation time when the traffic is light and you are driving at low speeds.

Information

If you change the warning timing, the warning time of other systems may change. Always be aware before changing the warning timing.



- Setting Warning Volume

  The driver can select the warning volume of Blind-Spot Collision Warning in the User Settings in the LCD display by selecting 'User Settings → Driver Assistance → Warning Volume → High/Medium/Low'.

For more details, refer to "LCD Display" in chapter 3.

Information

If you change the warning volume, the warning volume of other systems may change. Always be aware before changing the warning volume.

Operating Conditions

The system enters the ready status, when 'Active Assist' or 'Warning Only' is selected and the following conditions are satisfied:

- **Active Assist**

1) The Blind-Spot Collision-Avoidance Assist system will operate When:
   - Vehicle speed is between 60 km/h and 180 km/h (40 mph and 110 mph).
   - The system detects both of the lane lines.
   - An approaching vehicle is detected next to or behind your vehicle.
2) The Blind-Spot Collision Warning system will operate When:

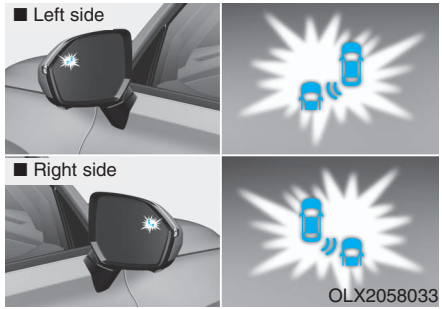
   The vehicle speed is above approximately 30 km/h (20 mph).

- **Warning Only**

1) The Blind-Spot Collision Warning system will activate When:
   - The vehicle speed is approximately 30 km/h (20 mph).
   - The Blind-Spot Collision-Avoidance Assist system is not activated when "Warning Only" is selected for the system setting.

Warning and System Control

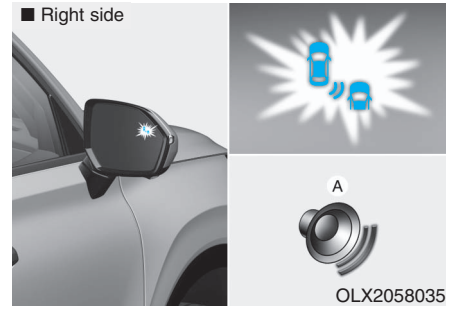
Blind-Spot Collision Warning (BCW) system



First stage alert

If a vehicle is detected within the boundary of the system, a warning light will illuminate on the outer side view mirror and the head up display (if equipped).

If the detected vehicle is no longer within the blind spot area, the warning will turn off according to the driving conditions of the vehicle.



[A] : Warning sound

Second stage alert

A warning chime to alert the driver will activate when:

1. A vehicle has been detected in the blind spot area by the radar system AND.
2. The turn signal is applied (same side as where the vehicle is being detected).

When this alert is activated, the warning light on the outer side view mirror and the head up display (if equipped) will also blink. And a warning chime will sound.

If you turn off the turn signal indicator, the second stage alert will be deactivated.

If the detected vehicle is no longer within the blind spot area, the warning will turn off according to the driving conditions of the vehicle.

⚠ WARNING

- **The warning light on the outer side view 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 surroundings of the vehicle.
- **Drive safely even though the vehicle is equipped with a Blind-Spot Collision Warning (BCW) system. Do not solely rely on the system but check your surroundings before changing lanes or backing the vehicle up.**
- **The system may not alert the driver in some situations due to system limitations so always check your surroundings while driving.**

⚠ CAUTION

- **Always pay attention to road and traffic conditions while driving, whether or not the warning light on the outer side view mirror illuminates or there is a warning alarm.**
- **Playing the vehicle audio system at high volume may prevent occupants from hearing the Blind-Spot Collision Warning system warning sounds.**
- **If any other warning sound such as seat belt warning chime is already generated, the Blind-Spot Collision Warning (BCW) system warning may not sound.**

Blind-Spot Collision-Avoidance Assist (BCA) system

OLX2059104N/OLX2059103N

The Blind-Spot Collision-Avoidance Assist (BCA) system may apply braking power, when an approaching vehicle is detected within a certain distance next to or behind your vehicle.

In this situation, the system gently apply braking power on the tire, which is located in the opposite side of the possible-colliding point. The instrument cluster will inform the driver of the system activation.

Blind-Spot Collision-Avoidance Assist (BCA) system is automatically deactivated when:

- The vehicle drives a certain distance away
- The vehicle direction is changed against the possible-colliding point
- The steering wheel is abruptly moved
- The brake pedal is depressed
- After a certain period of time

The driver should drive the vehicle in the middle of the vehicle lanes to keep the system in the ready status.

When the vehicle drives too close to one side of the vehicle lanes, the system may not properly operate.

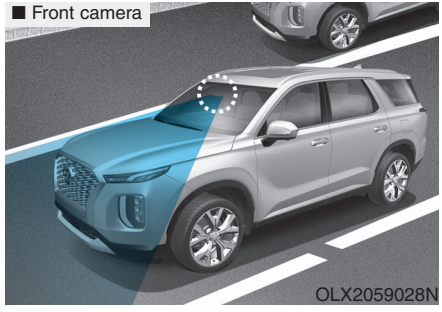
In addition, the system may not properly control your vehicle in accordance with driving situations. Thus, always pay close attention to road conditions.

⚠ WARNING

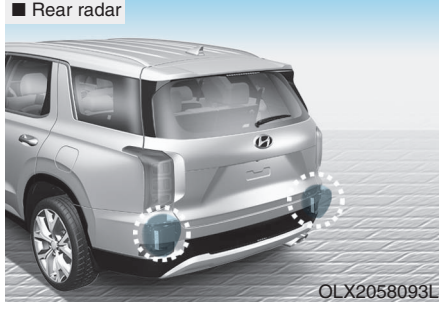
- **The driver is responsible for accurate steering.**
- **Do not unnecessarily operate the steering wheel, when the Blind-Spot Collision-Avoidance Assist System is in operation.**
- **Always pay attention to road and traffic conditions while driving. The Blind-Spot Collision-Avoidance Assist system may not operate or unnecessarily operate depending on certain situations.**
- **The Blind-Spot Collision-Avoidance Assist system is not a substitute for safe driving practices, but is a supplemental system only. It is the responsibility of the driver to always drive cautiously to prevent unexpected and sudden situations from occurring. Pay attention to road conditions at all times.**

Detecting Sensor (Camera and Radar)

■ Front camera



■ Rear radar



Front camera

The front camera function as a sensor detecting the lane. If the sensor is covered with snow, rain or foreign substance, the system may temporarily be canceled and not work properly. Always keep the sensor clean.

Refer to Lane Keeping Assist (LKA) System for cautions for the front camera sensor.

Rear radar

The rear radars are located inside the rear bumper for detecting the side and rear areas. Always keep the rear bumper clean for proper operation of the system.

NOTICE

- **The system may not work properly when the bumper has been damaged, or if the rear bumper has been replaced or repaired.**
- **The sensing range differs somewhat according to the width of the road. When the road is narrow, the system may detect other vehicles in the next lane.**
- **The system may turn off if interfered by strong electromagnetic waves.**
- **Always keep the sensors clean.**
- **NEVER disassemble the sensor component or apply any impact on the sensor component.**
- **Be careful not to apply unnecessary force on the radar sensor or sensor cover. If the sensor is forcibly moved out of proper alignment, the system may not operate correctly.**

  In this case, a warning message may not be displayed. Have the vehicle inspected by an authorized HYUNDAI dealer.
- **Do not apply foreign objects such as a bumper sticker or a bumper guard near the radar sensor or apply paint to the sensor area. Doing so may adversely affect the performance of the sensor.**
- **NEVER install any accessories or stickers on the front windshield, or tint the front windshield.**
- **Pay extreme caution to keep the camera sensor dry.**
- **NEVER place any reflective objects (i.e. white paper, mirror) over the crash pad. Any light reflection may prevent the system from functioning properly.**

Warning message

OIK057092L

Blind-Spot Collision Warning (BCW) system disabled. Radar blocked

This warning message may appear When:

- One or both of the sensors on the rear bumper is blocked by dirt or snow or a foreign object.
- Driving in rural areas where the sensor does not detect another vehicle for an extended period of time.
- When there is inclement weather such as heavy snow or rain.

If any of these conditions occur, the light on the BCW/BCA switch and the system will turn off automatically.

When the BCW canceled warning message is displayed in the cluster, check to make sure that the rear bumper is free from any dirt or snow in the areas where the sensor is located. Remove any dirt, snow, or foreign material that could interfere with the radar sensors.

After any dirt or debris is removed, the system should operate normally after about 10 minutes of driving the vehicle.

If the system still does not operate normally have your vehicle inspected by an authorized HYUNDAI dealer.

Information

Turn off the BCW, BCA and RCCW system when a trailer or carrier is installed.

- **Press the BCW/BCA switch (the indicator on the switch will turn off)**
- **Deactivate the RCCW system by deselecting**

  'User Settings → Driver Assistance → Parking Safety → Rear Cross-Traffic Collision Warning' (if equipped)

OTM058151L

Check Blind-Spot Collision Warning (BCW) system

If there is a problem with the BCW system, a warning message will appear and the light on the switch will turn off. The system will turn off automatically. BCA will not operate also if the BCW system turns off due to malfunction. Have your vehicle inspected by an authorized HYUNDAI dealer.

OLX2049137N

Check Blind-Spot Collision-Avoidance Assist (BCA) system

If there is a problem with the BCA system, a warning message will appear. The system will turn off automatically. BCW will still operate even if the BCA system turns off due to malfunction. Have your vehicle inspected by an authorized HYUNDAI dealer to use BCA system.

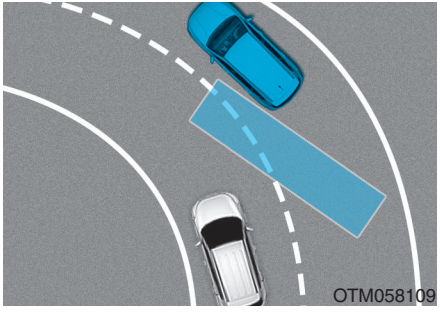
Limitations of the System

The driver must be cautious in the below situations because the system may not detect other vehicles or objects in certain circumstances:

- When a trailer or carrier is installed.
- The vehicle driven in inclement weather such as heavy rain or snow.
- The sensor is polluted with rain, snow, mud, etc.
- The rear bumper where the sensor is located is covered with a foreign object such as a bumper sticker, a bumper guard, a bike rack, etc.
- The rear bumper is damaged, or the sensor is out of the original default position.
- The vehicle height gets lower or higher due to heavy loading in a luggage compartment, abnormal tire pressure, etc.
- When the temperature of the rear bumper is high.
- When the sensors are blocked by other vehicles, walls or parking-lot pillars.

- The vehicle is driven on a curved road.
- The vehicle is driven through a toll-gate.
- The road pavement (or the peripheral ground) abnormally contains metallic components (i.e. possibly due to subway construction).
- There is a fixed object near the vehicle, such as a guardrail.
- While going down or up a steep road where the height of the lane is different.
- Driving on a narrow road where trees or grass or overgrown.
- Driving in rural areas where the sensor does not detect another vehicle or structure for an extended period of time.
- Driving on a wet road.
- Driving on a road where the guardrail or wall is in double structure.
- A big vehicle is near such as a bus or truck.
- When the other vehicle approaches very close.
- When the other vehicle passes at a very fast speed.
- While changing lanes.
- If the vehicle has started at the same time as the vehicle next to you and has accelerated.
- When the vehicle in the next lane moves two lanes away from you OR when the vehicle two lanes away moves to the next lane from you.
- A motorcycle or bicycle is near.
- A flat trailer is near.
- If there are small objects in the detecting area such as a shopping cart or a baby stroller.
- If there is a low height vehicle such as a sports car.
- The brake pedal is depressed.
- ESC (Electronic Stability Control) is activated.
- ESC (Electronic Stability Control) malfunctions.
- The tire pressure is low or a tire is damaged.
- The brake is reworked.
- The vehicle abruptly changes driving direction.
- The vehicle makes sharp lane changes.
- The vehicle sharply stops.
- Temperature is extremely low around the vehicle.
- The vehicle severely vibrates while driving over an uneven//bumpy road, or concrete patch.
- The vehicle drives on a slippery surface due to snow, water puddle, or ice.
- The Lane Keeping Assist (LKA) does not operate normally.

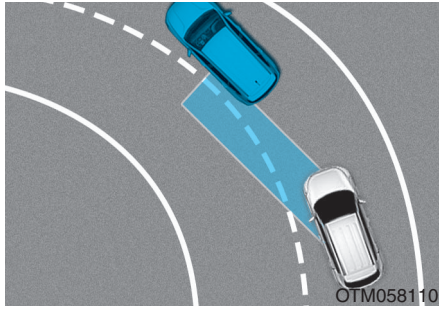
  For more details refer to "Lane Keeping Assist (LKA) system" in this chapter.



- Driving on a curve

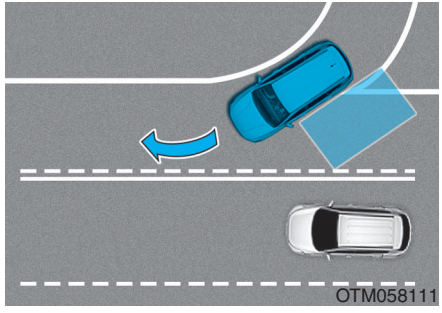
  The BCW and BCA systems may not operate properly when driving on a curved road. In certain instances, the system may not detect the vehicle in the next lane.

  Always pay attention to road and driving conditions, while driving.



The BCW and BCA systems may not operate properly when driving on a curved road. In certain instances, the system may recognize a vehicle in the same lane.

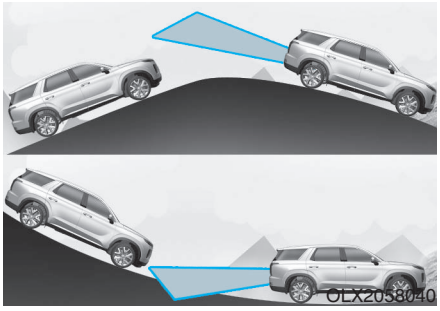
Always pay attention to road and driving conditions, while driving.



- Driving where the road is merging/dividing

  The BCW and BCA systems may not operate properly when driving where the road is merging/dividing. In certain instances, the system may not detect the vehicle in the next lane.

  Always pay attention to road and driving conditions, while driving.

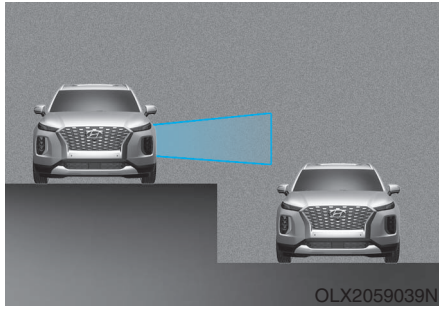


- Driving on a slope

  The BCW and BCA systems may not operate properly when driving on a slope. In certain instances the system may not detect the vehicle in the next lane.

  Also, in certain instances, the system may recognize the ground or structures.

  Always pay attention to road and driving conditions, while driving.

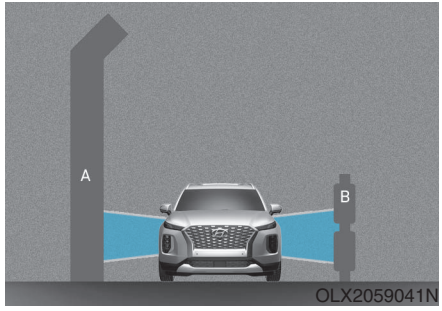


- Driving where the heights of the lanes are different

  The BCW and BCA systems may not operate properly when driving where the heights of the lanes are different.

  In certain instances, the system may not detect the vehicle on a road with different lane heights (i.e. underpass joining section, grade separated intersections, etc.).

  Always pay attention to road and driving conditions, while driving.



[A] : noise barrier, [B] : guardrail

- Driving where there is a structure beside the road

  The BCW and BCA systems may not operate properly when driving where there is structure beside the road.

  In certain instances, the system may recognize the structures (i.e. noise barriers, guardrail, double guardrail, median strip, bollard, street light, road sign, tunnel wall, etc.) beside the road.

  Always pay attention to road and driving conditions, while driving.

Information

This device complies with Industry Canada RSS-210 standard.

Operation is subject to the following two conditions:

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

DECLARATION OF CONFORMITY (IF EQUIPPED)

The radio frequency components (Rear Corner Radar) complies (if equipped):

This Category II radiocommunication device complies with Industry Canada Standard RSS-310.
Ce dispositif de radiocommunication de catégorie II respecte la norme CNR-310 d'Industrie Canada .

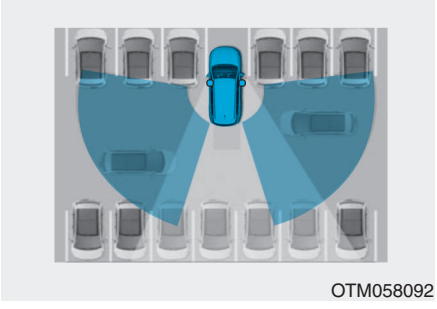
This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions:
(1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.
Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :
(1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

OANATEL004

REAR CROSS-TRAFFIC COLLISION WARNING (RCCW) / REAR CROSS-TRAFFIC COLLISION-AVOIDANCE ASSIST (RCCA) (IF EQUIPPED)

System Description

Rear Cross-Traffic Collision Warning (RCCW) system



OTM058092

The Rear Cross-Traffic Collision Warning (RCCW) system uses radar sensors to monitor the approaching cross traffic from the left and right side of the vehicle when your vehicle is in reverse.

The blind spot detection range varies relative to the approaching vehicle speed.

Rear Cross-Traffic Collision-Avoidance Assist (RCCA) system

The Rear Cross-Traffic Collision-Avoidance Assist (RCCA) system monitors approaching cross traffic from the left and right side of the vehicle when your vehicle is in reverse.

The Rear Cross-Traffic Collision-Avoidance Assist (RCCA) system may activate the Electronic Stability Control (ESC) in accordance with a possible collision with an approaching vehicle. It is to lower the possible collision risk or mitigate the possible collision damage.

⚠ WARNING

- **Always be aware of road and traffic conditions while driving and be alert for unexpected situations even though the Rear Cross-Traffic Collision Warning system and Rear Cross-Traffic Collision-Avoidance Assist system are operating.**
- **The Rear Cross-Traffic Collision Warning system and Rear Cross-Traffic Collision-Avoidance Assist system are supplemental systems to assist you. Do not entirely rely on the systems. Always pay attention, while driving, for your safety.**
- **The Rear Cross-Traffic Collision Warning system and Rear Cross-Traffic Collision-Avoidance Assist system are not substitutes for proper and safe driving. Always drive safely and use caution when backing up the vehicle.**

System Setting and Operation

System setting

OLX2059108N

- Setting Parking Safety function

  The driver can activate the systems by placing the ignition switch to the ON position and by selecting 'User Settings → Driver Assistance → Parking Safety → Rear Cross-Traffic Safety'. The RCCA and RCCW turn on and get ready to be activated when 'Rear Cross-Traffic Safety' is selected.
- When the engine is turned off then on again, the systems will be ready to be operated.
- When the system is initially turned on and engine is turned off then on again, the warning light will illuminate for 3 seconds on the side view mirror.

OTMA058089

- Setting Warning Timing

  The driver can select the initial warning activation time in the User Settings in the LCD display by selecting 'User Settings → Driver Assistance → Warning Timing'.

The options for the initial Rear Cross-Traffic Collision Warning includes the following:

- Normal:

When this option is selected, the initial Rear Cross-Traffic Collision Warning is activated normally. If this setting feels sensitive, change the option to 'Later'.

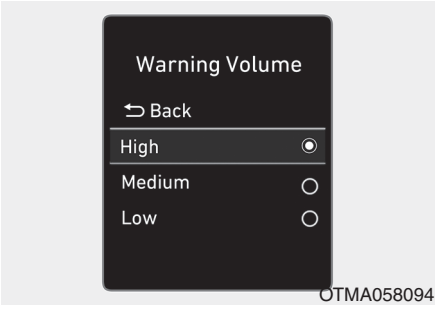
The warning activation time may feel late if the a vehicle at the side or rear abruptly accelerates.

- Later:

Select this warning activation time when the traffic is light and you are driving at low speeds.

Information

If you change the warning timing, the warning time of other systems may change. Always be aware before changing the warning timing.



OTMA058094

- Setting Warning Volume

  The driver can select the warning volume of the Rear Cross-Traffic Collision Warning by selecting 'User Settings → Driver Assistance → Warning Volume → High/Medium/Low'.

For more details, refer to "LCD Display" in chapter 3.

Information

If you change the warning volume, the warning volume of other systems may change. Always be aware before changing the warning volume.

Operating conditions

To operate:

Go to the 'User Settings → Driver Assistance → Parking Safety → Rear Cross-Traffic Safety' in the cluster LCD display. The system will turn on and standby to activate.

The system will operate when vehicle speed is below 10 km/h (6 mph) and with the gear in R (Reverse).

* The system will not operate when the vehicle speed exceeds 10 km/h (6 mph). The system will operate again when the speed is below 10 km/h (6 mph).

The system's detecting range is approximately 0.5 – 20 m (1 – 65 ft.). An approaching vehicle will be detected if the vehicle speed is within 8 – 36 km/h (5 – 22.5 mph).

Note that the detecting range may vary under certain conditions. As always, use caution and pay close attention to your surroundings when backing up your vehicle.

Warning and System Control

Rear Cross-Traffic Collision Warning (RCCW) system

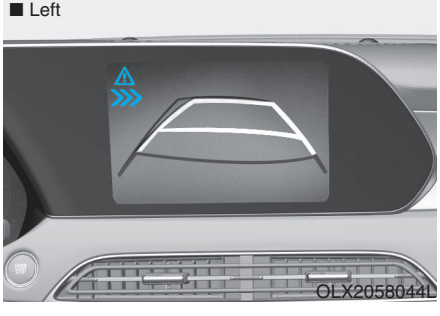
■ Left

OLX2059042N

■ Right

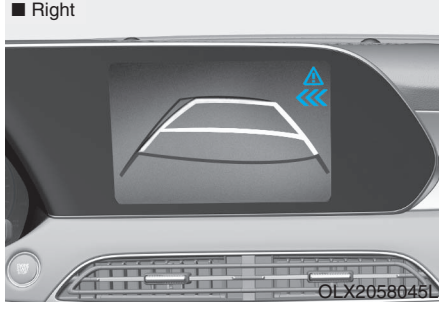
OLX2059043N

■ Left



OLX2058044L

■ Right



OLX2058045L

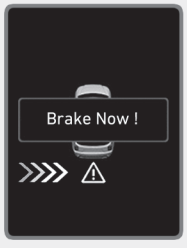
If the vehicle detected by the sensors approaches from the rear left/right side of your vehicle, the warning chime will sound, the warning light on the outer side view mirror will blink and a warning will appear on the LCD display. If the rear view monitor system is in activation, a warning will also appear on the infotainment system screen.

The warning will stop when:

- the detected vehicle moves out of the sensing area or
- when the vehicle is right behind your vehicle or
- when the vehicle is not approaching your vehicle or
- when the other vehicle slows down.

Rear Cross-Traffic Collision-Avoidance Assist (RCCA) system

■ Left

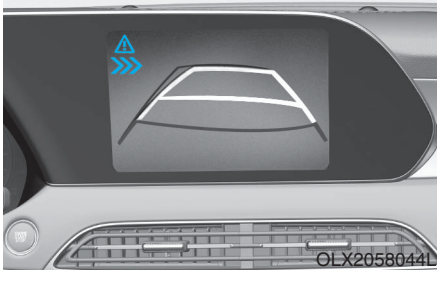


OLX2059046N

■ Right

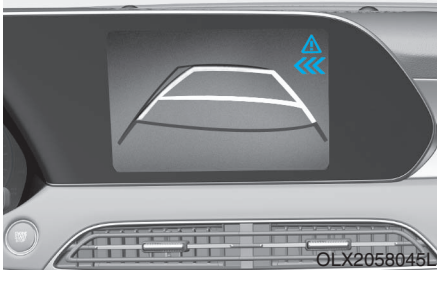
OLX2059047N

■ Left



OLX2058044L

■ Right



OLX2058045L

If the risk of collision is detected while the RCCW is generated, brake is controlled. The instrument cluster will inform the driver of the brake control. If the rear view monitor system is in activation, a message will also appear on the infotainment screen.

After the brake control is activated, the driver must immediately depress the brake pedal and check the surroundings.

- The brake activation by the system lasts for about 2 seconds.

  The driver must pay attention as the brake is disengaged after 2 seconds.
- The brake control by the system is canceled if the driver depresses the brake pedal with sufficient power.
- Brake control is activated once for each right/left approach after shifting the gear to R (Reverse).

The brake control may not operate properly according to the status of the ESC (Electronic Stability Control). The same warning message is displayed on the instrument cluster when :

- the ESC (Electronic Stability Control) warning light is on.
- the ESC (Electronic Stability Control) is engaged in a different function.

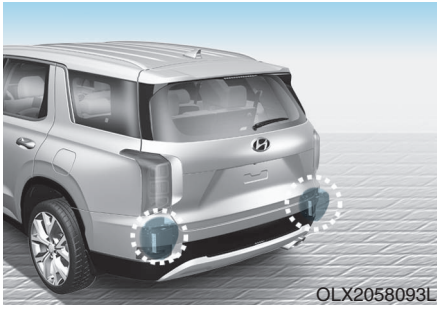
⚠ CAUTION

- **When the operation condition of the Rear Cross-Traffic Collision Warning system is satisfied, the warning will occur every time a vehicle approaches the side or rear of your stopped (0 km/h vehicle speed) vehicle.**
- **The system's warning may not operate properly if the left or right of your vehicle's rear bumper is blocked by a vehicle or obstacle.**
- **Always pay attention to road and traffic conditions while driving, whether or not the warning light on the outer side view mirror illuminates or there is a warning alarm.**
- **Playing the vehicle audio system at high volume may prevent occupants from hearing the system's warning sounds.**
- **If any other warning sound such as seat belt warning chime is already generated, the Rear Cross-Traffic Collision Warning system warning may not sound.**

⚠ WARNING

- **Drive safely even though the vehicle is equipped with a Rear Cross-Traffic Collision Warning system and Rear Cross-Traffic Collision-Avoidance Assist system. Do not solely rely on the system but check your surrounding when backing the vehicle up.**
- **The driver is responsible for accurate brake control.**
- **Always pay extreme caution while driving. The Rear Cross-Traffic Collision Warning system and Rear Cross-Traffic Collision-Avoidance Assist system may not operate properly or unnecessarily operate depending on traffic and driving conditions.**
- **The Rear Cross-Traffic Collision-Avoidance Assist system is not a substitute for safe driving practices, but a convenience function only. It is the responsibility of the driver to always drive cautiously to prevent unexpected and sudden situations from occurring. Pay attention to the road conditions at all times.**

Detecting Sensor


OLX2058093L

The rear radars are located inside the rear bumper for detecting the side and rear areas. Always keep the rear bumper clean for proper operation of the system.

NOTICE

- **The system may not work properly when the bumper has been damaged, or if the rear bumper has been replaced or repaired.**
- **The system may turn off if interfered by electromagnetic waves.**
- **Always keep the sensors clean.**
- **NEVER disassemble the sensor component or apply any impact on the sensor component.**
- **Be careful not to apply unnecessary force on the radar sensor or sensor cover. If the sensor is forcibly moved out of proper alignment, the system may not operate correctly. In this case, a warning message may not be displayed. Have the vehicle inspected by an authorized HYUNDAI dealer.**
- **Do not apply foreign objects such as a bumper sticker or a bumper guard near the radar sensor or apply paint to the sensor area. Doing so may adversely affect the performance of the sensor.**

Warning message

OIK057092L

Blind-Spot Collision Warning (BCW) system disabled. Radar blocked

This warning message may appear when:

- One or both of the sensors on the rear bumper is blocked by dirt or snow or a foreign object.
- Driving in rural areas where the sensor does not detect another vehicle for an extended period of time.
- When there is inclement weather such as heavy snow or rain.

If any of these conditions occur, the light on the BCW/BCA switch and the system will turn off automatically.

When the BCW canceled warning message is displayed in the cluster, check to make sure that the rear bumper is free from any dirt or snow in the areas where the sensor is located. Remove any dirt, snow, or foreign material that could interfere with the radar sensors.

After any dirt or debris is removed, the system should operate normally after about 10 minutes of driving the vehicle.

If the system still does not operate normally have your vehicle inspected by an authorized HYUNDAI dealer.

Information

Turn off the BCW and RCCW system when a trailer or carrier is installed.

- **Press the BCW/BCA switch (the indicator on the switch will turn off)**
- **Deactivate the RCCW system by deselecting 'User Settings → Driver Assistance → Parking Safety → Rear Cross-Traffic Collision Warning'**

OTM058151L

Check Blind-Spot Collision Warning (BCW) system

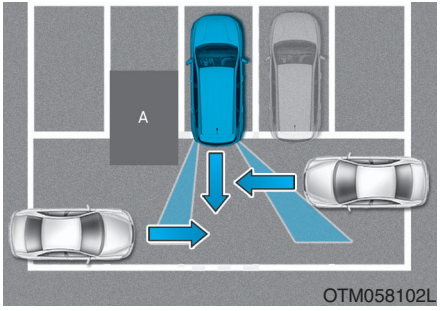
If there is a problem with the BCW system, a warning message will appear and the light on the switch will turn off. The system will turn off automatically. RCCW and RCCA will not operate also if the BCW system turns off due to malfunction. Have your vehicle inspected by an authorized HYUNDAI dealer.

Limitations of the System

The driver must be cautious in the below situations because the system may not detect other vehicles or objects in certain circumstances:

- When a trailer or carrier is installed.
- The vehicle drives in inclement weather such as heavy rain or snow.
- The sensor is polluted with rain, snow, mud, etc.
- The rear bumper where the sensor is located is covered with a foreign object such as a bumper sticker, a bumper guard, a bike rack, etc.
- The rear bumper is damaged, or the sensor is out of the original default position.
- The vehicle height gets lower or higher due to heavy loading in a trunk, abnormal tire pressure, etc.
- When the temperature of the rear bumper is high.
- When the sensors are blocked by other vehicles, walls or parking-lot pillars.
- The vehicle drives on a curved road.

- The road pavement (or the peripheral ground) abnormally contains metallic components (i.e. possibly due to subway construction).
- There is a fixed object near the vehicle, such as a guardrail.
- While going down or up a steep road where the height of the lane is different.
- Driving on a narrow road where trees or grass or overgrown.
- Driving in rural areas where the sensor does not detect another vehicle for an extended period of time.
- Driving on a wet road.
- Driving on a road where the guardrail or wall is in double structure.
- A big vehicle is near such as a bus or truck.
- When the other vehicle approaches very close.
- When the other vehicle passes at a very fast speed.
- While changing lanes.
- If the vehicle has started at the same time as the vehicle next to you and has accelerated.
- When the vehicle in the next lane moves two lanes away from you OR when the vehicle two lanes away moves to the next lane from you.
- A motorcycle or bicycle is near.
- A flat trailer is near.
- If there are small objects in the detecting area such as a shopping cart or a baby stroller.
- If there is a low height vehicle such as a sports car.
- The brake pedal is depressed.
- ESC (Electronic Stability Control) is activated.
- ESC (Electronic Stability Control) malfunctions.
- The tire pressure is low or a tire is damaged.
- The brake is reworked.
- The vehicle sharply stops.
- Temperature is extremely low around the vehicle.
- The vehicle severely vibrates while driving over an uneven/bumpy road, or concrete patch.
- The vehicle drives on a slippery surface due to snow, water puddle, or ice.



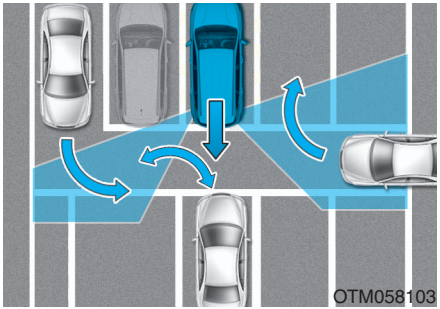
[A] : Structure

- Driving where there is a vehicle or structure near

  The system may not operate properly when driving where there is a vehicle or structure near.

  In certain instances, the system may not detect the vehicle approaching from behind and the warning or brake may not operate properly.

  Always pay attention to your surrounding while driving.

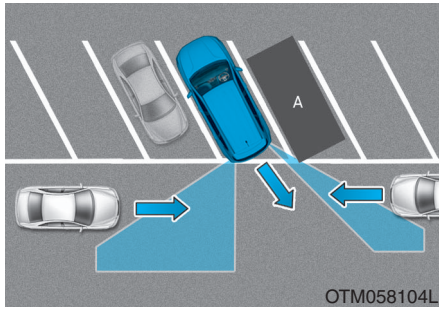


- When the vehicle is in a complex parking environment

  The system may not operate properly when the vehicle is in a complex parking environment.

  In certain instances, the system may not be able to exactly determine the risk of collision for the vehicles which are parking or pulling out near your vehicle (e.g. a vehicle escaping beside your vehicle, a vehicle parking or pulling out in the rear area, a vehicle approaching your vehicle making a turn, etc.).

  If this occurs, the warning or brake may not operate properly.



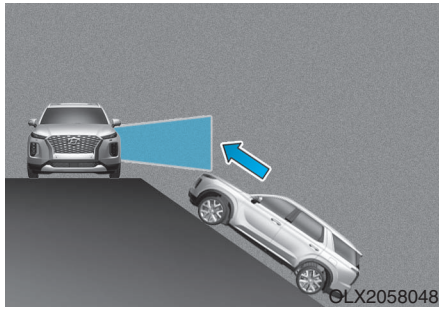
[A] : Vehicle

- When the vehicle is parked diagonally

  The system may not operate properly when the vehicle is parked diagonally.

  In certain instances, when the diagonally parked vehicle is pulled out of the parking space, the system may not detect the vehicle approaching from the rear left/right of your vehicle. In this case, the warning or brake may not operate properly.

  Always pay attention to your surrounding while driving.

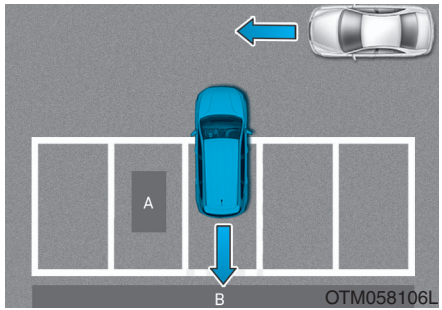


- When the vehicle is on/near a slope

  The system may not operate properly when the vehicle is on/near a slope.

  In certain instances, the system may not detect the vehicle approaching from the rear left/right and the warning or brake may not operate properly.

  Always pay attention to your surrounding while driving.



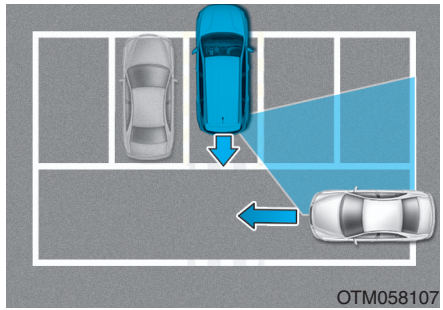
[A] : Structure, [B] : Wall

- Pulling into the parking space where there is a structure

  The system may not operate properly when pulling in the vehicle to the parking space where there is a structure at the back or side of your vehicle.

  In certain instances, when backing into the parking space, the system may falsely detect the vehicle moving in front of your vehicle. In this case, the warning or brake may operate.

  Always pay attention to the parking space while driving.



- When the vehicle is parked rearward

  If the vehicle is parked rearward and the sensor detects the another vehicle in the rear area of the parking space, the system can warn or control braking. Always pay attention to the parking space while driving.

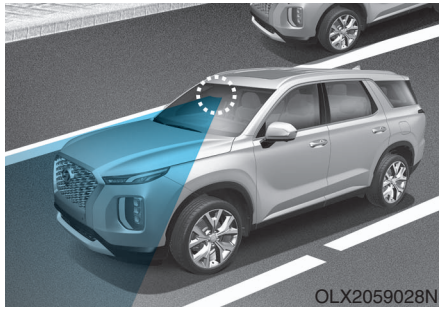
Information

This device complies with Industry Canada RSS-210 standard.

Operation is subject to the following two conditions:

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

LANE FOLLOWING ASSIST (LFA) SYSTEM



The Lane Following Assist (LFA) system helps detect lane markers on the road with a front view camera at the front windshield, and assists the driver's steering to help keep the vehicle between lanes.

⚠ WARNING

The Lane Following Assist (LFA) system is not a substitute for safe driving practices, but a convenience function. It is the responsibility of the driver to always be aware of the surroundings and steer the vehicle.

⚠ WARNING

Take the following precautions when using the Lane Following Assist (LFA) system:

- **Do not turn the steering wheel suddenly when the steering wheel is being assisted by the system.**
- **LFA system helps the driver to keep the vehicle in the center of the lane by assisting the driver's steering. However, the driver should not solely rely on the system but always pay attention on the steering wheel to stay in the lane.**
- **The operation of the LFA system can be canceled or not work properly according to road condition and surroundings. Always be cautious when driving.**
- **Do not disassemble the LFA system camera temporarily to tint the window or attach any types of coatings and accessories. If you disassemble the camera and assemble it again, take your vehicle to an authorized HYUNDAI dealer and have the system checked for calibration.**
- **When you replace the windshield glass, LFA system camera or related parts of the steering wheel, take your vehicle to an authorized HYUNDAI dealer and have the system checked for calibration.**
- **The system helps detect lane markers and controls the steering wheel by a camera, therefore, if the lane markers are hard to detect, the system may not work properly.**

  Please refer to "Limitations of the System".
- **Do not remove or damage the related parts of LFA system.**

- **You may not hear a warning sound of LFA system if the audio volume is high.**
- **Do not place objects on the dashboard that reflects light such as mirrors, white paper, etc. This may prevent the LFA system from functioning properly.**
- **Always have your hands on the steering wheel while the LFA system is activated.**
- **The steering wheel is not continuously controlled so if the vehicle speed is at a higher rate when leaving a lane the vehicle may not be controlled by the system. The driver must always follow the speed limit when using the system.**
- **If you attach objects to the steering wheel, the system may not assist steering or the hands off alarm may not work properly.**
- **When you tow a trailer, make sure that you turn off the LFA system.**

LFA Setting and Operation

System setting

- With the ignition switch in the ON position, the Lane Following Assist can be activated by selecting 'User settings → Driver Assistance → Driving Assist → Lane Following Assist' in the cluster LCD display. Deselect the setting to turn off the system.
- If the engine is turned off then on again, the system maintains the last setting.

Operating conditions

Select 'Lane Following Assist' from the Settings menu in the cluster LCD display and satisfy the following conditions for the system to operate.

- The Smart Cruise Control is operating
- Vehicle speed is lower than 153 km/h (95 mph)

When the system is activated, the indicator ( ) on the cluster will illuminate. The color of the indicator will change depending on the condition of the LFA system.

- Green : Steering assist mode is ON.
- White : Steering assist mode is OFF.

LFA operation

OLX2059099N

- If the vehicle is inside the lane with both lanes detected by the system (lane color changes from gray to white), and there is no abrupt steering made by the driver, the LFA system changes to steering assist mode.
- The indicator light will come on green, and the system helps the vehicle stay in line by controlling the steering wheel.

  When the steering wheel is not controlled temporarily, the indicator light will flash green and change to white.

Warning Message

OLX2059062N

Keep hands on steering wheel

If the driver takes their hands off the steering wheel for several seconds while the LFA system is activated, the system will warn the driver.

Information

Hold the steering wheel tight. Otherwise, the LFA system could misjudge that the driver's hands are off the steering wheel, and the above warning may occur.

WARNING

The warning message may appear late according to road conditions. Therefore, always have your hands on the steering wheel while driving.

OLX2059126N

Driving Convenience systems canceled

If the driver still does not have their hands on the steering wheel after the message "Keep hands on steering wheel", the system will not control the steering wheel and warn the driver only when the driver crosses the lane markers.

However, if the driver has their hands on the steering wheel again, the system will start controlling the steering wheel.

⚠ WARNING

- **The LFA system is a supplemental system only. It is the responsibility of the driver to safely steer the vehicle and to maintain it in its lane.**
- **Turn off the LFA system and drive without using the system in the following situations:**
  - **In bad weather**
  - **In bad road conditions**
  - **When the steering wheel needs to be controlled by the driver frequently.**
  - **When towing a vehicle or trailer**

Information

- **Even though the steering is assisted by the system, the driver may control the steering wheel.**
- **The steering wheel may feel heavier when the steering wheel is assisted by the system than when it is not.**

OLX2059065N

Check Lane Following Assist (LFA) system

If there is a problem with the system a message will appear for a few seconds. If the problem continues, we recommend that you have the vehicle inspected by an authorized HYUNDAI dealer.

The LFA system will not be in the ENABLED state and/or the steering wheel will not be assisted when:

- The turn signal is turned on before changing a lane. If you change lanes without the turn signal on, the steering wheel might be controlled.
- The vehicle is not driven in the middle of the lane when the system is turned on or right after changing a lane.
- ESC (Electronic Stability Control) or VSM (Vehicle Stability Management) is activated.
- The vehicle is driven on a sharp curve.
- Vehicle speed is over 153 km/h (95 mph).
- The vehicle makes sharp lane changes.
- The vehicle brakes suddenly.
- Only one lane marker is detected.
- The lane is very wide or narrow.
- There are more than two lane markers on the road (e.g. construction area).
- Radius of a curve is too small.
- The vehicle is driven on a steep incline.
- The steering wheel is turned suddenly.
- The system may not operate for 15 seconds after the engine is started or the camera is initialized.

Limitations of the System

The LFA system may operate prematurely even if the vehicle does not depart from the intended lane, OR, the LFA system may not assist your steering or warn you if the vehicle leaves the intended lane under the following circumstances:

When the lane and road conditions are poor

- It is difficult to distinguish the lane marking from the road surface or the lane marking is faded or not clearly marked.
- It is difficult to distinguish the color of the lane marker from the road.
- There are markings on the road surface that look like a lane marker that is inadvertently being detected by the camera.
- The lane marker is indistinct or damaged.
- The lane marker is merged or divided. (e.g. tollgate)
- The lane number increases or decreases or the lane marker are crossing complicatedly.

- There are more than two lane markers on the road in front of you.
- The lane marker is very thick or thin.
- The lane is very wide or narrow.
- The lane marker ahead is not visible due to rain, snow, water on the road, damaged or stained road surface, or other factors.
- The shadow is on the lane marker by a median strip, trees, guardrail, noise barriers, etc.
- The lane markers are complicated or a structure substitutes for the lines such as a construction area.
- There are crosswalk signs or other symbols on the road.
- The lane marker in a tunnel is stained with oil, etc.
- The lane suddenly disappears such as at the intersection.

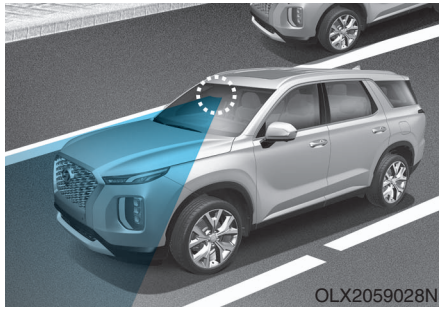
When external condition is intervened

- The brightness outside changes suddenly such as when entering or exiting a tunnel, or when passing under a bridge.
- The brightness outside is too low such as when the headlamps are not on at night or the vehicle is going through a tunnel.
- There is a boundary structure in the roadway such as a concrete barrier, guardrail and reflector post that is inadvertently being detected by the camera.
- When light coming from a street light or an oncoming vehicle is reflected on a wet road surface such as a puddle in the road.
- The field of view in front is obstructed by sun glare.
- There is not enough distance between you and the vehicle in front to be able to detect the lane marker or the vehicle ahead is driving on the lane marker.
- Driving on a steep grade, over a hill, or when driving on a curved road.
- The adverse road conditions cause excessive vehicle vibrations while driving.
- The surrounding of the inside rear view mirror temperature is high due to direct sunlight, etc.
- The sensor recognition changes suddenly when passing over a speed bump or driving on a steep up/down or right/left grade

When front visibility is poor

- The windshield or the camera lens is covered with dirt or debris.
- The windshield glass is fogged up; a clear view of the road is obstructed.
- Placing objects on the dashboard, etc.
- The sensor cannot detect the lane because of fog, heavy rain or snow.

LANE KEEPING ASSIST (LKA) SYSTEM (IF EQUIPPED)



The Lane Keeping Assist (LKA) system helps detect lane markers on the road with a front view camera at the front windshield, and assists the driver's steering to help keep the vehicle between lanes.

When the system detects the vehicle straying from its lane, it alerts the driver with a visual and audible warning, while applying a counter-steering torque, trying to help prevent the vehicle from moving out of its lane.

⚠ WARNING

The Lane Keeping Assist (LKA) system is not a substitute for safe driving practices, but a convenience function only. It is the responsibility of the driver to always be aware of the surroundings and steer the vehicle.

⚠ WARNING

Take the following precautions when using the Lane Keeping Assist (LKA) system:

- **Do not turn the steering wheel suddenly when the steering wheel is being assisted by the system.**
- **LKA system helps to prevent the driver from moving out of the lane unintentionally by assisting the driver's steering. However, the driver should not solely rely on the system but always pay attention on the steering wheel to stay in the lane.**
- **The operation of the LKA system can be canceled or not work properly according to road condition and surroundings. Always be cautious when driving.**
- **Do not disassemble the LKA system camera temporarily to tint the window or attach any types of coatings and accessories. If you disassemble the camera and assemble it again, take your vehicle to an authorized HYUNDAI dealer and have the system checked for calibration.**
- **When you replace the windshield glass, LKA system camera or related parts of the steering wheel, take your vehicle to an authorized HYUNDAI dealer and have the system checked for calibration.**

- **The system helps detect lane lines and controls the steering wheel by a camera, therefore, if the lane lines are hard to detect, the system may not work properly.**

  Please refer to "Limitations of the System".
- **Do not remove or damage the related parts of LKA system.**
- **You may not hear a warning sound of LKA system if the audio volume is high.**
- **If any other warning sound such as seat belt warning chime is already generated, the Lane Keeping Assist (LKA) system warning may not sound.**
- **Do not place objects on the dashboard that reflects light such as mirrors, white paper, etc. This may prevent the LKA system from functioning properly.**

- **Always have your hands on the steering wheel while the LKA system is activated.**
- **The steering wheel is not continuously controlled so if the vehicle speed is at a higher speed when leaving a lane the vehicle may not be able to be controlled by the system. The driver must always follow the speed limit when using the system.**
- **If you attach objects to the steering wheel, the system may not assist steering or the hands off alarm may not work properly. When you tow a trailer, make sure that you turn off the LKA system.**
- **When you tow a trailer, make sure that you turn off the LKA system.**

LKA System Operation

To activate/deactivate the LKA system:

With the ignition switch in the ON position, press the LKA system switch located on the instrument panel on the left hand side of the steering wheel. The indicator in the cluster display will initially illuminate white. This indicates the LKA system is in the READY but NOT ENABLED state.

If you press the LKA button again, the indicator on the cluster display will go off.

Note that the vehicle speed must be at least approximately 64 km/h (40 mph) to ENABLE the LKA system. The indicator in the cluster will illuminate green.

The color of indicator will change depending on the condition of LKA system.

- White : Sensor does not detect lane markers or vehicle speed is under 64 km/h (40 mph).
- Green : Sensor detects lane markers and the system is able to control vehicle steering.

Information

If the indicator (white) is activated from the previous ignition cycle, the system will turn ON without any additional control. If you press the LKA switch again, the indicator on the cluster goes off.

LKA system operation

OLX2059058N

- To see the LKA system screen on the LCD display in the cluster, select Assist mode ( ). **For more details, refer to "LCD Display Modes" in chapter 3.**

■ Lane marker undetected ■ Lane marker detected

OLX2059058N/OLX2059059N

- If vehicle speed is over 64 km/h (40 mph) and the system detects lane markers, the color changes from gray to white.

• If your vehicle departs from the projected lane in front of you, the LKA system operates as follows:

■ Left lane marker

■ Right lane marker

OLX2059061N/OLX2059060N

1. A visual warning appears on the cluster LCD display. Either the left lane marker or the right lane marker in the cluster LCD display will blink depending on which direction the vehicle is veering. Also, the steering wheel will vibrate.
2. The LKA system will help control the vehicle's steering to prevent the vehicle from crossing the lane maker in below conditions.
   - Vehicle speed is over 64 km/h (40 mph)
   - When driving, the vehicle is located between both lanes normally.
   - The steering wheel is not turned suddenly.

When lanes are detected and all the conditions to activate the LKA system are satisfied, a LKA system indicator light ( ) will change from white to green. This indicates that the LKA system is in the ENABLED state and the steering wheel will be controlled.

Warning Light and Message

Keep hands on steering wheel

OLX2059062N

If the driver takes their hands off the steering wheel for several seconds while the LKA system is activated, the system will warn the driver.

Information

If the steering wheel is held very lightly, the message may still appear because the LKA system may not recognize that the driver has their hands on the wheel.

⚠ WARNING

The warning message may appear late according to road conditions. Therefore, always have your hands on the steering wheel while driving.

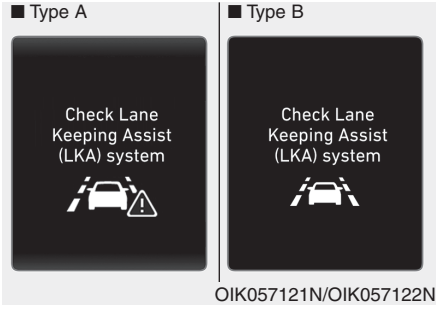
⚠ WARNING

- **The LKA system is a supplemental system only. It is the responsibility of the driver to safely steer the vehicle and to maintain it in its lane.**
- **Turn off the LKA system and drive without using the system in the following situations:**
  - **In bad weather**
  - **In bad road conditions**
  - **When the steering wheel needs to be controlled by the driver frequently.**

Information

- **Even though the steering is assisted by the system, the driver can still steer to control the steering wheel.**
- **The steering wheel may feel heavier when the steering wheel is assisted by the system than when it is not.**

Check Lane Keeping Assist (LKA) system



OIK057121N/OIK057122N

If there is a problem with the system a message will appear for a few seconds. If the problem continues the LKA system failure indicator will illuminate.

LKA system indicator

The LKA system indicator (yellow) will illuminate if the LKA system is not working properly. Have your vehicle checked by an authorized HYUNDAI dealer.

When there is a problem with the system do one of the following:

- Turn the system on after turning the engine off and on again.
- Check if the ignition switch is in the ON position.
- Check if the system is affected by the weather. (ex: fog, heavy rain, etc.)
- Check if there is foreign matter on the camera lens.

If the problem is not solved, have your vehicle checked by an authorized HYUNDAI dealer.

The LKA system will not be in the ENABLED state and/or the steering wheel will not be assisted when:

- The turn signal is turned on before changing a lane. If you change lanes without the turn signal on, the steering wheel might be controlled.
- The vehicle is not driven in the middle of the lane when the system is turned on or right after changing a lane.
- ESC (Electronic Stability Control) or VSM (Vehicle Stability Management) is activated.
- The vehicle is driven on a sharp curve.
- Vehicle speed is below 56 km/h (35 mph) and over 177 km/h (110 mph).
- The vehicle makes sharp lane changes.
- The vehicle brakes suddenly.
- The lane is very wide or narrow.
- There are more than two lane lines on the road. (e.g. construction area)
- Radius of a curve is too small.
- The vehicle is driven on a steep incline.
- The steering wheel is turned suddenly.
- The system may not operate for 15 seconds after the engine is started or the camera is initialized.

Limitations of the System

The LKA system may operate prematurely even if the vehicle does not depart from the intended lane, OR, the LKA system may not warn you if the vehicle leaves the intended lane under the following circumstances:

When the lane and road conditions are poor

- It is difficult to distinguish the lane marker from the road because the lane marker is covered with dust or sand.
- It is difficult to distinguish the color of the lane marker from the road.
- There are markings on the road surface that look like a lane marker that is inadvertently being detected by the camera.

- The lane marker is indistinct or damaged.
- The lane marker is merged or divided (e.g. tollgate).
- The lane number increases or decreases or the lane marker are crossing complicatedly.
- There are more than two lane markers on the road in front of you.
- The lane marker is very thick or thin.
- The lane is very wide or narrow.
- The lane marker ahead is not visible due to rain, snow, water on the road, damaged or stained road surface, or other factors.
- The shadow is on the lane marker by a median strip, trees, guardrail, noise barriers, etc.
- The lane markers are complicated or a structure substitutes for the lines such as a construction area.
- There are crosswalk signs or other symbols on the road.
- The lane marker in a tunnel is stained with oil, etc.
- The lane suddenly disappears such as at the intersection.

When external condition is intervened

- The brightness outside changes suddenly such as when entering or exiting a tunnel, or when passing under a bridge.
- The brightness outside is too low such as when the headlamps are not on at night or the vehicle is going through a tunnel.
- There is a boundary structure in the roadway such as a concrete barrier, guardrail and reflector post that is inadvertently being detected by the camera.
- When light coming from a street light or an oncoming vehicle is reflected on a wet road surface such as a puddle in the road.
- The field of view in front is obstructed by sun glare.
- There is not enough distance between you and the vehicle in front to be able to detect the lane marker or the vehicle ahead is driving on the lane marker.
- Driving on a steep grade, over a hill, or when driving on a curved road.
- The adverse road conditions cause excessive vehicle vibrations while driving.
- The surrounding of the inside rear view mirror temperature is high due to direct sunlight, etc.

When front visibility is poor

- The windshield or the camera lens is blocked with dirt or debris.
- The windshield glass is fogged up; a clear view of the road is obstructed.
- Placing objects on the dashboard, etc.
- The sensor cannot detect the lane because of fog, heavy rain or snow.

LKA System Function Change

The driver can change LKA to Lane Departure Warning from the LCD display. Go to the 'User Settings → Driver Assistance → Lane Safety → Lane Keeping Assist (LKA)/Lane Departure Warning (LDW)/Off'.

The system is automatically set to Lane Keeping Assist(LKA) if a function is not selected.

- Lane Keeping Assist

  Lane Keeping Assist guides the driver to help keep the vehicle within the lanes. It rarely controls the steering wheel, when the vehicle drives well inside the lanes. However, it starts to control the steering wheel, when the vehicle is about to deviate out of the lane.

- Lane Departure Warning

  Lane Departure Warning alerts the driver with a visual warning and a warning alarm when the system detects the vehicle departing the lane. The steering wheel will not be controlled.

- Off

  If you select 'off', the LKA system is deactivated.

DRIVER ATTENTION WARNING (DAW) SYSTEM (IF EQUIPPED)

The Driver Attention Warning (DAW) system is designed as a safety feature to help reduce drowsy or inattentive driving. The DAW displays a bar graph that is intended to represent the driver's attention and fatigue level while driving.

System Setting and Operation

System setting

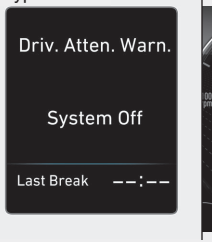
The Driver Attention Warning can be activated from the User Settings menu in the cluster LCD display by following the procedure below.

1. Set the ignition switch to the ON position.
2. Select 'User Settings → Driver Assistance → Driver Attention Warning' in the cluster LCD display.

The system stops operation when the setting is deactivated. However, if the engine is turned off then on again, the system maintains the previous state.

Driver's attention level

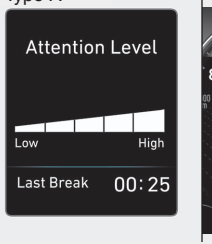
■ System off
- Type A



- Type B

OIK057129N/OLX2059113N

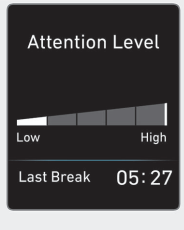
■ Attentive driving
- Type A



- Type B

OIK057130N/OLX2059114N

■ Inattentive driving
- Type A



- Type B

OIK057131N/OLX2059115N

- The driver can monitor his/her driving conditions on the cluster LCD display.

  The DAW screen will appear when you select the Assist mode tab ( ) on the LCD display if the system is activated. **For more details, refer to "LCD Display Modes" in chapter 3.**
- The driver's attention level is displayed on the scale of 1 to 5. The lower the number is, the more inattentive the driver is.
- The level decreases when the driver does not take a break for a certain period of time.
- The level increases when the driver attentively drives for a certain period of time.

- When the driver turns on the system while driving, it displays 'Last Break time' and level.

Take a break

OIK057132L

- The "Consider taking a break“ message appears on the cluster LCD display and a warning sounds to suggest that the driver take a break, when the driver’s attention level is below 1.
- The Driver Attention Warning (DAW) system will not suggest a break, when the total driving time is shorter than 10 minutes.

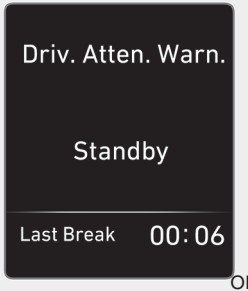
⚠ CAUTION

If any other warning sound such as seat belt warning chime is already generated, the Driver Attention Warning (DAW) system warning may not sound.

Resetting the System

- The last break time is set to 00:00 and the driver's attention level is set to 5 (very attentive) when the driver resets the Driver Attention Warning (DAW) system.
- The Driver Attention Warning (DAW) system resets in the following situations.
  - The engine is turned OFF.
  - The driver unfastens the seat belt and then opens the driver's door.
  - The vehicle is stopped for more than 10 minutes.
- The Driver Attention Warning (DAW) system operates again, when the driver restarts driving.

System Standby



OIK057133N

The Driver Attention Warning (DAW) system enters the ready status and displays the 'Standby' screen in the following situations.

- The system is unable to collect data to monitor the driver's driving conditions.
- Driving speed remains under 64 km/h (40 mph) or over 180 km/h (110 mph).

System Malfunction

OIK057134N

Check Driver Attention Warning (DAW) system

When the warning message appears, the system is not working properly. In this case, have the vehicle inspected by an authorized HYUNDAI dealer.

⚠ WARNING

- **The Driver Attention Warning system is not a substitute for safe driving practices, but a convenience function only. It is the responsibility of the driver to always drive cautiously to prevent unexpected and sudden situations from occurring. Pay attention to the road conditions at all times.**
- **The driver who feels fatigued should take a break, even though there is no break suggestion by the Driver Attention Warning system.**

i Information

The system may suggest a break according to the driver's driving pattern or habits even if the driver doesn't feel fatigue.

NOTICE

The Driver Attention Warning system utilizes the camera sensor on the front windshield for its operation. To keep the camera sensor in the best condition, you should observe the followings:

- NEVER install any accessories or stickers on the front windshield, or tint the front windshield.
- NEVER place any reflective objects (i.e. white paper, mirror) over the crash pad. Any light reflection may prevent the system from functioning properly.
- Pay extreme caution to keep the camera sensor dry.
- Never disassemble the camera assembly, or apply any impact on the camera assembly.

  If the sensor is forcibly moved out of proper alignment, the system may not operate correctly. Take your vehicle to an authorized HYUNDAI dealer and have the system checked for calibration.

⚠ CAUTION

The Driver Attention Warning (DAW) system may not provide alerts in the following situations:

- The lane detection performance is limited. (For more details, refer to "Lane Keeping Assist (LKA) system" in this chapter.)
- The vehicle is erratically driven or is abruptly turned for obstacle avoidance (e.g. construction area, other vehicles, fallen objects, bumpy road).
- Forward drivability of the vehicle is severely undermined (possibly due to wide variation in tire pressures, uneven tire wear-out, toe-in/toe-out alignment).
- The vehicle drives on a curvy road.
- The vehicle drives on a bumpy road.
- The vehicle drives through a windy area.
- The vehicle is controlled by the following driving assist systems:
  - Forward Collision-avoidance Assist (FCA)
  - Smart Cruise Control (SCC)
  - Lane Following Assist (LFA)
  - Lane Keeping Assist (LKA)
  - Blind-Spot Collision-Avoidance Assist (BCA)
  - Highway Driving Assist (HDA)

⚠ CAUTION

Playing the vehicle audio system at high volume may prevent occupants from hearing the Driver Attention Warning (DAW) system warning sounds.

HIGHWAY DRIVING ASSIST (HDA) SYSTEM (IF EQUIPPED)

The Highway Driving Assist (HDA) system helps keep the vehicle between lanes, maintain a distance with the vehicle ahead, and automatically adjusts the vehicle speed to the speed limit while driving on the highway.

⚠ WARNING

- **The Highway Driving Assist (HDA) system is not a substitute for safe driving practices, but a convenience function. It is the responsibility of the driver to always be aware of the surroundings and drive safely.**
- **The Highway Driving Assist (HDA) system relies entirely on the road information provided by the navigation system. It is the responsibility of the driver to follow traffic laws and avoid accidents.**
- **For your safety, please read the owner's manual before using the system.**

i Information

- **The Highway Driving Assist (HDA) system is available only on controlled access road of certain highways.**

  ❋ Controlled access road indicates roads with limited entrances and exits that allow uninterrupted high speed traffic flow. Only passenger cars and motorcycles are allowed on controlled access roads.

Available highway (Controlled access road)

USA	**Interstate Highway**
Canada	**Select Provincial and Territorial Highways**

- **Additional highways may be expanded by navigation updates.**

System Setting and Operation

System setting

- With the Engine Start/Stop button in the ON or START position, the Highway Driving Assist can be activated by selecting 'All menus → Setup → Vehicle → Driver Assistance → Highway Driving Assist' from the Settings menu in the infotainment system screen. Deselect the setting to turn off the system.
- If the engine is turned off then on again, the system maintains the last setting.

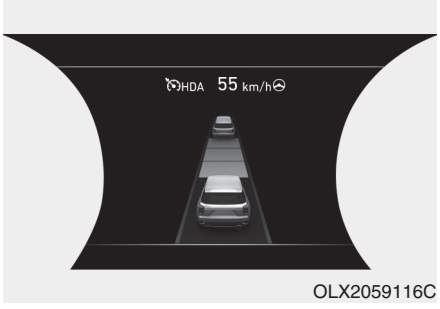
Operating conditions

Select 'Highway Driving Assist' from the Settings menu in the infotainment system screen and satisfy the following conditions for the system to operate.

- Driving on the highway main line
- Smart Cruise Control is operating
  - If the Smart Cruise Control is in the READY state the Highway Driving Assist will be in the READY state. The HDA indicator on the cluster will illuminate white.
- Vehicle speed is under 153 km/h (95 mph)

If all the mentioned conditions are satisfied, the system is ENABLED and the HDA indicator on the cluster will illuminate green.

Steering wheel control



OLX2059116C

Steering control

If the vehicle detects both lane markers (lane color white), the indicator light will change from white to green. This indicates that the steering wheel is being controlled.

OLX2059117C

Temporary deactivation

The indicator light changes from green to white when the steering wheel control is temporarily deactivated. Even if the steering wheel is not controlled, the distance between the vehicle ahead will be maintained.

Speed setting

OLX2059118C

Automatic speed setting mode

The system enters the automatic speed setting mode when:

1. The operating conditions are satisfied
   - HDA indicator will illuminate green
2. The Smart Cruise Control set speed and the highway speed limit matches

If the system changes to the automatic speed mode, the AUTO symbol will turn green and a chime will sound.

When the highway speed limit changes, the set speed automatically changes to the changed speed limit.

OLX2059125C

Manual speed setting mode

If the speed is set manually using the RES+ or SET- toggle switch on the steering wheel, the set speed on the cluster will turn white and the 'AUTO' symbol will disappear.

Warning Message

Hands-off warning

OHI058274L

Keep hands on steering wheel

If the driver takes their hands off the steering wheel for several seconds while the HDA system is activated, the system will warn the driver.

Information

If the steering wheel is held with a light grip, the message may appear because the HDA system may not recognize that the driver has their hands on the steering wheel.

WARNING

The warning message may appear late according to road conditions. Therefore, always have your hands on the steering wheel while driving.

OHI058296L

Highway Driving Assist (HDA) system canceled

If the driver still does not have their hands on the steering wheel after the message "Keep hands on steering wheel", the HDA system will be canceled. However, if the Smart Cruise Control is reactivated manually by the driver, the Highway Driving Assist System will reactivate.

To activate Smart Cruise control, refer to "Smart Cruise Control with Stop and Go" in chapter 5.

The HDA system will not be in the ENABLED state and/or the steering wheel will not be assisted when:

- The turn signal is turned on before changing a lane. If you change lanes without the turn signal on, the steering wheel might be controlled.
- The vehicle is not driven in the middle of the lane when the system is turned on or right after changing a lane.
- ESC (Electronic Stability Control) or VSM (Vehicle Stability Management) is activated.
- The vehicle is driven on a sharp curve.
- Vehicle speed is over 153 km/h (95 mph).
- The vehicle makes sharp lane changes.
- The vehicle brakes suddenly.
- Only one lane marker is detected.
- The lane is very wide or narrow.
- There are more than two lane markers on the road (e.g. construction area).
- Radius of a curve is too small.
- The vehicle is driven on a steep incline.
- The steering wheel is turned suddenly.

System malfunction

OHI049140N

Check Highway Driving Assist (HDA) system

If there is a problem with the system, a message will appear for a few seconds. If the problem continues, have the vehicle inspected by an authorized HYUNDAI dealer.

Information

- Highway Driving Assist is limited in other countries.
- Highway Driving Assist only operates based on the speed limits of the highway but it does not work with the speed cameras.
- The time gap could occur between the navigation speed warning and system operation.
- If the speed limits of speed cameras exceed the highway speed limits during the automatic speed setting mode, the navigation displays its own warning.
- The system is not designed to work on highways other than mentioned as a controlled access road. The system automatically cancels when you leave the highway.
- If there is a problem with Highway Driving Assist, the system cannot be activated in the infotainment system screen.
- If your vehicle is 500 m (1640 ft.) ahead and behind of an open tollgate, the system is automatically canceled. Also, it is converted to Smart Cruise Control automatically with a pop-up message on the navigation.
- In the automatic speed setting mode, the vehicle automatically accelerates or decelerates when the highway speed limit changes.
- If your vehicle speed exceeds 153 km/h (95 mph), Highway Driving Assist is automatically canceled. Also, it is converted to Smart Cruise Control automatically with a pop-up message on the navigation.
- If you enter a rest area on the highway or a IC/JC (intersection/junction) without a destination set, the system is canceled later than when the vehicle actually leaves the highway.

⚠ CAUTION

The Highway Driving Assist system may not function properly in the following situations:

- The navigation is not working properly.
- The navigation is not updated.
- The real-time GPS or map information provided has errors.
- The navigation is overloaded by performing functions such as route search, video playback, voice recognition, etc. are performing simultaneously.
- GPS signals are blocked in areas such as a tunnel.
- The driver goes off course or the route to the destination is changed or canceled by resetting the navigation.
- The vehicle enters a service station or rest area
- Android Auto or Car Play is operating.

- The navigation cannot detect the current vehicle position (ex: elevated roads including overpass adjacent to general roads or nearby roads exist in a parallel way).
- The navigation is being updated while driving.
- The navigation is being reset while driving.
- The road is slippery due to bad weather such as rain or snow.

Information

- For information's on vehicle to vehicle distance control and the front radar, refer to "Smart Cruise Control (Stop & Go)" in this chapter.
- For information's on steering control and distance control and the front camera, refer to "Lane Following Assist (LFA)" in this chapter.

Information

This device complies with Industry Canada RSS-210 standard.

Operation is subject to the following three conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.
3. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the device.

Information

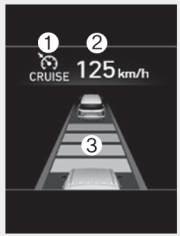
Radio frequency radiation exposure information:

This equipment complies with RSS radiation exposure limits set forth for an uncontrolled environment.

This equipment should be installed and operated with minimum distance of 20 cm (8 in.) between the radiator (antenna) and your body.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

SMART CRUISE CONTROL WITH STOP & GO SYSTEM (IF EQUIPPED)



OLX2058049

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

To see the SCC screen on the LCD display in the cluster, select Assist mode ( ). For more details, refer to "LCD Display Modes" in chapter 3.

The Smart Cruise Control system allows you to program the vehicle to help maintain the desired speed and minimum distance between the vehicle ahead.

The Smart Cruise Control system will automatically adjust your vehicle speed to maintain your programmed speed and following distance without requiring you to depress the accelerator or brake pedals.

⚠ WARNING

For your safety, please read the owner's manual before using the Smart Cruise Control system.

⚠ WARNING

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 distance to the vehicle ahead.

⚠ WARNING

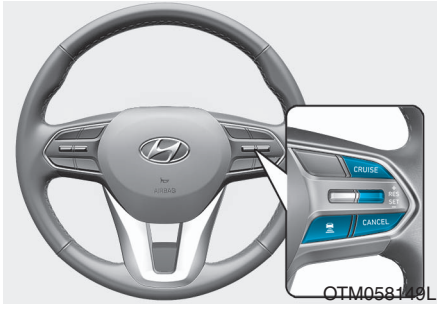
Take the following precautions :

- **Always set the vehicle speed under the speed limit.**
- **If the Smart Cruise Control is left on, (cruise indicator light in the instrument cluster is illuminated) the Smart Cruise Control can be activated unintentionally. Keep the Smart Cruise Control system off (cruise indicator light OFF) when the Smart Cruise Control is not in use, to avoid inadvertently setting a speed.**
- **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 vehicle at a constant speed.**
- **Do not use when:**
  - **Driving in heavy traffic or when traffic conditions make it difficult to drive at a constant speed**

- **Driving on rainy, icy, or snow-covered roads**
- **Driving on a steep downhill or uphill**
- **Driving in windy areas**
- **Driving in parking lots**
- **Driving near crash barriers**
- **Driving on a sharp curve**
- **Driving with limited view (possibly due to bad weather, such as fog, snow, rain or sandstorm)**
- **The vehicle's sensing ability decreases due to vehicle modification, resulting in a level difference of the vehicle's front and rear**

• **Unexpected situations may lead to possible accidents. Pay attention continuously to road conditions and driving even when the smart cruise control system is being operated.**

Smart Cruise Control Switch



OTM058140L

CRUISE: Turns cruise control system on or off.

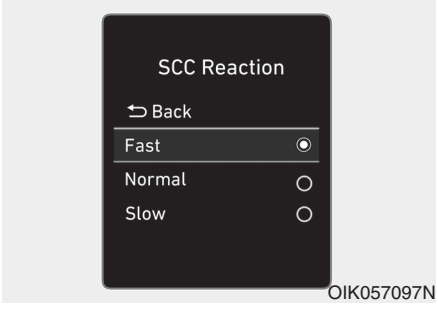
RES+: Resumes or increases cruise control speed.

SET-: Sets or decreases cruise control speed.

: Sets vehicle-to-vehicle distance.

CANCEL: Cancels cruise control operation.

Adjusting the Sensitivity of Smart Cruise Control



OIK057097N

The sensitivity of vehicle speed when following the front vehicle to maintain the set distance can be adjusted. Go to the 'User Settings → Driver Assistance → SCC Reaction → Fast/Normal/Slow' on the LCD display. You may select one of the three stages you prefer.

- Fast:

  Vehicle speed following the front vehicle to maintain the set distance is faster than normal speed.

- Normal:

  Vehicle speed following the front vehicle to maintain the set distance is normal.
- Slow:

  Vehicle speed following the front vehicle to maintain the set distance is slower than normal speed.

Information

The last selected speed sensitivity of the smart cruise control is remained in the system.

To Convert to Cruise Control Mode

The driver may choose to switch to use the conventional Cruise Control mode (speed only control function) by following these steps:

1. Push the CRUISE button on the steering wheel to turn the system on. The cruise (CRUISE) indicator will illuminate.
2. Push and hold the Vehicle-to-Vehicle Distance button for more than 2 seconds.
3. Choose between "Smart Cruise Control" and "Cruise Control".

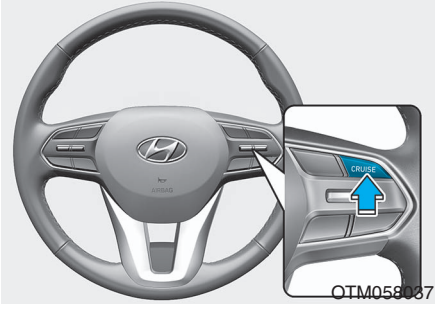
When the system is canceled using the CRUISE button or the CRUISE button is used after the engine is turned on, the Smart Cruise Control mode will turn on.

⚠ WARNING

When using the conventional Cruise Control mode, you must manually adjust the distance to other vehicles by depressing the brake pedal. The system does not automatically adjust the distance to vehicles in front of you.

Smart Cruise Control Speed

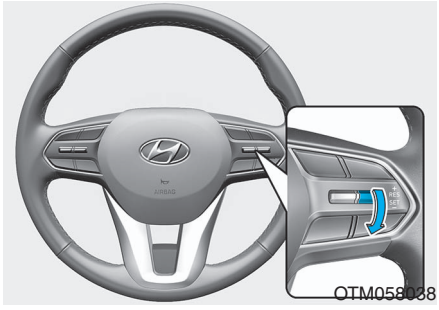
To set Smart Cruise Control speed



1. Push the CRUISE button on the steering wheel to turn the system on. The cruise indicator will illuminate.
2. Accelerate to the desired speed.

   The Smart Cruise Control speed can be set as follows:

   - 10 - 160 km/h (5 – 100 mph) : when there is no vehicle in front
   - 0 - 160 km/h (0 – 100 mph) : when there is a vehicle in front



3. Push the toggle switch down (SET-). The Set Speed and Vehicle-to-Vehicle Distance on the LCD display will illuminate.
4. Release the accelerator pedal. The desired speed will automatically be maintained.

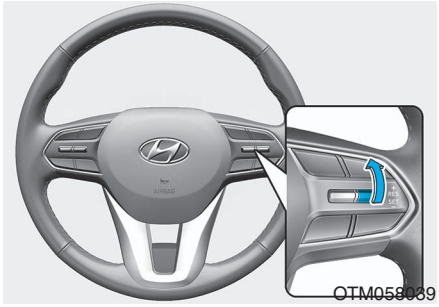
If there is a vehicle in front of you, the speed may decrease to maintain the distance to the vehicle ahead.

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

Information

- **Vehicle speed may decrease on an upward slope and increase on a downward slope.**
- **When you are setting the cruise control speed, with a vehicle in front and your vehicle speed is between 0 ~ 30 km/h (0 ~ 20 mph), the speed will set to 30 km/h (20 mph).**

To increase Smart Cruise Control set speed



Follow either of these procedures:

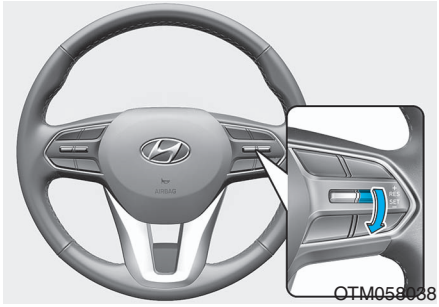
- Push the toggle switch up (RES+), and release it immediately. The cruising speed will increase by 1 km/h (1 mph) each time you move the toggle switch up in this manner.
- Push the toggle switch up (RES+), and hold it. Your vehicle set speed will increase by 10 km/h (5 mph). Release the toggle switch at the speed you want.

  You can set the speed to 160 km/h (100 mph).

⚠ CAUTION

Check the traffic and driving conditions before using the toggle switch. Driving speed may sharply increase, when you push up and hold the toggle switch.

To decrease the Smart Cruise Control set speed



Follow either of these procedures:

- Push the toggle switch down (SET-), and release it immediately. The cruising speed will decrease by 1 km/h (1 mph) each time you move the toggle switch down in this manner.
- Push the toggle switch down (SET-), and hold it. Your vehicle set speed will decrease by 10 km/h (5 mph). Release the toggle switch at the speed you want.
- You can set the speed to 30 km/h (20 mph).

To temporarily accelerate with the Smart Cruise Control on

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

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

If you push the toggle switch down (SET-) at increased speed, the cruising speed will be set again corresponding to the pedal position.

⚠ CAUTION

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 set speed will be temporarily canceled when:

Canceled manually

- Depressing the brake pedal.
- Pushing the CANCEL button located on the steering wheel.

The Smart Cruise Control turns off temporarily when the Set Speed and Vehicle-to-Vehicle Distance indicator on the cluster LCD display turns off.

The cruise indicator is illuminated continuously.

Canceled automatically

- The driver's door is opened.
- The vehicle is shifted to N (Neutral), R (Reverse) or P (Park).
- The EPB (Electronic Parking Brake) is applied.
- The vehicle speed is over 170 km/h (110 mph).
- The vehicle stops on a steep incline.
- The ESC (Electronic Stability Control), TCS (Traction Control System) or ABS is operating.
- The ESC is turned off.
- The sensor or the cover is dirty or blocked with foreign matter.
- The vehicle is stopped for a certain period of time.
- The vehicle stops and goes repeatedly for a long period of time.
- The accelerator pedal is continuously depressed for a long period of time.
- The engine stops or the engine performance is abnormal.
- Engine rpm is in the red zone.

- The driver starts driving by pushing the toggle switch up (RES+)/down (SET-) or depressing the accelerator pedal, after the vehicle is stopped by the Smart Cruise Control system with no other vehicle ahead.
- The driver starts driving by pushing the toggle switch up (RES+)/down (SET-) or depressing the accelerator pedal, after stopping the vehicle with a vehicle stopped far away in front.
- The Forward Collision-Avoidance Assist (FCA) is activated.
- The engine is stopped by ISG (Idle Stop & Go) (if equipped).

Each of these actions will cancel the Smart Cruise Control operation. The Set Speed and Vehicle-to-Vehicle Distance on the cluster 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- toggle switch is pushed.

Also, if the Smart Cruise Control is canceled automatically while the vehicle is at a standstill, EPB (Electronic Parking Brake) will be applied.

Information

If the Smart Cruise Control is canceled during a situation that is not described above, have the system checked by an authorized HYUNDAI dealer.

OIK057096N

Smart Cruise Control canceled

If the system is canceled, the warning chime will sound and a message will appear for a few seconds.

You must adjust the vehicle speed by depressing the accelerator or brake pedal according to the road and driving conditions.

Always check the road conditions. Do not rely on the warning chime.

To resume Smart Cruise Control set speed

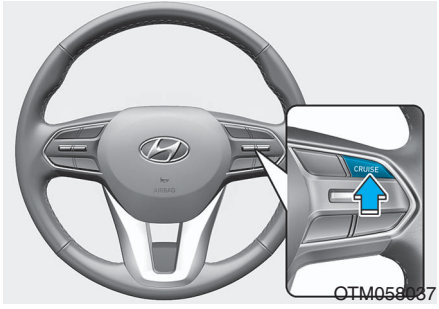
If any method other than the cruise toggle switch was used to cancel cruising speed and the system is still activated, the cruising speed will automatically resume when you push the toggle switch up (RES+) or down (SET-).

If you push the toggle switch up (RES+), the speed will resume to the recently set speed. However, if vehicle speed drops below 30 km/h (20 mph), it will resume when there is a vehicle in front of your vehicle.

⚠ WARNING

- **To avoid collisions, always be aware of the selected speed and vehicle to vehicle distance settings when activating your smart cruise control system.**
- **Always maintain sufficient braking distance and decelerate your vehicle by applying the brakes if necessary.**

To turn Cruise Control off



- Push the CRUISE button (the cruise indicator light will go off).

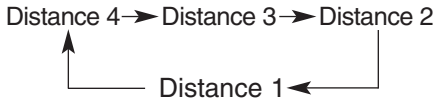
  If you wish not to use the cruise control system, always turn the system off by pushing the CRUISE button.

Smart Cruise Control Vehicle-to-Vehicle Distance

To set Vehicle-to-Vehicle Distance

When the Smart Cruise Control system is ON, you can set and maintain the distance from the vehicle ahead of you without pressing the accelerator or brake pedal.

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



For example, if you drive at 90 km/h (56 mph), the distance is maintained as follows:

Distance 4 - approximately 52.5 m (172 feet)

Distance 3 - approximately 40 m (130 feet)

Distance 2 - approximately 32.5 m (106 feet)

Distance 1 - approximately 25 m (82 feet)

Information

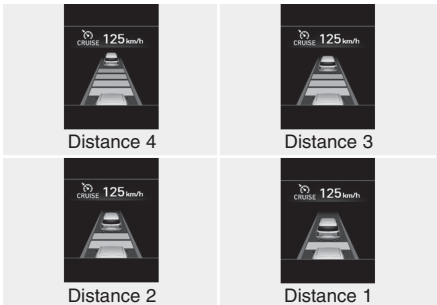
The distance is set to the last set distance when the system is used for the first time after starting the engine.

When the lane ahead is clear:

OLX2058050

The vehicle speed will maintain the set speed.

When there is a vehicle ahead of you in your lane:



OLX2058078/OLX2058053
OLX2058052/OLX2058051

- Your vehicle speed will slow down or speed up to maintain the selected distance.
- If the vehicle ahead speeds up, your vehicle will travel at a steady cruising speed after accelerating to the set speed.
- If distance from the front vehicle has changed due to accelerating or decelerating of the front vehicle, the distance on the cluster LCD display may change.

⚠ WARNING

OLX2059026N

When using the Smart Cruise Control system:

- **The warning message appears and warning chime sounds if the vehicle is unable to maintain the selected distance from the vehicle ahead.**
- **If the warning message appears and warning chime sounds, depress the brake pedal or use the steering wheel toggle switch to actively adjust the vehicle speed, and the distance to the vehicle ahead.**
- **Even if the warning message does not appear and warning chime does not sound, always pay attention to the driving conditions to prevent dangerous situations from occurring.**
- **Playing the vehicle audio system at high volume may prevent occupants from hearing the system warning sounds.**

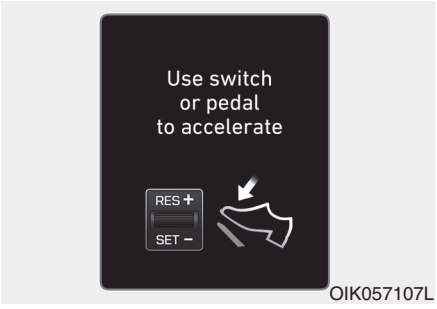
⚠ CAUTION

OLX2059054N

If the vehicle ahead (vehicle speed: less than 30 km/h (20 mph)) moves to the next lane, the warning chime will sound and a message "Watch for surrounding vehicles" will appear. Adjust your vehicle speed for vehicles or objects that can suddenly appear in front of you by depressing the brake pedal.

Always pay attention to the road condition ahead.

In traffic situation

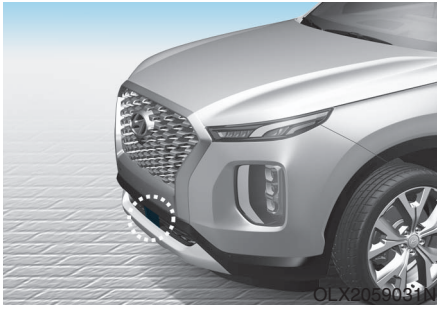


OIK057107L

Use switch or pedal to accelerate

- In traffic, your vehicle will stop if the vehicle ahead of you stops. Also, if the vehicle ahead of you starts moving, your vehicle will start as well. However, if the vehicle stops for more than 3 seconds, you must depress the accelerator pedal or push up the toggle switch (RES+) or push down the toggle switch (SET-) to start driving.
- If you push the smart cruise control toggle switch (RES+ or SET-) while Auto Hold and smart cruise control is operating the Auto Hold will be released regardless of accelerator pedal operation and the vehicle will start to move. The AUTO HOLD indicator changes from green to white.

Sensor to Detect Distance to the Vehicle Ahead


OLX2059031N

The Smart Cruise Control uses a sensor to detect 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 sensor clean.

Warning message

Smart Cruise Control disabled. Radar blocked

When the sensor lens cover is blocked with dirt, snow, or debris, the Smart Cruise Control system operation may stop temporarily. If this occurs, a warning message will appear on the cluster LCD display. Remove any dirt, snow, or debris and clean the radar sensor lens cover before operating the Smart Cruise Control system. The Smart Cruise Control system may not properly activate, if the radar is totally contaminated, or if any substance is not detected after turning on the engine (e.g. in an open terrain).

Information

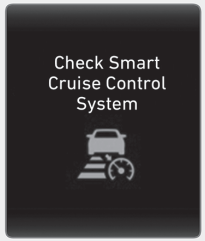
For the SCC operation is temporarily stopped if the radar is blocked, but you wish to use conventional cruise control mode (speed only control function), you must convert to the cruise control mode (refer to "To convert to Cruise Control mode" in the following page).

⚠ CAUTION

- **Do not apply license plate frame or foreign objects such as a bumper sticker or a bumper guard near the radar sensor. Doing so may adversely affect the sensing performance of the radar.**
- **Always keep the radar sensor and lens cover clean and free of dirt and debris.**
- **Use only a soft cloth to wash the vehicle. Do not spray pressurized water directly on the sensor or sensor cover.**
- **Be careful not to apply unnecessary force on the radar sensor or sensor cover. If the sensor is forcibly moved out of proper alignment, the Smart Cruise Control system may not operate correctly. In this case, a warning message may not be displayed. Have the vehicle inspected by an authorized HYUNDAI dealer.**
- **If the front bumper becomes damaged in the area around the radar sensor, the Smart Cruise Control System may not operate properly. Have the vehicle inspected by an authorized HYUNDAI dealer.**
- **Use only genuine HYUNDAI parts to repair or replace a damaged sensor or sensor cover. Do not apply paint to the sensor cover.**

■ Type A

■ Type B



OIK057109L/OIK057110L

Check Smart Cruise Control System

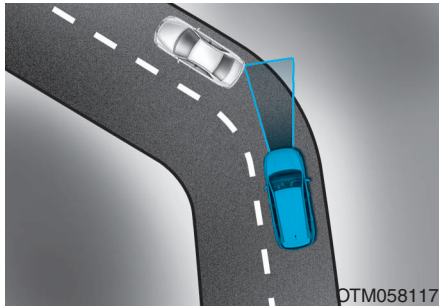
The message will appear when the vehicle to vehicle distance control system is not functioning normally.

Take your vehicle to an authorized HYUNDAI dealer and have the system checked.

Limitations of the System

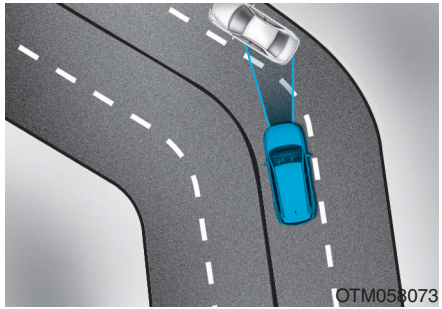
The Smart Cruise Control system may have limits to its ability to detect distance to the vehicle ahead due to road and traffic conditions.

On curves



OTM058117

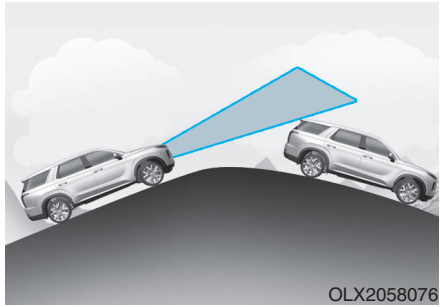
- The Smart Cruise Control system may not detect a moving vehicle in your lane, and then your vehicle could accelerate to the set speed. Also, the vehicle speed will decrease when the vehicle ahead is recognized suddenly.
- Select the appropriate set speed on curves and apply the brakes or accelerator pedal if necessary.



Your vehicle speed can be reduced due to a vehicle in the adjacent lane.

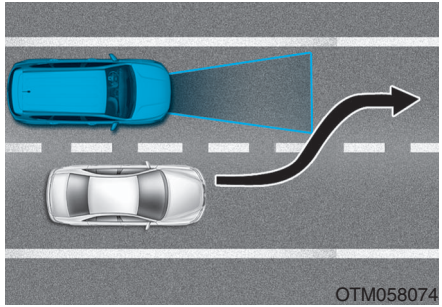
Apply the accelerator pedal and select the appropriate set speed. Check to be sure that the road conditions permit safe operation of the Smart Cruise Control.

On inclines



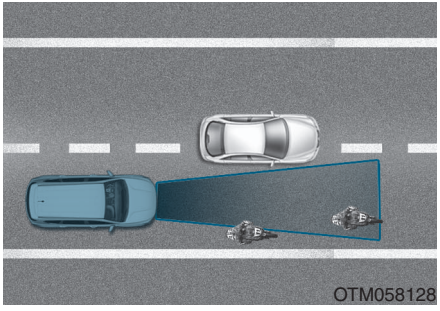
- During uphill or downhill driving, the Smart Cruise Control system may not detect a moving vehicle in your lane, and cause your vehicle to accelerate to the set speed. Also, the vehicle speed will rapidly decrease when the vehicle ahead is recognized suddenly.
- Select the appropriate set speed on inclines and apply the brake or accelerator pedal if necessary.

Lane changing



- 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 radar may not detect immediately when a vehicle cuts in suddenly. Always pay attention to the traffic, road and driving conditions.
- If a slower vehicle moves into your lane, your speed may decrease to maintain the distance to the vehicle ahead.
- If a faster vehicle which moves into your lane, your vehicle will accelerate to the set speed.

Detecting vehicles



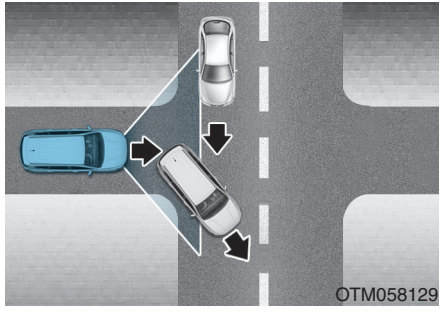
Some vehicles in your lane cannot be recognized by the sensor:

- 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

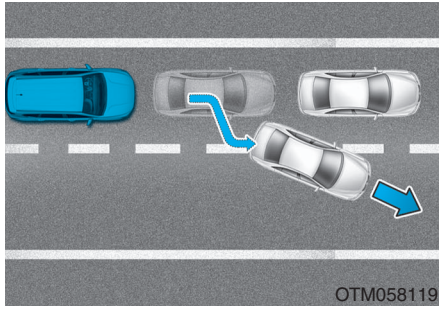
A vehicle ahead cannot be recognized correctly by the sensor if any of following occurs:

- When the vehicle is pointing upwards due to overloading in the luggage compartment
- While the steering wheel is operating
- When driving to one side of the lane
- When driving on narrow lanes or on curves

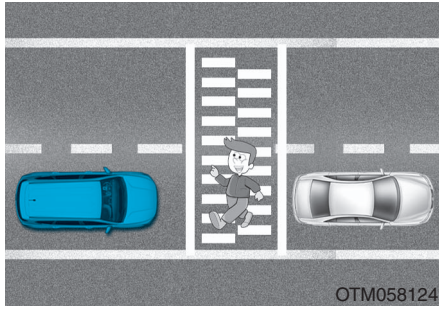
Apply the brake or accelerator pedal if necessary.



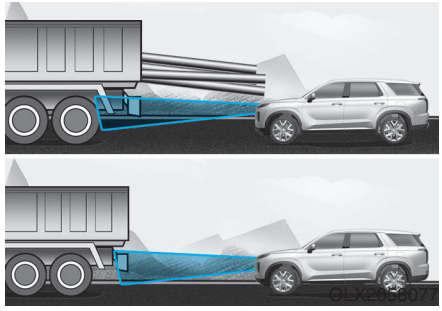
- Your vehicle may accelerate when a vehicle ahead of you disappears.
- When you are warned that the vehicle ahead of you is not detected, drive with caution.



- When driving in stop-and-go traffic, and a vehicle in front of you merges out of the lane, the system may not immediately detect the new vehicle that is now in front of you. In this case, you must maintain a safe braking distance, and if necessary, depress the brake pedal to reduce your driving speed in order to maintain a safe distance.



- 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 from the back of the vehicle.

⚠ WARNING

When using the Smart Cruise Control take the following precautions:

- If an emergency stop is necessary, you must apply the brakes. The smart cruise control system cannot guarantee the stop for every emergency situation.
- 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.
- Always maintain sufficient braking distance and decelerate your vehicle by applying the brakes if necessary.
- 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.
- Vehicles moving in front of you with a frequent lane change may cause a delay in the system's reaction or may cause the system to react to a vehicle actually in an adjacent lane. Always drive cautiously to prevent unexpected and sudden situations from occurring.
- Always be aware of the selected speed and vehicle to vehicle distance. The driver should not solely rely on the system but always pay attention to driving conditions and control your vehicle speed.
- The Smart Cruise Control system may not recognize complex driving situations so always pay attention to driving conditions and control your vehicle speed.
- The Smart Cruise Control system may recognize a pedestrian, bicycle, motorcycle, etc. as a vehicle. Always, look ahead cautiously to prevent unexpected and sudden situations from occurring.

Information

The Smart Cruise Control system may not operate temporarily due to:

- Electrical interference
- A modified suspension
- Differences of tire abrasion or tire pressure
- Installing different type of tires

Information

This device complies with Industry Canada RSS-210 standard.

Operation is subject to the following three conditions:

1. **This device may not cause harmful interference.**
2. **This device must accept any interference received, including interference that may cause undesired operation.**
3. **Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the device.**

Information

Radio frequency radiation exposure information:

This equipment complies with RSS radiation exposure limits set forth for an uncontrolled environment.

This equipment should be installed and operated with minimum distance of 20 cm (8 in.) between the radiator (antenna) and your body.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

LEADING VEHICLE DEPARTURE ALERT (IF EQUIPPED)

The Leading Vehicle Departure Alert system alerts the driver of the departure of the vehicle in front when the vehicle is stopped and the Smart Cruise Control (SCC) system is operating.

System Setting and Operation

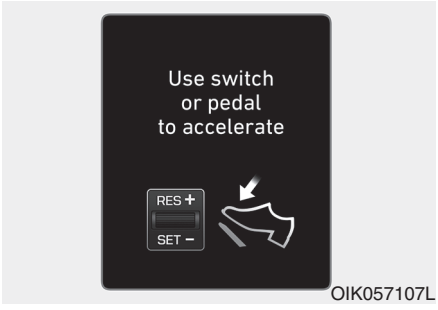
System setting

The Leading Vehicle Departure Alert can be activated from the User Settings menu in the cluster LCD display by following the procedure below.

1. Set the ignition switch to the ON position.
2. Select 'User Settings → Driver Assistance → Leading Vehicle Departure Alert' in the cluster LCD display.

The system stops operation when the setting is deactivated. However, if the engine is turned off then on again, the system maintains the previous state.

System standby



OIK057107L

Use switch or pedal to accelerate

While the Smart Cruise Control (SCC) system is operating, your vehicle stops behind the vehicle in front when it stops. The message shown above is displayed on the cluster within 3 seconds after the stop and the system will be in the standby position.

System operation

OTM058091L

Leading vehicle is driving away

If the driver does not take action for a certain period of time after the vehicle in front departs, the message shown above is displayed on the cluster.

The vehicle departs automatically if the accelerator pedal is depressed or RES + or SET - toggle switch is pushed up or down when there is a vehicle in front.

The Smart Cruise Control (SCC) system is deactivated if the accelerator pedal is depressed or RES + or SET - toggle switch is pushed up or down when there is no vehicle in front.

⚠ WARNING

Always check the front of the vehicle and road conditions before departure.

SPECIAL DRIVING CONDITIONS

Hazardous Driving Conditions

When hazardous driving elements are encountered such as water, snow, ice, mud and sand, take the below suggestions:

- Drive cautiously and keep a longer braking distance.
- Avoid abrupt braking or steering.
- When your vehicle is stuck in snow, mud, or sand, use second gear. Accelerate slowly to avoid unnecessary wheel spin.
- Put sand, rock salt or other non-slip materials under the wheels to provide additional traction while the vehicle becomes stuck in ice, snow, or mud.

⚠ WARNING

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

Rocking the Vehicle

If it is necessary to rock the vehicle to free it from snow, sand, or mud, first turn the steering wheel right and left to clear the area around your front wheels. Then, shift back and forth between R (Reverse) and a forward gear.

Try to avoid spinning the wheels, and do not race the engine.

To prevent transmission wear, wait until the wheels stop spinning before shifting gears. Release the accelerator pedal while shifting, and press lightly on the accelerator pedal while the transmission is in gear. Slowly spinning the wheels in forward and reverse directions causes a rocking motion that may free the vehicle.

⚠ WARNING

If the vehicle is stuck and excessive wheel spin occurs, the temperature in the tires can increase very quickly. If the tires become damaged, a tire blow out or tire explosion can occur. This condition is dangerous - you and others may be injured. Do not attempt this procedure if people or objects are anywhere near the vehicle.

If you attempt to free the vehicle, the vehicle can overheat quickly, possibly causing an engine compartment fire or other damage. Try to avoid spinning the wheels as much as possible to prevent overheating of either the tires or the engine. DO NOT allow the vehicle to spin the wheels above 56 km/h (35 mph).

Information

The ESC system must be turned OFF before rocking the vehicle.

NOTICE

If you are still stuck after rocking the vehicle a few times, have the vehicle pulled out by a tow vehicle to avoid engine overheating, possible damage to the transmission, and tire damage. See "Towing" in chapter 6.

Smooth Cornering

Avoid braking or gear changing in corners, especially when roads are wet. Ideally, corners should always be taken under gentle acceleration.

Driving at Night

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 headlamps.
- Keep your headlamps clean and properly aimed. Dirty or improperly aimed headlamps will make it much more difficult to see at night.
- Avoid staring directly at the headlamps of oncoming vehicles. You could be temporarily blinded, and it will take several seconds for your eyes to readjust to the darkness.

Driving in the Rain

Rain and wet roads can make driving dangerous. Here are a few things to consider when driving in the rain or on slick pavement:

- Slow down and allow extra following distance. A heavy rainfall makes it harder to see and increases the distance needed to stop your vehicle.
- Turn OFF your Cruise Control.
- Replace your windshield wiper blades when they show signs of streaking or missing areas on the windshield.
- Tires should be properly maintained with at least 1.6 mm (2/32 inch) of tread depth. If your tires do not have enough tread, making a quick stop on wet pavement can cause a skid and possibly lead to an accident. **See "Tire replacement" in chapter 7**.
- Turn on your headlamps 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 your brakes may be wet, apply them lightly while driving until normal braking operation returns.

Hydroplaning

If the road is wet enough and you are going fast enough, your vehicle may have little or no contact with the road surface and actually ride on the water. The best advice is SLOW DOWN when the road is wet.

The risk of hydroplaning increases as the depth of tire tread decreases, refer to "Tire replacement" in chapter 7.

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 reduced.

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

Highway Driving

Tires

Adjust the tire inflation, as specified. Under-inflation may overheat or damage the tires.

Do not install worn-out or damaged tires, which may reduce traction or adversely affect vehicle handling. This could lead to sudden tire failure that may cause loss of vehicle control resulting in an accident.

Information

Never over-inflate your tires above the maximum inflation pressure, as specified on your tires.

Fuel, engine coolant and engine oil

Driving at higher speeds on the highway consumes more fuel and is less efficient than driving at a slower, more moderate speed. Maintain a moderate speed in order to conserve fuel when driving on the highway.

Be sure to check both the engine coolant level and the engine oil before driving.

Drive belt

A loose or damaged drive belt may overheat the engine.

Reducing the Risk of a Rollover

Your 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. The specific design characteristics give them a higher center of gravity than ordinary vehicles making them more likely to roll over if you make abrupt turns. Utility vehicles have a significantly higher rollover rate than other types of vehicles. Due to this risk, driver and passengers are strongly recommended to buckle their seat belts. In a rollover crash, an unbelted person is significantly more likely to die than a person wearing a seat belt.

There are steps that a driver can make to reduce the risk of a rollover. If at all possible, avoid sharp turns or abrupt maneuvers, do not load your vehicle with heavy cargo on the roof, and never modify your vehicle in any way.

⚠ WARNING

Utility vehicles have a significantly higher rollover rate than other types of vehicles. To prevent rollovers or loss of control:

- **Take corners at slower speeds than you would with a passenger vehicle.**
- **Avoid sharp turns and abrupt maneuvers.**
- **Do not modify your vehicle in any way that you would raise the center of gravity.**
- **Keep tires properly inflated.**
- **Do not carry heavy cargo on the roof.**

WINTER DRIVING

The severe weather conditions of winter quickly wear out tires and cause other problems. To minimize winter driving problems, you should take the following suggestions:

Snow or Icy Conditions

You need to keep sufficient distance between your vehicle and the vehicle in front of you.

Apply the brakes gently. 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 the vehicle to skid.

To drive your vehicle in deep snow, it may be necessary to use snow tires.

Always carry emergency equipment. Some of the items you may want to carry include, tow straps or chains, a flashlight, emergency flares, sand, a shovel, jumper cables, a window scraper, gloves, ground cloth, coveralls, a blanket, etc.

Snow tires

⚠ WARNING

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

If you mount snow tires on your vehicle, make sure to use 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. The traction provided by snow tires on dry roads may not be as high as your vehicle's original equipment tires. Check with the tire dealer for maximum speed recommendations.

i Information

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

Winter Precautions

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 chapter 7. Before winter, have your coolant tested to assure that its freezing point is sufficient for the temperatures anticipated during the winter.

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 chapter 8 for recommendations. If you aren't sure what weight oil you should use, consult an authorized HYUNDAI dealer.

Check battery and cables

Winter puts additional burdens on the battery system. Visually inspect the battery and cables as described in chapter 7. The level of charge in your battery can be checked by an authorized HYUNDAI dealer or a service station.

Check spark plugs and ignition system

Inspect your spark plugs as described in chapter 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.

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 HYUNDAI dealer and most auto parts outlets. Do not use engine coolant or other types of anti-freeze as these may damage the paint finish.

Do not 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 gear in P and block the rear wheels so the car cannot roll. Then release the parking brake.

Do not let ice and snow accumulate underneath

Under some conditions, snow and ice can build up under the fenders and interfere with the steering. When driving in severe winter conditions where this may happen, you should periodically check underneath the car to be sure the movement of the front wheels and the steering components is not obstructed.

Don't place foreign objects or materials in the engine compartment

Placement of foreign object or materials which prevent cooling of the engine, in the engine compartment, may cause a failure or combustion. The manufacturer is not responsible for the damage caused by such placement.

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.

TRAILER TOWING

If you are considering to tow with your vehicle, you should first your country's legal requirements. As laws vary the requirements for towing trailers, vehicles, or other types of vehicles or apparatus may differ. Ask an authorized HYUNDAI dealer for further details before towing.

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. Damage to your vehicle caused by improper trailer towing is not covered by your vehicle manufacturer's warranty.

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.

⚠ WARNING

Take the following precautions:

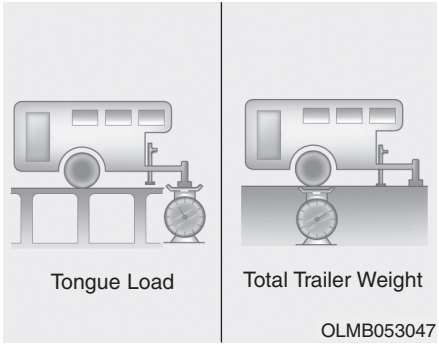
- **If you don't use the correct towing equipment, or if you drive improperly while towing, you can lose control of the vehicle when pulling a trailer. For example, if the trailer is too heavy, the braking performance may be reduced. You and your passengers could be seriously or fatally injured. Pull a trailer only if you have followed all the steps in this section.**
- **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.**
- **When you tow a trailer, make sure to turn off the Idle Stop and Go system.**

If you decide to pull a trailer

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

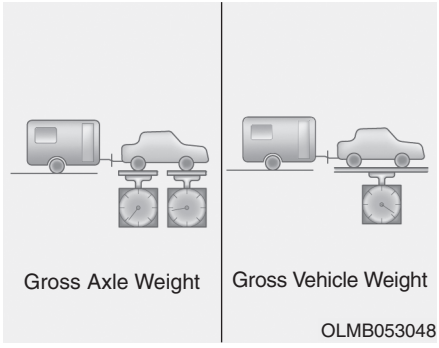
- Consider using a sway control. You can ask a trailer hitch dealer about sway control.
- Do not do any towing with your vehicle during its first 2,000 km (1,200 miles) in order to allow the engine to properly break in. Failure to heed this caution may result in serious engine or transmission damage.
- When towing a trailer, be sure to consult an authorized HYUNDAI dealer for further information on additional requirements such as a towing kit, etc.
- Always drive your vehicle at a moderate speed (less than 100 km/h (60 mph)) or posted towing speed limit.
- On a long uphill grade, do not exceed 70 km/h (45 mph) or the posted towing speed limit, whichever is lower.
- Carefully observe the weight and load limits provided in the following pages.

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.

Tongue load



The tongue load is an important weight to measure because it affects the total Gross Vehicle Weight (GVW) of your vehicle. The trailer tongue should weigh a maximum of 10% of the total loaded trailer weight, within the limits of the maximum trailer tongue load permissible.

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

Take the following precautions:

- **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.**

Reference weight and distance when towing a trailer

kg (lbs)

Item		7 seater	8 seater
Maximum trailer weight	Without brake system	750 (1,653)	750 (1,653)
	With brake system	2,267 (5,000)	2,267 (5,000)
Maximum permissible static vertical load on the coupling device		500 (227)	500 (227)

Trailer towing equipment

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:

- 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.
- A HYUNDAI trailer hitch accessory is available at an authorized HYUNDAI 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 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 federal and/or local regulations and that it is properly installed and operating correctly.

If your trailer weighs more than the maximum trailer weight without trailer brakes loaded, then it needs its own brakes and they must be adequate. 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 your vehicle's brake system. Trailer brakes must be applied separately from your vehicle's brake system.

⚠ WARNING

Do not use a trailer with its own brakes unless you are absolutely certain that you have properly set up the brake system. 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 longer and not nearly as responsive as your vehicle is by itself.

Before you start, check the trailer hitch and platform, safety chains, electrical connector(s), lights, tires and brakes.

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

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 will 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.

Backing up

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

Making turns

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

Turn signals

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

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

⚠ WARNING

Do not connect a trailer lighting system directly to your vehicle's lighting system. Use an approved trailer wiring harness. Failure to do so could result in damage to the vehicle electrical system and/or personal injury. Consult an authorized HYUNDAI dealer for assistance.

Driving on hills

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 overheated and may not 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 transmission overheating.

If your trailer weighs more than the maximum trailer weight without trailer brakes, 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 transmission.

NOTICE

To prevent engine and/or transmission overheating:

- **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 towards "H" (HOT), pull over and stop as soon as it is safe to do so, and allow the engine to idle until it cools down. You may proceed once the engine has cooled sufficiently.**
- **When towing a trailer, your vehicle speed may be much slower than the general flow of traffic, especially when climbing an uphill grade. Use the right hand lane when towing a trailer on an uphill grade. Choose your vehicle speed according to the maximum posted speed limit for vehicles with trailers, the steepness of the grade, and your trailer weight.**

Parking on hills

Generally, if you have a trailer attached to your vehicle, you should not park your vehicle on a hill.

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

1. Pull the vehicle into the parking area.

   Turn the steering wheel in the direction of the curb (right if headed down hill, left if headed up hill).
2. Shift the vehicle to P (Park).
3. Set the parking brake and shut off the vehicle.
4. Place wheel chocks under the trailer wheels on the down hill side of the wheels.

5. Start the vehicle, apply 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 and parking brakes.
7. Move the shift lever to P (Park).
8. Shut off the vehicle and release the vehicle brakes but leave the parking brake set.

⚠ WARNING

- **Do not get out of the vehicle without the parking brake firmly set. If you have left the engine running, the vehicle can move suddenly. You and others could be seriously or fatally injured.**
- **Do not apply the accelerator pedal to hold the vehicle on an uphill.**

Driving the vehicle after it has been parked on a hill

1. With the gear shift lever in P (Park), apply the brakes and hold the brake pedal down while performing the following:
   - 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 transmission fluid, axle lubricant and cooling system fluid. Brake condition is another important item to frequently check. If you're trailering, it's a good idea to review these items before you start your trip. Don't forget to also maintain your trailer and hitch. Follow the maintenance schedule that accompanied your trailer and check it periodically. Preferably, inspect the vehicle and trailer at the start of each day's driving. Inspect the hitch mounting to make sure the hitch is properly secured to the vehicle. Inspect the trailer electrical wiring to make sure brake lights, turn signal lights, running lights, and hazard lights are working properly.

NOTICE

To prevent vehicle damage:

- **Due to higher load during trailer usage, overheating might occur on hot days or during uphill driving. If the coolant gauge indicates over-heating, switch off the air conditioner and stop the vehicle in a safe area to cool down the engine.**
- **When towing check the automatic transmission fluid more frequently.**

VEHICLE LOAD LIMIT

Two labels on your driver's door sill show how much weight your vehicle was designed to carry: the Tire and Loading Information Label and the Certification Label.

Before loading your vehicle, familiarize yourself with the following terms for determining your vehicle's weight ratings, from the vehicle's specifications and the Certification Label:

Base Curb Weight

This is the weight of the vehicle including a full tank of fuel and all standard equipment. It does not include passengers, cargo, or optional equipment.

Vehicle Curb Weight

This is the weight of your new vehicle when you picked it up from your dealer plus any aftermarket equipment.

Cargo Weight

This figure includes all weight added to the Base Curb Weight, including cargo and optional equipment.

GAW (Gross Axle Weight)

This is the total weight placed on each axle (front and rear) - including vehicle curb weight and all payload.

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)

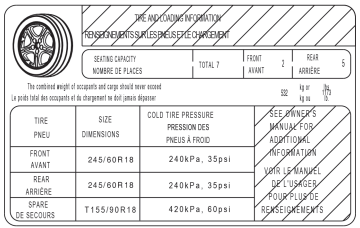
This is the Base Curb Weight plus actual Cargo Weight plus passengers.

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 located on the driver’s door sill.

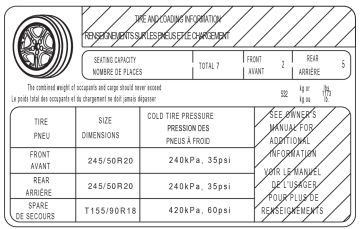
Tire Loading Information Label

■ Type A



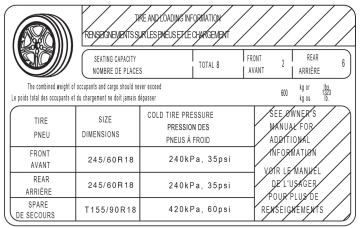
OLX2079056N

■ Type B



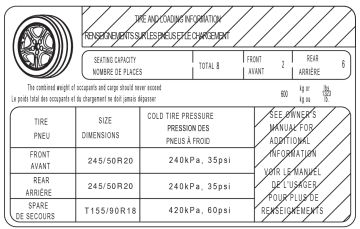
OLX2079057N

■ Type C



OLX2079058N

■ Type D



OLX2079059N

The label located on the driver's door sill gives the original tire size, cold tire pressures recommended for your vehicle, the number of people that can be in your vehicle and vehicle capacity weight.

Vehicle capacity weight

1. 7 persons : 532 kg (1173 lbs.)
2. 8 persons : 600 kg (1323 lbs.)

Vehicle capacity weight is the maximum combined weight of occupants and cargo. If your vehicle is equipped with a trailer, the combined weight includes the tongue load.

Seating capacity

1. Total : 7 persons
   (Front seat : 2 persons,
   Rear seat : 5 persons)
2. Total : 8 persons
   (Front seat : 2 persons,
   Rear seat : 6 persons)

Seating capacity is the maximum number of occupants including a driver, your vehicle may carry. However, the seating capacity may be reduced based upon the weight of all of the occupants, and the weight of the cargo being carried or towed. Do not overload the vehicle as there is a limit to the total weight, or load limit including occupants and cargo, the vehicle can carry.

Cargo capacity

The cargo capacity of your vehicle will increase or decrease depending on the weight and the number of occupants and the tongue load, if your vehicle is equipped with a trailer.

Steps for determining correct load limit

1. Locate the statement "The combined weight of occupants and cargo should never exceed XXX kg or XXX lbs." on your vehicle's placard.
2. Determine the combined weight of the driver and passengers that will be riding in your vehicle.
3. Subtract the combined weight of the driver and passengers from XXX kg or XXX lbs.
4. The resulting figure equals the available amount of cargo and luggage load capacity. For example, if the "XXX" amount equals 635 kg (1400 lbs.) and there will be five 68 kg (150 lb.) passengers in your vehicle, the amount of available cargo and luggage load capacity is 295 kg (650 lbs.) (635 - 340 (5 x 68) = 295 kg or (1400 - 750 (5 x 150) = 650 lbs.))
5. Determine the combined weight of luggage and cargo being loaded on the vehicle. That weight may not safely exceed the available cargo and luggage load capacity calculated in Step 4.
6. If your vehicle will be towing a trailer, load from your trailer will be transferred to your vehicle. Consult this manual to determine how this reduces the available cargo and luggage load capacity of your vehicle.

⚠ WARNING

Do not overload the vehicle as there is a limit to the total weight, or load limit, including occupants and cargo, the vehicle can carry. Overloading can shorten the life of the vehicle. If the GVWR or the GAWR is exceeded, parts on the vehicle can break, and it can change the handling of your vehicle. These could cause you to lose control and result in an accident.

Example 1	Vehicle Capacity	≥		+	
	Maximum Load (635 kg) (1400 lbs.)		Passenger Weight (68 kg × 2 = 136 kg) (150 lbs. × 2 = 300 lbs.)		Cargo Weight (499 kg) (1100 lbs.)
Example 2	Vehicle Capacity	≥		+	
	Maximum Load (635 kg) (1400 lbs.)		Passenger Weight (68 kg × 5 = 340 kg) (150 lbs. × 5 = 750 lbs.)		Cargo Weight (295 kg) (650 lbs.)
Example 3	Vehicle Capacity	≥		+	
	Maximum Load (635 kg) (1400 lbs.)		Passenger Weight (78 kg × 5 = 390 kg) (172 lbs. × 5 = 860 lbs.)		Cargo Weight (245 kg) (540 lbs.)

Certification label

The certification label is located on the driver's door sill at the center pillar and shows the maximum allowable weight of the fully loaded vehicle. This is called the GVWR (Gross Vehicle Weight Rating). The GVWR includes the weight of the vehicle, all occupants, fuel and cargo.

This label also tells you the maximum weight that can be supported by the front and rear axles, called Gross Axle Weight Rating (GAWR).

The total weight of the vehicle, including all occupants, accessories, cargo, and trailer tongue load must not exceed the Gross Vehicle Weight Rating (GVWR) or the Gross Axle Weight Rating (GAWR). To find out the actual loads on your front and rear axles, you need to go to a weigh station and weigh your vehicle. Be sure to spread out your load equally on both sides of the centerline.

⚠ WARNING

Overloading

- **Never exceed the GVWR for your vehicle, the GAWR for either the front or rear axle and vehicle capacity weight. Exceeding these ratings can affect your vehicle's handling and braking ability, and cause an accident.**
- **Do not overload your vehicle. Overloading your vehicle can cause heat buildup in your vehicle's tires and possible tire failure, increased stopping distances and poor vehicle handling-all of which may result in a crash.**

NOTICE

Overloading your vehicle may cause damage. Repairs would not be covered by your warranty. Do not overload your vehicle.

⚠ WARNING

If you carry items inside your vehicle (e.g., suitcases, tools, packages, or anything else), they are moving as fast as the vehicle. If you have to stop or turn quickly, or if there is a crash, the items will keep going and can cause an injury if they strike the driver or a passenger.

- **Put items in the cargo area of your vehicle. Try to spread the weight evenly.**
- **Do not stack items, like suitcases, inside the vehicle above the tops of the seats.**
- **Do not leave an unsecured child restraint in your vehicle.**
- **When you carry something inside the vehicle, secure it.**