
# XT4
# Owner's Manual

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# Contents

# Introduction



The names, logos, emblems, slogans, vehicle model names, and vehicle body designs appearing in this manual including, but not limited to, GM, the GM logo, CADILLAC, the CADILLAC Emblem, and XT*4* are trademarks and/or service marks of General Motors LLC, its subsidiaries, affiliates, or licensors.

This manual describes features that may or may not be on the vehicle because of optional equipment that was not purchased on the vehicle, model variants, country specifications, features/applications that may not be available in your region, or changes subsequent to the printing of this owner's manual.

Refer to the purchase documentation relating to your specific vehicle to confirm the features.

Keep this manual in the vehicle for quick reference.

## Danger, Warning, and Caution

Warning messages found on vehicle labels and in this manual describe hazards and what to do to avoid or reduce them.

**⚠ Danger**

Danger indicates a hazard with a high level of risk which will result in serious injury or death.

**⚠ Warning**

Warning indicates a hazard that could result in injury or death.

**Caution**

Caution indicates a hazard that could result in property or vehicle damage.

A circle with a slash through it is a safety symbol which means “Do not,” “Do not do this,” or “Do not let this happen.”

## Symbols

The vehicle has components and labels that use symbols instead of text. Symbols are shown along with the text describing the operation or information relating to a specific component, control, message, gauge, or indicator.

Litho in U.S.A.
Part No. DX4A0LSE2005EN

: Shown when the owner's manual has additional instructions or information.

: Shown when the service manual has additional instructions or information.

: Shown when there is more information on another page — "see page."

### Vehicle Symbol Chart

Here are some additional symbols that may be found on the vehicle and what they mean. See the features in this manual for information.

: Air Conditioning System

: Air Conditioning Refrigerant Oil

: Airbag Readiness Light

: Antilock Brake System (ABS)

: Brake System Warning Light

: Dispose of Used Components Properly

: Do Not Apply High Pressure Water

: Engine Coolant Temperature

: Flame/Fire Prohibited

: Flammable

: Forward Collision Alert

: Fuse Block Cover Lock Location

: Fuses

: ISOFIX/LATCH System Child Restraints

: Keep Fuse Block Covers Properly Installed

: Lane Change Alert

: Lane Departure Warning

: Lane Keep Assist

: Malfunction Indicator Lamp

: Oil Pressure

: Park Assist

: Pedestrian Ahead Indicator

: Power

: Rear Cross Traffic Alert

: Registered Technician

: Remote Vehicle Start

: Seat Belt Reminders

: Side Blind Zone Alert

: Stop/Start

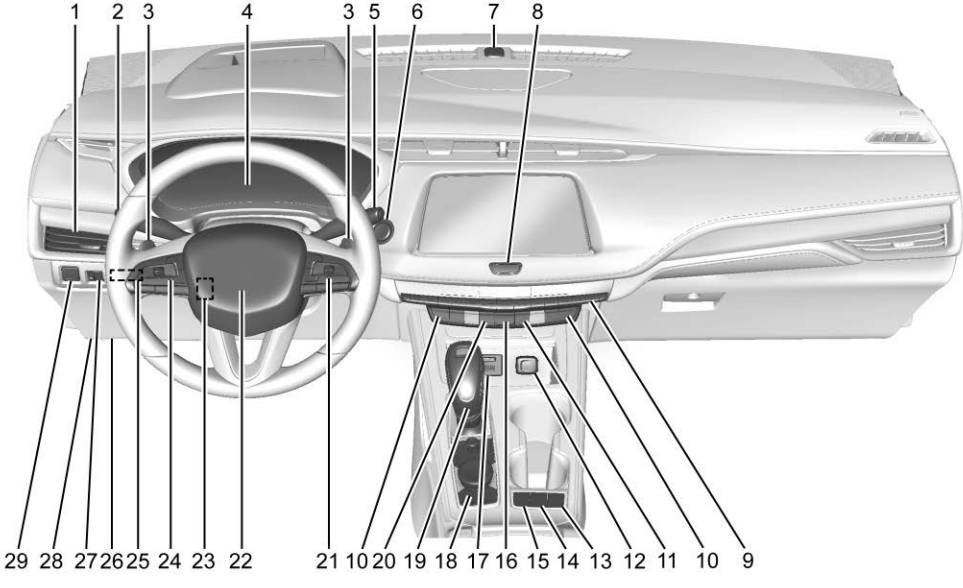
: Tyre Pressure Monitor

: Traction Control/StabiliTrak/ Electronic Stability Control (ESC)

: Under Pressure

: Vehicle Ahead Indicator

## Instrument Panel Overview



1. *Air Vents* ⇨ *146*.
2. *Exterior Lamp Controls* ⇨ *133*.

   Indicator Lever. See *Turn and Lane-Change Signals* ⇨ *137*.

   IntelliBeam System Button (If Equipped). See *Exterior Lamp Controls* ⇨ *133*.
3. Tap Shift Controls. See *Manual Mode* ⇨ *181* (If Equipped).
4. *Instrument Cluster* ⇨ *104*.

   Driver Information Centre (DIC) Display. See *Driver Information Centre (DIC)* ⇨ *120*.
5. *Windscreen Wiper/Washer* ⇨ *97*.

   *Rear Window Wiper/Washer* ⇨ *99*.
6. ENGINE START/STOP Button. See *Ignition Positions* ⇨ *164*.
7. Light Sensor. See *Automatic Headlamp System* ⇨ *135*.
8. Home Button. See the infotainment manual and *Infotainment* ⇨ *141*.
9. *Dual Automatic Climate Control System* ⇨ *142*.
10. *Heated and Ventilated Front Seats* ⇨ *49* (If Equipped).
11. *Lane Keep Assist (LKA)* ⇨ *219* (If Equipped).
12. *Power Sockets* ⇨ *100*.
13. MODE Switch. See *Driver Mode Control* ⇨ *188*.
14. Stop/Start Disable Switch. See *Stop/Start System* ⇨ *167*.
15. *Traction Control/Electronic Stability Control* ⇨ *186*.
16. *Hazard Lights* ⇨ *136*.
17. USB Port. See the infotainment manual.
18. Infotainment Controls. See the infotainment manual.
19. Shift Lever. See *Automatic Transmission* ⇨ *177*.
20. Park Assist Button. See *Assistance Systems for Parking or Reversing* ⇨ *203*.

    Automatic Parking Assist (APA) Button. See *Assistance Systems for Parking or Reversing* ⇨ *203*.
21. *Steering Wheel Controls* ⇨ *96*.

    Driver Information Centre (DIC) Controls. See *Driver Information Centre (DIC)* ⇨ *120*.
22. *Horn* ⇨ *97*.
23. *Steering Wheel Adjustment* ⇨ *96* (Out of View).
24. *Cruise Control* ⇨ *189*.

    *Adaptive Cruise Control* ⇨ *193* (If Equipped).

    *Heated Steering Wheel* ⇨ *96* (If Equipped).

    *Forward Collision Alert (FCA) System* ⇨ *211* (If Equipped).
25. *Head-Up Display (HUD)* ⇨ *123* (Out of View) (If Equipped).
26. Data Link Connector. See *Malfunction Indicator Lamp (Check Engine Light)* ⇨ *111* (Out of View).
27. *Instrument Panel Illumination Control* ⇨ *138*.
28. Bonnet Release. See *Bonnet* ⇨ *244* (Out of View).
29. *Electric Parking Brake* ⇨ *184*.

## ✍ NOTES

# Keys, Doors, and Windows



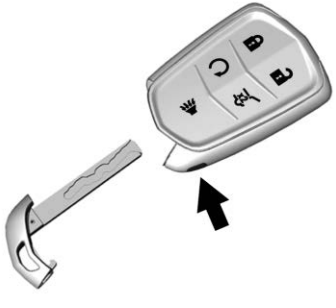
# Keys and Locks

## Keys

**⚠ Warning**

Leaving children in a vehicle with a Remote Keyless Entry (RKE) transmitter is dangerous and children or others could be seriously injured or killed. They could operate the power windows or other controls or make the vehicle move. The windows will function with the RKE transmitter in the vehicle, and children or others could be caught in the path of a closing window. Do not leave children in a vehicle with an RKE transmitter.

The key inside the Remote Keyless Entry (RKE) transmitter can be used for all locks.



To remove the key, press the button near the bottom of the transmitter, and pull the key out. Never pull the key out without pressing the button.

If it becomes difficult to turn the key, inspect the key blade for debris.

See your dealer if a new key is needed.

## Remote Keyless Entry (RKE) System

See *Declaration of Conformity* ⇨ *329*.

If there is a decrease in the Remote Keyless Entry (RKE) operating range:

- Check the distance. The transmitter may be too far from the vehicle.
- Check the location. Other vehicles or objects may be blocking the signal.
- Check the transmitter's battery. See “Battery Replacement” later in this section.
- If the transmitter is still not working correctly, see your dealer or a qualified technician for service.

## Remote Keyless Entry (RKE) System Operation

The Keyless Access system allows for vehicle entry when the transmitter is within 1 m (3 ft). See “Keyless Access Operation” following.

The RKE transmitter functions may work up to 60 m (197 ft) away from the vehicle.

Other conditions can affect the performance of the transmitter. See *Remote Keyless Entry (RKE) System* ⇨ *8*.

With Power Tailgate Shown, Without Similar

**:** Press to lock all doors and the fuel flap. The indicators may flash and/or the horn may sound on the second press to indicate locking. See *Vehicle Personalisation ⇨ 127*.

If the driver door is open when is pressed, all doors will lock and the driver door will immediately unlock, if Open Door Anti-Lockout is enabled. See *Vehicle Personalisation ⇨ 127*. If the passenger door is open when is pressed, all doors lock.

Pressing may also arm the alarm system. See *Vehicle Alarm System ⇨ 28*.

If equipped with remote folding mirrors, press and hold for one second to remotely fold the mirrors, if enabled. See *Vehicle Personalisation ⇨ 127*.

**:** Press to unlock the driver door and the fuel door. Press again within five seconds to unlock all doors. The RKE transmitter can be programmed to unlock all doors on the first button press. See *Vehicle Personalisation ⇨ 127*. The indicators may flash to indicate unlocking. See *Vehicle Personalisation ⇨ 127*. When remotely unlocking the vehicle at night, the lights come on briefly to light your approach to the vehicle.

Pressing will disarm the alarm system. See *Vehicle Alarm System ⇨ 28*.

If equipped with remote folding mirrors, press and hold for one second to remotely unfold the mirrors, if enabled. See *Vehicle Personalisation ⇨ 127*.

Press and hold until the windows fully open. Windows will not operate unless remote window operation is enabled. See *Vehicle Personalisation ⇨ 127*.

**:** Press and release and then immediately press and hold for at least four seconds to start the engine from outside the vehicle using the RKE transmitter. See *Remote Vehicle Start ⇨ 14*.

**:** Press and release one time to initiate vehicle locator. The exterior lamps flash and the horn chirps three times. Press and hold for three seconds to sound the panic alarm. The horn sounds and the indicators flash for 30 seconds, or until is pressed again or the vehicle is started.

**:** If equipped, press twice quickly to open or close the tailgate.

Press once to stop the liftgate from moving.

**Auto Door Relock :** If a door is not opened or the vehicle is not started within three minutes of unlocking the

vehicle and disarming the alarm system with the RKE transmitter, all doors are automatically locked and the vehicle alarm system is re-armed.

## Keyless Access Operation

With the Keyless Access system, you can lock and unlock the doors and access the tailgate without removing the RKE transmitter from your pocket, handbag, briefcase, etc. The RKE transmitter should be within 1 m (3 ft) of the tailgate or door being opened.

Keyless Access can be programmed to unlock all doors on the first lock/unlock press from the driver door. Keyless Access can also be turned on or off. See *Vehicle Personalisation* ⇨ *127*.

If equipped with memory seats, RKE transmitters 1 and 2 are linked to seating positions of memory 1 or 2. See *Memory Seats* ⇨ *47*.

### Keyless Unlocking/Locking from the Driver Door

When the doors are locked and the RKE transmitter is within 1 m (3 ft) of the driver door handle, pressing the lock/unlock button on the driver door handle will unlock the driver door. If the lock/unlock button is pressed again within five seconds, all passenger doors will unlock.

Driver Shown, Passenger Similar

Pressing the lock/unlock button will cause all doors to lock if any of the following occur:

- It has been more than five seconds since the first lock/unlock button press.
- Two lock/unlock button presses were used to unlock all doors.
- Any vehicle door has opened and all doors are now closed.

### Keyless Unlocking/Locking from Passenger Doors

When the doors are locked and the RKE transmitter is within 1 m (3 ft) of the door handle, pressing the lock/unlock button on that door handle will unlock all doors. Pressing the lock/unlock button will cause all doors to lock if either of the following occurs:

- The lock/unlock button was used to unlock all doors.
- Any vehicle door has opened and all doors are now closed.

### Disable/Enable Keyless Unlocking of Exterior Door Handles and Tailgate

If equipped, keyless unlocking of the exterior door handles and tailgate can be disabled and enabled.

**Disabling Keyless Unlocking:**

With the vehicle off, press and hold and on the RKE transmitter at the same time for approximately three seconds. The indicator lamps will flash four times quickly to indicate access is disabled. Using any exterior handle to unlock the doors or open the tailgate will cause the indicator lamps to flash four times quickly, indicating access is disabled. If disabled, disarm the alarm system before starting the vehicle.

**Enabling Keyless Unlocking:**

With the vehicle off, press and hold and on the RKE transmitter at the same time for approximately three seconds. The indicator lamps will flash twice quickly to indicate access is enabled.

### Anti-Theft Locking from Any Door

When all doors are locked using the lock/unlock button, a second press of the button within five seconds will activate the Anti-theft Locking System.

### Anti-Theft Unlocking from Any Door

When all doors are unlocked using the lock/unlock button, the Anti-theft Locking system will be deactivated.

### Passive Locking

With Keyless Access, this vehicle will lock several seconds after all doors have been closed if the vehicle is off and at least one RKE transmitter has been removed or none remain in the interior.

The fuel door will also lock.

If other electronic devices interfere with the RKE transmitter signal, the vehicle may not detect the RKE transmitter inside the vehicle.
If passive locking is enabled, the doors may lock with the RKE transmitter inside the vehicle. Do not leave the RKE transmitter in an unattended vehicle.

To customise the doors to automatically lock when exiting the vehicle, see *Vehicle Personalisation* ⇨ *127*.

### Temporary Disable of Passive Locking

Temporarily disable passive locking by pressing and holding on the interior door switch with a door open for at least four seconds, or until three chimes are heard. Passive locking will then remain disabled until on the interior door is pressed, or until the vehicle is switched on.

### Remote Left in Vehicle Alert

When the vehicle is turned off and an RKE transmitter is left in the vehicle, the horn will chirp three times after all doors are closed. To turn on or off, see *Vehicle Personalisation* ⇨ *127*.

### Remote No Longer in Vehicle Alert

If the vehicle is on, with a door open, and then all doors are closed, the vehicle will check for RKE transmitter(s) inside. If an RKE transmitter is not detected, the Driver Information Centre (DIC) will display NO REMOTE DETECTED and the horn will chirp three times.

This occurs only once each time the vehicle is driven.

To turn on or off, see *Vehicle Personalisation* ⇨ *127*.

### Keyless Tailgate Opening

Press the touch pad on the tailgate handle to open the tailgate if the RKE transmitter is within 1 m (3 ft).

### Key Access

To access a vehicle with a weak transmitter battery, see *Door Locks* ⇨ *16*.

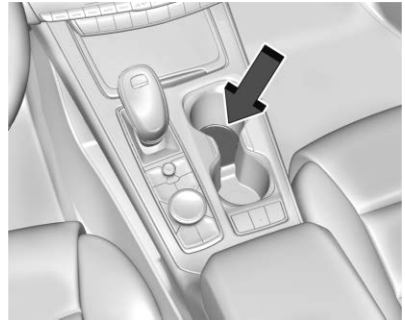
## Programming Transmitters to the Vehicle

Only RKE transmitters programmed to this vehicle will work. If a transmitter is lost or stolen, a replacement can be purchased and programmed through your dealer. When the replacement transmitter is programmed to this vehicle, all remaining transmitters must also be reprogrammed. Any lost or stolen transmitters will no longer work once the new transmitter is programmed.

## Starting the Vehicle with a Low Transmitter Battery

To improve vehicle security, the transmitter is equipped with a motion sensor. When starting the vehicle, if the transmitter has been idle for a while, move the transmitter slightly and try starting the vehicle. When starting the vehicle, if the transmitter battery is discharged or there is signal interference, the DIC may display NO REMOTE DETECTED, REPLACE BATTERY IN KEY, or NO REMOTE DETECTED PLACE KEY IN KEY POCKET THEN START YOUR VEHICLE. If the vehicle still does not start and the DIC displays the same warnings above, follow the steps shown below.

To start the vehicle:



1. Place the transmitter in the front cupholder.
2. With the vehicle in P (Park) or N (Neutral), press the brake pedal and ENGINE START/STOP.

   Replace the transmitter battery as soon as possible.

## Battery Replacement

**⚠ Warning**

Never allow children to play with the RKE transmitter. The transmitter contains a small

(Continued)

**Warning (Continued)**

battery, which can be a choking hazard. If swallowed, internal burns can occur, resulting in severe injury or death. Seek medical attention immediately if a battery is swallowed.

**⚠ Warning**

To avoid personal injury, do not touch metal surfaces on the RKE transmitter when it has been exposed to extreme heat. These surfaces can be hot to the touch at temperatures above 59 °C (138 °F).

**Caution**

When replacing the battery, do not touch any of the circuitry on the transmitter. Static from your body could damage the transmitter.

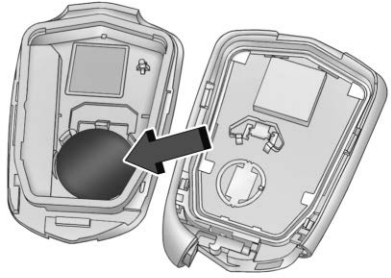
**Caution**

Always replace the battery with the correct type. Replacing the battery with an incorrect type could potentially create a risk of battery explosion. Dispose of used batteries according to instructions and local laws. Do not attempt to burn, crush, or cut the used battery, and avoid exposing the battery to environments with extremely low air pressures or high temperatures.

Replace the battery if the DIC displays REPLACE BATTERY IN REMOTE KEY.

1. Press the button on the side of the transmitter near the bottom and pull the key out. Never pull the key out without pressing the button.

2. Separate the two halves of the transmitter using a flat tool inserted into the bottom centre of the transmitter. Do not use the key slot.



3. Remove the old battery. Do not use a metal object.
4. Insert the new battery on the back housing, positive side facing down. Replace with a CR2032 or equivalent battery.
5. Align the front and back housing then snap the transmitter together.
6. Reinsert the key.

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Batteries in this product must not be disposed of with household waste. Batteries must be recycled at an appropriate facility. Contact local authorities for details on recycling.

## Remote Vehicle Start

This feature allows the engine to be started from outside of the vehicle.

**:** This button is on the RKE transmitter for remote start.

The climate control system will determine the best mode and temperature setting for operation during the remote start. Once the

vehicle is started with the ENGINE START/STOP button, the climate control system will begin to operate at the last customer-selected operating mode and temperature. The rear demist may come on during remote start based on cold ambient conditions. The rear fog indicator light does not come on during remote start.

If the vehicle has auto heated or ventilated seats they may come on during a remote start. See *Heated and Ventilated Front Seats* ⇨ *49*.

Laws in some local communities may restrict the use of remote starters. For example, some laws may require a person using remote start to have the vehicle in view. Check local regulations for any requirements.

Do not use remote start if the vehicle is low on fuel. The vehicle may run out of fuel.

Other conditions can affect the performance of the transmitter. See *Remote Keyless Entry (RKE) System* ⇨ *8*.

### Starting the Engine Using Remote Start

1. Press and release on the RKE transmitter.
2. Immediately press and hold for at least four seconds or until the indicator lamps flash. The indicators flashing confirms the request to remote start the vehicle has been received.

   During the remote start the doors will be locked and the parking lamps will remain on as long as the engine is running.

   The engine will shut off after 15 minutes unless a time extension is made or the ignition is turned on.
3. With the RKE transmitter in the vehicle, press the brake pedal and start the vehicle to drive.

### Extending Engine Run Time

The engine run time can also be extended by another 15 minutes, if during the first 15 minutes Steps 1and 2 are repeated while the engine is still running. An extension can be requested 30 seconds after starting. This provides a total of 30 minutes.

The remote start can only be extended once.

When the remote start is extended, the second 15-minute period is added on to the first 15 minutes for a total of 30 minutes.

A maximum of two remote starts, or a remote start with an extension, are allowed between ignition cycles.

The ignition must be turned on and then off before the remote start procedure can be used again.

### Cancelling a Remote Start

To cancel a remote start, do any of the following:

- Press and hold until the parking lamps turn off.
- Turn on the hazard warning lights.
- Turn the vehicle on and then off.

### Conditions in Which Remote Start Will Not Work

The remote start will not operate if any of the following occur:

- The RKE transmitter is in the vehicle.
- The vehicle is not turned off.
- The bonnet is not closed.
- The hazard warning flashers are on.
- There is an emission control system malfunction.
- The engine coolant temperature is too high.
- The oil pressure is low.
- Two remote vehicle starts or a start with an extension have already been used.
- The vehicle is not in P (Park).

## Door Locks

**⚠ Warning**

Unlocked doors can be dangerous.

- Passengers, especially children, can easily open the doors and fall out of a moving vehicle. The doors can be unlocked and opened while the vehicle is moving. The chance of being thrown out of the vehicle in a crash is increased if the doors are not locked. So, all passengers should wear seat belts properly and the doors should be locked whenever the vehicle is driven.
- Young children who get into unlocked vehicles may be unable to get out. A child can be overcome by extreme heat and can suffer permanent injuries or even death from heat stroke. Always lock the vehicle whenever leaving it.

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**Warning (Continued)**

- Outsiders can easily enter through an unlocked door when you slow down or stop the vehicle. Locking the doors can help prevent this from happening.

To lock/unlock the doors from outside the vehicle:

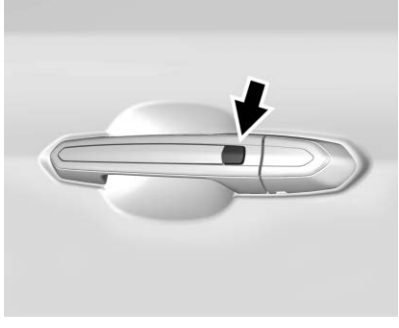
- Press or on the Remote Keyless Entry (RKE) transmitter. See *Remote Keyless Entry (RKE) System Operation* ⇨ *8*.
- Use the key in the key lock cylinder in the driver door. The key lock cylinder is covered with a cap.

To lock/unlock the doors from inside the vehicle:

- Press or on the power door lock switch. See *Power Door Locks* ⇨ *18*.
- Push down on the door lock knob to lock a door.

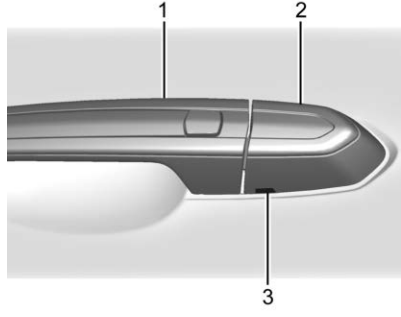
- Pull the door handle once to unlock it. Pull the door handle again to unlatch it.

### Keyless Access



The RKE transmitter must be within 1 m (3 ft) of the door or tailgate being opened. Press the button on the door handle to open. See “Keyless Access” in *Remote Keyless Entry (RKE) System Operation* ⇨ *8*.

### Driver Door Key Lock Cylinder Access (In Case of Dead Battery)

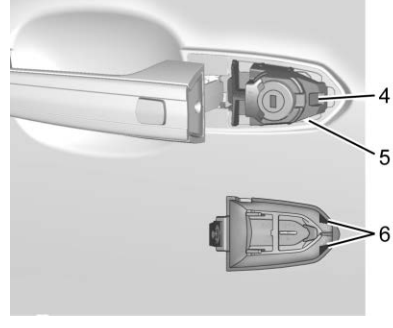



To access the driver door key lock cylinder:

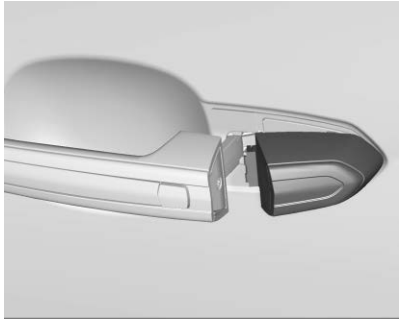
1. Pull the door handle (1) to the open position and hold it open until the cap removal is complete.
2. Insert the key into the slot (3) on the bottom of the cap (2) and lift the key upward.
3. Move the cap (2) rearward and remove.
4. Use the key in the cylinder.

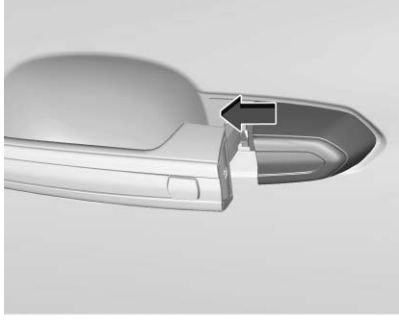
To replace the cap:

1. Pull the door handle (1) to the open position and hold it open until the cap installation is complete.




2. Insert the two tabs (6) at the back of the cap between the seal (5) and the metal base (4).



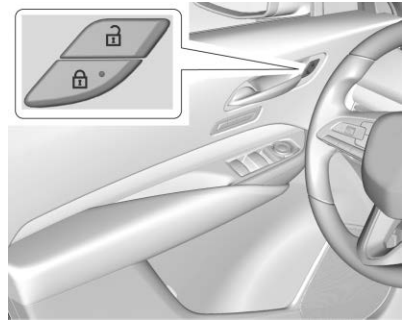


3. Slide the cap forward and press the forward edge to install the cap in place.
4. Release the door handle.
5. Check that the cap is secure.

### Free-Turning Locks

The door key lock cylinder turns freely when either the wrong key is used, or the correct key is not fully inserted. The free-turning door lock feature prevents the lock from being forced open. To reset the lock, turn it to the vertical position with the correct key fully inserted. Remove the key and insert it again. If this does not reset the lock, turn the key halfway around in the cylinder and repeat the reset procedure.

## Power Door Locks



: Press to lock the doors. The indicator light in the switch will illuminate when locked.

: Press to unlock the doors.

The fuel door is also locked or unlocked using these features.

## Delayed Locking

This feature delays the locking of the doors until five seconds after all doors are closed.

Delayed locking can only be turned on when Open Door Anti-Lockout has been turned off.

When is pressed on the power door lock switch while the door is open, a chime will sound three times indicating delayed locking is active.

The doors will lock automatically five seconds after all doors are closed. If a door is reopened before that time, the five-second timer will reset when all doors are closed again.

Press on the door lock switch again or press on the RKE transmitter to lock the doors immediately.

This feature can also be programmed. See *Vehicle Personalisation* ⇨ *127*.

## Automatic Door Locks

The vehicle is programmed so that when the doors are closed, the ignition is on, and the gear lever is moved out of P (Park), the doors will lock.

If a vehicle door is unlocked and then opened and closed, the doors will lock either when your foot is removed from the brake or the vehicle speed becomes faster than 13 km/h (8 mph).

To unlock the doors:

- Press on the power door lock switch.
- Shift the gearbox into P (Park).

Automatic door locking can be programmed. See *Vehicle Personalisation* ⇨ *127*.

## Lockout Protection

If the ignition is on or in ACC/ ACCESSORY and the power door lock switch is pressed with the driver door open, all the doors will lock and only the driver door will unlock.

If the vehicle is off and locking is requested while a door is open, when all doors are closed the vehicle will check for RKE transmitters inside. If an RKE transmitter is detected and the number of RKE transmitters inside has not reduced, the driver door will unlock and the horn will chirp three times.

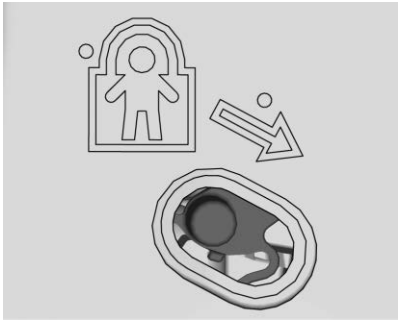
Lockout Protection can be manually overridden with the driver door open by pressing and holding on the power door lock switch.

### Open Door Anti-Lockout

If Open Door Anti-Lockout is turned on and the vehicle is turned off, the driver door is open, and locking is requested, all the doors will lock and the driver door will remain unlocked. The Open Door Anti-Lockout feature can be turned on or off. See *Vehicle Personalisation* ⇨ *127*.

## Safety Locks

The rear door safety locks prevent passengers from opening the rear doors from inside the vehicle.



The safety lock is on the inside edge of the rear doors. To use the safety lock:

1. Move the lever down to the lock position.
2. Close the door.
3. Do the same for the other rear door.

To open a rear door when the safety lock is on:

1. Unlock the door by activating the inside handle, by pressing the power door unlock switch, or by using the Remote Keyless Entry (RKE) transmitter.
2. Open the door from the outside.

When the safety lock is enabled, adults and older children will not be able to open the rear door from the inside. Cancel the safety locks to enable the doors to open from the inside.

To cancel the safety lock:

1. Unlock the door and open it from the outside.
2. Move the lever up to unlock. Do the same for the other door.

# Doors

## Tailgate

**⚠ Warning**

Exhaust gases can enter the vehicle if it is driven with the tailgate or boot/hatch open, or with any objects that pass through the seal between the body and the boot/hatch or tailgate. Engine exhaust contains carbon monoxide (CO) which cannot be seen or smelled. It can cause unconsciousness and even death.

If the vehicle must be driven with the tailgate or boot/hatch open:

- Close all of the windows.
- Fully open the air outlets on or under the instrument panel.
- Adjust the climate control system to a setting that brings in only outside air and

(Continued)

**Warning (Continued)**

set the fan speed to the highest setting. See “Climate Control Systems” in the Index.

- If the vehicle is equipped with a power tailgate, disable the power tailgate function.

See *Engine Exhaust* ⇨ *171*.

**Caution**

To avoid damage to the tailgate or tailgate glass, make sure the area above and behind the tailgate is clear before opening it.

## Manual Tailgate

To open the tailgate, press 🔓 on the power door lock switch or press 🔓 on the RKE transmitter twice to unlock all doors. Press the touch pad on the underside of the tailgate handle and lift up.

Use the pull cup to lower and close the tailgate. Do not press the touch pad while closing the tailgate. This will cause the tailgate to be unlatched.

For Keyless Access, the RKE transmitter must be within 1 m (3 ft) of the tailgate to automatically unlock it. See *Remote Keyless Entry (RKE) System Operation* ⇨ *8*.

The tailgate has an electric latch. If the battery is disconnected or has low voltage, the tailgate will not open. The tailgate will resume operation when the battery is reconnected and charged.

Always close the tailgate before driving.

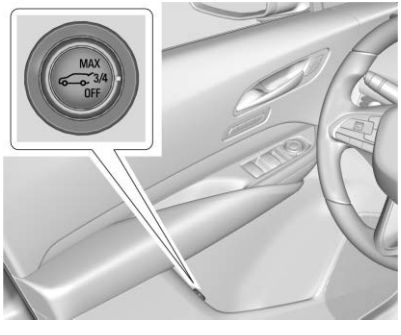
## Power Tailgate Operation

**⚠ Warning**

You or others could be injured if caught in the path of the power tailgate. Make sure there is no one in the way of the tailgate as it is opening and closing.

**Caution**

Driving with an open and unsecured tailgate may result in damage to the power tailgate components.




The power tailgate switch is on the driver door. The vehicle must be in P (Park).

The modes are:

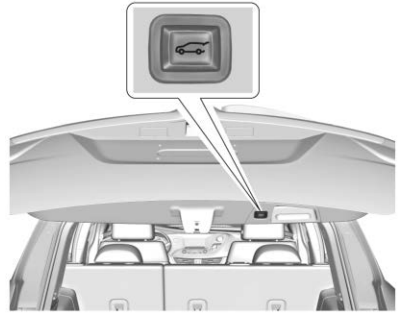
**MAX :** Opens to maximum height.

**3/4 :** Opens to a reduced height that can be set from 3/4 to fully open. Use to prevent the tailgate from opening into overhead obstructions such as a garage door or roof-mounted cargo. The tailgate can be manually opened all the way.

**OFF :** Opens manually only.

To power open or close the tailgate, select MAX or 3/4 mode.

- Press twice quickly on the RKE transmitter until the tailgate moves.
- Press on the driver door. The driver door must either be unlocked or locked without the security armed.
- Press the touch pad on the underside of the tailgate handle after unlocking all doors. A locked vehicle can be opened if the RKE transmitter is within 1 m (3 ft) of the touch pad.



- Press on the bottom of the tailgate next to the pull cup to close.

Press any tailgate button, or the touch pad, or on the RKE transmitter while the tailgate is moving to stop it. Press any tailgate button again or press twice quickly on the RKE transmitter to restart the operation in the reverse direction. Pressing the touch pad on the tailgate handle will restart the motion, but only in the opening direction.

**Caution**

Manually forcing the tailgate to open or close during a power cycle can damage the vehicle. Allow the power cycle to complete.

The power tailgate may be temporarily disabled under extreme low temperatures, or after repeated power cycling over a short period of time. If this occurs, the tailgate can still be operated manually.

If the vehicle is shifted out of P (Park) while the power function is in progress, the tailgate will continue to completion. If the vehicle is accelerated before the tailgate has completed moving, the tailgate may stop or reverse direction. Check for Driver Information Centre (DIC) messages and make sure the tailgate is closed and latched before driving.

#### Falling Tailgate Detection

If the power tailgate automatically closes after a power opening cycle, it indicates that the system is reacting to excess weight on the tailgate or a possible support strut failure. A repetitive chime will sound while the falling tailgate detection feature is operating. Remove any excess weight. If the tailgate continues to automatically close after opening, see your dealer for service before using the power tailgate.

Interfering with the power tailgate motion or manually closing the tailgate too quickly after power opening may resemble a support strut failure. This could also activate the falling tailgate detection feature. Allow the tailgate to complete its operation and wait a few seconds before manually closing the tailgate.

### Obstacle Detection Features

If the tailgate encounters an obstacle during a power open or close cycle, the tailgate will automatically reverse direction and move a short distance away from the obstacle. After removing the obstruction, the power tailgate operation can be used again. If the tailgate encounters multiple obstacles on the same power cycle, the power function will deactivate. After removing the obstructions, manually close the tailgate. This will allow normal power operation functions to resume.

If the vehicle is locked while the tailgate is closing, and an obstacle is encountered that prevents the tailgate from completely closing, the horn will sound as an alert that the tailgate did not close.

Pinch sensors are on the side edges of the tailgate. If an object is caught between the tailgate and the vehicle and presses against a sensor, the tailgate will reverse direction and open fully. The tailgate will remain open until it is activated again or closed manually.

### Setting the 3/4 Mode

To change the position the tailgate stops at when opening:

1. Select MAX or 3/4 mode and power open the tailgate.
2. Stop the tailgate movement at the desired height by pressing any tailgate button. Manually adjust the liftgate position if needed.

3. Press and hold next to the pull cup handle on the bottom of the tailgate until the indicators flash and a beep sounds. This indicates the setting has been recorded.

The liftgate cannot be set below a minimum programmable height. If there is no light flash or sound, then the height adjustment may be too low.

### Manual Operation

Select OFF to manually operate the tailgate. See “Manual Tailgate” at the beginning of this section.

**Caution**

Attempting to move the tailgate too quickly and with excessive force may result in damage to the vehicle.

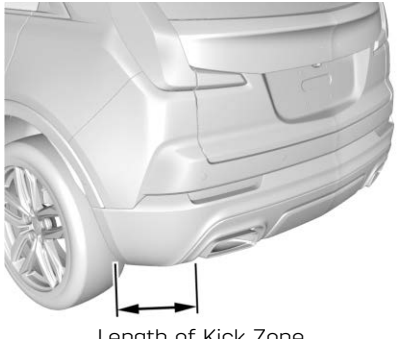
Operate the tailgate manually with a smooth motion and moderate speed. The system includes a feature which limits the manual closing speed to protect the components.

### Hands-Free Operation

If equipped, the tailgate may be operated with a kicking motion under the left-hand corner of the rear bumper at the location of the projected logo.

The RKE transmitter must be within 1 m (3 ft) of the rear bumper to operate the power tailgate hands-free.

The hands-free feature will not work while the tailgate is moving. To stop the tailgate while in motion use one of the tailgate switches.



Length of Kick Zone

Kick Zone Direction

To operate, kick your foot straight up in one swift motion under the left-hand corner of the rear bumper at the location of the projected logo, then pull it back.

**Caution**

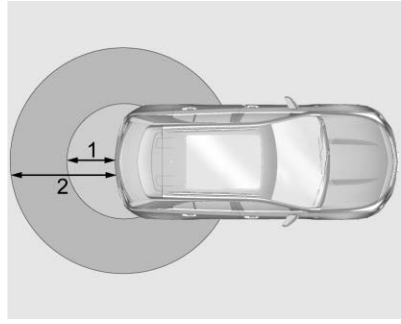
Splashing water may cause the tailgate to open. Keep the RKE transmitter away from the rear bumper detection area or turn the tailgate mode to OFF when cleaning or working near the rear bumper to avoid accidental opening.

- Do not sweep your foot side to side.
- Do not keep your foot under the bumper; the tailgate will not activate.
- Do not touch the tailgate until it has stopped moving.
- This feature may be temporarily disabled under some conditions. If the tailgate does not respond to the kick, open or close the tailgate by another method or start the vehicle. The feature will be re-enabled.

When closing the tailgate using this feature, there will be a short delay. The tail lights will flash and a chime will sound. Step away from the tailgate before it starts moving.

## Projected Logo

If equipped with this feature, a vehicle logo will be projected for one minute onto the ground near the rear bumper when an RKE transmitter is detected within approximately 2 m (6 ft). The projected logo may not be visible under brighter daytime conditions.




1. 1 m (3 ft) Hands-Free Operation Detection Zone
2. 2 m (6 ft) Projected Logo Detection Zone

The projected logo shows where the kicking motion is to take place.

The projected logo will only be available for this RKE transmitter after it has been out of range for at least 20 seconds.

If an RKE transmitter is again detected within approximately 2 m (6 ft) of the tailgate, or another hands-free operation has been detected, the one-minute timer will be reset.

The projected logo will not work under these conditions:

- The vehicle battery is low.
- The transmission is not in P (Park).
- Hands Free Tailgate Control is set to Off in vehicle personalisation. See *Vehicle Personalisation* ⇨ *127*.
- The power tailgate is turned off.
- The vehicle remains parked for 72 hours or more, with no RKE transmitter use or Keyless Access operation. To re-enable, press any button on the RKE transmitter or open and close a vehicle door.

The projected logo will not work for a single RKE transmitter when a transmitter:

- Has been left within approximately 5 m (15 ft) of the tailgate for several minutes.
- Has been left inside the vehicle and all vehicle doors are closed.
- Has approached the area outside of the tailgate five times within 10 minutes.

**Lens Cleaning**

Use a soft, damp cloth to clean the recessed lens.

**Hands-Free Tailgate and Projected Logo Availability**

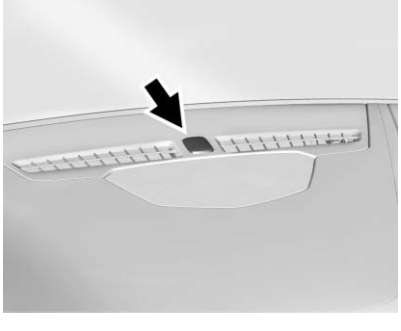
| Action | Hands-Free Tailgate | Projected Logo |
|---|---|---|
| RKE transmitter entering projected logo detection zone | Operative | On for one minute |
| RKE transmitter left inside projected logo detection zone for minimum of 10 minutes | Operative | Off until RKE transmitter button is pressed or a door is opened and closed |
| RKE transmitter brought in and out of projected logo detection zone five times or more within 10 minutes | Operative | Off for one hour or until RKE transmitter button press or a door is opened and closed |
| Vehicle remains parked for more than 72 hours | Operative | Off until RKE transmitter button is pressed or a door is opened and closed |
| Vehicle battery is low | Non-operative | Off |
| Transmission is not in P (Park) | Non-operative | Off |
| Power tailgate is turned off | Non-operative | Off |
| Hands-free tailgate is disabled in vehicle personalisation | Non-operative | Off |

# Vehicle Security

This vehicle has theft-deterrent features; however, they do not make the vehicle impossible to steal.

## Vehicle Alarm System

This vehicle has an anti-theft alarm system.



The indicator light, on the instrument panel near the windscreen, indicates the status of the system.

**Off :** Alarm system is disarmed.

**On Solid :** Vehicle is secured during the delay to arm the system.

**Fast Flash :** Vehicle is unsecured. A door, the hood, or the tailgate is open.

**Slow Flash :** Alarm system is armed.

### Arming the Alarm System

1. Close the tailgate and the hood. Turn off the vehicle.
2. Lock the vehicle in one of three ways:
   - Use the RKE transmitter.
   - Use the Keyless Access system.
   - With a door open, press the inside .
3. After 30 seconds the alarm system will arm, and the indicator light will begin to slowly flash indicating the alarm system is operating. Pressing  on the RKE transmitter a second time will bypass the 30-second delay and immediately arm the alarm system.

The vehicle alarm system will not arm if the doors are locked with the key.

If the driver door is opened without first unlocking with the RKE transmitter, the horn will chirp and the lights will flash to indicate pre-alarm. If the vehicle is not started, or the door is not unlocked by pressing  on the RKE transmitter during the 10-second pre-alarm, the alarm will be activated.

The alarm will also be activated if a passenger door, the tailgate, or the hood is opened without first disarming the system. When the alarm is activated, the indicators flash and the horn sounds for about 30 seconds. The alarm system will then re-arm to monitor for the next unauthorised event.

### Disarming the Alarm System

To disarm the alarm system or turn off the alarm if it has been activated:

- Press  on the RKE transmitter.
- Unlock the vehicle using the Keyless Access system.
- Start the vehicle.

To avoid setting off the alarm by accident:

- Lock the vehicle after all occupants have left the vehicle and all doors are closed.
- Always unlock a door with the RKE transmitter or use the Keyless Access system.

Unlocking the driver door with the key will not disarm the system or turn off the alarm.

### How to Detect a Tamper Condition

If is pressed and the horn chirps and the lights flash three times, the alarm was activated while the alarm system was armed.

If the alarm system has been activated, a message will appear on the DIC.

### Power Sounder, Inclination Sensor and Intrusion Sensor

In addition to the standard theft-deterrent system features, this system may also have an inclination sensor, an intrusion sensor, and power sounder.

The power sounder provides an audible alarm that is different from the vehicle's horn. It has its own power source, and can sound an alarm when the vehicle's battery is compromised.

If the vehicle battery must be disconnected, first deactivate the power sounder. See “Vehicle Storage” under Battery in *Battery ⇨ 259*.

The inclination sensor can set off the alarm if it senses movement of the vehicle, such as a change in vehicle orientation.

The intrusion sensor monitors the vehicle interior, and can set off the alarm if it senses an unauthorised entry into the vehicle's interior. Do not allow passengers or pets to remain in the vehicle when the intrusion sensor is activated.

Before arming the theft-deterrent system and activating the intrusion sensor:

- Make sure all doors and windows are completely closed.
- Secure any loose items such as a sunvisors.
- Make sure there are no obstructions blocking the sensors in the front overhead console.

### Inclination and Intrusion Sensors Disable Switch

It is recommended that the inclination and intrusion sensors be deactivated if pets are left in the vehicle or if the vehicle is being transported.

With the vehicle turned off, press in the overhead console. The indicator lamp will come on momentarily, indicating that the sensor has been disabled until the next time the alarm system is armed.

## Steering Column Lock

If equipped, the steering column lock is a theft-deterrent device. This feature locks the steering column when the vehicle is turned off and the driver door is opened, or when the driver door is opened and then the vehicle is turned off. The steering column unlocks when the vehicle is turned on.

The Driver Information Centre (DIC) may display one of these messages:

- A message to service the steering column lock indicates that an issue has been detected with the column lock feature and the vehicle should be serviced.
- A message that the steering column is locked indicates that the engine is running, but the steering column is still locked. It is normal for the column to be locked during a remote start, but the column should unlock after the brake pedal is depressed and the vehicle is started. No message will display during a remote start.
- A message that the steering wheel must be turned and the vehicle must be started again indicates that the column lock mechanism is engaged, the column locking device was unable to unlock the steering column, and the vehicle did not start. If this happens, immediately turn the steering wheel from side to side to disengage the column lock. If this does not unlock the steering column, turn the vehicle off and open the driver door to reset the system. Then turn the vehicle on and immediately turn the steering wheel from side to side for about 15 seconds. In some cases, significant force may be needed to disengage the column.

To prevent the steering column lock from engaging, straighten the front wheels before turning off the vehicle.

## Anti-theft Locking System

**⚠ Warning**

Do not use the system if there are people in the vehicle! The doors cannot be unlocked or opened from the inside.

The vehicle is equipped with a deadbolt locking feature in addition to the standard door locks.

The deadbolt is engaged whenever you press on the RKE transmitter twice within five seconds with all doors closed and the vehicle off. The deadbolt lock can also be engaged with the Keyless Access system. See "Keyless Access Operation" under *Remote Keyless Entry (RKE) System Operation* ⇨ *8*.

When the doors are secured with the deadbolt, they cannot be unlocked or opened using the controls or handles inside the vehicle.

Press on the transmitter once to open the deadbolt and unlock the driver door. Pressing the button again within five seconds will unlock all of the doors.

## Immobiliser Operation

This vehicle has a passive theft-deterrent system.

The system does not have to be manually armed or disarmed.

The vehicle is automatically immobilised when the vehicle is turned off.

The immobilisation system is disarmed when the ignition is on or in ACC/ACCESSORY and a valid transmitter is present in the vehicle.

The security light, in the instrument cluster, comes on if there is a problem with arming or disarming the theft-deterrent system.

The system has one or more RKE transmitters matched to an immobiliser control unit in your vehicle. Only a correctly matched RKE transmitter will start the vehicle. If the transmitter is ever damaged, you may not be able to start your vehicle.

When trying to start the vehicle, the security light may come on briefly when the ignition is turned on.

If the engine does not start and the security light stays on, there is a problem with the system. Turn the ignition off and try again.

If the vehicle will not change ignition modes (ACC/ACCESSORY, on, off), and the RKE transmitter appears to be undamaged, try another transmitter. Or, you may try placing the transmitter in the front cupholder located in the centre console. See *Remote Keyless Entry (RKE) System Operation* ⇨ *8*.

If the ignition mode will not change with the other transmitter or in the front cupholder, your vehicle needs service. If the ignition does change modes, the first transmitter may be faulty. See your dealer who can service the theft-deterrent system and have a new RKE transmitter programmed to the vehicle.

It is possible for the immobiliser system to learn new or replacement RKE transmitters. Up to eight transmitters can be programmed for the vehicle. To program additional transmitters, see “Programming Transmitters to the Vehicle” under *Remote Keyless Entry (RKE) System Operation* ⇨ *8*.

Do not leave the key or device that disarms or deactivates the theft-deterrent system in the vehicle.

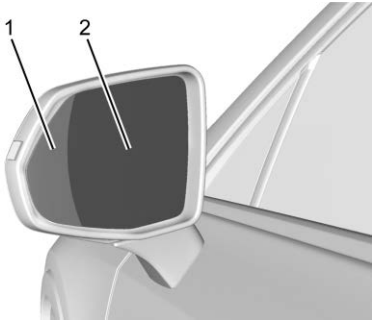
Do not modify or remove the system. The system may not work properly, and it could void the warranty.

# Exterior Mirrors

## Convex Mirrors

**⚠ Warning**

A convex mirror can make things, like other vehicles, look farther away than they really are. If you cut too sharply into the next lane, you could collide with a vehicle that is driving next to you. Check the inside mirror or glance over your shoulder before changing lanes.

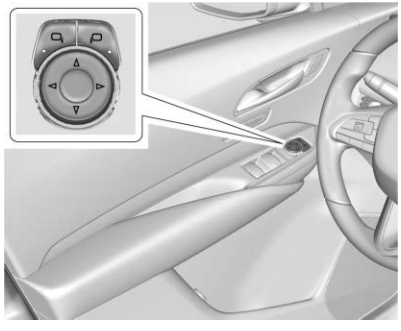



1. Wide View Side
2. Convex Side

The driver door mirror has two sides. The outboard side provides a wider field of vision when viewing lanes that are next to the vehicle. The inboard side is convex shaped, which is curved so more can be seen from the driver seat.

The passenger side mirror is convex shaped.

## Power Mirrors



To adjust each mirror:

1. Press ▭◂ or ▭▸ to choose the driver or passenger side mirror. The indicator light will illuminate.
2. Press the arrows on the control pad to move the mirror in the desired direction.
3. Adjust each outside mirror so that a little of the vehicle and the area behind it can be seen.
4. Press ▭◂ or ▭▸ again to deselect the mirror.

### Memory Mirrors

The vehicle may have memory mirrors. See *Memory Seats* ⇨ *47*.

### Lane Change Alert (LCA)

The vehicle may have LCA. See *Lane Change Alert (LCA)* ⇨ *217*.

### Side Blind Zone Alert (SBZA)

The vehicle may have Side Blind Zone Alert. See *Side Blind Zone Alert (SBZA)* ⇨ *217*.

### Indicator

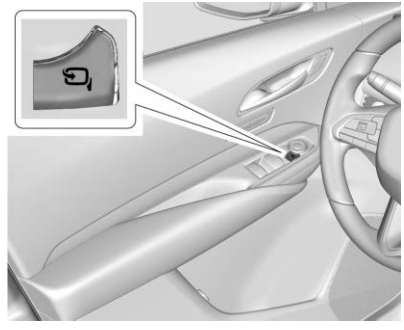
The vehicle may have an indicator on the mirror housings. The indicator will flash when indicator or hazard warning flashers are used.

## Folding Mirrors

### Manual Folding Mirrors

If equipped, manually fold the mirrors inward toward the vehicle to prevent damage when going through an automatic car wash. Push the mirror outward to return it to the original position.

### Power Folding Mirrors



If equipped, press to power fold the mirrors. Press again to unfold.

### Resetting the Power Folding Mirrors

Reset the power folding mirrors if:

- The mirrors are accidentally obstructed while folding.
- They are accidentally manually folded/unfolded.
- The mirrors do not stay in the unfolded position.
- The mirrors vibrate at normal driving speeds.

Fold and unfold the mirrors one time using the mirror controls to reset them to their normal position. A noise may be heard during the resetting of the power folding mirrors. This sound is normal after a manual folding operation.

### Remote Mirror Folding

If equipped, press and hold on the RKE transmitter for approximately one second to automatically fold the exterior mirrors. Press and hold on the RKE transmitter for approximately one second to unfold. See *Remote Keyless Entry (RKE) System Operation* ⇨ *8*.

This feature is turned on or off through vehicle personalisation. See *Vehicle Personalisation* ⇨ *127*.

## Heated Mirrors

REAR : Press to heat the mirrors.

See “Rear Window Demister” under *Dual Automatic Climate Control System* ⇨ *142*.

## Automatic Dimming Mirror

If the vehicle has the automatic dimming mirror, the driver outside mirror automatically adjusts for the glare of headlamps behind you.

## Reverse Tilt Mirrors

If equipped with reverse tilt mirrors and memory seats, the passenger and/or driver mirror tilts to a preselected position when the vehicle is in R (Reverse). This allows the kerb to be seen when parallel parking.

The mirror(s) may move from their tilted position when:

- The vehicle is shifted out of R (Reverse), or remains in R (Reverse) for about 30 seconds.
- The vehicle is turned off.
- The vehicle is driven in R (Reverse) above a set speed.

To turn this feature on or off, see *Vehicle Personalisation* ⇨ *127*.

# Interior Mirrors

## Interior Rearview Mirrors

Adjust the rearview mirror for a clear view of the area behind the vehicle.

Do not spray glass cleaner directly on the mirror. Use a soft towel dampened with water.

## Manual Rearview Mirror

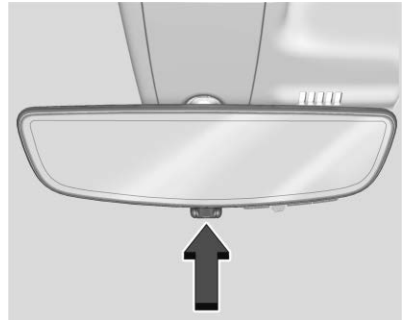
If equipped, push the tab forward for daytime use and pull it rearward for nighttime use to avoid glare of the headlamps from behind.

## Automatic Dimming Rearview Mirror

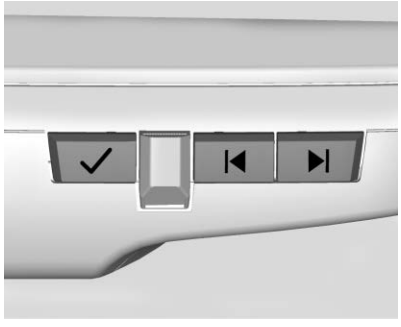
If equipped, automatic dimming reduces the glare of headlamps from behind. The dimming feature comes on when the vehicle is started.

## Rear Camera Mirror

If equipped, this automatic dimming mirror provides a wide angle camera view of the area behind the vehicle.



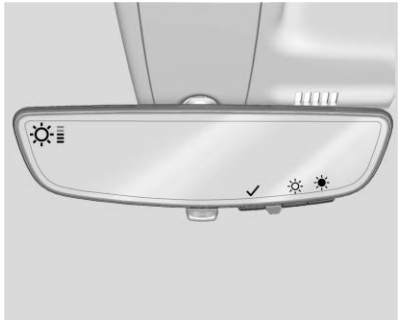
Pull the tab to turn on the display. Push the tab to turn it off. When off the mirror is automatic dimming. Adjust the mirror for a clear view of the area behind the vehicle while the display is off.



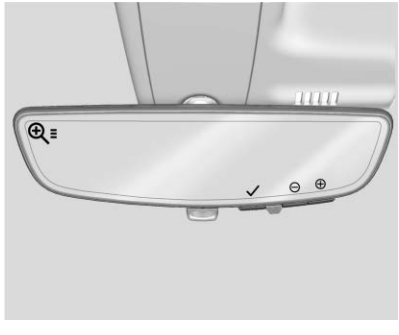
Press ✓ to scroll through the adjustment options.

Press |◀ and ▶| to adjust the settings using the indicators on the mirror. The indicators will remain visible for five seconds after the last button activation, and the settings will remain saved.

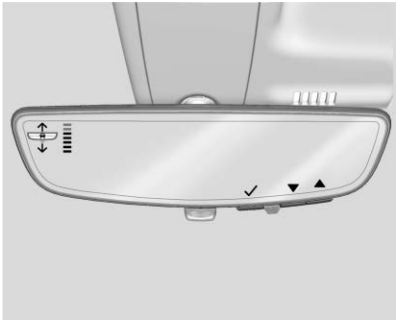
The adjustment options are:



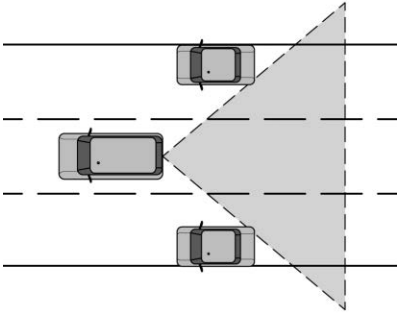
- Brightness



- Zoom



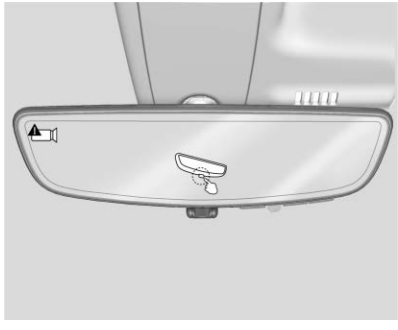
- Tilt



**⚠ Warning**

The Rear Camera Mirror (RCM) has a limited view. Portions of the road, vehicles, and other objects may not be seen. Do not drive or park the vehicle using only this camera. Objects may appear closer than they are. Check the outside mirrors or glance over your shoulder when making lane changes or merging. Failure to use proper care may result in injury, death, or vehicle damage.

**Troubleshooting**



See your retailer for service if a blue screen and ⚠ are displayed in the mirror, and the display shuts off. Also, push the tab as indicated to return to the automatic dimming mode.

The Rear Camera Mirror may not work properly or display a clear image if:

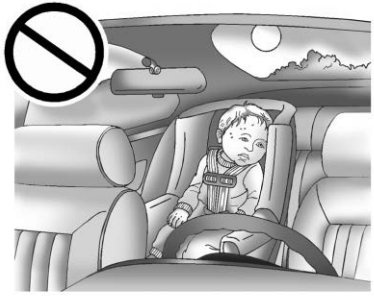
- There is glare from the sun or headlights. This may obstruct objects from view. If needed, push the tab to turn off the display.
- Dirt, snow, or other debris blocks the camera lens. Clean the lens with a soft damp cloth or, if equipped, with the Rear Camera Washer. See *Rear Window Wiper/ Washer* ⇨ *99*.

- The camera's mounting on the vehicle has been damaged, and/or the position or the mounting angle of the camera has changed.

# Windows

**⚠ Warning**

Never leave a child, a helpless adult or a pet alone in a vehicle, especially with the windows closed in warm or hot weather. They can be overcome by the extreme heat and suffer permanent injuries or even death from heat stroke.

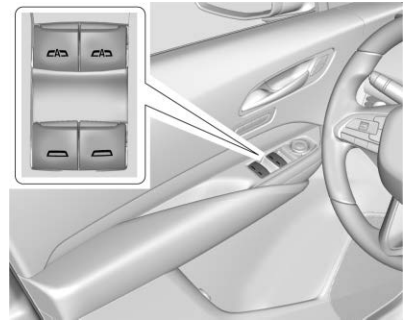


The vehicle aerodynamics are designed to improve fuel economy performance. This may result in a pulsing sound when either rear window is down and the front windows are up. To reduce the sound, open either a front window or the sunroof, if equipped.

## Power Windows

**⚠ Warning**

Children could be seriously injured or killed if caught in the path of a closing window. Never leave the Remote Keyless Entry (RKE) transmitter in a vehicle with children. When there are children in the rear seat, use the window lockout switch to prevent operation of the windows. See *Keys* ⇨ *7*.

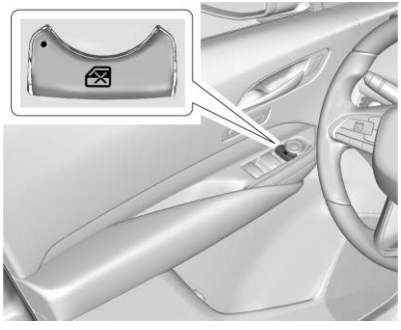


The power windows work when the ignition is on, in ACC/ACCESSORY, or when Retained Accessory Power (RAP) is active. See *Retained Accessory Power (RAP)* ⇨ *169*.

Using the window switch, press to open or pull to close the window.

The windows may be temporarily disabled if they are used repeatedly within a short time.

### Window Lockout



This feature stops the rear passenger window switches from working.

- Press to engage the rear window lockout feature. The indicator light is on when engaged.
- Press again to disengage.

### Window Express Movement

All windows can be opened without holding the window switch. Press the switch down fully and quickly release to express open the window.

If equipped, pull the window switch up fully and quickly release to express close the window.

Briefly press or pull the window switch in the same direction to stop that window's express movement.

### Window Automatic Reversal System

The express-close feature will reverse window movement if it comes in contact with an object. Extreme cold or ice could cause the window to auto-reverse. The window will operate normally after the object or condition is removed.

### Automatic Reversal System Override

**⚠ Warning**

If automatic reversal system override is active, the window will not reverse automatically. You or others could be injured and the window could be damaged. Before using automatic reversal system

(Continued)

**Warning (Continued)**

override, make sure that all people and obstructions are clear of the window path.

When the engine is on, override the automatic reversal system by pulling and holding the window switch if conditions prevent it from closing.

### Programming the Power Windows

Programming may be necessary if the vehicle battery has been disconnected or discharged. If the window is unable to express-up, program each express-close window:

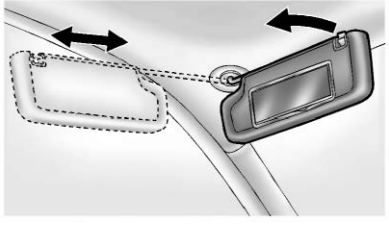
1. Close all doors.
2. Turn the ignition on or to ACC/ ACCESSORY.
3. Partially open the window to be programmed. Then close it and continue to pull the switch briefly after the window has fully closed.

4. Open the window and continue to press the switch briefly after the window has fully opened.

### Remote Window Operation

If equipped, this feature allows all windows to be opened remotely. If enabled in vehicle personalisation, press and hold on the RKE transmitter. See *Vehicle Personalisation* ⇨ *127*.

## Sun Visors

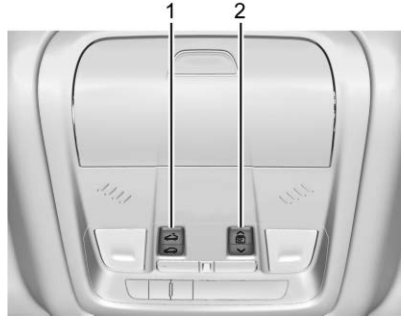


Pull the sun visor down to block glare. Detach the sun visor from the centre mount to pivot to the side window and, if equipped, extend along the rod.

# Roof

## Sunroof

If equipped, the ignition must be on or in ACC/ACCESSORY, or Retained Accessory Power (RAP) must be active to operate the sunroof. See *Ignition Positions* ⇨ *164* and *Retained Accessory Power (RAP)* ⇨ *169*.




1. Sunroof Switch
2. Sunshade Switch

**Sunroof Express Operation :** Press and release (1) to vent. Press and release again to move to the partially opened comfort stop position. Press and release again to express-open to the fully opened position. Press and release (1) at any time to stop movement. Press and release (1) to express-close. Press and release (1) at any time to stop movement.

**Sunroof Manual Operation :** The sunroof can change to manual mode by holding (1) while opening. The sunroof will now open for as long as (1) is held depressed. Press and release (1) again to change back to express operation.

**Power Sunshade Express Operation :** Press and release (2) to express-open the sunshade. Press and release (2) at any time to stop movement. Press and release (2) to express-close the sunshade. Press and release (2) at any time to stop movement.

**Power Sunshade Manual Operation :** The sunshade can change to manual mode by holding (2) depressed while opening. The

sunshade will now open for as long as (2) is held depressed. Press and release (2) again to change back to express operation.

The sunroof cannot be opened or closed if the vehicle has an electrical failure.

### Automatic Reversal System

The sunroof and power sunshade have an automatic reversal system that is only active when the sunroof and power sunshade, if equipped, are operated in express-close mode.

If an object is in the path of the express-closing, the reversal system will detect an object, stop, and open the sunroof or power sunshade slightly.

If frost or other conditions prevent closing, override the feature by closing the sunroof or power sunshade in manual mode. To stop movement, release the switch.

Dirt and debris may collect on the sunroof seal or in the track. This could cause an issue with sunroof operation or noise. It could also plug the water drainage system. Periodically open the sunroof and remove any obstacles or loose debris. Wipe the sunroof seal and roof sealing area using a clean cloth, mild soap, and water. Do not remove grease from the sunroof.

# Seats and Restraints

# Head Restraints

## Front Seats

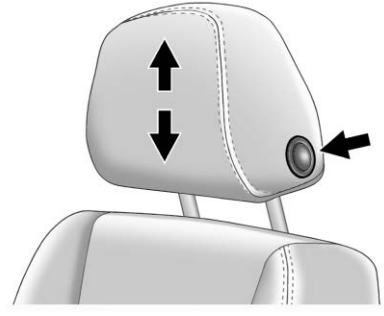
**⚠ Warning**

With head restraints that are not installed and adjusted properly, there is a greater chance that occupants will suffer a neck/spinal injury in a crash. Do not drive until the head restraints for all occupants are installed and adjusted properly.

The vehicle's front seats have adjustable head restraints in the outboard seating positions.

Adjust the head restraint so that the top of the restraint is at the same height as the top of the occupant's head. This position reduces the chance of a neck injury in a crash.

The height of the head restraint can be adjusted.



To raise or lower the head restraint, press the button located on the side of the head restraint, and pull up or push the head restraint down, and release the button. Pull and push on the head restraint after the button is released to make sure that it is locked in place.

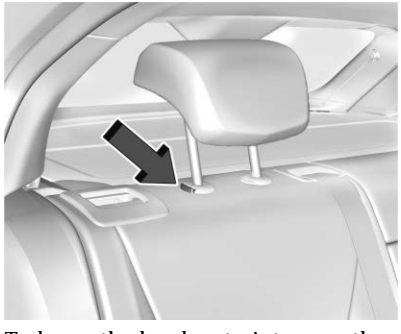
The front seat outboard head restraints are not removable.

## Rear Seats

### Adjusting the Rear Head Restraint

The vehicle's rear seats have adjustable head restraints in all three seating positions.

The height of the head restraint can be adjusted. Pull the head restraint up to raise it. Try to move the head restraint to make sure that it is locked in place.



To lower the head restraint, press the button, located on the top of the seat backrest, and push the head restraint down. Try to move the head restraint after the button is released to make sure that it is locked in place.

# Front Seats

## Seat Adjustment

**⚠ Warning**

You can lose control of the vehicle if you try to adjust a driver seat while the vehicle is moving. Adjust the driver seat only when the vehicle is not moving.

To adjust the seat position:

1. Pull the handle at the front of the seat cushion to unlock the seat.
2. Move the seat forward or rearward and release the handle.
3. Try to move the seat back and forth to be sure it is locked in place.

### Seat Height Adjuster

Move the lever up or down to raise or lower the seat.

## Power Seat Adjustment

**⚠ Warning**

You can lose control of the vehicle if you try to adjust a driver seat while the vehicle is moving. Adjust the driver seat only when the vehicle is not moving.

**⚠ Warning**

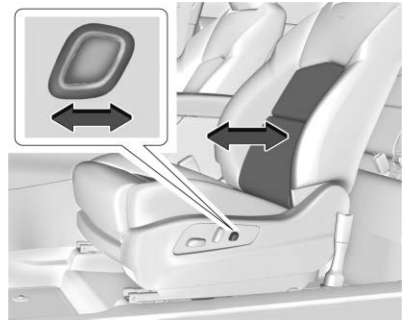
The power seats will work with the ignition off. Children could operate the power seats and be injured. Never leave children alone in the vehicle.

To adjust a power seat, if equipped:

- Move the seat forward or rearward by sliding the control forward or rearward.
- Raise or lower the front part of the seat cushion by moving the front of the control up or down.
- Raise or lower the entire seat by moving the rear of the control up or down.

## Lumbar Adjustment

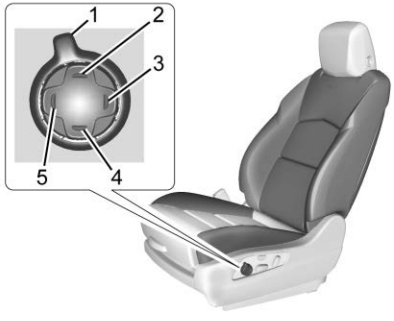
### Base Lumbar Adjustment



If equipped, press and hold the front or rear of the control to increase or decrease lumbar support.

### Uplevel Lumbar and Bolster Adjustment

To adjust the lumbar or bolster, if equipped




1. Feature Select
2. Up (lumbar only)
3. Rearward
4. Down (lumbar only)
5. Forward

- Move Feature Select (1) to display lumbar and bolster adjustments on the centre console. Press and release or hold to scroll through features.
- Press Up (2) to make upward lumbar adjustments.
- Press Rearward (3) to make rearward adjustments of the selected feature.
- Press Down (4) to make downward lumbar adjustments.
- Press Forward (5) to make forward adjustments of the selected feature.

## Reclining Seat Backrests

**⚠ Warning**

Sitting in a reclined position when the vehicle is in motion can be dangerous. Even when fastened, the seat belts cannot do their job.

The shoulder belt will not be against your body. Instead, it will be in front of you. In a crash, you could go into it, receiving neck or other injuries.

The lap belt could go up over your abdomen. The belt forces would be there, not at your pelvic bones. This could cause serious internal injuries.

(Continued)

**Warning (Continued)**

For proper protection when the vehicle is in motion, have the seatback upright. So sit well back in the seat and wear the seat belt properly.

Do not have a backrest reclined if the vehicle is moving.

## Manual Reclining Seatbacks

**⚠ Warning**

If either seatback is not locked, it could move forward in a sudden stop or crash. That could cause injury to the person sitting there. Always push and pull on the seatbacks to be sure they are locked.

To recline a manual seatback:

1. Lift the lever.
2. Move the backrest to the desired position, and then release the lever to lock the backrest in place.
3. Push and pull on the backrest to make sure it is locked.

To return the seat backrest to the upright position:

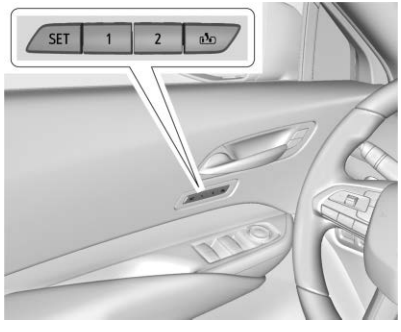
1. Lift the lever fully without applying pressure to the seatback, and the seatback will return to the upright position.
2. Push and pull on the backrest to make sure it is locked.

## Power Reclining Seatbacks

To adjust a power seatback, if available:

- Tilt the top of the control rearward to recline.
- Tilt the top of the control forward to raise.

## Memory Seats




If equipped, memory seats allow two drivers to save and recall their unique seat positions for driving the vehicle, and a shared exit position for getting out of the vehicle. Other feature positions may also be saved, such as power mirrors and power steering wheel, if equipped. Memory positions are linked to RKE transmitter 1 or 2 for automatic memory recalls.

Before saving, adjust all available memory feature positions. Turn the vehicle on and then press and release SET; a beep will sound. Then immediately press and hold 1, 2, or (Exit) until two beeps sound. To manually recall these positions, press and hold 1, 2, or until the saved position is reached. Follow the instructions under “Saving Memory Positions.”

The vehicle identifies the current driver's RKE transmitter number (1–8). See *Remote Keyless Entry (RKE) System Operation* ⇨ *8*. Only RKE transmitters 1 and 2 can be used for automatic memory recalls. A Driver Information Centre (DIC) welcome message indicating the transmitter number may display for the first few ignition cycles following a transmitter change. For Seat Entry Memory to work properly, save the positions to the memory button (1 or 2) matching the RKE transmitter number displayed in the DIC welcome message. Carry the linked RKE transmitter when entering the vehicle.

### Vehicle Personalisation Settings

- To have the Seat Entry Memory movement begin when the vehicle is started, select the Settings menu, then Vehicle, then Seating Position, and then Seat Entry Memory. Select On or Off. See “Seat Entry Memory” later in this section.
- To begin Seat Exit Memory movement when the vehicle is turned off and the driver door is opened, or when the vehicle is turned off with the driver door already opened, select the Settings menu, then Vehicle, then Seating Position, and then Seat Exit Memory. Select On or Off. See “Seat Exit Memory” later in this section.
- See *Vehicle Personalisation* ⇨ *127* for additional setting information.

### Identifying Driver Number

To identify the driver number:

1. Move your RKE transmitter away from the vehicle.
2. Start the vehicle with another key or RKE transmitter. The DIC should display the driver number for the other RKE transmitter. Turn the vehicle off and remove the key or RKE transmitter from the vehicle.

3. Start the vehicle with the initial key or RKE transmitter. The DIC should display the driver number of your RKE transmitter.

### Saving Memory Positions

Read these instructions completely before saving memory positions.

To save preferred driving positions 1 and 2:

1. Turn the vehicle on or to ACC/ ACCESSORY.

   A DIC welcome message may indicate driver number 1 or 2.

2. Adjust all available memory features to the desired driving position.
3. Press and release SET; a beep will sound.
4. Immediately press and hold the 1 or 2 memory button matching the above DIC welcome message until two beeps sound.

   If too much time passes between releasing SET and pressing 1, the memory position will not be saved and two beeps will not sound. Repeat Steps 3 and 4.

   1 or 2 corresponds to the driver number. See “Identifying Driver Number” previously in this section.

5. Repeat Steps 1–4 for a second driver using 1 or 2.

To save the position for and Seat Exit Memory features, repeat Steps 1–4 using . This saves the position for getting out of the vehicle.

Save preferred memory feature positions to both 1 and 2 if you are the only driver.

### Manually Recalling Memory Positions

Press and hold 1, 2, or to recall the previously saved memory positions if you are driver 1 or 2 identified in the DIC welcome message.

To stop Manual Memory recall movement, release 1, 2, or or press any of the following controls:

- Power seat
- Memory SET
- Power mirror, with the driver or passenger side mirror selected
- Power steering wheel, if equipped

Manual Memory recall movement for 1, 2, or buttons may be initiated and may complete to the saved memory position if the vehicle is in or out of P (Park).

### Seat Entry Memory

The vehicle identifies the number of the current driver's RKE transmitter (1–8). See *Remote Keyless Entry (RKE) System Operation* ⇨ *8*. If the RKE transmitter is 1 or 2, and Seat Entry Memory is enabled in vehicle personalisation, the positions saved to the same memory button number 1 or 2 are automatically recalled when the vehicle is turned on, or turned from off to ACC/ACCESSORY. RKE transmitters 3–8 will not provide automatic memory recalls.

To turn Seat Entry Memory on or off, see “Vehicle Personalisation Settings” previously in this section and *Vehicle Personalisation* ⇨ *127*.

The vehicle must be in P (Park) to start Seat Entry Memory. Seat Entry Memory recall will complete if the vehicle is shifted out of P (Park) prior to reaching the saved memory position.

To stop Seat Entry Memory recall movement, turn the vehicle off or press any of the following controls:

- Power seat
- Memory SET, 1, 2, or
- Power mirror, with the driver or passenger side mirror selected
- Power steering wheel, if equipped

If the saved memory seat position does not automatically recall or recalls to the wrong positions, the driver's RKE transmitter number (1 or 2) may not match the memory button number that positions were saved to. Try storing the position to the other memory button or try the other RKE transmitter.

### Seat Exit Memory

Seat Exit Memory is not linked to an RKE transmitter. The position saved to is used for all drivers. To turn Seat Exit Memory on or off, see "Vehicle Personalisation Settings" previously in this section and *Vehicle Personalisation* ⇨ *127*.

If turned on, the position saved to is automatically recalled when one of the following occurs:

- The vehicle is turned off and the driver's door is opened within a short time.
- The vehicle is turned off with the driver's door open.

To stop Seat Exit Memory movement, press any of the following memory controls:

- Power seat
- Memory SET, 1, 2, or
- Power mirror, with the driver or passenger side mirror selected
- Power steering wheel, if equipped

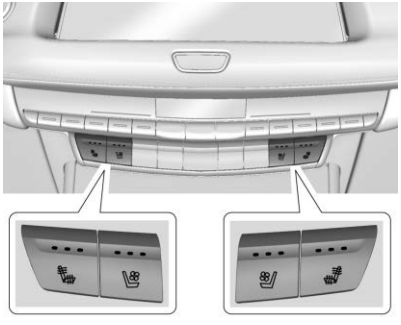
### Obstructions

If something has blocked the driver seat while recalling a memory position, the recall may stop. Remove the obstruction and try the recall again. If the memory position still does not recall, see your dealer.

## Heated and Ventilated Front Seats

**⚠ Warning**

If temperature change or pain to the skin cannot be felt, the seat heater may cause burns. To reduce the risk of burns, use care when using the seat heater, especially for long periods of time. Do not place anything on the seat that insulates against heat, such as a blanket, cushion, cover, or similar item. This may cause the seat heater to overheat. An overheated seat heater may cause a burn or may damage the seat.



Uplevel Buttons Shown, Base Buttons Similar

If equipped, the buttons are near the climate controls on the centre stack. To operate, the engine must be running.

Press or to heat the driver or passenger cushion and backrest.

Press or to ventilate the driver or passenger seat.

Press the button once for the highest setting. With each press of the button, the seat will change to the next lower setting, and then to the off setting. The indicator lights above the buttons indicate three for the highest setting and one for the lowest. If the front heated seats are on high, the level may automatically be lowered after approximately 30 minutes.

A ventilated seat has a fan that pulls or pushes air through the seat. The air is not cooled.

The passenger seat may take longer to heat up.

### Auto Heated and Ventilated Seats

If the vehicle is equipped with auto heated or ventilated seats, and the engine is running, this feature will automatically activate the heated or ventilated seats at the level required by the vehicle's interior temperature.

The active high, medium, low, or off heated or ventilated seat level will be indicated by the manual heated and ventilated seat buttons on the centre console. Use the manual heated and ventilated seat buttons on the centre console to turn auto heated or ventilated seats off. If the passenger seat is unoccupied, the auto heated or ventilated seats feature will not activate that seat. The auto heated and ventilated seats feature can be programmed to always be enabled when the vehicle is on. If equipped with a heated steering wheel, the auto heated steering wheel activation will follow the heated seat auto activation and the heated steering wheel indicator will follow the status of the steering wheel heat.

See *Vehicle Personalisation* ⇨ *127*.

### Remote Start Heated and Ventilated Seats

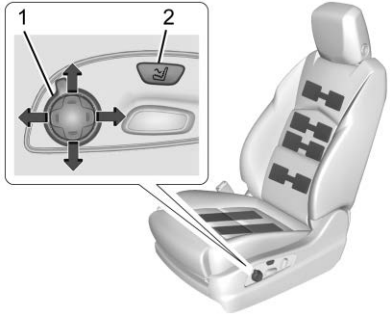
If equipped, the heated seats will turn on automatically during a remote start if it is cold outside and the ventilated seats will turn on automatically if it is hot outside. If equipped, the heated steering wheel will turn on automatically during a remote start if it is cold outside. The heated and ventilated seat indicators and heated steering wheel indicator may not come on during this operation.

The heated and ventilated seats and heated steering wheel may cancel when the vehicle is started. These features can be manually selected after the ignition is turned on.

The temperature performance of an unoccupied seat may be reduced. This is normal.

The heated or ventilated seats will not turn on during a remote start unless they are enabled in the vehicle personalisation menu. See *Remote Vehicle Start* ⇨ *14* and *Vehicle Personalisation* ⇨ *127*.

## Massage




If equipped, the ignition must be on to use the massage feature.

To activate and adjust massage:

1. Turn the selection control (1) to view massage options on the infotainment display.
2. Select massage feature.
3. Press up or down to select the massage type.
4. Press forward or rearward to change the intensity.
5. To activate massage at last massage type and intensity settings or to turn massage off, press the massage On/Off control (2).

The massage feature will turn off after approximately 20 minutes. Press the massage button to restart the massage feature.

# Rear Seats

### Rear Seat Reminder

If equipped, the message REAR SEAT REMINDER LOOK IN REAR SEAT displays under certain conditions indicating there may be an item or passenger in the rear seat. Check before exiting the vehicle.

This feature will activate when a second row door is opened while the vehicle is on, or up to 10 minutes before the vehicle is turned on. There will be an alert when the vehicle is turned off. The alert does not directly detect objects in the rear seat; instead, under certain conditions, it detects when a rear door is opened and closed, indicating that there may be something in the rear seat.

The feature is active only once each time the vehicle is turned on and off, and will require reactivation by opening and closing the second row doors. There may be an alert even when there is nothing in the rear seat; for example, if a child entered the

vehicle through the rear door and left the vehicle without the vehicle being turned off.

The feature can be turned on or off. See *Vehicle Personalisation* ⇨ *127*.

### Manually Folding the Backrests

**Caution**

Folding a rear seat with the seat belts still fastened may cause damage to the seat or the seat belts. Always unfasten the seat belts and return them to their normal stowed position before folding a rear seat.

1. Place the front backrests in the upright position. See *Reclining Seat Backrests* ⇨ *45*.
2. Lower the rear head restraint. See *Head Restraints* ⇨ *42*.

3. Pull on the lever on the top of the backrest to unlock it and fold the backrest forward.

   For outboard backrests, a tab near the backrest lever moves forward when the backrest is unlocked.

### Raising the Seatbacks

**⚠ Warning**

If either seatback is not locked, it could move forward in a sudden stop or crash. That could cause

(Continued)

**Warning (Continued)**

injury to the person sitting there. Always push and pull on the seatbacks to be sure they are locked.

**⚠ Warning**

A seat belt that is improperly routed, not properly attached, or twisted will not provide the protection needed in a crash. The person wearing the belt could be seriously injured. After raising the rear backrest, always check to be sure that the seat belts are properly routed and attached, and are not twisted.

To raise the seat backrest:

1. Push the seatback rearward until it locks in the upright position.

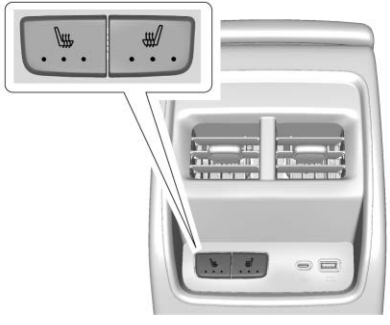
   For outboard seats, a tab near the backrest lever retracts when the backrest is locked in place.

2. Make sure the rear seat belts are in the belt guide and are not twisted or caught between the seat cushion and the backrest.

## Heated Rear Seats

**⚠ Warning**

If temperature change or pain to the skin cannot be felt, the seat heater may cause burns. See the Warning under *Heated and Ventilated Front Seats* ⇨ *49*.



If equipped, the rear heated seat buttons are on the rear of the centre console.

Press or to heat the left outboard or right outboard seat. Press the button once for the highest setting. With each press of the button, the seat will change to the next lower setting, and then to the off setting. The indicator lights on the buttons indicate three for the highest setting and one for the lowest.

# Seat Belts

This section describes how to use seat belts properly, and some things not to do.

**⚠ Warning**

Do not let anyone travel where a seat belt cannot be worn properly. In a crash, if you or your passenger(s) are not wearing seat belts, injuries can be much worse than if you are wearing seat belts. You can be seriously injured or killed by hitting things inside the vehicle harder or by being ejected from the vehicle. In addition, anyone who is not buckled up can strike other passengers in the vehicle.

It is extremely dangerous to ride in a cargo area, inside or outside of a vehicle. In a collision, passengers riding in these areas are more likely to be seriously injured or killed. Do

(Continued)

**Warning (Continued)**

not allow passengers to travel in any area of the vehicle that is not equipped with seats and seat belts.

Always wear a seat belt, and check that all passenger(s) are restrained properly too.

This vehicle has indicators as a reminder to fasten the seat belts. See *Seat Belt Reminders* ⇨ *108*.

### Why Seat Belts Work

When riding in a vehicle, you travel as fast as the vehicle does. If the vehicle stops suddenly, you keep going until something stops you. It could be the windscreen, the instrument panel, or the seat belts!

When you wear a seat belt, you and the vehicle slow down together. There is more time to stop because you stop over a longer distance and, when worn properly, your strongest bones take the forces from the seat belts. That is why wearing seat belts makes such good sense.

### Questions and Answers About Seat Belts

**Q: Will I be trapped in the vehicle after a crash if I am wearing a seat belt?**

**A:** You *could* be — whether you are wearing a seat belt or not. Your chances of being conscious during and after a crash, so you *can* unbuckle and get out, are *much* greater if you are belted.

**Q: If my vehicle has airbags, why should I have to wear a seat belt?**

**A:** Airbags are supplemental systems only. They work *with* seat belts — not instead of them. Whether or not an airbag is provided, all occupants still have to buckle up to get the most protection.

Also, in nearly all regions, the law requires wearing seat belts.

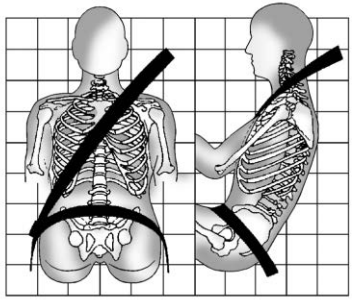
## How to Wear Seat Belts Properly

Follow these rules for everyone's protection.

There are additional things to know about seat belts and children, including smaller children and infants. If a child will be riding in the vehicle, see *Older Children* ⇨ *71* or *Infants and Young Children* ⇨ *71*. Review and follow the rules for children in addition to the following rules.

It is very important for all occupants to buckle up. Statistics show that unbelted people are hurt more often in crashes than those who are wearing seat belts.

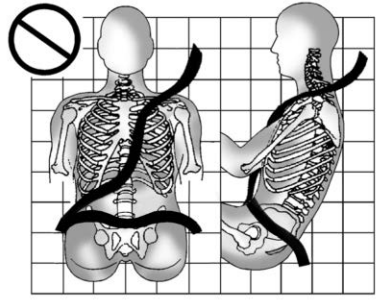
There are important things to know about wearing a seat belt properly.

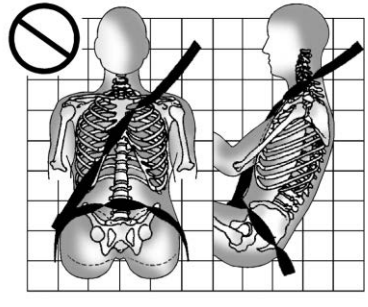


- Sit up straight and always keep your feet on the floor in front of you (if possible).
- Always use the correct buckle for your seating position.
- Wear the lap part of the belt low and snug on the hips, just touching the thighs. In a crash, this applies force to the strong pelvic bones and you would be less likely to slide under the lap belt. If you slid under it, the belt would apply force on your abdomen. This could cause serious or even fatal injuries.
- Wear the shoulder belt over the shoulder and across the chest. These parts of the body are best able to take belt restraining forces. The shoulder belt locks if there is a sudden stop or crash.

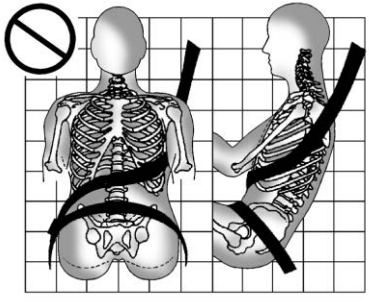
**⚠ Warning**

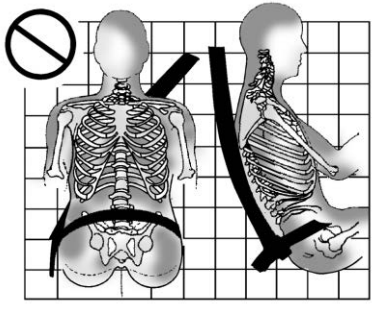
You can be seriously injured, or even killed, by not wearing your seat belt properly.



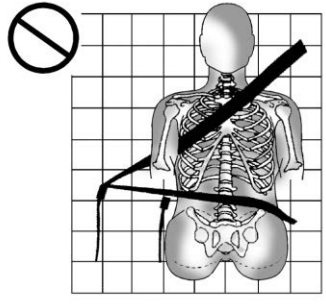


Never allow the lap or shoulder belt to become loose or twisted.

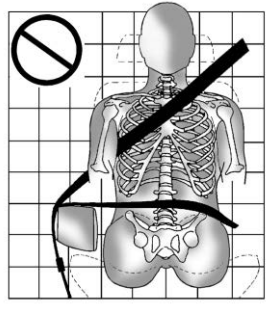




Never wear the shoulder belt under both arms or behind your back.



Always use the correct buckle for your seating position.



Never route the lap or shoulder belt over an armrest.

**⚠ Warning**

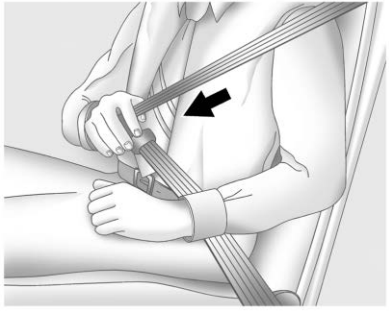
The seat belt can be pinched if it is routed under plastic trim on the seat, such as trim around the rear backrest folding handle or side airbag. In a crash, pinched seat belts might not be able to provide adequate protection. Never allow seat belts to be routed under plastic trim pieces.

## Lap-Shoulder Belt

All seating positions in the vehicle have a lap-shoulder belt.

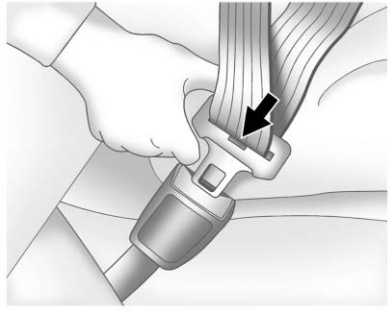
The following instructions explain how to wear a lap-shoulder belt properly.

1. Adjust the seat, if the seat is adjustable, so you can sit up straight. To see how, see "Seats" in the Index.



2. Pick up the latch plate and pull the belt across you. Do not let it get twisted.

   The lap-shoulder belt may lock if you pull the belt across you very quickly. If this happens, let the belt go back slightly to unlock it. Then pull the belt across you more slowly.

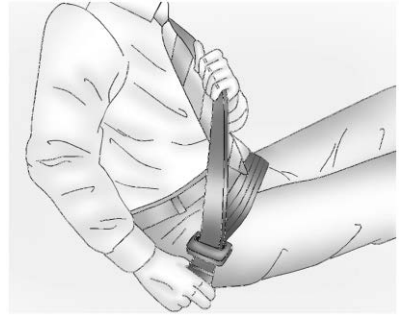


3. Push the latch plate into the buckle until it clicks.

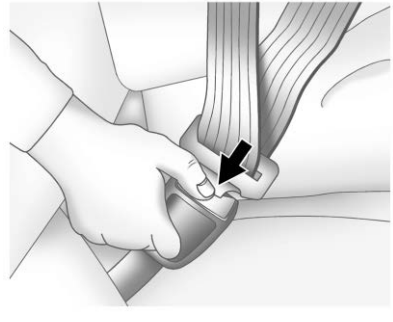
   Pull up on the latch plate to make sure it is secure.

   Position the release button on the buckle so that the seat belt could be quickly unbuckled if necessary.

4. If equipped with a shoulder belt height adjuster, move it to the height that is right for you. See “Shoulder Belt Height Adjuster” later in this section for instructions on use and important safety information.



5. To make the lap part tight, pull up on the shoulder belt.



To unlatch the belt, push the button on the buckle. The belt should return to its stowed position.

Always stow the seat belt slowly. If the seat belt webbing returns quickly to the stowed position, the retractor may lock and cannot be pulled out. If this happens, pull the seat belt straight out firmly to unlock the webbing, and then release it. If the webbing is still locked in the retractor, see your retailer.

Before a door is closed, be sure the seat belt is out of the way. If a door is slammed against a seat belt, damage can occur to both the seat belt and the vehicle.

## Shoulder Belt Height Adjuster

The vehicle has a shoulder belt height adjuster for the driver and front outboard passenger seating positions.

Adjust the height so that the shoulder portion of the belt is on the shoulder and not falling off of it. The belt should be close to, but not contacting, the neck. Improper shoulder belt height adjustment could reduce the effectiveness of the seat belt in a crash. See *How to Wear Seat Belts Properly* ⇨ *54*.

Press and hold the release button while raising or lowering the height adjuster to the desired position.

After the height adjuster is set to the desired position, try to move it down without pressing the release button to make sure it has locked into position.

## Seat Belt Pretensioners

This vehicle has seat belt pretensioners for front row and second row outboard occupants. Although the seat belt pretensioners cannot be seen, they are part of the seat belt assembly. They can help tighten the seat belts during the early stages of a moderate to severe frontal, near frontal, or rear crash if the threshold conditions for pretensioner activation are met. Seat belt pretensioners can also help tighten the seat belts in a side crash or roll-over event.

Pretensioners work only once. If the pretensioners activate in a crash, the pretensioners and probably other parts of the vehicle's seat belt system will need to be replaced. See *Replacing Seat Belt System Parts after a Crash* ⇨ *60*.

Do not sit on the outboard seat belt while entering or exiting the vehicle or at any time while sitting in the seat. Sitting on the seat belt can damage the webbing and hardware.

## Rear Seat Belt Comfort Guides

Rear seat belt comfort guides may provide added seat belt comfort for older children who have outgrown booster seats and for some adults.

When installed on a shoulder belt, the comfort guide positions the shoulder belt away from the neck and head.

The comfort guides for the second row outboard seating positions of this vehicle are provided in a package in the glovebox or cargo area. Instructions are included with the guides.

## Seat Belt Use During Pregnancy

Seat belts work for everyone, including pregnant women. Like all occupants, they are more likely to be seriously injured if they do not wear seat belts.

A pregnant woman should wear a lap-shoulder belt, and the lap portion should be worn as low as possible, below the rounding, throughout the pregnancy.

The best way to protect the foetus is to protect the mother. When a seat belt is worn properly, it is more likely that the foetus will not be hurt in a crash. For pregnant women, as for anyone, the key to making seat belts effective is wearing them properly.

## Safety System Check

Periodically check the seat belt reminder, seat belts, buckles, latch plates, retractors, shoulder belt height adjusters (if equipped) and seat belt anchorages to make sure they are all in working order. Look for any other loose or damaged seat belt system parts that might keep a seat belt system from performing properly. See your dealer to have it repaired. Torn, frayed or twisted seat belts may not protect you in a crash. Torn or frayed seat belts can rip apart under impact forces. If a belt is torn or frayed, have it replaced immediately. If a belt is twisted, it may be possible to untwist it by reversing the latch plate on the webbing. If the twist cannot be corrected, ask your retailer to fix it.

Make sure the seat belt reminder light is working. See *Seat Belt Reminders* ⇨ *108*.

Keep seat belts clean and dry. See *Seat Belt Care* ⇨ *59*.

## Seat Belt Care

Keep belts clean and dry.

Seat belts should be properly cared for and maintained.

Seat belt hardware should be kept dry and free of dust or debris. As necessary, exterior hard surfaces and seat belt webbing may be lightly cleaned with mild soap and water. Ensure there is not excessive dust or debris in the mechanism. If dust or debris exists in the system please see the dealer. Parts may need to be replaced to ensure proper functionality of the system.

**⚠ Warning**

Do not bleach or dye seat belt webbing. It may severely weaken the webbing. In a crash, they might not be able to provide adequate protection. Clean and rinse seat belt webbing only with mild soap and lukewarm water. Allow the webbing to dry.

## Replacing Seat Belt System Parts after a Crash

**⚠ Warning**

A crash can damage the seat belt system in the vehicle. A damaged seat belt system may not properly protect the person using it, resulting in serious injury or even death in a crash. To help make sure the seat belt systems are working properly after a crash, have them inspected and any necessary replacements made as soon as possible.

After a minor crash, replacement of seat belts may not be necessary. But the seat belt assemblies that were used during any crash may have been stressed or damaged. See your retailer to have the seat belt assemblies inspected or replaced.

New parts and repairs may be necessary even if the seat belt system was not being used at the time of the crash.

Have the seat belt pretensioners checked if the vehicle has been in a crash, or if the airbag readiness light stays on after you start the vehicle or while you are driving. See *Airbag Readiness Light* ⇨ *109*.

**⚠ Warning**

Safety procedures must be followed at all times when disposing of the vehicle or vehicle parts. Disposal should be performed only by an authorised service centre, to help protect the environment and your health.

## Airbag System

The vehicle has the following airbags:

- A frontal airbag for the driver
- A frontal airbag for the front outboard passenger
- A knee airbag for the driver.
- A knee airbag for the front outboard passenger.
- A seat-mounted side impact airbag for the driver
- A seat-mounted side impact airbag for the front outboard passenger
- A roof-rail airbag for the driver and the passenger seated directly behind the driver
- A roof-rail airbag for the front outboard passenger and the passenger seated directly behind the front outboard passenger

All vehicle airbags have the word AIRBAG on the trim or on a label near the deployment opening.

For frontal airbags, the word AIRBAG is on the centre of the steering wheel for the driver and on the instrument panel for the front outboard passenger.

For knee airbags, the word AIRBAG is on the lower part of the instrument panel.

For seat-mounted side impact airbags, the word AIRBAG is on the side of the backrest or side of the seat closest to the door.

For roof-rail airbags, the word AIRBAG is on the ceiling or trim.

Airbags are designed to supplement the protection provided by seat belts. Even though today's airbags are also designed to help reduce the risk of injury from the force of an inflating bag, all airbags must inflate very quickly to do their job.

Here are the most important things to know about the airbag system:

**⚠ Warning**

You can be severely injured or killed in a crash if you are not wearing your seat belt, even with airbags. Airbags are designed to work with seat belts, not replace them. Also, airbags are not designed to inflate in every crash. In some crashes seat belts are the only restraint. See *When Should an Airbag Inflate?* ⇨ *64*.

Wearing your seat belt during a crash helps reduce your chance of hitting things inside the vehicle or being ejected from it. Airbags are “supplemental restraints” to the seat belts. Everyone in the vehicle should wear a seat belt properly, whether or not there is an airbag for that person.

**⚠ Warning**

Because airbags inflate with great force and faster than the blink of an eye, anyone who is up against, or very close to, an airbag when it inflates can be seriously injured or killed. Do not sit unnecessarily close to any airbag, as you would be if sitting on the edge of the seat or leaning forward. Seat belts help keep you in position before and during a crash. Always wear a seat belt, even with airbags. The driver should sit as far back as possible while still maintaining control of the vehicle. The seat belts and the front outboard passenger airbags are most effective when you are sitting well back and upright in the seat with both feet on the floor.

Occupants should not lean on or sleep against the door or side windows in seating positions with seat-mounted side impact airbags and/or roof-rail airbags.

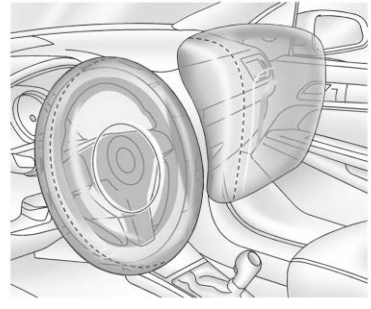
**⚠ Warning**

Children who are up against, or very close to, any airbag when it inflates can be seriously injured or killed. Always secure children properly in the vehicle. To read how, see *Older Children* ⇨ *71* or *Infants and Young Children* ⇨ *71*.

There is an airbag readiness light on the instrument cluster, which shows the airbag symbol.

The system checks the airbag electrical system for malfunctions. The light tells you if there is an electrical problem. See *Airbag Readiness Light* ⇨ *109*.

## Where Are the Airbags?



The driver frontal airbag is in the centre of the steering wheel.

The front outboard passenger frontal airbag is in the passenger side instrument panel.

The driver knee airbag is below the steering column. The front outboard passenger knee airbag is below the glove box.

Driver Side Shown, Passenger Side Similar

The driver and front outboard passenger seat-mounted side impact airbags are in the sides of the seatbacks closest to the door.

Driver Side Shown, Passenger Side Similar

The roof-rail airbags for the driver, front outboard passenger, and second row outboard passengers are in the ceiling above the side windows.

**⚠ Warning**

If something is between an occupant and an airbag, the airbag might not inflate properly or it might force the object into that person causing severe injury or even death. The path of an inflating

(Continued)

**Warning (Continued)**

airbag must be kept clear. Do not put anything between an occupant and an airbag, and do not attach or put anything on the steering wheel hub or on or near any other airbag covering.

Do not use seat accessories that block the inflation path of a seat-mounted side impact airbag.

Never secure anything to the roof of a vehicle with roof-rail airbags by routing a rope or tie-down through any door or window opening. If you do, the path of an inflating roof-rail airbag will be blocked.

## When Should an Airbag Inflate?

This vehicle is equipped with airbags. See *Airbag System* ⇨ *61*. Airbags are designed to inflate if the impact exceeds the specific airbag system's deployment threshold. Deployment thresholds are used to predict how severe a crash is likely to be in time for the airbags to inflate and help restrain the occupants. The vehicle has electronic sensors that help the airbag system determine the severity of the impact. Deployment thresholds can vary with specific vehicle design.

Frontal airbags are designed to inflate in moderate to severe frontal or near frontal crashes to help reduce the potential for severe injuries, mainly to the driver's or front outboard passenger's head and chest.

Whether the frontal airbags will or should inflate is not based primarily on how fast the vehicle is travelling. It depends on what is hit, the direction of the impact, and how quickly the vehicle slows down.

Frontal airbags may inflate at different crash speeds depending on whether the vehicle hits an object straight on or at an angle, and whether the object is fixed or moving, rigid or deformable, narrow or wide.

Frontal airbags are not intended to inflate during vehicle rollovers, rear impacts, or many side impacts.

In addition, the vehicle has advanced technology frontal airbags. Advanced technology frontal airbags adjust the restraint according to crash severity.

Knee airbags are designed to inflate in moderate to severe frontal or near-frontal impacts. Knee airbags are not designed to inflate during vehicle rollovers, in rear impacts, or in many side impacts.

Seat-mounted side impact airbags are designed to inflate in moderate to severe side crashes depending on the location of the impact. Seat-mounted side impact airbags are not designed to inflate in frontal impacts, near frontal impacts, rollovers, or rear impacts. A seat-mounted side impact airbag is designed to inflate on the side of the vehicle that is struck.

Roof-rail airbags are designed to inflate in moderate to severe side crashes depending on the location of the impact. In addition, these roof-rail airbags are designed to inflate during a rollover or in a severe frontal impact. Roof-rail airbags are not designed to inflate in rear impacts. Both roof-rail airbags will inflate when

either side of the vehicle is struck or if the sensing system predicts that the vehicle is about to roll over on its side, or in a severe frontal impact.

In any particular crash, no one can say whether an airbag should have inflated simply because of the vehicle damage or the repair costs.

## What Makes an Airbag Inflate?

In a deployment event, the sensing system sends an electrical signal triggering a release of gas from the inflator. Gas from the inflator fills the airbag causing the bag to break out of the cover. The inflator, the airbag, and related hardware are all part of the airbag module.

For airbag locations, see *Where Are the Airbags?* ⇨ *62*.

## How Does an Airbag Restrain?

In moderate to severe frontal or near frontal collisions, even belted occupants can contact the steering wheel or the instrument panel. In moderate to severe side collisions, even belted occupants can contact the inside of the vehicle.

Airbags supplement the protection provided by seat belts by distributing the force of the impact more evenly over the occupant's body.

Rollover capable roof-rail airbags are designed to help contain the head and chest of occupants in the outboard seating positions in the first and second rows. The rollover capable roof-rail airbags are designed to help reduce the risk of full or partial ejection in rollover events, although no system can prevent all such ejections.

But airbags would not help in many types of collisions, primarily because the occupant's motion is not toward those airbags. See *When Should an Airbag Inflate?* ⇨ *64*.

Airbags should never be regarded as anything more than a supplement to seat belts.

## What Will You See after an Airbag Inflates?

After frontal, knee, and seat-mounted side impact airbags inflate, they quickly deflate, so quickly that some people may not even realise the airbags inflated. Roof-rail airbags may still be at least partially inflated for some time after deployment. Some components of the airbag module may be hot for several minutes. For location of the airbags, see *Where Are the Airbags?* ⇨ *62*.

The parts of the airbag that come into contact with you may be warm, but not too hot to touch. There may be some smoke and dust coming from the vents in the deflated airbags. Airbag inflation does not prevent the driver from seeing out of the windscreen or being able to steer the vehicle, nor does it prevent people from leaving the vehicle.

**⚠ Warning**

When an airbag inflates, there may be dust in the air. This dust could cause breathing problems for people with a history of asthma or other breathing trouble. To avoid this, everyone should leave the vehicle as soon as it is safe to do so. If you have breathing problems but cannot get out of the vehicle after an airbag inflates, then get fresh air by opening a window or a door. If you experience breathing problems following an airbag deployment, you should seek medical attention.

The vehicle has a feature that may automatically unlock the doors, turn on the interior lamps and hazard warning lights, and shut off the fuel system after the airbags inflate. The feature may also activate, without airbag inflation, after an event that exceeds a predetermined threshold. After turning the ignition off and then on again, the fuel system will return to normal operation; the doors can be locked, the interior lamps can be turned off, and the hazard warning flashers can be turned off using the controls for those features. If any of these systems are damaged in the crash they may not operate as normal.

**⚠ Warning**

A crash severe enough to inflate the airbags may have also damaged important functions in the vehicle, such as the fuel system, brake and steering systems, etc. Even if the vehicle appears to be drivable after a moderate crash, there may be concealed damage that could make it difficult to safely operate the vehicle.

Use caution if you should attempt to restart the engine after a crash has occurred.

In many crashes severe enough to inflate the airbag, windscreens are broken by vehicle deformation. Additional windscreen breakage may also occur from the front outboard passenger airbag.

- Airbags are designed to inflate only once. After an airbag inflates, you will need some new parts for the airbag system. If you do not get them, the airbag system will not be there to help protect you in another crash. A new system will include airbag modules and possibly other parts. The service manual for the vehicle covers the need to replace other parts.
- The vehicle has a crash sensing and diagnostic module which records information after a crash. See *Vehicle Data Recording and Privacy* ⇨ *332*.
- Let only qualified technicians work on the airbag systems. Improper service can mean that an airbag system will not work properly. See your dealer for service.

## Airbag On-Off Switch

If the instrument panel has the switch pictured in the following illustration, the vehicle has an airbag on-off switch that you can use to manually turn the front outboard passenger airbag on or off. No other airbag is affected by the airbag on-off switch.


This switch should only be turned to the OFF position if the person in the front outboard passenger position belongs to a category indicated in this section:

**Infant. An infant (less than 1 year old) must travel in the front seat because:**

- *My vehicle has no rear seat;*
- *My vehicle has a rear seat too small to accommodate a rear-facing infant seat; or*
- *The infant has a medical condition which, according to the infant's physician, makes it necessary for the infant to ride in the front seat so that the driver can constantly monitor the child's condition.*

**Child age 1 to 12. A child age 1 to 12 must travel in the front seat because:**

- *My vehicle has no rear seat;*
- *Although children ages 1 to 12 ride in the rear seat(s) whenever possible, children ages 1 to 12 sometimes must travel in the front because no space is available in the rear seat(s) of my vehicle; or*
- *The child has a medical condition which, according to the child's physician, makes it necessary for the child to travel in the front seat so that the driver can constantly monitor the child's condition.*

**Medical Condition. A passenger has a medical condition which, according to his or her physician:**

- *Causes the passenger airbag to pose a special risk for the passenger; and*
- *Makes the potential harm from the passenger airbag in a crash greater than the potential harm from turning off the airbag and allowing the passenger, even if belted, to hit the instrument panel or windscreen in a crash.*

**⚠ Warning**

If the front outboard passenger frontal airbag is turned off for a person who does not belong to a category indicated in this section, that person will not have the extra protection of an airbag. In a crash, the airbag will not be able to inflate and help protect the person sitting there. Do not turn off the front

(Continued)

**Warning (Continued)**

outboard passenger frontal airbag unless the person sitting there belongs to a category indicated in this section.


To turn off the front outboard passenger frontal airbag, insert the ignition key into the airbag on-off switch, push in, and move the switch to the OFF position.

The airbag off light will come on and stay on to let you know the front outboard passenger airbag is turned off. See *Airbag On-Off Light* ⇨ *109*. The front outboard passenger airbag will remain turned off until you turn it back on again.

**⚠ Warning**

If the airbag readiness light ever comes on and stays on, it means that something may be wrong with the airbag system. For example, the front outboard passenger frontal airbag could inflate even though the airbag on-off switch is turned off.

To help avoid injury to yourself or others, have the vehicle serviced right away. See *Airbag Readiness Light* ⇨ *109* for more information, including important safety information.


To turn the front outboard passenger airbag on again, insert the ignition key into the airbag on-off switch, push in, and move the switch to the ON position.

The front outboard passenger frontal airbag is now enabled, and may inflate. See *Airbag On-Off Light* ⇨ *109*.

## Servicing the Airbag-Equipped Vehicle

Airbags affect how the vehicle should be serviced. There are parts of the airbag system in several places around the vehicle. Your dealer and the

service manual have information about servicing the vehicle and the airbag system.

**⚠ Warning**

For up to 10 seconds after the vehicle is turned off and the battery is disconnected, an airbag can still inflate during improper service. You can be injured if you are close to an airbag when it inflates. Avoid yellow connectors. They are probably part of the airbag system. Be sure to follow proper service procedures, and make sure the person performing work for you is qualified to do so.

**⚠ Warning**

Safety procedures must be followed at all times when disposing of the vehicle or vehicle parts. Disposal should be performed only by an

(Continued)

**Warning (Continued)**

authorised service centre, to help protect the environment and your health.

## Adding Equipment to the Airbag-Equipped Vehicle

Adding accessories that change the vehicle's frame, bumper system, height, front end, or side sheet metal may keep the airbag system from working properly.

The operation of the airbag system can also be affected by changing, including improperly repairing or replacing, any parts of the following:

- Airbag system, including airbag modules, front or side impact sensors, sensing and diagnostic module, or airbag wiring
- Front seats, including stitching, seams or zip fasteners
- Seat belts
- Steering wheel, instrument panel, overhead console, ceiling trim, or pillar garnish trim
- Inner door seals, including speakers

Your retailer and the service manual have information about the location of the airbag modules and sensors, sensing and diagnostic modules and airbag wiring, along with the proper replacement procedures.

If the vehicle has rollover roof-rail airbags, see *Different Size Tyres and Wheels* ⇨ *283* for additional important information.

If the vehicle must be modified because you have a disability and have questions about whether the modifications will affect the vehicle's airbag system, or if you have questions about whether the airbag system will be affected if the vehicle is modified for any other reason, see your retailer.

## Airbag System Check

The airbag system does not need regularly scheduled maintenance or replacement. Make sure the airbag readiness light is working. See *Airbag Readiness Light* ⇨ *109*.

**Caution**

If an airbag covering is damaged, opened, or broken, the airbag may not work properly. Do not open or break the airbag coverings. If there are any opened or broken airbag coverings, have the airbag covering and/or airbag module replaced. For the location of the airbags, see *Where Are the Airbags?* ⇨ *62*. See your dealer for service.

## Replacing Airbag System Parts after a Crash

**⚠ Warning**

A crash can damage the airbag systems in the vehicle. A damaged airbag system may not properly protect you and your passenger(s) in a crash, resulting in serious injury or even death. To help make sure the airbag systems are working properly after a crash, have them inspected and any necessary replacements made as soon as possible.

If an airbag inflates, you will need to replace airbag system parts. See your dealer for service.

If the airbag readiness light stays on after the vehicle is started or comes on when you are driving, the airbag system may not work properly. Have the vehicle serviced right away. See *Airbag Readiness Light* ⇨ *109*.

**⚠ Warning**

Safety procedures must be followed at all times when disposing of the vehicle or vehicle parts. Disposal should be performed only by an authorised service centre, to help protect the environment and your health.

# Child Restraints

## Older Children

Correct Seat Belt Use for Older Children

To verify if a child is able to use a lap-shoulder belt, make sure the child's knees fold comfortably on the edge of the seat. The shoulder belt should be positioned between the neck and the child's arm and the lap belt as low as possible over the child's hip.

**⚠ Danger**

- Accident statistics show that children are safer if they are in the rear seat and using a seat belt in a suitable way.
- Children not wearing a seat belt can be thrown out in a crash.
- Whenever a child is occupying a seat, the lap belt should be in a low position close to the hips, touching the child's thighs. This prevents loading to the abdomen in a crash.

**⚠ Danger**

This picture shows a child seated in a seat with a lap-shoulder belt used incorrectly. If a child uses the belt this way, in a crash the child can suffer injuries and risk of death.

## Infants and Young Children

Everyone in a vehicle needs protection! This includes infants and all other children. Neither the distance travelled nor the age and size of the traveller changes the need, for everyone, to use safety restraints.

**⚠ Warning**

Children can be seriously injured or strangled if a shoulder belt is wrapped around their neck. Never leave children unattended in a vehicle and never allow children to play with the seat belts.

Every time infants and young children ride in vehicles, they should have the protection provided by appropriate child restraints. Neither the vehicle's seat belt system nor its airbag system is designed for them.

Children who are not restrained properly can strike other people, or can be thrown out of the vehicle.

**⚠ Warning**

Never hold an infant or a child while riding in a vehicle. Due to crash forces, an infant or a child will become so heavy it is not possible to hold it during a crash.

(Continued)

**Warning (Continued)**

For example, in a crash at only 40 km/h (25 mph), a 5.5 kg (12 lb) infant will suddenly become a 110 kg (240 lb) force on a person's arms. An infant or child should be secured in an appropriate child restraint.

**⚠ Warning**

Children who are up against, or very close to, any airbag when it inflates can be seriously injured or killed. Never put a rear-facing child restraint in the front outboard seat. Secure a rear-facing child restraint in a rear seat. It is also better to secure a forward-facing child restraint in a rear seat. If you must secure a forward-facing child restraint in the front outboard seat, always move the front passenger seat as far back as it will go.

Child restraints are devices used to restrain, seat, or position children in the vehicle and are sometimes called child seats or car seats.

**There are three basic types of child restraints:**

- Forward-facing child restraints
- Rear-facing child restraints
- Belt-positioning booster seats

The proper child restraint for your child depends on their size, weight, and age, and also on whether the child restraint is compatible with the vehicle in which it will be used.

For each type of child restraint, there are many different models available. When purchasing a child restraint, be sure it is designed to be used in a motor vehicle.

The instruction manual that is provided with the child restraint states the weight and height limitations for that particular child restraint. In addition, there are many kinds of child restraints available for children with special needs.

**⚠ Warning**

To reduce the risk of neck and head injury in a crash, infants and toddlers should be secured in a rear-facing child restraint until age two, or until they reach the maximum height and weight limits of their child restraint.

**⚠ Warning**

A young child's hip bones are still so small that the vehicle seat belt may not remain low on the hip bones, as it should. Instead, it may settle up around the child's abdomen. In a crash, the belt would apply force on a body area that is unprotected by any bony structure. This alone could cause serious or fatal injuries. To reduce the risk of serious or fatal injuries during a crash, young children should always be secured in an appropriate child restraint.

## Child Restraint Systems

Infants and children should be placed in the rear seat and properly restrained, according to the terms in this manual.

A young child's hip bones are so small that the vehicle's regular seat belt may not remain low on the hip bones, as it should. Instead, there is a possibility

that it will load the abdomen and cause serious or fatal injury in a crash.


**⚠ Danger**

NEVER use a rearward-facing child restraint on a seat protected by an ACTIVE AIRBAG in front of it; DEATH or SERIOUS INJURY to the CHILD can occur.

**⚠ Danger**

If using a rear-facing child restraint on the front passenger seat, the airbag for the front passenger seat

(Continued)

**Danger (Continued)**

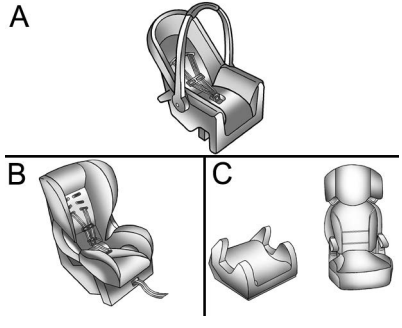
must be deactivated. This also applies to certain forward-facing child restraints as indicated in the tables listed in this manual.

See *Airbag On-Off Switch ⇨ 67*.

When a child restraint is being used, pay attention to the following usage and installation instructions and also those supplied with the child restraint.

Always comply with local or national regulations. In some countries, the use of child restraints is forbidden on certain seats.

| Group | Weight Class |
|---|---|
| Group 0 | Up to 10 kg (22 lb) |
| Group 0+ | Up to 13 kg (28 lb) |
| Group I | 9 to 18 kg (20 to 39 lb) |
| Group II | 15 to 25 kg (34 to 55 lb) |
| Group III | 22 to 36 kg (49 to 79 lb) |




**Model A :** Group 0 and 0+ – Baby Seat

**Model B :** Group I – Child Seat

**Model C :** Group II and III – Booster Seat

Child restraints are designed to be fastened with the lap-shoulder belt or the ISOFIX anchors. Some child restraints also use a top tether or support leg.

## Child Restraint Classification

For reference, child restraints available in the market are classified based on the child's mass. Carefully observe the installation and usage instructions given by the child restraint manufacturer.

When choosing a child restraint, it is important to consider the child's height in addition to its age and mass.

**⚠ Danger**

- Make sure that the child restraint is installed properly. If the child restraint is not properly attached, the risk of serious injury in the event of a collision increases.
- Do not attach or place objects or other materials on the child restraint.
- Do not leave any loose objects in the vehicle. During an impact, an object may move and cause injuries to the occupants.

(Continued)

**Danger (Continued)**

- After a crash, it is necessary to replace the child restraint because it may have suffered non-visible damage.
- Always restrain your child in a properly installed child restraint, even on short trips.
- Allow children to enter and exit the vehicle only on the side facing away from traffic.

**⚠ Warning**

- When carrying a child, follow the procedures for the transport of children established by the local laws.
- In some countries, the use of child restraints is forbidden on certain seats.
- After removing the child from the vehicle, keep the child restraint attached with the

(Continued)

**Warning (Continued)**

seat belt or ISOFIX, in order to avoid the child restraint from being thrown forward in case of sudden braking.

Make sure that the child restraint:

- Is installed in accordance with the instructions given by the child restraint manufacturer.
- Has the label of approval of safety regulations certification, in terms of the local laws.
- Is suitable for your vehicle.

## Selecting the Right Child Restraint

The rear seats are the most convenient location to fasten a child restraint.

Children should travel facing rearward in the vehicle to as late an age as possible. This makes sure that the child's backbone, which is still very weak, is under less strain in the event of a crash.

General Motors recommends using a genuine GM child restraint.

Ensure that the child restraint to be installed is compatible with the vehicle type.

Make sure that the mounting location of the child restraint within the vehicle is correct as per the tables included in this manual. See *Where to Put the Restraint* ⇨ *76*.

The provisions established by the laws have priority over the provisions of this manual.

**⚠ Danger**

Never use a single seat belt with an adult and a child. During an impact, the seat belt will exert strong pressure on the child, causing serious or fatal injury.

Never allow two children to share the same seat belt. Both could suffer serious injuries in a crash.

**⚠ Danger**

Infants and children must never be carried on the lap of another occupant.

Although an infant does not weigh much, it will be so heavy during a crash that it will be impossible to hold it, even if the occupant is attached to the seat belt.

## Where to Put the Restraint

According to accident statistics, children and infants are safer when properly restrained in an appropriate child restraint secured in a rear seating position.

Whenever possible, children aged 12 and under should be secured in a rear seating position.

Never put a rear-facing child restraint in the front. This is because the risk to the rear-facing child is so great if the airbag deploys.

**⚠ Danger**

NEVER use a rearward-facing child restraint on a seat protected by an ACTIVE AIRBAG in front of it; DEATH or SERIOUS INJURY to the CHILD can occur.

**⚠ Danger**

When using a child restraint on the front passenger seat, the airbag systems for the front passenger seat must be deactivated; if not, the triggering of the airbags poses a risk of fatal injury to the child.

This is especially the case if rear-facing child restraints are used on the front passenger seat.


EN: NEVER use a rearward-facing child restraint on a seat protected by an ACTIVE AIRBAG in front of it; DEATH or SERIOUS INJURY to the CHILD can occur.

FR: NE JAMAIS utiliser un siège d'enfant orienté vers l'arrière sur un siège protégé par un COUSSIN GONFLABLE ACTIF placé devant lui, sous peine d'infliger des BLESSURES GRAVES, voire MORTELLES à l'ENFANT.

DE: Nach hinten gerichtete Kindersitze NIEMALS auf einem Sitz verwenden, der durch einen davor befindlichen AKTIVEN AIRBAG geschützt ist, da dies den TOD oder SCHWERE VERLETZUNGEN DES KINDES zur Folge haben kann.

ES: NUNCA utilice un sistema de retención infantil orientado hacia atrás en un asiento protegido por un AIRBAG FRONTAL ACTIVO. Peligro de MUERTE o LESIONES GRAVES para el NIÑO.

SV: Använd ALDRIG en bakåtvänd barnstol på ett säte som skyddas med en framförvarande AKTIV AIRBAG. DÖDSFALL eller ALLVARLIGA SKADOR kan drabba BARNET.

IT: Non usare mai un sistema di sicurezza per bambini rivolto all'indietro su un sedile protetto da AIRBAG ATTIVO di fronte ad esso: pericolo di MORTE o LESIONI GRAVI per il BAMBINO!

NL: Gebruik NOOIT een achterwaarts gericht kinderzitje op een stoel met een ACTIEVE AIRBAG ervoor, om DODELIJK of ERNSTIG LETSEL van het KIND te voorkomen.

DA: Brug ALDRIG en bagudvendt autostol på et forsæde med AKTIV AIRBAG, BARNET kan komme i LIVSFARE eller komme ALVORLIGT TIL SKADE.

CS: NIKDY nepoužívejte dětský zádržný systém instalovaný proti směru jízdy na sedadle, které je chráněno před sedadlem AKTIVNÍM AIRBAGEM. Mohlo by dojít k VÁŽNÉMU PORANĚNÍ nebo ÚMRTÍ DÍTĚTE.

RU: ЗАПРЕЩАЕТСЯ устанавливать детское удерживающее устройство лицом назад на сиденье автомобиля, оборудованном фронтальной подушкой безопасности, если ПОДУШКА НЕ ОТКЛЮЧЕНА! Это может привести к СМЕРТИ или СЕРЬЕЗНЫМ ТРАВМАМ РЕБЕНКА.

FI: ÄLÄ KOSKAAN sijoita taaksepäin suunnattua lasten turvaistuinta istuimelle, jonka edessä on AKTIIVINEN TURVATYYNY, LAPSI VOI KUOLLA tai VAMMAUTUA VAKAVASTI.

NO: Bakovervendt barnesikringsutstyr må ALDRI brukes på et sete med AKTIV KOLLISJONSPUTE foran, da det kan føre til at BARNET utsettes for LIVSFARE og fare for ALVORLIGE SKADER.

PT: NUNCA use um sistema de retenção para crianças voltado para trás num banco protegido com um AIRBAG ACTIVO na frente do mesmo, poderá ocorrer a PERDA DE VIDA ou FERIMENTOS GRAVES na CRIANÇA.

EL: ΠΟΤΕ μη χρησιμοποιείτε παιδικό κάθισμα ασφαλείας με φορά προς τα πίσω σε κάθισμα που προστατεύεται από μετωπικό ΕΝΕΡΓΟ ΑΕΡΟΣΑΚΟ, διότι το παιδί μπορεί να υποστεί ΘΑΝΑΣΙΜΟ ή ΣΟΒΑΡΟ ΤΡΑΥΜΑΤΙΣΜΟ.

PL: NIE WOLNO montować fotelika dziecięcego zwróconego tyłem do kierunku jazdy na fotelu, przed którym znajduje się WŁĄCZONA PODUSZKA POWIETRZNA. Niezastosowanie się do tego zalecenia może być przyczyną ŚMIERCI lub POWAŻNYCH OBRAŻEŃ u DZIECKA.

TR: Arkaya bakan bir çocuk emniyet sistemini KESİNLİKLE önünde bir AKTİF HAVA YASTIĞI ile korunmakta olan bir koltukta kullanmayınız. ÇOCUK ÖLEBİLİR veya AĞIR ŞEKİLDE YARALANABİLİR.

UK: НІКОЛИ не використовуйте систему безпеки для дітей, що встановлюється обличчям назад, на сидінні з УВІМКНЕНОЮ ПОДУШКОЮ БЕЗПЕКИ, інакше це може призвести до СМЕРТІ чи СЕРЙОЗНОГО ТРАВМУВАННЯ ДИТИНИ.

HU: SOHA ne használjon hátrafelé néző biztonsági gyerekülést előlről AKTÍV LÉGZSÁKKAL védett ülésen, mert a GYERMEK HALÁLÁT vagy KOMOLY SÉRÜLÉSÉT okozhatja.

HR: NIKADA nemojte koristiti sustav zadržavanja za djecu okrenut prema natrag na sjedalu s AKTIVNIM ZRAČNIM JASTUKOM ispred njega, to bi moglo dovesti do SMRTI ili OZBILJNJIH OZLJEDA za DIJETE.

SL: NIKOLI ne nameščajte otroškega varnostnega sedeža, obrnjenega v nasprotni smeri vožnje, na sedež z AKTIVNO ČELNO ZRAČNO BLAZINO, saj pri tem obstaja nevarnost RESNIH ali SMRTNIH POŠKODB za OTROKA.

SR: NIKADA ne koristiti bezbednosni sistem za decu u kome su deca okrenuta unazad na sedištu sa AKTIVNIM VAZDUŠNIM JASTUKOM ispred sedišta zato što DETE može da NASTRADA ili da se TEŠKO POVREDI.

MK: НИКОГАШ не користете детско седиште свртено наназад на седиште заштитено со АКТИВНО ВОЗДУШНО ПЕРНИЧЕ пред него, затоа што детето може ДА ЗАГИНЕ или да биде ТЕШКО ПОВРЕДЕНО.

BG: НИКОГА не използвайте детска седалка, гледаща назад, върху седалка, която е защитена чрез АКТИВНА ВЪЗДУШНА ВЪЗГЛАВНИЦА пред нея - може да се стигне до СМЪРТ или СЕРИОЗНО НАРАНЯВАНЕ на ДЕТЕТО.

RO: Nu utilizaţi NICIODATĂ un scaun pentru copil îndreptat spre partea din spate a maşinii pe un scaun protejat

de un AIRBAG ACTIV în fața sa; acest lucru poate duce la DECESUL sau VĂTĂMAREA GRAVĂ a COPILULUI.

SK: NIKDY nepoužívajte detskú sedačku otočenú vzad na sedadle chránenom AKTÍVNYM AIRBAGOM, pretože môže dôjsť k SMRTI alebo VÁŽNYM ZRANENIAM DIEŤAŤA.

LT: JOKIU BŪDU nemontuokite atgal atgręžtos vaiko tvirtinimo sistemos sėdynėje, prieš kurią įrengta AKTYVI ORO PAGALVĖ, nes VAIKAS GALI ŽŪTI arba RIMTAI SUSIŽALOTI.

LV: NEKĀDĀ GADĪJUMĀ neizmantojiet uz aizmuguri vērstu bērnu sēdeklīti sēdvietā, kas tiek aizsargāta ar tās priekšā uzstādītu AKTĪVU DROŠĪBAS SPILVENU, jo pretējā gadījumā BĒRNS var gūt SMAGAS TRAUMAS vai IET BOJĀ.

ET: ÄRGE kasutage tahapoole suunatud lapseturvaistet istmel, mille ees on AKTIIVSE TURVAPADJAGA kaitstud iste, sest see võib põhjustada LAPSE SURMA või TÕSISE VIGASTUSE.

MT: QATT tuża trażżin għat-tfal li jħares lejn in-naħa ta' wara fuq sit protett b'AIRBAG ATTIV quddiemu; dan jista' jikkawż l-MEWT jew ĠIEĦ SERJI lit-TFAL.

GA: Ná húsáid srian sábháilteachta linbh cúil RIAMH ar shuíochán a bhfuil mála aeir ag feidhmiú os a chomhair.Tá baol BÁIS nó GORTÚ DONA don PHÁISTE ag baint leis.

When securing a child restraint with the seat belts in a rear seat position, study the instructions that came with the child restraint to make sure it is compatible with this vehicle.

Child restraints and booster seats vary considerably in size, and some may fit in certain seating positions better than others.

Depending on where you place the child restraint and the size of the child restraint, you may not be able to access adjacent seat belts or ISOFIX anchors for additional passengers or child restraints. Adjacent seating positions should not be used if the child restraint prevents access to or interferes with the routing of the seat belt.

The seat in front of an installed child restraint should be adjusted to ensure proper installation according to the child restraint manual.

Wherever a child restraint is installed, be sure to follow the instructions that came with the child restraint and secure the child restraint properly.

Keep in mind that an unsecured child restraint can move around in a collision or sudden stop and injure people in the vehicle. Be sure to properly secure any child restraint in the vehicle - even when no child is in it.

**Child Restraint Suitability**

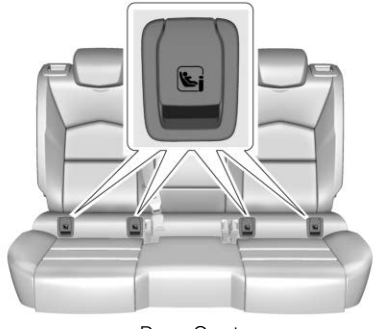
| | Seating Position | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Seat Position Number** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** |
| Seating Position Suitable for Universal Belted (Yes/No) | No | N/A | Yes[1] | Yes | No | Yes | N/A | N/A | N/A |
| i-Size Seating Position (Yes/No) | N/A | N/A | N/A | Yes | No | Yes | N/A | N/A | N/A |
| Seating Positions Suitable for Lateral Fixture (L1/L2) | N/A | N/A | N/A | No | No | No | N/A | N/A | N/A |
| Largest Suitable Rearward Facing Fixture (ISO R1/R2X/ R2/R3) | N/A | N/A | N/A | R3 | No | R3 | N/A | N/A | N/A |
| Largest Suitable Forward Facing Fixture (F2X/F2/F3) | N/A | N/A | N/A | F3 | No | F3 | N/A | N/A | N/A |
| Largest Suitable Booster Fixture (B2/B3) | N/A | N/A | No | B3 | No | B3 | N/A | N/A | N/A |

**Child Restraint Suitability (cont'd)**

| Legend and Footnotes |
|---|
| N/A: This feature/seating position does not exist in this vehicle |
| No: No Child Restraint permitted in this seating position |
| Yes: Child Restraint permitted in this seating position |
| [1]: Rear Facing Child Restraints are not permitted in this seat position. If a forward facing child restraint system is being secured using a three-point seat belt, move the seat as far back as possible, move the seat upward or the backrest to an upright position, if needed, to get a firm installation of the child restraint. See "Securing Child Restraints with Seat Belt in Front Seat" Section. |
| L1: Left lateral facing position child restraint system (carry-cot) |
| L2: Right lateral facing position child restraint system (carry-cot) |
| R1: Rearward Facing Infant child restraint system |
| R2X: Reduced-size Rearward Facing Toddler child restraint system |
| R2: Reduced-size Rearward Facing Toddler child restraint system |
| R3: Full-size Rearward Facing Toddler child restraint system |
| F2: Reduced-height Forward Facing toddler child restraint system |
| F2X: Reduced-height Forward Facing toddler child restraint system |
| F3: Full-height Forward Facing Toddler child restraint system |
| B2: Booster seat, reduced width 440 mm |
| B3: Booster seat, full width 520 mm |

| Seat Number | Position in the Vehicle |
|---|---|
| 1 | Driver |
| 2 | Front Centre |
| 3 | Front Outboard Passenger |
| 4 | 2nd Row Left |
| 5 | 2nd Row Centre |
| 6 | 2nd Row Right |
| 7 | 3rd Row Left |
| 8 | 3rd Row Centre |
| 9 | 3rd Row Right |

## ISOFIX Child Restraint Systems



Rear Seat

The ISOFIX anchors are located behind the vertical openings in the seat trim and identified with the symbol .

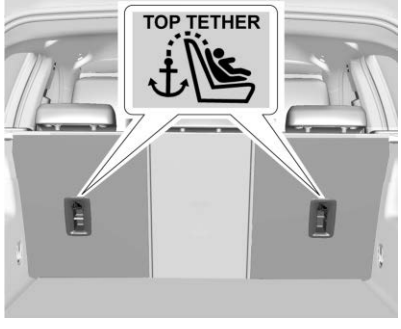
Fasten ISOFIX child restraints to the ISOFIX anchors.

Specific vehicle ISOFIX child restraint positions are marked in the “ISOFIX Child Restraint Systems Installation Suitability” table. See *Where to Put the Restraint* ⇨ *76*.

### Securing a Child Restraint to the ISOFIX Anchors

1. Position the child restraint on the front of the seat on which it will be installed.
2. Lock the ISOFIX attachments to the ISOFIX anchors following the instructions that came with the child restraint.
3. Ensure the child restraint is securely mounted to the seat.
4. A top tether strap or support leg must be used in addition to the ISOFIX anchors.

## Top Tether Anchors of Vehicle



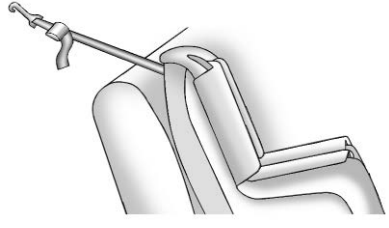

Top tether anchors are located on the back of the second row backrests and are always aligned with rear seats and identified with symbol TOP TETHER.

Do not attach anything other than a child restraint system to the vehicle top tether anchors.

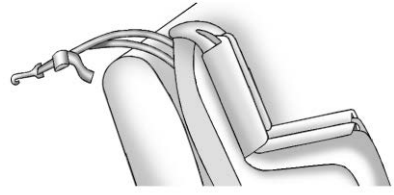
### Instructions for attaching the child restraint to the top tether anchor:

If the child restraint manufacturer recommends that a top tether be attached, attach and tighten the top tether to the top tether anchor, if equipped. Refer to the child restraint instructions and the following steps:

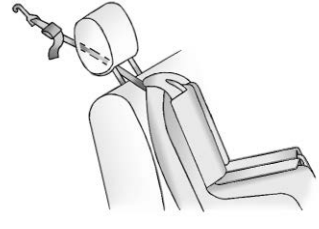
1. Find the top tether anchor.
2. Route, attach and tighten the top tether according to your child restraint instructions and the following instructions:



- If the position you are using does not have a head restraint and you are using a single tether, route the tether over the backrest.

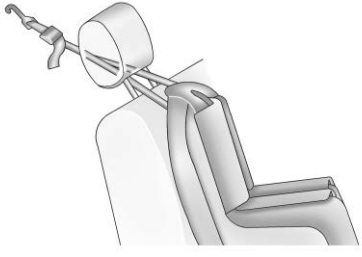


- If the position you are using does not have a head restraint and you are using a dual tether, route the tether over the backrest.



- If the position you are using has an adjustable head restraint and you are using a single tether, raise the head restraint and route the tether

under the head restraint and in between the head restraint posts.



- If the position you are using has an adjustable head restraint and you are using a dual tether, raise the head restraint and route the tether under the head restraint and in between the head restraint posts.

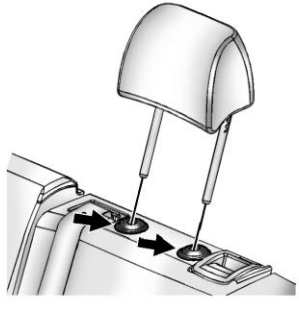
3. Make sure the child restraint top tether hook is completely closed and secured to the top tether anchor.

## Head Restraint Removal and Reinstallation

The rear outboard head restraints can be removed if they interfere with the proper installation of the child restraint.

To remove the head restraint:

1. Partially fold the backrest forward. See *Rear Seats* ⇨ *51* for additional information.

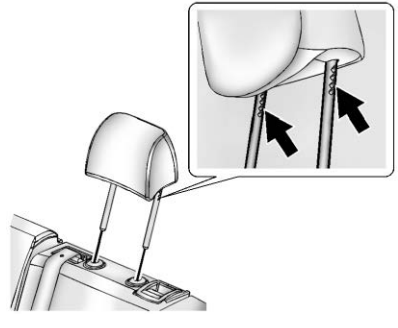


2. Press both buttons on the head restraint posts at the same time, and pull up the head restraint.
3. Store the head restraint in a secure place.
4. When the child restraint is removed, reinstall the head restraint before the seating position is used.

**⚠ Warning**

With head restraints that are not installed and adjusted properly, there is a greater chance that occupants will suffer a neck/spinal injury in a crash. Do not drive until the head restraints for all occupants are installed and adjusted properly.

To reinstall the head restraint:



1. Insert the head restraint posts into the holes in the top of the backrest. The notches on the posts must face the driver side of the vehicle.
2. Push the head restraint down.

   If necessary, press the height adjustment release button to further lower the head restraint. See *Head Restraints* ⇨ *42*.
3. Try to move the head restraint to make sure that it is locked in place.

## Securing Child Restraints (With the Seat Belt in the Rear Seat)

When securing a child restraint with the seat belts in a rear seat position, study the instructions that came with the child restraint to make sure it is compatible with this vehicle.

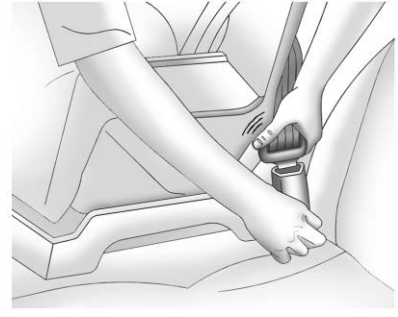
If the child restraint has the ISOFIX system, see *ISOFIX Child Restraint Systems* ⇨ *82* for how and where to install the child restraint using ISOFIX. If a child restraint is secured in the vehicle using a seat belt and it uses a top tether, see *ISOFIX Child Restraint Systems* ⇨ *82* for top tether anchor locations.

Do not secure a child seat in a position without a top tether anchor if a national or local law requires that the top tether be anchored, or if the instructions that come with the child restraint state that the top tether must be anchored.

If the child restraint or vehicle seat position does not have the ISOFIX system, you will be using the seat belt to secure the child restraint. Be sure to follow the instructions that came with the child restraint.

If more than one child restraint needs to be installed in the rear seat, be sure to read *Where to Put the Restraint* ⇨ *76*.

1. Put the child restraint on the seat.
2. Pick up the latch plate, and run the lap and shoulder portions of the vehicle seat belt through or around the child restraint. The child restraint instructions will show you how.



3. Push the latch plate into the buckle until it clicks.

   Position the release button on the buckle, away from the child restraint, so that the seat belt can be quickly unbuckled if necessary.
4. Follow the instructions in the child restraint owner's manual to tighten and lock the child restraint using the vehicle seat belt.
5. If the child restraint has a top tether, follow the child restraint manufacturer's instructions

regarding the use of the top tether. See *ISOFIX Child Restraint Systems* ⇨ *82*.

6. Before placing a child in the child restraint, make sure it is securely held in place. Refer to your child restraint manufacturer's instructions.

To remove the child restraint, follow the instructions in the child restraint owner's manual to unlock it. Unfasten the vehicle seat belt and let it return to the stowed position. If the top tether is attached to a top tether anchor, disconnect it.

## Securing Child Restraints (With the Seat Belt in the Front Seat)

This vehicle has airbags. A rear seat is a safer place to secure a forward-facing child restraint. See *Where to Put the Restraint* ⇨ *76*.

There may be a switch on the instrument panel that you can use to turn off the front outboard passenger frontal airbag. See *Airbag On-Off Switch* ⇨ *67* for more information, including important safety information.

Never put a rear-facing child restraint in the front. This is because the risk to the rear-facing child is so great if the airbag deploys.

**⚠ Danger**

When using a child restraint on the front passenger seat, the airbag systems for the front passenger seat must be deactivated; if not, the triggering of the airbags poses a risk of fatal injury to the child.

This is especially the case if rear-facing child restraints are used on the front passenger seat.

**⚠ Warning**

A child in a rear-facing child restraint can be seriously injured or killed if the front outboard passenger airbag inflates. This is because the back of the rear-facing child restraint would be very close to the inflating airbag. A child in a forward-facing child restraint can be seriously injured or killed if the front outboard passenger airbag inflates and the passenger seat is in a forward position.

Even if the airbag switch has turned off the front outboard passenger frontal airbag, no system is fail-safe. No one can guarantee that an airbag will not deploy under some unusual circumstance, even though it is turned off.

Secure rear-facing child restraints in a rear seat, even if the airbag is off. If you secure a forward-facing child restraint in the front outboard passenger seat, always move the

(Continued)

**Warning (Continued)**

seat as far back as it will go. It is better to secure the child restraint in a rear seat.

**⚠ Warning**

If the airbag readiness light ever comes on and stays on, it means that something may be wrong with the airbag system. For example, the front outboard passenger frontal airbag could inflate even though the airbag on-off switch is turned off.

To help avoid injury to yourself or others, have the vehicle serviced right away. See *Airbag Readiness Light* ⇨ *109* for more information, including important safety information.


If the child restraint uses a top tether, see *ISOFIX Child Restraint Systems* ⇨ *82* for top tether anchor locations.

Do not secure a child restraint in a position without a top tether anchor if a national or local law requires that the top tether must be anchored, or if the instructions that come with the child restraint say that the top tether must be anchored.

When using the lap-shoulder belt to secure the child restraint in this position, follow the instructions that came with the child restraint and the following instructions:

1. Move the seat as far back as it will go before securing the forward-facing child restraint. Move the seat upward or the backrest to an upright position, if needed, to get a tight installation of the child restraint.

   When the airbag off switch has turned off the front outboard passenger frontal airbag, the off indicator in the airbag off light should illuminate and remain illuminated when you start the vehicle. See *Airbag On-Off Light* ⇨ *109*.
2. Put the child restraint on the seat.
3. Pick up the latch plate, and run the lap and shoulder portions of the vehicle seat belt through or around the child restraint. The child restraint instructions will show you how.

4. Push the latch plate into the buckle until it clicks.

   Position the release button on the buckle, away from the child restraint, so that the seat belt can be quickly unbuckled if necessary.

5. Follow the instructions in the child restraint owner's manual to tighten and lock the child restraint when using the vehicle seat belt.

6. If the child restraint has a top tether, follow the child restraint manufacturer's instructions regarding the use of the top tether. See *ISOFIX Child Restraint Systems* ⇨ *82*.

If the airbags are off, the off indicator in the passenger airbag status indicator will come on and stay on when the vehicle is started.

To remove the child restraint, unbuckle the vehicle seat belt and let it return to the stowed position. If the top tether is attached to a top tether anchor, disconnect it.

If you turned the airbag off with the switch, turn on the front outboard passenger airbag when you remove the child restraint from the vehicle unless the person who will be sitting there is a member of a passenger airbag risk group. See *Airbag On-Off Switch* ⇨ *67* for more information, including important safety information.

# Storage

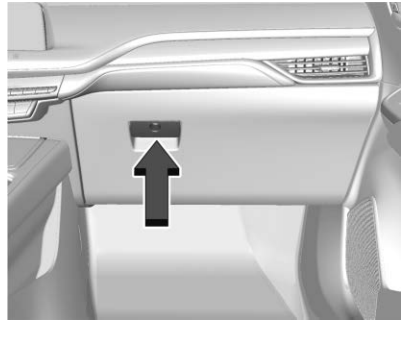


# Storage Compartments

**⚠ Warning**

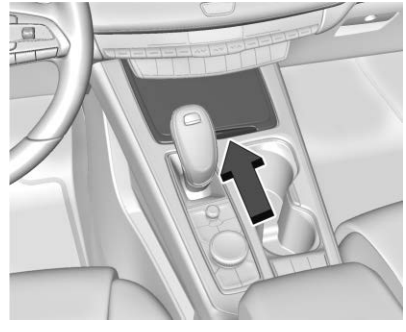
Do not store heavy or sharp objects in storage compartments. In a crash, these objects may cause the cover to open and could result in injury.

## Glove Box



Lift the handle to open the glove box. Close until it latches. Use the vehicle key to lock or unlock. See *Keys* ⇨ *7*.

## Front Storage



To open the front storage compartment, slide the cover forward. There are two USB ports inside. To close, push the cover forward and let go.

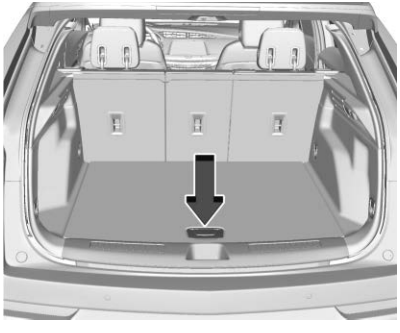
## Sunglasses Storage

If equipped, sunglasses storage is on the overhead console. Press the fixed button on the cover and release to access.

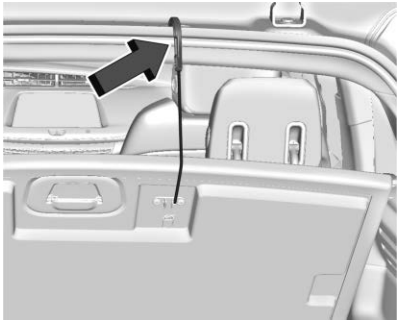
## Armrest Storage

For vehicles with a rear seat armrest, pull the rear seat armrest forward to access the cupholders with removable liner.

## Rear Storage

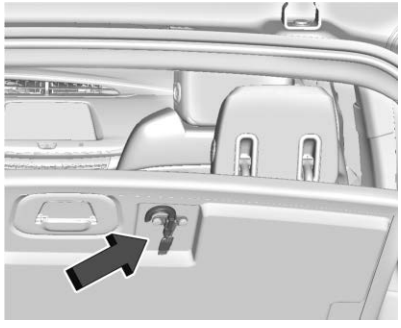


There is storage in the floor of the rear cargo area. Lift the handle to access.

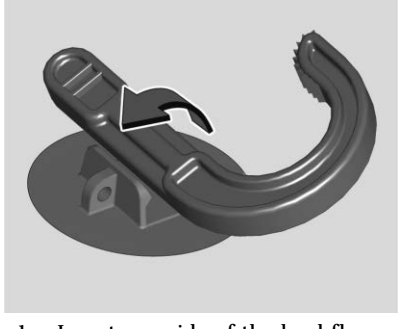


Remove the load floor hook from the holder and hook it to the weatherstrip above.

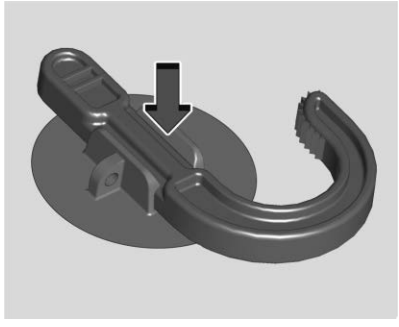
Then return the load floor hook to the holder.



To install the load floor hook into the holder:

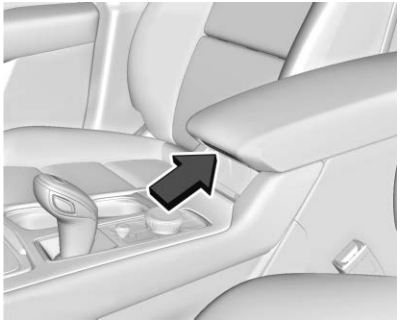


1. Insert one side of the load floor hook into the holder.



2. Push down on the other side of the load floor hook to lock into place.

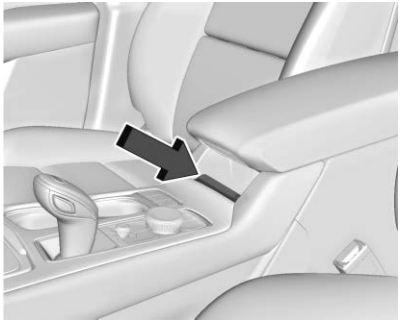
## Centre Console Storage



Press the button to access the storage area in front of the armrest cover.

There is a 12-volt power socket inside.

If equipped, there are two charge-only USB ports on the rear of the centre console.



There is a wireless smartphone charger in the front of the console storage. See *Wireless Charging* ⇨ *101*.

## Umbrella Storage

Slide a compact umbrella no larger than 6 cm (2.36 in) in diameter into the opening on the driver or passenger door.

# Additional Storage Features

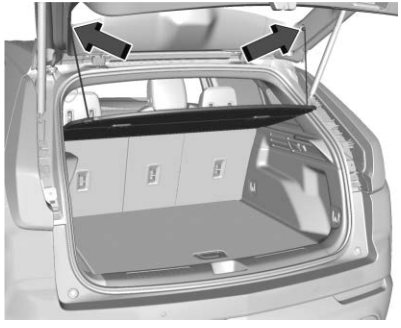
## Cargo Cover

**⚠ Warning**

An unsecured cargo cover could strike people in a sudden stop or turn, or in a crash. Store the cargo cover securely or remove it from the vehicle.

**⚠ Warning**

Do not place objects on the cargo cover. Sudden stops or turns can cause objects to be thrown in the vehicle. You or others could be injured.



If equipped, the cargo cover can be used to cover items in the cargo area.

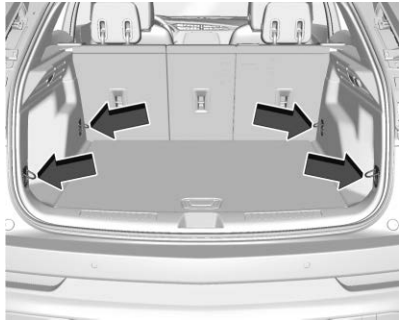
### Installing the Cargo Cover

1. Slide the cargo cover into the two front corner brackets until it snaps in place.
2. Attach the cords to the fixed retainers on the tailgate.

### Removing the Cargo Cover

To remove, disengage the cords and pull the cover out of the vehicle.

## Cargo Tie-Downs



The vehicle has four cargo tie-downs in the rear compartment.

## Warning Triangle

If equipped, the warning triangle is stored in the rear of the vehicle.

# Roof Rack System

**⚠ Warning**

If something is carried on top of the vehicle that is longer or wider than the roof rack - like panelling, plywood, or a mattress - the wind can catch it while the vehicle is being driven. The item being carried could be violently torn off, and this could cause a collision and damage the vehicle. Never carry something longer or wider than the roof rack on top of the vehicle unless using a GM certified accessory carrier.

If equipped, the roof rack can be used to load items. For roof racks that do not have crossrails included, GM certified crossrails can be purchased as an accessory. See your retailer.

**Caution**

Loading cargo on the roof rack that weighs more than 100 kg (220 lb) or hangs over the rear or sides of the vehicle may damage the vehicle. Do not load cargo exceeding 100 kg (220 lbs) and always load cargo so that it rests evenly between the crossrails and does not block the vehicle lamps or windows. Fasten the cargo securely.

To prevent damage or loss of cargo when driving, check to make sure crossrails and cargo are securely fastened. Loading cargo on the roof rack will make the vehicle's centre of gravity higher. Avoid high speeds, sudden starts, sharp turns, sudden braking, or abrupt manoeuvres; otherwise it may result in loss of control. If driving for a long distance, on rough roads, or at high speeds, occasionally stop the vehicle to make sure the cargo remains in its place. Do not exceed the maximum vehicle capacity when loading the vehicle. For more information on vehicle capacity and loading, see *Vehicle Load Limits* ⇨ *160*.

# Instruments and Controls

# Controls

## Steering Wheel Adjustment

### Manual Steering Wheel

To adjust the steering wheel:

1. Pull the lever down.
2. Move the steering wheel up or down.
3. Pull or push the steering wheel closer or away from you.
4. Pull the lever up to lock the steering wheel in place.

Do not adjust the steering wheel while driving.

### Power Tilt and Telescoping Steering Wheel

Press the control to move the tilt and telescoping steering wheel up and down or forward and rearward.

Do not adjust the steering wheel while driving.

## Steering Wheel Controls

The infotainment system can be operated by using the steering wheel controls. See "Steering Wheel Controls" in the infotainment manual.

## Heated Steering Wheel

: If equipped, press to turn on or off. A light near the button displays when the feature is turned on.

The steering wheel takes about three minutes to reach maximum heat.

### Automatic Heated Steering Wheel

If equipped with remote start, the heated steering wheel will turn on automatically during a remote start along with the heated seats when it is

cold outside. The heated steering wheel indicator light may not come on.

If equipped with auto-heated seats, the heated steering wheel will turn on when the auto heated seats are activated. The heated steering wheel indicator will follow the state of the steering wheel heat.

See *Heated and Ventilated Front Seats* ⇨ *49* and *Vehicle Personalisation* ⇨ *127*.

## Horn

Press on the steering wheel pad to sound the horn.

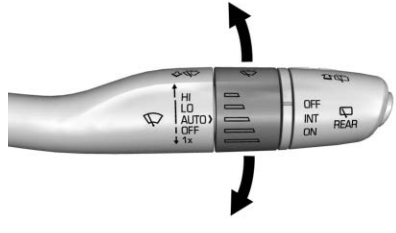
## Windscreen Wiper/Washer


Windscreen Wiper with Rainsense (AUTO Shown)

With the ignition on or in ACC/ ACCESSORY, move the windscreen wiper lever to select the wiper speed.

**HI :** Use for fast wipes.

**LO :** Use for slow wipes.




**AUTO :** Use this setting for intermittent wipes when Rainsense is disabled, or Rainsense wipes when Rainsense is enabled. For intermittent wipes, move the windscreen wiper lever to AUTO, then turn the band up for more frequent wipes or down for less frequent wipes. If Rainsense is turned on, see “Rainsense” later in this section.

**OFF :** Use to turn the wipers off.

**1X :** For a single wipe, briefly move the wiper lever down. For several wipes, hold the wiper lever down.

**:** Pull the windscreen wiper lever toward you to spray windscreen washer fluid and activate the wipers. The wipers will continue until the lever is released or the maximum wash time is reached. When the windscreen wiper lever is released, additional wipes may occur depending on how long the windscreen washer has been activated. See *Washer Fluid* ⇨ *256* for information on filling the windscreen washer fluid reservoir.

**⚠ Warning**

In freezing weather, do not use the washer until the windscreen is warmed. Otherwise the washer fluid can form ice on the windscreen, blocking your vision.

**⚠ Warning**

Before driving the vehicle, always clear snow and ice from the bonnet, windscreen, roof, and rear of the vehicle, including all lamps and windows. Reduced visibility from snow and ice build-up could lead to a crash.

Clear snow and ice from the wiper blades and windscreen before using them. If frozen to the windscreen, carefully loosen or thaw them. Damaged blades should be replaced. See *Wiper Blade Replacement* ⇨ *261*.

Heavy snow or ice can overload the wiper motor. See *Electrical System Overload* ⇨ *265*.

### Wiper Parking

If the ignition is turned off while the wipers are on LO, HI, or AUTO with Rainsense turned off, they will immediately stop.

If the windscreen wiper lever is then moved to OFF before the driver door is opened or within 10 minutes, the wipers will restart and move to the base of the windscreen.

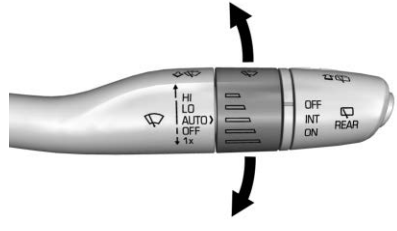
If the ignition is turned off while the wipers are performing wipes due to windscreen washing or Rainsense, the wipers continue to run until they reach the base of the windscreen.

## Rainsense

If Rainsense is turned on, a sensor near the top centre of the windscreen detects the amount of water on the windscreen and controls the frequency of the windscreen wiper based on the current sensitivity setting.

Keep this area of the windscreen clear of debris to allow for best system performance.

**AUTO :** Move the windscreen wiper stalk to AUTO. Turn the band on the wiper stalk to adjust the sensitivity.




- Turn the band up for more sensitivity to moisture.
- Turn the band down for less sensitivity to moisture.
- Move the windscreen wiper lever out of the AUTO position to deactivate Rainsense.

To turn the Rainsense feature on or off, see “Rain Sense Wipers” under *Vehicle Personalisation* ⇨ *127*.

### Wiper Arm Assembly Protection

When using an automatic car wash, move the windscreen wiper lever to OFF. This disables the automatic Rainsense windscreen wipers.

With Rainsense, if the transmission is in N (Neutral) and the vehicle speed is very slow, the wipers will automatically stop at the base of the windscreen.

The wiper operations return to normal when the transmission is no longer in N (Neutral) or the vehicle speed has increased.

## Rear Window Wiper/ Washer


The rear window wiper/washer controls are on the end of the windscreen wiper lever.

Turn the controls to adjust the setting.

**OFF :** Turns the wiper off.

**INT :** Turns on the rear wiper with a delay between wipes.

**ON :** Turns on the rear wiper.

**:** Push the windscreen wiper lever forward to spray washer fluid on the rear window. The wipers will clear the rear window and either stop or return to your preset speed. For more washer cycles, push and hold the lever.

The rear window wiper/washer will not operate if the tailgate is open or ajar. If the tailgate is opened while the rear wiper is on, the wiper returns to the parked position and stops.

### Rear Wiper Arm Assembly Protection

When using an automatic car wash, move the rear wiper control to OFF to disable the rear wiper. In some vehicles, if the transmission is in N (Neutral) and the vehicle speed is very slow, the rear wiper will automatically park under the rear spoiler.

The wiper operations return to normal when the transmission is no longer in N (Neutral) or the vehicle speed has increased.

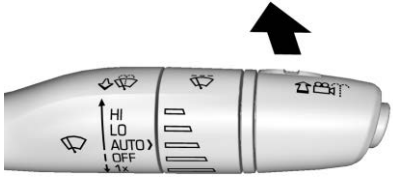
### Auto Wipe in Reverse Gear

If the rear wiper control is off, the rear wiper will automatically operate continuously when the gear lever is in R (Reverse), and the front windscreen wiper is performing low or high speed wipes. If the rear wiper control is off, the gear lever is in R (Reverse), and the front windscreen wiper is performing intermittent wipes, then the rear wiper automatically performs INT wipes.

This feature can be turned on or off. See *Vehicle Personalisation* ⇨ *127*.

The windscreen washer reservoir is used for the windscreen and rear window. Check the fluid level in the reservoir if either washer is not working. See *Washer Fluid* ⇨ *256*.

### Rear Camera Washer




If equipped, push the windscreen wiper lever forward to spray washer fluid on the rear camera lens. The lever returns to its starting position when released. See *Rear Camera Mirror ⇨ 34*.

## Compass

The vehicle may have a compass display on the Driver Information Centre (DIC). The compass receives its heading and other information from the Global Positioning System (GPS) aerial, StabiliTrak/Electronic Stability Control (ESC), and vehicle speed information.

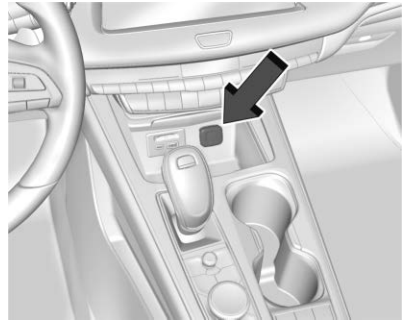
The compass system is designed to operate for a certain number of miles or degrees of turn before needing a signal from the GPS satellites. When the compass display shows CAL, drive the vehicle for a short distance in an open area where it can receive a GPS signal. The compass system will automatically determine when a GPS signal is restored and provide a heading again.

## Clock

The time and date for the clock can be set using the infotainment system. See “Time/Date” in “System” under “Settings” in the infotainment manual.

## Power Sockets

The accessory power outlet can be used to plug in electrical equipment, such as a cell phone or MP3 player.



The vehicle has three accessory power sockets: one at the front of the centre console, one under the armrest, and one in the rear cargo area.

Certain accessory power plugs may not be compatible with the accessory power outlet and could overload vehicle or adapter fuses. If a problem is experienced, see your dealer.

When adding electrical equipment, ensure that you follow the proper installation instructions included with the equipment. See *Add-On Electrical Equipment ⇨ 240*.

**Caution**

Hanging heavy equipment from the power outlet can cause damage not covered by the vehicle warranty. The power outlets are designed for accessory power plugs only, such as mobile phone charge cords.

Always unplug electrical equipment when not in use and do not plug in equipment that exceeds the maximum 15 amps rating.

## Wireless Charging

The vehicle may have wireless charging in the storage bin under the armrest. The system operates at 145 kHz and wirelessly charges one Qi compatible smartphone. The power output of the system is capable of charging at a rate up to 3 amp (15W), as requested by the smartphone.

**⚠ Warning**

Wireless charging can affect the operation of an implanted pacemaker or other medical devices. If you have one, it is recommended to consult with your doctor before using the wireless charging system.

The vehicle must be on, in ACC/ ACCESSORY, or Retained Accessory Power (RAP) must be active. The wireless charging feature may not correctly indicate charging when the vehicle is in RAP. See *Retained Accessory Power (RAP)* ⇨ *169*.

The operating temperature is –20 °C (–4 °F) to 60 °C (140 °F) for the charging system and 0 °C (32 °F) to 35 °C (95 °F) for the smartphone.

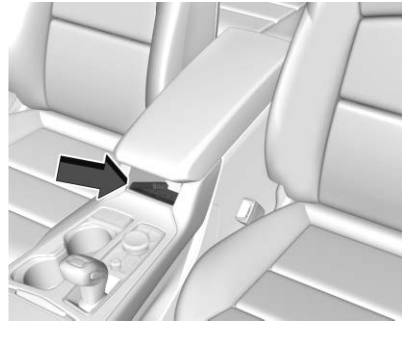
**⚠ Warning**

Remove all objects from the charging pad before charging your compatible smartphone. Objects,

(Continued)

**Warning (Continued)**

such as coins, keys, rings, paper clips, or cards, between the smartphone and charging pad will become very hot. On the rare occasion that the charging system does not detect an object, and the object gets wedged between the smartphone and charger, remove the smartphone and allow the object to cool before removing it from the charging pad, to prevent burns.



To charge a compatible smartphone:

1. Remove all objects from the charging pad. The system may not charge if there are any objects between the smartphone and charging pad.
2. Place the smartphone face up on the symbol on the charging pad.

   To maximise the charge rate, ensure the smartphone is fully seated and centred in the holder with nothing under it. A thick smartphone case may prevent the wireless charger from working, or may reduce the charging performance. See your retailer for additional information.
3. A green next to the will appear on the infotainment display. This indicates that the smartphone is properly positioned and charging.

   If the turns yellow, ensure that the charging pad is clear of any objects and that the smartphone is capable of wireless charging before re-positioning it.

   If the does not illuminate, the smartphone may need to be repositioned. To reposition, turn the smartphone 180 degrees and wait three seconds before placing/aligning it on the pad again.

   The smartphone may become warm during charging. This is normal. In warmer temperatures, the speed of charging may be reduced.

### Software Acknowledgements

Certain Wireless Charging Module products from LG Electronics, Inc. ("LGE") contain the open source software detailed below. Refer to the indicated open source licences (as are included following this notice) for the terms and conditions of their use.

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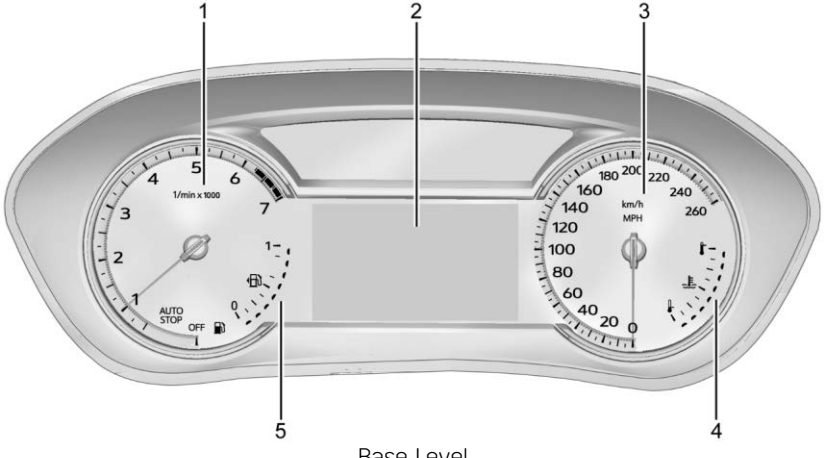
## Warning Lights, Gauges, and Indicators

Warning lights and gauges can signal that something is wrong before it becomes serious enough to cause an expensive repair or replacement. Paying attention to the warning lights and gauges could prevent injury.

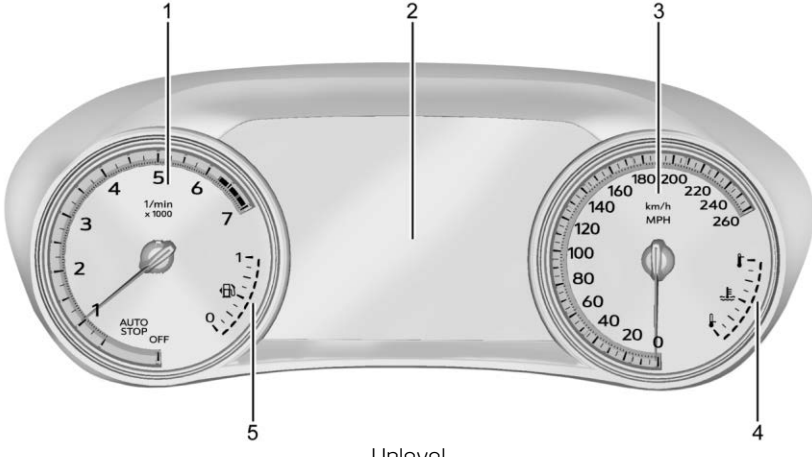
Some warning lights come on briefly when the engine is started to indicate they are working. When one of the warning lights comes on and stays on while driving, or when one of the gauges shows there may be a problem, check the section that explains what to do. Waiting to do repairs can be costly and even dangerous.

## Instrument Cluster




Base Level

1. *Rev Counter* ⇨ *107*
2. *Driver Information Centre (DIC)* ⇨ *120*
3. *Speedometer* ⇨ *106*
4. *Engine Coolant Temperature Gauge* ⇨ *108*
5. *Fuel Gauge* ⇨ *107*

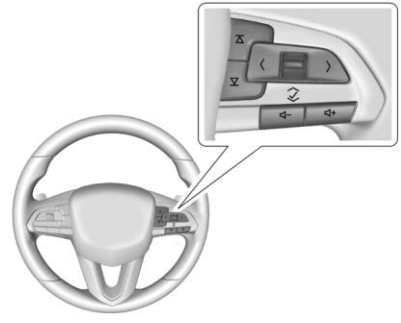



Uplevel

1. *Rev Counter* ⇨ *107*
2. *Driver Information Centre (DIC)* ⇨ *120*
3. *Speedometer* ⇨ *106*
4. *Engine Coolant Temperature Gauge* ⇨ *108*
5. *Fuel Gauge* ⇨ *107*

## Cluster Menu

There is an interactive display area in the centre of the instrument cluster.



Use the right steering wheel control to open and scroll through the different items and displays.

Press < or > to access the cluster applications. Use the thumbwheel to scroll through the list of available applications. Not all applications will be available on all vehicles.

- Info App. This is where the selected Driver Information Centre (DIC) displays can be viewed. See *Driver Information Centre (DIC)* ⇨ *120*.
- Audio
- Navigation

- Phone
- Options

### Audio

In the Audio menu browse for music, select from the favourites, or change the audio source. Use the thumbwheel to change the station or go to the next or previous track.

### Navigation

If there is no active route, press enter to access the Recents or Favourites list. If there is an active route, press the thumbwheel to cancel or resume route guidance, mute or unmute voice guidance, or access the Recents or Favourites list.

### Phone

In the Phone menu, if there is no active phone call, view recent calls, or scroll through contacts. If there is an active call, mute the phone or switch to handset operation.

### Options

Use the thumbwheel to scroll through items in the Options menu.

**Head-up Display (HUD) :** If equipped, this feature allows for adjusting the angle of the HUD image and changing or turning off the Speed Limit Sign.

HUD Rotation (Uplevel): Press the thumbwheel while Adjust Rotation is highlighted to enter Adjust Mode. Scroll to adjust the angle of the HUD display. Press the thumbwheel to confirm and save the setting. This feature may only be available in P (Park).

Speed Sign: If equipped, press the thumbwheel while Speed Sign is highlighted to turn it on or off.

**Units :** Choose English or Metric units by pressing the thumbwheel while the desired item is highlighted.

**Info Page Options :** Press the thumbwheel to select the items to be displayed in the Info app. See *Driver Information Centre (DIC)* ⇨ *120*.

**Display :** Press the thumbwheel to enter the Display menu. Select to turn on or off the speedometer, time, fuel range, or, if equipped, compass or speed sign.

**Speed Warning :** The Speed Warning display allows the driver to set a speed that they do not want to exceed. To set the Speed Warning press the thumbwheel when Speed Warning is displayed. Use the thumbwheel to adjust the value and press to set the speed.

Once the speed is set, this feature can be turned off by pressing the thumbwheel while viewing this page. If the selected speed limit is exceeded, a pop-up warning is displayed with a chime.

**Software Information :** Displays open source software information.

## Speedometer

The speedometer shows the vehicle's speed in either kilometres per hour (km/h) or miles per hour (mph).

## Mileometer

The odometer shows how far the vehicle has been driven, in either kilometres or miles.

## Trip Odometer

The trip odometer shows how far the vehicle has been driven since the trip odometer was last reset.

The trip odometer is accessed and reset through the Driver Information Centre (DIC). See *Driver Information Centre (DIC)* ⇨ *120*.

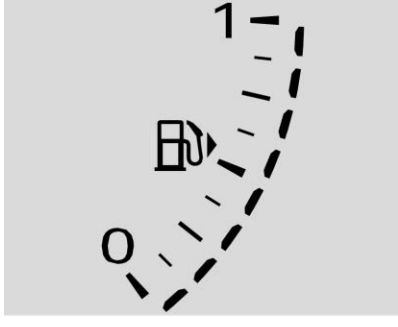
## Rev Counter

The tachometer displays the engine speed in revolutions per minute (rpm).

For vehicles with the Stop/Start system, when the ignition is on, the tachometer indicates the vehicle status. When pointing to AUTO STOP, the engine is off but the vehicle is on and can move. The engine could auto start at any time. When the indicator points to OFF, the vehicle is off.

When the engine is on, the tachometer will indicate the engine's revolutions per minute (rpm). The tachometer may vary by several hundred rpm's, during Auto Stop mode, when the engine is shutting off and restarting.

## Fuel Gauge




When the ignition is on, the fuel gauge indicates about how much fuel is left in the tank.

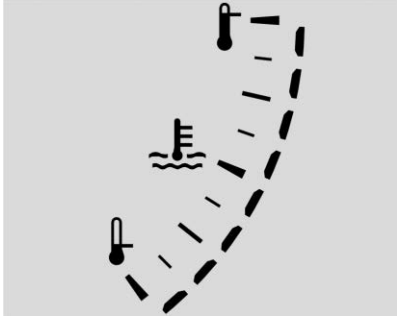
There is an arrow near the fuel gauge pointing to the side of the vehicle the fuel door is on.

When the indicator nears empty, the low fuel light comes on. There still is a little fuel left, but the vehicle should be refuelled soon.

Here are four things that some owners ask about. None of these show a problem with the fuel gauge:

- At the service station, the fuel pump shuts off before the gauge reads full.
- It takes a little more or less fuel to fill up than the gauge indicated. For example, the gauge may have indicated the tank was half full, but it actually took a little more or less than half the tank's capacity to fill the tank.
- The gauge moves a little while turning a corner or speeding up.
- The gauge takes a few seconds to stabilise after the ignition is turned on and goes back to empty when the ignition is turned off.

## Engine Coolant Temperature Gauge



This gauge measures the temperature of the vehicle's engine.

While driving under normal operating conditions, if the red LED is illuminated, the engine is too hot. Pull off the road, stop the vehicle, and turn off the engine as soon as possible.

## Seat Belt Reminders

### Driver Seat Belt Reminder Light

There is a driver seat belt reminder light on the instrument cluster.

When the vehicle is started, this light flashes and a chime may come on to remind the driver to fasten their seat belt. Then the light stays on solid until the belt is buckled. This cycle may continue several times if the driver remains or becomes unbuckled while the vehicle is moving.

If the driver seat belt is fastened, neither the light nor the chime is activated.

### Passenger Seat Belt Reminder Light

The vehicle may have a passenger seat belt reminder light. See *Airbag On-Off Light* ⇨ *109*.


When the vehicle is started, this light flashes and a chime may sound to remind passengers to fasten their seat belts. Then the light stays on solid until the belt is buckled. This cycle continues several times if the passenger remains or becomes unbuckled while the vehicle is moving.

If the passenger seat belt is fastened, neither the chime nor the light comes on.

The front passenger seat belt reminder light and chime may turn on if an object is placed on the seat such as a briefcase, handbag, shopping bag, laptop, or other electronic device. To turn off the reminder light and/or chime, remove the object from the seat or fasten the seat belt.

### Rear Passenger Seat Belt Reminder Light

The vehicle may have a rear passenger seat belt reminder light.

When the vehicle is started, this light illuminates with a solid glow to remind passengers to fasten their seat belts. Then the light stays on solid or flashes with a chime until the belt is fastened. This cycle continues for a period of time if the passenger remains or becomes unfastened while the vehicle is moving. If the passenger seat belt is fastened, neither the chime nor the light comes on.

## Airbag Readiness Light

This light shows if there is an electrical problem with the airbag system. The system check includes the airbag sensor(s), the pretensioners, the airbag modules, the wiring, and the crash sensing and diagnostic module. For more information on the airbag system, see *Airbag System* ⇨ *61*.

The airbag readiness light comes on for several seconds when the vehicle is started. If the light does not come on then, have it fixed immediately.

**⚠ Warning**

If the airbag readiness light stays on after the vehicle is started or comes on while driving, it means the airbag system might not be working properly. The airbags in the vehicle might not inflate in a crash, or they could even inflate without a crash. To help avoid injury, have the vehicle serviced right away.

If there is a problem with the airbag system, a Driver Information Centre (DIC) message may also come on.

## Airbag On-Off Light

If the vehicle has an airbag on-off switch, it also has a passenger airbag status indicator located in the overhead console.


When the vehicle is started, the passenger airbag status indicator symbols for on and off will light for several seconds as a system check. Then, after several more seconds, the status indicator will light either the on or off symbol to let you know the status of the front outboard passenger frontal airbag.

When the front outboard passenger frontal airbag is manually turned off using the airbag on-off switch on the

instrument panel end face, the off symbol will illuminate and stay on as a reminder that the airbag has been turned off. This light will go off when the airbag has been turned on. See *Airbag On-Off Switch* ⇨ *67* for more information, including important safety information.


**⚠ Warning**

If the front outboard passenger frontal airbag is turned off for a person who does not belong to a category indicated in this manual,

(Continued)

**Warning (Continued)**

that person will not have the extra protection of an airbag. In a crash, the airbag will not be able to inflate and help protect the person sitting there.

Do not turn off the front outboard passenger frontal airbag unless the person sitting there belongs to a category indicated in this manual. See *Airbag On-Off Switch* ⇨ *67* for more on this, including important safety information.

**⚠ Warning**

If the airbag readiness light ever comes on and stays on, it means that something may be wrong with the airbag system. For example, the front outboard passenger frontal airbag could inflate even though the airbag on-off switch is turned off.

(Continued)

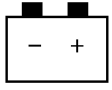
**Warning (Continued)**

To help avoid injury to yourself or others, have the vehicle serviced right away. See *Airbag Readiness Light* ⇨ *109* for more information, including important safety information.

If the on symbol is lit, it means that the front outboard passenger frontal airbag is enabled (may inflate). See *Airbag On-Off Switch* ⇨ *67* for more information, including important safety information.

If, after several seconds, both status indicator lights remain on, or if there are no lights at all, there may be a problem with the lights or the airbag on-off switch. See your retailer for service.

## Charging System Light




The charging system light comes on briefly when the ignition is turned on, but the engine is not running, as a check to show the light is working. It should go out when the engine is started.

If the light stays on, or comes on while driving, there may be a problem with the electrical charging system. Have it checked by your dealer. Driving while this light is on could drain the battery.

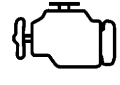
When this light comes on, or is flashing, the Driver Information Centre (DIC) also displays a message.

If a short distance must be driven with the light on, be sure to turn off all accessories, such as the radio and air conditioner.

## Malfunction Indicator Lamp (Check Engine Light)

This light is part of the vehicle's emission control on-board diagnostic system. If this light is on while the engine is running, a malfunction has been detected and the vehicle may require service. The light should come on to show that it is working when the ignition is in Service Mode. See *Ignition Positions* ⇨ *164*.

This light may also illuminate when the system has detected a problem with the Diesel Exhaust Fluid (DEF) management system. See *Diesel Exhaust Fluid* ⇨ *173*.



Malfunctions are often indicated by the system before any problem is noticeable. Being aware of the light and seeking service promptly when it comes on may prevent damage.

**Caution**

If the vehicle is driven continually with this light on, the emission control system may not work as well, the fuel economy may be lower, and the vehicle may not run smoothly. This could lead to costly repairs that might not be covered by the vehicle warranty.

**Caution**

Modifications to the engine, transmission, exhaust, intake, or fuel system, or the use of replacement tyres that do not meet the original tyre specifications, can cause this light to come on. This could lead to costly repairs not covered by the vehicle warranty. This could also affect the vehicle's ability to pass an Emissions Inspection/Maintenance test. See *Accessories and Modifications* ⇨ *243*.

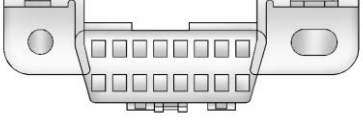
When the light is on, a malfunction has been detected. Diagnosis and service may be required.

Poor fuel quality can cause inefficient engine operation and poor driveability, which may go away once the engine is warmed up. If this occurs, change the fuel brand. It may require at least one full tank of the proper fuel to turn the light off. See *Fuel for Diesel Engines* ⇨ *221*.

If the light remains on, see your retailer.

### Emissions Inspection and Maintenance Programs

If the vehicle requires an Emissions Inspection/Maintenance test, the test equipment will likely connect to the vehicle's Data Link Connector (DLC).



The DLC is under the instrument panel to the left of the steering wheel. Connecting devices that are not used to perform an Emissions Inspection/ Maintenance test or to service the vehicle may affect vehicle operation. See *Add-On Electrical Equipment* ⇨ *240*. See your dealer if assistance is needed.

The vehicle may not pass inspection if:

- The light is on when the engine is running.
- The light does not come on when the ignition is in Service Mode.
- Critical emission control systems have not been completely diagnosed. If this happens, the vehicle would not be ready for inspection and might require several days of routine driving before the system is ready for inspection. This can happen if the 12-volt battery has recently been replaced or run down, or if the vehicle has recently been serviced.

See your retailer if the vehicle will not pass or cannot be made ready for the test.

## Brake System Warning Light

The vehicle brake system consists of electronically controlled hydraulic brake circuits. If a fault is detected, valves are adjusted to allow the brake pedal to push brake fluid directly into the hydraulic brake circuits. When a fault occurs, the brake system warning light illuminates, and Driver Information Centre (DIC) messages may display. Vehicle speed may also be limited and the amount of brake pedal force applied may need to increase. Have the vehicle brake system serviced as soon as possible.

This light should illuminate briefly when the vehicle is turned on. If it does not come on then, have it fixed so it will be ready to warn if there is a problem.

The brake system warning light may also illuminate when the parking brake is set, if the vehicle has low brake fluid, or if the brakes are severely worn. See *Brake Fluid* ⇨ *258*. If the brakes are overheated, DIC messages may display, and the vehicle speed may be limited. If the brake fluid is not low, if the brakes are not overheated, and if the parking brake is fully released, then the vehicle has a brake problem. Have the vehicle brake system serviced as soon as possible.

If the light comes on while driving, pull off the road and stop carefully. The pedal might be harder to push, or the pedal may go closer to the floor. It could take longer to stop. If the light is still on, have the vehicle towed for service. See *Towing the Vehicle* ⇨ *302*.

**⚠ Warning**

The brake system might not be working properly if the brake system warning light is on. Driving with the brake system warning light

(Continued)

**Warning (Continued)**

on can lead to a crash. If the light is still on after the vehicle has been pulled off the road and carefully stopped, have the vehicle towed for service.

## Electric Parking Brake Light

The parking brake status light comes on when the parking brake is applied. If the light continues flashing after the parking brake is released, or while driving, there is a problem with the electric parking brake system. A message may also display in the Driver Information Centre (DIC).

If the light does not come on, or remains flashing, see your dealer.

## Service Electric Parking Brake Light

On some vehicles the service electric parking brake light should come on briefly when the vehicle is started. If it does not come on, have it fixed so it will be ready to warn if there is a problem. For vehicles with the reconfigurable cluster, this light may not come on when the vehicle is started.

If this light stays on, the vehicle should be taken to a retailer as soon as possible. See *Electric Parking Brake* ⇨ *184*. A message may also display in the Driver Information Centre (DIC).

## Antilock Brake System (ABS) Warning Light


This warning light should illuminate briefly when the vehicle is turned on. If the light does not come on, have it fixed so it will be ready to warn if there is a problem.

If the light illuminates while driving, safely stop as soon as it is possible and turn off the vehicle. Then turn on the vehicle again to reset the system.

If the ABS warning light remains turned on, or illuminates again while driving, the vehicle needs service. A chime may also sound when the light stays on.

If the ABS warning light is the only light turned on, the vehicle has regular brakes, but ABS is not functioning.

If both the ABS warning light and the brake system warning light are turned on, ABS is not functioning and there is a problem with the regular brakes. See your retailer for service.

See *Brake System Warning Light* ⇨ *112*.

## Gear Shifting Light


This light comes on when a gear shift is recommended for best fuel economy. When the arrow is pointed up, an upshift is recommended. When the arrow is pointed down, a downshift is recommended. The number displayed with the arrow indicates the recommended gear.

## Performance Shifting Light

If equipped, this light may display when Sport Mode is activated and certain driving conditions are met. Sport Mode detects when the vehicle is being driven in a competitive manner, and adjusts the shifting of the gears accordingly. The colour of this light may change based on how competitively the vehicle is being driven. See *Driver Mode Control* ⇨ *188*.

## All-Wheel-Drive Light


All-Wheel-Drive Light


Front-Wheel-Drive Light

If equipped, the corresponding light illuminates when an All-Wheel Drive (AWD) mode or Front-Wheel Drive mode is selected. See *Driver Mode Control* ⇨ *188*.

If the light turns amber, there may be a malfunction. See your dealer.

## Lane Keep Assist (LKA) Light

After the vehicle is started, this light turns off and stays off if LKA has not been turned on or is unavailable.

If equipped, this light is white if LKA is turned on, but not ready to assist. This light is green if LKA is turned on and is ready to assist.

LKA may assist by gently turning the steering wheel if the vehicle approaches a detected lane marking. The LKA light is amber when assisting.

This light flashes amber as a Lane Departure Warning (LDW) alert, to indicate that the lane marking has been crossed.

LKA will not assist or alert if the indicator is active in the direction of lane departure, or if LKA detects that you are accelerating, braking, or actively steering.

See *Lane Keep Assist (LKA)* ⇨ *219*.

## Vehicle Ahead Indicator

If equipped, this indicator will display green when a vehicle is detected ahead and amber when you are following a vehicle ahead much too closely.

See *Forward Collision Alert (FCA) System* ⇨ *211*.

## Pedestrian Ahead Indicator

If equipped, this indicator will display in amber when a nearby pedestrian is detected in front of the vehicle.

See *Front Pedestrian Braking (FPB) System* ⇨ *215*.

## Traction Off Light


This light comes on briefly while starting the engine. If it does not, have the vehicle serviced by your dealer. If the system is working normally, the indicator light then turns off.

The traction off light illuminates when the Traction Control System (TCS) has been turned off by pressing and releasing the TCS/StabiliTrak/ Electronic Stability Control (ESC) button.

This light and the StabiliTrak OFF light illuminate when StabiliTrak/ESC is turned off.

If the TCS is off, wheel speed will be limited when necessary to protect the driveline from damage. Adjust driving accordingly.

See *Traction Control/Electronic Stability Control* ⇨ *186*.

## StabiliTrak OFF Light


This light comes on briefly while starting the engine. If it does not, have the vehicle serviced by your dealer.

This light illuminates when the StabiliTrak/Electronic Stability Control (ESC) system is turned off.
If StabiliTrak/ESC is off, the Traction Control System (TCS) is also off.

If StabiliTrak/ESC and TCS are off, the system does not assist in controlling the vehicle. Turn on the TCS and the StabiliTrak/ESC systems, and the warning light turns off.

See *Traction Control/Electronic Stability Control* ⇨ *186*.

## Traction Control System (TCS)/StabiliTrak Light

This light comes on briefly when the engine is started.

If the light does not come on, have the vehicle serviced by your dealer. If the system is working normally, the indicator light turns off.

If the light is on and not flashing, the TCS and potentially the StabiliTrak/ ESC system have been disabled.
A Driver Information Centre (DIC) message may display. Check the DIC messages to determine which feature(s) is no longer functioning and whether the vehicle requires service.

If the light is on and flashing, the TCS and/or the StabiliTrak/ESC system is actively working.

See *Traction Control/Electronic Stability Control* ⇨ *186*.

## Engine Coolant Temperature Warning Light

This light comes on briefly while starting the vehicle.

If it does not, have the vehicle serviced by your dealer. If the system is working normally the indicator light goes off.

**Caution**

The engine coolant temperature warning light indicates that the vehicle has overheated. Driving with this light on can damage the engine and it may not be covered by the vehicle warranty. See *Engine Overheating* ⇨ *255*.

The engine coolant temperature warning light comes on when the engine has overheated.

If this happens, pull over and turn off the engine as soon as possible. See *Engine Overheating* ⇨ *255*.

## Driver Mode Control Light

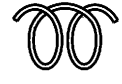
This light comes on when Sport Mode is selected.

This light comes on when Snow/Ice Mode is selected.

This light illuminates when Off-Road Mode is selected.

See *Driver Mode Control* ⇨ *188*.

## Wait-to-Start Light



For diesel engines, the wait-to-start light shows that the engine is functioning properly and indicates when the engine can be started.

The fast warm-up glow plug system makes the wait-to-start light stay on for a shorter amount of time than most diesel engines.

For more information, see *Starting the Engine* ⇨ *165*.

## Tyre Pressure Light

For vehicles with the Tyre Pressure Monitor System (TPMS), this light comes on briefly when the engine is started. It provides information about tyre pressures and the TPMS.

### When the Light Is On Steady

This indicates that one or more of the tyres are significantly underinflated.

A Driver Information Centre (DIC) tyre pressure message may also display. Stop as soon as possible, and inflate the tyres to the pressure value shown on the Tyre and Loading Information label. See *Tyre Pressure* ⇨ *273*.

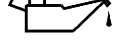
### When the Light Flashes First and Then Is On Steady

If the light flashes for about a minute and then stays on, there may be a problem with the TPMS. If the problem is not corrected, the light will come on at every ignition cycle. See *Tyre Pressure Monitor Operation* ⇨ *276*.

## Engine Oil Pressure Light

**Caution**

Lack of proper engine oil maintenance can damage the engine. Driving with the engine oil low can also damage the engine. The repairs would not be covered by the vehicle warranty. Check the oil level as soon as possible. Add oil if required, but if the oil level is within the operating range and the oil pressure is still low, have the vehicle serviced. Always follow the maintenance schedule for changing engine oil.



This light should come on briefly as the engine is started. If it does not come on, have the vehicle serviced by your dealer.

If the light comes on and stays on, it means that oil is not flowing through the engine properly. The vehicle could be low on oil and might have some other system problem. See your dealer.

## Low Fuel Warning Light

This light is near the fuel gauge and comes on briefly when the ignition is turned on as a check to show it is working.

It also comes on when the fuel tank is low on fuel. The light turns off when fuel is added. If it does not, have the vehicle serviced.

## Diesel Exhaust Fluid (DEF) Warning Light

This light, a Driver Information Centre (DIC) Message, and a chime are activated when there is an issue with the DEF.

If the DEF issue has not been corrected, the light will continue to flash. The vehicle's speed may also be limited. See *Diesel Exhaust Fluid* ⇨ *173*.

## Security Light

The security light should come on briefly as the engine is started. If it does not come on, have the vehicle serviced by your dealer. If the system is working normally, the indicator light turns off.

If the light stays on and the engine does not start, there could be a problem with the theft-deterrent system. See *Immobiliser Operation* ⇨ *30*.

## Main-Beam On Light

This light comes on when the high-beam headlamps are in use. See *Headlamp Main/Dipped-Beam Changer* ⇨ *135*.

### IntelliBeam Light


This light comes on when the IntelliBeam system, if equipped, is enabled. See *Exterior Lamp Controls* ⇨ *133*.

## Rear Fog Lamp Light

This light comes on when the rear fog lamps are in use.

See *Fog Lamps* ⇨ *137*.

## Lamps On Reminder

This light illuminates when the exterior lamps are in use, except when only the Daytime Running Lamps (DRL) are active. See *Exterior Lamp Controls* ⇨ *133*.

## Cruise Control Light

The cruise control light is white when the cruise control is on and ready, and turns green when the cruise control is set and active. See *Cruise Control* ⇨ *189*.

### Adaptive Cruise Control Light

This light comes on when Adaptive Cruise Control (if equipped) is active. See *Adaptive Cruise Control* ⇨ *193*.

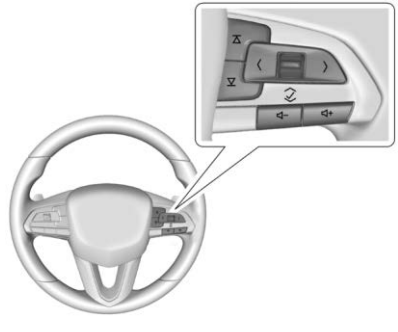
## Door Ajar Light

This light comes on when a door is open or not securely latched. Before driving, check that all doors are properly closed.

# Information Displays

## Driver Information Centre (DIC)

The DIC is displayed in the instrument cluster. It shows the status of many vehicle systems.



**< or > :** Press to move between the interactive display zones in the cluster. Press < to go back to the previous menu.

**∧ or ∨ :** Use the thumbwheel to scroll to the previous or next selection.

**✓ :** Press the thumbwheel to open a menu or select a menu item. Press and hold to reset values on certain screens.

## Info Page Options

The info displays on the DIC can be turned on or off through the Options menu.

1. Press > to scroll to the Options menu. Use the thumbwheel to scroll to Info Pages and press the thumbwheel to select.
2. Scroll ∧ or ∨ to move through the list of possible info displays.
3. Press the thumbwheel while an item is highlighted to select or deselect that item.

The info pages can also be turned on or off through the DIC page Info Page Options.

## DIC Information Displays

The following is the list of all possible DIC information displays. Some of the information displays may not be available for your particular vehicle.

While in the Info Page Options menu, the info pages can be restored to the default factory settings by pressing and holding on the left steering wheel controls and the thumbwheel on the right steering wheel controls at the same time. Doing this also resets the display settings (uplevel only).

**Speed :** Shows the vehicle speed in either kilometres per hour (km/h) or miles per hour (mph).

**Trip 1 or Trip 2 and Average Fuel Economy :** The Trip display shows the current distance travelled, in either kilometres (km) or miles (mi), since the trip odometer was last reset. The trip odometer can be reset by pressing ✓ and selecting yes or no while this display is active.

Shows the approximate average litres per 100 kilometers (L/100 km) or miles per gallon (mpg). This number is calculated based on the number of L/100 km (mpg) recorded since the last time this menu item was reset. This number reflects only the approximate average fuel economy that the vehicle has right now, and will change as driving conditions change. The Average Fuel Economy can be reset by pressing ✓ and selecting yes or no while this display is active.

**Fuel Range :** Shows the approximate distance the vehicle can be driven without refuelling. LOW will be displayed when the vehicle is low on fuel. The fuel range estimate is based on an average of the vehicle's fuel economy over recent driving history and the amount of fuel remaining in the fuel tank.

**Oil Life :** Shows an estimate of the oil's remaining useful life.
If REMAINING OIL LIFE 99% is displayed, that means 99% of the current oil life remains.

When the remaining oil life is low, the CHANGE ENGINE OIL SOON message will appear on the display. The oil should be changed as soon as possible. See *Engine Oil* ⇨ *247*. In

addition to the engine oil life system monitoring the oil life, additional maintenance is recommended. See the Maintenance Schedule booklet.

The Oil Life display must be reset after each oil change. It will not reset itself. Do not reset the Oil Life display accidentally at any time other than when the oil has just been changed. It cannot be reset accurately until the next oil change. See *Engine Oil Life System* ⇨ *249*.

**Tyre Pressure :** Shows the approximate pressures of all four tyres. Tyre pressure is displayed in either kilopascal (kPa) or in pounds per square inch (psi). If the pressure is low, the value for that tyre is shown in amber. See *Tyre Pressure Monitor System* ⇨ *275* and *Tyre Pressure Monitor Operation* ⇨ *276*.

**Air Filter Life :** Shows an estimate of the engine air filter's remaining useful life and the state of the system. Engine Air Filter Life 95% means 95% of the current air filter life remains. Messages will display based on the engine air filter life and the state of the system. When the REPLACE AT NEXT OIL CHANGE message displays, the engine air filter should be replaced at the time of the next oil change. When the REPLACE SOON message displays, the engine air filter should be replaced at the earliest convenience.

The Air Filter Life display must be reset after the engine air filter replacement. To reset, see *Engine Air Filter Life System* ⇨ *250*.

**DEF :** Displays the Diesel Exhaust Fluid (DEF) fluid level as a bar graph with individual segments that illuminate from Empty (E) to Full (F). When LOW appears on the display and the segments turn red, add fluid as soon as possible. For a guide on how much to add, see *Diesel Exhaust Fluid* ⇨ *173*.

**Fuel Economy :** Displays average fuel economy, the best fuel economy over the selected distance, and a bar graph showing instantaneous fuel economy.

**Average Speed :** Displays the average vehicle speed of the vehicle in kilometres per hour (km/h) or miles per hour (mph). This average is based on the various vehicle speeds recorded since the last reset. Reset the average speed by pressing the thumbwheel while this display is active to show a confirmation window to select yes or no.

**Timer :** This display can be used as a timer. To start the timer, press the thumbwheel while this display is active. The display will show the amount of time that has passed since the timer was last reset. To stop the timer, press the thumbwheel briefly while this display is active and the timer is running.

Press the thumbwheel while this display is active to reset the timer.

**Speed Signs :** Shows sign information, which comes from a roadway database in the onboard navigation.

**Follow Distance/Gap Setting :** When Adaptive Cruise Control (ACC) is not engaged, the current follow time to the vehicle ahead is displayed as a time value on this page. When ACC has been engaged, the display switches to the gap setting page. This page shows the current gap setting along with the vehicle ahead telltale.

**Driver Assistance :** If equipped, shows information for Lane Keep Assist (LKA) and Forward Collision Alert (FCA).

**Battery Voltage :** Shows the current battery voltage.

**Coolant Temperature :** Shows the engine coolant temperature in either degrees Celsius (°C) or degrees Fahrenheit (°F).

**Oil Temperature :** Shows the engine oil temperature in either degrees Celsius (°C) or degrees Fahrenheit (°F).

**Engine Boost :** Displays engine manifold pressure relative to ambient air pressure. It will display boost pressure generated by the turbocharging system.

**Transmission Fluid Temperature :** Shows the temperature of the automatic transmission fluid in either degrees Celsius (°C) or degrees Fahrenheit (°F).

**Info Page Options :** Scroll to choose which info pages appear on the DIC. Press the thumbwheel to select or deselect.

**Blank Page :** Allows for no information to be displayed in the cluster info display areas.

## Head-Up Display (HUD)

**⚠ Warning**

If the HUD image is too bright or too high in your field of view, it may take you more time to see things you need to see when it is dark outside. Be sure to keep the HUD image dim and placed low in your field of view.

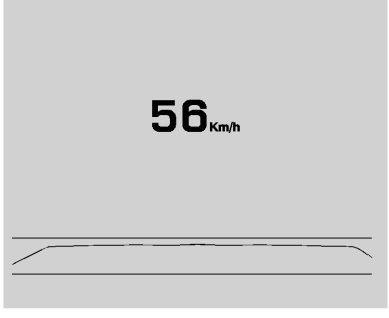
If equipped with HUD, some information concerning the operation of the vehicle is projected onto the windscreen. The image is projected through the HUD lens on top of the instrument panel. The information appears as an image focused out toward the front of the vehicle.

**Caution**

If you try to use the HUD image as a parking aid, you may misjudge the distance and damage your vehicle. Do not use the HUD image as a parking aid.

The HUD information can be displayed in various languages in some vehicles. The speedometer reading and other numerical values can be displayed in either English or metric units.

The language selection is changed through the radio and the units of measurement is changed through the instrument cluster. See “Settings” in the Infotainment Manual and “Options” under *Instrument Cluster* ⇨ *104*.




HUD Display on the Windscreen

The HUD may display some of the following vehicle information and vehicle messages or alerts:

- Speed
- Audio
- Phone
- Navigation
- Performance
- Driver Assistance Features
- Vehicle Messages

Some vehicle messages or alerts displayed in the HUD may be cleared by using the steering wheel controls. See *Vehicle Messages* ⇨ *126*.

Some information shown may not be available on your vehicle if it is not equipped with these features.


The HUD control is to the left of the steering wheel.

To adjust the HUD image:

1. Adjust the driver seat.
2. Start the engine.
3. Use the following settings to adjust the HUD.

HUD **:** Press or lift to centre the HUD image. The HUD image can only be adjusted up and down, not side to side.

INFO **:** Press to select the display view. Each press will change the display view.

±☼ **:** Lift and hold to brighten the display. Press and hold to dim the display. Continue to hold to turn the display off.

The HUD image will automatically dim and brighten to compensate for outside lighting. The HUD brightness control can also be adjusted as needed.

The HUD image can temporarily light up depending on the angle and position of sunlight on the HUD display. This is normal.

Polarised sunglasses could make the HUD image harder to see.

### Head-Up Display (HUD) Rotation Option

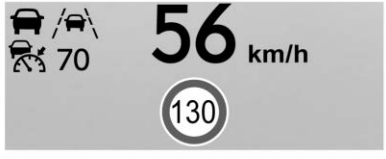
This feature allows the angle of the HUD image to be adjusted.

Press the thumbwheel while Adjust Rotation is highlighted to enter Adjust Mode. Scroll to adjust the angle of the HUD display. Press the thumbwheel to

confirm and save the setting. This feature may only be available in P (Park). See *Instrument Cluster* ⇨ *104*.

### HUD Views

There are four views in the HUD. Some vehicle information and vehicle messages or alerts may be displayed in any view.




**Speed View :** This displays digital speed in English or metric units, speed limit, and indicators such as vehicle ahead, Lane Departure Warning/Lane Keep Assist, and Adaptive Cruise Control and set speed. Some information only appears on vehicles that have these features, and when they are active.

The speed limit sign can be disabled in the HUD settings under Options in the Cluster Menu. See *Instrument Cluster* ⇨ *104*.

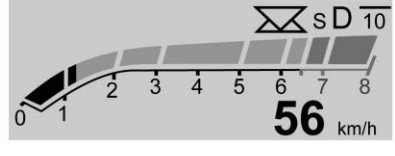

**Audio/Phone View :** This displays digital speed, indicators from speed view along with audio/phone information. The current radio station, media type, and incoming calls will be displayed.

All HUD views may briefly display audio information when the steering wheel controls are used to adjust the audio settings appearing in the instrument cluster.

Incoming phone calls appearing in the instrument cluster may also display in any HUD view.


**Navigation View :** This displays digital speed, indicators from speed view along with Turn-by-Turn Navigation information in some vehicles. The compass heading is displayed when navigation routing is not active.

Navigation Turn-by-Turn Alerts shown in the instrument cluster may also be displayed in any HUD view.



**Performance View :** This displays digital speed, indicators from speed view along with rpm reading, transmission positions, and gear shift indicator (if equipped).

### Care of the HUD

Clean the inside of the windscreen to remove any dirt or film that could reduce the sharpness or clarity of the HUD image.

Clean the HUD lens with a soft cloth sprayed with glass cleaner. Wipe the lens gently, then dry it.

### HUD Troubleshooting

If you cannot see the HUD image when the ignition is on, check that:

- Nothing is covering the HUD lens.
- The HUD brightness setting is not too dim or too bright.
- The HUD is adjusted to the proper height.
- Polarised sunglasses are not worn.
- The windscreen and HUD lens are clean.

If the HUD image is not correct, contact your dealer.

The windscreen is part of the HUD system. See *Windscreen Replacement* ⇨ *262*.

## Vehicle Messages

Messages displayed on the Driver Information Centre (DIC) indicate the status of the vehicle or some action that may be needed to correct a condition. Multiple messages may appear one after another.

The messages that do not require immediate action can be acknowledged and cleared by pressing the thumbwheel. The messages that require immediate action cannot be cleared until that action is performed.

All messages should be taken seriously; clearing the message does not correct the problem.

If a SERVICE message appears, see your retailer.

Follow the instructions given in the messages. The system displays messages regarding the following topics:

- Service Messages
- Fluid Levels
- Vehicle Security
- Brakes

- Steering
- Ride Control Systems
- Driver Assistance Systems
- Cruise Control
- Lighting and Bulb Replacement
- Wiper/Washer Systems
- Doors and Windows
- Seat Belts
- Airbag Systems
- Engine and Transmission
- Tyre Pressure
- Battery

## Engine Power Messages

### ENGINE POWER IS REDUCED

This message displays when the vehicle's propulsion power is reduced. A reduction in propulsion power can affect the vehicle's ability to accelerate. If this message is on, but there is no observed reduction in performance, proceed to your destination. The performance may be reduced the next time the vehicle is driven. The vehicle may be driven while this message is on, but maximum acceleration and speed may be reduced. Anytime this message stays on, or displays repeatedly, the vehicle should be taken to your dealer for service as soon as possible.

Under certain operating conditions, propulsion will be disabled. Try restarting after the vehicle has been off for 30 seconds.

## Vehicle Speed Messages

### SPEED LIMITED TO XXX KM/H (MPH)

This message shows that the vehicle speed has been limited to the speed displayed. The limited speed is a protection for various propulsion and vehicle systems, such as lubrication, thermal, brakes, suspension, Teen Driver if equipped, or tires.

# Vehicle Personalisation

The following are all possible vehicle personalisation features. Depending on the vehicle, some may not be available.

For System, Apps, and Personal features and functions, see “Settings” in the infotainment manual.

To access the vehicle personalisation menu:

1. Touch the Settings icon on the Home Page of the infotainment display.
2. Touch Vehicle to display a list of available options.
3. Touch to select the desired feature setting.
4. Touch ◯ or | to turn a feature off or on.
5. Touch ✕ to go to the top level of the Settings menu.

The menu may contain the following:

## Rear Seat Reminder

This allows for a chime and a message when the rear door has been opened before or during the operation of the vehicle.

Touch Off or On.

## Climate and Air Quality

Touch and the following may display:

- Auto Fan Speed
- Auto Cooled Seats
- Auto Heated Seats
- Auto Defog
- Auto Rear Defog
- Ionizer

### Auto Fan Speed

This setting specifies the amount of airflow when the climate control fan setting is Auto Fan.

Touch Low, Medium, or High.

### Auto Cooled Seats

This setting automatically turns on and regulates the ventilated seats when the cabin temperature is warm. See *Heated and Ventilated Front Seats* ⇨ *49*.

Touch Off or On.

### Auto Heated Seats

This setting automatically turns on and regulates the heated seats when the cabin temperature is cool. The auto heated seats can be turned off by using the heated seat buttons on the centre console. See *Heated and Ventilated Front Seats* ⇨ *49*.

Touch Off or On.

### Auto Defog

This setting automatically turns the front defogger on when the engine is started.

Touch Off or On.

### Auto Rear Defog

This setting automatically turns the rear defogger on when the engine is started.

Touch Off or On.

### Ionizer

If equipped and on, this feature helps to clean the air inside the vehicle and remove contaminants such as pollen, odours, and dust. See *Dual Automatic Climate Control System* ⇨ *142*.

Touch Off or On.

## Collision / Detection Systems

Touch and the following may display:

- Alert Type
- Forward Collision System
- Front Pedestrian Detection
- Rear Pedestrian Detection
- Adaptive Cruise Go Notifier
- Lane Change Alert
- Rear Camera Park Assist Symbols
- Rear Cross Traffic Alert

### Alert Type

This setting specifies the type of vehicle feedback provided, either a beep or seat vibration, when you are in danger of colliding with an object.

Touch Beeps or Safety Alert Seat.

### Forward Collision System

This setting controls the vehicle response when detecting a vehicle ahead of you. The Off setting disables all FCA and AEB functions. With the Alert and Brake setting, both FCA and AEB are available. The Alert setting disables AEB. See *Automatic Emergency Braking (AEB)* ⇨ *213*.

Touch Off, Alert, or Alert and Brake.

### Front Pedestrian Detection

This feature may help avoid or reduce the harm caused by front-end crashes with nearby pedestrians.

See *Front Pedestrian Braking (FPB) System* ⇨ *215*.

Select Off, Alert, or Alert and Brake.

### Rear Pedestrian Detection

This setting specifies if alerts will display when the vehicle detects pedestrians behind the vehicle, when in R (Reverse). See *Rear Pedestrian Alert* ⇨ *210*.

Touch Off, Alert, or Alert and Brake.

### Adaptive Cruise Go Notifier

This setting determines if an alert will appear when Adaptive Cruise Control brings the vehicle to a complete stop and the vehicle ahead of you starts moving again. See *Adaptive Cruise Control* ⇨ *193*.

Touch Off or On.

### Lane Change Alert

This setting specifies if an alert will display on the outside mirror to help you avoid crashing into a vehicle in your blind spot, or rapidly approaching your blind spot, during a lane change maneuver. See *Lane Change Alert (LCA)* ⇨ *217*.

When Lane Change Alert is disabled, Side Blind Zone Alert is also disabled.

Touch Off or On.

### Rear Camera Park Assist Symbols

This setting enables the Rear Camera Park Assist Symbols. See *Assistance Systems for Parking or Reversing* ⇨ *203*.

Touch Off or On.

### Rear Cross Traffic Alert

This setting specifies if an alert will display when the vehicle detects approaching rear cross traffic when in R (Reverse). See *Assistance Systems for Parking or Reversing* ⇨ *203*.

Touch Off or On.

## Comfort and Convenience

Touch and the following may display:

- Chime Volume
- Reverse Tilt Mirror
- Remote Mirror Folding
- Rain Sense Wipers
- Auto Wipe in Reverse Gear
- Hands Free Tailgate Control

### Chime Volume

This setting determines the chime volume level.

Touch the controls on the infotainment display to adjust the volume.

### Reverse Tilt Mirror

When on, both the driver and passenger, driver, or passenger outside mirrors will tilt downward when the vehicle is shifted to R (Reverse) to improve visibility of the ground near the rear wheels. They will return to their previous driving position when the vehicle is shifted out of R (Reverse) or the engine is turned off. See *Reverse Tilt Mirrors* ⇨ *34*.

Touch Off, On - Driver and Passenger, On - Driver, or On - Passenger.

### Remote Mirror Folding

When on, the outside mirrors will automatically fold or unfold when the Remote Keyless Entry (RKE) transmitter or button is pressed and held. See *Folding Mirrors* ⇨ *33*.

Touch Off or On.

### Rain Sense Wipers

This setting automatically turns on the wipers when moisture is detected and the wiper switch is in intermittent mode.

Touch Disabled or Enabled.

### Auto Wipe in Reverse Gear

When on and the front wiper is on, the rear wiper will automatically activate when the vehicle is shifted to R (Reverse).

Select Off or On.

### Hands Free Tailgate Control

The liftgate may be operated with a kicking motion under the left corner of the rear bumper. See *Tailgate* ⇨ *20*.

Select Off, On-Open and Close, or On-Open Only.

## Lighting

Touch and the following may display:

- Vehicle Locator Lights
- Exit Lighting

### Vehicle Locator Lights

This setting flashes the headlights of your vehicle when you press on the Remote Keyless Entry (RKE) transmitter.

Touch Off or On.

### Exit Lighting

This setting specifies how long the headlamps stay on after the vehicle is turned off and exited.

Touch Off, 30 Seconds, 60 Seconds, or 120 Seconds.

## Power Door Locks

Touch and the following may display:

- Open Door Anti Lock Out
- Auto Door Lock
- Delayed Door Lock

### Open Door Anti Lock Out

This setting prevents the driver door from locking when the door is open. If this setting is on, the Delayed Door Lock menu will not be available.

Touch Off or On.

### Auto Door Lock

When this feature is turned on, all doors will automatically lock when the vehicle is shifted out of P (Park). The doors will automatically unlock when the vehicle is shifted into P (Park).

Touch Off or On.

### Delayed Door Lock

This setting delays the locking of the vehicle's doors.

Touch Off or On.

## Remote Lock, Unlock, Start

Touch and the following may display:

- Remote Unlock Light Feedback
- Remote Lock Feedback
- Remote Door Unlock
- Remote Start Auto Cool Seats
- Remote Start Auto Heat Seats
- Remote Window Operation
- Passive Door Unlock
- Passive Door Lock
- Remote Left in Vehicle Alert

### Remote Unlock Light Feedback

This setting flashes the exterior lamps when the vehicle is unlocked with the RKE transmitter.

Touch Off or Flash Lights.

### Remote Lock Feedback

This setting specifies how the vehicle responds when the vehicle is locked with the RKE transmitter.

Touch Off, Lights and Horn, Lights Only, or Horn Only.

### Remote Door Unlock

This setting specifies whether all doors, or just the driver door, unlock when pressing on the RKE transmitter.

Touch All Doors or Driver Door.

### Remote Start Auto Cool Seats

This setting automatically turns on the ventilated seats when using the remote start function on warm days. See *Heated and Ventilated Front Seats* ⇨ *49* and *Remote Vehicle Start* ⇨ *14*.

Touch Off or On.

### Remote Start Auto Heat Seats

This setting automatically turns on the heated seats when using the remote start function on cold days. See *Heated and Ventilated Front Seats* ⇨ *49* and *Remote Vehicle Start* ⇨ *14*.

Touch Off or On.

### Remote Window Operation

If equipped, this feature enables remote operation of the windows with the RKE transmitter. See *Remote Keyless Entry (RKE) System Operation* ⇨ *8*.

Touch Off or On.

### Passive Door Unlock

This setting specifies which doors unlock when using the button on the driver door handle to unlock the vehicle.

Touch Off, All Doors, or Driver Door Only.

### Passive Door Lock

This setting specifies if the vehicle will automatically lock, or lock and provide an alert after all the doors are closed, and you walk away from the vehicle with the RKE transmitter. See *Remote Keyless Entry (RKE) System Operation* ⇨ *8*.

Touch Off, On with Horn Chirp, or On.

#### Remote Left in Vehicle Alert

This feature sounds an alert when the RKE transmitter is left in the vehicle. This menu also enables Remote No Longer in Vehicle Alert.

Touch Off or On.

### Seating Position

Touch and the following may display:

- Seat Entry Memory
- Seat Exit Memory

#### Seat Entry Memory

This feature automatically recalls the previously stored 1 or 2 button positions when the ignition is changed from off to on or ACC/ACCESSORY. See *Memory Seats* ⇨ *47*.

Touch Off or On.

#### Seat Exit Memory

This feature automatically recalls the previously stored exit button positions when the ignition is changed from on or ACC/ACCESSORY to off if the driver door is open or opened. See *Memory Seats* ⇨ *47*.

Touch Off or On.

### Valet Mode

This will lock the infotainment system and steering wheel controls. It may also limit access to vehicle storage locations, if equipped.

To enable valet mode:

1. Enter a four-digit code on the keypad.
2. Touch Enter to go to the confirmation screen.
3. Re-enter the four-digit code.

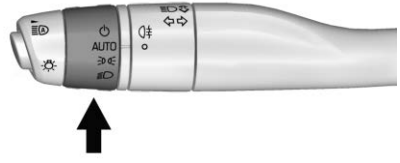
Touch Lock or Unlock to lock or unlock the system. Touch Back to go back to the previous menu.

# Lighting



# Exterior Lighting

## Exterior Lamp Controls




The exterior lamp control is on the indicator lever.

Turn the control to the following positions:

⏻ **:** Turns off the exterior lamps. The knob returns to the AUTO position after it is released. Turn to ⏻ again to reactivate the AUTO mode.

**AUTO :** Automatically turns the exterior lamps on and off, depending on outside lighting.

**:** Turns on the parking lamps including all lamps, except the headlamps.

: Turns on the headlamps together with the parking lamps and instrument panel lights.

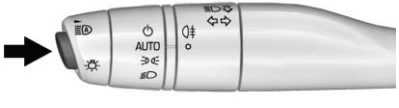
## IntelliBeam System

If equipped, this system turns the vehicle's main beam headlamps on and off according to surrounding traffic conditions.

The system turns the main beam headlamps on when it is dark enough and there is no other traffic present.

This light comes on in the instrument cluster when the IntelliBeam system is enabled.

### Turning On and Enabling IntelliBeam




To enable the IntelliBeam system, press the button on the end of the indicator lever when the exterior lamp control is in the AUTO or position.

### Driving with IntelliBeam

The system only activates the main beams when driving over 40 km/h (25 mph).

The blue main-beam on light appears on the instrument cluster when the main beams are on.

There is a sensor near the top centre of the windscreen that automatically controls the system. Keep this area of the windscreen clear of debris to allow for best system performance.

The main beam headlamps remain on, under the automatic control, until one of the following situations occurs:

- The system detects an approaching vehicle's headlamps.
- The system detects a preceding vehicle's tail lamps.
- The outside light is bright enough that main beam headlamps are not required.
- The vehicle's speed drops below 20 km/h (12 mph).
- The IntelliBeam system is disabled by the button on the indicator Lever. If this happens, press the button on the end of the indicator lever when the exterior lamp control is in the AUTO or position to reactivate the IntelliBeam system. The instrument cluster light will come on to indicate the IntelliBeam is reactivated.

The main beams may not turn off automatically if the system cannot detect another vehicle's lamps because of any of the following:

- The other vehicle's lamps are missing, damaged, obstructed from view, or otherwise undetected.
- The other vehicle's lamps are covered with dirt, snow, and/or road spray.
- The other vehicle's lamps cannot be detected due to dense exhaust, smoke, fog, snow, road spray, mist, or other airborne obstructions.

- The vehicle's windscreen is dirty, cracked, or obstructed by something that blocks the view of the light sensor.
- The vehicle is loaded such that the front end points upward, causing the light sensor to aim high and not detect headlamps and tail lamps.
- The vehicle is being driven on winding or hilly roads.

The automatic main beam headlights may need to be disabled if any of the above conditions exist.

## Exterior Lamps Off Reminder

A warning chime sounds if the driver door is opened while the ignition is off and the exterior lamps are on.

## Headlamp Main/ Dipped-Beam Changer

: Push the indicator lever away from you and release, to turn the main beams on. To return to dipped beams, push the stalk again or pull it toward you and release.

This indicator light turns on in the instrument cluster when the high-beam headlamps are on.

## Flash-to-Pass

To flash the main beams, pull the indicator stalk toward you, and release.

## Daytime Running Lamps (DRL)

DRL can make it easier for others to see the front of your vehicle during the day.

The dedicated DRL will come on when all of the following conditions are met:

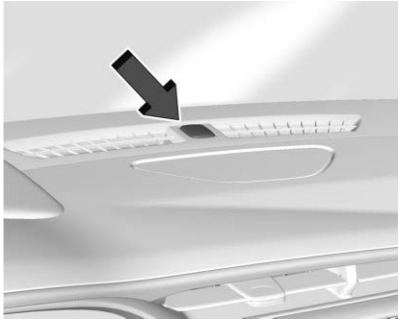
- The ignition is on.
- The exterior lamp control is in AUTO.
- The light sensor determines it is daytime.

When the DRL are on, the tail lights and other lamps will not be on.

The DRL turn off when the headlamps are turned to ⏻ or the ignition is off.

## Automatic Headlamp System

When the exterior lamp control is set to AUTO and it is dark enough outside, the headlights come on automatically.



There is a light sensor on top of the instrument panel. Do not cover the sensor.

The system may also turn on the headlamps when driving through a parking garage or tunnel.

If the vehicle is started in a dark garage, the automatic headlamp system comes on immediately. If it is light outside when the vehicle leaves the garage, there is a slight delay before the automatic headlight system changes to the Daytime Running Lamps (DRL). During that delay, the instrument cluster may not be as bright as usual. Make sure the instrument panel brightness control is in the full bright position. See *Instrument Panel Illumination Control* ⇨ *138*.

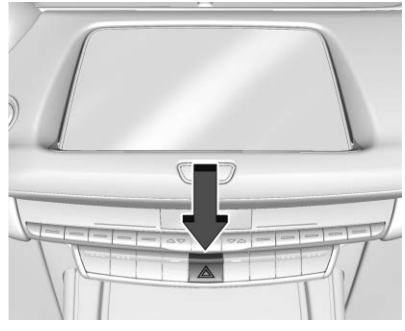
When it is bright enough outside, the headlights will turn off or may change to DRL.

The automatic headlamp system turns off when the exterior lamp control is turned to ⏻ or the ignition is off.

### Lights On with Wipers

If the windscreen wipers are activated in daylight with the engine on, and the exterior lamp control is in AUTO, the headlights, parking lights, and other exterior lamps come on. The transition time for the lamps coming on varies based on wiper speed. When the wipers are not operating, these lamps turn off. Move the exterior lamp control to ⏻ or AUTO to disable this feature.

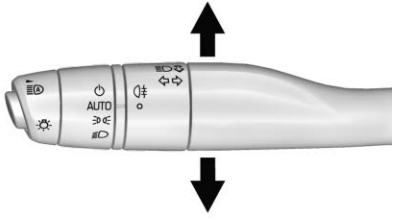
## Hazard Lights



⚠ : Press ⚠ to make the front and rear indicator lamps flash on and off. Press again to turn the flashers off.

The hazard warning flashers turn on automatically if the airbags deploy.

## Turn and Lane-Change Signals




Move the lever all the way up or down to signal a turn.

An arrow on the instrument cluster flashes in the direction of the turn or lane change.

Raise or lower the lever until the arrow starts to flash to signal a lane change. Hold it there until the lane change is completed. If the lever is briefly pressed and released, the indicator flashes three times.

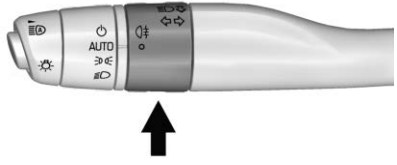
The indicator and lane-change signal can be turned off manually by moving the lever back to its original position.

If after signalling a turn or lane change, the arrow flashes rapidly or does not come on, a signal bulb may be burned out.

Replace any burned out bulbs. If a bulb is not burned out, check the fuse. See *Fuses and Circuit Breakers* ⇨ *265*.

## Fog Lamps

### Rear Fog Lamps




The rear fog lamps make the vehicle more visible from the rear in foggy or misty conditions.

**:** Turn the band on the lever to and release it, to turn the rear fog lamps on or off. The band will return to its original position.

The parking lights and headlights must be on for the rear fog lamps to work.

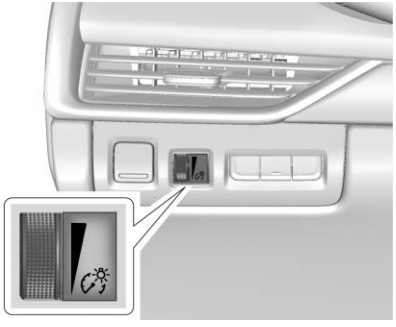
## Cornering Lights

If equipped with cornering lamps, they automatically come on when all of the following occur:

- The dipped beam headlights are on.
- The indicators are activated or the steering wheel is at a turning angle.
- The vehicle speed is below 40 km/h (25 mph).

# Interior Lighting

## Instrument Panel Illumination Control



The brightness of the instrument panel lighting and steering wheel controls can be adjusted.

**:** Move the thumbwheel up or down to brighten or dim the lights.

The brightness of the displays automatically adjusts based on outdoor lighting. The instrument panel illumination control will set the lowest level to which the display will be automatically adjusted.

## Courtesy Lamps

The courtesy lamps come on when any door is opened unless the dome lamp override is activated. To deactivate the dome lamp override, press OFF and the indicator light on the button will turn off.

## Dome Lamps


The dome lamp controls are in the overhead console.

To operate, press the following buttons:

**OFF :** Press to turn off the dome lamps when a door is open. An indicator light on the button will turn on when the dome lamp override is activated. Press OFF again to deactivate this feature and the indicator light will turn off. The dome lamps will come on when doors are opened.

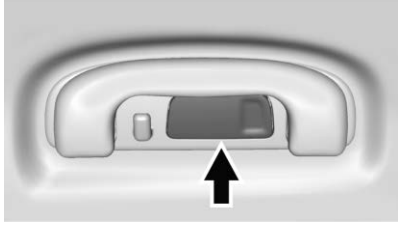
**ON/OFF :** Press to turn the dome lamps on manually.

## Reading Lamps

There are front and rear reading lamps on the overhead console and over the rear passenger doors. These lamps come on automatically when any door is opened.

To manually turn the reading lamps on or off:

Press the lamp lenses on the front reading lamps.



Press the lamp lenses over the rear passenger doors.

# Lighting Features

## Entry Lighting

Some exterior lamps and most of the interior lights turn on briefly at night, or in areas of limited lighting when is pressed on the Remote Keyless Entry (RKE) transmitter. See *Remote Keyless Entry (RKE) System Operation* ⇨ *8*. When the driver door is opened, all control lights, Driver Information Centre (DIC) lights, and door pocket lights turn on. After about 30 seconds the exterior lamps turn off, then the remaining interior lights dim to off. Entry lighting can be disabled manually by turning the ignition on or to ACC/ACCESSORY, or by pressing on the RKE transmitter.

This feature can be changed. See "Vehicle Locator Lights" under *Vehicle Personalisation* ⇨ *127*.

## Exit Lighting

The headlamps, tail lamps, parking lamps, outside mirror lamps, and number plate lamps come on when the following is performed:

1. Press ENGINE START/STOP to turn off the vehicle.
2. Open the driver door.
3. Pull the indicator lever and release.
4. Close the driver door.

The dome lamp illuminates after the vehicle is turned off. The exterior lamps and interior light remain on for a set amount of time, then automatically turn off.

The exterior lamps turn off immediately by turning the exterior lamp control off.

This feature can be changed. See *Vehicle Personalisation* ⇨ *127*.

## Battery Power Protection

The battery saver feature is designed to protect the vehicle's battery.

If some interior lamps are left on and the ignition is turned off, the battery rundown protection system automatically turns the lamp off after some time.

## Exterior Lighting Battery Saver

The exterior lamps turn off about 10 minutes after the ignition is turned off, if the parking lamps or headlamps have been manually left on. This protects against draining the battery. To restart the 10-minute timer, turn the exterior lamp control to the off position and then back to the parking lamp or headlamp position.

To keep the lamps on for more than 10 minutes, the ignition must be on or in ACC/ACCESSORY.

# Infotainment System



# Introduction

## Infotainment

See the infotainment manual for information on the radio, audio players, phone, navigation system, and voice or speech recognition. It also includes information on settings.

### Active Noise Cancellation (ANC)

If equipped, ANC reduces engine noise in the vehicle's interior. ANC requires the factory-installed audio system, radio, speakers, amplifier (if equipped), induction system and exhaust system to work properly. Deactivation is required by your retailer if related aftermarket equipment is installed.

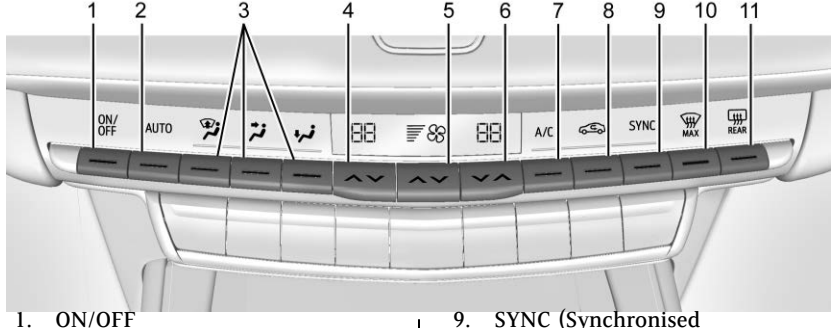
# Climate Controls



# Climate Control Systems

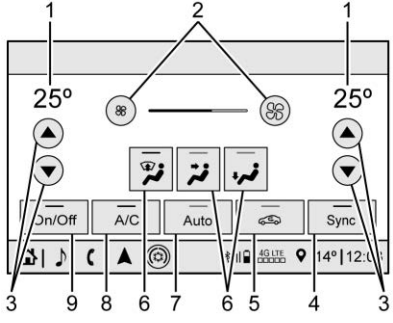
## Dual Automatic Climate Control System

The climate control buttons on the centre console and on the climate control display are used to adjust the heating, cooling, and ventilation.




1. ON/OFF
2. AUTO (Automatic Operation)
3. Air Delivery Mode Controls
4. Driver Temperature Control
5. Fan Control
6. Passenger Temperature Control
7. A/C (Air Conditioning)
8. Recirculation
9. SYNC (Synchronised Temperature)
10. Max Defrost
11. Rear Window Demister

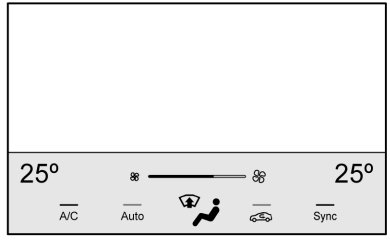
## Climate Control Display




1. Driver and Passenger Temperature Display
2. Fan Control
3. Driver and Passenger Temperature Controls
4. Sync (Synchronised Temperature)
5. Recirculation
6. Air Delivery Mode Controls
7. Auto (Automatic Operation)
8. A/C (Air Conditioning)
9. On/Off

The fan, air delivery mode, air conditioning, driver and passenger temperatures, and SYNC settings can be controlled by touching CLIMATE on the infotainment home page or the climate button in the infotainment display application tray. A selection can then be made on the front climate control page displayed.

## Climate Control Status Display




The climate control status display appears briefly when the climate control buttons on the centre console are adjusted.

### Automatic Operation

The system automatically controls the fan speed, air delivery, air conditioning, and recirculation in order to heat or cool the vehicle to the desired temperature.

When AUTO is lit, all four functions operate automatically. Each function can also be manually set and the setting is displayed. Functions not manually set will continue to be automatically controlled, even if the AUTO indicator is not lit.

For automatic operation:

1. Touch or press AUTO on the display or the centre console.
2. Set the temperature. Allow the system time to stabilise. Then adjust the temperature as needed.

To improve fuel efficiency and to cool the vehicle faster, recirculation may be automatically selected in warm weather. The recirculation light will not come on. Press to select recirculation; press it again to select outside air.

English units can be changed to metric units through the instrument cluster. See *Instrument Cluster* ⇨ *104*.

**OFF :** Press to turn the fan on or off. The front climate display turns off when the fan is turned off and the system will stop air from flowing into the cabin. If on is selected, or any other buttons are pressed, the climate control system will turn on and operate at the current setting. The temperature control and air delivery mode can still be adjusted.

△ / ▽ **:** The temperature can be adjusted separately for the driver and the passenger. Press to increase or decrease the temperature. Press and hold to rapidly increase or decrease the temperature.

The driver and passenger temperatures can also be adjusted by touching the buttons on the climate control display.

**Sync :** Touch Sync on the climate control display to link all climate zone settings to the driver settings. Adjust the driver side temperature control to change the linked temperature. When the passenger settings are adjusted, the Sync indicator light turns off when the temperatures are unlinked.

### Manual Operation

▲ ▼ **:** Press the fan controls on the centre console or the climate control display to increase or decrease the fan speed. Press and hold the controls to adjust speed more quickly. The fan speed setting displays. Pressing either button cancels automatic fan control and the fan can be controlled manually. Press AUTO to return to automatic operation.

**Air Delivery Mode Control :** When the climate information is displayed, touch the desired air delivery mode on the climate control display to change the direction of the airflow. The selected air delivery mode button is lit. Touching any of the air delivery buttons cancels automatic air delivery control and the direction of the airflow can be controlled manually. Press AUTO to return to automatic operation.

Press , , or to change the direction of the airflow. Any combination of the three controls can be selected. An indicator light comes on in the selected mode button.

To change the current mode, select one of the following:

**:** Air is directed to the instrument panel outlets.

**:** Air is directed to the floor outlets.

**:** Air is directed to the windscreen.

**:** Clears the windscreen of mist or frost more quickly. Air is directed to the windscreen. Press to turn on or off. Changing the air delivery mode also turns the defrost off.

**A/C :** Touch A/C on the climate control display to turn the automatic air conditioning on or off. If the fan is turned off or the outside temperature falls below freezing, the air conditioner will not run.

Press AUTO to return to automatic operation and the air conditioner runs as needed.

**:** Press to alternate between recirculating air inside the vehicle or pulling in outside air. The indicator light on the button is lit when recirculation mode is active. This helps to quickly cool the air inside the vehicle or reduce the outside air and odours that might enter.

Pressing this control cancels automatic recirculation. Press AUTO to return to automatic operation; recirculation runs automatically as needed.

Manual recirculation mode is not available when in Defrost or Defog modes.

**Auto Defog :** The climate control system may have a sensor to automatically detect high humidity inside the vehicle. When high humidity is detected, the climate control system may adjust to outside air supply and turn on the air conditioner. If the climate control system does not detect possible window misting, it returns to normal operation. To turn Auto Demist off or on, see "Climate and Air Quality" under *Vehicle Personalisation ⇨ 127*.

**Ionizer :** If equipped with an ioniser, this feature helps to clean the air inside the vehicle and remove contaminants such as pollen, odours, and dust. If the climate control system is on and the ioniser is enabled, the ioniser status indicator will be lit on the climate control display. To turn the ioniser on or off, see “Climate and Air Quality” under *Vehicle Personalisation ⇨ 127*.

## Rear Window Demister

REAR **:** Press to turn the rear window demister on or off. An indicator light on the button comes on to show that the rear window demister is on.

The demister only works when the ignition is on. The demister turns off if the ignition is off or in ACC/ ACCESSORY.

The rear window demister can be set to automatic operation. See “Climate and Air Quality” under *Vehicle Personalisation ⇨ 127*. When Auto Rear Demist is selected, the rear window demister turns on automatically when the interior temperature is cold and the outside temperature is about 7 °C (45 °F) and below.

The upper grid lines on the rear window are aerial lines and are not intended to heat when the demister is activated.

The heated outside mirrors turn on when the rear window demister button is on and help to clear mist or frost from the surface of the mirrors.

### Caution

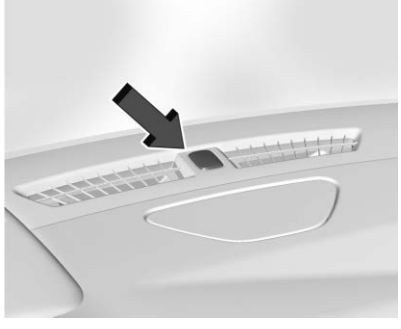
Do not try to clear frost or other material from the inside of the front windscreen and rear window with a razor blade or anything else that is sharp. This may damage the rear window demister grid and affect the radio's ability to pick up stations clearly. The repairs would not be covered by the vehicle warranty.

**Remote Start Climate Control Operation :** If equipped with remote start, the climate control system may

run when the vehicle is started remotely. The system will determine the best mode and temperature setting for operation. Once the vehicle is started with the Engine Start/Stop button, the climate control system will begin to operate at the last customer selected operating mode and temperature. The rear demist may come on during remote start based on cold ambient conditions. The rear demist indicator light does not come on during a remote start.

If equipped, the heated seats will turn on if it is cold outside or the ventilated seats will turn on if it is hot outside. The heated and ventilated seat indicator lights may not come on during a remote start. If equipped, the heated steering wheel will come on in a remote start if it is cold outside. The heated steering wheel indicator light may not come on. See *Remote Vehicle Start* ⇨ *14* and *Heated and Ventilated Front Seats* ⇨ *49*.

### Sensor

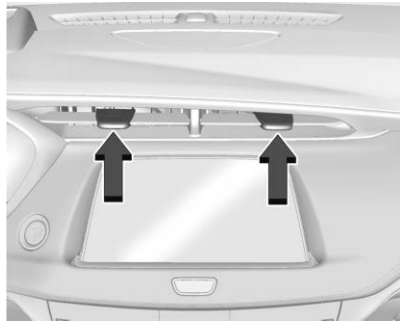


The solar sensor, on top of the instrument panel near the windscreen, monitors the solar intensity.

The climate control system uses the sensor information to adjust the temperature, fan speed, recirculation, and air delivery mode for best comfort.

If the sensor is covered, the automatic climate control system may not work properly.

## Air Vents



Adjustable air vents are in the centre and on the sides of the instrument panel, and on the rear of the centre console storage.

Move the slider knobs to change the direction of or to close off the airflow.

### Operation Tips

- Clear away any ice, snow, or leaves from air inlets at the base of the windscreen that could block the flow of air into the vehicle.

- Clear snow off the bonnet to improve visibility and help decrease moisture drawn into the vehicle.
- Keep the path under the front seats clear of objects to help circulate the air inside of the vehicle more effectively.
- Use of non-GM approved bonnet air flow deflectors can adversely affect the performance of the system. Check with your dealer before adding equipment to the outside of the vehicle.
- Do not attach any devices to the air vent slats. This restricts airflow and may cause damage to the air vents.

# Maintenance

## Passenger Compartment Air Filter

The filter reduces dust, pollen, and other airborne irritants from outside air that is pulled into the vehicle. The filter should be replaced as part of routine scheduled maintenance. See your retailer regarding replacement of the filter.

## Service

All vehicles have a label underbonnet that identifies the refrigerant used in the vehicle. The refrigerant system should only be serviced by trained and certified technicians. The air conditioning evaporator should never be repaired or replaced by one from a salvage vehicle. It should only be replaced by a new evaporator to ensure proper and safe operation.

During service, all refrigerants should be reclaimed with proper equipment. Venting refrigerants directly to the atmosphere is harmful to the environment and may also create unsafe conditions based on inhalation, combustion, frostbite, or other health-based concerns.

The air conditioning system requires periodic maintenance. See your retailer for service.

# Driving and Operating

### Trailer Towing



### Conversions and Add-Ons



# Driving Information

## Driving for Better Fuel Economy

Driving habits can affect fuel mileage. Here are some driving tips to get the best fuel economy possible.

- Set the climate controls to the desired temperature after the engine is started, or turn them off when not required.
- On AWD vehicles, use Tour Mode when conditions permit.
- Avoid fast starts and accelerate smoothly.
- Brake gradually and avoid abrupt stops.
- Avoid idling the engine for long periods of time.
- When road and weather conditions are appropriate, use cruise control.
- Always follow posted speed limits or drive more slowly when conditions require.
- Keep vehicle tyres properly inflated.
- Combine several trips into a single trip.
- Replace the vehicle's tyres with the same TPC Spec number moulded into the tyre's sidewall near the size.
- Follow recommended scheduled maintenance.

## Distracted Driving

Distraction comes in many forms and can take your focus from the task of driving. Exercise good judgement and do not let other activities divert your attention away from the road. Many local governments have enacted laws regarding driver distraction. Become familiar with the local laws in your area.

To avoid distracted driving, keep your eyes on the road, keep your hands on the steering wheel, and focus your attention on driving.

- Do not use a phone in demanding driving situations. Use a hands-free method to place or receive necessary phone calls.
- Watch the road. Do not read, take notes, or look up information on phones or other electronic devices.
- Designate a front seat passenger to handle potential distractions.
- Become familiar with vehicle features before driving, such as programming favourite radio stations and adjusting climate control and seat settings. Program all trip information into any navigation device prior to driving.
- Wait until the vehicle is parked to retrieve items that have fallen to the floor.
- Stop or park the vehicle to tend to children.
- Keep pets in an appropriate carrier or restraint.
- Avoid stressful conversations while driving, whether with a passenger or on a mobile phone.

**⚠ Warning**

Taking your eyes off the road too long or too often could cause a crash resulting in injury or death. Focus your attention on driving.

Refer to the infotainment manual for more information on using that system and the navigation system, if equipped, including pairing and using a mobile phone.

## Defensive Driving

Defensive driving means “always expect the unexpected.” The first step in driving defensively is to wear the seat belt. See *Seat Belts ⇨ 53*.

- Assume that other road users (pedestrians, bicyclists, and other drivers) are going to be careless and make mistakes. Anticipate what they may do and be ready.
- Allow enough following distance between you and the driver in front of you.
- Focus on the task of driving.

## Control of a Vehicle

Braking, steering, and accelerating are important factors in helping to control a vehicle while driving.

## Braking

Braking action involves perception time and reaction time. Deciding to push the brake pedal is perception time. Actually doing it is reaction time.

Average driver reaction time is about three-quarters of a second. In that time, a vehicle moving at 100 km/h (60 mph) travels 20 m (66 ft), which could be a lot of distance in an emergency.

Helpful braking tips to keep in mind include:

- Keep enough distance between you and the vehicle in front of you.
- Avoid needless heavy braking.
- Keep pace with traffic.

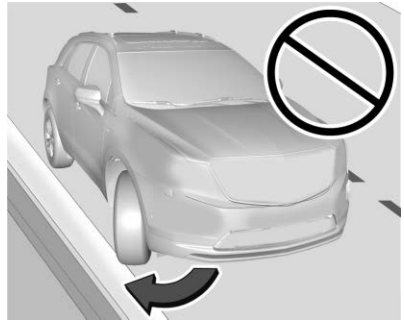
If the engine ever stops while the vehicle is being driven, brake normally but do not pump the brakes. Doing so could make the pedal harder to push down. If the engine stops, there will be some power brake assist but it will be used when the brake is applied. Once the power assist is used up, it can take longer to stop and the brake pedal will be harder to push.

## Steering

### Electric Power Steering

**Caution**

To avoid damage to the steering system, do not drive over kerbs, parking barriers, or similar objects at speeds greater than 3 km/h (1 mph). Use care when driving over other objects such as lane dividers and speed bumps. Damage caused by misuse of the vehicle is not covered by the vehicle warranty.



The vehicle has electric power steering. It does not have power steering fluid. Regular maintenance is not required.

If power steering assist is lost due to a system malfunction, the vehicle can be steered, but may require increased effort.

If the steering assist is used for an extended period of time while the vehicle is not moving, power assist may be reduced.

If the steering wheel is turned until it reaches the end of its travel and is held against that position for an extended period of time, power steering assist may be reduced.

Normal use of the power steering assist should return when the system cools down.

See your dealer if there is a problem.

### Bend Tips

- Take bends at a reasonable speed.
- Reduce speed before entering a bend.
- Maintain a reasonable steady speed through the bend.
- Wait until the vehicle is out of the bend before accelerating gently into the straight.

### Steering in Emergencies

- There are some situations when steering around a problem may be more effective than braking.

- Holding both sides of the steering wheel allows you to turn 180 degrees without removing a hand.
- The Antilock Brake System (ABS) allows steering while braking.

## Off-Road Recovery

The vehicle's right wheels can drop off the edge of a road onto the shoulder while driving. Follow these tips:

1. Ease off the accelerator and then, if there is nothing in the way, steer the vehicle so that it straddles the edge of the pavement.
2. Turn the steering wheel about one-eighth of a turn, until the right front tyre contacts the pavement edge.
3. Turn the steering wheel to go straight down the roadway.

## Loss of Control

### Skidding

There are three types of skids that correspond to the vehicle's three control systems:

- Braking Skid - wheels are not rolling.
- Steering or Cornering Skid - too much speed or steering in a bend causes tyres to slip and lose cornering force.
- Acceleration Skid - too much throttle causes the driving wheels to spin.

Defensive drivers avoid most skids by taking reasonable care suited to existing conditions, and by not overdriving those conditions. But skids are always possible.

If the vehicle starts to slide, follow these suggestions:

- Ease your foot off the accelerator pedal and steer the way you want the vehicle to go. The vehicle may straighten out. Be ready for a second skid if it occurs.
- Slow down and adjust your driving according to weather conditions. Stopping distance can be longer and vehicle control can be affected when traction is reduced by water, snow, ice, gravel, or other material on the road. Learn to recognise warning clues - such as enough water, ice, or packed snow on the road to make a mirrored surface - and slow down when you have any doubt.
- Try to avoid sudden steering, acceleration, or braking, including reducing vehicle speed by shifting

to a lower gear. Any sudden changes could cause the tyres to slide.

Remember: Antilock brakes help avoid only the braking skid.

## Off-Road Driving

All-Wheel Drive (AWD) vehicles can be used for off-road driving. Vehicles without AWD and vehicles not equipped with All Terrain (AT) or On-Off Road (OOR) tyres must not be driven off-road except on a level, solid surface. To contact the tyre manufacturer for more information about the original equipment tyres, see the warranty manual.

Controlling the vehicle is the key to successful off-road driving. One of the best ways to control the vehicle is to control the speed.

**⚠ Warning**

When driving off-road, bouncing and quick changes in direction can easily throw you out of position.

(Continued)

**Warning (Continued)**

This could cause you to lose control and crash. You and your passengers should always wear seat belts.

### Before Driving Off-Road

- Have all necessary maintenance and service work completed.
- Fuel the vehicle, fill fluid levels, and check inflation pressure in all tyres, including the spare, if equipped.
- Read all the information about AWD vehicles in this manual.
- Make sure all underbody shields, if equipped, are properly attached.
- Know the local laws that apply to off-road driving.

To gain more ground clearance if needed, it may be necessary to remove the front fascia lower air dam. However, driving without the front spoiler reduces fuel economy.

**Caution**

Operating the vehicle for extended periods without the front fascia lower air dam installed can cause improper airflow to the engine. Reattach the front fascia air dam after off-road driving.

### Loading the Vehicle for Off-Road Driving

**⚠ Warning**

- Unsecured cargo on the load floor can be tossed about when driving over rough terrain. You or your passengers can be struck by flying objects. Secure the cargo properly.
- Keep cargo in the cargo area as far forward and as low as possible. The heaviest things should be on the floor, forward of the rear axle.

(Continued)

**Warning (Continued)**

- Heavy loads on the roof raise the vehicle's centre of gravity, making it more likely to roll over. You can be seriously or fatally injured if the vehicle rolls over. Put heavy loads inside the cargo area, not on the roof.

For more information about loading the vehicle, see *Vehicle Load Limits* ⇨ *160*.

## Environmental Concerns

- Always use established trails, roads, and areas that have been set aside for public off-road recreational driving and obey all posted regulations.
- Do not damage shrubs, flowers, trees, or grasses or disturb wildlife.
- Do not park over things that burn. See *Parking over Things That Burn* ⇨ *171*.

## Driving on Hills

Driving safely on hills requires good judgement and an understanding of what the vehicle can and cannot do.

**⚠ Warning**

Many hills are simply too steep for any vehicle. Driving up hills can cause the vehicle to stall. Driving down hills can cause loss of control. Driving across hills can cause a rollover. You could be injured or killed. Do not drive on steep hills.

Before driving on a hill, assess the steepness, traction, and obstructions. If the terrain ahead cannot be seen, get out of the vehicle and walk the hill before driving further.

When driving on hills:

- Use a low gear and keep a firm grip on the steering wheel.
- Maintain a slow speed.
- When possible, drive straight up or down the hill.
- Slow down when approaching the top of the hill.
- Use headlamps even during the day to make the vehicle more visible.

**⚠ Warning**

Driving to the top of a hill at high speed can cause a collision. There could be a drop-off, embankment, cliff, or even another vehicle. You could be seriously injured or killed. As you near the top of a hill, slow down and stay alert.

- Never go downhill forward or backward with the transmission in N (Neutral). The brakes could overheat and you could lose control.
- When driving down a hill, keep the vehicle headed straight down. Use a low gear because the engine will work with the brakes to slow the vehicle and help keep the vehicle under control.

**⚠ Warning**

Heavy braking when going down a hill can cause your brakes to overheat and fade. This could cause loss of control and you or others could be injured or killed. Apply the brakes lightly when descending a hill and use a low gear to keep vehicle speed under control.

If the vehicle stalls on a hill:

1. Apply the brakes to stop the vehicle, and then apply the parking brake.
2. Shift into P (Park) and then restart the engine.
   - If driving uphill when the vehicle stalls, shift to R (Reverse), release the parking brake, and reverse straight down.
   - Never try to turn the vehicle around. If the hill is steep enough to stall the vehicle, it is steep enough to cause it to roll over.
   - If you cannot make it up the hill, back straight down the hill.
   - Never reverse down a hill in N (Neutral) using only the brake.
   - The vehicle can roll backward quickly and you could lose control.
   - If driving downhill when the vehicle stalls, shift to a lower gear, release the parking brake, and drive straight down the hill.
3. If the vehicle cannot be restarted after stalling, apply the parking brake, shift into P (Park), and turn the vehicle off.
   3.1. Leave the vehicle and seek help.
   3.2. Stay clear of the path the vehicle would take if it rolled downhill.

- Avoid turns that take the vehicle across the incline of the hill. A hill that can be driven straight up or down might be too steep to drive across. Driving across an incline puts more weight on the downhill wheels which could cause a downhill slide or a rollover.
- Surface conditions can be a problem. Loose gravel, muddy spots, or even wet grass can cause the tyres to slip sideways, downhill. If the vehicle slips sideways, it can hit something that will trip it - a rock, a rut, etc. - and roll over.
- Hidden obstacles can make the steepness of the incline more severe. If a rock is driven across with the uphill wheels, or if the downhill wheels drop into a rut or depression, the vehicle can tilt even more.
- If an incline must be driven across, and the vehicle starts to slide, turn downhill. This should help straighten out the vehicle and prevent the side slipping.

**⚠ Warning**

Getting out of the vehicle on the downhill side when stopped across an incline is dangerous. If the vehicle rolls over, you could be crushed or killed. Always get out on the uphill side of the vehicle and stay well clear of the rollover path.

### Driving in Mud, Sand, Snow, or Ice

Use a low gear when driving in mud – the deeper the mud, the lower the gear. Keep the vehicle moving to avoid getting stuck.

Traction changes when driving on sand. On loose sand, such as on beaches or sand dunes, the tyres tend to sink into the sand. This affects steering, accelerating, and braking. Drive at a reduced speed and avoid sharp turns or abrupt manoeuvres.

Traction is reduced on hard packed snow and ice and it is easy to lose control. Reduce vehicle speed when driving on hard packed snow and ice.

**⚠ Warning**

Driving on frozen lakes, ponds, or rivers can be dangerous. Ice conditions vary greatly and the vehicle could fall through the ice; you and your passengers could drown. Drive your vehicle on safe surfaces only.

### Driving in Water

**⚠ Warning**

Driving through rushing water can be dangerous. Deep water can sweep your vehicle downstream and you and your passengers could drown. If it is only shallow water, it can still wash away the ground from under your tyres. Traction could be lost, and the vehicle could roll over. Do not drive through rushing water.

**Caution**

Do not drive through standing water if it is deep enough to cover the wheel hubs, axles, or exhaust pipe. Deep water can damage the axle and other vehicle parts.

If the standing water is not too deep, drive through it slowly. At faster speeds, water can get into the engine and cause it to stall. Stalling can occur if the exhaust pipe is under water. Do not turn off the ignition when driving through water. If the exhaust pipe is under water, the engine will not start. When going through water, the brakes get wet, and it might take longer to stop. See *Driving on Wet Roads ⇨ 157*.

### After Off-Road Driving

Remove any brush or debris that has collected on the underbody or chassis, or under the bonnet. These accumulations can be a fire hazard.

After operation in mud or sand, have the brake linings cleaned and checked. These substances can cause glazing and uneven braking. Check the body structure, steering, suspension, wheels, tyres, and exhaust system for damage and check the fuel lines and cooling system for any leakage.

More frequent maintenance service is required.

## Driving on Wet Roads

Rain and wet roads can reduce vehicle traction and affect your ability to stop and accelerate. Always drive slower in these types of driving conditions and avoid driving through large puddles and deep-standing or flowing water.

**⚠ Warning**

Wet brakes can cause crashes. They might not work as well in a quick stop and could cause pulling to one side. You could lose control of the vehicle.

(Continued)

**Warning (Continued)**

After driving through a large puddle of water or a car/vehicle wash, lightly apply the brake pedal until the brakes work normally.

Flowing or rushing water creates strong forces. Driving through flowing water could cause the vehicle to be carried away. If this happens, you and other vehicle occupants could drown. Do not ignore police warnings and be very cautious about trying to drive through flowing water.

### Aquaplaning

Aquaplaning is dangerous. Water can build up under the vehicle's tyres so they actually ride on the water. This can happen if the road is wet enough and you are going fast enough. When the vehicle is aquaplaning, it has little or no contact with the road.

There is no hard and fast rule about aquaplaning. The best advice is to slow down when the road is wet.

### Other Rainy Weather Tips

Besides slowing down, other wet weather driving tips include:

- Allow extra following distance.
- Overtake with caution.
- Keep windscreen wiping equipment in good condition.
- Keep the windscreen washer fluid reservoir filled.
- Have good tyres with proper tread depth. See *Tyres* ⇨ *271*.
- Turn off cruise control.
- Activate All-Wheel Drive (AWD) mode. See *Driver Mode Control* ⇨ *188*.

## Hill and Mountain Roads

Driving on steep hills or through mountains is different than driving on flat or rolling terrain. Tips include:

- Keep the vehicle serviced and in good shape.
- Check all fluid levels and brakes, tyres, cooling system, and transmission.

- Shift to a lower gear when going down steep or long hills.

**⚠ Warning**

Using the brakes to slow the vehicle on a long downhill slope can cause brake overheating, can reduce brake performance, and could result in a loss of braking. Shift the transmission to a lower gear to let the engine assist the brakes on a steep downhill slope.

**⚠ Warning**

Coasting downhill in N (Neutral) or with the ignition off is dangerous. This can cause overheating of the brakes and loss of steering assist. Always have the engine running and the vehicle in gear.

- Drive at speeds that keep the vehicle in its own lane. Do not swing wide or cross the centre line.
- Be alert on top of hills; something could be in your lane (e.g. stalled car, crash).
- Pay attention to special road signs (e.g., falling rocks area, winding roads, long gradients, overtaking or no-overtaking zones) and take appropriate action.
- Select All-Wheel Drive (AWD) Mode. See *Driver Mode Control* ⇨ *188* and *All-Wheel Drive* ⇨ *183*.

## Winter Driving

### Driving on Snow or Ice

Snow or ice between the tyres and the road creates less traction or grip, so drive carefully. Wet ice can occur at about 0 °C (32 °F) when freezing rain begins to fall. Avoid driving on wet ice or in freezing rain until roads can be treated.

**For Slippery Road Driving:**

- Accelerate gently. Accelerating too quickly causes the wheels to spin and makes the surface under the tyres slick.
- The Antilock Brake System (ABS) improves vehicle stability during hard stops, but the brakes should be applied sooner than when on dry surfaces. See *Antilock Brake System (ABS)* ⇨ *184*.
- Allow greater following distance and watch for slippery spots. Icy patches can occur on otherwise clear roads in shaded areas. The surface of a curve or an overpass can remain icy when the surrounding roads are clear. Avoid sudden steering manoeuvres and braking while on ice.
- Turn off cruise control.
- Select All-Wheel Drive (AWD) Mode for vehicles equipped with AWD. Select Snow/Ice Mode for FWD only vehicles. See *Driver Mode Control* ⇨ *188* and *All-Wheel Drive* ⇨ *183*.

### Blizzard Conditions

Stop the vehicle in a safe place and signal for help. Stay with the vehicle unless there is help nearby.

To get help and keep everyone in the vehicle safe:

- Turn on the hazard warning lights.
- Tie a red cloth to an outside mirror.

**⚠ Warning**

Snow can trap engine exhaust under the vehicle. This may cause exhaust gases to get inside. Engine exhaust contains carbon monoxide (CO), which cannot be seen or smelled. It can cause unconsciousness and even death.

If the vehicle is stuck in snow:

- Clear snow from the base of the vehicle, especially any blocking the exhaust pipe.
- Open a window about 5 cm (2 in) on the vehicle side that is away from the wind, to bring in fresh air.

(Continued)

**Warning (Continued)**

- Fully open the air outlets on or under the instrument panel.
- Adjust the climate control system to circulate the air inside the vehicle and set the fan speed to the highest setting. See “Climate Control Systems.”

For more information about CO, see *Engine Exhaust* ⇨ *171*.

To save fuel, run the engine for short periods to warm the vehicle and then shut the engine off and partially close the window. Moving about to keep warm also helps.

If it takes time for help to arrive, when running the engine, push the accelerator pedal slightly so the engine runs faster than the idle speed. This keeps the battery charged to restart the vehicle and to signal for help with the headlamps. Do this as little as possible, to save fuel.

## If the Vehicle Is Stuck

Slowly and cautiously spin the wheels to free the vehicle when stuck in sand, mud, ice, or snow.

If stuck too severely for the traction system to free the vehicle, turn the traction system off and use the rocking method. See *Traction Control/ Electronic Stability Control* ⇨ *186*.

**⚠ Warning**

If the vehicle's tyres spin at high speed, they can explode, and you or others could be injured. The vehicle can overheat, causing an engine compartment fire or other damage. Spin the wheels as little as possible and avoid going above 56 km/h (35 mph).

Select All-Wheel Drive (AWD) Mode. See *Driver Mode Control* ⇨ *188* and *All-Wheel Drive* ⇨ *183*.

### Rocking the Vehicle to Get it Out

Turn the steering wheel left and right to clear the area around the front wheels. Turn off any traction system. Shift back and forth between R (Reverse) and a low forward gear, spinning the wheels as little as possible. 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 when the transmission is in gear. Slowly spinning the wheels in the forward and reverse directions causes a rocking motion that could free the vehicle. If that does not get the vehicle out after a few tries, it might need to be towed out. If the vehicle does need to be towed out, see *Towing the Vehicle ⇨ 302*.

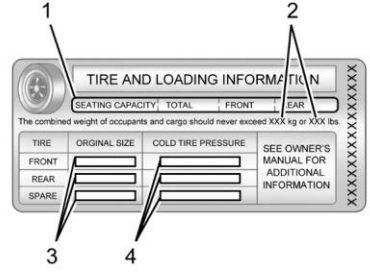
## Vehicle Load Limits

It is very important to know how much weight the vehicle can carry. This weight is called the vehicle capacity weight and includes the weight of all occupants, cargo, and all non-factory-installed options. Two labels on the vehicle may show how much weight it may properly carry, the Tyre and Loading Information label and the Certification/Tyre label.

**⚠ Warning**

Do not load the vehicle any heavier than the Gross Vehicle Weight Rating (GVWR), or either the maximum front or rear Gross Axle Weight Rating (GAWR). This can cause systems to break and change the way the vehicle handles. This could cause loss of control and a crash. Overloading can also reduce stopping distance, damage the tyres, and shorten the life of the vehicle.

### Tyre and Loading Information Label




Example Label

A vehicle-specific Tyre and Loading Information label is attached to the centre pillar (B-pillar). The Tyre and Loading Information label shows the number of occupant seating positions (1), and the maximum vehicle capacity weight (2) in kilogrammes and pounds.

The Tyre and Loading Information label also shows the size of the original equipment tyres (3) and the recommended cold tyre

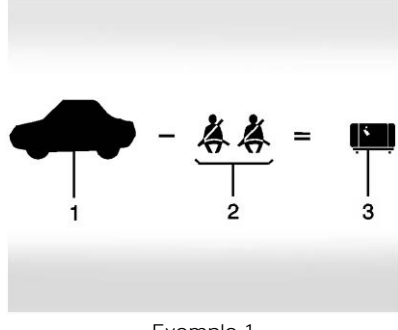
inflation pressures (4). For more information on tyres and inflation see *Tyres* ⇨ *271* and *Tyre Pressure* ⇨ *273*.

There is also important loading information on the vehicle Certification/Tyre label. It may show the Gross Vehicle Weight Rating (GVWR) and the Gross Axle Weight Rating (GAWR) for the front and rear axle. See "Certification/Tyre Label" later in this section.

**"Steps for Determining Correct Load Limit–**

1. Locate the statement "The combined weight of occupants and cargo should never exceed XXX kg or XXX lbs." on your vehicle's placard.
2. Determine the combined weight of the driver and passengers that will be riding in your vehicle.
3. Subtract the combined weight of the driver and passengers from XXX kg or XXX lbs.
4. The resulting figure equals the available amount of cargo and luggage load capacity. For example, if the "XXX" amount equals 1400 lbs. and there will be five 150 lb passengers in your vehicle, the amount of available cargo and luggage load capacity is 650 lbs. (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."

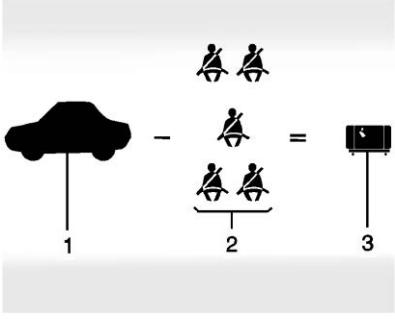
This vehicle is neither designed nor intended to tow a trailer.




Example 1

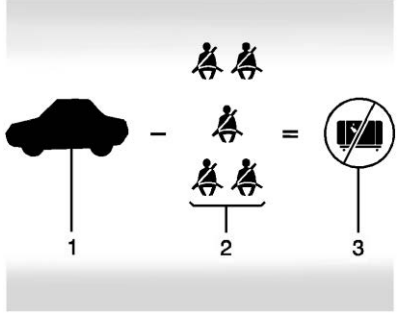
1. Vehicle Capacity Weight for Example 1 = 453 kg (1,000 lbs).
2. Subtract Occupant Weight @ 68 kg (150 lbs) × 2 = 136 kg (300 lbs).

3. Available Occupant and Cargo Weight = 317 kg (700 lbs).




Example 2

1. Vehicle Capacity Weight for Example 2 = 453 kg (1,000 lbs).
2. Subtract Occupant Weight @ 68 kg (150 lbs) × 5 = 340 kg (750 lbs).
3. Available Cargo Weight = 113 kg (250 lbs).

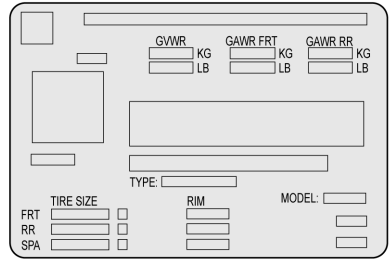



Example 3

1. Vehicle Capacity Weight for Example 3 = 453 kg (1,000 lbs).
2. Subtract Occupant Weight @ 91 kg (200 lbs) × 5 = 453 kg (1,000 lbs).
3. Available Cargo Weight = 0 kg (0 lbs).

Refer to your vehicle's Tyre and Loading Information label for specific information about your vehicle's capacity weight and seating positions. The combined weight of the driver, passengers, and cargo should never exceed your vehicle's capacity weight.

**Certification/Tyre Label**




Label Example

A vehicle-specific Certification/ Tyre label is attached to the centre pillar (B-pillar).

The label may show the size of the vehicle's original tyres and the inflation pressures needed to obtain the gross weight capacity of the vehicle. The label shows the gross weight capacity of the vehicle. This is called the Gross

Vehicle Weight Rating (GVWR). The GVWR includes the weight of the vehicle, all occupants, fuel, and cargo.

The Certification/Tyre label may also show the maximum weights for the front and rear axles, called the Gross Axle Weight Rating (GAWR). To find out the actual loads on the front and rear axles, weigh the vehicle at a weigh station. Your dealer can help with this. Be sure to spread the load equally on both sides of the centreline.

**Caution**

Overloading the vehicle may cause damage. Repairs would not be covered by the vehicle warranty. Do not overload the vehicle.

**⚠ Warning**

Things you put inside the vehicle can strike and injure people in a sudden stop or turn or in a crash.

- Put things in the cargo area of the vehicle. Try to spread the weight evenly.
- Never stack heavier things, like suitcases, inside the vehicle so that some of them are above the tops of the seats.
- Do not leave an unsecured child restraint in the vehicle.
- When you carry something inside the vehicle, secure it whenever you can.
- Do not leave a seat folded down unless you need to.

# Starting and Operating

## New Vehicle Run-In

**Caution**

The vehicle does not need an elaborate run-in. But it will perform better in the long run if you follow these guidelines:

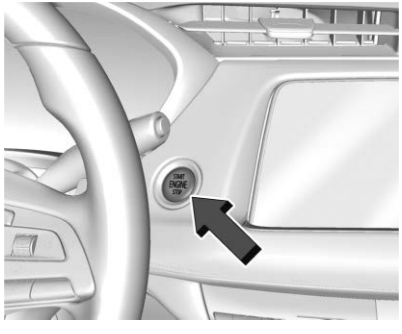
- Do not drive at any one constant speed, fast or slow, for the first 800 km (500 mi). Do not make full-throttle starts. Avoid downshifting to brake or slow the vehicle.
- Avoid making hard stops for the first 300 km (200 mi) or so. During this time the new brake linings are not yet broken in. Hard stops with new linings can mean premature wear and earlier replacement. Follow this breaking-in guideline every time you get new brake linings.

(Continued)

**Caution (Continued)**

Following run-in, engine speed and load can be gradually increased.

## Ignition Positions



The vehicle has an electronic keyless ignition with pushbutton start.

If the pushbutton start is not working, the vehicle may be near a strong radio aerial signal causing interference to the Remote Keyless Entry (RKE) system. See *Remote Keyless Entry (RKE) System Operation* ⇨ *8*.

To shift out of P (Park), the vehicle must be turned on and the brake pedal must be applied.

**Stopping the Engine/OFF (No Indicator Light) :** When the vehicle is stopped, press ENGINE START/STOP once to turn the engine off.

If the vehicle is in P (Park), the ignition will turn off, and Retained Accessory Power (RAP) will remain active. See *Retained Accessory Power (RAP)* ⇨ *169*.

If the vehicle is in R (Reverse), D (Drive) or M (Manual Mode), the vehicle will shift to P (Park), the ignition will turn off, and RAP will remain active.

If the vehicle is in N (Neutral), the ignition will return to ACC/ ACCESSORY and display the message SHIFT TO PARK in the Driver Information Centre (DIC).

When the vehicle is shifted into P (Park), the ignition will turn off.

**⚠ Warning**

Turning off the vehicle while moving may cause loss of power assistance in the brake and steering systems and disable the airbags. While driving, only shut the vehicle off in an emergency.

If the vehicle must be shut off in an emergency:

1. Brake using a firm and steady pressure. Do not pump the brakes repeatedly. This may deplete power assist, requiring increased brake pedal force.
2. Shift the vehicle to N (Neutral). This can be done while the vehicle is moving. After shifting to N (Neutral), firmly apply the brakes and steer the vehicle to a safe location.
3. Come to a complete stop and shift to P (Park).

4. Apply the parking brake. See *Electric Parking Brake* ⇨ *184*. Press ENGINE START/STOP to turn the vehicle off.

If the vehicle cannot be pulled over and must be shut off while driving, press and hold ENGINE START/STOP for longer than two seconds, or press twice in five seconds.

**ACC/ACCESSORY (Amber Indicator Light) :** This mode allows you to use some electrical accessories when the engine is off.

With the ignition off, pressing ENGINE START/STOP once without the brake pedal applied will place the ignition system in ACC/ACCESSORY.

The ignition will switch from ACC/ACCESSORY to OFF after 10 minutes to prevent battery rundown.

**ON/RUN/START (Green Indicator Light) :** This mode is for driving and starting. With the ignition off and the brake pedal applied, pressing ENGINE START/STOP once will place the ignition system in ON/RUN/START. Once engine cranking begins, release the button. Engine cranking will continue until the engine starts. The ignition will then remain on. See *Starting the Engine* ⇨ *165*.

### Service Mode

This mode is available to verify the proper operation of the malfunction indicator lamp as may be required for emissions inspection purposes and for service and diagnostics. See *Automatic Transmission* ⇨ *177*.

With the vehicle off, and the brake pedal not applied, pressing and holding ENGINE START/STOP for more than five seconds will place the vehicle in Service Mode. The instruments and audio systems will operate as they do in ON/RUN, but the vehicle will not be able to be driven. The engine will not start in Service Mode. Press ENGINE START/STOP again to turn the vehicle off.

## Starting the Engine

Place the transmission in the proper gear, P (Park) or N (Neutral). To restart the engine when the vehicle is already moving, use N (Neutral) only.

**Caution**

Do not try to shift to P (Park) if the vehicle is moving. If you do, you could damage the transmission. Shift to P (Park) only when the vehicle is stopped.

**Caution**

If you add electrical parts or accessories, you could change the way the engine operates. Any resulting damage would not be covered by the vehicle warranty. See *Add-On Electrical Equipment* ⇨ *240*.

### Starting Procedure

1. With the Keyless Access system, the RKE transmitter must be in the vehicle. Press ENGINE START/STOP with the brake pedal applied to start. If it is too cold, the wait-to-start light will come on and there will be a short delay before starting. See *Wait-to-Start Light* ⇨ *117*.

The engine has a fast warm-up glow plug system. The wait-to-start light will illuminate for a much shorter time than most diesel engines, due to the rapid heating of the glow plug system.

**Caution**

If the wait-to-start light stays on after starting the vehicle, the vehicle may not run properly. Have the vehicle serviced right away.

2. If the engine does not start after 15 seconds of cranking, wait one minute for the cranking motor to cool, then try the same step again.

If you are trying to start the engine after you have run out of fuel, follow the steps in *Running Out of Fuel* ⇨ *226*.

When the engine is cold, let it run for a few minutes before driving. This lets oil pressure build up. The engine will sound louder when it is cold.

## Cold Weather Starting

Use the recommended engine oil when the outside temperature drops below freezing. See *Engine Oil* ⇨ *247*. When the outside temperature drops below –18°C (0°F), use of the engine heater is recommended.

See *Fuel for Diesel Engines* ⇨ *221* for information on what fuel to use in cold weather.

## If the Engine Will Not Start

If you have run out of fuel, see *Running Out of Fuel* ⇨ *226*.

If the vehicle is not out of fuel, and the engine will not start:

Press ENGINE START/STOP. Immediately after the wait-to-start light turns off, press ENGINE START/STOP to start the vehicle.

If the light does not go off, wait a few seconds, then try starting the engine again. See your retailer for a starting system check.

If the light illuminates and then turns off, and it is known that the battery is charged, but the engine still will not start, the vehicle needs service.

If the light does not come on when the engine is cold, the vehicle needs service.

If the battery does not have enough charge to start the engine, see *Battery* ⇨ *259*.

Check that the correct engine oil has been used and changed at appropriate intervals. If the wrong oil is used, the engine may be harder to start.

Make sure you use the proper fuel for the prevailing weather conditions. See *Fuel for Diesel Engines* ⇨ *221*.

If the engine starts, runs a short time, then stops, the vehicle needs service.

**⚠ Warning**

Do not use petrol or starting aids, such as ether, in the air intake. They could damage the engine, which may not be covered by the

(Continued)

**Warning (Continued)**

vehicle warranty. They could also cause a fire, which could cause serious personal injury.

## Stop/Start System

The Stop/Start system will shut off the engine to help conserve fuel. It has components designed for the increased number of starts.

**⚠ Warning**

The automatic engine Stop/Start feature causes the engine to shut off while the vehicle is still on. Do not exit the vehicle before shifting to P (Park). The vehicle may restart and move unexpectedly. Always shift to P (Park), and then turn the ignition off before exiting the vehicle.

### Auto Engine Stop/Start

When the brakes are applied and the vehicle is at a complete stop, the engine may turn off. When stopped, the tachometer displays AUTO STOP. See *Rev Counter ⇨ 107*. When the brake pedal is released or the accelerator pedal is depressed, the engine will restart.

To maintain vehicle performance, other conditions may cause the engine to automatically restart before the brake pedal is released.

Auto Stops may not occur and/or Auto Starts may occur because:

- The climate control settings require the engine to be running to cool or heat the vehicle interior.
- The vehicle battery charge is low.
- The vehicle battery has recently been disconnected.
- Minimum vehicle speed has not been reached since the last Auto Stop.
- The accelerator pedal is depressed.
- The engine or transmission is not at the required operating temperature.
- The outside temperature is not in the required operating range.
- The vehicle is in any gear other than D (Drive).
- Driver modes have been selected.
- The vehicle is on a steep hill or grade.
- The driver door has been opened or the driver seat belt has been unfastened.
- The bonnet has been opened.
- The Auto Stop has reached the maximum allowed time.

**Auto Stop Disable Switch**

The automatic engine Stop/Start feature can be disabled and enabled by pressing the switch with the Ⓐ symbol. Auto Stop is enabled each time you start the vehicle.

When Ⓐ is illuminated, the system is enabled.

## Engine Heater

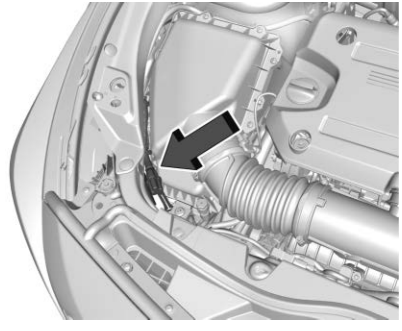
The engine heater, if available, can help in cold weather conditions at or below -18 °C (0 °F) for easier starting and better fuel economy during engine warm-up. Plug in the engine heater at least four hours before starting the vehicle. An internal thermostat in the plug end of the cord will prevent engine heater operation at temperatures above -18 °C (0 °F).

**⚠ Warning**

Do not plug in the engine block heater while the vehicle is parked in a garage or under a carport. Property damage or personal injury may result. Always park the vehicle in a clear open area away from buildings or structures.

### To Use the Engine Heater

1. Turn off the engine.



2. Open the bonnet and unwrap the electrical cord. The cord is located on the passenger side of the compartment near the air cleaner/filter.

   Check the heater cord for damage. If it is damaged, do not use it. See your dealer for a replacement. Inspect the cord for damage yearly.

3. Plug it into a normal, grounded 110-volt AC outlet.

**⚠ Warning**

Improper use of the heater cord or an extension cord can damage the cord and may result in overheating and fire.

- Plug the cord into a three-prong electrical utility receptacle that is protected by a ground fault detection function. An ungrounded outlet could cause an electric shock.
- Use a weatherproof, heavy-duty, 15 amp-rated extension cord if needed. Failure to use the recommended extension cord in good operating condition, or using a damaged heater or extension cord, could make it overheat and cause a fire, property damage, electric shock and injury.

(Continued)

**Warning (Continued)**

- Do not operate the vehicle with the heater cord permanently attached to the vehicle. Possible heater cord and thermostat damage could occur.
- While in use, do not let the heater cord touch vehicle parts or sharp edges. Never close the bonnet on the heater cord.
- Before starting the vehicle, unplug the cord, reattach the cover to the plug, and securely fasten the cord. Keep the cord away from any moving parts.

4. Before starting the engine, be sure to unplug and store the cord as it was before to keep it away from moving engine parts. If you do not it could be damaged.

The length of time the heater should remain plugged in depends on several factors. Ask a dealer in the area where you will be parking the vehicle for the best advice on this.

## Retained Accessory Power (RAP)

When the ignition is turned from on to off, the following features (if equipped) will continue to function for up to 10 minutes, or until the driver door is opened. These features will also work when the ignition is in RUN or ACC/ACCESSORY:

- Infotainment System
- Power Windows (during RAP this functionality will be lost when any door is opened)
- Sunroof (during RAP this functionality will be lost when any door is opened)
- Auxiliary Power Socket
- Audio System
- OnStar System

## Shifting Into Park

To shift into P (Park):

1. Bring the vehicle to a stop, and hold the brake pedal down.
2. Press the button on top of the gear lever to shift into P (Park). See *Automatic Transmission* ⇨ *177*.
3. The P indicator on the gear lever will turn red when the vehicle is in P (Park).

### Leaving the Vehicle with the Engine Running

**⚠ Warning**

It can be dangerous to leave the vehicle with the engine running. It could overheat and catch fire.

It is dangerous to get out of the vehicle if the vehicle is not in P (Park) with the parking brake firmly applied. The vehicle can roll.

(Continued)

**Warning (Continued)**

Do not leave the vehicle when the engine is running. If you have left the engine running, the vehicle can move suddenly. You or others could be injured. To be sure the vehicle will not move, even when you are on fairly level ground, always apply the parking brake and shift to P (Park).

If you need to leave the vehicle with the engine running, make sure the vehicle is in P (Park) and the parking brake is set before you leave it.

## Shifting out of Park

This vehicle is equipped with an electronically controlled transmission. The shift lock release button is designed to prevent inadvertent shifting out of P (Park) unless the ignition is on, the brake pedal is applied, and the shift lock release button is pressed.

The shift lock control is always functional except in the case of an uncharged or low voltage (less than 9-volt) battery.

If the vehicle has an uncharged battery or a battery with low voltage, try charging or jump starting the battery. See *Jump Starting* ⇨ *299*.

To shift out of P (Park):

1. Ensure the engine is running.
2. Apply the brake pedal.
3. Press and hold the shift lock release button.
4. Move the shift lever to the desired position.
5. The P indicator will turn white and the gear indicator on the gear lever will turn red when the vehicle is no longer in P (Park).
6. After releasing the gear lever, it will return to the centre position.

If the vehicle cannot shift from P (Park), a Driver Information Centre (DIC) message will be displayed. See your dealer for service.

## Parking over Things That Burn

**⚠ Warning**

Things that can burn could touch hot exhaust parts under the vehicle and ignite. Do not park over papers, leaves, dry grass, or other things that can burn.

## Extended Parking

It is best not to park with the vehicle running. If the vehicle is left running, be sure it will not move and there is adequate ventilation.

See *Shifting Into Park* ⇨ *170* and *Engine Exhaust* ⇨ *171*.

If the vehicle is left parked and running with the RKE transmitter outside the vehicle, it will continue to run for up to half an hour.

If the vehicle is left parked and running with the RKE transmitter inside the vehicle, it will continue to run for up to an hour.

The vehicle could turn off sooner if it is parked on a hill, due to lack of available fuel.

The timer will reset if the vehicle is taken out of P (Park) while it is running.

# Engine Exhaust

**⚠ Warning**

Engine exhaust contains carbon monoxide (CO), which cannot be seen or smelled. Exposure to CO can cause unconsciousness and even death.

Exhaust may enter the vehicle if:

- The vehicle idles in areas with poor ventilation (parking garages, tunnels, deep snow that may block underbody airflow or exhaust pipes).
- The exhaust smells or sounds strange or different.
- The exhaust system leaks due to corrosion or damage.
- The vehicle exhaust system has been modified, damaged, or improperly repaired.

(Continued)

**Warning (Continued)**

- There are holes or openings in the vehicle body from damage or aftermarket modifications that are not completely sealed.

If unusual fumes are detected or if it is suspected that exhaust is coming into the vehicle:

- Drive it only with the windows completely down.
- Have the vehicle repaired immediately.

Never park the vehicle with the engine running in an enclosed area such as a garage or a building that has no fresh air ventilation.

## Running the Vehicle While Parked

It is better not to park with the engine running.

If the vehicle is left with the engine running, follow the proper steps to be sure the vehicle will not move. See *Shifting Into Park* ⇨ *170* and *Engine Exhaust* ⇨ *171*.

## Diesel Particulate Filter

The Diesel Particulate Filter (DPF) system filters soot particles out of the exhaust gases. The DPF is under the vehicle in the exhaust system.

Depending on a number of factors monitored by the engine computer, the DPF will need to be cleaned of accumulated solids. When cleaning is needed, the engine computer will initiate a self-cleaning function that runs automatically during driving without any notification. The filter is cleaned by periodically burning off the soot particles at high temperature. This process takes place automatically under set driving conditions and may take up to 25 minutes. Fuel consumption may be higher during this period.

While the DPF cleaning is being automatically controlled by the engine computer, the vehicle will need to operate continuously for approximately 25 minutes and at speeds greater than 50 km/h (30 mph) to clean the DPF effectively.

If the vehicle is used for numerous short trips or extended slow-speed operation, the engine computer may not be able to adequately heat up the exhaust system to clean the DPF effectively. The engine computer has been designed to continuously monitor the condition of the DPF. When the engine computer detects that the DPF is nearly full of particulates and that the vehicle is not being operated in a manner that would allow effective automatic DPF cleaning, a Driver Information Centre (DIC) message will display. Start the cleaning process as soon as possible.

### Cleaning Process

To activate the cleaning process, continue driving safely, and keep vehicle speed above 50 km/h (30 mph) until the warning message in the DIC turns off.

If the vehicle continues to be driven with the DPF warning message on, and the exhaust filter is not cleaned as required, the malfunction indicator lamp and the ENGINE POWER IS REDUCED message will come on. Retailer service is necessary.

See *Malfunction Indicator Lamp (Check Engine Light)* ⇨ *111*.

**⚠ Warning**

During DPF self cleaning or during extended idling while parked, the exhaust system and exhaust gases are very hot. Things that burn could touch hot exhaust parts under the vehicle and ignite. You or others could be burned. Do not park, or idle for an extended period of time, near or over papers, leaves, dry grass, or other things that can burn. Keep the exhaust area clear of material that could ignite or burn. See *Parking over Things That Burn* ⇨ *171* for more information.

## Diesel Exhaust Fluid

**⚠ Warning**

Avoid getting Diesel Exhaust Fluid (DEF) on your skin or in your eyes as it could cause irritation. For more safety, handling, and storage information, see the Diesel Exhaust Fluid container label.

**Caution**

Use only DEF that is GM approved, or fluid containing the API certified or ISO 22241 label. The use of other fluids could damage the system, requiring costly repairs that will not be covered by the vehicle warranty.

**Caution**

Do not mix fuel with DEF, and do not put DEF in the fuel tank. This could lead to costly repairs that might not be covered by the vehicle warranty.

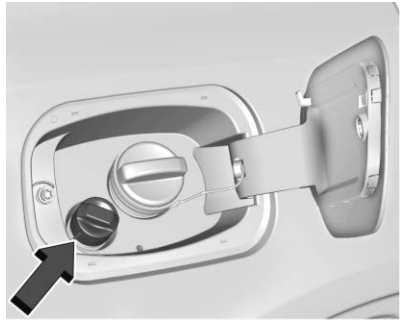
Diesel Exhaust Fluid (DEF) is used with diesel engines to reduce the amount of regulated emissions produced. Products such as AdBlue are types of DEF, and are approved for use in the vehicle as long as they have an API certification label or meet ISO 22241. The fluid level in the DEF tank must be maintained for the vehicle to run properly. DEF is not a fuel additive. DEF should not be mixed with or added to diesel fuel. DEF freezes when exposed to temperatures below -11 °C (12 °F). For DEF tank capacity see *Capacities and Specifications* ⇨ *326*.

It is normal to hear the DEF system purge fluid back into the tank after the vehicle is turned off.

### Locating Diesel Exhaust Fluid

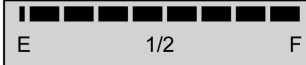
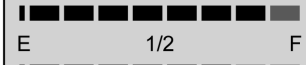
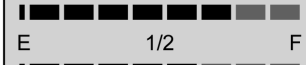
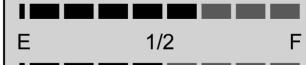
DEF can be purchased at your retailer. Additionally, some diesel truck filling stations or retailers may have DEF for purchase. See “Customer Assistance Offices” in the owner's manual for phone numbers to assist in contacting a GM retailer. See *Recommended Fluids and Lubricants* ⇨ *322*.

### Filling the DEF Tank



The blue DEF cap is behind the fuel/DEF door. Do not remove the fuel and DEF caps at the same time. Fill diesel fuel and DEF independently. Turn the DEF cap anticlockwise to remove.

In cold conditions DEF can freeze in the DEF filler pipe opening. If this prevents the filling of the DEF tank, park the vehicle in a warm garage overnight.

| DEF Gauge Indication | Approximate minimum volume of DEF that can be added * |
|---|---|
|  | 0L (0 Gal) |
|  | 1.5L (0.5 Gal) |
|  | 3.5L (1 Gal) |
|  | 6L (1.5 Gal) |
|  | 8L (2 Gal) |
|  | 10.5L (2.5 Gal) |
|  | 12.5L (3 Gal) |
|  | 15L (4 Gal) |
| * Final gauge reading after fill may not illuminate all segments | |

Fill the DEF tank on level ground and with the vehicle turned off. When adding DEF, it is recommended to fully fill the DEF tank. For DEF tank capacity see *Capacities and Specifications* ⇨ *326*. When adding DEF to an empty or very low tank, always add at least 7.5L (2 gal) of fluid to release the vehicle from speed limitation.

When fluid reaches the top of the DEF filler pipe, stop filling. Do not top up the DEF tank. If using a bottle or jug to refill DEF, follow the instructions on the container label and use a dedicated filling aid.

**Caution**

Do not overfill the DEF tank and do not allow DEF to make contact with the finished surfaces of the vehicle, as it could damage the vehicle finish. If DEF is spilled during filling, wipe any affected surface with a damp cloth.

When replacing the DEF cap, turn it clockwise until it clicks. Make sure the cap is fully installed.

Push the fuel/DEF door closed.

### DEF Low

As the DEF level drops, warnings will automatically be displayed in the Driver Information Centre (DIC). Select Vehicle Information in the DIC to view DEF level status. See *Driver Information Centre (DIC)* ⇨ *120*.

Refill the DEF tank at the first opportunity after a low warning indication to avoid vehicle speed limitations.

It may take some time for the vehicle to detect that DEF has been added. If there was a vehicle speed limitation, it will be removed gradually and it may take several kilometres/miles for the DIC message to update.

If DEF is added under freezing conditions, additional time may be required to remove speed limitations.

The DEF range DIC message first displays at approximately 1 600 km (1,000 mi). This message appears again at approximately 500 km (300 mi) of remaining range before the DEF tank becomes empty.

The DEF range DIC message first displays at approximately 1 600 km (1,000 mi). This message appears again at approximately 500 km (300 mi) of remaining range before the exhaust fluid tank becomes empty.

As the fluid level nears empty, these messages appear every time the vehicle is started.

If the DEF low warnings are ignored and the DEF tank becomes empty, the DIC will display messages that describe the action needed and distance until vehicle speed is limited. For the DEF warning light symbol, see *Diesel Exhaust Fluid (DEF) Warning Light* ⇨ *119*.

### DEF Quality Poor

Use only DEF that is GM approved, or fluid containing the API certified or ISO 22241 label.

DEF has an expiration date. If the system detects poor quality, or contaminated or diluted DEF, the DIC message will display along with distance until vehicle speed is limited.

The speed limitation will occur in a series of steps with the final speed limitation being 8 km/h (5 mph) along with a flashing warning light and chimes.

Adding fresh DEF to the system may resolve the problem after several kilometres/miles of driving, depending on several factors. If the DIC message persists, see your retailer or additional DIC messages may display.

### Service DEF System

If a problem occurs with the DEF system, a DIC message displays along with distance until vehicle speed is limited.

The speed limitation will occur in a series of steps with the final speed limitation being 8 km/h (5 mph) along with a flashing warning light and chimes.

In some cases, this message will clear itself, indicating that the DEF system was able to correct the condition. If the DIC message persists, see your retailer or additional DIC messages may display.

### Service Emission System

If a problem occurs with the vehicle emission system, a DIC message displays along with distance until vehicle speed is limited. The speed limitation will occur in a series of steps with the final speed limitation of 88 km/h (55 mph) and chimes. In some cases, this message will clear itself, indicating that the emission system was able to correct the condition. If the DIC message persists, see your retailer or additional DIC messages may display.

## Automatic Transmission

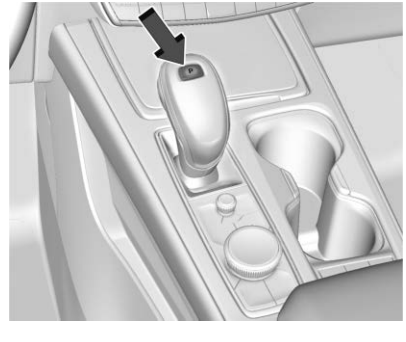

The shift pattern is displayed in the top of the gear lever. The selected gear position will illuminate red on the gear lever, while all others will be displayed in white. If the shift is not immediate, as in very cold conditions, the indicator on the gear lever may flash until it is fully engaged.

The gear lever always starts from a centre position, represented by an up/down arrow on the shift pattern. After releasing the gear lever, it will return to the centre position.

The transmission does not operate when the vehicle is off.

If the vehicle is in ACC/ACCESSORY, the transmission can be shifted into P (Park).

If the vehicle is turned off while at a relatively high vehicle speed, the transmission will automatically shift to N (Neutral). Once the vehicle is stopped, P (Park) is automatically selected.



**P :** This position locks the drive wheels. Use P (Park) when starting the engine because the vehicle cannot move easily.

**⚠ Warning**

It can be dangerous to leave the vehicle with the engine running. It could overheat and catch fire.

It is dangerous to get out of the vehicle if the vehicle is not in P (Park) with the parking brake firmly applied. The vehicle can roll.

Do not leave the vehicle when the engine is running. If you have left the engine running, the vehicle can move suddenly. You or others could be injured. To be sure the vehicle will not move, even when you are on fairly level ground, always apply the parking brake and shift to P (Park).

This vehicle is equipped with an electronically controlled transmission. The shift lock release button is designed to prevent inadvertent shifting out of P (Park) unless the ignition is on, the brake pedal is applied, and the shift lock release button is pressed.

When the vehicle is stopped, press ENGINE START/STOP to turn off the vehicle. The transmission will shift to P (Park) automatically unless the vehicle is in N (Neutral), See “Car Wash Mode” later in this section.

The vehicle will not shift into P (Park) if it is moving too fast. Stop the vehicle and shift into P (Park).

To shift in and out of P (Park), see *Shifting Into Park ⇨ 170* and *Shifting out of Park ⇨ 170*.

### Service Gear Lever Message

If the message SERVICE SHIFTER SEE OWNER'S MANUAL appears in the Driver Information Centre (DIC), the gear lever needs service. Have the vehicle serviced as soon as possible. If the vehicle is automatically shifting into P (Park), check to see if the P (Park) button on top of the gear lever is stuck. To operate the vehicle, hold the gear lever in the desired gear, R (Reverse) or D (Drive), until vehicle speed exceeds 15 km/h (10 mph), then release the gear lever.

**R :** Use this gear to reverse.

If the gear is changed from either R (Reverse) to D (Drive) or M (Manual Mode), or M (Manual Mode) or D (Drive) to R (Reverse) while the speed is too high, the vehicle will change to N (Neutral). Reduce the vehicle speed and try the shift again.

To shift into R (Reverse):

1. Bring the vehicle to a complete stop.

2. Press and hold the shift lock release button on the side of the gear lever.
3. From the centre position, move the gear lever forward through the first detent to the end of travel. R is illuminated in red.
4. After releasing the gear lever, it will return to the centre position.

To shift out of R (Reverse):

1. Bring the vehicle to a complete stop.
2. Shift to the desired gear.
3. After releasing the gear lever, it will return to the centre position.

At low vehicle speeds, R (Reverse) can be used to rock the vehicle back and forth to get out of snow, ice, or sand without damaging the transmission. See *If the Vehicle Is Stuck* ⇨ *159*.

**N :** In this position, the engine does not connect with the wheels. To restart the engine when the vehicle is already moving, use N (Neutral) only.

**⚠ Warning**

Shifting into a drive gear while the engine is running at high speed is dangerous. Unless your foot is firmly on the brake pedal, the vehicle could move very rapidly. You could lose control and hit people or objects. Do not shift into a drive gear while the engine is running at high speed.

**Caution**

Shifting out of P (Park) or N (Neutral) with the engine running at high speed may damage the transmission. The repairs would not be covered by the vehicle warranty. Be sure the engine is not running at high speed when shifting the vehicle.

The vehicle is not designed to stay in N (Neutral) for more than five minutes. It may automatically shift into P (Park). N (Neutral) is not intended for towing. If the vehicle needs to be towed, see *Towing the Vehicle* ⇨ *302*.

To shift into N (Neutral):

1. Move the gear lever forward to the first detent from the centre position.
   - If the vehicle is in P (Park), apply the brake pedal and press the shift lock release button while moving the gear lever forward.
   - N will illuminate in red.
2. After releasing the gear lever, it will return to the centre position.

To shift out of N (Neutral):

1. Bring the vehicle to a complete stop.
2. Shift to the desired gear. If shifting from N (Neutral) to R (Reverse), press the shift lock release button.
3. After releasing the gear lever, it will return to the centre position.

## Car Wash Mode

This vehicle includes a Car Wash Mode that allows the vehicle to remain in N (Neutral) for use in automatic car washes.

### Car Wash Mode (Engine Off – Driver in Vehicle)

To place the vehicle in N (Neutral) with the engine off and the vehicle occupied:

1. Drive to the entrance of the car wash.
2. Apply the brake pedal.
3. Shift to N (Neutral).
4. Turn off the engine and release the brake pedal.
5. The indicator should continue to show N. If it does not, repeat Steps 2–4.
6. The vehicle is now ready for the car wash.

### Car Wash Mode (Engine Off – Driver out of Vehicle)

To place the vehicle in N (Neutral) with the engine off and the vehicle unoccupied:

1. Drive to the entrance of the car wash.
2. Apply the brake pedal.
3. Open the door.
4. Shift to N (Neutral).
5. Turn off the engine and release the brake pedal.
6. The indicator should continue to show N. If it does not, repeat Steps 2–5.
7. Exit the vehicle and close the door. The vehicle is now ready for the car wash.
8. The vehicle may automatically shift to P (Park) when the door is opened.

### Car Wash Mode (Engine On – Driver in Vehicle)

To place the vehicle in N (Neutral) with the engine on and the vehicle occupied:

1. Drive to the entrance of the car wash.
2. Apply the brake pedal.
3. Shift to N (Neutral).
4. Release the brake pedal. The vehicle is now ready for the car wash.

### Car Wash Mode (Engine On – Driver out of Vehicle)

To place the vehicle in N (Neutral) with the engine on and the vehicle unoccupied:

1. Drive to the entrance of the car wash.
2. Apply the brake pedal.
3. Open the door.
4. Shift to N (Neutral), then release the brake pedal.

5. The indicator should continue to show N. If it does not, repeat Steps 2–4.
6. Exit the vehicle and close the door. The vehicle is now ready for the car wash.
7. The vehicle may automatically shift to P (Park) when the door is opened.

**Caution**

A transmission hot message may display if the automatic gearbox fluid is too hot. Driving under this condition can damage the vehicle. Stop and idle the engine to cool the automatic gearbox fluid. This message clears when the gearbox fluid has cooled sufficiently.

**D :** This position is for normal driving. If more power is needed for overtaking, press the accelerator pedal down.

To shift into D (Drive):

1. Bring the vehicle to a complete stop.
2. From the centre position, move the gear lever back.
   - If the vehicle is in P (Park), press the shift lock release button while pulling the gear lever back.
   - D will illuminate in red.
   - After releasing the gear lever, it will return to the centre position.

To shift out of D (Drive):

1. Bring the vehicle to a complete stop.
2. Shift to the desired gear.
3. After releasing the gear lever, it will return to the centre position.

Downshifting the transmission in slippery road conditions could result in skidding. See “Skidding” under *Loss of Control* ⇨ *152*.

**Caution**

Spinning the tyres or holding the vehicle in one place on a hill using only the accelerator pedal may damage the transmission. The repair will not be covered by the vehicle warranty. If the vehicle is stuck, do not spin the tyres. When stopping on a hill, use the brakes to hold the vehicle in place.

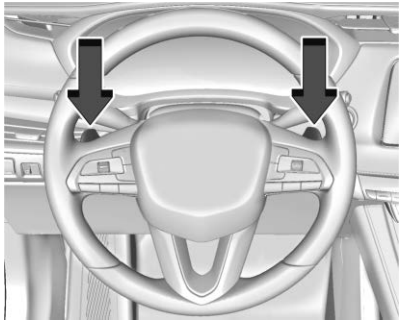
If equipped with the 2.0L L4 engine, engine speeds may be increased while driving at motorway speeds while the engine is still warming up.

## Manual Mode

### Tap Shift

**Caution**

Driving with the engine at a high rpm without upshifting while using Tap Shift, could damage the vehicle. Always upshift when necessary while using Tap Shift.



Vehicles with Tap Shift have controls on the back of the steering wheel to manually shift the automatic transmission.

### Permanent Tap Shift Mode

To enter Permanent Tap Shift Mode:

1. With the vehicle in D (Drive), pull back on the gear lever to activate M (Manual Mode). The M in the shift pattern will illuminate in red, and the D will switch to white.
2. After releasing the gear lever, it will return to the centre position.
3. Press the controls on the back of the steering wheel to shift. Use the left-hand steering wheel control to downshift, and the right-hand control to upshift. To shift to the lowest available gear, press and hold the left control.

To exit Permanent Tap Shift Mode:

1. To exit M (Manual Mode) and return to D (Drive), pull back on the gear lever. The D in the shift pattern will illuminate in red, and the M will switch to white.
2. After releasing the gear lever, it will return to the centre position.

M (Manual Mode) can be exited to return to D (Drive) at any speed by pulling the lever rearward from the centre position. It is not necessary to stop the vehicle or shift to N (Neutral) or P (Park) prior to shifting back to D (Drive).

### Temporary Tap Manual Shift Mode

To enter Temporary Tap Shift Mode:

1. With the transmission in D (Drive) and not in Permanent Tap Shift Mode, the Tap Shift controls will activate a temporary tap manual shift mode, allowing the transmission to be manually shifted.
2. To shift to the lowest available gear, press and hold the left control.
3. To deactivate, hold the right control briefly. Automatic shifts return after no manual shifts have been done for seven to 10 seconds.

While using Tap Shift, the vehicle will have firmer, quicker shifting. This can be used for sport driving or when climbing or descending hills, to stay in gear longer, or to downshift for more power or engine braking.

The transmission will only allow shifting into gears appropriate for the vehicle speed and engine revolutions per minute (rpm). If shifting is prevented for any reason, a SHIFT DENIED message will be displayed in the instrument cluster. The transmission will not automatically shift to the next higher gear if the engine rpm is too high. It will only

automatically shift to the next lower gear if the engine rpm is much too low.

### Gear Shift Light

The gear shift light illuminates in the instrument cluster when a gear upshift is recommended for best fuel economy or performance, depending on driver input.

# Drive Systems

## All-Wheel Drive

Vehicles with this feature can operate in All-Wheel Drive (AWD) Mode. When the AWD feature is active, the system transfers engine power, if required, to all four wheels. The system is fully automatic and adjusts to road conditions for improved traction and control. In FWD Mode engine power is transferred to the front wheels only, and the AWD feature is off.

The AWD feature is automatically activated when certain modes are selected using the Driver Mode Control switch. When an AWD mode change is requested the light will flash briefly while the system is engaging and the AWD light will be displayed when the system is active. When a non-AWD Mode is selected, the light will flash briefly while the system disengages and a 2WD light will be displayed when the AWD system is off. See *Driver Mode Control* ⇨ *188*.

When a compact spare tyre is installed on an AWD vehicle, the system will automatically detect the compact spare and reduce AWD performance to protect the system. To restore AWD operation and prevent excessive wear on the system, replace the compact spare with a full-size tyre as soon as possible. See *Compact Spare Tyre* ⇨ *298*.

# Brakes

## Electric Brake Boost

Vehicles equipped with electric brake boost have hydraulic brake circuits that are electronically controlled when the brake pedal is applied during normal operation. The system performs routine tests and turns off within a few minutes after the vehicle is turned off. Noise may be heard during this time. If the brake pedal is depressed during the tests or when the electric brake boost system is off, a noticeable change in pedal force and travel may be felt. This is normal.

## Antilock Brake System (ABS)

The Antilock Brake System (ABS) helps prevent a braking skid and maintain steering while braking hard.


If there is a problem with ABS, this warning light stays on. See *Antilock Brake System (ABS) Warning Light* ⇨ *114*.

ABS does not change the time needed to put your foot on the brake pedal and does not always decrease stopping distance. If you get too close to the vehicle ahead, there will not be enough time to apply the brakes if it suddenly slows or stops. Always leave enough room ahead to stop, even with ABS.

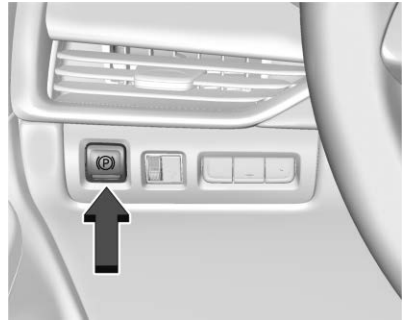
### Using ABS

Do not pump the brakes. Just hold the brake pedal down firmly. Hearing and feeling ABS operate is normal.

### Braking in Emergencies

ABS allows steering and braking at the same time. In many emergencies, steering can help even more than braking.

## Electric Parking Brake



The vehicle has an Electric Parking Brake (EPB). The EPB can always be activated, even if the ignition is off. To prevent draining the battery, avoid repeated cycles of the EPB system when the engine is not running.

The system has a Ⓟ Electric Parking Brake light, and a Ⓟ Service Parking Brake light. See *Electric Parking Brake Light* ⇨ *113* and *Service Electric Parking Brake Light* ⇨ *113*.

Before leaving the vehicle, check for the Ⓟ light to ensure that the parking brake is applied.

### EPB Apply

To apply the EPB:

1. Be sure the vehicle is at a complete stop.
2. Press the EPB switch momentarily.

The Ⓟ light will flash and then stay on once the EPB is fully applied. If the Ⓟ light flashes continuously, then the EPB is only partially applied or there is a problem with the EPB. A DIC message will display. Release the EPB and try to apply it again. If the light does not come on, or keeps flashing, have the vehicle serviced. Do not drive the vehicle if the Ⓟ light is flashing. See your dealer. See *Electric Parking Brake Light* ⇨ *113*.

If the Ⓟ light is on, press the EPB switch and hold it. Continue to hold the switch until the Ⓟ light remains on. If the Ⓟ light remains on, see your retailer.

If the EPB is applied while the vehicle is moving, the vehicle will decelerate as long as the switch is pressed. If the switch is pressed until the vehicle comes to a stop, the EPB will remain applied.

The vehicle may automatically apply the EPB in some situations when the vehicle is not moving. This is normal, and is done to periodically check the correct operation of the EPB system.

If the EPB fails to apply, block the rear wheels to prevent vehicle movement.

### EPB Release

To release the EPB:

1. Turn the ignition on or to ACC/ ACCESSORY.
2. Apply and hold the brake pedal.
3. Press the EPB switch momentarily.

The EPB is released when the Ⓟ light is off.

If the Ⓟ light is on, release the EPB by pressing and holding the EPB switch. Continue to hold the switch until the Ⓟ light is off. If either light stays on after release is attempted, see your dealer.

**Caution**

Driving with the parking brake on can overheat the brake system and cause premature wear or damage to brake system parts. Make sure that the parking brake is fully released and the brake warning light is off before driving.

### Automatic EPB Release

The EPB will automatically release if the vehicle is running, placed into gear and an attempt is made to drive

away. Avoid rapid acceleration when the EPB is applied, to preserve parking brake lining life.

## Brake Assist

Brake Assist detects rapid brake pedal applications due to emergency braking situations and provides additional braking to activate the Antilock Brake System (ABS) if the brake pedal is not pushed hard enough to activate ABS normally. Minor noise, brake pedal pulsation, and/or pedal movement during this time may occur. Continue to apply the brake pedal as the driving situation dictates. Brake Assist disengages when the brake pedal is released.

## Hill Start Assist (HSA)

**⚠ Warning**

Do not rely on the HSA feature. HSA does not replace the need to pay attention and drive safely. You may not hear or feel alerts or

(Continued)

**Warning (Continued)**

warnings provided by this system. Failure to use proper care when driving may result in injury, death, or vehicle damage. See *Defensive Driving ⇨ 150*.

When the vehicle is stopped on a grade, Hill Start Assist (HSA) prevents the vehicle from rolling in an unintended direction during the transition from brake pedal release to accelerator pedal apply. The brakes release when the accelerator pedal is applied. If the accelerator pedal is not applied within a few minutes, the Electric Parking Brake will apply. The brakes may also release under other conditions. Do not rely on HSA to hold the vehicle.

HSA is available when the vehicle is facing uphill in a forward gear, or when facing downhill in R (Reverse). The vehicle must come to a complete stop on a grade for HSA to activate.

# Ride Control Systems

## Traction Control/Electronic Stability Control

### System Operation

The vehicle has a Traction Control System (TCS) and StabiliTrak/ Electronic Stability Control (ESC). These systems help limit wheel spin and assist the driver in maintaining control, especially on slippery road conditions.

TCS activates if it senses that any of the drive wheels are spinning or beginning to lose traction. On an All-Wheel Drive (AWD) vehicle in AWD or Sport Mode, the system will operate if it senses that any of the wheels are spinning or beginning to lose traction. When this happens, TCS applies the brakes to the spinning wheels and reduces engine power to limit wheel spin.

StabiliTrak/ESC activates when the system senses a discrepancy between the intended path and the direction the vehicle is actually travelling.

StabiliTrak/ESC selectively applies braking pressure at any one of the vehicle's brakes to help steer the vehicle in the direction in which you are steering.

If cruise control is being used and traction control or StabiliTrak/ESC begins to limit wheel spin, cruise control will disengage. Cruise control may be turned back on when road conditions allow. TCS and StabiliTrak/ESC will automatically turn on when cruise control is set.

Both systems come on automatically when the vehicle is started and begins to move. The systems may be heard or felt while they are operating or while performing diagnostic checks. This is normal and does not mean there is a problem with the vehicle.

It is recommended to leave both systems on for normal driving conditions, but it may be necessary to turn TCS off if the vehicle gets stuck in sand, mud, ice, or snow. See *If the Vehicle Is Stuck* ⇨ *159* and "Turning the Systems Off and On" later in this section.

The indicator light for both systems is in the instrument cluster. This light will:

- Flash when TCS is limiting wheel spin.
- Flash when StabiliTrak/ESC is activated.
- Turn on and stay on when either system is not working.

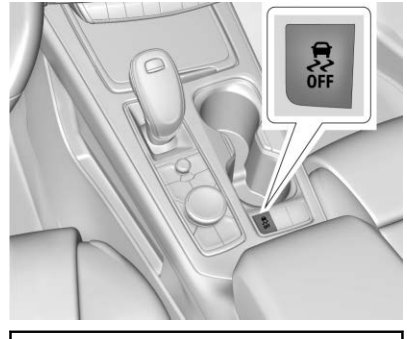
If either system fails to turn on or to activate, a message may display in the Driver Information Centre (DIC), and comes on and stays on to indicate that the system is inactive and is not assisting the driver in maintaining control. The vehicle is safe to drive, but driving should be adjusted accordingly.

If comes on and stays on:

1. Stop the vehicle.
2. Turn the engine off and wait 15 seconds.
3. Start the engine.

Drive the vehicle. If comes on and stays on, the vehicle may need more time to diagnose the problem. If the condition persists, see your dealer.

## Turning the Systems Off and On




**Caution**

Do not repeatedly brake or accelerate heavily when TCS is off. The vehicle driveline could be damaged.

To turn off only TCS, press and release OFF. The Traction Off light displays in the instrument cluster and a DIC message may display.

To turn TCS on again, press and release OFF. The Traction Off light displayed in the instrument cluster will turn off and a DIC message may display.

If TCS is limiting wheel spin when OFF is pressed, the system will not turn off until the wheels stop spinning.

To turn off both TCS and StabiliTrak/ESC, press and hold OFF until the Traction Off light and StabiliTrak/ESC Off light OFF come on and stay on in the instrument cluster. A DIC message may display.

To turn TCS and StabiliTrak/ESC on again, press and release OFF. The Traction Off light and StabiliTrak/ESC Off light OFF in the instrument cluster turn off and a DIC message may display.

Adding accessories can affect vehicle performance. See *Accessories and Modifications* ⇨ *243*.

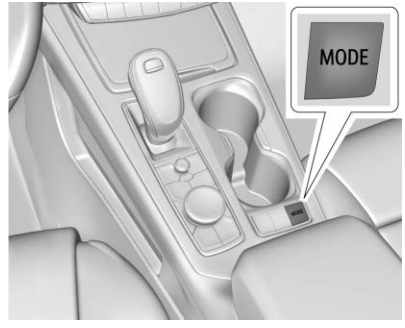
## Driver Mode Control

Depending on the option package and available features, Driver Mode Control can include the following modes: Tour, Sport, All-Wheel Drive (AWD), Off-Road, and Snow/Ice (Front-Wheel Drive vehicles only). Press MODE on the centre console to make a mode selection.

Every press will scroll and activate the next available mode.

Driver Mode Control will come on in Tour Mode at every ignition cycle.

When AWD, Sport Mode, Snow/Ice Mode, or Off-Road are selected, a unique and persistent indicator will be displayed in the Driver Information Centre (DIC).




Driver Mode Control Switch

**Tour :** Tour Mode operates in FWD to improve fuel economy. Use this mode during normal driving operations.

**Sport :** Sport Mode improves vehicle handling and acceleration on dry pavement. When active, Sport Mode modifies steering efforts, transmission shifting, AWD torque, and suspension tuning, if equipped. Choosing Sport Mode also engages AWD (if equipped).

The Performance Algorithm Liftfoot (PAL) feature is enabled in Sport Mode. PAL allows the transmission to hold the current gear after the quick

release of a heavily applied accelerator pedal. This provides greater engine braking and enhanced vehicle control.

When PAL is activated, there may be an additional green gear symbol appearing in the instrument cluster display. See *Performance Shifting Light* ⇨ *114*.

**AWD :** AWD Mode provides drive torque to all four wheels. Select AWD to improve traction and control on slippery road surfaces, such as gravel, sand, wet pavement, snow, and ice.

AWD is active in Sport and Off-Road Modes. AWD is only available on vehicles equipped with AWD. For more information on AWD Mode, see *All-Wheel Drive* ⇨ *183*.

**Snow/Ice (FWD Vehicles Only) :** Snow/Ice Mode improves vehicle acceleration on snow and ice covered roads.

**Off-Road (AWD Vehicles Only) :** Use this mode for off-road recreational driving. When active, Off-Road Mode modifies accelerator pedal response, AWD torque, and TCS. Choosing Off-Road Mode also engages AWD.

# Cruise Control

**⚠ Warning**

Cruise control can be dangerous where you cannot drive safely at a steady speed. Do not use cruise control on winding roads or in heavy traffic.

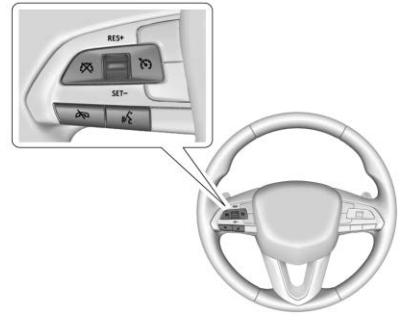
Cruise control can be dangerous on slippery roads. On such roads, fast changes in tyre traction can cause excessive wheel slip, and you could lose control. Do not use cruise control on slippery roads.

With cruise control, a speed of about 40 km/h (25 mph) or more can be maintained without keeping your foot on the accelerator. Cruise control does not work at speeds below about 40 km/h (25 mph).

If the Traction Control System (TCS) or StabiliTrak/Electronic Stability Control (ESC) begins to limit wheel spin while using cruise control, the cruise control automatically disengages. See *Traction Control/ Electronic Stability Control* ⇨ *186*. If a collision alert occurs when cruise control is activated, cruise control is disengaged. See *Forward Collision Alert (FCA) System* ⇨ *211*. When road conditions allow cruise control to be safely used, it can be turned back on.

Cruise control will disengage if either TCS or StabiliTrak/ESC is turned off.

If the brakes are applied, cruise control disengages.



: Press to turn the system on and off. A white indicator appears in the instrument cluster when cruise is turned on.

**RES+ :** If there is a set speed in the memory, move the thumbwheel up briefly to resume that speed or press and hold to accelerate. If the cruise control is already active, use to increase vehicle speed. To increase speed by 1 km/h (1 mph), press the thumbwheel up to the first detent toward RES+. To increase speed to the next 5 km/h (5 mph) mark on the speedometer, press the thumbwheel up to the second detent.

**SET– :** Move the thumbwheel down briefly to set the speed and activate cruise control. If the cruise control is already active, use to decrease vehicle speed. To decrease speed by 1 km/h (1 mph), move the thumbwheel down toward SET–. To decrease speed to the next 5 km/h (5 mph) mark on the speedometer, move the thumbwheel down toward SET– to the second detent.

: Press to disengage cruise control without erasing the set speed from memory.

### Setting Cruise Control

If is on when not in use, SET– or RES+ could get pressed and go into cruise when not desired. Keep off when cruise is not being used.

1. Press .
2. Get up to the desired speed.
3. Move the thumbwheel down to SET–. The desired set speed briefly appears in the instrument cluster.
4. Remove your foot from the accelerator.

When the cruise control has been set to the desired speed, a green cruise control indicator appears on the instrument cluster and a cruise set speed message appears on the Head-Up Display (HUD), if equipped.

### Resuming a Set Speed

If the cruise control is set at a desired speed and then the brakes are applied or is pressed, the cruise control is disengaged without erasing the set speed from memory.

Once the vehicle speed reaches about 40 km/h (25 mph) or more, move the thumbwheel up toward RES+ briefly. The vehicle returns to the previous set speed.

### Increasing Speed While Using Cruise Control

If the cruise control system is already activated:

- Move the thumbwheel up toward RES+ until the desired speed is reached, then release it.
- To increase vehicle speed in small increments, move the thumbwheel up toward RES+ briefly. For each press, the vehicle goes about 1 km/h (1 mph) faster.
- To increase vehicle speed in larger increments, move the thumbwheel up toward RES+ to the second

detent. For each press, the vehicle speed increases to the next 5 km/h (5 mph) mark on the speedometer.

The speedometer reading can be displayed in either English or metric units. See *Instrument Cluster* ⇨ *104*. The increment value used depends on the units displayed.

### Reducing Speed While Using Cruise Control

If the cruise control system is already activated:

- Move the thumbwheel down toward SET- until the desired lower speed is reached, then release it.
- To decrease vehicle speed in small increments, move the thumbwheel down toward SET- briefly. For each press, the vehicle goes about 1 km/h (1 mph) slower.
- To decrease vehicle speed in larger increments, move the thumbwheel down toward SET- to the second detent. For each press, the vehicle speed decreases to the next 5 km/h (5 mph) mark on the speedometer.

The cruise control system may automatically brake to slow the vehicle down.

The speedometer reading can be displayed in either English or metric units. See *Instrument Cluster* ⇨ *104*. The increment value used depends on the units displayed.

### Overtaking Another Vehicle While Using Cruise Control

Use the accelerator pedal to increase the vehicle speed. When you take your foot off the pedal, the vehicle will slow down to the previous set cruise speed.

While depressing the accelerator pedal, or shortly after its release to override cruise, briefly moving the thumbwheel down toward SET- will result in cruise set to the current vehicle speed.

### Using Cruise Control on Hills

How well the cruise control will work on hills depends upon the vehicle speed, load, and the steepness of the hills. When going up steep hills, you might have to apply the accelerator pedal to maintain your speed. When going downhill, the cruise control system may automatically brake to slow the vehicle down. Also, you may have to brake or shift to a lower gear to keep your speed down. If the brake pedal is applied, cruise control disengages.

### Ending Cruise Control

There are four ways to end cruise control:

- Step lightly on the brake pedal.
- Press .
- Shift the transmission to N (Neutral).
- Press .

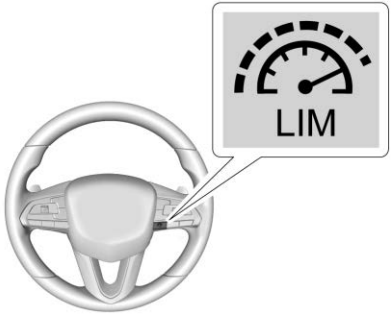
### Erasing Speed Memory

The cruise control set speed is erased from memory if  is pressed or if the ignition is turned off.

## Speed Limiter

The speed limiter function can be used to set a maximum speed when cruise control or Adaptive Cruise Control (ACC) is not in use. The speed

limiter can help prevent unintentionally driving above the selected set speed. The speed can be set automatically or manually using the steering wheel controls.




## Manual Speed Limiter

Press the LIM button. The LIM light on the instrument cluster will illuminate in white.

Manually set the maximum driving speed by moving the thumbwheel down toward SET– or up toward +RES. The desired maximum speed will remain displayed next to the LIM light, which will change from white to green. See “Adjusting Set Maximum Speed” later in this section.

If the LIM light is on when the system is not in use, the thumbwheel could be accidentally moved and the system would enter speed limiting mode when not desired. Turn the speed limiter off when speed limiting is not being used.

If the maximum driving speed is exceeded without the accelerator being firmly pressed, a chime will sound and the maximum set speed will flash on the instrument cluster.

To override the maximum driving speed, firmly depress the accelerator pedal. The maximum set speed will flash on the instrument cluster.

Press ⊗ to cancel the current set speed. The LIM light will illuminate in white.

Press LIM to turn the speed limiter off. The LIM light will turn off.

## Automatic Speed Limiter

Press the LIM button. The LIM light will illuminate in white. Press the LIM button again to enter automatic speed limiting mode.

When automatic speed limiting is activated, a brief pop-up will appear with the detected speed limit. To accept the speed limit, move the thumbwheel down toward SET–. To decline the speed limit, move the thumbwheel up toward +RES. If no action is taken, the speed limit will be automatically accepted after a short period of time. After accepting the speed limit, the LIM light will change from white to green and the speed limiter can be set up to 8 km/h (5 mph) above or below the speed limit. See “Adjusting Set Maximum Speed” later in this section.

If the maximum driving speed is exceeded without the accelerator being firmly pressed, a chime will sound and the maximum set speed will flash on the instrument cluster.

To exceed the maximum driving speed, firmly depress the accelerator pedal. The maximum set speed will flash on the instrument cluster.

Press ⊘ to cancel the current set speed. The LIM light will illuminate in white.

Press LIM to turn the speed limiter off. The LIM light will turn off.

### Adjusting Set Maximum Speed

To adjust the maximum speed when the speed limiter function is already activated:

- Move the thumbwheel down toward SET– or up toward +RES until the desired speed is reached. Automatic speed limiting can be set up to 8 km/h (5 mph) above or below the speed limit.
- To increase or decrease vehicle speed in small increments, move the thumbwheel down toward SET – or up toward +RES briefly. For each press, the maximum speed will change 1 km/h (1 mph).

## Adaptive Cruise Control

If equipped with Adaptive Cruise Control (ACC), it allows the driver to select the cruise control set speed and following gap. Read this entire section before using this system. The following gap is the following time between your vehicle and a vehicle detected directly ahead in your path, moving in the same direction. If no vehicle is detected in your path, ACC works like regular cruise control. ACC uses camera and radar sensors.

If a vehicle is detected in your path, ACC can apply acceleration or limited, moderate braking to maintain the selected following gap. To disengage ACC, apply the brake. If ACC is controlling your vehicle speed when the traction control system (TCS) or StabiliTrak/Electronic Stability Control (ESC) system activates, the ACC may automatically disengage. See *Traction Control/Electronic Stability Control* ⇨ *186*. When road conditions allow ACC to be safely used, the ACC can be turned back on.

ACC will not engage if the TCS or StabiliTrak/ESC system is disabled.

**⚠ Warning**

ACC has limited braking ability and may not have time to slow the vehicle down enough to avoid a collision with another vehicle you are following. This can occur when vehicles suddenly slow or stop ahead, or enter your lane. Also see "Alerting the Driver" in this section. Complete attention is always required while driving and you should be ready to take action and apply the brakes. See *Defensive Driving* ⇨ *150*.

**⚠ Warning**

ACC will not detect or brake for children, pedestrians, animals, or other objects.

Do not use ACC when:

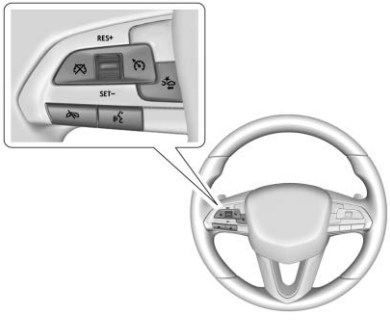
- On winding and hilly roads or when the sensors are blocked by snow, ice, or dirt. The

(Continued)

**Warning (Continued)**

system may not detect a vehicle ahead. Keep the entire front of the vehicle clean.

- Visibility is low, such as in mist, rain, or snow conditions. ACC performance is limited under these conditions.
- On slippery roads where fast changes in tyre traction can cause excessive wheel slip.




: Press to turn the system on or off. The indicator turns white on the instrument cluster when ACC is turned on.

**RES+ :** Move the thumbwheel up briefly toward RES+ to resume the previous set speed or to increase vehicle speed if ACC is already activated. To increase speed by 1 km/h (1 mph), move the thumbwheel up to the first detent toward RES+. To increase speed to the next 5 km/h (5 mph) mark on the speedometer, move the thumbwheel up to the second detent.

**SET– :** Move the thumbwheel down toward SET– briefly to set the speed and activate ACC or to decrease vehicle speed if ACC is already activated. To decrease speed by 1 km/h (1 mph), move the thumbwheel down toward SET– to the first detent. To decrease speed to the next 5 km/h (5 mph) mark on the speedometer, move the thumbwheel down to the second detent.

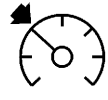
**:** Press to disengage ACC without erasing the selected set speed.

**:** Press to select a following gap time (or distance) setting for ACC of Far, Medium, or Near.

### Switching Between ACC and Regular Cruise Control

To switch between ACC and regular cruise control, press and hold . A Driver Information Display (DIC) message displays. See *Vehicle Messages* ⇨ *126*.

ACC Indicator



Regular Cruise Control Indicator

When ACC is engaged, a green indicator will be lit on the instrument cluster and the following gap will be displayed. When the regular cruise control is engaged, a green indicator will be lit on the instrument cluster; the following gap will not display.

When the vehicle is turned on, the cruise control mode will be set to the last mode used before the vehicle was turned off.

**⚠ Warning**

Always check the cruise control indicator on the instrument cluster to determine which mode cruise control is in before using the feature. If ACC is not active, the vehicle will not automatically brake for other vehicles, which could cause a crash if the brakes are not applied manually. You and others could be seriously injured or killed.

### Setting Adaptive Cruise Control

If is on when not in use, it could get pressed and go into cruise when not desired. Keep off when cruise is not being used.

Select the set speed desired for cruise. This is the vehicle speed when no vehicle is detected in its path.

ACC will not set at a speed less than 25 km/h (16 mph), although it can be resumed when driving at lower speeds.

To set ACC while moving:

1. Press .
2. Get up to the desired speed.
3. Move the thumbwheel down toward SET–.
4. Remove your foot from the accelerator.

After ACC is set, it may immediately apply the brakes if a vehicle ahead is detected closer than the selected following gap.

ACC can also be set while the vehicle is stopped if ACC is on and the brake pedal is applied.

The ACC indicator displays on the instrument cluster and Head-Up Display (HUD), if equipped. When ACC is turned on, the indicator will be lit white. When ACC is engaged, the indicator will turn green.

Be mindful of speed limits, surrounding traffic speeds, and weather conditions when selecting the set speed.

### Resuming a Set Speed

If the ACC is set at a desired speed and then the brakes are applied, ACC is disengaged without erasing the set speed from memory.

To begin using ACC again, move the thumbwheel up toward RES+ briefly. The vehicle returns to the previous set speed.

- If the vehicle is moving, it returns to the previous set speed.
- If the vehicle is stopped with the brake pedal applied, move the thumbwheel up toward RES+ and release the brake pedal. ACC will hold the vehicle until the

thumbwheel is moved up toward RES+ or the accelerator pedal is depressed.

A green ACC indicator and the set speed display on the instrument cluster. The vehicle ahead indicator may be flashing if a vehicle ahead was present and moved. See “Approaching and Following a Vehicle” later in this section.

Once ACC has resumed, if there is no vehicle ahead, if the vehicle ahead is beyond the selected following gap, or if the vehicle has exited a sharp curve, then the vehicle speed will increase to the set speed.

### Increasing Speed While ACC is at a Set Speed

If ACC is already activated, do one of the following:

- Use the accelerator to get to the higher speed. Move the thumbwheel down toward SET– . Release the control and the accelerator pedal. The vehicle will now cruise at the higher speed.

  When the accelerator pedal is pressed, ACC will not brake because it is overridden. The ACC indicator will turn blue on the instrument panel and HUD, if equipped. See *Vehicle Messages* ⇨ *126*.
- Move the thumbwheel up toward RES+ until the desired set speed appears on the display, then release it.
- To increase vehicle speed in small increments, move the thumbwheel up toward RES+ to the first detent. For each press, the vehicle goes 1 km/h (1 mph) faster.
- To increase vehicle speed in larger increments, move the thumbwheel up toward RES+ to the second detent. For each press, the vehicle speed increases to the next 5 km/h (5 mph) mark on the speedometer.

The set speed can also be increased while the vehicle is stopped.

- If stopped with the brake applied, move the thumbwheel up toward RES+ until the desired set speed is displayed.
- If ACC is holding the vehicle at a stop and there is another vehicle directly ahead, moving the thumbwheel up toward RES+ will increase the set speed. Moving the thumbwheel up toward RES+ when there is no longer a vehicle ahead will cause the ACC to resume.

When it is determined that there is no vehicle ahead or the vehicle ahead is beyond the selected following gap, then the vehicle speed will increase to the set speed.

The speedometer reading can be displayed in either English or metric units. See *Instrument Cluster* ⇨ *104*. The increment value used depends on the units displayed.

### Reducing Speed While ACC is at a Set Speed

If ACC is already activated, do one of the following:

- Use the brake to get to the desired lower speed. Release the brake and move the thumbwheel down toward SET– . The vehicle will now cruise at the lower speed.

- Hold the thumbwheel down toward SET– until the desired lower speed is reached, then release it.
- To decrease vehicle speed in smaller increments, move the thumbwheel down toward SET- to the first detent. For each press, the vehicle goes about 1 km/h (1 mph) slower.
- To decrease vehicle speed in larger increments, move the thumbwheel down toward SET- to the second detent. For each press, the vehicle speed decreases to the next 5 km/h (5 mph) mark on the speedometer.
- To decrease speed while the vehicle is stopped, move the thumbwheel down toward SET– until the desired set speed is displayed.

The speedometer reading can be displayed in either English or metric units. See *Instrument Cluster* ⇨ *104*. The increment value used depends on the units displayed.

### Selecting the Follow Distance Gap

When a slower moving vehicle is detected ahead within the selected following gap, ACC will adjust the vehicle's speed and attempt to maintain the follow distance gap selected.

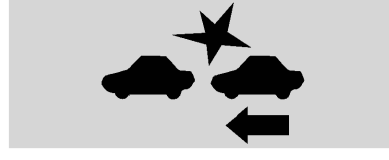
Press on the steering wheel to adjust the following gap. Each press cycles the gap button through three settings: Far, Medium, or Near.

When pressed, the current gap setting displays briefly on the instrument cluster and HUD. The gap setting will be maintained until it is changed.

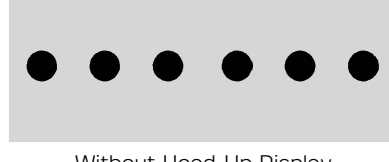
Since each gap setting corresponds to a following time (Far, Medium, or Near), the following distance will vary based on vehicle speed. The faster the vehicle speed, the further back your vehicle will follow a vehicle detected ahead. Consider traffic and weather conditions when selecting the following gap. The range of selectable gaps may not be appropriate for all drivers and driving conditions.

Changing the gap setting automatically changes the alert timing sensitivity (Far, Medium, or Near) for the Forward Collision Alert (FCA) feature. See *Forward Collision Alert (FCA) System* ⇨ *211*.

### Alerting the Driver



With Head-Up Display



Without Head-Up Display

If ACC is engaged, driver action may be required when ACC cannot apply sufficient braking because of approaching a vehicle too rapidly.

When this condition occurs, six red lights or the collision alert symbol on the HUD, if equipped, will flash on the windscreen. Either eight beeps will sound from the front, or both sides of the Safety Alert Seat will pulse five times. See “Collision/Detection Systems” under *Vehicle Personalisation* ⇨ *127*.

See *Defensive Driving* ⇨ *150*.

### Approaching and Following a Vehicle

The vehicle ahead indicator is in the instrument cluster and HUD display.

The vehicle ahead indicator only displays when a vehicle is detected in your vehicle's path moving in the same direction.

If this symbol is not displaying, ACC will not respond to or brake for vehicles ahead.

ACC automatically slows the vehicle down and adjusts vehicle speed to follow the vehicle in front at the selected follow gap. The vehicle speed increases or decreases to follow the vehicle in front of you, but will not exceed the set speed. It may apply limited braking, if necessary. When braking is active, the brake lamps will come on. The automatic braking may feel or sound different than if the brakes were applied manually. This is normal.

### Stationary or Very Slow-Moving Objects

**⚠ Warning**

ACC may not detect and react to stopped or slow-moving vehicles ahead of you. For example, the system may not brake for a vehicle it has never detected moving. This can occur in stop-and-go traffic or when a vehicle suddenly appears due to a vehicle ahead changing lanes. Your vehicle may not stop

(Continued)

**Warning (Continued)**

and could cause a crash. Use caution when using ACC. Your complete attention is always required while driving and you should be ready to take action and apply the brakes.

### ACC Automatically Disengages

ACC may automatically disengage and the driver will need to manually apply the brakes to slow the vehicle when:

- The sensors are blocked.
- The Traction Control System (TCS) or StabiliTrak/ESC system has activated or been disabled.
- There is a fault in the system.
- The radar falsely reports blockage when driving in a desert or remote area with no other vehicles or roadside objects. A DIC message may display to indicate that ACC is temporarily unavailable.

The ACC indicator will turn white when ACC is no longer active.

### Notification to Resume ACC

ACC will maintain a follow gap behind a detected vehicle and slow your vehicle to a stop behind that vehicle.

If the stopped vehicle ahead has driven away and ACC has not resumed, the vehicle ahead indicator will flash as a reminder to check traffic ahead before proceeding. In addition, the left and right sides of the Safety Alert Seat will pulse three times, or three beeps will sound. See "Alert Type" and "Adaptive Cruise Go Notifier" in "Collision/Detection Systems" under *Vehicle Personalisation* ⇨ *127*.

When the vehicle ahead drives away, move the thumbwheel up toward RES + or depress the accelerator pedal to resume cruise control. If stopped for more than two minutes or if the driver door is opened and the driver seat belt is unfastened, the ACC automatically applies the Electric Parking Brake (EPB) to hold the vehicle. The EPB status light will turn on. See *Electric Parking Brake* ⇨ *184*. To release the EPB, depress the accelerator pedal.

A DIC warning message may display indicating to shift to P (Park) before exiting the vehicle. See *Vehicle Messages* ⇨ *126*.

**⚠ Warning**

If ACC has stopped the vehicle, and if ACC is disengaged, turned off, or cancelled, the vehicle will no longer be held at a stop. The vehicle can move. When ACC is holding the vehicle at a stop, always be prepared to manually apply the brakes.

**⚠ Warning**

Leaving the vehicle without placing it in P (Park) can be dangerous. Do not leave the vehicle while it is being held at a stop by ACC. Always place the vehicle in P (Park) and turn off the ignition before leaving the vehicle.

### ACC Override

If using the accelerator pedal while ACC is active, the ACC indicator turns blue on the instrument cluster and in the HUD (if equipped) to indicate that automatic braking will not occur. ACC will resume operation when the accelerator pedal is not being pressed.

**⚠ Warning**

The ACC will not automatically apply the brakes if your foot is resting on the accelerator pedal. You could crash into a vehicle ahead of you.

### Bends in the Road

**⚠ Warning**

On bends, ACC may not detect a vehicle ahead in your lane. You could be startled if the vehicle accelerates up to the set speed, especially when following a vehicle exiting or entering exit ramps. You

(Continued)

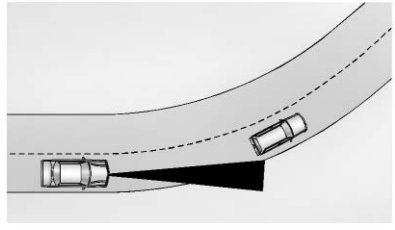
**Warning (Continued)**

could lose control of the vehicle or crash. Do not use ACC while driving on an entrance or exit ramp. Always be ready to use the brakes if necessary.

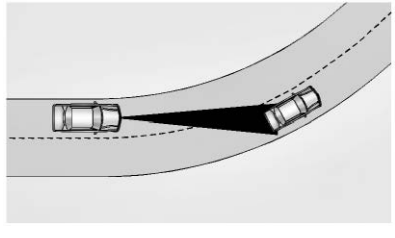
**⚠ Warning**

On bends, ACC may respond to a vehicle in another lane, or may not have time to react to a vehicle in your lane. You could crash into a vehicle ahead of you, or lose control of your vehicle. Give extra attention in bends and be ready to use the brakes if necessary. Select an appropriate speed while driving in bends.

ACC may operate differently in a sharp bend. It may reduce the vehicle speed if the bend is too sharp.



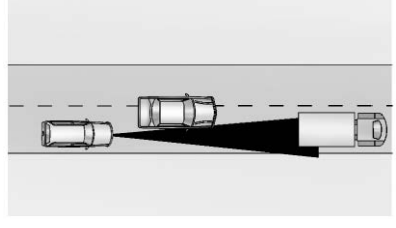
When following a vehicle and entering a bend, ACC may not detect the vehicle ahead and may accelerate to the set speed. When this happens, the vehicle ahead indicator will not appear.



ACC may detect a vehicle that is not in your lane and apply the brakes.

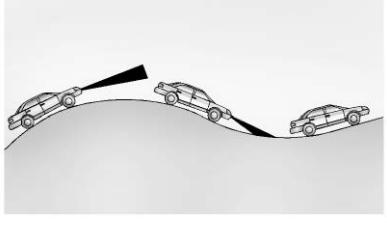
ACC may occasionally provide an alert and/or braking that is considered unnecessary. It could respond to vehicles in different lanes, signs, guardrails, and other stationary objects when entering or exiting a bend. This is normal operation. The vehicle does not need service.

### Other Vehicle Lane Changes



ACC will not detect a vehicle ahead until it is completely in the lane. The brakes may need to be manually applied.

### Do Not Use ACC on Hills and When Towing a Trailer



Do not use ACC when driving on steep hills or when towing a trailer. ACC will not detect a vehicle in the lane while driving on steep hills. The driver will often need to take over acceleration and braking on steep hills, especially when towing a trailer. If the brakes are applied, the ACC disengages.

### Disengaging ACC

There are three ways to disengage ACC:

- Step lightly on the brake pedal.
- Press .
- Press .

### Erasing Speed Memory

The cruise control set speed is erased from memory if is pressed or if the ignition is turned off.

### Cleaning the Sensing System

The camera sensor on the windscreen behind the rear-view mirror and the radar sensors on the front of the vehicle can become blocked by snow, ice, dirt, or mud. These areas need to be cleaned for ACC to operate properly.

For cleaning instructions, see "Washing the Vehicle" under *Exterior Care* ⇨ *305*.

System operation may also be limited under snow, heavy rain, or road spray conditions.

## Driver Assistance Systems

This vehicle may have features that work together to help avoid crashes or reduce crash damage while driving, reversing, and parking. Read this entire section before using these systems.

**⚠ Warning**

Do not rely on the Driver Assistance Systems. These systems do not replace the need for paying attention and driving safely. You may not hear or feel alerts or warnings provided by these systems. Failure to use proper care when driving may result in injury, death, or vehicle damage. See *Defensive Driving* ⇨ *150*.

Under many conditions, these systems will not:

- Detect children, pedestrians, bicyclists, or animals.

(Continued)

**Warning (Continued)**

- Detect vehicles or objects outside the area monitored by the system.
- Work at all driving speeds.
- Warn you or provide you with enough time to avoid a crash.
- Work under poor visibility or bad weather conditions.
- Work if the detection sensor is not cleaned or is covered by ice, snow, mud, or dirt.
- Work if the detection sensor is covered up, such as with a sticker, magnet, or metal plate.
- Work if the area surrounding the detection sensor is damaged or not properly repaired.

Complete attention is always required while driving, and you should be ready to take action and apply the brakes and/or steer the vehicle to avoid crashes.

### Audible or Safety Alert Seat

Some driver assistance features alert the driver of obstacles by beeping. To change the volume of the warning chime, see “Comfort and Convenience” under *Vehicle Personalisation* ⇨ *127*.

If equipped with the Safety Alert Seat, the driver seat cushion may provide a vibrating pulse alert instead of beeping. To change this, see “Collision/Detection Systems” under *Vehicle Personalisation* ⇨ *127*.

### Cleaning

Depending on vehicle options, keep these areas of the vehicle clean to ensure the best driver assistance feature performance. Driver Information Centre (DIC) messages may display when the systems are unavailable or blocked.

- Front and rear bumpers and the area below the bumpers
- Front grille and headlights

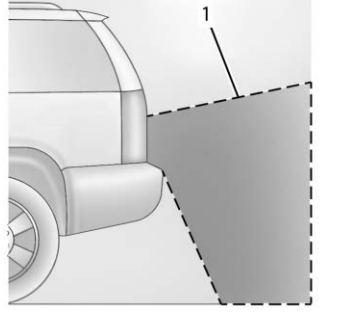
- Front camera lens in the front grille or near the front emblem
- Front side and rear side panels
- Outside of the windscreen in front of the rearview mirror
- Side camera lens on the bottom of the outside mirrors
- Rear side corner bumpers
- Rear Vision Camera above the license plate

## Assistance Systems for Parking or Reversing

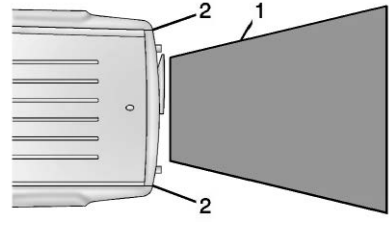
If equipped, the Rear Vision Camera (RVC), Rear Park Assist (RPA), Front Park Assist (FPA), Surround Vision, Reverse Automatic Braking (RAB) and Reversing Warning System, Rear Cross Traffic Alert (RCTA), and Automatic Parking Assist (APA) may help the driver park or avoid objects. Always check around the vehicle when parking or backing.

### Rear Vision Camera (RVC)

When the vehicle is shifted into R (Reverse), the RVC displays an image of the area behind the vehicle in the infotainment display. The previous screen displays when the vehicle is shifted out of R (Reverse) after a short delay. To return to the previous screen sooner, press any button on the infotainment system, shift into P (Park), or reach a vehicle speed of approximately 12 km/h (8 mph).




1. View Displayed by the Camera




1. View Displayed by the Camera
2. Corners of the Rear Bumper

Displayed images may be farther or closer than they appear. The area displayed is limited and objects that are close to either corner of the bumper or under the bumper do not display.

A warning triangle may appear on the infotainment display to show that RPA has detected an object. This triangle changes from amber to red and increases in size the closer the object.

### Surround Vision

If equipped, Surround Vision shows an image of the area surrounding the vehicle, along with the front or rear

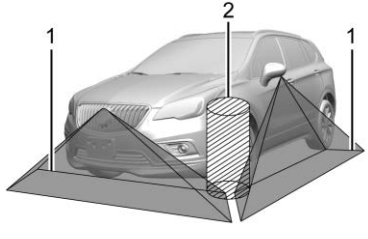
camera views on the infotainment display. The front camera is in the grille or near the front emblem, the side cameras are on the bottom of the outside mirrors, and the rear camera is above the number plate.

The Surround Vision system can be accessed by selecting CAMERA in the infotainment display or when the vehicle is shifted into R (Reverse). To return to the previous screen sooner, press any button on the infotainment system, shift into P (Park), or reach a vehicle speed of approximately 12 km/h (8 mph).

**⚠ Warning**

The Surround Vision cameras have blind spots and will not display all objects near the corners of the vehicle. Folding outside mirrors that are out of position may not display surround view correctly. Always check around the vehicle when parking or backing.


1. Views Displayed by the Surround Vision Cameras
2. Area Not Shown

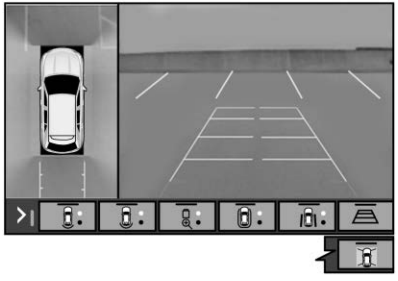



1. Views Displayed by the Surround Vision Cameras
2. Area Not Shown

**⚠ Warning**

The camera(s) do not display children, pedestrians, bicyclists, crossing traffic, animals, or any other object outside of the cameras' field of view, below the bumper, or under the vehicle. Shown distances may be different from actual distances. Do not drive or park the vehicle using only these camera(s). Always check behind and around the vehicle before driving. Failure to use proper care may result in injury, death, or vehicle damage.

### Camera Views



Touch the camera view buttons along the bottom of the infotainment display.

**Front/Rear Standard View :** Displays an image of the area in front or behind the vehicle. Touch Front/Rear Standard View on the infotainment display when a camera view is active. Touching the button multiple times will toggle between front and rear camera views.

If equipped, the front view camera also displays when the Park Assist system detects an object within 30 cm (12 in).

**Front/Rear Junction View :** Displays a front or rear cross traffic view that shows objects directly to the left and right of the front or rear of the vehicle. Touch Junction View on the infotainment display when a camera view is active. Touching the button multiple times will toggle between front and rear camera views.

**Front/Rear Overhead View :** Displays a front or rear overhead view of the vehicle. Touching the button will toggle between the two views.

**Front/Rear Bowl View :** Displays a view of the vehicle from either the front or the rear of the vehicle. Touch Bowl View on the infotainment display when a camera view is active. Touching the button multiple times will toggle between forward and rearward views. Park Assist and RCTA overlays are not available when Bowl View is active.

**Side Forward/Rearward View :** Displays a view that shows objects next to the front or rear sides of the vehicle. Touch Side Forward/Rearward View on the infotainment display when a camera view is active. Touching the button multiple times will toggle between forward and rearward views. Park Assist and RCTA overlays are not available when Side Forward/Rearward view is active.

**Guidance Lines :** Displays available guidelines.

**Top Down View :** Displays an image of the area surrounding the vehicle, along with the rear camera view in the infotainment display. The rear camera view will be replaced by the front camera view after shifting from R (Reverse) to a forward gear or when the vehicle is moving forward slower than 12 km/h (8 mph). This view can only be enabled in Front/Rear Standard View by touching the Top Down View button when the CAMERA view is active.

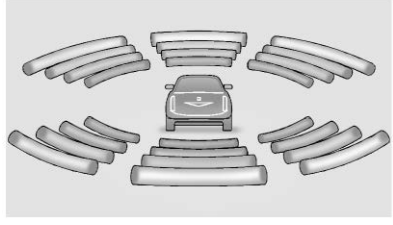
### Park Assist

With Front and Rear Park Assist, as the vehicle moves at speeds of less than 8 km/h (5 mph) the sensors on the bumpers may detect objects up to 1.2 m (4 ft) in front and 2.5 m (8 ft) behind the vehicle within a zone 25 cm (10 in) high off the ground and

below bumper level. These detection distances may be shorter during warmer or humid weather. Blocked sensors will not detect objects and can also cause false detections. Keep the sensors clean of mud, dirt, snow, ice, and slush; and clean sensors after a car wash in freezing temperatures.

**⚠ Warning**

The Park Assist system does not detect children, pedestrians, cyclists, animals, or objects located below the bumper or that are too close or too far from the vehicle. It is not available at speeds greater than 8 km/h (5 mph). To prevent injury, death, or vehicle damage, even with Park Assist, always check the area around the vehicle and check all mirrors before moving forward or reversing.



The instrument cluster may have a park assist display with bars that show “distance to object” and object location information for the Park Assist system. As the object gets closer, more bars light up and the bars change colour from yellow to amber to red. An obstacle is also indicated by audible beeps. The interval between the beeps becomes shorter as the vehicle gets closer to the obstacle.

When an object is first detected in the rear, one beep will be heard from the rear, or both sides of the Safety Alert Seat will pulse two times. When an object is very close (<0.6 m (2 ft) in the vehicle rear, or <0.3 m (1 ft) in the vehicle front), five beeps will sound from the front or rear depending on object location, or both sides of the Safety Alert Seat will pulse five times. Beeps for FPA are higher pitched than for RPA.

### Reversing Warning and Reverse Automatic Braking (RAB)

Vehicles with Adaptive Cruise Control (ACC) have the Reversing Warning System and Reverse Automatic Braking (RAB) system. When in R (Reverse), Reversing Warning alerts of rear objects at vehicle speeds greater than 8 km/h (5 mph), and RAB may automatically brake hard at speeds between 1–32 km/h (0.5–20 mph).

The Reversing Warning System will beep once from the rear when an object is first detected, or pulse twice on both sides of the Safety Alert Seat. When the system detects a potential crash, beeps will be heard from the rear, or five pulses will be felt on both sides of the Safety Alert Seat. There may also be a brief, sharp application of the brakes.

**⚠ Warning**

The Reversing Warning System only operates at speeds greater than 8 km/h (5 mph). It does not detect children, pedestrians, bicyclists, animals, or objects below the bumper or that are too close or too far from the vehicle. In some situations, such as at higher reversing speeds, there may not be enough time for the short, sharp application of the vehicle brake system to occur. To prevent injury, death, or vehicle damage, even with the Reversing Warning System, always check the area around the vehicle and check all mirrors before reversing.

When the vehicle is in R (Reverse), if the system detects the vehicle is reversing too fast to avoid a crash with a detected object behind your vehicle in your path, it may automatically brake hard to a stop to help avoid or reduce the harm caused by a reversing crash.

**⚠ Warning**

RAB may not avoid many types of reversing crashes. Do not wait for the automatic braking to apply. This system is not designed to replace driver braking and only works in R (Reverse) when an object is detected directly behind the vehicle. It may not brake or stop in time to avoid a crash. It will not brake for objects when the vehicle is moving at very low speeds. It does not detect children, pedestrians, bicyclists, animals, or objects below the bumper or that are too close or too far from the vehicle. To prevent injury, death, or vehicle damage, even with RAB, always check the area around the vehicle before and while reversing.

Pressing the brake pedal after the vehicle comes to a stop will release RAB. If the brake pedal is not pressed soon after the stop, the Electric Parking Brake (EPB) may be set. When it is safe, press the accelerator pedal firmly at any time to override RAB.

**⚠ Warning**

There may be instances where unexpected or undesired automatic braking occurs. If this happens, either press the brake pedal or firmly press the accelerator pedal to release the brakes from the RAB system. Before releasing the brakes, check the RVC and check the area around the vehicle to make sure it is safe to proceed.

### Rear Cross Traffic Alert (RCTA)

If equipped, RCTA displays a red warning triangle with a left or right pointing arrow on the infotainment display to warn of traffic coming from the left or right. This system detects objects coming from up to 20 m (65 ft) from the left or right-hand side of the vehicle. When an object is detected, either three beeps sound from the left or right or three Safety

Alert Seat pulses occur on the left or right side, depending on the direction of the detected vehicle.

Use caution while reversing when towing a trailer, as the RCTA detection zones that extend out from the back of the vehicle do not move further back when a trailer is towed.

### Turning the Features On or Off

Press P on the centre console to turn on or off the Front and Rear Park Assist, Reverse Automatic Braking (RAB), and the Reversing Warning System at the same time. The indicator light next to the button comes on when the features are on and turns off when the features have been disabled.

Turn off Park Assist, RCTA, and RAB when towing a trailer.

RCTA can be turned on or off through vehicle personalisation. See “Collision/ Detection Systems” under *Vehicle Personalisation* ⇨ *127*.

### Automatic Parking Assist (APA) with Braking

If equipped, APA searches for and steers the vehicle into parallel and perpendicular parking spots. When using APA, you must still change gear, while the system applies the brakes and accelerator. A display and audible beeps help to guide parking maneuvers.

Do not use APA when towing a trailer.

**⚠ Warning**

APA may not detect objects in the parking space, objects that are soft or narrow, objects high off the ground such as flatbed trucks, objects below ground level such as large potholes, or moving objects (e.g. pedestrians). Always verify that the parking space is appropriate for parking a vehicle. APA does not respond to changes in the parking space, such as movement of an adjacent vehicle, or a person or object entering the parking space.

(Continued)

**Warning (Continued)**

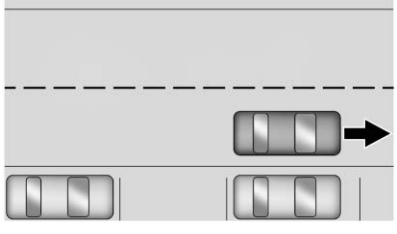
APA does not detect or avoid traffic that is behind or alongside of the vehicle. Always be prepared to stop the vehicle during the parking manoeuvre.

Press P on the centre console to enable the system to search for a parking space that is large enough and within 1.5 m (5 ft) of the vehicle. The vehicle speed must be below 30 km/h (18 mph). The system cannot:

- Detect whether it is a legal parking space.
- Park exactly lined up with the vehicle next to it if the spot is approached at an angle or if the parking space is angled.
- Park exactly centred in a spot that is marked too large.
- Always detect short curbs.

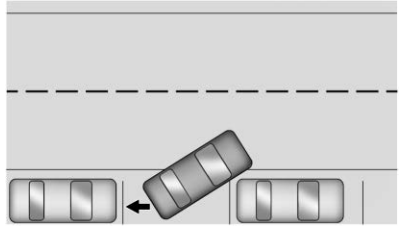
When enabled, APA searches for parallel parking spaces to the right of the vehicle. To search for a parking space to the left, turn on the left

indicator or, if available, change the side selection in the infotainment display. To switch the parking mode between parallel and perpendicular, press and hold P during the search process or, if available, change the parking mode in the infotainment display.



After completely passing a sufficiently large space, an audible beep occurs. A red stop symbol and a shift to reverse message are displayed.

If the vehicle is in R (Reverse), but does not steer into the expected space, this may be because the system is manoeuvring the vehicle into a previously detected space. The APA system does not need service.



APA will instruct the vehicle to stop once a large enough space is found. Follow the displayed instructions. Shift to R (Reverse) to engage automatic steering. The steering wheel will vibrate briefly as a reminder to remove your hands from the steering wheel. APA uses idle speed and braking to park. If idle speed is not sufficient, gently depress the accelerator pedal. Check surroundings and be prepared to stop to avoid vehicles, pedestrians, or objects not detected by the system. In the event that the driver brakes, APA will not disengage. Manual steering by the driver automatically disengages APA. Vehicle speed is limited to a maximum of 5 km/h (3 mph) during the parking manoeuvre.

A progress arrow displays the status of the parking maneuver. Depending on the space size, additional manoeuvres may be required, and there will be additional instructions. When changing gears, allow the automatic steering to complete before continuing the parking manoeuvre. APA will beep and display a PARKING COMPLETE message. Apply the brakes and set the vehicle in P (Park).

APA may automatically disengage if:

- The steering wheel is used by the driver.
- The maximum allowed speed is exceeded.
- The parking brake is applied or the vehicle is shifted into P (Park).
- There is a failure with the APA system.
- Electronic stability control or antilock brakes are activated.
- A high priority vehicle message is displayed in the DIC.
- The driver opens the door with an unfastened seat belt.

The brake holds the vehicle until the parking brake or brake is applied, or the vehicle is shifted into P (Park).

To cancel APA, press P again.

### When the System Does Not Seem to Work Properly

The APA system may require a short period of driving along bends to calibrate.

## Rear Pedestrian Alert

Under certain conditions, this feature can provide alerts for a pedestrian within the system's range directly behind the vehicle. This feature only works in R (Reverse) below 12 km/h (8 mph), and detects pedestrians up to 8 m (26 ft) away during daytime driving. During nighttime driving, feature performance is very limited.

Rear Pedestrian Alert Indicator

When a pedestrian is detected within the system's range directly behind the vehicle, this symbol flashes amber on the infotainment display, along with two beeps from the rear, or if equipped, two pulses from both sides of the driver seat. When a pedestrian is detected close to the vehicle, the symbol flashes red on the infotainment display, along with seven beeps from the rear, or if equipped, seven pulses from both sides of the driver seat.

**⚠ Warning**

Rear Pedestrian Alert does not automatically brake the vehicle. It also does not provide an alert unless it detects a pedestrian, and it may not detect all pedestrians if:

(Continued)

**Warning (Continued)**

- The pedestrian is not directly behind the vehicle, fully visible to the Rear Vision Camera (RVC), or standing upright.
- The pedestrian is part of a group.
- The pedestrian is a child.
- Visibility is poor, including nighttime conditions, fog, rain, or snow.
- The RVC is blocked by dirt, snow, or ice.
- The RVC, tail lights, or reversing lamps are not cleaned or in proper working condition.
- The vehicle is not in R (Reverse).

To help avoid death or injury, always check for pedestrians around the vehicle before reversing. Be ready to take action and apply

(Continued)

**Warning (Continued)**

the brakes. See *Defensive Driving* ⇨ *150*. Keep the RVC, tail lights, and reversing lamps clean and in good repair.

Rear Pedestrian Alert can be set to Off or Alert. See “Rear Pedestrian Detection” in “Collision/Detection Systems” under *Vehicle Personalisation* ⇨ *127*. If equipped, alerts can be set to beeps or seat pulses. See “Alert Type” in “Collision/Detection Systems” under *Vehicle Personalisation* ⇨ *127*.

## Assistance Systems for Driving

If equipped, when driving the vehicle in a forward gear, Forward Collision Alert (FCA), Lane Departure Warning (LDW), Lane Keep Assist (LKA), Side Blind Zone Alert (SBZA), Lane Change Alert (LCA), Automatic Emergency Braking (AEB), and/or the Front Pedestrian Braking (FPB) System can help to avoid a crash or reduce crash damage.

## Forward Collision Alert (FCA) System

If equipped, the FCA system may help to avoid or reduce the harm caused by front-end crashes. When approaching a vehicle ahead too quickly, FCA provides a red flashing alert on the windscreen and rapidly beeps or pulses the driver seat. FCA also lights an amber visual alert if following another vehicle much too closely.

FCA detects vehicles within a distance of approximately 60 m (197 ft) and operates at speeds above 8 km/h (5 mph). If the vehicle has Adaptive Cruise Control (ACC), it can detect vehicles to distances of approximately 110 m (360 ft) and operates at all speeds. See *Adaptive Cruise Control* ⇨ *193*.

**⚠ Warning**

FCA is a warning system and does not apply the brakes. When approaching a slower-moving or stopped vehicle ahead too rapidly,

(Continued)

**Warning (Continued)**

or when following a vehicle too closely, FCA may not provide a warning with enough time to help avoid a crash. It also may not provide any warning at all. FCA does not warn of pedestrians, animals, signs, crash barriers, bridges, construction barrels, or other objects. Be ready to take action and apply the brakes. See *Defensive Driving* ⇨ *150*.

FCA can be disabled. See “Collision/Detection Systems” under *Vehicle Personalisation* ⇨ *127*.

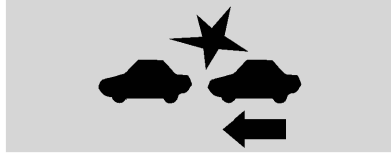
### Detecting the Vehicle Ahead

FCA warnings will not occur unless the FCA system detects a vehicle ahead. When a vehicle is detected, the vehicle ahead indicator will display green. Vehicles may not be detected on bends, motorway exit ramps, or hills, due to poor visibility; or if a vehicle ahead is partially blocked by pedestrians or other objects. FCA will not detect another vehicle ahead until it is completely in the driving lane.

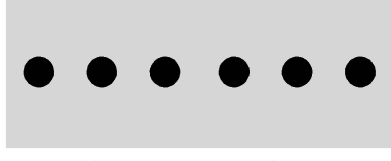
**⚠ Warning**

FCA does not provide a warning to help avoid a crash, unless it detects a vehicle. FCA may not detect a vehicle ahead if the FCA sensor is blocked by dirt, snow, or ice, or if the windscreen is damaged. It may also not detect a vehicle on winding or hilly roads, or in conditions that can limit visibility such as fog, rain, or snow, or if the headlamps or windscreen are not cleaned or in proper condition. Keep the windscreen, headlamps, and FCA sensors clean and in good repair.

**Collision Alert**



With Head-Up Display



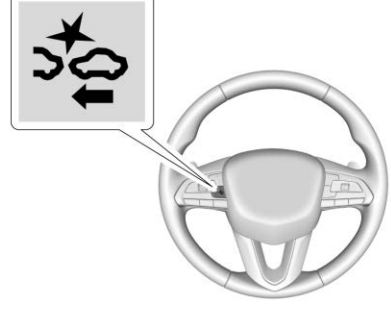
Without Head-Up Display

When your vehicle approaches another detected vehicle too rapidly, the red FCA display will flash on the windscreen. Also, eight rapid high-pitched beeps will sound from the front, or both sides of the Safety Alert Seat will pulse five times. When this Collision Alert occurs, the brake system may prepare for driver braking to occur more rapidly which can cause a brief, mild deceleration. Continue to apply the brake pedal as needed. Cruise control may be disengaged when the Collision Alert occurs.

**Tailgating Alert**

The vehicle ahead indicator will display amber when you are following a vehicle ahead much too closely.

## Selecting the Alert Timing



The Collision Alert control is on the steering wheel. Press to set the FCA timing to Far, Medium, or Near, or on some vehicles, Off. The first button press shows the current setting on the DIC. Additional button presses will change this setting. The chosen setting will remain until it is changed and will affect the timing of both the Collision Alert and the Tailgating Alert features. The timing of both alerts will vary based on vehicle speed. The faster the vehicle speed, the farther away the alert will occur. Consider traffic and weather conditions when selecting the alert timing. The range of selectable alert timings may not be appropriate for all drivers and driving conditions.

If your vehicle is equipped with Adaptive Cruise Control (ACC), changing the FCA timing setting automatically changes the following gap setting (Far, Medium, or Near).

### Following Distance Indicator

The following distance to a moving vehicle ahead in your path is indicated in following time in seconds on the Driver Information Center (DIC). See *Driver Information Centre (DIC)* ⇨ *120*. The minimum following time is 0.5 seconds away.

### Unnecessary Alerts

FCA may provide unnecessary alerts for turning vehicles, vehicles in other lanes, objects that are not vehicles, or shadows. These alerts are normal operation and the vehicle does not need service.

### Cleaning the System

If the FCA system does not seem to operate properly, this may correct the issue:

- Clean the outside of the windscreen in front of the rearview mirror.
- Clean the entire front of the vehicle.
- Clean the headlights.

## Automatic Emergency Braking (AEB)

If the vehicle has Forward Collision Alert (FCA), it also has AEB, which includes Intelligent Brake Assist (IBA). When the system detects a vehicle ahead in your path that is travelling in the same direction that you may be about to crash into, it can provide a boost to braking or automatically brake the vehicle. This can help avoid or lessen the severity of crashes when driving in a forward gear. Depending on the situation, the vehicle may automatically brake moderately or hard. This automatic emergency braking can only occur if a vehicle is detected. This is shown by the FCA vehicle ahead indicator being lit. See *Forward Collision Alert (FCA) System* ⇨ *211*.

The system works when driving in a forward gear between 8 km/h (5 mph) and 80 km/h (50 mph), or on vehicles with Adaptive Cruise Control (ACC), above 4 km/h (2 mph). It can detect vehicles up to approximately 60 m (197 ft).

**⚠ Warning**

AEB is an emergency crash preparation feature and is not designed to avoid collisions. Do not rely on AEB to brake the vehicle. AEB will not brake outside of its operating speed range and only responds to detected vehicles.

AEB may not:

- Detect a vehicle ahead on winding or hilly roads.
- Detect all vehicles, especially vehicles with a trailer, tractors, muddy vehicles, etc.
- Detect a vehicle when weather limits visibility, such as in fog, rain, or snow.
- Detect a vehicle ahead if it is partially blocked by pedestrians or other objects.

Complete attention is always required while driving, and you should be ready to take action and apply the brakes and/or steer the vehicle to avoid crashes.

AEB may slow the vehicle to a complete stop to try to avoid a potential collision. If this happens, AEB may engage the Electric Parking Brake (EPB) to hold the vehicle at a stop. Release the EPB or firmly press the accelerator pedal.

**⚠ Warning**

AEB may automatically brake the vehicle suddenly in situations where it is unexpected and undesired. It could respond to a turning vehicle ahead, guardrails, signs, and other non-moving objects. To override AEB, firmly depress the accelerator pedal, if it is safe to do so.

### Intelligent Brake Assist (IBA)

IBA may activate when the brake pedal is applied quickly by providing a boost to braking based on the speed of approach and distance to a vehicle ahead.

Minor brake pedal pulsations or pedal movement during this time is normal and the brake pedal should continue to be applied as needed. IBA will automatically disengage only when the brake pedal is released.

**⚠ Warning**

IBA may increase vehicle braking in situations when it may not be necessary. You could block the flow of traffic. If this occurs, take your foot off the brake pedal and then apply the brakes as needed.

FCA and AEB may also detect a cyclist ahead. FCA provides a green  when a cyclist is detected ahead, and displays amber if you follow a cyclist too closely. When approaching a cyclist ahead too quickly, FCA provides a red flashing alert on the windscreen and beeps rapidly or pulses the driver seat. AEB can provide a boost to braking or automatically brake the vehicle to

help avoid or reduce the harm caused by front-end collisions with a nearby cyclist when driving in a forward gear.

AEB and IBA can be disabled through vehicle personalisation. See “Collision/ Detection Systems” under *Vehicle Personalisation* ⇨ *127*.

**⚠ Warning**

Using AEB or IBA while towing a trailer could cause you to lose control of the vehicle and cause a collision. Turn the system to Alert or Off when towing a trailer.

A system unavailable message may display if:

- The front of the vehicle or windscreen is not clean.
- Heavy rain or snow is interfering with object detection.
- There is a problem with the StabiliTrak/Electronic Stability Control (ESC) system.

The AEB system does not need service.

## Front Pedestrian Braking (FPB) System

If equipped, the FPB system may help avoid or reduce injury and damage caused by front-end collisions with pedestrians when driving in a forward gear. FPB displays an amber indicator, , when a pedestrian is detected close ahead. When approaching a detected pedestrian too quickly, FPB provides a red flashing alert on the windscreen and rapidly beeps or pulses the driver seat. FPB can provide a boost to braking or automatically brake the vehicle. This system includes Intelligent Brake Assist (IBA), and the Automatic Emergency Braking (AEB) system may also respond to pedestrians. See *Automatic Emergency Braking (AEB)* ⇨ *213*.

The FPB system can detect and alert to pedestrians in a forward gear at speeds between 8 km/h (5 mph) and 80 km/h (50 mph). During daytime driving, the system detects pedestrians up to a distance of approximately 40 m (131 ft). During night-time driving, system performance is very limited.

**⚠ Warning**

FPB does not provide an alert or automatically brake the vehicle, unless it detects a pedestrian. FPB may not detect pedestrians, including children:

- When the pedestrian is not directly ahead, fully visible, or standing upright, or when part of a group.
- Due to poor visibility, including night-time conditions, mist, rain, or snow.
- If the FPB sensor is blocked by dirt, snow, or ice.
- If the headlights or windscreen are not cleaned or in proper condition.

Be ready to take action and apply the brakes. For more information, see *Defensive Driving* ⇨ *150*. Keep the windscreen, headlights, and FPB sensor clean and in good repair.

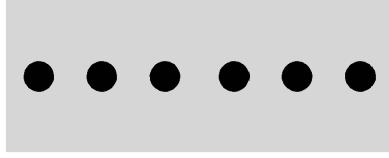
FPB can be set to Off, Alert, or Alert and Brake through vehicle personalisation. See “Collision/ Detection Systems” under *Vehicle Personalisation* ⇨ *127*.

### Detecting the Pedestrian Ahead

FPB alerts and automatic braking will not occur unless the FPB system detects a pedestrian. When a pedestrian is detected closely in front of the vehicle, the pedestrian ahead indicator will display amber.

### Front Pedestrian Alert

With Head-Up Display



Without Head-Up Display

When the vehicle approaches a pedestrian ahead too rapidly, the red FPB alert display will flash on the windscreen. Eight rapid high-pitched beeps will sound from the front, or both sides of the Safety Alert Seat will pulse five times. When this Pedestrian Alert occurs, the brake system may prepare for driver braking to occur more rapidly which can cause a brief, mild deceleration. Continue to apply the brake pedal as needed. Cruise control may be disengaged when the Front Pedestrian Alert occurs.

### Automatic Braking

If FPB detects it is about to crash into a pedestrian directly ahead, and the brakes have not been applied, FPB may automatically brake moderately or brake hard. This can help to avoid some very low speed pedestrian crashes or reduce pedestrian injury. FPB can automatically brake to detected pedestrians between 8 km/h (5 mph) and 80 km/h (50 mph). Automatic braking levels may be reduced under certain conditions, such as higher speeds.

If this happens, Automatic Braking may engage the Electric Parking Brake (EPB) to hold the vehicle at a stop. Release the EPB. A firm press of the accelerator pedal will also release Automatic Braking and the EPB.

**⚠ Warning**

FPB may alert or automatically brake the vehicle suddenly in situations where it is unexpected and undesired. It could falsely alert or brake for objects similar in shape or size to pedestrians, including shadows. This is normal operation and the vehicle does not need service. To override Automatic Braking, firmly press the accelerator pedal, if it is safe to do so.

Automatic Braking can be disabled through vehicle personalisation. See “Front Pedestrian Detection” in “Collision/Detection Systems” under *Vehicle Personalisation ⇨ 127*.

**⚠ Warning**

Using the Front Pedestrian Braking system while towing a trailer could cause you to lose control of the vehicle and crash. Turn the system to Alert or Off when towing a trailer.

### Cleaning the System

If FPB does not seem to operate properly, cleaning the outside of the windscreen in front of the rear-view mirror may correct the issue.

## Side Blind Zone Alert (SBZA)

If equipped, the SBZA system is a lane-changing aid that assists drivers with avoiding crashes that occur with moving vehicles in the side blind zone (or spot) areas. When the vehicle is in a forward gear, the left or right side mirror display will light up if a moving vehicle is detected in that blind zone. If the indicator is activated and a vehicle is also detected on the same side, the display will flash as an extra warning not to change lanes. Since this system is part of the Lane Change Alert (LCA) system, read the entire LCA section before using this feature.

## Lane Change Alert (LCA)

If equipped, the LCA system is a lane-changing aid that assists drivers with avoiding lane change crashes that occur with moving vehicles in the side blind zone (or spot) areas or with vehicles rapidly approaching these areas from behind. The LCA warning display will light up in the corresponding outside side mirror and will flash if the indicator is on.

**⚠ Warning**

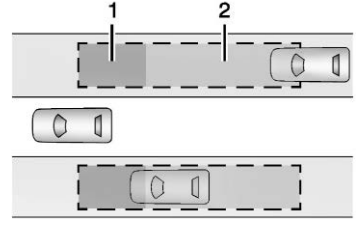
LCA does not alert the driver to vehicles outside of the system detection zones, pedestrians,

(Continued)

**Warning (Continued)**

bicyclists, or animals. It may not provide alerts when changing lanes under all driving conditions. Failure to use proper care when changing lanes may result in injury, death, or vehicle damage. Before making a lane change, always check mirrors, glance over your shoulder, and use the indicators.

### LCA Detection Zones




1. SBZA Detection Zone
2. LCA Detection Zone

The LCA sensor covers a zone of approximately one lane over from both sides of the vehicle, or 3.5 m

(11 ft). The height of the zone is approximately between 0.5 m (1.5 ft) and 2 m (6 ft) off the ground. The Side Blind Zone Alert (SBZA) warning area starts at approximately the middle of the vehicle and goes back 5 m (16 ft). Drivers are also warned of vehicles rapidly approaching from up to 25 m (82 ft) behind the vehicle.

### How the System Works

The LCA symbol lights up in the side mirrors when the system detects a moving vehicle in the next lane over that is in the side blind zone or rapidly approaching that zone from behind. A lit LCA symbol indicates it may be unsafe to change lanes. Before making a lane change, check the LCA display, check mirrors, glance over your shoulder, and use the indicators.

Left Side Mirror Display

Right Side Mirror Display

When the vehicle is started, both outside mirror LCA displays will briefly come on to indicate the system is operating. When the vehicle is in a forward gear, the left or right side mirror display will light up if a moving vehicle is detected in the next lane over in that blind zone or rapidly approaching that zone. If the indicator is activated in the same direction as a detected vehicle, this display will flash as an extra warning not to change lanes.

LCA is disabled when the trailer connection status is displayed. A DIC message may display. The SBZA system still operates.

LCA can be disabled through vehicle personalisation. When you disable LCA, SBZA is also disabled. See *Vehicle Personalisation* ⇨ *127*. If LCA is disabled by the driver, the LCA mirror displays will not light up.

### When the System Does Not Seem to Work Properly

The LCA system requires some driving for the system to calibrate to maximum performance. This calibration may occur more quickly if the vehicle is driving on a straight motorway with traffic and roadside objects (e.g., guardrails, barriers).

LCA displays may not come on when passing a vehicle quickly, for a stopped vehicle, or when towing a trailer. The LCA detection zones that extend back from the side of the vehicle do not move further back when a trailer is towed. Use caution while changing lanes when towing a trailer. LCA may alert to objects attached to the vehicle, such as a trailer, bicycle, or object extending out to either side of the vehicle. Attached objects may also interfere with the detection of vehicles. This is normal system operation; the vehicle does not need service.

LCA may not always alert the driver to vehicles in the next lane over, especially in wet conditions or when driving on sharp curves. The system does not need to be serviced. The system may light up due to guardrails, signs, trees, shrubs, and other

non-moving objects. This is normal system operation; the vehicle does not need service.

LCA may not operate when the LCA sensors in the left or right corners of the rear bumper are covered with mud, dirt, snow, ice, or slush, or in heavy rainstorms. For cleaning instructions, see "Washing the Vehicle" under *Exterior Care* ⇨ *305*. If the DIC still displays the system unavailable message after cleaning both sides of the vehicle toward the rear corners of the vehicle, see your dealer.

If the LCA displays do not illuminate when moving vehicles are in the side blind zone or are rapidly approaching this zone and the system is clean, the system may need service. Take the vehicle to your dealer.

## Lane Keep Assist (LKA)

If equipped, LKA may help avoid crashes due to unintentional lane departures. It may assist by gently turning the steering wheel if the vehicle approaches a detected lane marking without using a indicator in that direction. It may also provide a Lane Departure Warning (LDW) system alert as the lane marking is crossed. The LKA system is not intended to keep the vehicle centred in the lane. It may not assist or provide an LDW alert if it detects that you are braking, accelerating or actively steering. Override LKA by turning the steering wheel. LKA uses a camera to detect lane markings between 60 km/h (37 mph) and 180 km/h (112 mph).

**⚠ Warning**

The LKA system does not continuously steer the vehicle. It may not keep the vehicle in the lane or give a Lane Departure Warning (LDW) alert, even if a lane marking is detected.

The LKA and LDW systems may not:

- Provide an alert or enough steering assist to avoid a lane departure or crash.

(Continued)

**Warning (Continued)**

- Detect lane markings under poor weather or visibility conditions. This can occur if the windscreen or headlamps are blocked by dirt, snow or ice; if they are not in proper condition; or if the sun shines directly into the camera.
- Detect road edges.
- Detect lanes on winding or hilly roads.

If LKA only detects lane markings on one side of the road, it will only assist or provide an LDW alert when approaching the lane on the side where it has detected a lane marking. Even with LKA and LDW, you must steer the vehicle. Always keep your attention on the road and maintain proper vehicle position within the lane, or vehicle damage, injury or death could occur. Always keep the windscreen, headlamps and camera sensors clean and in

(Continued)

**Warning (Continued)**

good repair. Do not use LKA in bad weather conditions or on roads with unclear lane markings, such as construction zones.

**⚠ Warning**

Using LKA while towing a trailer or on slippery roads could cause loss of control of the vehicle and a crash. Turn the system off.

## How the System Works

The LKA camera sensor is on the windscreen ahead of the rear-view mirror.

To turn LKA on and off, press  on the centre console. If equipped, the indicator light on the button illuminates when LKA is on and turns off when LKA is disabled.

When on,  is green if LKA is available to assist and provide LDW alerts. It may assist by gently turning the steering wheel and display  as amber if the vehicle approaches a detected lane marking without using a indicator in that direction. It may also provide an LDW alert by flashing  amber as the lane marking is crossed. Additionally, there may be three beeps, or the driver seat may pulse three times, on the right or left, depending on the lane departure direction.

### Take Steering

The LKA system does not continuously steer the vehicle. If LKA does not detect active driver steering, an alert and chime may be provided. Move the steering wheel to dismiss.

## When the System Does Not Seem to Work Properly

The system performance may be affected by:

- Close vehicles ahead.
- Sudden lighting changes, such as when driving through tunnels.
- Banked roads.
- Roads with poor lane markings, such as two-lane roads.

If the LKA system is not functioning properly when lane markings are clearly visible, cleaning the windscreen may help.

A camera blocked message may display if the camera is blocked. Some driver assistance systems may have reduced performance or not work at all. An LKA or LDW unavailable message may display if the systems are temporarily unavailable. This message could be due to a blocked camera. The LKA system does not need service. Clean the outside of the windscreen behind the rearview mirror.

LKA assistance and/or LDW alerts may occur due to tar marks, shadows, cracks in the road, temporary or construction lane markings, or other road imperfections. This is normal system operation; the vehicle does not need service. Turn LKA off if these conditions continue.

# Fuel

## Fuel Additives

GM recommends the use of ACDelco Diesel Fuel conditioner. This will help maintain optimal engine performance. GM does not recommend other aftermarket diesel additives.

In the event you refuel using low-quality diesel, GM recommends adding ACDelco Fuel System Treatment Plus-Diesel to the vehicle's fuel tank. ACDelco Fuel System Treatment Plus-Diesel can help clean engine deposits and is available at your GM dealership.

## Fuel for Diesel Engines


The selection of a high-quality fuel is important for maintaining optimum vehicle performance. Diesel fuel should meet or exceed the minimum requirements in the most current versions of the local fuel standards.

Do not use fuel with more than 15 ppm sulphur. If available, use of diesel fuel with less sulphur is highly recommended for better emissions. In countries where 15 ppm or lower sulphur is not available, do not use diesel fuel with sulphur greater than 50 ppm. In these countries only, the vehicle is already designed to accommodate this level of sulphur.

**Caution**

Use of fuel that does not comply with the required technical standards may lead to engine power loss, increased wear, or engine damage and may void your warranty.

Some improper fuels are:

- Diesel fuel with the addition of petrol.

(Continued)

**Caution (Continued)**

- Diesel fuel mixed with engine oil or automatic gearbox fluid.
- Triglyceride fuels, such as raw vegetable oil or animal fat, in any form, including with blends of diesel or biodiesel.
- Marine diesel fuel and fuel oils.
- Diesel-water emulsions, such as Aquazole.
- Aftermarket diesel fuel additives, which contain alcohol, organo-metallic additives, or water emulsifiers.

**Caution**

If the vehicle is accidentally refuelled with petrol, do not continue driving the vehicle. Driving the vehicle will damage the

(Continued)

**Caution (Continued)**

fuel system. Have the vehicle towed to a qualified technician to have the petrol removed from the tank and fuel system. Refuel with Ultra Low Sulphur Diesel fuel. It is also recommended to have the fuel system flushed with Ultra Low Sulphur Diesel, to ensure all petrol is removed.

Some conditions, such as dirty fuel, may decrease fuel filter life and a CHANGE FUEL FILTER message may come on in the Driver Information Centre (DIC).

### Climate Grade Diesel Fuels

At temperatures below 0 °C (32 °F), avoid using biodiesel blends above 7% by volume. Using such a fuel may cause fuel filter plugging, system gelling, and freezing, which may adversely affect vehicle starting.

Severe winter grade diesel fuel, such as 1-D diesel fuel or Arctic grade diesel fuel, can be used in extreme cold temperatures (below –18 °C or 0 ° F); however, doing so will reduce power and fuel economy. Avoid using severe winter grade fuel in warm or hot climates. It may result in stalling, poor starting, and damage to the fuel injection system.

Fuels improperly blended for cold temperature operation may result in restricted fuel filters. The vehicle is equipped with a fuel heating system to prevent gelling or waxing of conventional diesel fuel and biodiesel blends, but may not prevent all cases.

In the event of severe winter conditions, the fuel filter may become clogged by wax naturally present in the fuel. To unclog it, move the vehicle to a warm garage area and allow the filter to warm up. The fuel filter may need to be replaced. See *Fuel Filter Replacement* ⇨ *227*.

## Biodiesel

Biodiesel is a renewable fuel produced from vegetable oils or animal fats that have been chemically modified to make it compatible with diesel fuel.

**Caution**

Do not use homemade biodiesel or home test kits because the quality cannot be verified by approved scientific methods. Do not use raw vegetable oil or other unmodified bio-oils, fats, or blends of vegetable oil with diesel. They could damage the fuel system and engine, and damage would not be covered by the vehicle warranty.

### Biodiesel Blends

Fuels with a biodiesel content up to 10% by volume may be used (e.g., named B10). Only use biodiesel blends up to 10% by volume that comply with your country's or region's fuel standards.

**Caution**

Do not use blends containing more than 10% biodiesel. Any engine, fuel system, or exhaust

(Continued)

**Caution (Continued)**

after-treatment system damage would not be covered by the vehicle warranty.

As a renewable fuel, biodiesel provides some environmental benefits. However, biodiesel has unique properties and needs to be handled differently than diesel fuel. Its use presents additional risks and may not be appropriate in all situations. Certain vehicle operating modes increase these risks and should be avoided.

Biodiesel fuel quality degrades with time and exposure to high temperature more quickly than Ultra Low Sulphur Diesel fuel. More frequent refuelling provides the best opportunity to have a supply of fresh fuel. Storage at hot ambient temperatures will accelerate biodiesel degradation.

Owners who use little fuel, or who have vehicles stored for extended periods of time, should avoid the use of biodiesel blended fuels above 5% by volume. When vehicles are stored for longer than one month, they should be run out of biodiesel to below one quarter tank, refuelled with biodiesel-free diesel fuel, and driven several kilometres (miles) before storage.

## Cold Weather Operation

At temperatures below 0 °C (32 °F), avoid using biodiesel blends above 5% by volume. Using such a fuel may cause fuel filter plugging, system gelling, and freezing, which may adversely affect vehicle starting.

Severe winter grade diesel fuel, such as 1-D diesel fuel or Arctic grade diesel fuel, can be used in extreme cold temperatures (below -18 °C or 0 ° F); however, doing so will reduce power and fuel economy. Avoid using severe winter grade fuel in warm or hot climates. It may result in stalling, poor starting, and damage to the fuel injection system.

Fuels improperly blended for cold temperature operation may result in restricted fuel filters. The vehicle is equipped with a fuel heating system to prevent gelling or waxing of conventional diesel fuel and biodiesel blends, but it may not prevent all cases.

In severe winter conditions, the fuel filter may become clogged by wax naturally present in the fuel. To unclog it, move the vehicle to a warm garage area and allow the filter to warm up. The fuel filter may need to be replaced. See *Fuel Filter Replacement* ⇨ *227*.

## Water in Fuel

Improper fuel tank inspection or cleaning, or contaminated fuel from suppliers, may cause water to be pumped into the fuel tank along with the diesel fuel. If a WATER IN FUEL message displays in the DIC, the water must be drained immediately.

**⚠ Warning**

Diesel fuel containing water is still combustible. You or others could be burned. If the fuel needs to be drained, keep sparks, flames, and smoking materials away from the mixture.

**Caution**

Water in the diesel fuel may corrode internal components of the fuel system and lead to severe damage. It may also support fungus or bacteria growth, which may damage the fuel system. Even with a diesel fuel biocide, the fuel system may still need to be cleaned. Your retailer can advise of the appropriate solution.

If the fuel tank needs to be purged to remove water, see your retailer or a qualified technician. Improper purging may damage the fuel system.

### Water in Fuel Troubleshooting

If a WATER IN FUEL message illuminates:

| Problem | Recommended Action |
|---|---|
| Message displays but turns off during the ignition cycle. | The fuel filter is approximately half full of water. Drain the water immediately. See "Removing Water from the Fuel Filter" later in this section. |
| Message displays and stays on. | Drain the fuel filter immediately. If no water can be drained, and the temperature is below freezing, then water may be frozen in the filter. Move the vehicle to a warm location to thaw the water, and then drain the fuel. If water still does not drain, see your retailer. |

| Problem | Recommended Action |
|---|---|
| Immediately after refuelling, message displays and stays on. | A large amount of water is in the fuel tank. Drain the fuel filter immediately. If the message remains illuminated, or illuminates again without refuelling, then fuel tank purging is required. See your dealer. If the message displays and the vehicle stalls or running is rough, do not drive until the water-contaminated fuel is drained. |

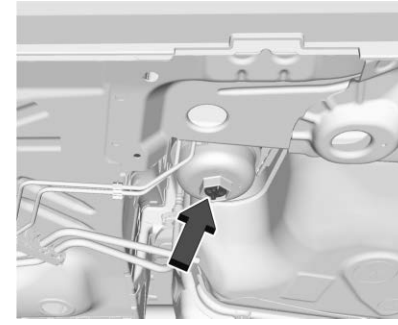
**Caution**

Driving with this message on may damage the fuel injection system and the engine. If the message illuminates directly after refuelling, water has been pumped into the fuel tank. Turn off the engine and drain the water immediately.

### Removing Water from the Fuel Filter

To drain water:

1. Turn the engine off and apply the parking brake.
2. Place a container under the filter drain valve, which is on the bottom of the fuel filter.



3. Turn the drain plug anticlockwise using a suitable tool.
4. With the engine turned off, press and hold ENGINE START/STOP without applying the brake for five seconds to place the vehicle in Service Mode. See *Ignition Positions* ⇨ *164*. Wait approximately five seconds, and then press ENGINE START/STOP again to turn it off. This operation will enhance water flow out of the filter. The filter is drained as soon as diesel fuel emerges from the port.

5. Retighten the drain plug by turning it clockwise.
6. Properly dispose of the water-contaminated fuel.
7. Start the engine and let it run for a few minutes. During the draining process, air may have entered the fuel system. If the engine stalls, the fuel system may need to be primed. See "Fuel Priming" following.

### Fuel Priming

For the fuel system to work properly, there must not be any air in the fuel lines. If air does enter, the engine may not start and the fuel lines will need to be primed before operating the vehicle.

If air is present, the following may have occurred:

- The vehicle has run out of fuel.
- The fuel filter was removed.
- The fuel lines were removed or disconnected.
- The fuel filter water drain valve was opened while the engine was running.

To prime the fuel lines:

1. With the engine turned off, press and hold ENGINE START/STOP without applying the brake for five seconds to place the vehicle in Service Mode. See *Ignition Positions* ⇨ *164*. Wait approximately five seconds and press ENGINE START/STOP again to turn it off. Perform this step three times or more while the engine is turned off.
2. Press and hold ENGINE START/STOP while applying the brake for a maximum of 40 seconds at a time, with five seconds between attempts, until the engine starts. If the engine tries to run, but does not run smoothly, increase the engine revolutions slightly by using the accelerator pedal. This will help force air through the system.
3. Repeat Step 2 if the engine stalls and will not restart.
4. After a few attempts, if the engine still does not start, see your retailer.

## Running Out of Fuel

**⚠ Warning**

Diesel fuel is flammable. It could start a fire if something ignites it, and people could be burned. Do not allow it to spill on hot engine parts, and keep matches or other ignition sources away.

If the engine has stalled due to running out of fuel, add at least 7.6 L (2 gal) of fuel if parked on a level surface, or up to 18.9 L (5 gal) of fuel if parked on a slope, and perform the procedure under "Fuel Priming" previously in this section.

## Fuel Filter Replacement

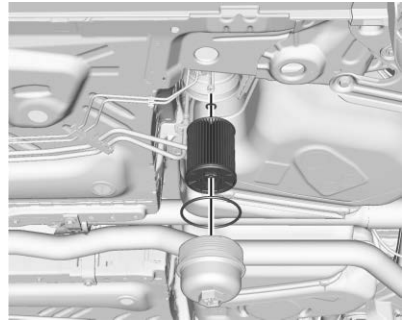
**⚠ Warning**

Diesel fuel is flammable. It could start a fire if something ignites it, and people could be burned. Do not allow it to spill on hot engine parts, and keep matches or other ignition sources away.

The fuel filter is under the vehicle on the driver side in front of the left-hand rear tyre.

1. Drain any water from the filter. See “Removing Water from Fuel Filter” in *Water in Fuel ⇨ 223*.

   Keep the engine off until the procedure is completed.
2. Apply the parking brake.



3. Remove the filter element cap by turning it anticlockwise.
4. Remove the filter element and O-rings. If there is any dirt on the filter sealing surface, clean it off.
5. Install the new filter element and O-rings.
6. Reinstall and tighten the filter cap to the housing.
7. Use the fuel filter priming procedure to prime the fuel filter. See “Fuel Priming” in *Water in Fuel ⇨ 223*.
8. Start the engine and let it idle for five minutes. Check the fuel filter and air bleed valve for leaks.

## Filling the Tank

An arrow on the fuel gauge indicates which side of the vehicle the fuel door is on. See *Fuel Gauge ⇨ 107*. Do not refill the diesel fuel and Diesel Exhaust Fluid (DEF) at the same time.

**⚠ Warning**

Fuel vapours and fuel fires burn violently and can cause injury or death.

Follow these guidelines to help avoid injuries to you and others:

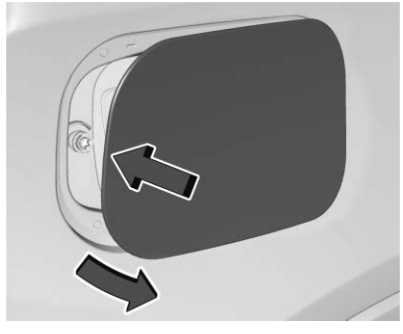
- Read and follow all the instructions on the fuel pump island.
- Turn off the engine when refuelling.

(Continued)

**Warning (Continued)**

- Keep sparks, flames, and smoking materials away from fuel.
- Do not leave the fuel pump unattended.
- Avoid using electronic devices while refuelling.
- Do not re-enter the vehicle while pumping fuel.
- Keep children away from the fuel pump and never let children pump fuel.
- Before touching the fill nozzle, touch a metallic object to discharge static electricity from your body.
- Fuel can spray out if the fuel cap is opened too quickly. This spray can happen if the tank is nearly full, and is more likely in hot weather. Open the fuel cap slowly and wait for any hissing noise to stop, then unscrew the cap all the way.

The fuel door unlocks when the vehicle doors are unlocked. See *Remote Keyless Entry (RKE) System Operation* ⇨ *8*.



To open the fuel filler flap, push and release the rearward centre edge of the flap.

Turn the fuel cap anticlockwise to remove. When refuelling, hang the fuel cap from the hook on the fuel door. Fully insert and latch the fill nozzle, begin refuelling.

**⚠ Warning**

Overfilling the fuel tank by more than three clicks of a standard fill nozzle may cause:

- Vehicle performance issues, including engine stalling and damage to the fuel system.
- Fuel spills.
- Under certain conditions, fuel ignites.

Diesel fuel can foam when filling the tank. The automatic pump nozzle may shut off, even if the tank is not full. Wait for the foaming to stop, and then fill the tank more slowly. Be careful not to spill fuel. Wait five seconds after pumping before removing the fill nozzle. Clean fuel from painted surfaces as soon as possible. See *Exterior Care* ⇨ *305*.

Reinstall the cap by turning it clockwise until it clicks. Push the fuel door closed until it latches.

**⚠ Warning**

If a fire starts while you are refuelling, do not remove the fill nozzle. Shut off the flow of fuel by shutting off the pump or by notifying the station attendant. Leave the area immediately.

**Caution**

If a new fuel cap is needed, be sure to get the right type of cap from your dealer. The wrong type of fuel cap may not fit properly and could damage the fuel system.

#### Accidental Refuelling with Petrol

**Caution**

If the vehicle is accidentally refuelled with petrol, do not continue driving the vehicle except to reach a location where it can be

(Continued)

**Caution (Continued)**

stopped safely. Driving the vehicle will damage the engine. Tow the vehicle for service. Have the petrol removed from the tank and fuel system.

## Filling a Portable Fuel Container

**⚠ Warning**

Filling a portable fuel container while it is in the vehicle can cause fuel vapours that can ignite either by static electricity or other means. You or others could be badly burned and the vehicle could be damaged. Always:

- Use approved fuel containers.
- Remove the container from the vehicle, boot, or pickup bed before filling.

(Continued)

**Warning (Continued)**

- Place the container on the ground.
- Place the nozzle inside the fill opening of the container before dispensing fuel, and keep it in contact with the fill opening until filling is complete.
- Fill the container no more than 95% full to allow for expansion.
- Do not smoke, light matches, or use lighters while pumping fuel.
- Do not use electronic devices while pumping fuel.

# Trailer Towing

## General Towing Information

Only use towing equipment that has been designed for the vehicle. Contact your retailer or trailer retailer for assistance with preparing the vehicle to tow a trailer. Read the entire section before towing a trailer.

To tow a disabled vehicle, see *Towing the Vehicle* ⇨ *302*. To tow the vehicle behind another vehicle such as a motor home, see *Recreational Vehicle Towing* ⇨ *302*.

## Driving Characteristics and Towing Tips

**⚠ Warning**

You can lose control when towing a trailer if the correct equipment is not used or the vehicle is not driven properly. For example, if the trailer is too heavy or the trailer brakes are

(Continued)

**Warning (Continued)**

inadequate for the load, the vehicle may not stop as expected. You and others could be seriously injured. The vehicle may also be damaged, and the repairs would not be covered by the vehicle warranty. Pull a trailer only if all the steps in this section have been followed. Ask your dealer for advice and information about towing a trailer with the vehicle.

### Driving with a Trailer

Trailering is different than just driving the vehicle by itself. Trailer towing means changes in handling, acceleration, braking, durability, and fuel economy. Successful, safe trailering takes correct equipment, and it has to be used properly.

The following information has many time-tested, important trailering tips and safety rules. Many of these are important for your safety and that of your passengers. Read this section carefully before pulling a trailer.

When towing a trailer:

- Become familiar with and follow all state and local laws that apply to trailer towing. These requirements vary from state to state.
- State laws may require the use of extended side view mirrors. Even if not required, you should install extended side view mirrors if your visibility is limited or restricted while towing.
- Do not tow a trailer during the first 800 km (500 mi) of vehicle use to prevent damage to the engine, axle, or other parts.
- It is recommended to perform the first oil change before heavy towing.
- During the first 800 km (500 mi) of trailer towing, do not drive over 80 km/h (50 mph) and do not make starts at full throttle.
- Vehicles can tow in D (Drive). If the transmission downshifts too often, a lower gear may be selected using Manual Mode See *Manual Mode* ⇨ *181*.

If equipped, the following driver assistance features should be turned off when towing a trailer:

- Adaptive Cruise Control (ACC)
- Super Cruise Control
- Lane Keep Assist (LKA)
- Park Assist
- Automatic Parking Assist (APA)
- Reverse Automatic Braking (RAB)

If equipped, the following driver assistance features should be turned to alert or off when towing a trailer:

- Automatic Emergency Braking (AEB)
- Intelligent Brake Assist (IBA)
- Front Pedestrian Braking (FPB)

If equipped with Lane Change Alert (LCA), the LCA detection zones that extend back from the side of the vehicle do not move further back when a trailer is towed. Use caution while changing lanes when towing a trailer.

If equipped with Rear Cross Traffic Alert (RCTA), exercise caution while reversing when towing a trailer, as the RCTA detection zones that extend out from the back of the vehicle do not move further back when a trailer is towed.

**⚠ Warning**

To prevent serious injury or death from carbon monoxide (CO) when towing a trailer:

- Do not drive with the tailgate, boot/hatch, or rear-most window open.
- Fully open the air outlets on or under the instrument panel.
- Adjust the climate control system to a setting that only allows in outside air. See “Climate Control Systems” in the Index.

For more information about carbon monoxide, see *Engine Exhaust* ⇨ *171*.

Towing a trailer requires experience. The combination of the vehicle and trailer is longer and not as responsive as the vehicle itself. Get used to the handling and braking of the combination by driving on a level road surface before driving on public roads.

The trailer structure, the tyres, and the brakes must all be rated to carry the intended load. Inadequate trailer equipment can cause the combination to operate in an unexpected or unsafe manner. Before driving, inspect all trailer hitch parts and attachments, safety chains, electrical connectors, lamps, tyres, and mirrors. See *Towing Equipment* ⇨ *237*. If the trailer has electric brakes, start the combination moving and then manually apply the trailer brake controller to check that the trailer brakes work. During the trip, occasionally check that the load and trailer are secure and that the lamps and any trailer brakes are working.

### Towing with a Stability Control System

When towing, the stability control system might be heard. The system reacts to vehicle movement caused by the trailer, which mainly occurs during cornering. This is normal when towing heavier trailers.

### Following Distance

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

### Overtaking

More overtaking distance is needed when towing a trailer. The combination of the vehicle and trailer will not accelerate as quickly and is much longer than the vehicle alone. You need to drive much farther beyond the overtaken vehicle before turning back into the lane. Overtaking on level roadways. Avoid overtaking on hills if possible.

### Reversing

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

### Making Turns

**Caution**

Turn more slowly and make wider arcs when towing a trailer to prevent damage to your vehicle. Making very sharp turns could cause the trailer to make contact with the vehicle.

Make wider turns than normal when towing, so the trailer does not go over soft shoulders, over kerbs, or collide with road signs, trees, or other objects. Always indicate turns well in advance. Do not steer or brake suddenly.

### Driving on Grades

Reduce speed and change to a lower gear before starting down a long or steep downhill grade. If the transmission is not shifted down, the brakes may overheat and result in reduced braking efficiency.

The vehicle can tow in D (Drive). Shift the transmission to a lower gear if the transmission shifts too often under heavy loads and/or hilly conditions.

When towing at higher altitudes, engine coolant will boil at a lower temperature than at lower altitudes. If the engine is turned off immediately after towing at high altitude on steep uphill grades, the vehicle could show signs similar to engine overheating. To avoid this, let the engine run, preferably on level ground, with the transmission in P (Park) for a few minutes before turning the engine off. If the overheat warning comes on, see *Engine Overheating ⇨ 255*.

### Parking on Hills

**⚠ Warning**

To prevent serious injury or death, always park your vehicle and trailer on a level surface when possible.

When parking your vehicle and your trailer on a hill:

1. Press the brake pedal, but do not shift into P (Park) yet. Turn the wheels into the curb if facing downhill or into traffic if facing uphill.
2. Have someone place chocks under the trailer wheels.
3. When the wheel chocks are in place, gradually release the brake pedal to allow the chocks to absorb the load of the trailer.
4. Reapply the brake pedal. Then apply the parking brake and shift into P (Park).
5. Release the brake pedal.

### Leaving After Parking on a Hill

1. Apply and hold the brake pedal.
   - Start the engine.
   - Shift into a gear.
   - Release the parking brake.
2. Release 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

The vehicle needs to be serviced more often when used to tow trailers. See the maintenance schedule booklet for more information. It is especially important to check the automatic gearbox fluid, engine oil, axle lubricant, belts, cooling system, and brake system before and during each trip.

Check periodically that all nuts and bolts on the trailer hitch are tight.

### Engine Cooling When Trailer Towing

The cooling system may temporarily overheat during severe operating conditions. See *Engine Overheating* ➪ *255*.

## Trailer Towing

**Caution**

Towing a trailer improperly can damage the vehicle and result in costly repairs not covered by the vehicle warranty. To tow a trailer correctly, follow the directions in this section and see your retailer for important information about towing a trailer with the vehicle.

Trailering is different than just driving the vehicle by itself. Trailer towing means changes in handling, acceleration, braking, durability, and fuel economy. Successful, safe trailering takes correct equipment, and it has to be used properly.

The following information has many time-tested, important trailering tips and safety rules. Many of these are important for your safety and that of your passengers. Read this section carefully before pulling a trailer.

## Trailer Weight

**⚠ Warning**

Never exceed the towing capacity for your vehicle.

Safe trailer towing requires monitoring of the weight, speed, altitude, road gradients, outside temperature, dimensions of the front of the trailer, and how frequently the vehicle is used to tow a trailer.

When towing a trailer, the combined weight of the vehicle, vehicle contents, trailer, and trailer contents must be below all of the maximum weight ratings for the vehicle, including:

- GCWR: Gross Combined Weight Rating
- GVWR: Gross Vehicle Weight Rating
- Maximum Trailer Weight Rating
- Maximum Trailer Tongue Weight Rating

See “Trailer Brakes” under *Towing Equipment* ⇨ *237*.

The only way to be sure that the weight does not exceed any of these ratings is to weigh the towing vehicle and trailer combination, fully loaded for the trip, getting individual weights for each of these items.

**⚠ Warning**

You and others could be seriously injured or killed if the trailer is too heavy or the trailer brakes are inadequate for the load. The vehicle may be damaged, and the repairs would not be covered by the vehicle warranty.

Only tow a trailer if all the steps in this section have been followed. Ask your retailer for advice and information about towing a trailer.

### Gross Combined Weight Rating (GCWR)

GCWR is the total allowable weight of the completely loaded vehicle and trailer including any fuel, passengers, cargo, equipment, and accessories. Do not exceed the GCWR for your vehicle. The GCWR for the vehicle is in the following Tow Rating Chart.

### Gross Vehicle Weight Rating (GVWR)

For information about the vehicle's maximum load capacity, see *Vehicle Load Limits* ⇨ *160*. When calculating the GVWR with a trailer attached, the trailer tongue weight must be included as part of the weight the vehicle is carrying.

### Maximum Trailer Weight

The maximum trailer weight rating is calculated assuming the towing vehicle has a driver, a front seat passenger, and all required trailer towing equipment. This value represents the heaviest trailer the vehicle can tow, but it may be necessary to reduce the trailer weight

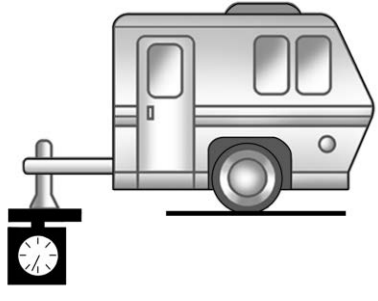
to stay within the GCW, GVWR, maximum trailer tongue load, or GAWR-RR for the vehicle.

Use the tow rating chart to determine how much the trailer can weigh, based on the vehicle model and options.

| Vehicle | Maximum Trailer Weight | GCWR* | Maximum Tongue Weight |
|---|---|---|---|
| 2.0L L4 Diesel Engine (LSQ) | 1 600 kg (3,527 lb) | 3 965 kg (8,740 lb) | 64 kg (141 lb) |
| *The Gross Combination Weight Rating (GCWR) is the total allowable weight of the completely loaded vehicle and trailer including any passengers, cargo, equipment, and conversions. The GCWR for the vehicle should not be exceeded. | | | |

### Maximum Trailer Tongue Weight Rating

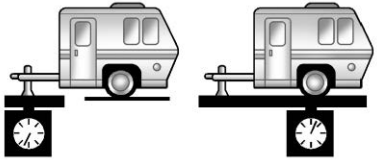
The Maximum Trailer Tongue Weight Rating is the allowable trailer tongue weight that the vehicle can support using a conventional trailer hitch. It may be necessary to reduce the overall trailer weight to stay within the maximum trailer tongue weight rating while still maintaining the correct trailer load balance.



The trailer tongue weight contributes to the Gross Vehicle Weight (GVW). GVW includes the kerb weight of your vehicle, any passengers, cargo, equipment and the trailer tongue weight. Vehicle options, passengers, cargo, and equipment reduce the maximum allowable tongue weight the vehicle can carry, which also reduces the maximum allowable trailer weight.

### Trailer Load Balance

The correct trailer load balance must be maintained to ensure trailer stability. Incorrect load balance is a leading cause of trailer sway.



1 2

The trailer tongue weight (1) should be 4% of the loaded trailer weight (2). Some specific trailer types, such as boat trailers, fall outside of this range. Always refer to the trailer owner's manual for the recommended trailer tongue weight for each trailer. Never exceed the maximum loads for your vehicle, hitch and trailer.

The trailer load balance percentage is calculated as: weight (1) divided by weight (2) times 100.

After loading the trailer, separately weigh the trailer and then the trailer tongue to see if the weights are appropriate for your vehicle. If the trailer weight is too high, it may be possible to transfer some of the cargo into your vehicle. If the trailer tongue weight is too high or too low, it may be possible to rearrange some of the cargo inside the trailer.

Do not exceed the maximum allowable tongue weight for your vehicle. Use the shortest hitch extension available to position the hitch ball closer to your vehicle. This will help reduce the effect of the trailer tongue weight on the trailer hitch and the rear axle.

If a cargo carrier is used in the trailer hitch receiver, choose a carrier that positions the load as close to the vehicle as possible. Make sure the total weight, including the carrier, is no more than half of the maximum allowable tongue weight for the vehicle.

Ask your retailer for trailer towing information or assistance.

## Towing Equipment

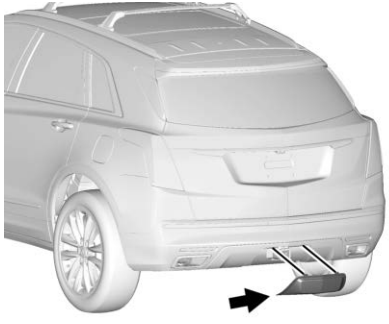
### Hitches

Always use the correct hitch equipment for your vehicle. Crosswinds, large trucks going by, and rough roads can affect the trailer and the hitch.

Proper hitch equipment for your vehicle helps maintain control of the vehicle-trailer combination. Many trailers can be towed using a weight-carrying hitch which has a coupler latched to the hitch ball, or a tow eye latched to a pintle hook. Other trailers may require a weight-distributing hitch that uses spring bars to distribute the trailer tongue weight between your vehicle and trailer axles. See “Maximum Trailer Tongue Weight” under *Trailer Towing* ⇨ *233* for weight limits with various hitch types.

Never attach rental hitches or other bumper-type hitches. Only use frame-mounted hitches that do not attach to the bumper.

**Hitch Cover**



To remove hitch cover, if equipped:

1. Remove the two fasteners on the lower tabs.
2. Pull the lower edge of the cover to about a 45 degree angle.
3. Pull the cover downward to disengage the upper attachments.

To reinstall the hitch cover:

1. Hold the cover at a 45 degree angle to the vehicle and push the upper tabs into the slots in the bumper.
2. Push the bottom of the cover forward until the lower tabs line up with the lower slots.
3. Snap the hitch cover into place by pushing the upper corners forward.
4. Reinstall the two fasteners on the lower tabs.

Consider using mechanical sway controls with any trailer. Ask a trailering professional about sway controls or refer to the trailer manufacturer's recommendations and instructions.

## Tyres

- Do not tow a trailer while using a compact spare tyre on the vehicle.
- Tyres must be properly inflated to support loads while towing a trailer. See *Tyres* ⇨ *271* for instructions on proper tyre inflation.

## Safety Chains

Always attach chains between the vehicle and the trailer, and attach the chains to the holes on the trailer hitch platform. Instructions about safety chains may be provided by the hitch manufacturer or by the trailer manufacturer.

Cross the safety chains under the tongue of the trailer to help prevent the tongue from contacting the road if it becomes separated from the hitch. Always leave just enough slack so the combination can turn. Never allow safety chains to drag on the ground.

## Trailer Brakes

Loaded trailers over 450 kg (1,000 lb) must be equipped with brake systems and with brakes for each axle. Trailer braking equipment conforming to Canadian Standards Association (CSA) requirement CAN3-D313, or its equivalent, is recommended.

Regional or local regulations may require trailers to have their own braking system if the loaded weight of the trailer exceeds certain minimums that can vary from region to region. Read and follow the instructions for the trailer brakes so they are installed, adjusted, and maintained properly. Never attempt to tap into your

vehicle's hydraulic brake system. If you do, both the vehicle anti-lock brakes and the trailer brakes may not function, which could result in a collision.

### Trailer Wiring Harness

#### Basic Trailer Wiring

The trailer wiring harness is located at the rear of the vehicle and is tied to the vehicle's frame. The harness connector can be plugged into a trailer connector available through your retailer.

### Trailer Lamps

Always check that all trailer lamps are working at the beginning of each trip, and periodically on longer trips.

### Turn Signals When Towing a Trailer

When properly connected, the trailer indicators will illuminate to indicate the vehicle is turning, changing lanes, or stopping. When towing a trailer, the arrows on the instrument cluster will illuminate even if the trailer is not properly connected or the bulbs are burned out.

## Trailer Sway Control (TSC)

Vehicles with StabiliTrak/Electronic Stability Control (ESC) have a Trailer Sway Control (TSC) feature. Trailer sway is unintended side-to-side motion of a trailer while towing. If the vehicle is towing a trailer and the TSC detects that sway is increasing, the vehicle brakes are selectively applied at each wheel, to help reduce excessive trailer sway. If equipped with the Integrated Trailer Brake Control (ITBC) system, and the trailer has an electric brake system, StabiliTrak/ESC may also apply the trailer brakes.

If TSC is enabled, the Traction Control System (TCS)/StabiliTrak/ESC warning light will flash on the instrument cluster. Reduce vehicle speed by gradually removing your foot from the accelerator. If trailer sway continues, StabiliTrak/ESC can reduce engine torque to help slow the vehicle. TSC will not function if StabiliTrak/ESC is turned off. See *Traction Control/ Electronic Stability Control* ⇨ *186*.

**⚠ Warning**

Trailer sway can result in a crash and in serious injury or death, even if the vehicle is equipped with TSC.

If the trailer begins to sway, reduce vehicle speed by gradually removing your foot from the accelerator. Then pull over to check the trailer and vehicle to help correct possible causes, including an improperly or overloaded trailer, unsecured load, improper trailer hitch configuration, or improperly inflated or incorrect vehicle or trailer tyres. See *Towing Equipment* ⇨ *237* for trailer ratings and hitch setup recommendations.

### Trailer Tyres

Special Trailer (ST) tyres differ from vehicle tyres. Trailer tyres are designed with stiff sidewalls to help prevent sway and to support heavy loads. These features can make it difficult to determine if the trailer tyre pressures are low only based on a visual inspection.

Always check all trailer tyre pressures before each trip when the tyres are cool. Low trailer tyre pressure is a leading cause of trailer tyre blowouts.

Trailer tyres deteriorate over time. The trailer tyre sidewall will show the week and year the tyre was manufactured. Many trailer tyre manufacturers recommend replacing tyres more than six years old.

Overloading is another leading cause of trailer tyre blowouts. Never load your trailer with more weight than the tyres are designed to support. The load rating is located on the trailer tyre sidewall.

Always know the maximum speed rating for the trailer tyres before driving. This may be significantly lower than the vehicle tyre speed rating. The speed rating may be on the trailer tyre sidewall. If the speed rating is not shown, the default trailer tyre speed rating is 105 km/h (65 mph).

## Conversions and Add-Ons

### Add-On Electrical Equipment

**⚠ Warning**

The Data Link Connector (DLC) is used for vehicle service and Emission Inspection/Maintenance testing. See *Malfunction Indicator Lamp (Check Engine Light)* ⇨ *111*. A device connected to the DLC — such as an aftermarket fleet or driver-behaviour tracking device — may interfere with vehicle systems. This could affect vehicle operation and cause a crash. Such devices may also access information stored in the vehicle's systems.

**Caution**

Some electrical equipment can damage the vehicle or cause components not to work and would not be covered by the vehicle warranty. Always check with your dealer before adding electrical equipment.

Add-on equipment can drain the vehicle's 12-volt battery, even if the vehicle is not operating.

The vehicle has an airbag system. Before attempting to add anything electrical to the vehicle, see *Servicing the Airbag-Equipped Vehicle* ⇨ *68* and *Adding Equipment to the Airbag-Equipped Vehicle* ⇨ *69*.

# Vehicle Care

# General Information

For service and parts needs, visit your dealer. You will receive genuine parts and trained and supported service people.

## Accessories and Modifications

Adding non-dealer accessories or making modifications to the vehicle can affect vehicle performance and safety, including such things as airbags, braking, stability, ride and handling, emissions systems, aerodynamics, durability, and electronic systems like anti-lock brakes, traction control, and stability control. These accessories or modifications could even cause malfunction or damage not covered by the vehicle warranty.

Damage to suspension components caused by modifying vehicle height outside of factory settings will not be covered by the vehicle warranty.

Damage to vehicle components resulting from modifications or the installation or use of non-GM certified parts, including control module or software modifications, is not covered under the terms of the vehicle warranty and may affect remaining warranty coverage for affected parts.

GM Accessories are designed to complement and function with other systems on the vehicle. See your dealer to accessorise the vehicle using genuine GM Accessories installed by a dealer technician.

Also, see *Adding Equipment to the Airbag-Equipped Vehicle* ⇨ *69*.

# Vehicle Checks

## Doing Your Own Service Work

**⚠ Warning**

It can be dangerous to work on your vehicle if you do not have the proper knowledge, service manual, tools, or parts. Always follow owner's manual procedures and consult the service manual for your vehicle before doing any service work.

If doing some of your own service work, use the proper service manual. It tells you much more about how to service the vehicle than this manual can.

This vehicle has an airbag system. Before attempting to do your own service work, see *Servicing the Airbag-Equipped Vehicle* ⇨ *68*.

If the vehicle is equipped with remote vehicle start, open the bonnet before performing any service work to prevent remote starting the vehicle accidentally. See *Remote Vehicle Start* ⇨ *14*.

Keep a record with all parts receipts and list the mileage and the date of any service work performed.

**Caution**

Even small amounts of contamination can cause damage to vehicle systems. Do not allow contaminants to contact the fluids, reservoir caps, or dipsticks.

## Bonnet

**⚠ Warning**

For vehicles with auto engine stop/start, turn the vehicle off before opening the bonnet. If the vehicle is on, the engine will start when the bonnet is opened. You or others could be injured.

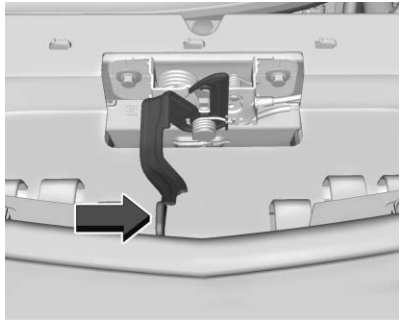
**⚠ Warning**

Components under the bonnet can get hot from running the engine. To help avoid the risk of burning unprotected skin, never touch these components until they have cooled, and always use a glove or towel to avoid direct skin contact.

Clear any snow from the bonnet before opening.

**To open the bonnet:**

1. Pull the bonnet release lever with the symbol. It is on the lower left side of the instrument panel.



2. Go to the front of the vehicle and locate the secondary release lever under the front centre of the bonnet. Push the secondary bonnet release lever to the right to release.
3. After you have partially lifted the bonnet, the gas strut system will automatically lift the bonnet and hold it in the fully open position.

**To close the bonnet:**

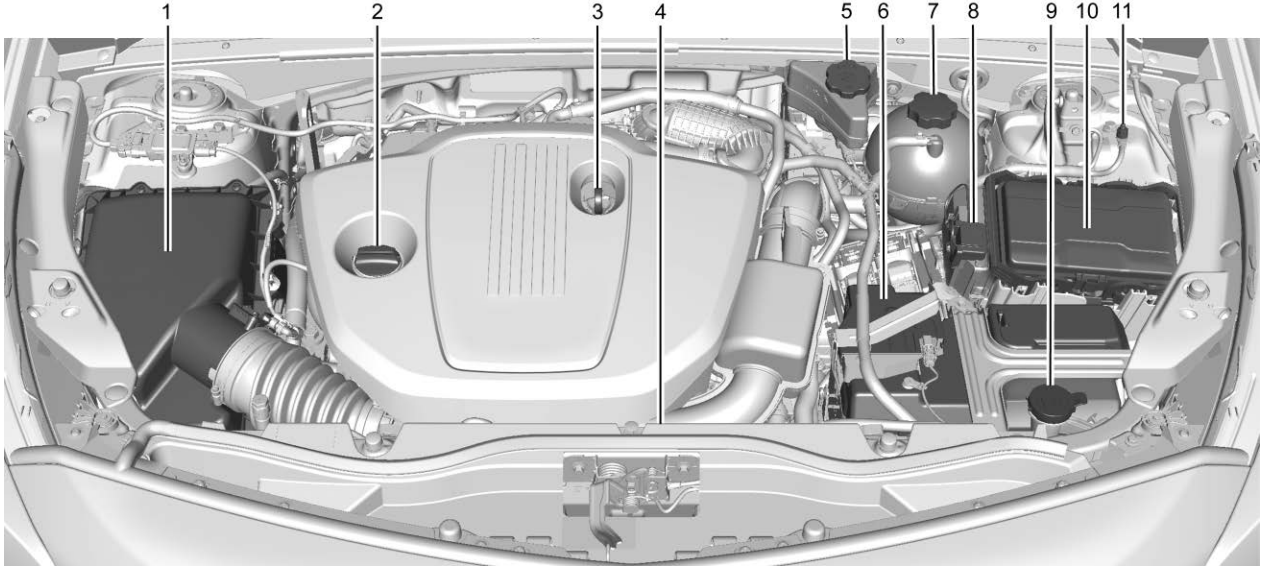
1. Before closing the bonnet, make sure all filler caps are fitted on properly, and all tools are removed.

2. Pull the bonnet down until the strut system is no longer holding up the bonnet.
3. Allow the bonnet to fall. Check to make sure the bonnet is latched completely. Repeat this process with additional force if necessary.

**⚠ Warning**

Do not drive the vehicle if the bonnet is not latched completely. The bonnet could open fully, block your vision, and cause a crash. You or others could be injured. Always close the bonnet completely before driving.

## Engine Compartment Overview



1. *Engine Air Cleaner/Filter ⇨ 250*.
2. Engine Oil Fill Cap. See *Engine Oil ⇨ 247*.
3. Engine Oil Dipstick. See *Engine Oil ⇨ 247*.
4. Engine Cooling Fan (Out of View). See *Cooling System ⇨ 251*.
5. Brake Fluid Reservoir. See *Brake Fluid ⇨ 258*.
6. *Battery ⇨ 259*.
7. Engine Coolant Surge Tank and Pressure Cap. See *Cooling System ⇨ 251*.
8. Positive (+) Battery Terminal (Under Cover). See *Jump Starting ⇨ 299*.
9. Windscreen Washer Fluid Reservoir. See *Washer Fluid ⇨ 256*.
10. *Engine Compartment Fuse Block ⇨ 266*.
11. Remote Negative (-) Battery Terminal. See *Jump Starting ⇨ 299*.

## Engine Oil

To ensure proper engine performance and long life, careful attention must be paid to engine oil. Following these simple, but important steps will help protect your investment:

- Use engine oil approved to the proper specification and of the proper viscosity grade. See “Selecting the Right Engine Oil” in this section.
- Check the engine oil level regularly and maintain the proper oil level. See “Checking Engine Oil” and “When to Add Engine Oil” in this section.
- Change the engine oil at the appropriate time. See *Engine Oil Life System ⇨ 249*.
- Always dispose of engine oil properly. See “What to Do with Used Oil” in this section.

### Checking Engine Oil

Check the engine oil level regularly, every 650 km (400 mi), especially prior to a long trip. The engine oil dipstick handle is a loop. See *Engine Compartment Overview ⇨ 246* for the location.

**⚠ Warning**

The engine oil dipstick handle may be hot; it could burn you. Use a towel or glove to touch the dipstick handle.

If a low oil Driver Information Centre (DIC) message displays, check the oil level.

Follow these guidelines:

- To get an accurate reading, park the vehicle on level ground. Check the engine oil level after the engine has been off for at least two hours. Checking the engine oil level on steep gradients or too soon after engine shutoff can result in incorrect readings. Accuracy improves when checking a cold engine prior to starting. Remove the dipstick and check the level.

- If unable to wait two hours, the engine must be off for at least 15 minutes if the engine is warm, or at least 30 minutes if the engine is not warm. Pull out the dipstick, wipe it with a clean paper towel or cloth, then push it back in all the way. Remove it again, keeping the tip down, and check the level.

### When to Add Engine Oil

If the oil is below the cross-hatched area at the tip of the dipstick and the engine has been off for at least 15 minutes, add 1 L (1 qt) of the recommended oil and then recheck the level. See “Selecting the Right Engine Oil” later in this section for an explanation of what kind of oil to use. For engine oil crankcase capacity, see *Capacities and Specifications* ⇨ *326*.

**Caution**

Do not add too much oil. Oil levels above or below the acceptable operating range shown on the dipstick are harmful to the engine. If the oil level is above the operating range (i.e. the engine has so much oil that the oil level rises above the cross-hatched area that shows the correct operating range), the engine could be damaged. Drain the excess oil or limit driving the vehicle, and seek help from a service professional to remove the excess oil.

See *Engine Compartment Overview* ⇨ *246* for the location of the engine oil fill cap.

Add enough oil to put the level somewhere in the proper operating range. Push the dipstick all the way back in when done.

### Selecting the Right Engine Oil

Selecting the right engine oil depends on both the proper oil specification and viscosity grade:

#### Specification

Use engine oils that meet the dexosD specification. Engine oils that have been approved by GM as meeting the dexosD specification are marked with the dexosD approved logo. See www.gmdexos.com.

**Caution**

Failure to use the recommended engine oil or equivalent can result in engine damage not covered by the vehicle warranty.

### Viscosity Grade

Use SAE 0W-20 viscosity grade engine oil.

When selecting an oil of the appropriate viscosity grade, it is recommended to select an oil of the correct specification. See "Specification" earlier in this section.

### Engine Oil Additives/Engine Oil Flushes

Do not add anything to the oil. The recommended oils meeting the dexos specification are all that is needed for good performance and engine protection.

Engine oil system flushes are not recommended and could cause engine damage not covered by the vehicle warranty.

### What to Do with Used Oil

Used engine oil contains certain elements that can be unhealthy for your skin and could even cause cancer. Do not let used oil stay on your skin for very long. Clean your skin and nails with soap and water, or a good hand cleaner. Wash or properly dispose of clothing or rags containing used engine oil. See the manufacturer's warnings about the use and disposal of oil products.

Used oil can be a threat to the environment. If you change your own oil, be sure to drain all the oil from the filter before disposal. Never dispose of oil by putting it in the trash or pouring it on the ground, into sewers, or into streams or bodies of water. Recycle it by taking it to a place that collects used oil.

## Engine Oil Life System

### When to Change Engine Oil

This vehicle has a computer system that indicates when to change the engine oil and filter. This is based on a combination of factors which include engine revolutions, engine temperature, and miles driven. Based on driving conditions, the mileage at which an oil change is indicated can vary considerably. For the oil life system to work properly, the system must be reset every time the oil is changed.

When the system has calculated that oil life has been diminished, it indicates that an oil change is necessary. A CHANGE ENGINE OIL SOON message comes on. Change the oil as soon as possible within the next 1 000 km (600 mi). It is possible that, if driving under the best conditions, the oil life system may indicate that an oil change is not necessary for up to a year. The engine oil and filter must be changed at least once a year and at this time the system must be reset. Your dealer has trained service people who will perform this work and reset the system. It is also important to check the oil regularly over the course of an oil drain interval and keep it at the proper level.

### Resetting the Oil Life System

After you change the oil, the oil life system will need to be reset. See your dealer for service.

If the system is ever reset accidentally, the oil must be changed at 5 000 km (3,000 mi) since the last oil change. Remember to reset the oil life system whenever the oil is changed.

See “Oil Life” under *Driver Information Centre (DIC)* ⇨ *120* for information on the engine oil life system.

## Automatic Transmission Fluid

A transmission fluid leak is the only reason for fluid loss. If a leak occurs, take the vehicle to your dealer and have it repaired as soon as possible.

**Caution**

Using the incorrect automatic transmission fluid may damage the vehicle, and the damage may not be covered by the vehicle warranty. Always use the correct automatic gearbox fluid. See *Recommended Fluids and Lubricants* ⇨ *322*.

See your retailer to have the fluid and filter changed at the intervals.

## Engine Air Filter Life System

If equipped, this feature provides the engine air filter's remaining life and best timing for a change. The timing to change an engine air filter depends on driving and environmental conditions.

### When to Change Engine Air Filter

When the Driver Information Centre (DIC) displays a message to replace the engine air filter at the next oil change, follow this timing.

When the DIC displays a message to replace the engine air filter soon, replace the engine air filter at the earliest convenience. The system must be reset after the engine air filter has been changed.

If the DIC displays a message to check the engine air filter system, see your retailer.

### How to Reset Engine Air Filter Life System

To reset:

1. Place the vehicle in P (Park).
2. Display the Air Filter Life on the DIC. See *Driver Information Centre (DIC)* ⇨ *120*.
3. Press > on the steering wheel to move to the Reset/Disable display area. Select Reset then press ✓.
4. Press ✓ to confirm to reset.

## Engine Air Cleaner/Filter

The engine air cleaner/filter is in the engine compartment on the passenger side of the vehicle. See *Engine Compartment Overview* ⇨ *246*.

### When to Inspect the Engine Air Cleaner/Filter

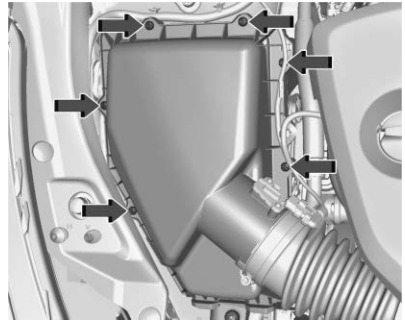
- For intervals on inspecting and changing the engine air cleaner/filter, see your retailer.
- If equipped with Engine Air Filter Life System, see *Engine Air Filter Life System* ⇨ *250*.

- If driving in dusty areas, follow the engine air filter inspection and changing intervals, see your retailer.

### How to Inspect/Replace the Engine Air Cleaner/Filter

Do not start the engine or have the engine running with the engine air cleaner/filter housing open. Before removing the engine air cleaner/filter, make sure that the engine air cleaner/filter housing and nearby components are free of dirt and debris. Remove the engine air cleaner/filter. Lightly tap and shake the engine air cleaner/filter (away from the vehicle), to release dust and dirt. Inspect the engine air cleaner/filter for damage, and replace if damaged. Do not clean the engine air cleaner/filter or components with water or compressed air.

To inspect or replace the engine air cleaner/filter:



1. Remove the six screws on top of the engine air cleaner/filter housing.
2. Lift the air cleaner/filter cover housing away from the engine.
3. Pull out the filter.
4. Inspect or replace the engine air cleaner/filter.
5. Reverse Steps 1–3 to reinstall the filter cover housing.

**⚠ Warning**

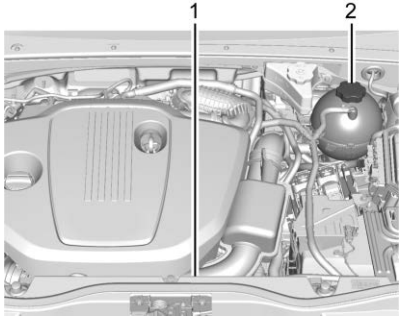
Operating the engine with the air cleaner/filter off can cause you or others to be burned. Use caution when working on the engine. Do not start the engine or drive the vehicle with the air cleaner/filter off, as flames may be present if the engine backfires.

**Caution**

If the air cleaner/filter is off, dirt can easily get into the engine, which could damage it. Always have the air cleaner/filter in place when driving.

## Cooling System

The cooling system allows the engine to maintain the correct working temperature.




1. Electric Engine Cooling Fan (Out of View)
2. Coolant Surge Tank and Pressure Cap

**⚠ Warning**

An underbonnet electric fan can start up even when the engine is not running and can cause injury. Keep hands, clothing, and tools away from any underbonnet electric fan.

**⚠ Warning**

Do not touch heater or radiator hoses, or other engine parts. They can be very hot and can burn you. Do not run the engine if there is a leak; all coolant could leak out. That could cause an engine fire and can burn you. Fix any leak before driving the vehicle.

## Engine Coolant

The engine cooling system in the vehicle is filled with DEX-COOL engine coolant mixture. This coolant needs to be checked and changed at appropriate levels. See *Recommended Fluids and Lubricants* ⇨ *322*.

The following explains the cooling system and how to check and add coolant when it is low. If there is a problem with engine overheating, see *Engine Overheating* ⇨ *255*.

### What to Use

**⚠ Warning**

Do not touch heater or radiator hoses, or other engine parts. They can be very hot and can burn you. Do not run the engine if there is a leak; all coolant could leak out. That could cause an engine fire and can burn you. Fix any leak before driving the vehicle.

Use a 50/50 mixture of clean, drinkable water and DEX-COOL coolant. This mixture:

- Gives freezing protection down to -37 °C (-34 °F), outside temperature.
- Gives boiling protection up to 129 °C (265 °F), engine temperature.
- Protects against rust and corrosion.
- Will not damage aluminium parts.
- Helps keep the proper engine temperature.

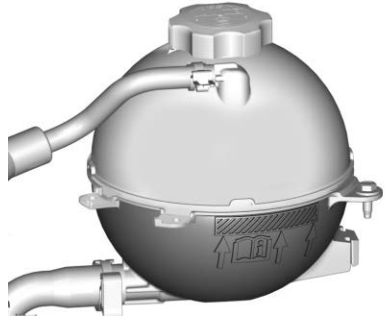
**Caution**

Do not use anything other than a mix of DEX-COOL coolant that meets GM Standard GMW3420 and clean, drinkable water. Anything else can cause damage to the engine cooling system and the vehicle, which would not be covered by the vehicle warranty.

Never dispose of engine coolant by putting it in the rubbish, pouring it on the ground, or pouring into sewers, streams, or bodies of water. Have the coolant changed by an authorised service centre, familiar with legal requirements regarding used coolant disposal. This will help protect the environment and your health.

## Checking Coolant

The vehicle must be on a level surface when checking the coolant level.



Check to see if coolant is visible in the coolant surge tank. If the coolant inside the coolant surge tank is boiling, do not do anything else until it cools down. If coolant is visible but the coolant level mark is not at or above the indicated mark, add a 50/50 mixture of clean, drinkable water and DEX-COOL coolant. Be sure the cooling system is cool before this is done. See *Engine Overheating* ⇨ *255*.

The coolant surge tank is in the engine compartment on the driver side of the vehicle. See *Engine Compartment Overview* ⇨ *246*.

### How to Add Coolant to the Surge Tank

**⚠ Warning**

Spilling coolant on hot engine parts can burn you. Coolant contains ethylene glycol and it will burn if the engine parts are hot enough.

**⚠ Warning**

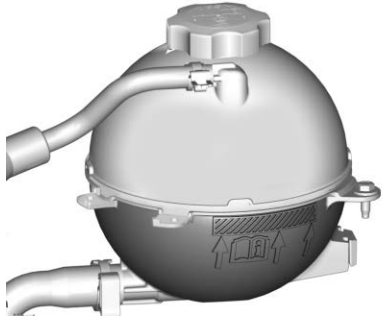
Steam and scalding liquids from a hot cooling system are under pressure. Turning the pressure cap, even a little, can cause them to jet out at high speed and you could be burned. Never turn the cap when the cooling system, including the pressure cap itself, is hot. Wait for the cooling system and pressure cap to cool.

**Caution**

Failure to follow the specific coolant filling procedure could cause the engine to overheat and could cause system damage.
If coolant is not visible in the surge tank, contact your retailer.

The coolant surge tank pressure cap can be removed when the cooling system, including the surge tank pressure cap and upper radiator hose, is no longer hot.


1. Turn the pressure cap slowly anticlockwise. If a hiss is heard, wait for that to stop. A hiss means there is still some pressure left.
2. Keep turning the pressure cap slowly and remove it.



3. If topping up the level in the coolant surge tank, add the proper mixture until the level reaches the mark on the front of the tank and replace the cap. Operate the vehicle. Repeat steps 1–3, as necessary.

   If filling the system (such as after servicing), follow the Automatic Coolant Service Filling Instructions.

**Caution**

If the pressure cap is not tightly installed, coolant loss and engine damage may occur. Be sure the cap is properly and tightly secured.

## Automatic Coolant Service Filling Instructions

It is recommended to take Diesel engine vehicles to the retailer for coolant system servicing. However, if that is not possible, the vehicle is equipped with an Automatic Coolant Service Fill feature.

To fill the system, use the following steps:

1. With a cold system, add coolant to the indicated mark on the surge tank.
2. Turn the ignition on. See *Ignition Positions* ➪ *164*.
3. Turn off the air conditioning.
4. Apply the parking brake.

5. At the same time, depress the accelerator and the brake pedals for two seconds, then release.
6. Start the vehicle within five to 10 seconds.
7. Idle for three minutes while adding fluid as the level drops below the indicated mark on the surge tank.
8. Reinstall the cap and run the engine at 2000 RPM for 10 minutes while watching the coolant temperature gauge to be sure the temperature has risen but is not overheating.

   If the temperature has not risen or the temperature is indicating overheating, stop the process by returning to idle and turning off the engine. Then return to Step 1. If the coolant filling process cannot be completed without overheating, see your retailer for assistance.

   If the temperature has risen and is not overheating, proceed to Step 9.
9. Idle the engine for two minutes before turning off and allowing the engine to cool down.
10. Allow the system to completely cool down and make a note of the level of the coolant in the surge tank. If low, add fluid to the indicated mark and repeat Steps 3–9.

## Engine Overheating

The vehicle has several indicators to warn of the engine overheating.

There is an engine coolant temperature gauge and an engine coolant temperature warning light on the instrument cluster. See *Engine Coolant Temperature Gauge* ⇨ *108* and *Engine Coolant Temperature Warning Light* ⇨ *117*. The vehicle may also display a message on the Driver Information Centre (DIC).

If the decision is made not to lift the bonnet when this warning appears, get service help right away.

If the decision is made to lift the bonnet, make sure the vehicle is parked on a level surface. Then check to see if the engine cooling fan is running. If the engine is overheating, the fan should be running. If it is not, do not continue to run the engine. Have the vehicle serviced.

**Caution**

Do not run the engine if there is a leak in the engine cooling system. This can cause a loss of all coolant and can damage the system and vehicle. Have any leaks fixed right away.

### If Steam Is Coming from the Engine Compartment

**⚠ Warning**

Steam and scalding liquids from a hot cooling system are under pressure. Turning the pressure cap, even a little, can cause them to jet out at high speed and you could be burned. Never turn the cap when the cooling system, including the

(Continued)

**Warning (Continued)**

pressure cap itself, is hot. Wait for the cooling system and pressure cap to cool.

### If No Steam Is Coming from the Engine Compartment

If an engine overheat warning is displayed but no steam can be seen or heard, the problem may not be too serious. Sometimes the engine can get a little too hot when the vehicle:

- Climbs a long hill on a hot day.
- Stops after high-speed driving.
- Idles for long periods in traffic.

If the overheat warning is displayed with no sign of steam:

1. Turn the air conditioning off.
2. Turn the heater on to the highest temperature and to the highest fan speed. Open the windows as necessary.
3. When it is safe to do so, pull off the road, shift to P (Park) or N (Neutral), and let the engine idle.

If the engine coolant temperature gauge is no longer in the overheated area or the engine coolant temperature warning light no longer displays, the vehicle can be driven. Continue to drive the vehicle slowly for about 10 minutes. Keep a safe distance from the vehicle in front. If the warning does not come back on, continue to drive normally and have the cooling system checked for proper fill and function.

If the warning continues, pull over, stop, and park the vehicle right away.

If there is no sign of steam, idle the engine for three minutes while parked. If the warning is still displayed, turn off the engine until it cools down.

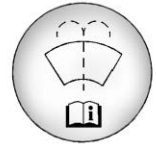
## Washer Fluid

### What to Use

When windscreen washer fluid is needed, be sure to read the manufacturer's instructions before use. If operating the vehicle in an area where the temperature may fall below freezing, use a fluid that has sufficient protection against freezing.

### Adding Washer Fluid

The appropriate message will appear in the Driver Information Centre (DIC) when the fluid level is low.



Open the cap with the washer symbol on it. Add washer fluid until the tank is full. See *Engine Compartment Overview* ⇨ *246* for reservoir location.

**Caution**

- Do not use washer fluid that contains any type of water repellent coating. This can cause the wiper blades to chatter or skip.

(Continued)

**Caution (Continued)**

- Do not use engine coolant (antifreeze) in the windscreen washer. It can damage the windscreen washer system and paint.
- Do not mix water with ready-to-use washer fluid. Water can cause the solution to freeze and damage the washer fluid tank and other parts of the washer system.
- When using concentrated washer fluid, follow the manufacturer instructions for adding water.
- Fill the washer fluid tank only three-quarters full when it is very cold. This allows for fluid expansion if freezing occurs, which could damage the tank if it is completely full.

## Brakes

Disc brake pads have built-in wear indicators that make a high-pitched warning sound when the brake pads are worn and new pads are needed. The sound can come and go or can be heard all the time when the vehicle is moving, except when applying the brake pedal firmly.

**⚠ Warning**

The brake wear warning sound means that soon the brakes will not work well. That could lead to a crash. When the brake wear warning sound is heard, have the vehicle serviced.

**Caution**

Continuing to drive with worn-out brake pads could result in costly brake repair.

Some driving conditions or climates can cause a brake squeal when the brakes are first applied or lightly applied. This does not mean something is wrong with the brakes.

Properly torqued wheel nuts are necessary to help prevent brake pulsation. When tyres are rotated, inspect brake pads for wear and evenly tighten wheel nuts in the proper sequence to torque specifications. See *Capacities and Specifications* ⇨ *326*.

Brake pads should be replaced as complete sets.

### Brake Pedal Travel

See your dealer if the brake pedal does not return to normal height, or if there is a rapid increase in pedal travel. This could be a sign that brake service may be required.

### Replacing Brake System Parts

Always replace brake system parts with new, approved replacement parts. If this is not done, the brakes may not work properly. The braking performance expected can change in

many other ways if the wrong replacement brake parts are installed or if parts are improperly installed.

## Brake Fluid

The brake master cylinder reservoir is filled with GM approved DOT 3 brake fluid as indicated on the reservoir cap. See *Engine Compartment Overview* ⇨ *246* for the location of the reservoir.

### Checking Brake Fluid

With the vehicle in P (Park) on a level surface, the brake fluid level should be between the minimum and maximum marks on the brake fluid reservoir.

There are only two reasons why the brake fluid level in the reservoir may go down:

- Normal brake lining wear. When new linings are installed, the fluid level goes back up.
- A fluid leak in the brake hydraulic system. Have the brake hydraulic system fixed. With a leak, the brakes will not work well.

Always clean the brake fluid reservoir cap and the area around the cap before removing it.

Do not top off the brake fluid. Adding fluid does not correct a leak. If fluid is added when the linings are worn, there will be too much fluid when new brake linings are installed. Add or remove fluid, as necessary, only when work is done on the brake hydraulic system.

**⚠ Warning**

If too much brake fluid is added, it can spill on the engine and burn, if the engine is hot enough. You or others could be burned, and the vehicle could be damaged. Add brake fluid only when work is done on the brake hydraulic system.

When the brake fluid falls to a low level, the brake warning light comes on. See *Brake System Warning Light* ⇨ *112*.

Brake fluid absorbs water over time which degrades the effectiveness of the brake fluid. Replace brake fluid at the specified intervals to prevent increased stopping distance. See *Maintenance Schedule* ⇨ *315*.

### What to Add

Use only GM approved DOT 3 brake fluid from a clean, sealed container. See *Recommended Fluids and Lubricants* ⇨ *322*.

**⚠ Warning**

The wrong or contaminated brake fluid could result in damage to the brake system. This could result in the loss of braking leading to a possible injury. Always use the proper GM approved brake fluid.

**Caution**

If brake fluid is spilled on the vehicle's painted surfaces, the paint finish can be damaged. Immediately wash off any painted surface.

## Battery

The original equipment battery is maintenance free. Do not remove the cap and do not add fluid.

Refer to the replacement number shown on the original battery label when a new battery is needed. See *Engine Compartment Overview* ⇨ *246* for battery location.

### Stop/Start System

The vehicle has a Stop/Start system to shut off the engine to help conserve fuel. See *Stop/Start System* ⇨ *167*.

The vehicle has an Absorbed Glass Mat (AGM) 12-volt battery. Installation of a standard 12-volt battery will result in reduced 12-volt battery life.

When using a 12-volt battery charger on the 12-volt AGM battery, some chargers have an AGM battery setting on the charger. If available, use the AGM setting on the charger, to limit charge voltage to 14.8 volts. Follow the charger manufacturer's instructions.

**⚠ Warning**

Do not use a match or flame near a vehicle's battery. If you need more light, use a torch.

(Continued)

**Warning (Continued)**

Do not smoke near a vehicle's battery.

When working around a vehicle's battery, shield your eyes with protective glasses.

Keep children away from vehicle batteries.

**⚠ Warning**

Batteries have acid that can burn you and gas that can explode. You can be hurt badly if you are not careful.

Follow instructions carefully when working around a battery.

Battery posts, terminals and related accessories contain lead and lead compounds which can cause cancer and reproductive harm. Wash hands after handling.

### Vehicle Storage

If the vehicle battery must be disconnected, unlock the vehicle using the RKE transmitter to disarm the power sounder and disconnect the battery within 15 seconds.

Infrequent Usage: Remove the black, negative (-) cable from the battery to keep the battery from running down.

Extended Storage: Remove the black, negative (-) cable from the battery or use a battery trickle charger.

## All-Wheel Drive

### Transfer Case

Under normal driving conditions, transfer case fluid does not require maintenance unless there is a fluid leak or unusual noise. If required, have the transfer case serviced by your dealer.

## Starter Switch Check

**⚠ Warning**

When you are doing this inspection, the vehicle could move suddenly. If the vehicle moves, you or others could be injured.

1. Before starting this check, be sure there is enough room around the vehicle.
2. Apply both the parking brake and the regular brake.

   Do not use the accelerator pedal, and be ready to turn off the engine immediately if it starts.
3. Try to start the engine in each gear. The vehicle should start only in P (Park) or N (Neutral). If the vehicle starts in any other position, contact your dealer for service.

## Park Brake and P (Park) Mechanism Check

**⚠ Warning**

When you are doing this check, the vehicle could begin to move. You or others could be injured and property could be damaged. Make sure there is room in front of the vehicle in case it begins to roll. Be ready to apply the regular brake at once should the vehicle begin to move.

Park on a fairly steep hill, with the vehicle facing downhill. Keeping your foot on the regular brake, apply the parking brake.

- To check the parking brake's holding ability: With the engine running and the transmission in N (Neutral), slowly remove foot pressure from the regular brake pedal. Do this until the vehicle is held by the parking brake only.

- To check the P (Park) mechanism's holding ability: With the engine running, shift to P (Park). Then release the parking brake followed by the regular brake.

Contact your dealer if service is required.

## Wiper Blade Replacement

Windscreen wiper blades should be inspected for wear or cracking.

It is a good idea to clean or replace the wiper blade assembly on a regular basis or when worn. For proper windscreen wiper blade length and type, see *Maintenance Replacement Parts* ⇨ *323*.

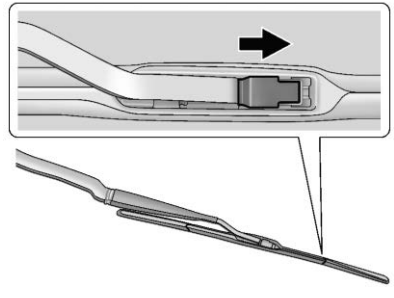
**Caution**

Allowing the wiper arm to touch the windscreen when no wiper blade is installed could damage the windscreen. Any damage that occurs would not be covered by the vehicle warranty. Do not allow the wiper arm to touch the windscreen.

### Front Wiper Blade Replacement

To replace the wiper blade assembly:

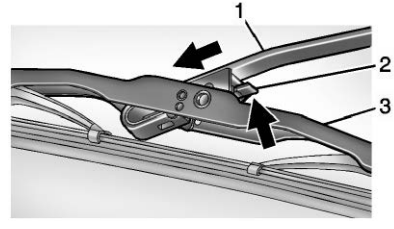
1. Pull the windscreen wiper assembly away from the windscreen.



2. Lift up on the latch in the middle of the wiper blade where the wiper arm attaches.
3. With the catch open, pull the wiper blade down towards the windscreen far enough to release it from the J-hooked end of the wiper arm.
4. Remove the wiper blade.
5. Reverse Steps 1–3 for wiper blade replacement.

### Rear Wiper Blade Replacement

To remove the wiper blade:




1. Set the vehicle in ACC/ ACCESSORY and turn on the rear windscreen wiper. The wiper will stop pointing down. See *Rear Window Wiper/Washer* ⇨ *99*.
2. Push ENGINE START/STOP to turn the vehicle off.
3. Lift the wiper arm away from the window.
4. Push the release lever (2) to disengage the hook and push the wiper arm (1) out of the blade assembly (3).

5. Push the new blade assembly securely on the wiper arm until the release lever clicks into place.
6. Start the engine and the rear wiper will return to its normal position.

## Windscreen Replacement

### HUD System

The windscreen is part of the HUD system. If the windscreen needs to be replaced, make sure you get one that is designed for HUD or the HUD image may look out of focus.

### Driver Assistance Systems

If the windshield needs to be replaced and the vehicle is equipped with a front camera sensor for the Driver Assistance Systems, a GM replacement windshield is recommended. The replacement windshield must be installed according to GM specifications for proper alignment. If it is not, these systems may not work properly, they may display messages, or they may not work at all. See your dealer for proper windshield replacement.

### Acoustic Windscreen

The vehicle is equipped with an acoustic windscreen. If the windscreen needs to be replaced be sure to get an acoustic windscreen so you will continue to have the benefits an acoustic windscreen can provide.

## Gas Strut(s)

This vehicle is equipped with gas strut(s) to provide assistance in lifting and holding open the bonnet/boot/tailgate system in full open position.

**⚠ Warning**

If the gas struts that hold open the bonnet, boot, and/or tailgate fail, you or others could be seriously injured. Take the vehicle to your retailer for service immediately. Visually inspect the gas struts for signs of wear, cracks, or other

(Continued)

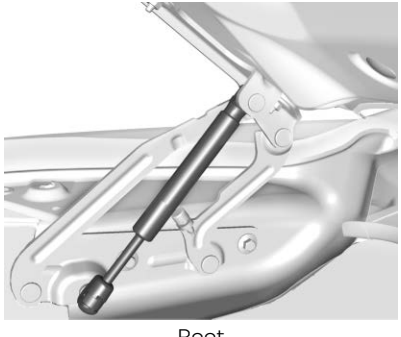
**Warning (Continued)**

damage periodically. Check to make sure the bonnet/boot/tailgate is held open with enough force. If struts are failing to hold the bonnet/boot/tailgate, do not operate. Have the vehicle serviced.

**Caution**

Do not apply tape or hang any objects from gas struts. Also do not push down or pull on gas struts. This may cause damage to the vehicle.

Bonnet



Boot

Tailgate

# Headlamp Aiming

## Front Headlight Aiming

Headlamp alignment has been preset and should need no further adjustment.

If the vehicle is damaged in a crash, the headlamp alignment may be affected. If adjustment to the headlamps is necessary, see your dealer.

# Bulb Replacement

For the proper type of replacement bulbs, or any bulb changing procedure not listed in this section, contact your retailer.

**Caution**

Do not replace incandescent bulbs with aftermarket LED replacement bulbs. This can cause damage to the vehicle's electrical system.

## LED Lighting

This vehicle has several LED lamps. For replacement of any LED lighting assembly, contact your dealer.

## Front Indicator Lamps

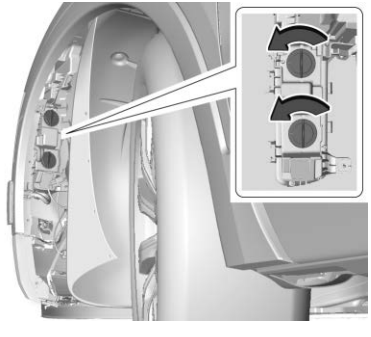
### Uplevel

See your retailer for indicator replacement.

### Base level

To replace one of these lamps:

1. Turn the steering wheel in the opposite direction as the bulb in need of replacement.
2. Remove the fasteners securing the front wheel arch liner.
3. Pull back the wheel arch liner to expose the rear of the indicator lamp.



4. Remove the indicator bulb socket from the lamp housing by rotating it anticlockwise.
5. Replace the bulb and reverse Steps 1–4 to reinstall.

## Back-Up Lamps

To replace one of these bulbs:

1. Remove the fasteners to remove the trailer hitch cover.
2. Access the lamp through the opening in the underbody.
3. Disconnect the electrical connector from the bulb assembly.

4. Turn the bulb socket anticlockwise and pull the bulb straight out of the socket.
5. Replace the bulb and reverse Steps 1–4 to reinstall.

# Electrical System

## Electrical System Overload

The vehicle has fuses and circuit breakers to protect against an electrical system overload.

When the current electrical load is too heavy, the circuit breaker opens and closes, protecting the circuit until the current load returns to normal or the problem is fixed. This greatly reduces the chance of circuit overload and fire caused by electrical problems.

Fuses and circuit breakers protect power devices in the vehicle.

Replace a bad fuse with a new one of the identical size and rating.

If there is a problem on the road and a fuse needs to be replaced, the same amperage fuse can be borrowed. Choose some feature of the vehicle that is not needed to use and replace it as soon as possible.

### Headlamp Wiring

An electrical overload may cause the lamps to go on and off, or in some cases to remain off. Have the headlamp wiring checked right away if the lamps go on and off or remain off.

### Windscreen Wipers

If the wiper motor overheats due to heavy snow or ice, the windscreen wipers will stop until the motor cools and will then restart.

Although the circuit is protected from electrical overload, overload due to heavy snow or ice may cause wiper linkage damage. Always clear ice and heavy snow from the windscreen before using the windscreen wipers.

If the overload is caused by an electrical problem and not snow or ice, be sure to get it fixed.

## Fuses and Circuit Breakers

The wiring circuits in the vehicle are protected from short circuits by a combination of fuses and circuit

breakers. This greatly reduces the chance of damage caused by electrical problems.

**⚠ Danger**

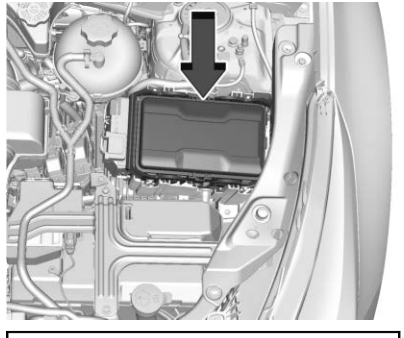
Fuses and circuit breakers are marked with their ampere rating. Do not exceed the specified amperage rating when replacing fuses and circuit breakers. Use of an oversized fuse or circuit breaker can result in a vehicle fire. You and others could be seriously injured or killed.

To check a fuse, look at the silver-coloured band inside the fuse. If the band is broken or melted, replace the fuse. Be sure to replace a bad fuse with a new one of the identical size and rating.

Fuses of the same amperage can be temporarily borrowed from another fuse location, if a fuse goes out. Replace the fuse as soon as possible.

## Engine Compartment Fuse Block

The underbonnet fuse block is in the engine compartment, on the driver side of the vehicle.



**Caution**

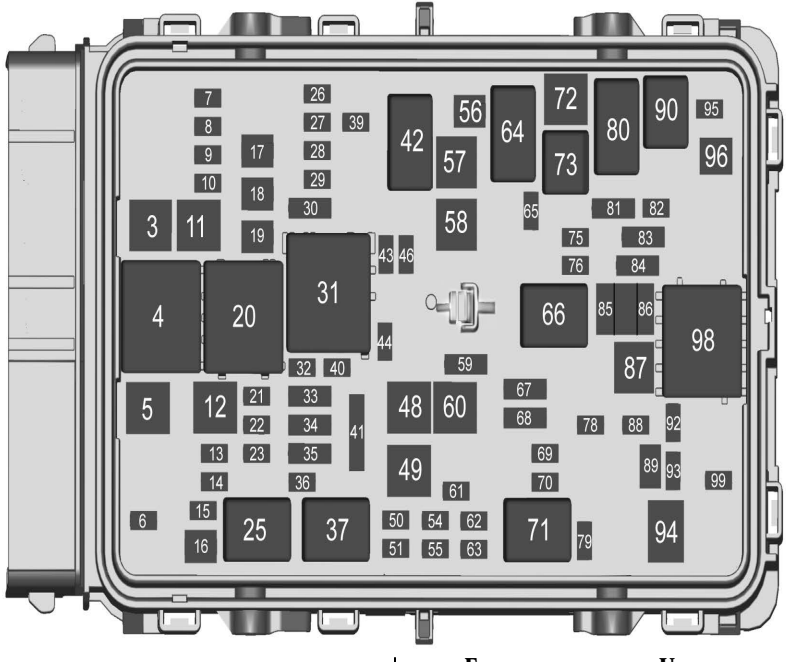
Do not pull the engine compartment fuse block lever, since it is intended only for service purposes. If pulled, vehicle malfunction may occur.

**Caution**

Spilling liquid on any electrical component on the vehicle may damage it. Always keep the covers on any electrical component.

To remove the fuse block cover, press the clips on the cover and lift it straight up.

The vehicle may not be equipped with all of the fuses, relays, and features shown.




| Fuses | Usage |
|---|---|
| 3 | Anti-lock brake system pump |

| Fuses | Usage |
|---|---|
| 5 | Trailer brake |
| 6 | Rear closure |

| Fuses | Usage |
|---|---|
| 7 | Trailer stop/Turn LH |
| 8 | Memory seat module |
| 9 | Pedestrian friendly alert function |
| 10 | Semi-active damping system |
| 11 | DC DC Battery 1/2 |
| 12 | Rear demister |
| 13 | Heated mirror |
| 14 | - |
| 15 | Passive entry passive start |
| 16 | Front wiper |
| 17 | Passenger power seat |
| 18 | Power tailgate module |
| 19 | Driver power seat |
| 21 | Sunroof |
| 22 | Rear wiper |
| 23 | Trailer interface module 2 |

| Fuses | Usage |
|---|---|
| 26 | Transmission control module/Ignition |
| 27 | Instrument panel body/Ignition |
| 28 | Rear wiper |
| 29 | Trailer ignition |
| 30 | Malfunction indicator lamp |
| 32 | Rear drive control module 1 |
| 33 | Front heated seat |
| 34 | Hands-free/Window switch |
| 35 | Diesel exhaust fuel heater |
| 36 | Fuel module |
| 39 | Massage |
| 40 | Steering column lock |
| 41 | - |
| 43 | Heated steering wheel |
| 44 | Seat ventilation |

| Fuses | Usage |
|---|---|
| 46 | Engine control module/Ignition |
| 48 | Rear drive control module 2 |
| 49 | Heating ventilation/ Air conditioning blower motor |
| 50 | - |
| 51 | - |
| 54 | - |
| 55 | - |
| 56 | Starter motor |
| 57 | - |
| 58 | - |
| 59 | Main beam headlights left/right |
| 60 | Trailer interface module 1 |
| 61 | - |
| 62 | - |
| 63 | - |

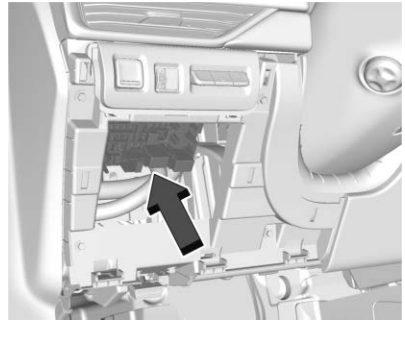
| Fuses | Usage |
|---|---|
| 65 | Air conditioning control |
| 67 | - |
| 68 | - |
| 69 | - |
| 70 | Trailer parking light |
| 72 | Starter pinion |
| 75 | Engine control module |
| 76 | Powertrain off engine |
| 78 | Horn |
| 79 | Washer pump |
| 81 | Transmission control module/Engine control module/ Cooling pump |
| 82 | Nitrogen oxide sensor |
| 83 | Ignition coil |
| 84 | Powertrain on engine |
| 85 | Shunt |
| 86 | Shunt |

| Fuses | Usage |
|---|---|
| 87 | Diesel fuel heater 1 |
| 88 | Aeroshutter |
| 89 | Selective catalytic reduction module |
| 92 | Trailer stop/Turn right |
| 93 | Automatic headlight levelling/Canister vent solenoid |
| 95 | Smart sensors |
| 96 | Diesel fuel heater 2 |
| 99 | - |

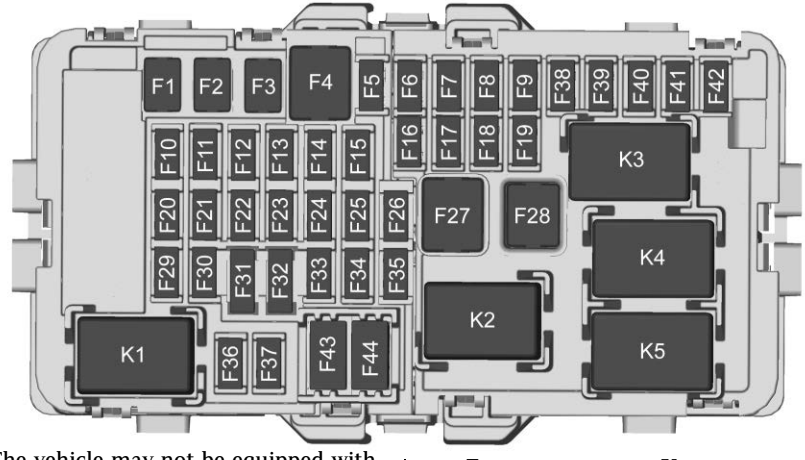
| Relays | Usage |
|---|---|
| 4 | - |
| 20 | Rear demister |
| 25 | Front wiper control |
| 31 | Run/Crank |
| 37 | Front wiper speed |
| 42 | - |
| 64 | Starter motor |
| 66 | Powertrain |
| 71 | Trailer parking light |
| 73 | Air conditioning control |
| 80 | Starter pinion |
| 90 | Powertrain sensor |
| 94 | Diesel exhaust fuel heater |
| 98 | Diesel fuel heater |

## Instrument Panel Fuse Block

The instrument panel fuse block is on the driver side of the instrument panel, between the steering wheel and the door. To access the fuses, remove the panel, starting at the top. Once clips are disengaged, the tabs along the bottom of the door can be disengaged from the instrument panel to remove the door.



To reinstall the door, place the bottom tabs into the slots, and rotate the door into position, engaging the clips.




The vehicle may not be equipped with all of the fuses, relays, and features shown.

| Fuses | Usage |
|---|---|
| F1 | Left power window |
| F2 | Right power window |
| F3 | - |
| F4 | DC DC battery 2/1 |
| F5 | Auxiliary power socket – cargo |
| F6 | Heated seat battery 1 |
| F7 | Heated seat battery 2 |
| F8 | Body control module 3 |
| F9 | Electric parking brake switch |
| F10 | Body control module 2 (Stop/Start) |
| F11 | - |
| F12 | - |
| F13 | - |
| F14 | - |
| F15 | Transmission control module (Stop/Start) |
| F16 | Amplifier |
| F17 | - |
| F18 | Video processing module |
| F19 | Power steering column |
| F20 | Body control module 6 |
| F21 | Body control module 4 |
| F22 | Body control module 7 |
| F23 | Electric steering column lock |
| F24 | Airbag |
| F25 | Data link connector |
| F26 | - |
| F27 | - |
| F28 | - |
| F29 | Body control module 8 |

| Fuses | Usage |
|---|---|
| F30 | Overhead console |
| F31 | Steering wheel control |
| F32 | - |
| F33 | Heating ventilation/Air conditioning |
| F34 | CGM |
| F35 | Heated switch |
| F36 | Charger |
| F37 | Auxiliary power socket – front |
| F38 | Telematics |
| F39 | Display |
| F40 | Obstacle detection |
| F41 | Body control module 1 (Stop/Start) |
| F42 | Radio |
| F43 | Auxiliary power socket – console (circuit breaker) |
| F44 | Auxiliary power socket – console |

| Relay | Usage |
|---|---|
| K1 | - |
| K2 | Retained accessory power |
| K3 | - |
| K4 | - |
| K5 | - |

# Wheels and Tyres

## Tyres

Every new GM vehicle has high-quality tyres made by a leading tyre manufacturer. See the warranty manual for information regarding the tyre warranty and where to get service. For additional information refer to the tyre manufacturer.

**⚠ Warning**

- Poorly maintained and improperly used tyres are dangerous.
- Overloading the tyres can cause overheating as a result of too much flexing. There could be a blowout and a serious crash. See *Vehicle Load Limits ⇨ 160*.

(Continued)

**Warning (Continued)**

- Underinflated tyres pose the same danger as overloaded tyres. The resulting crash could cause serious injury. Check all tyres frequently to maintain the recommended pressure. Tyre pressure should be checked when the tyres are cold.
- Overinflated tyres are more likely to be cut, punctured, or broken by a sudden impact - such as when hitting a pothole. Keep tyres at the recommended pressure.
- Worn or old tyres can cause a crash. If the tread is badly worn, replace them.

(Continued)

**Warning (Continued)**

- Replace any tyres that have been damaged by impacts with potholes, curbs, etc.
- Improperly repaired tyres can cause a crash. Only the dealer or an authorised tyre service centre should repair, replace, dismount, and mount the tyres.
- Do not spin the tyres in excess of 56 km/h (35 mph) on slippery surfaces such as snow, mud, ice, etc. Excessive spinning may cause the tyres to explode.

See *Tyre Pressure for High-Speed Operation* ⇨ *275* for inflation pressure adjustment for high-speed driving.

## All-Season Tyres

This vehicle may come with all-season tyres. These tyres are designed to provide good overall performance on most road surfaces and weather conditions. Original equipment tyres designed to GM's specific tyre performance criteria have a TPC specification code moulded onto the sidewall. Original equipment all-season tyres can be identified by the last two characters of this TPC code, which will be “MS.”

Consider installing winter tyres on the vehicle if frequent driving on snow or ice-covered roads is expected. All-season tyres provide adequate performance for most winter driving conditions, but they may not offer the same level of traction or performance as winter tyres on snow or ice-covered roads. See *Winter Tyres* ⇨ *272*.

## Winter Tyres

This vehicle was not originally equipped with winter tyres. Winter tyres are designed for increased traction on snow and ice-covered

roads. Consider installing winter tyres on the vehicle if frequent driving on ice or snow covered roads is expected. See your dealer for details regarding winter tyre availability and proper tyre selection. Also, see *Buying New Tyres* ⇨ *282*.

With winter tyres, there may be decreased dry road traction, increased road noise and shorter tread life. After changing to winter tyres, be alert for changes in the vehicle handling and braking.

If using winter tyres:

- Use tyres of the same brand and tread type on all four wheel positions.
- Use only radial ply tyres of the same size, load range and speed rating as the original equipment tyres.

Winter tyres with the same speed rating as the original equipment tyres may not be available for H, V, W, Y and ZR speed rated tyres. If winter tyres with a lower speed rating are chosen, never exceed the tyre's maximum speed capability.

## Summer Tyres

This vehicle may come with 235/55R18 or 245/45R20 high performance summer tyres. These tyres have a special tread and compound that are optimised for maximum dry and wet road performance. This special tread and compound will have decreased performance in cold climates, and on ice and snow. It is recommended that winter tyres be installed on the vehicle if frequent driving at temperatures below approximately 5 °C (40 °F) or on ice or snow covered roads is expected. See *Winter Tyres* ⇨ *272*.

**Caution**

High performance summer tires have rubber compounds that lose flexibility and may develop surface cracks in the tread area at temperatures below -7 °C (20 °F). Always store high performance summer tires indoors and at temperatures above -7 °C (20 °F)

(Continued)

**Caution (Continued)**

when not in use. If the tires have been subjected to -7 °C (20 °F) or less, let them warm up in a heated space to at least 5 °C (40 °F) for 24 hours or more before being installed or driving a vehicle on which they are installed. Do not apply heat or blow heated air directly on the tyres. Always inspect tyres before use. See *Tyre Inspection* ⇨ *280*.

## Tyre Pressure

Tyres need the correct amount of air pressure to operate effectively.

**⚠ Warning**

Neither tyre underinflation nor overinflation is good. Underinflated tyres, or tyres that do not have enough air, can result in:

(Continued)

**Warning (Continued)**

- Tyre overloading and overheating, which could lead to a blowout.
- Premature or irregular wear.
- Poor handling.
- Reduced fuel economy.

Overinflated tyres, or tyres that have too much air, can result in:

- Unusual wear.
- Poor handling.
- Rough ride.
- Needless damage from road hazards.

The Tyre and Loading Information label on the vehicle indicates the original equipment tyres and the correct cold tyre inflation pressures. The recommended pressure is the minimum air pressure needed to support the vehicle's maximum load carrying capacity. See *Vehicle Load Limits* ⇨ *160*.

How the vehicle is loaded affects vehicle handling and ride comfort. Never load the vehicle with more weight than it was designed to carry.

### When to Check

Check the pressure of the tyres once a month or more. Do not forget the compact spare, if the vehicle has one. The cold compact spare tyre pressure should be at 420 kPa (60 psi). See *Compact Spare Tyre* ⇨ *298*.

### How to Check

Use a good quality pocket-type gauge to check tyre pressure. Proper tyre inflation cannot be determined by looking at the tyre. Check the tyre inflation pressure when the tyres are cold, meaning the vehicle has not been driven for at least three hours or no more than 1.6 km (1 mi).

Remove the valve cap from the tyre valve stem. Press the tyre gauge firmly onto the valve to get a pressure measurement. If the cold tyre inflation pressure matches the recommended pressure on the Tyre and Loading Information label, no further adjustment is necessary. If the inflation pressure is low, add air until the recommended pressure is reached. If the inflation pressure is high, press on the metal stem in the centre of the tyre valve to release air.

Recheck the tyre pressure with the tyre gauge.

Put the valve caps back on the valve stems to keep out dirt and moisture and prevent leaks. Use only valve caps designed for the vehicle by GM. TPMS sensors

could be damaged and would not be covered by the vehicle warranty.

## Tyre Pressure for High-Speed Operation

**⚠ Warning**

Driving at high speeds, 160 km/h (100 mph) or higher, puts additional strain on tyres. Sustained high-speed driving causes excessive heat build-up and can cause sudden tyre failure. This could cause a crash, and you or others could be killed. Some high-speed rated tyres require inflation pressure adjustment for high-speed operation. When speed limits and road conditions allow the vehicle to be driven at high speeds, make sure the tyres are rated for high-speed operation, are in excellent condition, and are set to the correct cold tyre inflation pressure for the vehicle load.

Vehicles with 235/55R18 or 245/45R20 size tyres require inflation pressure adjustment when driving the vehicle at speeds of 160 km/h (100 mph) or higher. Set the cold tyre inflation pressure to 20 kPa (3 psi) above the recommended cold tyre pressure shown on the Tyre and Loading Information label.

Return the tyres to the recommended cold tyre inflation pressure when high-speed driving has ended. See *Vehicle Load Limits* ⇨ *160* and *Tyre Pressure* ⇨ *273*.

## Tyre Pressure Monitor System

**Caution**

Modifications made to the Tyre Pressure Monitor System (TPMS) by anyone other than an authorised service facility may void authorisation to use the system.

The Tyre Pressure Monitor System (TPMS) uses radio and sensor technology to check tyre pressure levels. The TPMS sensors monitor the air pressure in your vehicle's tyres and transmit tyre pressure readings to a receiver located in the vehicle.

Each tyre, including the spare (if provided), should be checked monthly when cold and inflated to the inflation pressure recommended by the vehicle manufacturer on the vehicle placard or tyre inflation pressure label. (If your vehicle has tyres of a different size than the size indicated on the vehicle placard or tyre inflation pressure label, you should determine the proper tyre inflation pressure for those tyres.)

As an added safety feature, your vehicle has been equipped with a tyre pressure monitoring system (TPMS) that illuminates a low tyre pressure telltale when one or more of your tyres is significantly under-inflated.

Accordingly, when the low tyre pressure telltale illuminates, you should stop and check your tyres as soon as possible, and inflate them to

the proper pressure. Driving on a significantly under-inflated tyre causes the tyre to overheat and can lead to tyre failure. Under-inflation also reduces fuel efficiency and tyre tread life, and may affect the vehicle's handling and stopping ability.

Please note that the TPMS is not a substitute for proper tyre maintenance, and it is the driver's responsibility to maintain correct tyre pressure, even if under-inflation has not reached the level to trigger illumination of the TPMS low tyre pressure telltale.

Your vehicle has also been equipped with a TPMS malfunction indicator to indicate when the system is not operating properly. The TPMS malfunction indicator is combined with the low tyre pressure telltale. When the system detects a malfunction, the telltale will flash for approximately one minute and then remain continuously illuminated. This sequence will continue upon subsequent vehicle start-ups as long as the malfunction exists.

When the malfunction indicator is illuminated, the system may not be able to detect or signal low tyre pressure as intended. TPMS malfunctions may occur for a variety of reasons, including the installation of replacement or alternate tyres or wheels on the vehicle that prevent the TPMS from functioning properly. Always check the TPMS malfunction telltale after replacing one or more tyres or wheels on your vehicle to ensure that the replacement or alternate tyres and wheels allow the TPMS to continue to function properly.

See *Tyre Pressure Monitor Operation* ⇨ *276* for additional information.

See *Declaration of Conformity* ⇨ *329*.

## Tyre Pressure Monitor Operation

This vehicle may have a Tyre Pressure Monitor System (TPMS). The TPMS is designed to warn the driver when a low tyre pressure condition exists. TPMS sensors are mounted onto each tyre and wheel assembly, excluding the spare tyre and wheel assembly. The TPMS sensors monitor the air pressure in the tyres and transmit the tyre pressure readings to a receiver located in the vehicle.

When a low tyre pressure condition is detected, the TPMS illuminates the low tyre pressure warning light on the instrument cluster. If the warning light comes on, stop as soon as possible and inflate the tyres to the recommended pressure shown on the Tyre and Loading Information label. See *Vehicle Load Limits* ⇨ *160*.

A message to check the pressure in a specific tyre displays in the Driver Information Centre (DIC). The low tyre pressure warning light and the DIC warning message come on at each ignition cycle until the tyres are inflated to the correct inflation pressure. Using the DIC, tyre pressure

levels can be viewed. For additional information and details about the DIC operation and displays see *Driver Information Centre (DIC)* ⇨ *120*.

The low tyre pressure warning light may come on in cool weather when the vehicle is first started, and then turn off as the vehicle is driven. This could be an early indicator that the air pressure is getting low and needs to be inflated to the proper pressure.

A Tyre and Loading Information label, attached to your vehicle, shows the size of the original equipment tyres and the correct inflation pressure for the tyres when they are cold. See *Vehicle Load Limits* ⇨ *160* for an example of the Tyre and Loading Information label and its location. Also see *Tyre Pressure* ⇨ *273*.

The TPMS can warn about a low tyre pressure condition but it does not replace normal tyre maintenance. See *Tyre Inspection* ⇨ *280*, *Tyre Rotation* ⇨ *280*, and *Tyres* ⇨ *271*.

**Caution**

Tyre sealant materials are not all the same. A non-approved tyre sealant could damage the TPMS sensors. TPMS sensor damage caused by using an incorrect tyre sealant is not covered by the vehicle warranty. Always use only the GM approved tyre sealant available through your dealer or included in the vehicle.

Factory-installed Tyre Inflater Kits use a GM-approved liquid tyre sealant. Using non-approved tyre sealants could damage the TPMS sensors. See *Tyre Sealant and Compressor Kit* ⇨ *287* for information regarding the inflator kit materials and instructions.

## TPMS Malfunction Light and Message

The TPMS will not function properly if one or more of the TPMS sensors are missing or inoperable. When the system detects a malfunction, the low tyre pressure warning light flashes for about one minute and then stays on for the remainder of the ignition cycle. A DIC warning message also displays. The malfunction light and DIC warning message come on at each ignition cycle until the problem is corrected. Some of the conditions that can cause these to come on are:

- One of the road tyres has been replaced with the spare tyre. The spare tyre does not have a TPMS sensor. The malfunction light and DIC message should go off after the road tyre is replaced and the sensor matching process is performed successfully. See “TPMS Sensor Matching Process” following.
- The TPMS sensor matching process was not done or not completed successfully after rotating the tyres. The malfunction light and the DIC message should go off after successfully completing the sensor matching process. See "TPMS Sensor Matching Process" following.

- One or more TPMS sensors are missing or damaged. The malfunction light and the DIC message should go off when the TPMS sensors are installed and the sensor matching process is performed successfully. See your dealer for service.
- Replacement tyres or wheels do not match the original equipment tyres or wheels. Tyres and wheels other than those recommended could prevent the TPMS from functioning properly. See *Buying New Tyres* ⇨ *282*.
- Operating electronic devices or being near facilities using radio wave frequencies similar to the TPMS could cause the TPMS sensors to malfunction.

If the TPMS is not functioning properly, it cannot detect or signal a low tyre pressure condition. See your dealer for service if the TPMS malfunction light and DIC message come on and stay on.

## Tyre Fill Alert (If Equipped)

This feature provides visual and audible alerts outside the vehicle to help when inflating an underinflated tyre to the recommended cold tyre pressure.

When the low tyre pressure warning light comes on:

1. Park the vehicle in a safe, level place.
2. Apply the parking brake firmly.
3. Place the vehicle in P (Park).
4. Add air to the tyre that is underinflated. The indicator lamp will flash.

   When the recommended pressure is reached, the horn sounds once and the indicator lamp will stop flashing and briefly turn solid.

Repeat these steps for all underinflated tyres that have illuminated the low tyre pressure warning light.

**⚠ Warning**

Overinflating a tyre could cause the tyre to rupture and you or others could be injured. Do not exceed the maximum pressure listed on the tyre sidewall.

If the tyre is overinflated by more than 35 kPa (5 psi), the horn will sound multiple times and the indicator lamp will continue to flash for several seconds after filling stops. To release and correct the pressure, while the indicator lamp is still flashing, briefly press the centre of the valve stem. When the recommended pressure is reached, the horn sounds once.

If the indicator lamp does not flash within 15 seconds after starting to inflate the tyre, the tyre fill alert has not been activated or is not working.

If the hazard warning flashers are on, the tyre fill alert visual feedback will not work properly.

The TPMS will not activate the tyre fill alert properly under the following conditions:

- There is interference from an external device or transmitter.
- The air pressure from the inflation device is not sufficient to inflate the tyre.
- There is a malfunction in the TPMS.
- There is a malfunction in the horn or indicator lamps.
- The identification code of the TPMS sensor is not registered to the system.
- The battery of the TPMS sensor is low.

If the tyre fill alert does not operate due to TPMS interference, move the vehicle about 1 m (3 ft) back or forward and try again. If the tyre fill alert feature is not working, use a tyre pressure gauge.

## TPMS Sensor Matching Process

Each TPMS sensor has a unique identification code. The identification code needs to be matched to a new tyre/wheel position after rotating the vehicle's tyres or replacing one or more of the TPMS sensors. The TPMS sensor matching process should also be performed after replacing a spare tyre with a road tyre containing the TPMS sensor. The malfunction light and the DIC message should go off at the next ignition cycle. The sensors are matched to the tyre/wheel positions, using a TPMS relearn tool, in the following order: driver side front tyre, passenger side front tyre, passenger side rear tyre, and driver side rear tyre. See your dealer for service or to purchase a relearn tool.

You have two minutes to match the first tyre/wheel position, and five minutes overall to match all four tyre/wheel positions. If it takes longer, the matching process stops and must be restarted.

The TPMS sensor matching process is outlined below:

1. Apply the parking brake.
2. Place the vehicle in Service Mode. See *Ignition Positions* ⇨ *164*.
3. Make sure the Tyre Pressure info display option is turned on. The info displays on the DIC can be turned on and off through the Options menu. See *Driver Information Centre (DIC)* ⇨ *120*.
4. Use the DIC controls on the right-hand side of the steering wheel to scroll to the Tyre Pressure screen under the DIC info page.
5. Press and hold the thumbwheel located in the centre of the DIC controls on the right-hand side of the steering wheel.

   The horn sounds twice to signal the receiver is in relearn mode and the TYRE LEARNING ACTIVE message displays on the DIC screen.
6. Start with the driver side front tyre.

7. Place the relearn tool against the tyre sidewall, near the valve stem. Then press the button to activate the TPMS sensor. A horn chirp confirms that the sensor identification code has been matched to this tyre and wheel position.
8. Proceed to the passenger side front tyre, and repeat the procedure in Step 7.
9. Proceed to the passenger side rear tyre, and repeat the procedure in Step 7.
10. Proceed to the driver side rear tyre, and repeat the procedure in Step 7. The horn sounds two times to indicate the sensor identification code has been matched to the driver side rear tyre, and the TPMS sensor matching process is no longer active. The TYRE LEARNING ACTIVE message on the DIC display screen goes off.
11. Turn the vehicle off.
12. Set all four tyres to the recommended air pressure level as indicated on the Tyre and Loading Information label.

## Tyre Inspection

We recommend that the tyres, including the spare tyre, if the vehicle has one, be inspected for signs of wear or damage at least once a month.

Replace the tyre if:

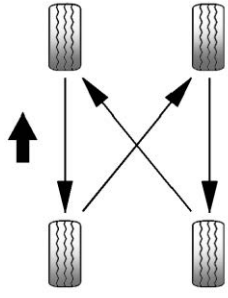
- The indicators at three or more places around the tyre can be seen.
- There is cord or fabric showing through the tyre's rubber.
- The tread or sidewall is cracked, cut, or snagged deep enough to show cord or fabric.
- The tyre has a bump, bulge, or split.
- The tyre has a puncture, cut, or other damage that cannot be repaired well because of the size or location of the damage.

## Tyre Rotation

Tyres should be rotated at the intervals specified in the Maintenance Schedule. See *Maintenance Schedule* ⇨ *315*.

Tyres are rotated to achieve a uniform wear for all tyres. The first rotation is the most important.

Anytime unusual wear is noticed, rotate the tyres as soon as possible, check for proper tyre inflation pressure, and check for damaged tyres or wheels. If the unusual wear continues after the rotation, check the wheel alignment. See *When It Is Time for New Tyres* ⇨ *281* and *Wheel Replacement* ⇨ *284*.



Use this rotation pattern when rotating the tyres.

Do not include the compact spare tyre in the tyre rotation.

Adjust the front and rear tyres to the recommended inflation pressure on the Tyre and Loading Information label after the tyres have been rotated. See *Tyre Pressure* ⇨ *273* and *Vehicle Load Limits* ⇨ *160*.

Reset the Tyre Pressure Monitor System. See *Tyre Pressure Monitor Operation* ⇨ *276*.

Check that all wheel nuts are properly tightened. See “Wheel Nut Torque” under *Capacities and Specifications* ⇨ *326*.

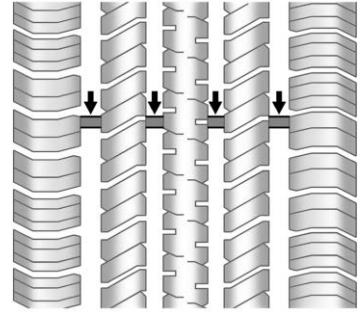
**⚠ Warning**

Rust or dirt on a wheel, or on the parts to which it is fastened, can make wheel nuts become loose after time. The wheel could come off and cause a crash. When changing a wheel, remove any rust or dirt from places where the wheel attaches to the vehicle. In an emergency, a cloth or a paper towel can be used; however, use a scraper or wire brush later to remove all rust or dirt.

Lightly coat the inner diameter of the wheel hub opening with wheel bearing grease after a wheel change or tyre rotation to prevent corrosion or rust build-up. Do not get grease on the wheel mounting surface or on the wheel nuts or bolts.

## When It Is Time for New Tyres

Factors such as maintenance, temperatures, driving speeds, vehicle loading, and road conditions affect the wear rate of the tyres.



Tread wear indicators are one way to tell when it is time for new tyres. Tread wear indicators appear when the tyres have only 1.6 mm (1/16 in)

or less of tread remaining. See *Tyre Inspection* ⇨ *280* and *Tyre Rotation* ⇨ *280*.

The rubber in tyres ages over time. This also applies to the spare tyre, if the vehicle has one, even if it is never used. Multiple factors including temperatures, loading conditions, and inflation pressure maintenance affect how fast ageing takes place. GM recommends that tyres, including the spare if equipped, be replaced after six years, regardless of tread wear. To identify the age of a tyre, use the tyre manufacturing date which is the last four digits of the DOT Tyre Identification Number (TIN) which is moulded into one side of the tyre sidewall. The first two digits represent the week (01–52) and the last two digits, the year. For example, the third week of the year 2010 would have a four-digit DOT date of 0310.

### Vehicle Storage

Tyres age when stored normally mounted on a parked vehicle. Park a vehicle that will be stored for at least a month in a cool, dry, clean area away from direct sunlight to slow ageing. This area should be free of grease, petrol, or other substances that can deteriorate rubber.

Parking for an extended period can cause flat spots on the tyres that may result in vibrations while driving. When storing a vehicle for at least a month, remove the tyres or raise the vehicle to reduce the weight from the tyres.

## Buying New Tyres

GM has developed and matched specific tyres for the vehicle. The original equipment tyres installed were designed to meet General Motors Tyre Performance Criteria Specification (TPC Spec) system rating. When replacement tyres are needed, GM strongly recommends buying tyres with the same TPC Spec rating.

GM's exclusive TPC Spec system considers over a dozen critical specifications that impact the overall performance of the vehicle, including brake system performance, ride and handling, traction control, and tyre pressure monitoring performance. GM's TPC Spec number is moulded onto the tyre's sidewall near the tyre size. If the tyres have an all-season tread design, the TPC Spec number will be followed by MS for mud and snow.

GM recommends replacing worn tyres in complete sets of four. Uniform tread depth on all tyres will help to maintain the performance of the vehicle. Braking and handling performance may be adversely affected if all the tyres are not replaced at the same time. If proper rotation and maintenance have been done, all four tyres should wear out at about the same time. See *Tyre Rotation* ⇨ *280* for information on proper tyre rotation. However, if it is necessary to replace only one axle set of worn tyres, place the new tyres on the rear axle.

Winter tyres with the same speed rating as the original equipment tyres may not be available for H, V, W, Y and ZR speed rated tyres. Never exceed the winter tyre's maximum speed capability when using winter tyres with a lower speed rating.

**⚠ Warning**

Tyres could explode during improper service. Attempting to mount or dismount a tyre could cause injury or death. Only your dealer or authorised tyre service centre should mount or dismount the tyres.

**⚠ Warning**

Mixing tyres of different sizes, tread patterns, or types on the same axle may cause loss of control of the vehicle, resulting

(Continued)

**Warning (Continued)**

in a crash or other vehicle damage. Use the same size, load range, and type of tyres as the original tyres.

**⚠ Warning**

Using bias-ply tyres on the vehicle may cause the wheel rim flanges to develop cracks after many miles of driving. A tyre and/or wheel could fail suddenly and cause a crash. Use only radial-ply tyres with the wheels on the vehicle.

If the vehicle tyres must be replaced with a tyre that does not have a TPC Spec number, make sure they are the same size, load range, speed rating, and construction (radial) as the original tyres.

Vehicles that have a tyre pressure monitoring system could give an inaccurate low-pressure warning if non-TPC Spec rated tyres are installed. See *Tyre Pressure Monitor System* ⇨ *275*.

The Tyre and Loading Information label indicates the original equipment tyres on the vehicle. See *Vehicle Load Limits* ⇨ *160* for the label location and more information about the Tyre and Loading Information label.

## Different Size Tyres and Wheels

If wheels or tyres are installed that are a different size than the original equipment wheels and tyres, vehicle performance, including its braking, ride and handling characteristics, stability, and resistance to rollover may be affected. If the vehicle has electronic systems such as antilock brakes, rollover airbags, traction

control, electronic stability control, or All-Wheel Drive, the performance of these systems can also be affected.

**⚠ Warning**

If different sized wheels are used, there may not be an acceptable level of performance and safety if tyres not recommended for those wheels are selected. This increases the chance of a crash and serious injury. Only use GM specific wheel and tyre systems developed for the vehicle, and have them properly installed by a GM certified technician.

See *Buying New Tyres* ⇨ *282* and *Accessories and Modifications* ⇨ *243*.

## Wheel Alignment and Tyre Balance

The tyres and wheels were aligned and balanced at the factory to provide the longest tyre life and best overall performance. Adjustments to wheel alignment and tyre balancing are not necessary on a regular basis. Consider an alignment check if there is unusual tyre wear or the vehicle is significantly pulling to one side or the other. Some slight pull to the left or right, depending on the crown of the road and/or other road surface variations such as troughs or ruts, is normal. If the vehicle is vibrating when driving on a smooth road, the tyres and wheels may need to be rebalanced. See your dealer for proper diagnosis.

## Wheel Replacement

Replace any wheel that is bent, cracked, or badly rusted or corroded. If wheel nuts keep coming loose, the wheel, wheel bolts, and wheel nuts should be replaced. If the wheel leaks air, replace it. Some aluminium wheels can be repaired. See your dealer if any of these conditions exist.

Your dealer will know the kind of wheel that is needed.

Each new wheel should have the same load-carrying capacity, diameter, width, offset, and be mounted the same way as the one it replaces.

Replace wheels, wheel bolts, wheel nuts, or Tyre Pressure Monitor System (TPMS) sensors with new GM original equipment parts.

**⚠ Warning**

Using the wrong replacement wheels, wheel bolts, or wheel nuts can be dangerous. It could affect the braking and handling of the vehicle. Tyres can lose air, and cause loss of control, causing a crash. Always use the correct wheel, wheel bolts, and wheel nuts for replacement.

**Caution**

The wrong wheel can also cause problems with bearing life, brake cooling, speedometer or odometer calibration, headlamp aim, bumper height, vehicle ground clearance, and tyre or tyre chain clearance to the body and chassis.

### Used Replacement Wheels

**⚠ Warning**

Replacing a wheel with a used one is dangerous. How it has been used or how far it has been driven may be unknown. It could fail suddenly and cause a crash. When replacing wheels, use a new GM original equipment wheel.

## Tyre Chains

Use tyre chains or other traction devices only when necessary.

Before using tyre chains, check with the tyre manufacturer to make sure tyre chains are compatible with the tyres on the vehicle. Follow the manufacturer's instructions.

Tyre chains are only permitted on 235/55R18 size tyres. Install them on the front tyres only, as tightly as possible with the ends securely fastened.

Only use low profile tyre chains that are the proper size for the tyres and add no more than 12 mm thickness to the tyre tread and inner sidewall.

**Caution**

Do not install traction devices on the rear tyres.

Drive slowly and follow the cable manufacturer's instructions. If the cables are contacting the vehicle, stop and retighten them. If the contact continues, slow down until it stops.

**Caution**

To help avoid damage to the vehicle, drive slowly, do not spin the wheels, and readjust or remove the device if it contacts the vehicle.

## If a Tyre Goes Flat

It is unusual for a tyre to blow out while driving, especially if the tyres are maintained properly. See *Tyres* ⇨ *271*. If air goes out of a tyre, it is much more likely to leak out slowly. But if there is ever a blowout, here are a few tips about what to expect and what to do:

If a front tyre fails, the flat tyre creates a drag that pulls the vehicle toward that side. Take your foot off the accelerator pedal and grip the steering wheel firmly. Steer to maintain lane position, and then gently brake to a stop, well off the road, if possible.

A rear blowout, particularly on a curve, acts much like a skid and may require the same correction as used in a skid. Stop pressing the accelerator pedal and steer to straighten the vehicle. It may be very bumpy and noisy. Gently brake to a stop, well off the road, if possible.

**⚠ Warning**

Driving on a flat tyre will cause permanent damage to the tyre. Re-inflating a tyre after it has been driven on while severely

(Continued)

**Warning (Continued)**

underinflated or flat may cause a blowout and a serious crash. Never attempt to re-inflate a tyre that has been driven on while severely underinflated or flat. Have your dealer or an authorised tyre service centre repair or replace the flat tyre as soon as possible.

**⚠ Warning**

Lifting a vehicle and getting under it to do maintenance or repairs is dangerous without the appropriate safety equipment and training. If a jack is provided with the vehicle, it is designed only for changing a flat tyre. If it is used for anything else, you or others could be badly injured or killed if the vehicle slips off the jack. If a jack is provided with the vehicle, only use it for changing a flat tyre.

If a tyre goes flat, avoid further tyre and wheel damage by driving slowly to a level place, well off the road, if possible. Turn on the hazard warning flashers. See *Hazard Lights* ⇨ *136*.

**⚠ Warning**

Changing a tyre can be dangerous. The vehicle can slip off the jack and roll over or fall causing injury or death. Find a level place to change the tyre. To help prevent the vehicle from moving:

1. Apply the parking brake firmly.
2. Put an automatic transmission in P (Park) or a manual gearbox in 1 (First) or R (Reverse).
3. Turn off the engine and do not restart while the vehicle is raised.
4. Do not allow passengers to remain in the vehicle.

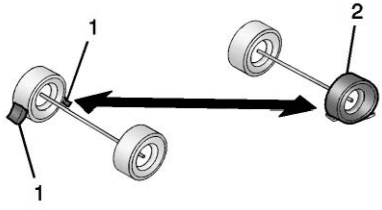
(Continued)

**Warning (Continued)**

5. Place wheel chocks, if equipped, on both sides of the tyre at the opposite corner of the tyre being changed.

This vehicle may come with a jack and spare tyre or a tyre sealant and compressor kit. To use the jacking equipment to change a spare tyre safely, follow the instructions below. Then see *Tyre Changing* ⇨ *293*. To use the tyre sealant and compressor kit, see *Tyre Sealant and Compressor Kit* ⇨ *287*.

When the vehicle has a flat tyre (2), use the following example as a guide to assist you in the placement of wheel chocks (1), if equipped.




1. Wheel Chock (If Equipped)
2. Flat Tyre

The following information explains how to repair or change a tyre.

## Tyre Sealant and Compressor Kit

**⚠ Warning**

Idling a vehicle in an enclosed area with poor ventilation is dangerous. Engine exhaust may enter the vehicle. Engine exhaust contains carbon monoxide (CO) which cannot be seen or smelled. It can cause unconsciousness and even death. Never run the engine in an

(Continued)

**Warning (Continued)**

enclosed area that has no fresh air ventilation. For more information, see *Engine Exhaust* ⇨ *171*.

**⚠ Warning**

Overinflating a tyre could cause the tyre to rupture and you or others could be injured. Be sure to read and follow the tyre sealant and compressor kit instructions and inflate the tyre to its recommended pressure. Do not exceed the recommended pressure.

**⚠ Warning**

Storing the tyre sealant and compressor kit or other equipment in the passenger compartment of the vehicle could cause injury. In a sudden stop or collision, loose

(Continued)

**Warning (Continued)**

equipment could strike someone. Store the tyre sealant and compressor kit in its original location.

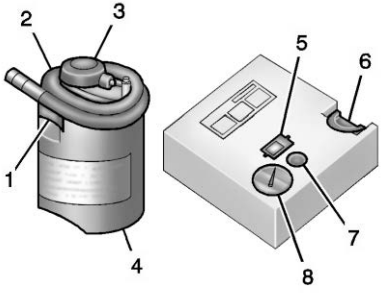
If this vehicle has a tyre sealant and compressor kit, there may not be a spare tyre or tyre changing equipment, and on some vehicles there may not be a place to store a tyre.

The tyre sealant and compressor can be used to temporarily seal punctures up to 6 mm (0.25 in) in the tread area of the tyre. It can also be used to inflate an under inflated tyre.

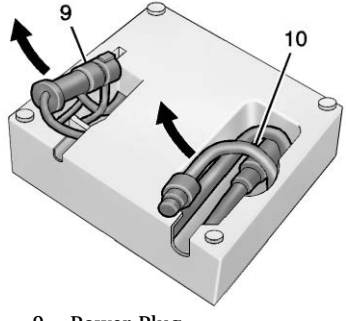
If the tyre has been separated from the wheel, has damaged sidewalls, or has a large puncture, the tyre is too severely damaged for the tyre sealant and compressor kit to be effective.

Read and follow all of the tyre sealant and compressor kit instructions.

The kit includes:




1. Sealant Canister Inlet Valve
2. Sealant/Air Hose
3. Base of Sealant Canister
4. Tyre Sealant Canister
5. On/Off Button
6. Slot on Top of Compressor
7. Pressure Deflation Button
8. Pressure Gauge




9. Power Plug
10. Air Only Hose

## Tyre Sealant

Read and follow the safe handling instructions on the label adhered to the tyre sealant canister (4).

Check the tyre sealant expiration date on the tyre sealant canister. The tyre sealant canister (4) should be replaced before its expiration date. Replacement tyre sealant canisters are available at your local dealer.

There is only enough sealant to seal one tyre. After usage, the tyre sealant canister must be replaced.

## Using the Tyre Sealant and Compressor Kit to Temporarily Seal and Inflate a Punctured Tyre

When using the tyre sealant and compressor kit during cold temperatures, warm the kit in a heated environment for five minutes. This will help to inflate the tyre faster.

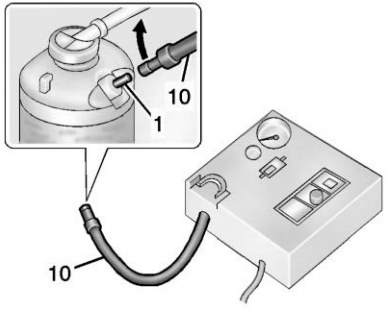
If a tyre goes flat, avoid further tyre and wheel damage by driving slowly to a level place. Turn on the hazard warning flashers. See *Hazard Lights* ⇨ *136*.

See *If a Tyre Goes Flat* ⇨ *285* for other important safety warnings.

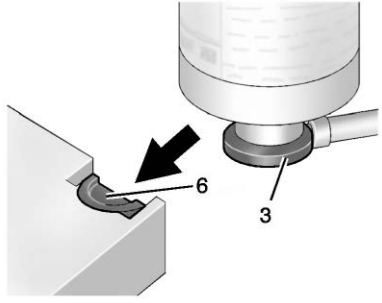
Do not remove any objects that have penetrated the tyre.

1. Remove the tyre sealant canister (4) and compressor from its storage location. See *Storing the Tyre Sealant and Compressor Kit* ⇨ *293*.
2. Remove the air only hose (10) and the power plug (9) from the bottom of the compressor.

3. Place the compressor on the ground near the flat tyre.



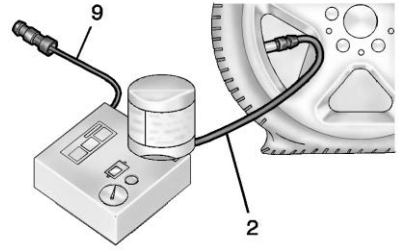

4. Attach the air only hose (10) to the sealant canister inlet valve (1) by turning it clockwise until tight.




5. Slide the base of the tyre sealant canister (3) into the slot on the top of the compressor (6) to hold it upright.

   Make sure the tyre valve stem is positioned close to the ground so the hose will reach it.

6. Remove the valve stem cap from the flat tyre by turning it anticlockwise.




7. Attach the sealant/air hose (2) to the tyre valve stem by turning it clockwise until tight.

8. Plug the power plug (9) into the accessory power outlet in the vehicle. Unplug all items from other accessory power outlets. See *Power Sockets* ⇨ *100*.

   Do not pinch the power plug cord in the door or window.

9. Start the vehicle. The vehicle must be running while using the air compressor.

10. Press the on/off button (5) to turn the tyre sealant and compressor kit on.

The compressor will inject sealant and air into the tyre.

The pressure gauge (8) will initially show a high pressure while the compressor pushes the sealant into the tyre. Once the sealant is completely dispersed into the tyre, the pressure will quickly drop and start to rise again as the tyre inflates with air only.

11. Inflate the tyre to the recommended inflation pressure using the pressure gauge (8). The recommended inflation pressure can be found on the Tyre and Loading Information label. See *Tyre Pressure* ⇨ *273*.

    The pressure gauge (8) may read higher than the actual tyre pressure while the compressor is on. Turn the compressor off to get an accurate pressure reading. The compressor may be turned on/off until the correct pressure is reached.

**Caution**

If the recommended pressure cannot be reached after approximately 25 minutes, the vehicle should not be driven farther. The tyre is too severely damaged and the tyre sealant and compressor kit cannot inflate the tyre. Remove the power plug from the accessory power outlet and unscrew the inflating hose from the tyre valve.

12. Press the on/off button (5) to turn the tyre sealant and compressor kit off.

    The tyre is not sealed and will continue to leak air until the vehicle is driven and the sealant is distributed in the tyre. Therefore, Steps 13–21 must be done immediately after Step 12.

    Be careful while handling the tyre sealant and compressor kit as it could be warm after usage.

13. Unplug the power plug (9) from the accessory power outlet in the vehicle.
14. Turn the sealant/air hose (2) anticlockwise to remove it from the tyre valve stem.
15. Replace the tyre valve stem cap.
16. Remove the tyre sealant canister (4) from the slot on top of the compressor (6).
17. Turn the air only hose (10) anticlockwise to remove it from the tyre sealant canister inlet valve (1).
18. Turn the sealant/air hose (2) clockwise onto the sealant canister inlet valve (1) to prevent sealant leakage.
19. Return the air only hose (10) and power plug (9) back to their original storage location.


20. If the flat tyre was able to inflate to the recommended inflation pressure, remove the maximum speed label from the sealant canister and place it in a highly visible location.

    Do not exceed the speed on this label until the damaged tyre is repaired or replaced.

21. Return the equipment to its original storage location in the vehicle.

22. Immediately drive the vehicle 8 km (5 mi) to distribute the sealant in the tyre.

23. Stop at a safe location and check the tyre pressure. Refer to Steps 1–10 under “Using the Tyre Sealant and Compressor Kit without Sealant to Inflate a Tyre (Not Punctured).”

    If the tyre pressure has fallen more than 68 kPa (10 psi) below the recommended inflation pressure, stop driving the vehicle. The tyre is too severely damaged and the tyre sealant cannot seal the tyre.

    If the tyre pressure has not dropped more than 68 kPa (10 psi) from the recommended inflation pressure, inflate the tyre to the recommended inflation pressure.

24. Wipe off any sealant from the wheel, tyre, or vehicle.

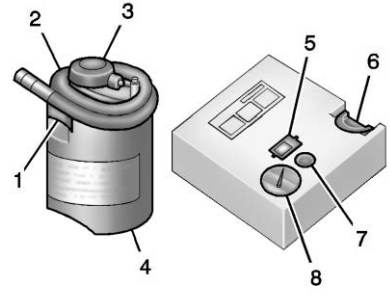
25. Dispose of the used tyre sealant canister (4) at a local dealer or in accordance with local state codes and practices.

26. Replace it with a new canister available from your dealer.

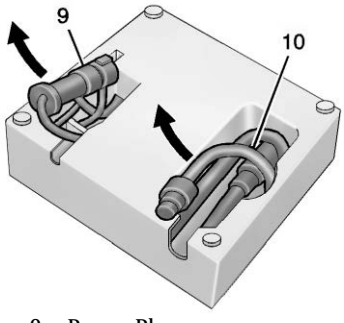
27. After temporarily sealing a tyre using the tyre sealant and compressor kit, take the vehicle to an authorised dealer within 161 km (100 mi) of driving to have the tyre repaired or replaced.

## Using the Tyre Sealant and Compressor Kit without Sealant to Inflate a Tyre (Not Punctured)

The kit includes:




1. Sealant Canister Inlet Valve
2. Sealant/Air Hose
3. Base of Sealant Canister
4. Tyre Sealant Canister
5. On/Off Button
6. Slot on Top of Compressor
7. Pressure Deflation Button
8. Pressure Gauge




9. Power Plug
10. Air Only Hose

If a tyre goes flat, avoid further tyre and wheel damage by driving slowly to a level place. Turn on the hazard warning flashers. See *Hazard Lights* ⇨ *136*.

See *If a Tyre Goes Flat* ⇨ *285* for other important safety warnings.

1. Remove the compressor from its storage location. See *Storing the Tyre Sealant and Compressor Kit* ⇨ *293*.
2. Remove the air only hose (10) and the power plug (9) from the bottom of the compressor.
3. Place the compressor on the ground near the flat tyre.

   Make sure the tyre valve stem is positioned close to the ground so the hose will reach it.
4. Remove the valve stem cap from the flat tyre by turning it anticlockwise.
5. Attach the air only hose (10) to the tyre valve stem by turning it clockwise until tight.
6. Plug the power plug (9) into the accessory power outlet in the vehicle. Unplug all items from other accessory power outlets. See *Power Sockets* ⇨ *100*.

   Do not pinch the power plug cord in the door or window.
7. Start the vehicle. The vehicle must be running while using the air compressor.
8. Press the on/off button (5) to turn the tyre sealant and compressor kit on.

   The compressor will inflate the tyre with air only.
9. Inflate the tyre to the recommended inflation pressure using the pressure gauge (8). The recommended inflation pressure can be found on the Tyre and Loading Information label. See *Tyre Pressure* ⇨ *273*.

   The pressure gauge (8) may read higher than the actual tyre pressure while the compressor is on. Turn the compressor off to get an accurate pressure reading. The compressor may be turned on/off until the correct pressure is reached.

**Caution**

If the recommended pressure cannot be reached after approximately 25 minutes, the vehicle should not be driven farther. The tyre is too severely damaged and the tyre sealant and compressor kit cannot inflate the tyre. Remove the power plug from the accessory power outlet and unscrew the inflating hose from the tyre valve.

10. Press the on/off button (5) to turn the tyre sealant and compressor kit off.

    Be careful while handling the compressor as it could be warm after usage.

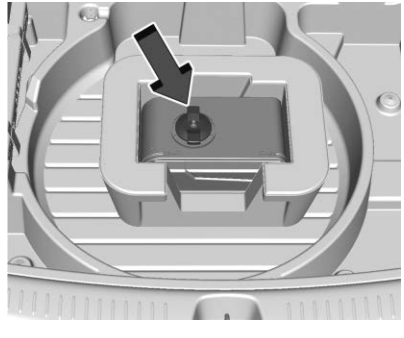
11. Unplug the power plug (9) from the accessory power outlet in the vehicle.
12. Turn the air only hose (10) anticlockwise to remove it from the tyre valve stem.
13. Replace the tyre valve stem cap.
14. Return the air only hose (10) and power plug (9) back to their original storage location.
15. Return the equipment to its original storage location in the vehicle.

The tyre sealant and compressor kit has accessory adapters located in a compartment on the bottom of its housing that can be used to inflate air mattresses, balls, etc.

## Storing the Tyre Sealant and Compressor Kit

The tyre sealant and compressor kit is in a bag in the rear compartment storage area.

1. Open the tailgate.
2. Remove the cargo cover, if equipped.
3. Lift the load floor. Use the hook to hold the load floor open. See *Rear Storage* ⇨ *90*.

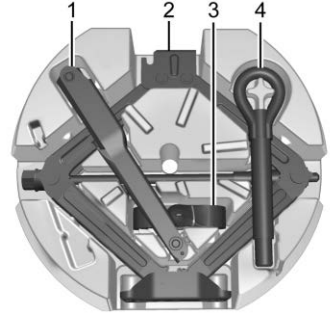


4. Turn the retainer nut anticlockwise to remove the tyre sealant and compressor kit bag.
5. Remove the tyre sealant and compressor kit from the bag.

To store the tyre sealant and compressor kit, reverse the steps.

## Tyre Changing

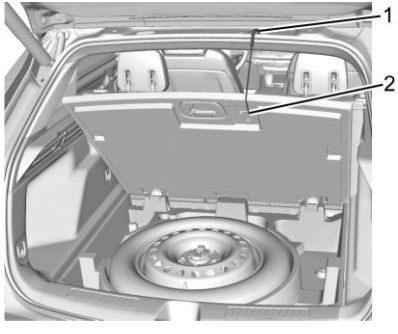
### Removing the Spare Tyre and Tools



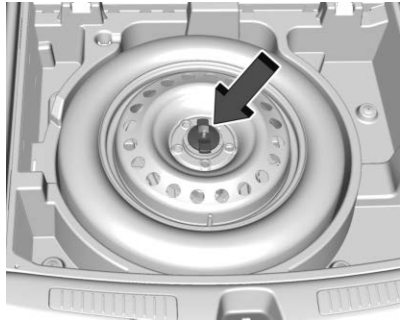

1. Wrench
2. Jack
3. Strap
4. Tow Hook (If Equipped)

To access the spare tyre and tools:

1. Open the tailgate. See *Tailgate ⇨ 20*.
2. Remove the cargo cover, if equipped.
3. Lift the load floor.




Insert the hook (2) into the opening on the tailgate (1) to hold it open.



4. Turn the retainer nut anticlockwise and remove the spare tyre.

   Place the spare tyre next to the tyre being changed.
5. The jack and tools are stored below the spare tire.

   Remove them from their container and place them near the tyre being changed.

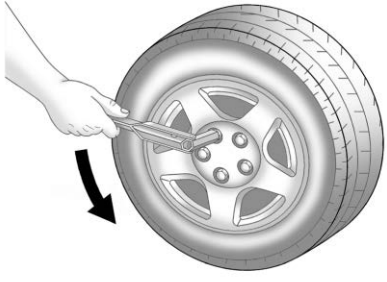
## Removing the Flat Tyre and Installing the Spare Tyre

1. Do a safety check before proceeding. See *If a Tyre Goes Flat ⇨ 285*.
2. For vehicles equipped with a wheel cover or centre cap, pull the cover or centre cap away from the wheel to remove it.

   Store the wheel cover in the cargo area until the flat tyre is repaired or replaced.

   If the vehicle has a centre cap with wheel nut caps, the wheel nut caps are designed to stay with the centre cap after they are loosened.

   Remove the entire centre cap if the wheel has a smooth centre cap. Place the chisel end of the wheel wrench in the slot on the wheel, and gently prize it off.

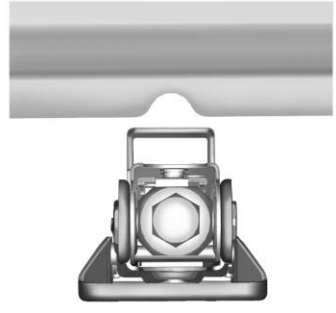


3. Turn the wheel wrench anticlockwise to loosen all the wheel nuts, but do not remove them yet.

**Caution**

Make sure that the jack lift head is in the correct position or you may damage your vehicle. The repairs would not be covered by your warranty.

4. Position the jack lift head at the jack location nearest the flat tyre.



Locate the notch on the sheet metal weld flange. Place the centre of the jack lift head on the centre of the sheet metal notch.

The jack must not be used in any other position.

**⚠ Warning**

Getting under a vehicle when it is lifted on a jack is dangerous. If the vehicle slips off the jack, you could be badly injured or killed. Never get under a vehicle when it is supported only by a jack.

**⚠ Warning**

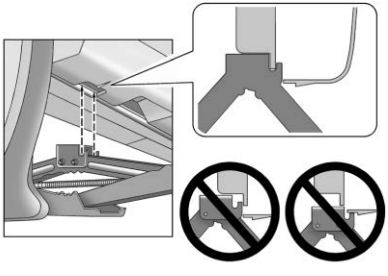
Raising the vehicle with the jack improperly positioned can damage the vehicle and even make the vehicle fall. To help avoid personal injury and vehicle damage, be sure to fit the jack lift head into the proper location before raising the vehicle.

**⚠ Warning**

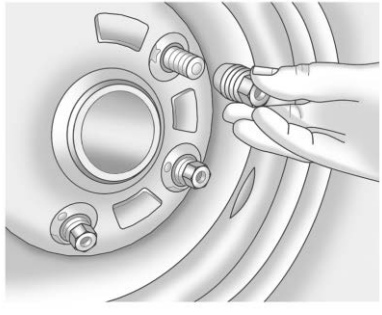
Lifting a vehicle and getting under it to do maintenance or repairs is dangerous without the appropriate safety equipment and training. If a jack is provided with the vehicle, it is designed only for changing a flat tyre. If it is used for anything else, you or others could be badly injured or killed if the vehicle slips off the jack. If a jack is provided with the vehicle, only use it for changing a flat tyre.

**Caution**

Using a jack to raise the vehicle without positioning it correctly could damage your vehicle. When raising your vehicle on a jack, be sure to position it correctly under the frame and avoid contact with the plastic moulding.



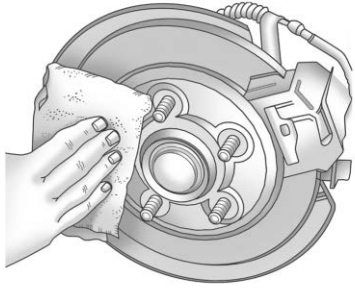
5. Turn the wheel wrench clockwise to raise the jack until the slot in the jack lift head fits into the metal flange located behind the cut out on the plastic moulding. Do not raise the vehicle yet.
6. Put the compact spare tyre near you.
7. Raise the vehicle by turning the jack handle clockwise. Raise the vehicle far enough off the ground so there is enough room for the road tyre to clear the ground.



8. Remove all of the wheel nuts.
9. Remove the flat tyre.

**⚠ Warning**

Rust or dirt on a wheel, or on the parts to which it is fastened, can make wheel nuts become loose after time. The wheel could come off and cause a crash. When changing a wheel, remove any rust or dirt from places where the wheel attaches to the vehicle. In an emergency, a cloth or a paper towel can be used; however, use a scraper or wire brush later to remove all rust or dirt.



10. Remove any rust or dirt from the wheel bolts, mounting surfaces, and spare wheel.
11. Place the compact spare tyre on the wheel-mounting surface.

**⚠ Warning**

Never use oil or grease on bolts or nuts because the nuts might come loose. The vehicle's wheel could fall off, causing a crash.

12. Reinstall the wheel nuts. Tighten each nut by hand until the wheel is held against the hub.
13. Lower the vehicle by turning the jack handle anticlockwise.

**⚠ Warning**

Wheel nuts that are improperly or incorrectly tightened can cause the wheels to become loose or come off. The wheel nuts should be tightened with a torque wrench to the proper torque specification after replacing. Follow the torque specification supplied by the aftermarket manufacturer when using accessory locking wheel nuts. See *Capacities and Specifications* ⇨ *326* for original equipment wheel nut torque specifications.

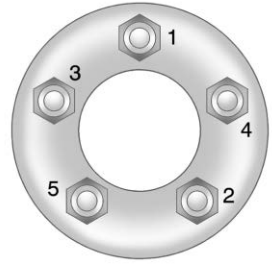
**Caution**

Improperly tightened wheel nuts can lead to brake pulsation and disc damage. To avoid expensive brake repairs, evenly tighten the wheel nuts in the proper sequence and to

(Continued)

**Caution (Continued)**

the proper torque specification. See *Capacities and Specifications* ⇨ *326* for the wheel nut torque specification.




14. Tighten the wheel nuts firmly in a crisscross sequence, as shown.
15. Lower the jack all the way and remove the jack from under the vehicle.
16. Tighten the wheel nuts firmly with the wheel wrench.

When reinstalling the wheel cover or centre cap on the full-size tyre, tighten all five plastic caps hand snug with the aid of the wheel wrench and tighten them with the wheel wrench an additional one-quarter of a turn.

**Caution**

Wheel covers will not fit on the vehicle's compact spare. If you try to put a wheel cover on the compact spare, the cover or the spare could be damaged.

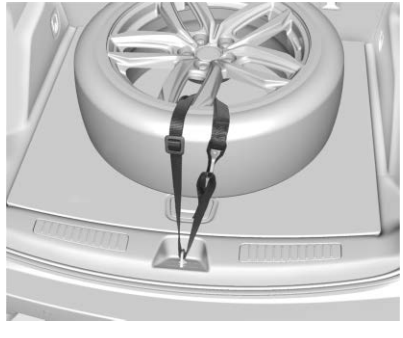
### Storing a Flat or Spare Tyre and Tools

**⚠ Warning**

Storing a jack, a tyre, or other equipment in the passenger compartment of the vehicle could cause injury. In a sudden stop or collision, loose equipment could strike someone. Store all these in the proper place.

To store the flat or spare tyre and tools:

1. Open the tailgate. See *Tailgate ⇨ 20*.
2. Replace the jack and tools in their original storage location.
3. Lower the load floor.
4. Place the tyre, lying flat, in the rear storage compartment.
5. Place the loop end of the strap through the tailgate striker.



6. Route the strap through the wheel as shown.
7. Attach the hook to the loop end of the strap.
8. Tighten the strap.
9. Replace the cargo cover, if equipped.
10. Close the tailgate and make sure it is fully latched.

The compact spare is for temporary use only. Replace the compact spare tyre with a full-size tyre as soon as you can.

## Compact Spare Tyre

**⚠ Warning**

Driving with more than one compact spare tyre at a time could result in loss of braking and handling. This could lead to a crash and you or others could be injured. Use only one compact spare tyre at a time.

If this vehicle has a compact spare tyre, it was fully inflated when new; however, it can lose air over time. Check the inflation pressure regularly. It should be 420 kPa (60 psi).

Stop as soon as possible and check that the spare tyre is correctly inflated after being installed on the vehicle. The compact spare tyre is designed for temporary use only. The vehicle will perform differently with the spare tyre installed and it is recommended that the vehicle speed be limited to 80 km/h (50 mph). To conserve the tread of the spare tyre, have the standard tyre repaired or replaced as soon as convenient and return the spare tyre to the storage area.

When using a compact spare tyre, the AWD (if equipped), ABS, and Traction Control systems may engage until the spare tyre is recognised by the vehicle, especially on slippery roads. Adjust driving to reduce possible wheel slip.

**Caution**

When the compact spare is installed, do not take the vehicle through an automatic car wash with guide rails. The compact spare can get caught on the rails which can damage the tyre, wheel, and other parts of the vehicle.

Do not use the compact spare on other vehicles.

Do not mix the compact spare tyre or wheel with other wheels or tyres. They will not fit. Keep the spare tyre and its wheel together.

**Caution**

Tyre chains will not fit the compact spare. Using them can damage the vehicle and the chains. Do not use tyre chains on the compact spare.

## Jump Starting

For more information about the vehicle battery, see *Battery* ⇨ *259*.

If the battery has run down, try to use another vehicle and some jumper cables to start your vehicle. Be sure to use the following steps to do it safely.

**⚠ Warning**

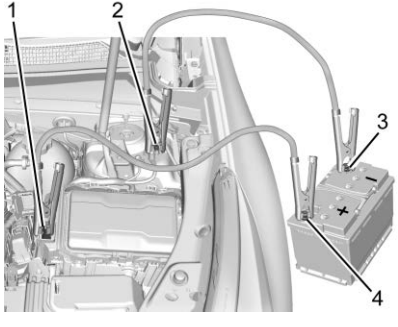
Batteries can hurt you. They can be dangerous because:

- They contain acid that can burn you.
- They contain gas that can explode or ignite.
- They contain enough electricity to burn you.

If you do not follow these steps exactly, some or all of these things can hurt you.

**Caution**

Ignoring these steps could result in costly damage to the vehicle that would not be covered by the vehicle warranty. Trying to start the vehicle by pushing or pulling it will not work, and it could damage the vehicle.




1. Discharged Remote Battery Positive Terminal
2. Discharged Remote Battery Negative Ground Terminal
3. Good Battery Negative Terminal
4. Good Battery Positive Terminal

The jump start remote positive terminal (1) and the remote negative ground terminal (2) for the discharged battery are on the driver side of the vehicle.

The jump start negative terminal (3) and positive terminal (4) are on the battery of the vehicle providing the jump start.

The positive jump start connection for the discharged battery is under a cover. Remove the cover to expose the terminal.

1. Check the other vehicle. It must have a 12-volt battery with a negative ground system.

**Caution**

If the other vehicle does not have a 12-volt system with a negative ground, both vehicles can be

(Continued)

**Caution (Continued)**

damaged. Only use a vehicle that has a 12-volt system with a negative ground for jump starting.

2. Position the two vehicles so that they are not touching.
3. Apply the parking brake firmly and put the transmission in P (Park). See *Shifting Into Park* ⇨ *170*.

**Caution**

If any accessories are left on or plugged in during the jump starting procedure, they could be damaged. The repairs would not be covered by the vehicle warranty. Whenever possible, turn off or unplug all accessories on either vehicle when jump starting.

4. Turn the ignition off. Turn off all lights and accessories in both vehicles, except the hazard warning flashers if needed.

**⚠ Warning**

An electric fan can start up even when the engine is not running and can injure you. Keep hands, clothing, and tools away from any underbonnet electric fan.

**⚠ Warning**

Using a match near a battery can cause battery gas to explode. People have been hurt doing this, and some have been blinded. Use a torch if you need more light.

Battery fluid contains acid that can burn you. Do not get it on you. If you accidentally get it in your eyes or on your skin, flush the place with water and get medical help immediately.

**⚠ Warning**

Fans or other moving engine parts can injure you badly. Keep your hands away from moving parts once the engine is running.

5. Connect one end of the red positive (+) cable to the remote positive (+) terminal on the discharged battery.
6. Connect the other end of the red positive (+) cable to the positive (+) terminal of the good battery.
7. Connect one end of the black negative (–) cable to the negative (–) terminal of the good battery.
8. Connect the other end of the black negative (–) cable to the remote negative (–) ground terminal on the driver side shock tower for the discharged battery.
9. Start the engine in the vehicle with the good battery and run the engine at idle speed for at least four minutes.
10. Try to start the vehicle that had the dead battery. If it will not start after a few tries, it probably needs service.

**Caution**

If the jump leads are connected or removed in the wrong order, electrical shorting may occur and damage the vehicle. The repairs would not be covered by the vehicle warranty. Always connect and remove the jump leads in the correct order, making sure that the cables do not touch each other or other metal.

### Jump Lead Removal

Reverse the sequence exactly when removing the jump leads.

After starting the disabled vehicle and removing the jump leads, allow it to idle for several minutes.

# Towing the Vehicle

**Caution**

Incorrectly towing a disabled vehicle may cause damage. The damage would not be covered by the vehicle warranty. Do not lash or hook to suspension components. Use the proper straps around the tyres to secure the vehicle. Do not drag a locked wheel/tyre. Use tyre skates or dollies under any locked wheel/tyre while loading the vehicle. Do not use a sling type lift to tow the vehicle. This could damage the vehicle.

**Caution**

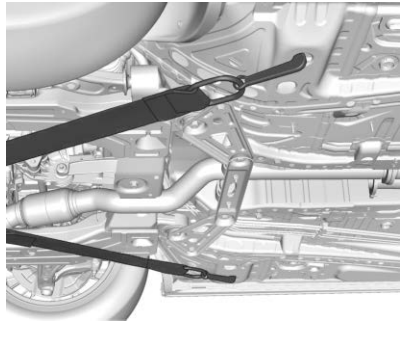
Improper use of the towing eye can damage the vehicle. If equipped, use the towing eye to load a disabled vehicle onto a flatbed tow truck from a flat road surface, or to move

(Continued)

**Caution (Continued)**

the vehicle a short distance. Use caution and low speeds. The transmission must be in (N) Neutral when moving the vehicle.

GM recommends a flatbed tow truck to transport a disabled vehicle. Use ramps to help reduce approach angles, if necessary. A towed vehicle should have its drive wheels off the ground. Contact a professional towing service if the disabled vehicle must be towed.



The vehicle is equipped with specific attachment points to be used by the towing provider. These holes may be used to pull the vehicle from a flat road surface onto the flatbed tow truck.

## Recreational Vehicle Towing

Recreational vehicle towing means towing the vehicle behind another vehicle, such as behind a motor home. The two most common types of recreational vehicle towing are known as dinghy towing and dolly towing. Dinghy towing is towing the vehicle with all four wheels on the ground. Dolly towing is towing the vehicle with two wheels on the ground and two wheels up on a device known as a dolly.

Here are some important things to consider before recreational vehicle towing:

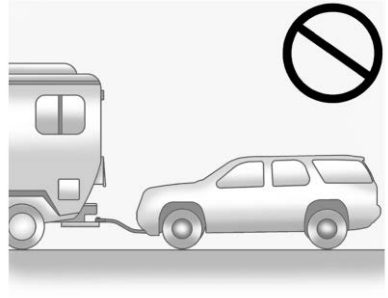
- Become familiar with the local laws that apply to recreational vehicle towing. These laws may vary by region.

- The towing capacity of the towing vehicle. Be sure to read the tow vehicle manufacturer's recommendations.
- How far the vehicle will be towed. Some vehicles have restrictions on how far and how long they can be towed.
- The proper towing equipment. See your dealer or trailering professional for additional advice and equipment recommendations.
- If the vehicle is ready to be towed. Just as preparing the vehicle for a long trip, make sure the vehicle is prepared to be towed.

**Caution**

Use of a shield mounted in front of the vehicle grille could restrict airflow and cause damage to the transmission. The repairs would not be covered by the vehicle warranty. If using a shield, only use one that attaches to the towing vehicle.

## Dinghy Towing

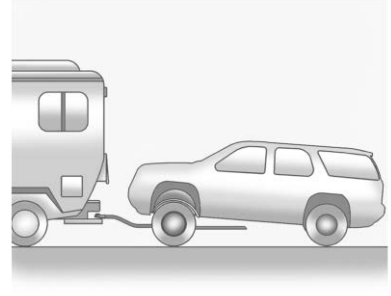


**Caution**

If the vehicle is towed with all four wheels on the ground, the drivetrain components could be damaged. The repairs would not be covered by the vehicle warranty. Do not tow the vehicle with all four wheels on the ground.

The vehicle is neither designed nor intended to be towed with all four wheels on the ground. If the vehicle must be towed, a dolly should be used. See the following information on dolly towing.

## Dolly Towing



### Loading up to the Dolly

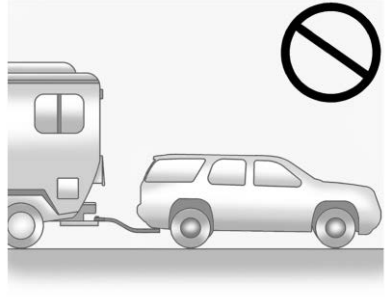
1. On level ground start the engine.
2. Release the parking brake.
3. Apply the brake pedal and hold until the end of step 5.
4. Push and hold the Electric Parking Brake (EPB) switch. After 15 seconds, the EPB amber tell-tale warning light will begin flashing in the IP cluster.

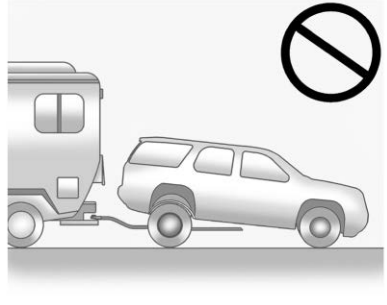
5. When the indicator flashes amber, release the EPB within five seconds. Then, push and release the EPB switch and release the brake pedal.
6. The EPB amber tell-tale warning light will remain flashing and the parking brake will be released if the process is successful.
7. Put the front wheels on the dolly.
8. Shift the transmission to P (Park).
9. Turn the vehicle off.
10. Secure the vehicle to the dolly.
11. Follow the dolly manufacturer's instructions for preparing the vehicle and dolly for towing.
12. Open the bonnet.
13. Disconnect the negative (-) terminal connector from the 12–volt battery.
14. Close and latch the bonnet.

### Unloading from the Dolly

1. On level ground open the bonnet.
2. Connect the negative (-) terminal connector to the 12–volt battery.
3. Close the hood.
4. Follow the dolly manufacturer's instructions for preparing the vehicle and dolly for unloading.
5. Unfasten the vehicle from the dolly.
6. Start the engine.
7. Shift the transmission to R (Reverse).
8. Drive vehicle off of the dolly.
9. Shift the transmission to P (Park).
10. Apply the brake pedal and hold until step 12.
11. Push and hold the EPB switch for 5 seconds.
12. The EPB amber tell-tale warning light in the IP cluster will turn off.
13. Apply and release the Parking Brake by pushing the EPB switch.

## Towing the Vehicle from the Rear





**Caution**

Towing the vehicle from the rear could damage it. Also, repairs would not be covered by the vehicle warranty. Never have the vehicle towed from the rear.

Do not tow the vehicle from the rear.

# Appearance Care

## Exterior Care

### Locks

Locks are lubricated at the factory. Use a de-icing agent only when absolutely necessary, and have the locks greased after using. See *Recommended Fluids and Lubricants* ⇨ *322*.

### Washing the Vehicle

To preserve the vehicle's finish, wash it often and out of direct sunlight.

**Caution**

Do not use petroleum-based, acidic, or abrasive cleaning agents as they can damage the vehicle's paint, metal, or plastic parts. If damage occurs, it would not be covered by the vehicle warranty. Approved cleaning products can be obtained from your dealer. Follow all manufacturer directions regarding

(Continued)

**Caution (Continued)**

correct product usage, necessary safety precautions, and appropriate disposal of any vehicle care product.

**Caution**

Avoid using high-pressure washers closer than 30 cm (12 in) to the surface of the vehicle. Use of power washers exceeding 8 274 kPa (1,200 psi) can result in damage or removal of paint and decals.

**Caution**

Do not power wash any component under the bonnet that has this  symbol.

This could cause damage that would not be covered by the vehicle warranty.

If using an automatic car wash, follow the car wash instructions. The windscreen wiper and rear window wiper, if equipped, must be off. Remove any accessories that may be damaged or interfere with the car wash equipment.

Rinse the vehicle well, before washing and after, to remove all cleaning agents completely. If they are allowed to dry on the surface, they could stain.

Dry the finish with a soft, clean chamois or an all-cotton towel to avoid surface scratches and water spotting.

## Finish Care

Application of aftermarket clearcoat sealant/wax materials is not recommended. If painted surfaces are damaged, see your dealer to have the damage assessed and repaired. Foreign materials such as calcium chloride and other salts, ice melting agents, road oil and tar, tree sap, bird droppings, chemicals from industrial chimneys, etc., can damage the vehicle's finish if they remain on painted surfaces. Wash the vehicle as soon as possible. If necessary, use non-abrasive cleaners that are marked safe for painted surfaces to remove foreign matter.

Occasional hand waxing or mild polishing should be done to remove residue from the paint finish. See your dealer for approved cleaning products.

Do not apply waxes or polishes to uncoated plastic, vinyl, rubber, decals, simulated wood, or flat paint as damage can occur.

**Caution**

Machine compounding or aggressive polishing on a base coat/clear coat paint finish may damage it. Use only non-abrasive waxes and polishes that are made for a base coat/clear coat paint finish on the vehicle.

To keep the paint finish looking new, keep the vehicle garaged or covered whenever possible.

### Protecting Exterior Bright Metal Mouldings

**Caution**

Failure to clean and protect the bright metal mouldings can result in a hazy white finish or pitting. This damage would not be covered by the vehicle warranty.

The bright metal mouldings on the vehicle are aluminium, chrome, or stainless steel. To prevent damage always follow these cleaning instructions:

- Be sure the moulding is cool to the touch before applying any cleaning solution.
- Use only approved cleaning solutions for aluminium, chrome, or stainless steel. Some cleaners are highly acidic or contain alkaline substances and can damage the mouldings.
- Always dilute a concentrated cleaner according to the manufacturer's instructions.

- Do not use cleaners that are not intended for automotive use.
- Use a nonabrasive wax on the vehicle after washing to protect and extend the moulding finish.

### Cleaning Exterior Lamps/Lenses, Emblems, Decals, and Stripes

Use only lukewarm or cold water, a soft cloth, and a car washing soap to clean exterior lamps, lenses, emblems, decals, and stripes. Follow instructions under "Washing the Vehicle" previously in this section.

Lamp covers are made of plastic, and some have a UV protective coating. Do not clean or wipe them when dry.

Do not use any of the following on lamp covers:

- Abrasive or caustic agents.
- Washer fluids and other cleaning agents in higher concentrations than suggested by the manufacturer.
- Solvents, alcohols, fuels, or other harsh cleaners.
- Ice scrapers or other hard items.
- Aftermarket appearance caps or covers while the lamps are illuminated, due to excessive heat generated.

**Caution**

Failure to clean lamps properly can cause damage to the lamp cover that would not be covered by the vehicle warranty.

**Caution**

Using wax on low gloss black finish stripes can increase the gloss level and create a non-uniform finish. Clean low gloss stripes with soap and water only.

### Air Intakes

Clear debris from the air intakes, between the bonnet and windscreen, when washing the vehicle.

### Windscreen and Wiper Blades

Clean the outside of the windscreen with glass cleaner.

Clean rubber blades using a lint-free cloth or paper towel soaked with windscreen washer fluid or a mild detergent. Wash the windscreen thoroughly when cleaning the blades. Insects, road grime, sap, and a build-up of vehicle wash/wax treatments may cause wiper streaking.

Replace the wiper blades if they are worn or damaged. Damage can be caused by extreme dusty conditions, sand, salt, heat, sun, snow, and ice.

### Weatherstrips

Apply weatherstrip lubricant on weatherstrips to make them last longer, seal better, and not stick or squeak. Lubricate weatherstrips at least once a year. Hot, dry climates may require more frequent application. Black marks from rubber material on painted surfaces can be removed by rubbing with a clean cloth. See *Recommended Fluids and Lubricants ⇨ 322*.

### Tyres

Use a stiff brush with tyre cleaner to clean the tyres.

**Caution**

Using petroleum-based tyre dressing products on the vehicle may damage the paint finish and/or tyres. When applying a tyre dressing, always wipe off any overspray from all painted surfaces on the vehicle.

### Wheels and Wheel Trim

Use a soft, clean cloth with mild soap and water to clean the wheels. After rinsing thoroughly with clean water, dry with a soft, clean towel. A wax may then be applied.

**Caution**

Chrome wheels and chrome wheel trim may be damaged if the vehicle is not washed after driving on roads

(Continued)

**Caution (Continued)**

that have been sprayed with magnesium chloride or calcium chloride. These are used on roads for conditions such as dust and ice. Always wash the chrome with soap and water after exposure.

**Caution**

To avoid surface damage on wheels and wheel trims, do not use strong soaps, chemicals, abrasive polishes, cleaners or brushes. Use only GM approved cleaners. Do not drive the vehicle through an automatic car wash that uses silicon carbide tyre/wheel cleaning brushes. Damage could occur and the repairs would not be covered by the vehicle warranty.

### Brake System

Visually inspect brake lines and hoses for proper hook-up, binding, leaks, cracks, chafing, etc. Inspect disc brake pads for wear and discs for surface condition. Inspect drum brake linings/shoes for wear or cracks. Inspect all other brake parts.

### Steering, Suspension, and Chassis Components

Visually inspect steering, suspension, and chassis components for damaged, loose, or missing parts or signs of wear at least once a year.

Inspect power steering for proper attachment, connections, binding, leaks, cracks, chafing, etc.

Visually check constant velocity joint boots and axle seals for leaks.

### Body Component Lubrication

Lubricate all key lock cylinders, bonnet hinges, tailgate hinges, and the steel fuel flap hinges, unless the components are plastic. Applying silicone grease on weatherstrips with a

clean cloth will make them last longer, seal better, and not stick or squeak.

### Underbody Maintenance

At least twice a year, spring and fall, use plain water to flush any corrosive materials from the underbody. Take care to thoroughly clean any areas where mud and other debris can collect.

Do not directly power wash the transfer case and/or front/rear axle output seals. High pressure water can overcome the seals and contaminate the fluid. Contaminated fluid will decrease the life of the transfer case and/or axles and should be replaced.

### Sheet Metal Damage

If the vehicle is damaged and requires sheet metal repair or replacement, make sure the body repair shop applies anti-corrosion material to parts repaired or replaced to restore corrosion protection.

Original manufacturer replacement parts will provide the corrosion protection while maintaining the vehicle warranty.

### Finish Damage

Quickly repair minor chips and scratches with touch-up materials available from your dealer to avoid corrosion. Larger areas of finish damage can be corrected in your dealer's body and paint shop.

### Chemical Paint Spotting

Airborne pollutants can fall upon and attack painted vehicle surfaces causing blotchy, ring-shaped discolourations, and small, irregular dark spots etched into the paint surface. See “Finish Care” previously in this section.

## Interior Care

To prevent dirt particle abrasions, regularly clean the vehicle's interior. Immediately remove any soiling. Newspapers or dark garments can transfer colour to the vehicle's interior.

Use a soft bristle brush to remove dust from knobs and crevices on the instrument cluster. Using a mild soap solution, immediately remove hand lotions, sunscreen, and insect repellent from all interior surfaces or permanent damage may result.

Use cleaners specifically designed for the surfaces being cleaned to prevent permanent damage. Apply all cleaners directly to the cleaning cloth. Do not spray cleaners on any switches or controls. Remove cleaners quickly.

Before using cleaners, read and follow all safety instructions on the label. While cleaning the interior, open the doors and windows to get proper ventilation.

To prevent damage, do not clean the interior using the following cleaners or techniques:

- Never use a razor or any other sharp object to remove soil from any interior surface.
- Never use a brush with stiff bristles.
- Never rub any surface aggressively or with too much pressure.

- Do not use laundry detergents or dishwashing soaps with degreasers. For liquid cleaners, use approximately 20 drops per 3.8 L (1 gal) of water. A concentrated soap solution will create streaks and attract dirt. Do not use solutions that contain strong or caustic soap.
- Do not heavily saturate the upholstery when cleaning.
- Do not use solvents or cleaners containing solvents.

### Interior Glass

To clean, use a terry cloth fabric dampened with water. Wipe droplets left behind with a clean dry cloth. If necessary, use a commercial glass cleaner after cleaning with plain water.

**Caution**

To prevent scratching, never use abrasive cleaners on automotive glass. Abrasive cleaners or aggressive cleaning may damage the rear window defogger.

Cleaning the windscreen with water during the first three to six months of ownership will reduce tendency to fog.

### Speaker Covers

Vacuum around a speaker cover gently, so that the speaker will not be damaged. Clean spots with water and mild soap.

### Coated Mouldings

Coated mouldings should be cleaned.

- When lightly soiled, wipe with a sponge or soft, lint-free cloth dampened with water.
- When heavily soiled, use warm soapy water.

### Fabric/Carpet/Suede

Start by vacuuming the surface using a soft brush attachment. If a rotating vacuum brush attachment is being used, only use it on the floor carpet. Before cleaning, gently remove as much of the soil as possible:

- Gently blot liquids with a paper towel. Continue blotting until no more soil can be removed.
- For solid soil, remove as much as possible prior to vacuuming.

To clean:

1. Saturate a clean, lint-free colour-fast cloth with water. Microfiber cloth is recommended to prevent lint transfer to the fabric or carpet.
2. Remove excess moisture by gently wringing until water does not drip from the cleaning cloth.
3. Start on the outside edge of the soil and gently rub toward the centre. Fold the cleaning cloth to a clean area frequently to prevent forcing the soil in to the fabric.
4. Continue gently rubbing the soiled area until there is no longer any colour transfer from the soil to the cleaning cloth.
5. If the soil is not completely removed, use a mild soap solution followed only by plain water.

If the soil is not completely removed, it may be necessary to use a commercial upholstery cleaner or spot lifter. Test a small hidden area for colourfastness before using a commercial upholstery cleaner or spot lifter. If ring formation occurs, clean the entire fabric or carpet.

After cleaning, use a paper towel to blot excess moisture.

### Cleaning High Gloss Surfaces and Vehicle Information and Radio Displays

Use a microfibre cloth on high gloss surfaces or vehicle displays. First, use a soft bristle brush to remove dirt that can scratch the surface. Then gently clean by rubbing with a microfibre cloth. Never use window cleaners or solvents. Periodically hand wash the microfibre cloth separately, using mild soap. Do not use bleach or fabric softener. Rinse thoroughly and air dry before next use.

**Caution**

Do not attach a device with a suction cup to the display. This may cause damage and would not be covered by the vehicle warranty.

### Instrument Panel, Leather, Vinyl, Other Plastic Surfaces, Low Gloss Paint Surfaces, and Natural Open Pore Wood Surfaces

Use a soft microfiber cloth dampened with water to remove dust and loose dirt. For a more thorough cleaning, use a soft microfiber cloth dampened with a mild soap solution.

**Caution**

Soaking or saturating leather, especially perforated leather, as well as other interior surfaces, may cause permanent damage. Wipe excess moisture from these surfaces after cleaning and allow them to

(Continued)

**Caution (Continued)**

dry naturally. Never use heat, steam, or spot removers. Do not use cleaners that contain silicone or wax-based products. Cleaners containing these solvents can permanently change the appearance and feel of leather or soft trim, and are not recommended.

Do not use cleaners that increase gloss, especially on the instrument panel. Reflected glare can decrease visibility through the windscreen under certain conditions.

**Caution**

Use of air fresheners may cause permanent damage to plastics and painted surfaces. If an air freshener comes in contact with any plastic or painted surface in the vehicle, blot immediately and clean with a soft cloth dampened with a mild

(Continued)

**Caution (Continued)**

soap solution. Damage caused by air fresheners would not be covered by the vehicle warranty.

### Cargo Cover and Convenience Net

If equipped, wash with warm water and mild detergent. Do not use chlorine bleach. Rinse with cold water, and then dry completely.

### Care of Seat Belts

Keep belts clean and dry.

**⚠ Warning**

Do not bleach or dye seat belt webbing. It may severely weaken the webbing. In a crash, they might not be able to provide adequate protection. Clean and rinse seat belt webbing only with mild soap and lukewarm water. Allow the webbing to dry.

## Floor Mats

**⚠ Warning**

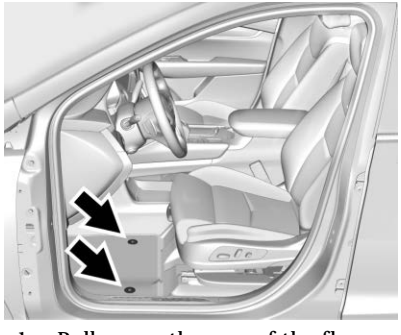
If a floor mat is the wrong size or is not properly installed, it can interfere with the pedals. Interference with the pedals can cause unintended acceleration and/or increased stopping distance which can cause a crash and injury. Make sure the floor mat does not interfere with the pedals.

Use the following guidelines for proper floor mat usage.

- The original equipment floor mats were designed for your vehicle. If the floor mats need replacing, it is recommended that certified floor mats be purchased. Non-certified floor mats may not fit properly and may interfere with the pedals. Always check that the floor mats do not interfere with the pedals.
- Do not use a floor mat if the vehicle is not equipped with a floor mat retainer on the driver side floor.
- Use the floor mat with the correct side up. Do not turn it over.
- Do not place anything on top of the driver side floor mat.
- Use only a single floor mat on the driver side.
- Do not place one floor mat on top of another.

## Removing and Replacing the Floor Mats

The driver and passenger side floor mats are held in place by two button-type retainers.



1. Pull up on the rear of the floor mat to unlock each retainer and remove.
2. Reinstall by lining up the floor mat retainer openings over the carpet retainers and pushing down to snap into position.
3. Make sure the floor mat is properly secured in place. Verify the floor mat does not interfere with the pedals.

# Service and Maintenance



## General Information

Your vehicle is an important investment. This section describes the required maintenance for the vehicle. Follow this schedule to help protect against major repair expenses resulting from neglect or inadequate maintenance. It may also help to maintain the value of the vehicle if it is sold. It is the responsibility of the owner to have all required maintenance performed.

Your retailer has trained technicians who can perform required maintenance using genuine replacement parts. They have up-to-date tools and equipment for fast and accurate diagnostics. Many dealers have extended evening and Saturday hours, courtesy transportation, and online scheduling to assist with service needs.

Your retailer recognises the importance of providing competitively priced maintenance and repair services. With trained technicians, your retailer is the place for routine maintenance such as oil changes and tyre rotations and additional maintenance items like tyres, brakes, batteries, and wiper blades.

**Caution**

Damage caused by improper maintenance can lead to costly repairs and may not be covered by the vehicle warranty. Maintenance intervals, checks, inspections, recommended fluids, and lubricants are important to keep the vehicle in good working condition.

Do not have chemical flushes that are not approved by GM performed on the vehicle. The use of flushes, solvents, cleaners, or lubricants that are not approved by GM could damage the vehicle, requiring expensive repairs that are not covered by the vehicle warranty.

The Tyre Rotation and Required Services are the responsibility of the vehicle owner. It is recommended to have your retailer perform these services every 12 000 km/7,500 mi.

Proper vehicle maintenance helps to keep the vehicle in good working condition, improves fuel economy, and reduces vehicle emissions.

Because of the way people use vehicles, maintenance needs vary. There may need to be more frequent checks and services. The Additional Required Services - Normal are for vehicles that:

- Carry passengers and cargo within recommended limits on the Tyre and Loading Information label. See “Vehicle Load Limits” in the owner's manual.
- Are driven on reasonable road surfaces within legal driving limits.
- Use the recommended fuel. See *Fuel for Diesel Engines ⇨ 221*.

Refer to the information in the Maintenance Schedule Additional Required Services - Normal chart.

The Additional Required Services - Severe are for vehicles that are:

- Mainly driven in heavy city traffic in hot weather.
- Mainly driven in hilly or mountainous terrain.
- Frequently towing a trailer.
- Used for high speed or competitive driving.
- Used for taxi, police, or delivery service.

Refer to the information in the Maintenance Schedule Additional Required Services - Severe chart.

**⚠ Warning**

Performing maintenance work can be dangerous and can cause serious injury. Perform maintenance work only if the required information, proper tools, and equipment are available. If they are not, visit your retailer for a trained technician to do the work. See "Doing Your Own Service Work" in the owner's manual.

# Maintenance Schedule

## Owner Checks and Services

Check the engine oil level. See *Engine Oil ⇨ 247*.

### Once a Month

- Check the tyre inflation pressures. See *Tyre Pressure ⇨ 273*.
- Inspect the tyres for wear. See *Tyre Inspection ⇨ 280*.
- Check the windscreen washer fluid level. See *Washer Fluid ⇨ 256*.

## Engine Oil Change

Change engine oil and filter when indicated by the Engine Oil Life System, 30 000 km, or at one year, whichever comes first (15 000 km or at six months under severe driving conditions). When the CHANGE ENGINE OIL SOON message displays, have the engine oil and filter changed within the next 1 000 km. The system must be reset. Your dealer has trained service people who will perform this work and reset the system. It is also

important to check the oil regularly over the course of an oil drain interval and keep it at the proper level.

Drain the diesel fuel filter of water when the oil is changed or when the WATER IN FUEL CONTACT SERVICE message displays.

### Engine Air Filter Change

When the REPLACE AT NEXT OIL CHANGE message displays, the engine air filter should be replaced at the next engine oil change. When the REPLACE ENGINE AIR FILTER SOON message displays, the engine air filter should be replaced at the earliest convenience. Reset the engine air filter life system after the engine air filter is replaced. See *Engine Air Filter Life System* ⇨ *250*.

### Air Conditioning Desiccant (Replace Every Seven Years)

The air conditioning system requires maintenance every seven years. This service requires replacement of the desiccant to help the longevity and efficient operation of the air conditioning system. This service can be complex. See your dealer.

### Vehicle Inspection and Required Services

Inspect the following items when indicated by the oil life system, at 30 000 km, or at one year, whichever comes first. See *Tyre Rotation* ⇨ *280*.

- Check engine oil level and oil life percentage. If needed, change engine oil and filter, and reset oil life system. See *Engine Oil* ⇨ *247* and *Engine Oil Life System* ⇨ *249*.
- Check the air filter life percentage. If necessary, replace the engine air filter and reset the engine air filter life system. See *Engine Air Filter Life System* ⇨ *250*.
- Check engine coolant level. See *Cooling System* ⇨ *251*.
- Check the windscreen washer fluid level. See *Washer Fluid* ⇨ *256*.
- Check the tyre inflation pressures. See *Tyre Pressure* ⇨ *273*.
- Inspect the tyre wear. See *Tyre Inspection* ⇨ *280*.
- Visually check for fluid leaks.
- Inspect brake system. See *Exterior Care* ⇨ *305*.
- Visually inspect steering, suspension, and chassis components for damage, including cracks or tears in the rubber boots, loose or missing parts, or signs of wear, at least once a year. See *Exterior Care* ⇨ *305*.
- Inspect power steering for proper attachment, connections, binding, leaks, cracks, chafing, etc.
- Visually inspect halfshafts and drive shafts for excessive wear, lubricant leaks, and/or damage including: tube dents or cracks, constant velocity joint or universal joint looseness, cracked or missing boots, loose or missing boot clamps, centre bearing excessive looseness, loose or missing fasteners, and axle seal leaks.
- Check the restraint system components. See *Safety System Check* ⇨ *59*.
- Visually inspect fuel system for damage or leaks.

- Visually inspect the exhaust system and nearby heat shields for loose or damaged parts.
- Lubricate body components. See *Exterior Care ⇨ 305*.
- Check the parking brake and automatic transmission park mechanism. See *Park Brake and P (Park) Mechanism Check ⇨ 260*.
- Check the accelerator pedal for damage, high effort, or binding. Replace if needed.
- Visually inspect gas strut for signs of wear, cracks, or other damage. Check the hold open ability of the strut. If the hold open is low, service the gas strut. See *Gas Strut(s) ⇨ 262*.
- Check the tyre sealant expiration date, if equipped. See *Tyre Sealant and Compressor Kit ⇨ 287*.
- Inspect sunroof track and seal, if equipped. See *Sunroof ⇨ 39*.

| **Maintenance Schedule Additional Required Services - Normal** | 30 000 km | 60 000 km | 90 000 km | 120 000 km | 150 000 km | 180 000 km | 210 000 km | 240 000 km | 270 000 km | 300 000 km | 330 000 km | 360 000 km | 390 000 km | 420 000 km | 450 000 km | 480 000 km | 510 000 km | 540 000 km | 570 000 km | 600 000 km |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Rotate the tyres, if recommended for the vehicle, and perform Required Services. Check engine oil level and oil life percentage. Change the engine oil and filter, if needed.<br>Check the engine air filter life percentage and status. Change the engine air filter, if needed. (1)<br>Drain the diesel fuel filter of water. | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Replace the passenger compartment air filter. (2) | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Replace fuel filter. (3) | | ✓ | | ✓ | | ✓ | | ✓ | | ✓ | | ✓ | | ✓ | | ✓ | | ✓ | | ✓ |
| Inspect the evaporative control system. (4) | | ✓ | | ✓ | | ✓ | | ✓ | | ✓ | | ✓ | | ✓ | | ✓ | | ✓ | | ✓ |
| Change the rear axle fluid, if equipped with AWD. (5) | | | | | | | | ✓ | | | | | | | | ✓ | | | | |
| Drain and fill the engine cooling system. (6) | | | | | | | | ✓ | | | | | | | | ✓ | | | | |
| Visually inspect the accessory drive belts. (7) | | | | | | | | ✓ | | | | | | | | ✓ | | | | |
| Replace brake fluid. (8) | | | | | | | | | | | | | | | | | | | | |
| Replace windscreen wiper blades. (9) | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Replace bonnet and/or body lift support gas struts. (10) | | | | ✓ | | | | ✓ | | | | ✓ | | | | ✓ | | | | ✓ |
| Replace the air conditioning desiccant. (11) | | | | | | | | | | | | | | | | | | | | |

### Footnotes — Maintenance Schedule Additional Required Services - Normal

**(1)** Or every four years, whichever comes first. If driving in dusty conditions, inspect the filter at each oil change or more often as needed. See *Engine Air Cleaner/Filter* ⇨ *250*.

**(2)** Or every two years, whichever comes first. More frequent passenger compartment air filter replacement may be needed if driving in areas with heavy traffic, poor air quality, high dust levels, or environmental allergens. Passenger compartment air filter replacement may also be needed if there is reduced airflow, window misting, or odours. Your GM retailer can help determine when to replace the filter.

**(3)** Or as indicated by the Driver Information Centre (DIC) or two years whichever comes first. The fuel filter may need to be replaced more often based on biodiesel usage, driving in climates with severe dust, off-road driving, or towing a trailer for extended periods.

**(4)** Visually check all fuel and vapour lines and hoses for proper attachment, connection, routing, and condition.

**(5)** Do not directly power wash the transfer case and/or front/rear axle output seals. High pressure water can overcome the seals and contaminate the transfer case fluid. Contaminated fluid will decrease the life of the transfer case and/or axles and should be replaced.

**(6)** Or every five years, whichever comes first. See *Cooling System* ⇨ *251*.

**(7)** Or every 10 years, whichever comes first. Inspect for fraying, excessive cracking, or damage; replace, if needed.

**(8)** Replace the brake fluid every two years. See *Brake Fluid* ⇨ *258*.

**(9)** Or every 12 months, whichever comes first. See *Wiper Blade Replacement* ⇨ *261*.

**(10)** Or every 10 years, whichever comes first. See *Gas Strut(s)* ⇨ *262*.

**(11)** Replace the air conditioning desiccant every seven years.

| **Maintenance Schedule Additional Required Services - Severe** | 15 000 km | 30 000 km | 45 000 km | 60 000 km | 75 000 km | 90 000 km | 105 000 km | 120 000 km | 135 000 km | 150 000 km | 165 000 km | 180 000 km | 195 000 km | 210 000 km | 225 000 km | 240 000 km | 255 000 km | 270 000 km | 285 000 km | 300 000 km |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Rotate the tyres, if recommended for the vehicle, and perform Required Services. Check engine oil level and oil life percentage. Change the engine oil and filter, if needed.<br>Check the engine air filter life percentage and status. Change the engine air filter, if needed. (1)<br>Drain the diesel fuel filter of water. | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Replace the passenger compartment air filter. (2) | | ✓ | | ✓ | | ✓ | | ✓ | | ✓ | | ✓ | | ✓ | | ✓ | | ✓ | | ✓ |
| Replace fuel filter. (3) | | | | ✓ | | | | ✓ | | | | ✓ | | | | ✓ | | | | ✓ |
| Inspect the evaporative control system. (4) | | | | ✓ | | | | ✓ | | | | ✓ | | | | ✓ | | | | ✓ |
| Change the rear axle fluid, if equipped with AWD. (5) | | | | | | | | ✓ | | | | | | | | ✓ | | | | |
| Change the automatic gearbox fluid. | | | | ✓ | | | | ✓ | | | | ✓ | | | | ✓ | | | | ✓ |
| Drain and fill the engine cooling system. (6) | | | | | | | | | | | | | | | | ✓ | | | | |
| Visually inspect the accessory drive belts. (7) | | | | | | | | | | | | | | | | ✓ | | | | |
| Replace brake fluid. (8) | | | | | | | | | | | | | | | | | | | | |
| Replace windscreen wiper blades. (9) | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Replace bonnet and/or body lift support gas struts. (10) | | | | | | | | ✓ | | | | | | | | ✓ | | | | |
| Replace the air conditioning desiccant. (11) | | | | | | | | | | | | | | | | | | | | |

**Footnotes — Maintenance Schedule Additional Required Services - Severe**

**(1)** Or every four years, whichever comes first. If driving in dusty conditions, inspect the filter at each oil change or more often as needed. See *Engine Air Cleaner/Filter* ⇨ *250*.

**(2)** Or every two years, whichever comes first. More frequent passenger compartment air filter replacement may be needed if driving in areas with heavy traffic, poor air quality, high dust levels, or environmental allergens. Passenger compartment air filter replacement may also be needed if there is reduced airflow, window misting, or odours. Your GM retailer can help determine when to replace the filter.

**(3)** Or as indicated by the Driver Information Centre (DIC) or two years whichever comes first. The fuel filter may need to be replaced more often based on biodiesel usage, driving in climates with severe dust, off-road driving, or towing a trailer for extended periods.

**(4)** Visually check all fuel and vapour lines and hoses for proper attachment, connection, routing, and condition.

**(5)** Do not directly power wash the transfer case and/or front/rear axle output seals. High pressure water can overcome the seals and contaminate the transfer case fluid. Contaminated fluid will decrease the life of the transfer case and/or axles and should be replaced.

**(6)** Or every five years, whichever comes first. See *Cooling System* ⇨ *251*.

**(7)** Or every 10 years, whichever comes first. Inspect for fraying, excessive cracking, or damage; replace, if needed.

**(8)** Replace the brake fluid every two years. See *Brake Fluid* ⇨ *258*.

**(9)** Or every 12 months, whichever comes first. See *Wiper Blade Replacement* ⇨ *261*.

**(10)** Or every 10 years, whichever comes first. See *Gas Strut(s)* ⇨ *262*.

**(11)** Replace the air conditioning desiccant every seven years.

# Recommended Fluids, Lubricants, and Parts

## Recommended Fluids and Lubricants

Fluids and lubricants identified below by name or specification, including fluids or lubricants not listed here, can be obtained from your retailer.

| Usage | Fluid/Lubricant |
|---|---|
| Automatic Transmission | DEXRON-VI Automatic Transmission Fluid. |
| Electronic Limited-Slip Differential Hydraulic Apply Fluid (AWD Only) | DEXRON-VI Automatic Transmission Fluid. |
| Engine Coolant | 50/50 mixture of clean, drinkable water and use only DEX-COOL Coolant. See *Cooling System* ⇨ *251*. |
| Engine Oil | Engine oil meeting the dexosD specification of the proper SAE viscosity grade. ACDelco dexosD is recommended. See *Engine Oil* ⇨ *247*. |
| Bonnet Latch Assembly, Secondary Latch, Pivots, Spring Anchor and Release Pawl | Lubricant meeting requirements of NLGI #2, Category LB or GC-LB. |
| Hydraulic Brake System | DOT 3 Hydraulic Brake Fluid. |
| Key Lock Cylinders, Bonnet and Door Hinges | Multi-Purpose Lubricant. See your dealer. |
| Rear Axle/Front Axle | See your dealer. |
| Transfer Case (All-Wheel Drive) | Transfer Case Fluid. See your dealer. |
| Weatherstrip Conditioning | Weatherstrip Lubricant. See your dealer. |

| Usage | Fluid/Lubricant |
|---|---|
| Windscreen Washer | Automotive windscreen washer fluid that meets regional freeze protection requirements. |

## Maintenance Replacement Parts

Replacement parts identified below by name, part number, or specification can be obtained from your dealer.

| Part | GM Part Number | ACDelco Part Number |
|---|---|---|
| Engine Air Cleaner/Filter | 23430313 | A3210C |
| Engine Oil Filter | | |
| ASM | 55511058 | - |
| Cartridge | 55511059 | PF2268G |
| Passenger Compartment Air Filter | 13508023 | CF185 |
| Wiper Blades | | |
| Driver Side – 60 cm (23.62 in) | 84580856 | - |
| Passenger Side – 50 cm (19.68 in) | 84580859 | - |
| Rear — 30 cm (11.81 in) | 84215609 | - |

## Maintenance Records

After the scheduled services are performed, record the date, odometer reading, who performed the service, and the type of services performed in the boxes provided. Retain all maintenance receipts.

| Date | Odometer Reading | Serviced By | Maintenance Stamp | Services Performed |
|---|---|---|---|---|
| | | | | |
| | | | | |
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# Technical Data



# Vehicle Identification

## Vehicle Identification Number (VIN)


This legal identifier is in the front corner of the instrument panel, on the driver side of the vehicle. It can be seen through the windscreen from outside. The Vehicle Identification Number (VIN) also appears on the Vehicle Certification and Service Parts labels and certificates of title and registration.

### Engine Identification

The eighth character in the VIN is the engine code. This code identifies the vehicle's engine, specifications, and replacement parts. See “Engine Specifications” under *Capacities and Specifications* ⇨ *326* for the vehicle's engine code.

## Service Parts Identification

There may be a large barcode on the certification label on the centre pillar that you can scan for the following information:

- Vehicle Identification Number (VIN)
- Model designation
- Paint information
- Production options

If there is not a large barcode on this label, then you will find this same information on a label under the tailgate area.

# Vehicle Data

## Capacities and Specifications

| Application | Capacities | |
|---|---|---|
| | Metric | English |
| Air Conditioning Refrigerant | For the air conditioning system refrigerant type and charge amount, see the refrigerant label under the bonnet. See your dealer for more information. | |
| Engine Cooling System | 9.2 L | 9.7 qt |
| Engine Oil with Filter | 5.0 L | 5.3 qt |
| Fuel Tank | | |
| FWD | 60.2 L | 15.9 gal |
| AWD | 61.7 L | 16.3 gal |
| Wheel Nut Torque | 190 N•m | 140 lb ft |
| All capacities are approximate. When adding, be sure to fill to the approximate level, as recommended in this manual. Recheck fluid level after filling. | | |
| Engine cooling system capacity values are based on the entire cooling system and its components. | | |

**Engine Specifications**

| Engine | VIN Code | Transmission | Spark Plug Gap |
|---|---|---|---|
| 2.0L L4 Turbo Diesel Engine (LSQ) | 2 | Automatic | - |

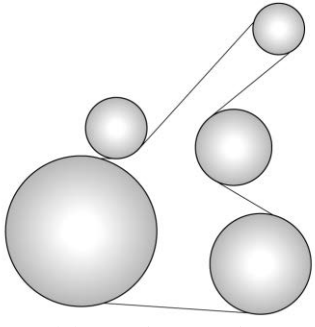
**Engine Data**

| Engine | Horsepower | Torque | Displacement | Compression Ratio |
|---|---|---|---|---|
| 2.0L L4 Turbo Diesel Engine | 128 Kw (172 hp) @ 3500 rpm | 381 N•m (281 lb ft) @ 1500-2750 rpm | 2.0 L | 15 +/- 5:1 |

## Fuel Consumption and Emissions Information

| | Urban | Extra-Urban | Combined |
|---|---|---|---|
| With 2.0L L4 LSQ Engine and 9-Speed MJD Automatic Transmission | | | |
| Carbon Dioxide (g/km) | TBD | TBD | TBD |
| Fuel Economy (L/100 km) | TBD | TBD | TBD |

## Engine Drive Belt Routing



2.0L L4 Diesel Engine

# Customer Information



Customer Information

## Declaration of Conformity

### Transmission Systems

This vehicle has systems that transmit and/or receive radio waves subject to 2014/53/EU. The manufacturers of the systems listed below declare conformity with Directive 2014/53/EU. The full text of the EU declaration of conformity for each system is available at the following Internet address: www.cadillaceurope.com.

#### Importer

GM Mobility Europe GmbH

Bethmannstraße 50-54 Ort

60311 Frankfurt am Main

Hessen

Germany

#### Forward Collision Alert and Adaptive Cruise Control

ADC Automotive Distance Control Systems GmbH

Peter-Dornier-Strasse 10,
88131 Lindau, Germany

Operating frequency: 76-77 GHz

Maximum transmit power: 35 dBm or 3.16w

#### Side Blind Zone Alert/Rear Cross Traffic Alert

Hella KGaA Hueck & Co.

Rixbecker Straße 75

59552 Lippstadt

Operating frequency: 24.25 GHz

Maximum transmit power: 20 dBm or 100mW

#### Rear Collision Mitigation

Delphi Electronics & Safety Systems

2151 East Lincoln Road

Kokomo, Indiana 46902

USA

Operating frequency: 76-77 GHz

Maximum transmit power: 22.5 dBm

#### Passive Entry Passive Start Key Fobs

DENSO Corporation

1-1, Showa-cho, Kariya-shi, Aichi-ken, 448-8661, Japan

Operating frequency: 433.92 MHz

Maximum transmit power: 0.258 mW

**Passive Entry Passive Start Module**

DENSO Corporation

1-1, Showa-cho, Kariya-shi, Aichi-ken, 448-8661, Japan

Operating frequency: 125 kHz

Maximum transmit power: 0.968 mW

**Tyre Pressure Monitoring System**

Schrader Electronics Ltd.

11 Technology Park

Belfast Road

Antrim Bt41 1QS

Northern Ireland

United Kingdom

Operating frequency: 433.92 MHz

Maximum transmit power: 10 dBm

GM North America

General Motors Company
Warren Technical Center
Vehicle Engineering Center
29427 Louis Chevrolet Rd.
Warren, Michigan 48093
U.S.A.

Declaration of Conformity
Pursuant to Machinery Directive 2006/42/EC

We hereby declare that the product:

Product Description: Scissor / Screw Automotive Jack
Type/Part #: 13508400-Base Jack

Is in conformity with Machinery Directive 2006/42/EC.

Technical standards applied:
GMW14337 Standard Equipment Jack - Hardware Tests
GMW15005 Standard Equipment Jack and Spare Tire, Vehicle Test

The person authorized to compile the technical file:
Lisa Pennick-Taylor
General Motors Company
29427 Louis Chevrolet Rd.
Warren, MI, 48093, USA

Date: January 17, 2019, Warren/MI, USA

Phillip Hubler
Engineering Group Manager
Tire/Wheel System
29427 Louis Chevrolet Rd.
Warren, MI, 48093, USA

Declaration of Conformity

Pursuant to Machinery Directive 2006/42/EC

We hereby declare that the product:

Product Description: Scissor/Screw Automotive Jack

Type/Part Number: 13508400
Base Jack

Is in conformity with Machinery Directive 2006/42/EC.

Technical standards applied:

GMW14337 Standard Equipment Jack – Hardware Tests

GMW15005 Standard Equipment Jack and Spare Tyre, Vehicle Test

The person authorised to complete the technical file:

Lisa Pennick-Taylor

General Motors Company

GMNA, USA

Signed by:

Phillip Hubler

Engineering Group Manager Tyre/Wheel Systems

GMNA, USA

# Vehicle Data Recording and Privacy

## Event Data Recorders

### Data Storage Modules in the Vehicle

A large number of electronic components of your vehicle contain data storage modules temporarily or permanently storing technical data about the condition of the vehicle, events, and errors. In general, this technical information documents the condition of parts, modules, systems, or the environment:

- Operating conditions of system components (e.g., filling levels).
- Status messages of the vehicle and its single components (e.g., number of wheel revolutions/rotational speed, deceleration, lateral acceleration).
- Dysfunctions and defects in important system components.
- Vehicle reactions in particular driving situations (e.g., inflation of an airbag, activation of the stability regulation system).

- Environmental concerns (e.g., temperature).

This data is exclusively technical and helps identify and correct errors as well as optimise vehicle functions.

Motion profiles indicating travelled routes cannot be created with this data.

If services are used (e.g., repair works, service processes, warranty cases, quality assurance), employees of the service network (manufacturer included) are able to read out this technical information from the event and error data storage modules applying special diagnostic devices. If required, you will receive further information at these dealers. After an error has been corrected, the data is deleted from the error storage module or constantly overwritten.

When using the vehicle, situations may occur in which these technical data related to other information (crash report, damage to the vehicle, witness statements, etc.) may be associated with a specific person — possibly, with the assistance of an expert.

Additional functions contractually agreed upon with the client (e.g., vehicle location in emergency cases) allow the transmission of particular vehicle data from the vehicle.

## Cybersecurity

GM collects information about the use of your vehicle including operational and safety related information. We collect this information to provide, evaluate, improve, and troubleshoot our products and services and to develop new products and services. The protection of vehicle electronics systems and customer data from unauthorised outside electronic access or control is important to GM. GM maintains appropriate security standards, practices, guidelines and controls aimed at defending the vehicle and the vehicle service ecosystem against unauthorised electronic access, detecting possible malicious activity in related networks, and responding to suspected cybersecurity incidents in a timely, coordinated and effective manner. Security incidents could impact your safety or compromise your private data. To minimise security risks, please do not connect your vehicle electronic systems to unauthorised devices or connect your vehicle to any unknown or untrusted networks (such as Bluetooth, Wi-Fi or similar technology). In the event you suspect any security incident impacting your data or the safe operation of your vehicle, please stop operating your vehicle and contact your retailer.

## Infotainment System

If the vehicle is equipped with a navigation system as part of the infotainment system, use of the system may result in the storage of destinations, addresses, telephone numbers, and other trip information. See the infotainment manual for information on stored data and for deletion instructions.

# eCall

**eCall Overview**



## eCall Overview

This vehicle is equipped with a 112 based eCall system that is free of charge.

In the event of a crash, an eCall-equipped vehicle may automatically call the nearest 112 emergency centre. If built-in sensors detect a crash, an emergency call is placed automatically. An advisor will determine whether help is needed. The exact location of the crash site is sent to the emergency centre even if the occupants of the vehicle are unable to communicate with emergency personnel.


The eCall system can also be activated manually. Press SOS on the overhead console to contact the nearest 112 emergency centre. Press within two seconds to cancel the manually activated eCall.

A problem with the system may be indicated by the following:

- Red light near the phone button displays
- Light near the phone button does not display with the vehicle switched on
- Driver Information Centre message may appear

Contact your retailer for service.

When the system is active, the green light near the phone button is lit.

Usage of personal data is strictly limited to the purpose of handling the emergency call to the emergency number 112.

The eCall system may collect and process the following data:

- Vehicle Identification Number
- Vehicle type, such as passenger vehicle or light commercial vehicle

- Vehicle propulsion storage type, such as petrol, diesel, CNG, LPG, electric, or hydrogen
- Last three vehicle locations and direction of travel
- Automatic activation log file for the system and its timestamp

Data collected by the eCall system is shared only with the 112 emergency centre when a connection is made.

Data collected by the system is:

- Temporarily stored in the system memory, but it is not available outside of the system before an eCall is triggered.
- Not traceable and not subject to constant tracking during normal system operation.
- Stored in the system's memory but is automatically and continuously deleted.

Vehicle location data is continuously overwritten and limited to the last three locations for normal operation of the system.

The system activity log is kept for the duration of the emergency call, or a maximum of 13 hours after the call was initiated.

The data subject, or vehicle owner, has the right to access the data and, as appropriate, to request the rectification, erasure or blocking of personal data when the processing of the data does not comply with local regulations. Any third parties who have received the data must be notified of any rectification, erasure, or blocking necessary in order to comply with local regulations unless it proves impossible or involves a disproportionate effort.

The data subject, or vehicle owner, has a right to complain to the competent data protection authority if he or she feels that his or her rights have been infringed as a result of the processing of his or her personal data.

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GENERAL MOTORS
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