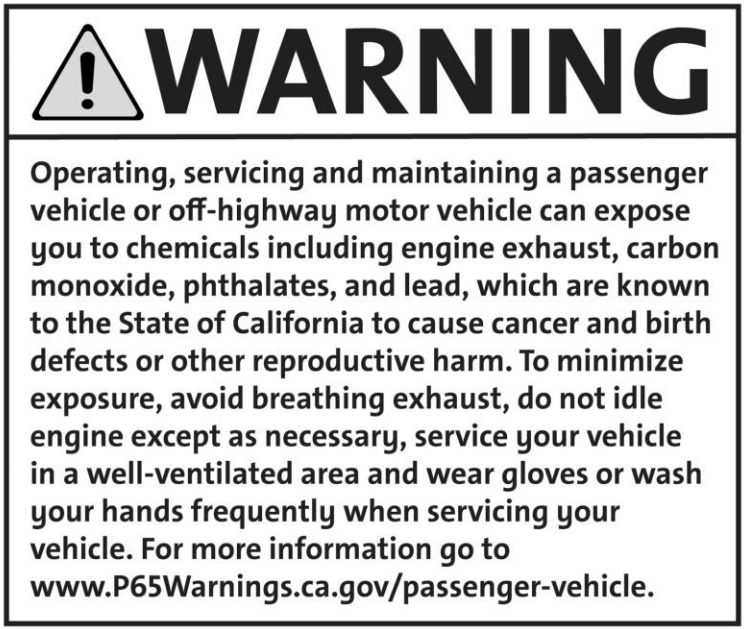

BUICK
2025
Encore GX
Owner's Manual

# Contents


Introduction ..... 1
Keys, Doors, and Windows ..... 8
Seats and Restraints ..... 36
Storage ..... 85
Instruments and Controls ..... 90
Lighting ..... 119
Infotainment System ..... 126
Climate Controls ..... 146
Driving and Operating ..... 154
Vehicle Care ..... 219
Service and Maintenance ..... 292
Technical Data ..... 300
Customer Information ..... 304
Reporting Safety Defects ..... 312
OnStar ..... 315
Connected Services ..... 320
Index ..... 323


# Introduction

## California Proposition 65 Warning






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## Introduction







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For vehicles first sold in Canada, substitute the name "General Motors of Canada Company" for Buick Motor Division wherever it appears in this manual.

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 this publication's release, including changes in standard or optional content.

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

## Canadian Vehicle Owners

A French language manual can be obtained from your dealer, at www.helminc.com, or from:

### Propriétaires Canadiens

On peut obtenir un exemplaire de ce guide en français auprès du concessionnaire ou à l'adresse suivante:

Helm, Incorporated
Attention: Customer Service
47911 Halyard Drive
Plymouth, MI 48170
USA

## Using this Manual

To quickly locate information about the vehicle, use the Index in the back of the manual. It is an alphabetical list of what is in the manual and the page number where it can be found.

## About Driving the Vehicle

As with other vehicles of this type, failure to operate this vehicle correctly may result in loss of control or a crash. Be sure to read the driving guidelines in this manual in the section called "Driving and Operating" and specifically *Driver Behavior* ⇨ *155*, *Driving Environment* ⇨ *155*, and *Vehicle Design* ⇨ *155*.

## 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.

: 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 Start

: Risk of Electrical Fire

: Seat Belt Reminders

: Side Blind Zone Alert

: Stop/Start

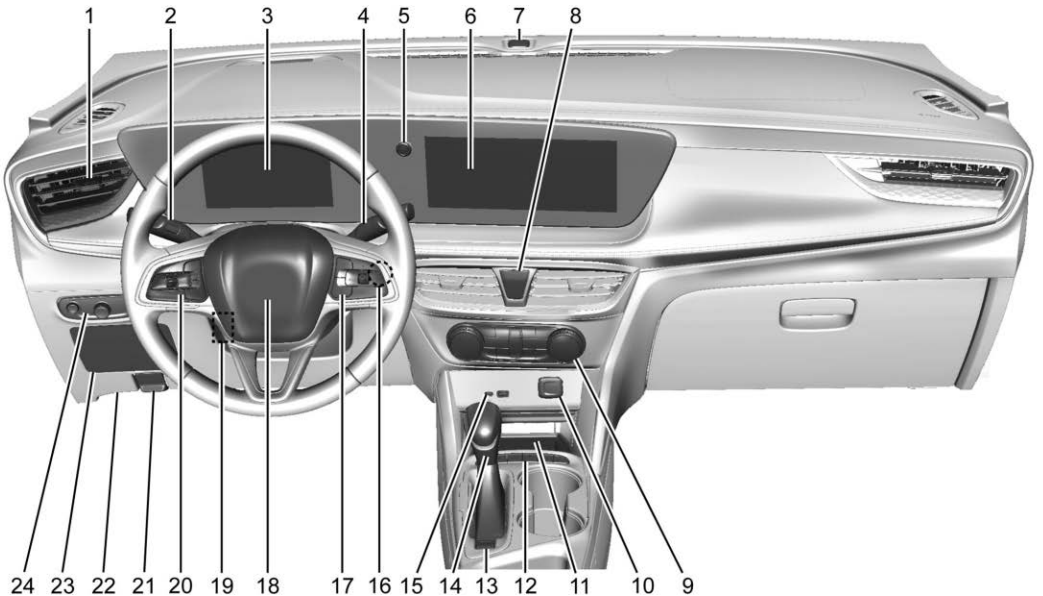
: Tire Pressure Monitor

: StabiliTrak/Electronic Stability Control (ESC)

: Under Pressure

: Vehicle Ahead Indicator

## Instrument Panel Overview




Base/Uplevel

1. *Air Vents* ⇨ *152*.
2. Turn Signal Lever. See *Turn and Lane-Change Signals* ⇨ *122*.

   IntelliBeam System Button (If Equipped). See *Exterior Lamp Controls* ⇨ *119*.
3. *Instrument Cluster* ⇨ *99*.

   Driver Information Center (DIC) Display. See *Driver Information Center (DIC)* ⇨ *112*.
4. *Windshield Wiper/Washer* ⇨ *91*.
5. Infotainment Controls. See *Overview* ⇨ *127*.
6. Infotainment Display. See *Using the System* ⇨ *128*.
7. Light Sensor. See *Automatic Headlamp System* ⇨ *121*.

   Anti-Theft Alarm System. See *Vehicle Alarm System* ⇨ *26*.
8. *Hazard Warning Flashers* ⇨ *122*.
9. *Climate Control Systems* ⇨ *146*.

   *Dual Automatic Climate Control System* ⇨ *149*.

   *Heated Front Seats* ⇨ *44*. (If Equipped).
10. *Power Outlets* ⇨ *94*.
11. *Wireless Charging* ⇨ *95* (If Equipped).
12. Auto Stop Disable Switch. See *Stop/Start System* ⇨ *168*.

    All-Wheel Drive Button. (If Equipped). See *All-Wheel Drive* ⇨ *175*.

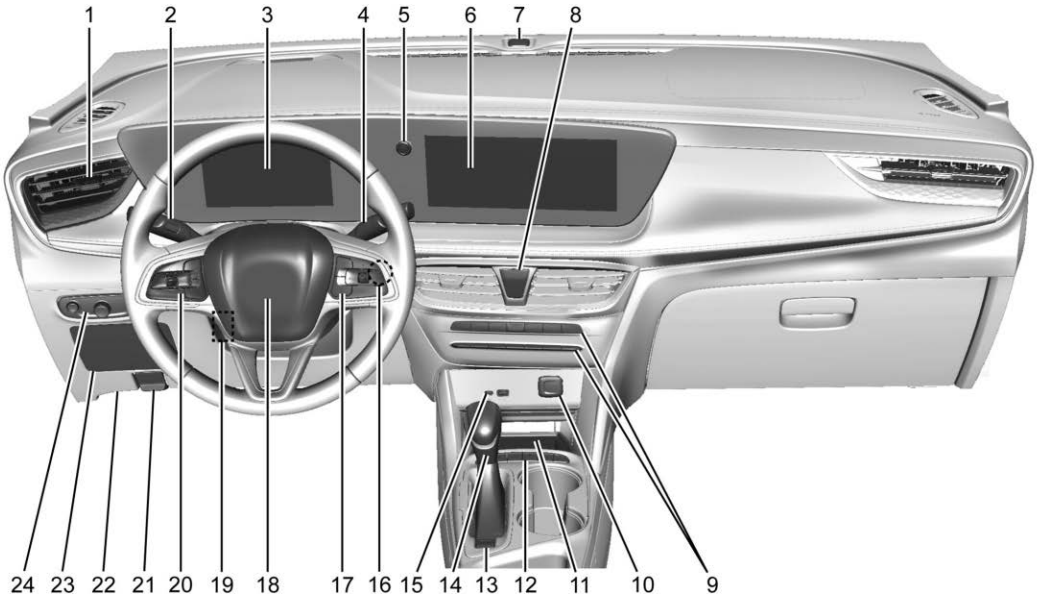
    *Lane Keep Assist (LKA)* ⇨ *204* (If Equipped).

    *Traction Control/Electronic Stability Control* ⇨ *178*.
13. *Electric Parking Brake* ⇨ *176*.
14. Shift Lever. See *Automatic Transmission* ⇨ *173*.
15. *USB Port* ⇨ *132*.
16. ENGINE START/STOP Button. (Out of View). See *Ignition Positions* ⇨ *166*.
17. *Steering Wheel Controls* ⇨ *128*.
18. *Horn* ⇨ *91*.
19. *Steering Wheel Adjustment* ⇨ *91* (Out of View).
20. *Cruise Control* ⇨ *180*.

    *Adaptive Cruise Control (Camera)* ⇨ *182* (If Equipped).

    *Heated Steering Wheel* ⇨ *91* (If Equipped).

    *Forward Collision Alert (FCA) System* ⇨ *197* (If Equipped).
21. Hood Release. See *Hood* ⇨ *221*.
22. Data Link Connector (DLC) (Out of View). See *Malfunction Indicator Lamp (Check Engine Light)* ⇨ *104*.
23. *Instrument Panel Fuse Block* ⇨ *251*.
24. *Exterior Lamp Controls* ⇨ *119*.




**Avenir**

1. *Air Vents* ⇨ *152*.
2. Turn Signal Lever. See *Turn and Lane-Change Signals* ⇨ *122*.
   IntelliBeam System Button (If Equipped). See *Exterior Lamp Controls* ⇨ *119*.
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   Driver Information Center (DIC) Display. See *Driver Information Center (DIC)* ⇨ *112*.
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24. *Exterior Lamp Controls* ⇨ *119*.

# Keys, Doors, and Windows

**Keys and Locks**
Keys ..... 8
Remote Key ..... 9
Remote Key Operation ..... 9
Remote Start ..... 16
Door Locks ..... 17
Power Door Locks ..... 19
Delayed Locking ..... 19
Automatic Door Locks ..... 19
Lockout Protection ..... 19
Safety Locks ..... 20

**Doors**
Liftgate ..... 20

**Vehicle Security**
Vehicle Security ..... 26
Vehicle Alarm System ..... 26
Immobilizer ..... 27
Immobilizer Operation ..... 27

**Exterior Mirrors**
Convex Mirrors ..... 28
Power Mirrors ..... 28
Folding Mirrors ..... 29
Heated Mirrors ..... 29
Reverse Tilt Mirrors ..... 29

**Interior Mirrors**
Interior Rearview Mirrors ..... 29
Manual Rearview Mirror ..... 29
Automatic Dimming Rearview Mirror ..... 29
Rear Camera Mirror ..... 29

**Windows**
Windows ..... 32
Power Windows ..... 32
Sun Visors ..... 33

**Roof**
Sunroof ..... 33

# Keys and Locks

## Keys

**⚠ Warning**

Leaving children in a vehicle with a remote key 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 remote key 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 a remote key.



The key inside the remote key is used for the driver door.



To remove the key, press the button on the bottom of the remote key 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.

Contact Roadside Assistance if locked out of the vehicle. See *Roadside Assistance Program* ⇨ *307*.

With an active OnStar or connected service plan, an OnStar Advisor may remotely unlock the vehicle. See *OnStar Overview* ⇨ *315*.

## Remote Key

See *Radio Frequency Statement* ⇨ *312*.

If there is a decrease in the remote key operating range:

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

## Remote Key Operation

The Keyless Access system allows for vehicle entry when the remote key is within 1 m (3 ft). See “Keyless Access Operation” later in this section.

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

Other conditions can impact the performance of the remote key. See *Remote Key* ⇨ *9*.



**With Power Liftgate and Remote Start Shown**

**:** Press to lock all doors. The turn signal indicators may flash and/or the horn may sound on the second press to indicate locking. To view available settings for this feature, from the infotainment home screen, select Settings > Vehicle > Remote Lock, Unlock, Start.

If the driver door is open when is pressed, and Open Door Anti Lock Out is enabled through vehicle settings, all doors will lock and then the driver door will immediately unlock. To view available settings for this feature, from the infotainment home screen, select Settings > Vehicle > Power Door Locks. If the passenger door is open when is pressed, all doors lock.

Pressing may also arm the theft-deterrent system. See *Vehicle Alarm System* ⇨ *26*.

**:** Press to unlock the driver door. Press unlock again within five seconds to unlock all doors. The remote key can be programmed to unlock all doors on the first button press. When remotely unlocking the vehicle at night the back-up lamps will come on for about 30 seconds to light your approach to the vehicle. The turn signal indicators may flash to indicate unlocking. To view available settings for this feature, from the infotainment home screen, select Settings > Vehicle > Remote Lock, Unlock, Start.

Pressing will disarm the theft-deterrent system. See *Vehicle Alarm System* ⇨ *26*.

**:** Press and release and then immediately press and hold for at least four seconds to start the engine from outside the vehicle using the remote key. See *Remote Start* ⇨ *16*.

**:** 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 turn signal lamps flash for 30 seconds, or until is pressed again or the vehicle is started.

**:** Press twice quickly to open or close the liftgate.

Press once to stop the liftgate from moving.

## Keyless Access Operation

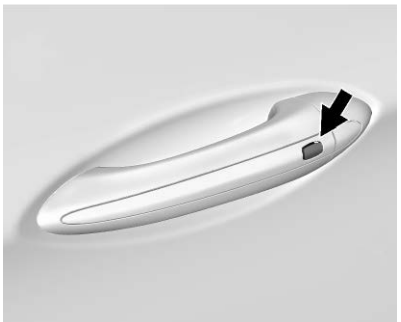
With the Keyless Access system, you can lock and unlock the doors and access the liftgate without removing the remote key from your pocket, purse, briefcase, etc. The remote key should be within 1 m (3 ft) of the liftgate or door being opened. The buttons are on the outside door handles.

Keyless Access can be programmed to unlock all doors on the first lock/unlock press from the driver door. To view available settings for this feature, from the infotainment home screen, select Settings > Vehicle > Remote Lock, Unlock, Start.

If equipped with memory seats, remote keys 1 and 2 are linked to seating positions of memory 1 or 2. See *Memory Seats* ⇨ *41*.

**Keyless Unlocking/Locking from the Driver Door**

When the doors are locked and the remote key 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 remote key 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 any of the following occur:

- 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 Liftgate**

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

**Disabling Keyless Unlocking:**

With the vehicle off, press and hold and on the remote key at the same time for approximately three seconds. The turn signal lamps will flash four times quickly to indicate access is disabled. Using any exterior handle to unlock the doors or open the liftgate will cause the turn signal 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 remote key at the same time for approximately three seconds. The turn signal lamps will flash twice quickly to indicate access is enabled.

**Passive Locking**

The vehicle will lock several seconds after all doors are closed if the vehicle is off and at least one remote key has been removed or none remain in the interior.

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

To view available settings for this feature, from the infotainment home screen, select Settings > Vehicle > Remote Lock, Unlock, Start.

**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 turned on.

**Remote Left in Vehicle Alert**

When the vehicle is turned off and an remote key is left in the vehicle, the horn will chirp three times after all doors are closed. To view available settings for this feature, from the infotainment home screen, select Settings > Vehicle > Remote Lock, Unlock, Start.

**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 remote keys inside. If an remote key is not detected, the Driver Information Center (DIC) will display NO REMOTE DETECTED and the horn will chirp three times. This occurs only once each time the vehicle is driven.

**Keyless Liftgate Opening**

Press the touch pad on the liftgate handle to open the liftgate if the remote key is within 1 m (3 ft).

**Key Access**

To access a vehicle with a weak remote key battery, see *Door Locks* ⇨ *17*.

## Programming Remote Keys to the Vehicle

Only remote keys programmed to the vehicle will work. If a remote key is lost or stolen, a replacement can be purchased and programmed through your dealer. The vehicle can be reprogrammed so that lost or stolen remote keys no longer work. Each vehicle can have up to eight remote keys matched to it.

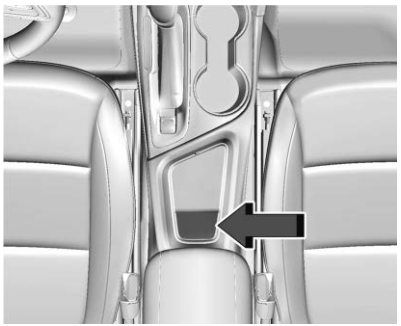
**Programming with Recognized Remote Keys**

A new remote key can be programmed to the vehicle when there are two recognized remote keys.

To program, the vehicle must be off and all of the remote keys, both currently recognized and new, must be with you.

1. Place the two recognized remote keys in remote key pocket.
2. Insert the vehicle key of the new remote key into the key lock cylinder on the outside of the driver door and turn the key to the unlock position five times within 10 seconds.

   The DIC displays READY FOR REMOTE #2, 3, 4, etc.



3. Remove the two recognized remote keys from remote key pocket. Place the new remote key in remote key pocket.

4. Press ENGINE START/STOP. When the remote key is learned the DIC display will show that it is ready to program the next remote key.
5. Remove the remote key from the remote key pocket and press the remote key or button.

   To program additional remote keys, repeat Steps 3–5.

   When all additional remote keys are programmed, press and hold ENGINE START/STOP for 12 seconds to exit programming mode.
6. Put the key back into the remote key.
7. Replace the key lock cylinder cap. See *Door Locks* ⇨ *17*.

**Programming without Recognized Remote Keys**

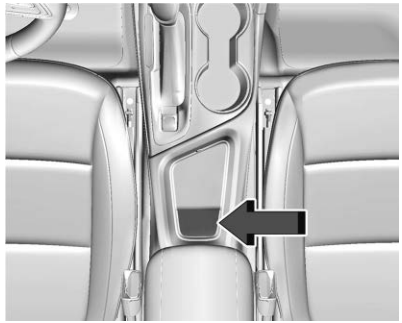
If two currently recognized remote keys are not available, follow this procedure to program up to eight remote keys. This feature is not available in Canada. This procedure will take approximately 30 minutes to complete. The vehicle must be off and all of the remote keys you wish to program must be with you.

1. Remove the key lock cylinder cap on the driver door handle. See *Door Locks* ⇨ *17*. Insert the vehicle key of the remote key into the key lock cylinder on the driver door handle and turn the key, counterclockwise, to the unlock position five times within 10 seconds.

   The DIC displays REMOTE LEARN PENDING, PLEASE WAIT.
2. Wait for 10 minutes until the DIC displays PRESS ENGINE START BUTTON TO LEARN and then press ENGINE START/STOP.

   The DIC display will again show REMOTE LEARN PENDING, PLEASE WAIT.
3. Repeat Step 2 two additional times. After the third time all previously known remote keys will no longer work with the vehicle. Remaining remote keys can be relearned during the next steps.

   The DIC display should now show READY FOR REMOTE #1.



4. Place the new remote key in remote key pocket.
5. Press ENGINE START/STOP. When the remote key is learned the DIC display will show that it is ready to program the next remote key.
6. Remove the remote key from the remote key pocket and press the remote key or button.

   To program additional remote keys, repeat Steps 4–6.

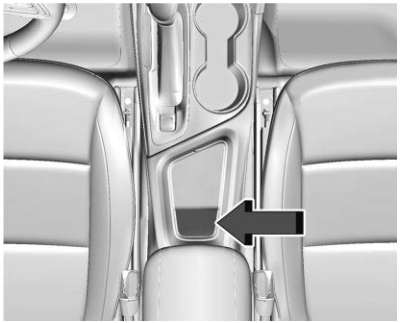
   When all additional remote keys are programmed, press and hold ENGINE START/STOP for 12 seconds to exit programming mode.

7. Put the key back into the remote key.
8. Replace the key lock cylinder cap. See *Door Locks* ⇨ *17*.

### Starting the Vehicle with a Low Remote Key Battery

For improved vehicle security, the remote key is equipped with a motion sensor. When starting the vehicle, if the remote key has been idle for a while, move the remote key slightly and try starting the vehicle. When starting the vehicle, if the remote key battery is depleted 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, follow the steps shown below.

To start the vehicle:



1. Place the remote key in the remote key pocket, with the buttons facing the front of the vehicle.
2. With the vehicle in P (Park) or N (Neutral), press the brake pedal and ENGINE START/STOP.

   Replace the remote key battery as soon as possible.

### Battery Replacement

**⚠ Warning**

Never allow children to play with the remote key. The remote key contains a small 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 remote key 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 remote key. Static from your body could damage the remote key.

**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.

**Caution**

If the remote key is not reassembled properly, liquids could enter the housing and damage the circuitry, resulting in a remote key malfunction and/or failure. To prevent damage, always follow the steps for remote key reassembly in this manual to ensure the remote key is sealed properly whenever the remote key is opened.

Replace the battery in the remote key soon if the DIC displays REPLACE BATTERY IN REMOTE KEY.

To replace the battery:



1. Press the button on the bottom of the remote key to remove the key. Never pull the key out without pressing the button.



2. Insert a flat, thin object and remove the back cover.



3. Lift the battery with a flat object.

4. Remove the battery.
5. Insert the new battery, positive side toward the back cover. Replace with a CR2032 or equivalent battery.
6. Ensure that the silicone mat is correctly positioned with no gaps or wrinkles.
7. Set remote key button side down on a hard surface and press the other half straight down to force the halves together.
8. Insert the key back into the remote key.

## Remote Start

This vehicle has a remote starting feature that starts the engine from outside of the vehicle.

: This button is on the remote key.

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

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

The remote key range may be less while the vehicle is running.

Other conditions can affect the performance of the remote key. See *Remote Key* ⇨ *9*.

### Starting the Engine Using Remote Start

To start the vehicle:

1. Press and release on the remote key.
2. Immediately after completing Step 1, press and hold until the turn signal lamps flash. If the vehicle's lights cannot be seen, press and hold for at least four seconds.

When the vehicle starts, the park lamps will turn on and remain on as long as the engine is running. The doors will be locked and the climate control system will operate automatically if the vehicle has the automatic system, or at the same setting as when the vehicle was last turned off.

With an automatic climate control system and if equipped with heated seats, the heated seats turn on during colder outside temperatures and shut off when the ignition is turned on.

The rear window defogger and heated mirrors, if equipped, turn on during colder outside temperatures and turn off when the ignition is turned on.

After entering the vehicle during a remote start, press the brake and ENGINE START/STOP with the remote key in the vehicle to drive the vehicle.

If the vehicle is left running, it automatically shuts off after 15 minutes unless a time extension has been done.

### Extending Engine Run Time

To extend the engine run time by 15 minutes, repeat Steps 1 and 2 while the engine is still running. An extension can be requested 30 seconds after starting. The engine run time can only be extended if it is the first remote start since the vehicle has been driven. Remote start can be extended one time.

If the remote start procedure is used again while the engine is still running, 15 minutes will be added on for a total of 30 minutes.

For example, if and then are pressed again while the engine is still running, 15 minutes will be added on for a total of 30 minutes.

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

After the vehicle's engine has been started two times using the remote start button or a start with an extension, the ignition must be turned on and then back off before the remote start procedure can be used again.

### Canceling a Remote Start

To manually shut off a remote start:

- Press and hold until the lamps turn off.
- Turn on the hazard warning flashers.
- Turn the ignition on and then off.

### Conditions in Which the Remote Start Will Not Work

The vehicle cannot be started using the remote start feature if the remote key is in the vehicle, the hood is open, the vehicle is not in P (Park), the hazard flashers are on, the vehicle is on, two remote starts or a start with an extension have been used, or there is an emission control system malfunction.

The engine turns off during a remote start if the coolant temperature gets too high or if the oil pressure gets low.

## 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.
- 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.

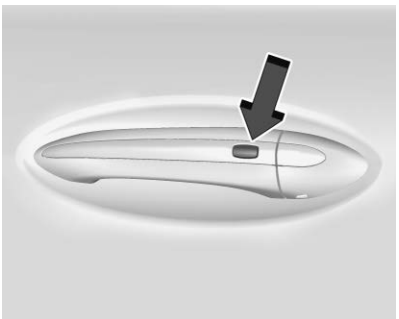
To lock/unlock the doors from the outside:

- Press or on the remote key. See *Remote Key Operation* ⇨ *9*.
- Use the key in the driver door. The key lock cylinder is covered with a cap.

To lock/unlock the doors from the inside:

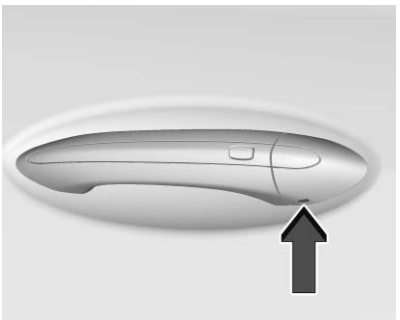
- Press or on the power door lock switch.
- Push down on the door lock knob to lock a door.
- Pull the door handle once to unlock it. Pull the door handle again to unlatch it.

**Keyless Access**



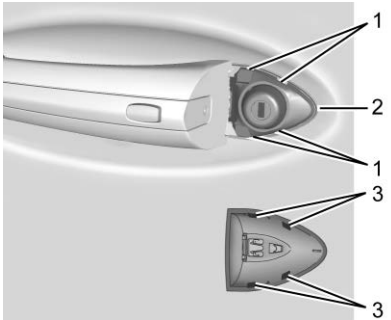
The remote key must be within 1 m (3 ft) of the liftgate or door being opened. Press the button on the door handle to open. See *Remote Key Operation* ⇨ *9*.

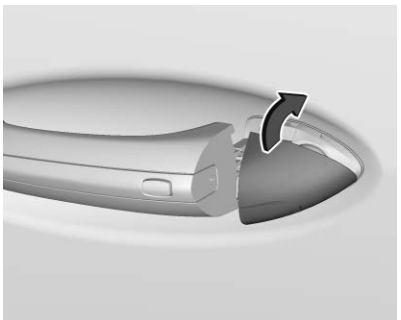
### Driver Door Key Lock Cylinder Access (In Case of Dead Battery)



To access the driver door key lock cylinder:

1. Insert the key into the slot on the bottom of the cap.
2. Lift the key upward to remove the cap.
3. Insert the key into the cylinder and turn to lock or unlock.



To replace the cap:

1. Position the bottom edge of the cap under the lower edge of the metal piece (2). The tabs (3) attach to the metal piece (2) at the positions (1).
2. Rotate the cap upward and install into place.
3. 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.

: Press to unlock the doors.

## 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 the Open Door Anti-Lockout feature 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 remote key to lock the doors immediately.

To view available settings for this feature, touch the Settings icon on the infotainment home page. Select “Vehicle” to display the list of available options and select “Power Door Locks”.

## Automatic Door Locks

The doors will lock automatically when all doors are closed, the ignition is on, and the vehicle is shifted out of P (Park).

To unlock the doors:

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

To view available settings for this feature, touch the Settings icon on the infotainment home page. Select “Vehicle” to display the list of available options and select “Power Door Locks”.

## Lockout Protection

If the ignition is on or in accessory mode 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 remote keys inside. If an remote key is detected and the number of remote keys 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 Lock Out

If Open Door Anti Lock Out has been turned on and the vehicle is off, the driver door is open, and locking is requested, all the doors will lock and the driver door will lock and then immediately unlock. The Open Door Anti-Lock Out feature can be turned on or off. To view available settings from the infotainment screen, touch Settings > Vehicle > Power Door Locks.

## Safety Locks

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

### Manual Safety Locks



If equipped, the safety lock is on the inside edge of the rear doors. To use the safety lock:

1. Move the lever up 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 pulling the inside handle, by pressing the driver power door lock switch, or by using the remote key.
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 down to unlock. Do the same for the other door.

# Doors

## Liftgate

**⚠ Warning**

Exhaust gases can enter the vehicle if it is driven with the liftgate or trunk/hatch open, or with any objects that pass through the seal between the body

(Continued)

**Warning (Continued)**

and the trunk/hatch or liftgate. 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 liftgate or trunk/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 set the fan speed to the highest setting. See “Climate Control Systems” in the Index.
- If the vehicle is equipped with a power liftgate, disable the power liftgate function.

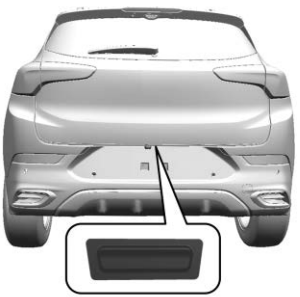
See *Engine Exhaust* ⇨ 172.

**Caution**

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

### Manual Liftgate

To unlock the liftgate, press on the power door lock switch or press on the remote key twice within five seconds. See *Remote Key Operation* ⇨ *9*.



To open the liftgate, press the touch pad under the liftgate handle and lift up.

With Keyless Access, the liftgate can be opened when locked if the remote key is within 1 m (3 ft) of the touch pad. See *Remote Key Operation* ⇨ *9*.

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

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

Always close the liftgate before driving.

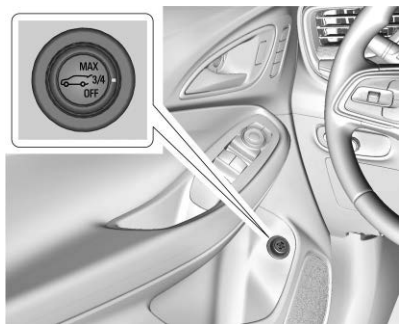
### Power Liftgate Operation

**⚠ Warning**

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

**Caution**

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




If equipped, the power liftgate switch is on the driver door. The vehicle must be in P (Park).

The modes are:

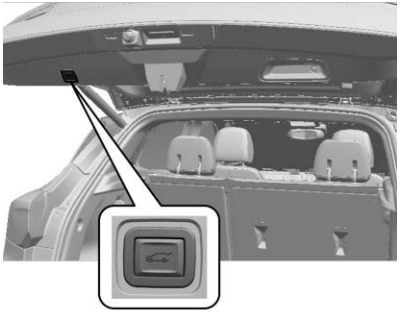
- MAX: Opens to maximum height.
- 3/4: Opens to a reduced height that can be set from 3/4 to fully open. Use to prevent the liftgate from opening into overhead

obstructions such as a garage door or roof-mounted cargo. The liftgate can be manually opened all the way.

- OFF: Opens manually only.

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

- Press twice quickly on the remote key until the liftgate 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 liftgate handle after unlocking all doors. A locked vehicle can be opened if the remote key is within 1 m (3 ft) of the touch pad.



- Press on the bottom edge of the liftgate to the left of the latch to close.

Press any liftgate button, the touch pad, or on the remote key while the liftgate is moving to stop it. Pressing any liftgate button or pressing twice quickly on the remote key restarts the operation in the reverse direction. Pressing the touch pad on the liftgate handle will restart the motion, but only in the opening direction.

**Caution**

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

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

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

**Falling Liftgate Detection**

If the power liftgate automatically closes after a power opening cycle, it indicates that the system is reacting to excess weight on the liftgate or a possible support strut failure. A repetitive chime will sound while the falling liftgate detection feature is operating. Remove any excess weight. If the liftgate

continues to automatically close after opening, see your dealer for service before using the power liftgate.

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

### Obstacle Detection Features

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

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

### Setting the 3/4 Mode

To change the position the liftgate stops at when opening:

1. Select MAX or 3/4 mode and power open the liftgate.
2. Stop the liftgate movement at the desired height by pressing any liftgate switch. Manually adjust the liftgate position if needed.
3. Press and hold  to the left of the latch at the bottom of the liftgate until the turn signals 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 liftgate. See “Manual Liftgate” at the beginning of this section.

| Caution |
| --- |
| Attempting to move the liftgate too quickly and with excessive force may result in damage to the vehicle. |

Operate the liftgate 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 liftgate may be operated with a kicking motion near the left side of the rear bumper at the location of the projected logo. The remote key must be within 1 m (3 ft) of the rear bumper to operate the power liftgate hands-free.

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

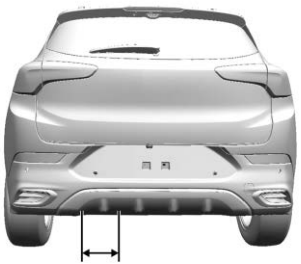
The hands-free feature can be customized. To view available settings for this feature, touch the Settings icon on the infotainment home page. Select “Vehicle” to display the list of available options and select “Comfort and Convenience”. Choose from the following:

**On-Open and Close:** The kicking motion is activated to both open and close the liftgate.

**On-Open Only:** The kicking motion is activated to only open the liftgate.

**Off:** The feature is disabled.

**Kick Zone**



To operate, move your foot in a forward kicking motion near the left side of the rear bumper at the location of the projected logo, then pull it back. The kick must come within 14 cm (6 in) of the rear bumper to activate. Then step back.

**Caution**

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

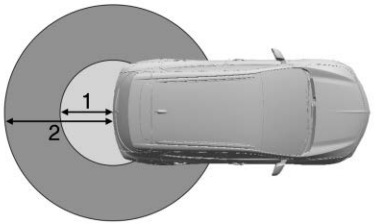
- Do not sweep your foot side to side.
- Do not keep your foot under the bumper; the liftgate will not activate.
- Do not touch the liftgate until it has stopped moving.

When closing the liftgate using this feature, there will be a short delay. The taillamps will flash and a chime will sound.

Step away from the liftgate 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 remote key 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 remote key after it has been out of range for at least 20 seconds.

If an remote key is again detected within approximately 2 m (6 ft) of the liftgate, 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 Liftgate Control is set to Off in vehicle settings. To view available settings for this feature, touch the Settings icon on the infotainment home page. Select “Vehicle” to display the list of available options and select “Comfort and Convenience”.
- Power liftgate is turned off.
- The vehicle remains parked for 72 hours or more, with no remote key use or Keyless Access operation. To re-enable, press any button on the remote key or open and close a vehicle door.

The projected logo will not work for a single remote key when a remote key :

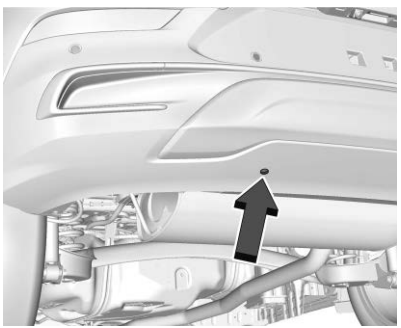
- Has been left within approximately 2 m (6 ft) of the liftgate for several minutes.
- Has been left inside the vehicle and all vehicle doors are closed.
- Has approached the area outside of the liftgate five times within five minutes. If the logo is continuously on for five minutes, then the projected logo will not turn back on for one hour.

## Hands-Free Liftgate and Projected Logo Availability

| Action | Hands-Free Liftgate | Projected Logo |
|---|---|---|
| remote key entering projected logo detection zone | Operative | On for one minute |
| remote key left inside projected logo detection zone for minimum of five minutes | Operative | Off until remote key button press or a door is opened and closed |
| remote key brought in and out of projected logo detection zone five times or more within five minutes | Operative | Off for one hour or until remote key button press or a door is opened and closed |
| Vehicle remains parked for more than 72 hours | Operative | Off until remote key button press or a door is opened and closed |

| Action | Hands-Free Liftgate | Projected Logo |
|---|---|---|
| Vehicle battery is low | Non-operative | Off |
| Transmission is not in P (Park) | Non-operative | Off |
| Power liftgate is turned off | Non-operative | Off |
| Hands-free liftgate is disabled in vehicle settings | Non-operative | Off |

**Lens Cleaning**



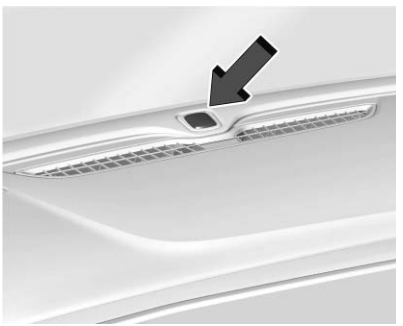
If equipped, use a cotton swab to clean the lens.

# 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 windshield 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 liftgate is open.

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

### Arming the Alarm System

1. Close the liftgate and the hood. Turn off the vehicle.
2. Lock the vehicle in one of three ways:
   - Use the remote key.
   - 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 remote key 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 remote key, 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 remote key during the 10-second pre-alarm, the alarm will be activated.

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

### Disarming the Alarm System

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

- Press on the remote key.
- 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 remote key 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.

## Immobilizer

See *Radio Frequency Statement* ⇨ *312*.

## Immobilizer Operation

This vehicle has a passive theft-deterrent system.

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

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

The immobilization system is disarmed when the ignition is on or in accessory mode and a valid remote key 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 remote keys matched to an immobilizer control unit in the vehicle. Only a correctly matched remote key will start the vehicle. If the remote key is ever damaged, the vehicle may not start.

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, and the remote key appears to be undamaged, try another remote key. Or, try placing the remote key into the remote key pocket located in the center console. See Starting the Vehicle With a Low remote key Battery under *Remote Key Operation* ⇨ *9*.

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

It is possible for the immobilizer system to learn new or replacement remote keys. Up to eight remote keys can be programmed for the vehicle. To program additional remote keys, see Programming remote keys to the Vehicle under *Remote Key Operation* ⇨ *9*.

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

# Exterior Mirrors

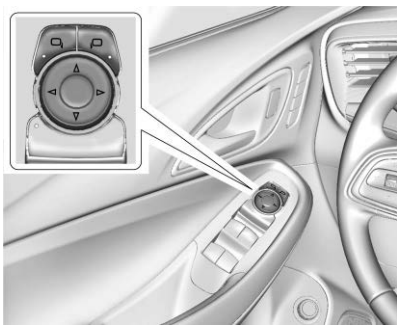
## Convex Mirrors

**⚠ Warning**

A convex mirror can make things, like other vehicles, look farther away than they really are. If you cut too sharply into the right lane, you could hit a vehicle on the right. Check the inside mirror or glance over your shoulder before changing lanes.

The passenger side mirror is convex shaped. A convex mirror's surface is curved so more can be seen from the driver seat.

## Power Mirrors



To adjust a mirror:

1. Press ▭◂ or ▸▭ to choose the driver or passenger mirror.
2. Press one of the four 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. If you do not deselect the mirror, the mirror adjustment will turn off after about one minute.

**Lane Change Alert (LCA)**

The vehicle may have LCA. See *Lane Change Alert (LCA)* ⇨ *203*.

**Side Blind Zone Alert**

The vehicle may have Side Blind Zone Alert. See *Side Blind Zone Alert (SBZA)* ⇨ *202*.

## Folding Mirrors

### Manual Folding Mirrors

If equipped, the mirrors can be folded inward by hand to prevent damage when going through tight maneuvers such as an automatic car wash. Afterward, fold the mirror outward by hand to return it to the original position.

## Heated Mirrors

REAR : Press to heat the mirrors.

See "Rear Window Defogger" under *Dual Automatic Climate Control System* ⇨ *149*.

## 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 curb 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 view available settings from the infotainment screen, touch Settings > Vehicle > Comfort and Convenience.

# 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

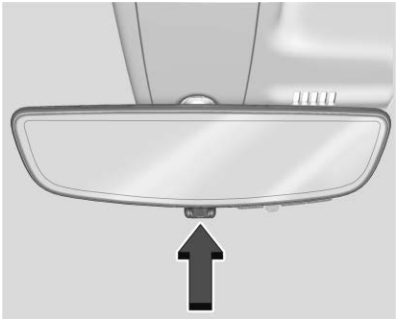
If equipped, push the tab forward for daytime use and pull it rearward for nighttime use to avoid glare of the headlamps from behind.

## Automatic Dimming Rearview Mirror

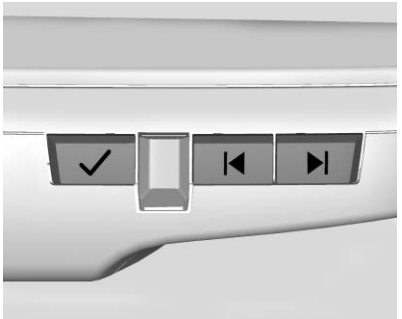
If equipped, automatic dimming reduces the glare of headlamps from behind. The dimming feature comes on when the vehicle is started.

## 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 has automatic dimming. Adjust the mirror for a clear view of the area behind the vehicle while the display is off.



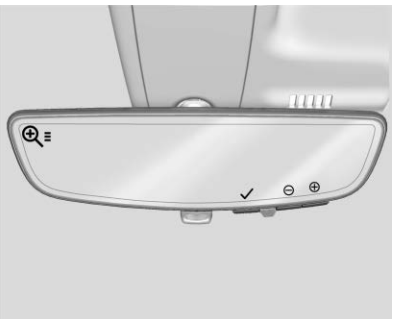
Press ✓ to scroll through the adjustment options.

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.

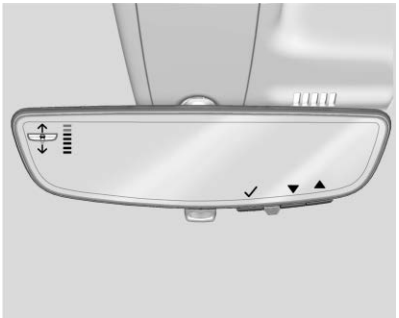
The adjustment options are:



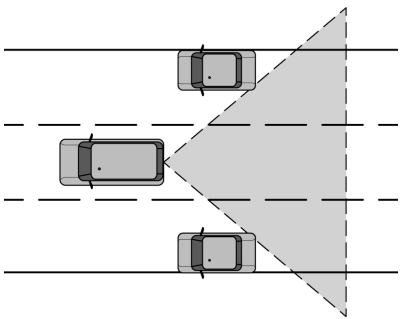
- Brightness



- Zoom



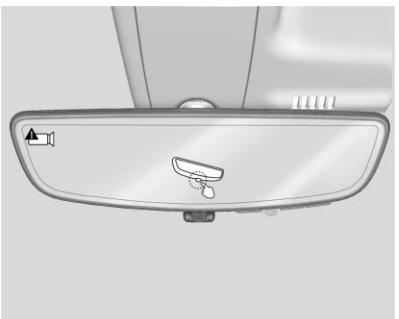
- Tilt



**⚠ 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 dealer 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 headlamps. 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* ⇨ *93*.



- 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.

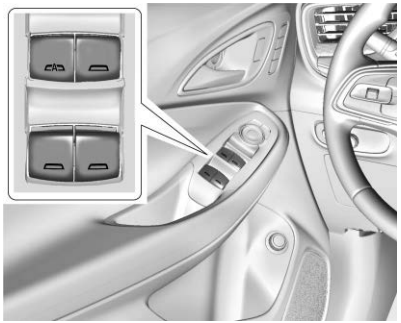


The vehicle aerodynamics are designed to improve fuel economy performance. This may result in a pulsing sound when either rear window is down and the front windows are up. To reduce the sound, open either a front window or the sunroof, if equipped.

## Power Windows

**⚠ Warning**

Children could be seriously injured or killed if caught in the path of a closing window. Never leave keys in a vehicle with children. When there are children in the rear seat, use the window lockout button to prevent operation of the windows. See *Keys* ⇨ *8*.



The power windows work when the vehicle is on, in accessory mode, or when Retained Accessory Power (RAP) is active. See *Retained Accessory Power (RAP)* ⇨ *170*.

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.

### Rear Window Lockout

If equipped, this feature prevents rear seat passengers from opening the rear windows.

To enable or disable the feature:

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

### Window Express Movement

This feature allows you to open all windows fully without holding the switches down. Press the switch down fully, then 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

If equipped, the window automatic reversal system reverses and stops window movement if it detects an object in its path. Extreme cold or ice may 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 override, make sure that all people and obstructions are clear of the window path.

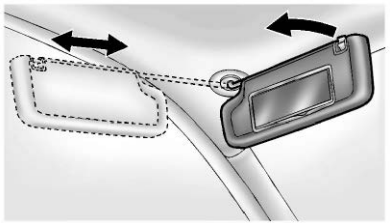
When the vehicle is on, override the automatic reversal system by pulling and holding the window switch if conditions prevent the window from closing.

### Programming the Power Windows

Programming may be necessary if the vehicle battery is disconnected or discharged. To program an express-close window:

1. Close all doors.
2. Turn the vehicle on.
3. Partially open the window you want to program, 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.

## Sun Visors

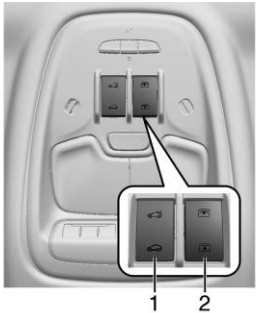


Pull the sun visor down to block glare. Detach the sun visor from the center mount to pivot to the side window and, if equipped, extend along the rod.

# Roof

## Sunroof

If equipped, the ignition must be on or in accessory mode, or Retained Accessory Power (RAP) must be active to operate the sunroof. See *Ignition Positions* ⇨ *166* and *Retained Accessory Power (RAP)* ⇨ *170*.




1. Sunroof Switch (SLIDE)
2. Sunshade Switch (SLIDE)

**Sunroof Switch**

**Express-Open/Express-Close :** To express-open the sunroof, fully press and release (1). Press the switch again to stop it. To express-close the sunroof, fully press and release (1). Press the switch again to stop it.

**Sunroof Comfort Stop Position:** This vehicle may be equipped with a comfort stop to prevent excessive wind noise. The sunroof will stop approximately halfway open during an express open. To fully open the sunroof, press and release (1) again.

**Open/Close (Manual Mode) :** To open the sunroof, press to the first position, and hold (1) until the sunroof reaches the desired position. Press and hold (1) to close it.

**Vent :** From the closed position, (1) to vent the sunroof.

**Sunshade Switch**

**Express-Open/Express-Close :** To express-open the sunshade, fully press and release (2). To express-close the sunshade, fully press and release (2). Press the switch again to stop it.

**Open/Close (Manual Mode) :** To open the sunshade, press to the first position, and hold (2) until the sunshade reaches the desired position. Press (2) to close the sunshade.

When the sunroof is opened, an air deflector will automatically raise.

The air deflector will retract when the sunroof is closed.

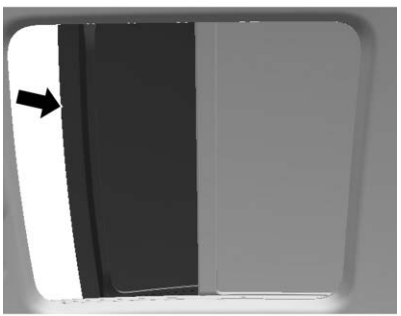
## Automatic Reversal System

The sunroof has an automatic reversal system that is only active when the sunroof is operated in express-close mode.

If an object is in the path while 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 in manual mode. To stop movement, release the switch.

In the event of closing difficulties like frost or other conditions, it is possible to override the reversal system. To override the reversal system, close in manual mode. To stop the 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**
Head Restraints ..... 37

**Front Seats**
Seat Adjustment ..... 38
Power Seat Adjustment ..... 39
Reclining Seatbacks ..... 40
Lumbar Adjustment ..... 41
Memory Seats ..... 41
Heated Front Seats ..... 44
Folding Seatback ..... 45

**Rear Seats**
Rear Seats ..... 46
Rear Seat Armrest ..... 47

**Seat Belts**
Seat Belts ..... 47
Buckle To Drive ..... 48
How to Wear Seat Belts Properly ..... 49
Lap-Shoulder Belt ..... 51
Seat Belt Use During Pregnancy ..... 54
Seat Belt Extender ..... 54
Safety System Check ..... 54
Seat Belt Care ..... 55
Replacing Seat Belt System Parts After a Crash ..... 55

**Airbag System**
Airbag System ..... 55
Where Are the Airbags? ..... 57
When Should an Airbag Inflate? ..... 59
What Makes an Airbag Inflate? ..... 60
How Does an Airbag Restrain? ..... 60
What Will You See After an Airbag Inflates? ..... 60
Passenger Sensing System ..... 61
Servicing the Airbag-Equipped Vehicle ..... 64
Adding Equipment to the Airbag-Equipped Vehicle ..... 65
Airbag System Check ..... 65
Replacing Airbag System Parts After a Crash ..... 66

**Child Restraints**
Older Children ..... 66
Infants and Young Children ..... 68
Child Restraint Systems ..... 70
Where to Put the Restraint ..... 72
Lower Anchors and Tethers for Children (LATCH System) ..... 73
Replacing LATCH System Parts After a Crash ..... 79
Securing Child Restraints (With the Seat Belt in the Rear Seat) ..... 79
Securing Child Restraints (With the Seat Belt in the Front Seat) ..... 81

# Head Restraints

**⚠ Warning**

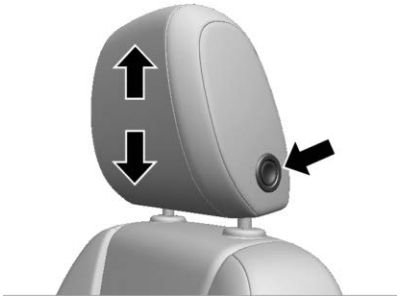
With head restraints that are not installed and adjusted properly, there is a greater chance that occupants will suffer a neck/spinal injury in a crash. Do not drive until the head restraints for all occupants are installed and adjusted properly.

## Front Seats

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 chances of a neck injury in a crash.

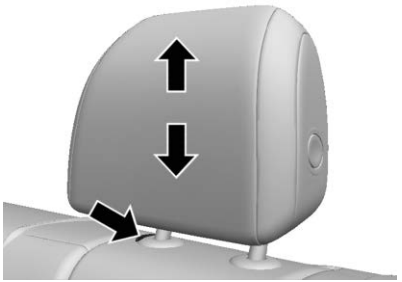


To raise or lower the head restraint, press the button located on the side of the head restraint, and pull up or push the head restraint down, and release the button. Pull and push on the head restraint after the button is released to make sure that it is locked in place.

The front seat outboard head restraints are not removable.

## Rear Seats

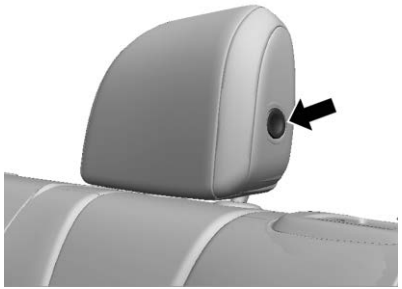
The vehicle's rear seats have adjustable head restraints in the outboard seating positions. The height of the head restraint can be adjusted. Pull the head restraint up to raise it. Try to move the head restraint to make sure it is locked in place.



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

### Folding the Rear Head Restraint

The head restraint can be folded rearward to allow for better visibility when the rear seat is unoccupied.



To fold the head restraint, press the button on the side of the head restraint.



The head restraint will fold rearward automatically.

When an occupant or child restraint is in the seat, always return the head restraint to the full upright position. Pull the head restraint up and forward until it locks into place.

Push and pull on the head restraint to make sure that it is locked.

Always adjust the head restraint so that the top of the restraint is at the same height as the top of the occupant's head.

Rear outboard head restraints are not removable.

# Front Seats

## Seat Adjustment

### Seat Position

**⚠ 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 a manual seat:

1. Pull the handle at the front of the seat.

2. Slide the seat to the desired position and release the handle.
3. Try to move the seat back and forth to be sure it is locked in place.

### Height Adjustment



If equipped, move the lever up or down to manually 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 the seat:

- 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.

To adjust the seatback, see *Reclining Seatbacks* ⇨ *40*.

To adjust the lumbar support, see *Lumbar Adjustment* ⇨ *41*.

## 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.

### Manual Reclining Seatbacks



To recline the seatback:

1. Lift the lever. If necessary, move the seat belt out of the way to access the lever.
2. Move the seatback to the desired position, then release the lever to lock the seatback in place.
3. Push and pull on the seatback to make sure it is locked.

To return the seatback to an upright position:

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

**⚠ Warning**

Sitting in a reclined position when the vehicle is in motion can be dangerous. Even when buckled up, 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.

(Continued)

**Warning (Continued)**

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.

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



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

### Power Reclining Seatbacks



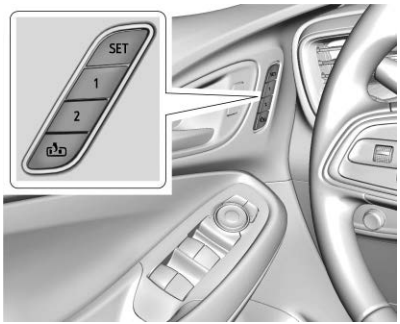
- Tilt the top of the control rearward to recline.
- Tilt the top of the control forward to raise.

## Lumbar Adjustment



Press and hold the control forward to increase or rearward to decrease support.

## Memory Seats




### Overview

If equipped, the memory seat feature allows drivers to save their unique driving positions and a shared exit position. See “Saving Seating Positions” later in this section. The saved positions can be recalled manually by all drivers, see “Manually Recalling Seating Positions” later in this section, and drivers with remote keys 1 and 2 can also recall them automatically. See “Auto Seat Entry Memory Recall” or “Auto Seat Exit Memory Recall” later in this section. To enable automatic recalls, turn on Seat Entry Memory and/or Seat Exit Memory. See “Enabling Automatic Recalls”

later in this section. The memory recalls may be canceled at any time during the recall. See "Cancel Memory Seating Recalls" later in this section.

**Identifying Driver Number**

The vehicle identifies the current driver by their remote key number 1–8. The current remote key number may be identified by Driver Information Center (DIC) welcome message, "You are driver x for memory recalls." This message is displayed the first few times the vehicle is turned on when a different remote key is used. For Seat Entry Memory to work properly, save positions to the 1 or 2 memory button matching the driver number of this welcome message. To aid in identifying remote key IDs, it is recommended to only carry one remote key when entering the vehicle. Perform the following if the welcome message is not displayed:

1. Move all keys and remote keys away from the vehicle.
2. Start the vehicle with another remote key. A DIC welcome message should display indicating the driver number of the other remote key. Turn the vehicle off and remove the other key or remote key from the vehicle.
3. Start the vehicle with the initial key or remote key. The DIC welcome message should display the driver number of the initial remote key.

**Saving Seating Positions**

Read these instructions completely before saving memory positions.

To save preferred driving positions to 1 and 2:

1. Turn the vehicle on or to accessory mode. A DIC welcome message may indicate the driver number of the current remote key. See "Identifying Driver Number" previously in this section.
2. Adjust all available memory features to the desired driving position.
3. Press and release SET; a beep will sound.
4. Immediately upon releasing SET, press and hold memory button 1 or 2 matching the current driver's remote key number until two beeps sound. If too much time passes between releasing SET and pressing 1 or 2, the two beeps will not sound indicating memory position were not saved. Repeat Steps 3 and 4 to try again.
5. Repeat Steps 1–4 for the other remote key 1 or 2 using the other 1 or 2 memory button.

It is recommended to save the preferred driving positions to both 1 and 2 if you are the only driver.

To save the common exit seating position to  that is used by all drivers for Manually Recalling Seating Positions and Auto Seat Exit Memory Recall features, repeat Steps 1–4 using  , the exit button.

**Manually Recalling Seating Positions**

Press and hold 1, 2, or  button until the recall is complete, to recall the positions previously saved to that button.

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

**Enabling Automatic Recalls**

- Seat Entry Memory moves the driver seat to the selected 1 or 2 position when the vehicle is started. Select Settings > Vehicle > Seating Position > Seat Entry Memory > ON or OFF. See "Auto Seat Entry Memory Recall" later in this section.
- Seat Exit Memory moves the driver seat to the preferred exit position of the button when the vehicle is turned off and the door is opened. Select Settings > Vehicle > Seating Position > Seat Exit Memory > ON or OFF. See "Auto Seat Exit Memory Recall" later in this section.

**Auto Seat Entry Memory Recall**

Seat Entry Memory will automatically begin movement to the seating positions of the 1 or 2 button corresponding to the driver's remote key number 1 or 2 detected by the vehicle when:

- The vehicle is turned on.
- Seating positions have been previously saved to the same 1 or 2 button. See "Saving Seating Positions" previously in this section.
- Seat Entry Memory is enabled. See "Enabling Automatic Recalls" previously in this section.
- The shift lever is in P (Park).

Seat Entry Memory Recall will continue if the vehicle is shifted out of P (Park) prior to reaching the saved memory position.

If the saved memory seat position does not automatically recall, verify the recall is enabled. See "Enabling Automatic Recalls" previously in this section.

If the memory seat recalls to the wrong position, the driver's remote key number 1 or 2 may not match the memory button number positions they were saved to. Try the other remote key or try saving the positions to the other 1 or 2 memory button. See "Saving Seating Positions" previously in this section.

Automatic Seat Entry Memory recalls are only available for driver's remote key numbers 1 and 2. Remote keys 3–8 will not provide Seat Entry Memory recalls.

**Auto Seat Exit Memory Recall**

Seat Exit Memory will begin movement to the seating position of the button when:

- The vehicle is turned off and the driver door is open or opened within a short time.
- A seating position has been previously been saved to the memory button. See "Saving Seating Positions" previously in this section.
- Seat Exit Memory is enabled. See "Enabling Automatic Recalls" previously in this section.
- The shift lever is in P (Park).

Seat Exit Memory recall will continue if the vehicle is shifted out of P (Park) prior to reaching the saved memory position.

Seat Exit Memory is not linked to the driver's remote key. The seating position saved to is used for all drivers.

**Cancel Memory Seating Recalls**

- During any memory recall:

  Press a power seat control

  Press SET memory button

- During Manual memory recall:

  Release 1, 2, or memory button
- During Auto Seat Entry Memory Recall:

  Turn vehicle off

  Press SET, 1, 2, or memory buttons
- During Auto Seat Exit Memory Recall:

  Press SET, 1, 2, or memory buttons

**Obstructions**

If something has blocked the 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 Front Seats

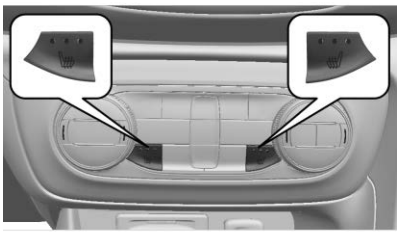
**Warning**

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

(Continued)

**Warning (Continued)**

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.



**Type I**



**Type II**

If equipped, the controls are on the climate control panel. The engine must be running to operate the heated seats.

Press or to heat the driver or passenger seat cushion and seatback.

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

The passenger seat may take longer to heat up.

**Remote Start Heated Seats**

When it is cold outside, the heated seats can be turned on automatically during a remote vehicle start. The heated seats will be canceled when the ignition is turned on. Press the heated seat controls to use the heated seats after the vehicle is started.

The heated seat indicator lights on the control do not turn on during a remote start.

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

To enable or disable remote start heated seats, select Settings > Vehicle > Remote Lock, Unlock, and Start > Remote Start Auto Heat Seats > ON or OFF.

See *Remote Start* ⇨ *16*.

## Folding Seatback

The front passenger seatback may fold flat.

**⚠ Warning**

If you fold the seatback forward to carry longer objects, such as skis, be sure any such cargo is not near an airbag. In a crash, an inflating airbag might force that object toward a person. This could cause severe injury or even death. Secure objects away from the area in which an airbag would inflate. For more information, see *Where Are the Airbags?* ⇨ *57* and *Vehicle Load Limits* ⇨ *162*.

**⚠ Warning**

Things you put on this seatback can strike and injure people in a sudden stop or turn, or in a crash. Remove or secure all items before driving.

To fold the seatback:

1. Lower the head restraint all the way. See *Head Restraints* ⇨ *37*
2. Move the seat as far back as possible. See *Seat Adjustment* ⇨ *38* or *Power Seat Adjustment* ⇨ *39*



3. Lift the lever fully and fold the seatback forward. If necessary, move the seat belt out of the way to access the lever.
4. Continue lowering the seatback until it is completely folded and locks in place.

To raise the seatback:

1. Lift the lever fully to unlock the seatback. Then, raise the seatback and push it rearward until it re-engages.
2. Push and pull on the seatback to make sure it is locked in place.

**⚠ 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.

# 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 rear 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 rear 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 shut off.

The feature can be turned on or off. Select Settings > Vehicle > Rear Seat Reminder > ON or OFF.

## Folding the Seatback

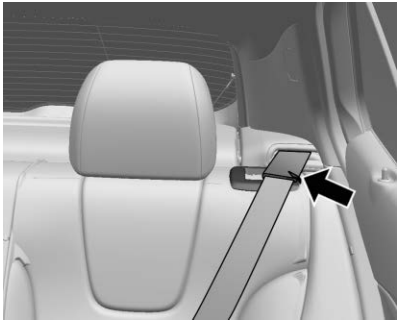
Either side of the seatback can be folded for more cargo space. Fold a seatback only when the vehicle is not moving.

**⚠ Warning**

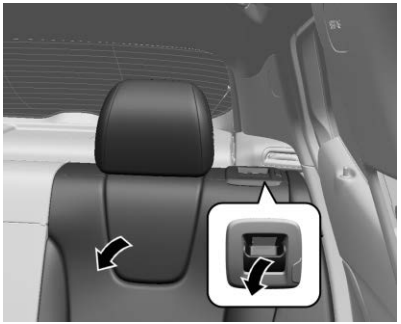
Folding a rear seat with the seat belts still fastened may cause damage to the seat or the seat belts. Always unbuckle the seat belts and return them to their normal stowed position before folding a rear seat.

To fold the seatback:

1. Fold the head restraint. See *Head Restraints* ⇨ *37*.



2. Make sure the seat belt is in the retainer hook



3. Pull the lever on top of the seatback to unlock the seatback.

   A red indicator near the seatback lever is exposed when the seatback is unlocked.

4. Fold the seatback down.

   Repeat Steps 1–3 for the other seatback, if desired.

### Raising the 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.

**⚠ 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

(Continued)

**Warning (Continued)**

seatback, always check to be sure that the seat belts are properly routed and attached, and are not twisted.

To raise a seatback:

1. Lift the seatback up and push it rearward to lock it in place.

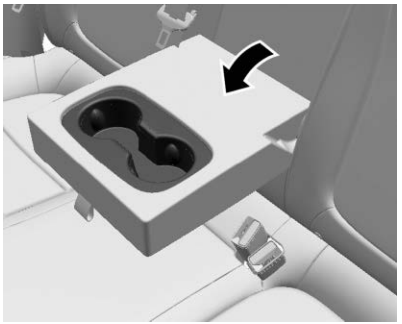
   A red indicator near the seatback lever retracts when the seatback is locked in place.

   The center rear seat belt may lock when you raise the seatback. If this happens, let the belt go back all the way and start again.

2. Return the head restraint to the upright position. See *Head Restraints* ⇨ *37*.
3. Push and pull the top of the seatback to be sure it is locked into position.
4. Check if the seat belt is stowed within hook at side. If not, stow seat belt in it appropriately.
5. Repeat the steps to raise the other seatback, if necessary.

When the seat is not in use, it should be kept in the upright, locked position.

### Rear Seat Armrest



The rear seat has an armrest in the center of the seatback. Lower the armrest to access the cupholders.

To fold, lift the armrest up and push it rearward until it is flush with the seatback.

## Seat Belts

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

**⚠ Warning**

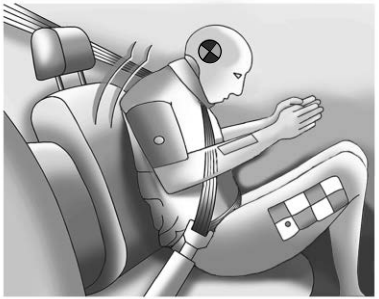
Do not let anyone ride where a seat belt cannot be worn properly. In a crash, if you or your passenger(s) are not wearing seat belts, injuries can be much worse than if you are wearing seat belts. You can be seriously injured or killed by hitting things inside the vehicle harder or by being ejected from 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 not allow passengers to ride 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 buckle the seat belts. See *Seat Belt Reminders* ⇨ *102*.

### 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 windshield, 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 chance of being conscious during and after a crash, so you *can* unbuckle and get out, is *much* greater if you are belted.

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

**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 states and in all Canadian provinces, the law requires wearing seat belts.

## Buckle To Drive

If equipped, this feature delays the vehicle from being shifted out of P (Park) when Teen Driver is active, and the driver seat belt is not buckled. See *Teen Driver* ⇨ *140*.

If the vehicle is on and the brake pedal is pressed with the vehicle in P (Park) but the driver seat belt is not buckled, a message displays in the Driver Information Center (DIC) and the vehicle will be delayed from shifting out of P (Park). Buckle the driver seat belt to clear the message and shift out of P (Park). Shifting from P (Park) will be delayed once for each time the vehicle is started.

For some fleet vehicles, shifting out of P (Park) will be delayed each time the driver attempts to do so while the driver seat belt is not buckled, whether Teen Driver is ON or OFF. Turning the vehicle off then on will not change this condition.

On some models, Buckle to Drive may also delay shifting out of P (Park) if a front passenger is unbuckled under similar conditions. A message displays in the DIC. Buckle the front passenger seat belt to shift out of P (Park). This feature may delay the vehicle from shifting out of P (Park) if an object, such as a briefcase, handbag, grocery bag, laptop, or other electronic device, is on the front passenger seat. If this happens, remove the object from the seat or buckle the seat belt to shift out of P (Park).

If the driver, or on some vehicles, the present front passenger seat belt remains unbuckled, the DIC message will turn off after several seconds and the vehicle can be shifted out of P (Park). See "Seat Belts" and "Child Restraints" in the Index for information about the importance of proper restraint use.

If the driver seat belt or the front passenger seat belt is unbuckled when driving, the seat belt reminder chime and light(s) will come on. See *Seat Belt Reminders* ⇨ *102*. This feature may not function properly if the airbag readiness light is on. See *Airbag Readiness Light* ⇨ *102*.

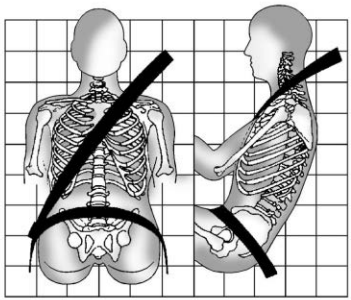
## How to Wear Seat Belts Properly

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* ⇨ *66* or *Infants and Young Children* ⇨ *68*. 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.

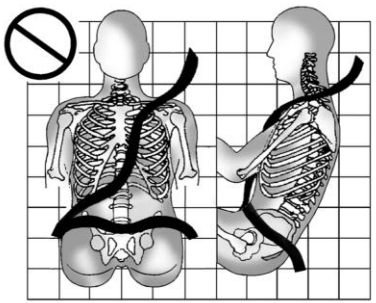


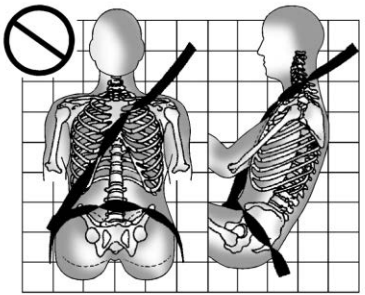
- Sit up straight and always keep your feet on the floor in front of you (if possible).
- Wear the lap part of the belt low and snug on the hips, just touching the thighs. In a crash, this applies force to the strong pelvic bones and you would be less likely to slide under the lap belt. If you slid under 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.

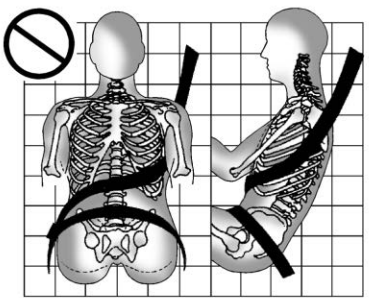
**⚠ Warning**

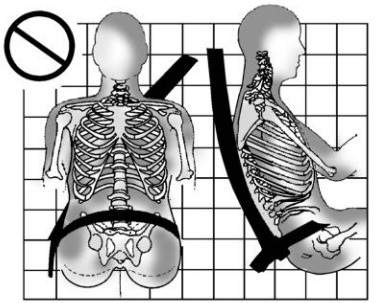
You can be seriously injured, or even killed, by not wearing your seat belt properly.



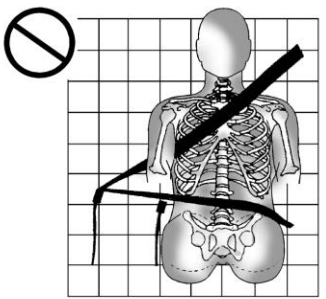


Never allow the lap or shoulder belt to become loose or twisted.

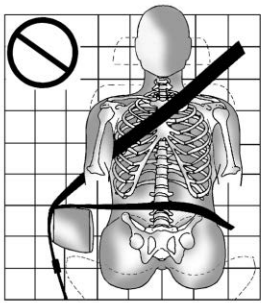




Never wear the shoulder belt under both arms or behind your back.



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 seatback folding handle or side airbag. In a crash, pinched seat belts might not provide adequate protection. Never allow seat belts to be routed under plastic trim pieces.

**⚠ Warning**

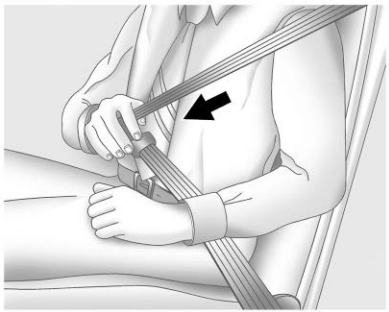
You can be seriously injured or killed if the shoulder belt is worn behind your back, under your legs, or wrapped around your neck. The shoulder belt can tighten but cannot be loosened if it is locked. The shoulder belt locks when it is pulled all the way out of the retractor. It unlocks when the shoulder belt is allowed to go all the way back into the retractor, but it cannot do this if it is wrapped around you. You may have to cut the seat belt if it is locked and tightened around you.

## 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.



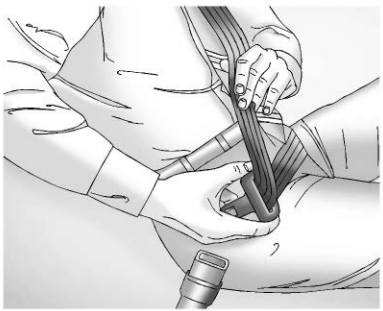
2. Pick up the latch plate and pull the belt across you. Do not let it get twisted.

   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.

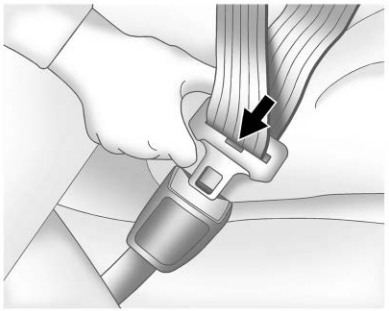
   If the shoulder portion of a passenger belt is pulled out all the way, the child restraint locking feature may be engaged. See *Child Restraint Systems* ⇨ *70*. If this occurs, let the belt go back all the way and start again. If the locking feature stays engaged after letting the belt go back to stowed position

on the seat, move the seat rearward or recline the seat until the shoulder belt retractor lock releases.

Engaging the child restraint locking feature in the front outboard seating position may affect the passenger sensing system. See *Passenger Sensing System* ⇨ *61*.



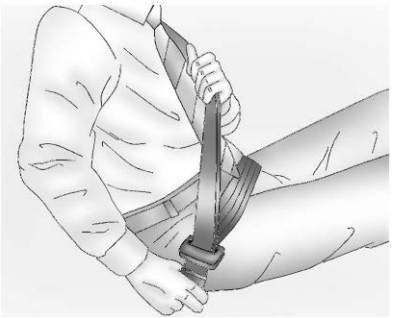
If the webbing locks in the latch plate before it reaches the buckle, tilt the latch plate flat to unlock.



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

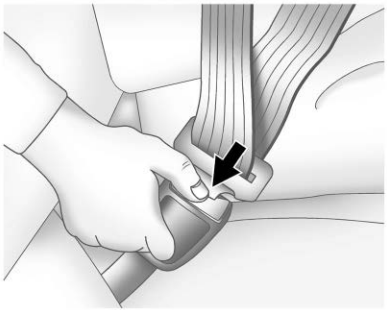
   Pull up on the latch plate to make sure it is secure. If the belt is not long enough, see *Seat Belt Extender* ⇨ *54*.

   Position the release pushbutton 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.

It may be necessary to pull stitching on the seat belt through the latch plate to fully tighten the lap belt on smaller occupants.



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

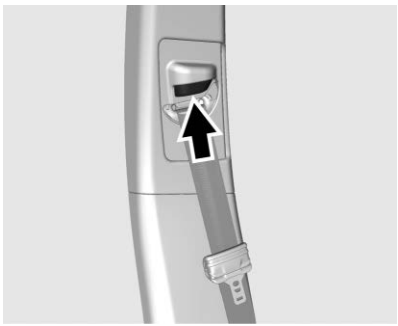
Always stow the seat belt slowly. If the seat belt webbing returns quickly to the stowed position, the retractor may lock and cannot be pulled out. If this happens, pull the seat belt straight out firmly to unlock the webbing, and then release it. If the webbing is still locked in the retractor, see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

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 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* ⇨ *49*.



To move the shoulder belt height adjuster down, push up on the release button and move the height adjuster to the desired position. You can move the height adjuster up by pushing up on the shoulder belt guide.

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

## Seat Belt Pretensioners

This vehicle has seat belt pretensioners for the 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 a rollover event.

Pretensioners work only once. If the pretensioners activate in a crash, the pretensioners and probably other parts of the vehicle seat belt system will need to be replaced. See *Replacing Seat Belt System Parts After a Crash* ⇨ *55*.

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.

Comfort guides are available through your dealer for the rear outboard seating positions. 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 fetus is to protect the mother. When a seat belt is worn properly, it is more likely that the fetus will not be hurt in a crash. For pregnant women, as for anyone, the key to making seat belts effective is wearing them properly.

## Seat Belt Extender

If the vehicle seat belt will fasten around you, you should use it.

But if a seat belt is not long enough, your dealer will order you an extender. Only a GM issued extender should be used. When you go in to order it, take the heaviest coat you will wear, so the extender will be long enough for you. To help avoid personal injury, do not let someone else use it, and use it only for the seat it is made to fit. The extender has been designed for adults. Never use it for securing child restraints. For more information on the proper use and fit of seat belt extenders see the instruction sheet that comes with the extender.

## 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

by reversing the latch plate on the webbing. If the twist cannot be corrected, ask your dealer to fix it.

Make sure the seat belt reminder light is working. See *Seat Belt Reminders* ⇨ *102*.

Keep seat belts clean and dry. See *Seat Belt Care* ⇨ *55*.

## 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 after proper cleaning 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 dealer 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* ⇨ *102*.

# 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

- Seat-mounted side impact airbags for the second row outboard passengers
- A roof-rail airbag for the driver and for the rear passengers seated directly behind the driver
- A roof-rail airbag for the front outboard passenger and the rear passengers 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 center 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 seatback 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?* ⇨ *59*.

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, any 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**

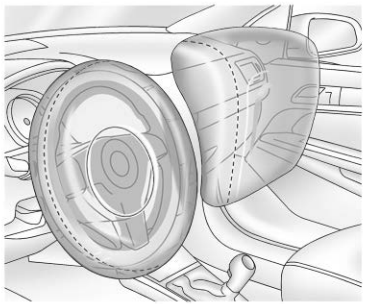
Children who are up against, or very close to, any airbag when it inflates can be seriously injured or killed. Always secure children properly in the vehicle. To read how, see *Older Children* ⇨ *66* or *Infants and Young Children* ⇨ *68*.



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* ⇨ *102*.

## Where Are the Airbags?



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

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

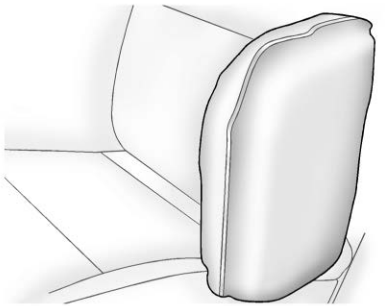


The driver knee airbag is below the steering column. The front outboard passenger knee airbag is below the glove box.



**Driver Side Shown, Passenger Side Similar**

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



On vehicles with second row seat-mounted side impact airbags, they are in the sides of the seatback closest to the door.



**Driver Side Shown, Passenger Side Similar**

The roof-rail airbags for the driver, front outboard passenger, and rear 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 airbag must be kept clear. Do not put anything

(Continued)

**Warning (Continued)**

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* ⇨ *55*. 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 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 traveling. 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, in rear impacts, or in many side impacts.

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

Knee airbags are designed to inflate in moderate to severe 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. These airbags may also inflate in some moderate to severe frontal impacts. Seat-mounted side impact airbags are not designed to inflate in 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 may 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 may 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 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?* ⇨ 57.

## How Does an Airbag Restrain?

In moderate to severe 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?* ⇨ 59.

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 realize the airbags inflated. Roof-rail airbags may still be at least partially inflated for some time after they inflate. Some components of the airbag module may be hot for several minutes. For location of the airbags, see *Where Are the Airbags?* ⇨ 57.

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 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 in the vehicle should get out 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 flashers, 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 vehicle 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.

**⚠ 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.

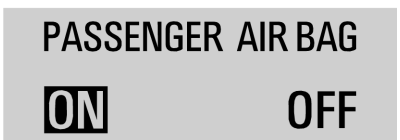
Use caution if you should attempt to restart the engine after a crash has occurred.

In many crashes severe enough to inflate the airbag, windshields are broken by vehicle deformation. Additional windshield 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* ⇨ *313* and *Event Data Recorders* ⇨ *314*.
- Let only qualified technicians work on the airbag system. Improper service can mean that an airbag system will not work properly. See your dealer for service.

## Passenger Sensing System

The vehicle has a passenger sensing system for the front outboard passenger position. The passenger airbag status indicator will light on the overhead console when the vehicle is started.




**United States**



**Canada**

The words ON and OFF, or the symbols for on and off, will be visible during the system check. When the system check is complete, either the word ON or OFF, or the symbol for on or off, will be visible. See *Passenger Airbag Status Indicator* ⇨ *103*.

The passenger sensing system turns off the front outboard passenger frontal airbag and knee airbag under certain conditions. No other airbag is affected by the passenger sensing system.

The passenger sensing system works with sensors that are part of the front outboard passenger seat and seat belt.

The sensors are designed to detect the presence of a properly seated occupant and determine if the front outboard passenger frontal airbag, and knee airbag, should be allowed to inflate or not.

According to accident statistics, children are safer when properly secured in a rear seat in the correct child restraint for their weight and size.

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

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

**⚠ Warning**

A child in a rear-facing child restraint can be seriously injured or killed if the passenger frontal 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 passenger frontal airbag inflates and the passenger seat is in a forward position.

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

(Continued)

**Warning (Continued)**

Never put a rear-facing child restraint in the front seat, even if the airbag is off. If securing a forward-facing child restraint in the front outboard passenger seat, always move the seat as far back as it will go. It is better to secure child restraints in the rear seat. Consider using another vehicle to transport the child when a rear seat is not available.

The passenger sensing system is designed to turn off the front outboard passenger frontal airbag, and knee airbag, if:

- The front outboard passenger seat is unoccupied.
- The system determines an infant is present in a child restraint.
- A front outboard passenger takes his/her weight off of the seat for a period of time.
- There is a critical problem with the airbag system or the passenger sensing system.

When the passenger sensing system has turned off the front outboard passenger frontal airbag, and knee airbag, the OFF indicator will light and stay lit as a reminder that the airbags are off. See *Passenger Airbag Status Indicator* ⇨ *103*.

The passenger sensing system is designed to turn on the front outboard passenger frontal airbag, and knee airbag, anytime the system senses that a person of adult size is sitting properly in the front outboard passenger seat.

When the passenger sensing system has allowed the airbags to be enabled, the ON indicator will light and stay lit as a reminder that the airbags are active.

For some children, including children in child restraints, and for very small adults, the passenger sensing system may or may not turn off the front outboard passenger frontal airbag, and knee airbag, depending upon the person's seating posture and body build. Everyone in the vehicle who has outgrown child restraints should wear a seat belt properly — whether or not there is an airbag for that person.

**⚠ Warning**

If the airbag readiness light ever comes on and stays on, it means that something may be wrong with the airbag system. To help avoid injury to yourself or others, have the vehicle serviced right away. See *Airbag Readiness Light* ⇨ *102* for more information, including important safety information.

### If the On Indicator Is Lit for a Child Restraint

The passenger sensing system is designed to turn off the front outboard passenger frontal airbag and knee airbag, if the system determines that an infant is present in a child restraint. If a child restraint has been installed and the ON indicator is lit:

1. Turn the vehicle off.
2. Remove the child restraint from the vehicle.
3. Remove any additional items from the seat such as blankets, cushions, seat covers, seat heaters, or seat massagers.
4. Reinstall the child restraint following the directions provided by the child restraint manufacturer and refer to *Securing Child Restraints (With the Seat Belt in the Rear Seat)* ⇨ *79 Securing Child Restraints (With the Seat Belt in the Front Seat)* ⇨ *81*.

   Make sure the seat belt retractor is locked by pulling the shoulder belt all the way out of the retractor when installing the child restraint, even if the child restraint is equipped with a seat belt lock off. When the retractor lock is set, the belt can be tightened but not pulled out of the retractor.
5. If, after reinstalling the child restraint and restarting the vehicle, the ON indicator is still lit, turn the vehicle off. Then slightly recline the vehicle seatback and adjust the seat cushion, if adjustable, to make sure that the vehicle seatback is not pushing the child restraint into the seat cushion.

   Also make sure the child restraint is not trapped under the vehicle head restraint. If this happens, adjust the head restraint. See *Head Restraints* ⇨ *37*.
6. Restart the vehicle.

The passenger sensing system may or may not turn off the airbags for a child in a child restraint depending upon the child's size. It is better to secure the child restraint in a rear seat. Never put a rear-facing child restraint in the front seat, even if the ON indicator is not lit.

### If the Off Indicator Is Lit for an Adult-Sized Occupant



If a person of adult size is sitting in the front outboard passenger seat, but the OFF indicator is lit, it could be because that person is not sitting properly in the seat or that the child restraint locking feature is engaged. Use the following steps to allow the system to detect that person and enable the front outboard passenger frontal airbag and knee airbag:

1. Turn the vehicle off.

2. Remove any additional material from the seat, such as blankets, cushions, seat covers, seat heaters, or seat massagers.
3. Place the seatback in the fully upright position.
4. Have the person sit upright in the seat, centered on the seat cushion, with legs comfortably extended.
5. If the shoulder portion of the belt is pulled out all the way, the child restraint locking feature will be engaged. This may unintentionally cause the passenger sensing system to turn the airbag off for some adult-sized occupants. If this happens, unbuckle the belt, let the belt go back all the way, and then buckle the belt again without pulling the belt out all the way.
6. Restart the vehicle and have the person remain in this position for two to three minutes after the ON indicator is lit.

**⚠ Warning**

If the front outboard passenger airbag is turned off for an adult-sized occupant, the airbag will not be able to inflate and help protect that person in a crash, resulting in an increased risk of serious injury or even death. An adult-sized occupant should not ride in the front outboard passenger seat, if the passenger airbag OFF indicator is lit.

### Additional Factors Affecting System Operation

Seat belts help keep the passenger in position on the seat during vehicle maneuvers and braking, which helps the passenger sensing system maintain the passenger airbag status. See “Seat Belts” and “Child Restraints” in the Index for additional information about the importance of proper restraint use.

A thick layer of additional material, such as a blanket or cushion, or aftermarket equipment such as seat covers, seat heaters, and seat massagers can affect how well the passenger sensing system operates. We recommend that you not use seat covers or other aftermarket equipment except when approved by GM for your specific vehicle. See *Adding Equipment to the Airbag-Equipped Vehicle* ➪ *65* for more information about modifications that can affect how the system operates.

The ON indicator may be lit if an object, such as a briefcase, handbag, grocery bag, laptop, or other electronic device, is put on an unoccupied seat. If this is not desired, remove the object from the seat.

**⚠ Warning**

Stowing articles under the passenger seat or between the passenger seat cushion and seatback may interfere with the proper operation of the passenger sensing system.

## 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. To purchase a service manual, see *Publication Ordering Information* ➪ *311*.

**⚠ 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.

## 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 zippers
- Seat belts
- Steering wheel, instrument panel, overhead console, ceiling trim, or pillar garnish trim
- Inner door seals, including speakers

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

In addition, the vehicle has a passenger sensing system for the front outboard passenger position, which includes sensors that are part of the passenger's seat. The passenger sensing system may not operate properly if the original seat trim is replaced with non-GM covers, upholstery, or trim, or with GM covers, upholstery, or trim designed for a different vehicle. Any object, such as an aftermarket seat heater or a comfort enhancing pad or device, installed under or on top of the seat fabric, could also interfere with the operation of the passenger sensing system. This could either prevent proper deployment of the passenger airbag(s) or prevent the passenger sensing system from properly turning off the passenger airbag(s). See *Passenger Sensing System* ⇨ *61*.

If the vehicle has rollover roof-rail airbags, see *Different Size Tires and Wheels* ⇨ *268* for additional important information.

If the vehicle must be modified because you have a disability and you 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, call Customer Assistance. See *Customer Assistance Offices* ⇨ *306*.

## 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* ⇨ *102*.

**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?* ⇨ 57. See your dealer for service.

## Replacing Airbag System Parts After a Crash

**⚠ Warning**

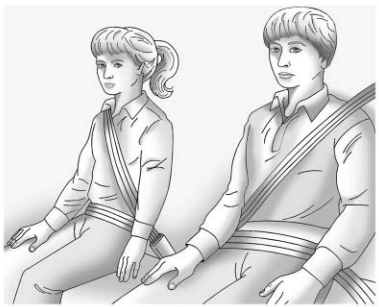
A crash can damage the airbag systems in the vehicle. A damaged airbag system may not properly protect you and your passenger(s) in a crash, resulting in serious injury or even death. To help make sure the airbag systems are working properly after a crash, have them inspected and any necessary replacements 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* ⇨ 102.

# Child Restraints

## Older Children



Older children who have outgrown booster seats should wear the vehicle seat belts. See *How to Wear Seat Belts Properly* ⇨ 49.

The manufacturer instructions that come with the booster seat state the weight and height limitations for that booster. Use a booster seat with a lap-shoulder belt until the child passes the fit test below:

- Sit all the way back on the seat. Do the knees bend at the seat edge? If yes, continue. If no, return to the booster seat.
- Buckle the lap-shoulder belt. Does the shoulder belt rest on the shoulder? If yes, continue. If no, try using the rear seat belt comfort guide, if available. See "Rear Seat Belt Comfort Guides" under *Lap-Shoulder Belt* ⇨ 51. If a comfort guide is not available, or if the shoulder belt still does not rest on the shoulder, then return to the booster seat.
- Does the lap belt fit low and snug on the hips, touching the thighs? If yes, continue. If no, return to the booster seat.
- Can proper seat belt fit be maintained for the length of the trip? If yes, continue. If no, return to the booster seat.

**Q: What is the proper way to wear seat belts?**

**A:** An older child should wear a lap-shoulder belt and get the additional restraint a shoulder belt can provide. The shoulder belt should not cross the face or neck. The lap belt should fit snugly below the hips, just touching the top of the thighs. This applies belt force to the child's pelvic bones in a crash. It should never be worn over the abdomen, which could cause severe or even fatal internal injuries in a crash.

Also see "Rear Seat Belt Comfort Guides" under *Lap-Shoulder Belt* ⇨ *51*.

According to accident statistics, children are safer when properly restrained in a rear seating position.

In a crash, children who are not buckled up can strike other people who are buckled up, or can be thrown out of the vehicle. Older children need to use seat belts properly.

**⚠ Warning**

Never allow more than one child to wear the same seat belt. The seat belt cannot properly spread the impact forces. In a crash, they can be crushed together and seriously injured. A seat belt must be used by only one person at a time.



**⚠ Warning**

Never allow a child to wear the seat belt shoulder belt under both arms or behind their back. A child can be seriously injured by not wearing the lap-shoulder belt properly. In a crash, the child would not be restrained by the shoulder belt. The child could move too far forward increasing the chance of head and neck injury. The child might also slide under the lap belt. The belt force would then be applied right on the abdomen. That could cause serious or fatal injuries. The shoulder belt should go over the shoulder and across the chest.



**⚠ Warning**

Children can be seriously injured or killed if the shoulder belt is worn behind their back, under their legs, or wrapped around their neck. The shoulder belt can tighten but cannot be loosened if it is locked. The shoulder belt locks when it is pulled all the way out of the retractor. It unlocks when the shoulder belt is allowed to go all the way back into the retractor, but it cannot do this if it is wrapped around the child. Never leave children unattended in a vehicle and never allow children to improperly wear, or play with, the seat belts.

## Infants and Young Children

Everyone in a vehicle needs protection! This includes infants and all other children. Neither the distance traveled nor the age and size of the traveler changes the need, for everyone, to use safety restraints. In fact, the law in every state in the United States and in every Canadian province says children up to some age must be restrained while in a vehicle.

**⚠ Warning**

Children can be seriously injured or killed if the shoulder belt is worn behind their back, under their legs, or wrapped around their neck. The shoulder belt can tighten but cannot be loosened if it is locked. The shoulder belt locks when it is pulled all the way out of the retractor. It unlocks when the shoulder belt is allowed to go all the way back into the retractor, but it cannot do this if it is wrapped around the child. Never leave children unattended in a vehicle and never allow children to improperly wear, or 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 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. 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 and is designed by a genuine child restraint manufacturer. If it is, the child restraint will have a label saying that it meets federal motor vehicle safety standards.

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.

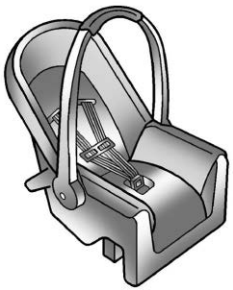
**⚠ Warning**

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



**Rear-Facing Infant Restraint**

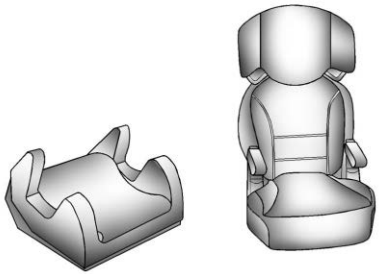
A rear-facing child restraint provides restraint with the seating surface against the back of the infant.

The harness system holds the infant in place and, in a crash, acts to keep the infant positioned in the restraint.



**Forward-Facing Child Restraint**

A forward-facing child restraint provides restraint for the child's body with the harness.



**Booster Seats**

A belt-positioning booster seat is used for children who have outgrown their forward-facing child restraint. Boosters are designed to improve the fit of the vehicle seat belt system until the child is large enough for the vehicle seat belts to fit properly without a booster seat. See the seat belt fit test in *Older Children* ⇨ *66*.



**Backless Booster**

Backless booster fitment requirement:

Some backless booster seats are not suitable for rear seats that have oversized side seat bolsters, as they can push the backless booster forward from the seat back.

To use a backless booster:

1. Center the booster on the seat cushion.
2. Ensure the backless booster seat contacts the seat back.

If the backless booster does not meet the fit test described in Steps 1–2, select another booster seat.

## Securing an Add-On Child Restraint in the Vehicle

**⚠ Warning**

Each top-tether anchor is designed to anchor only one child restraint. Do not attach more than one child restraint to a single top-tether anchor. The anchor may come loose or break, potentially causing personal injury, property damage, or death.

**⚠ Warning**

A child can be seriously injured or killed in a crash if the child restraint is not properly secured in the vehicle. Secure the child restraint properly in the vehicle using the vehicle seat belt or LATCH system, following the instructions that came with that child restraint and the instructions in this manual.

To help reduce the chance of injury, the child restraint must be secured in the vehicle. Child restraints must be secured in vehicle seats by the lap belt portion of a lap-shoulder belt, or by the LATCH system. See *Lower Anchors and Tethers for Children (LATCH System)* ⇨ *73* for more information. Never use a seat belt extender when installing a child restraint. Never use non-regulated aftermarket anchors or attachments to secure a child restraint. Children can be endangered in a crash if the child restraint is not properly secured in the vehicle.

When securing an add-on child restraint, see the following:

- Instruction labels provided on the child restraint
- Instruction manual provided with the child restraint
- This vehicle owner's manual

The child restraint instructions are important, so if they are not available, obtain a replacement copy from the manufacturer.

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.

In some areas Certified Child Passenger Safety Technicians (CPSTs) are available to inspect and demonstrate how to correctly

use and install child restraints. In the U.S., see the National Highway Traffic Safety Administration (NHTSA) website to locate the nearest child safety seat inspection station. For CPST availability in Canada, check with Transport Canada or the Provincial Ministry of Transportation office.

### Securing the Child Within the Child Restraint

**⚠ Warning**

A child can be seriously injured or killed in a crash if the child is not properly secured in the child restraint. Secure the child properly following the instructions that came with that child restraint.

## 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.

**⚠ Warning**

A child in a rear-facing child restraint can be seriously injured or killed if the front 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 passenger airbag inflates and the passenger seat is in a forward position.

Even if the passenger sensing system has turned off the front 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 seat, always move the front passenger seat as far back as it will go. It is better to secure the child restraint in a rear seat.

(Continued)

**Warning (Continued)**

See *Passenger Sensing System* ⇨ *61* for additional information.

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. Do not install a child restraint in any rear seating position where it cannot be installed securely.

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 LATCH 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.

Adjust the seat in front of a child restraint to ensure proper installation according to the child restraint manual. Move the front

seat forward to avoid contact between the child restraint and the seat or any accessories mounted to the seat.

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.

## Lower Anchors and Tethers for Children (LATCH System)

The LATCH system secures a child restraint during driving or in a crash. LATCH attachments on the child restraint are used to attach the child restraint to the anchors in the vehicle. This system is designed to make installation of a child restraint easier.

In order to use the LATCH system in your vehicle, you need a child restraint that has LATCH attachments. LATCH-compatible rear-facing and forward-facing child seats can be properly installed using either the LATCH anchors or the vehicle's seat belts. Do not use both the seat belts and the LATCH anchorage system to secure a rear-facing or forward-facing child restraint.

Booster seats use the vehicle's seat belts to secure the child and the booster seat. If the manufacturer recommends that the booster seat be secured with the LATCH system, this can be done as long as the booster seat can be positioned properly and there is no interference with the proper positioning of the lap-shoulder belt on the child.

Make sure to follow the instructions that came with the child restraint, and also the instructions in this manual.

When installing a child restraint with a top tether, you must also use either the lower anchors or the seat belts to properly secure the child restraint. A child restraint must never be attached using only the top tether.

For a forward-facing 5-pt harness child restraint where the combined weight of the child and restraint are up to 29.5 kg (65 lb), use either the lower LATCH anchorages with the top tether anchorage, or the seat belt with the top tether anchorage. Where the combined weight of the child and restraint are greater than 29.5 kg (65 lb), use the seat belt with the top tether anchorage only.

## Recommended Methods for Attaching Child Restraints

| Restraint Type | Combined Weight of the Child + Child Restraint | Use Only Approved Attachment Methods Show with an X | | | |
|---|---|---|---|---|---|
| | | LATCH-Lower Anchors Only | Seat Belt Only | LATCH-Lower Anchors and Top Tether Anchor | Seat Belt and Top Tether Anchor |
| Rear-Facing Child Restraint | Up to 29.5 kg (65 lb) | X | X | | |
| Rear-Facing Child Restraint | Greater than 29.5 kg (65 lb) | | X | | |
| Forward-Facing Child Restraint | Up to 29.5 kg (65 lb) | | | X | X |
| Forward-Facing Child Restraint | Greater than 29.5 kg (65 lb) | | | | X |

See *Securing Child Restraints (With the Seat Belt in the Rear Seat)* ➪ *79 Securing Child Restraints (With the Seat Belt in the Front Seat)* ➪ *81.*

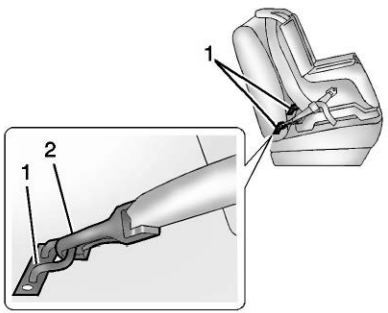
Child restraints built after March 2014 are labeled with the maximum child weight, with which the LATCH system can be used for installing the child restraint.

The following explains how to attach a child restraint with these attachments in the vehicle.

Not all vehicle seating positions have lower anchors. In this case, the seat belt must be used (with top tether where available) to secure the child restraint. See *Securing Child*

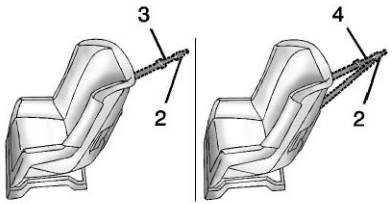
*Restraints (With the Seat Belt in the Rear Seat)* ⇨ *79 Securing Child Restraints (With the Seat Belt in the Front Seat)* ⇨ *81.*

### Lower Anchors




Lower anchors (1) are metal bars built into the vehicle. There are two lower anchors for each LATCH seating position that will accommodate a child restraint with lower attachments (2).

### Top Tether Anchor



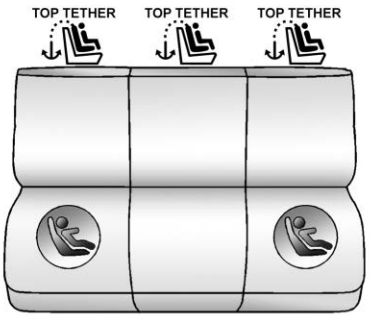

A top tether (3, 4) is used to secure the top of the child restraint to the vehicle. A top tether anchor is built into the vehicle. The top tether attachment hook (2) on the child restraint connects to the top tether anchor in the vehicle in order to reduce the forward movement and rotation of the child restraint during driving or in the event of a crash.

The child restraint may have a single tether (3) or a dual tether (4). Either will have a single attachment hook (2) to secure the top tether to the anchor.

Some child restraints with a top tether are designed for use with or without the top tether being attached. Others require the top tether always to be attached. In Canada, the law requires that forward-facing child restraints have a top tether, and that the tether be attached. Be sure to read and follow the instructions for your child restraint.

### Lower Anchor and Top Tether Anchor Locations

**Rear Seat**




TOP TETHER : Seating positions with top tether anchors.

: Seating positions with two lower anchors.



To assist in locating the lower anchors, each seating position with lower anchors has two labels with the lower anchor symbol on them, near the crease between the seatback and the seat cushion.

Do not install a child restraint that requires lower anchors in the center rear seating position. See *Securing Child Restraints (With the Seat Belt in the Rear Seat)* ⇨ *79 Securing Child Restraints (With the Seat Belt in the Front Seat)* ⇨ *81*.



The lower anchors are behind the vertical openings in the seat cushion trim located below the anchor label.




To assist in locating the top tether anchors, the top tether anchor symbol is near the top tether anchors.

**Top Tether Anchors**




The top tether anchors for each rear seating position are on the back of the rear seatback. For models with a cargo cover, remove the cargo cover before installing the top tether. The cargo cover should remain off while the top tether is in use. Be sure to use an anchor on the same side of the vehicle as the seating position where the child restraint will be placed.

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 be attached, or if the instructions that come with the child restraint say that the top tether must be attached.

According to accident statistics, children and infants are safer when properly restrained in a child restraint system or infant restraint system secured in a rear seating position. See *Where to Put the Restraint* ⇨ *72* for additional information.

### Securing a Child Restraint Designed for the LATCH System

**⚠ Warning**

A child could be seriously injured or killed in a crash if the child restraint is not properly attached to the vehicle using either the LATCH anchors or the vehicle seat belt. Follow the instructions that came with the child restraint and the instructions in this manual.

**⚠ Warning**

To reduce the risk of serious or fatal injuries during a crash, do not attach more than one child restraint to a single anchor. Attaching more than one child restraint

(Continued)

**Warning (Continued)**

to a single anchor could cause the anchor or attachment to come loose or even break during a crash. A child or others could be injured.

**⚠ Warning**

Children can be seriously injured or strangled if a shoulder belt is wrapped around their neck. The shoulder belt can tighten but cannot be loosened if it is locked. The shoulder belt locks when it is pulled all the way out of the retractor. It unlocks when the shoulder belt is allowed to go all the way back into the retractor, but it cannot do this if it is wrapped around a child's neck. If the shoulder belt is locked and tightened around a child's neck, the only way to loosen the belt is to cut it.

Buckle any unused seat belts behind the child restraint so children cannot reach them. Pull the shoulder belt all the way out of the retractor to set the lock, and tighten the belt behind the child restraint after the child restraint has been installed.

**Caution**

Do not let the LATCH attachments rub against the vehicle's seat belts. This may damage these parts. If necessary, move buckled seat belts to avoid rubbing the LATCH attachments.

Do not fold the rear seatback when the seat is occupied. Do not fold the empty rear seat with a seat belt buckled. This could damage the seat belt or the seat. Unbuckle and return the seat belt to its stowed position, before folding the seat.

If you need to secure more than one child restraint in the rear seat, see *Where to Put the Restraint* ⇨ *72*.

1. Attach and tighten the lower attachments to the lower anchors. If the child restraint does not have lower attachments or the desired seating position does not have lower anchors, secure the child restraint with the top tether and the seat belts. Refer to the child restraint manufacturer instructions and the instructions in this manual.

1.1 Find the lower anchors for the desired seating position. See *Lower Anchors and Tethers for Children (LATCH System)* ⇨ *73*

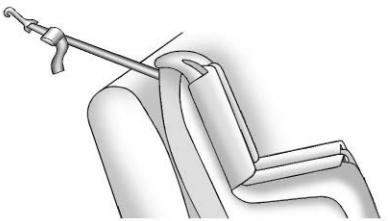
1.2 Put the child restraint on the seat.

1.3 Attach and tighten the lower attachments on the child restraint to the lower anchors.

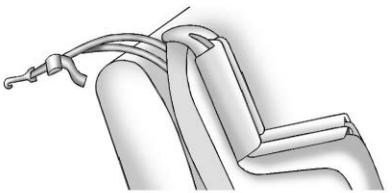
2. If the child restraint manufacturer recommends that the top tether be attached, adjust the top tether to its full length and attach it to the anchor. Refer to the child restraint instructions and the following steps:

2.1 Find the top tether anchor.

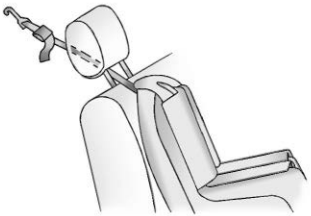
2.2 Route, attach and tighten the top tether according to your child restraint instructions and the following instructions:



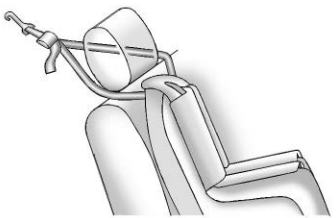
If the position you are using does not have a head restraint and you are using a single tether, route the tether over the seatback.



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



If the position you are using has an adjustable headrest or head restraint, adjust it accordingly to allow proper fitment. If you are using a single tether, route the tether in between the headrest or head restraint posts.



If the position you are using has an adjustable headrest or head restraint, adjust it accordingly to

allow proper fitment. If you are using a dual tether, route the tether around the headrest or head restraint posts.

If the child restraint is installed next to a center seat, make sure the top tether does not interfere with the center seating position shoulder belt/retractor. If it does, find another suitable seating position to install the child restraint.

3. Before placing a child in the child restraint, make sure it is securely held in place. To check, firmly grip the child restraint at the LATCH path and attempt to move it side to side and back and forth. There should be no more than 2.5 cm (1 in) of movement for proper installation.

## Replacing LATCH System Parts After a Crash

**⚠ Warning**

A crash can damage the LATCH system in the vehicle. A damaged LATCH system may not properly secure the child restraint, resulting in serious injury or even death in a crash. To help make sure the LATCH system is working properly after a crash, see your dealer to have the system inspected and any necessary replacements made as soon as possible.

If the vehicle has the LATCH system and it was being used during a crash, new LATCH system parts may be needed.

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

## 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 LATCH system, see *Lower Anchors and Tethers for Children (LATCH System)* ⇨ *73* for how and where to install the child restraint using LATCH. If a child restraint is secured in the vehicle using a seat belt and it uses a top tether, see *Lower Anchors and Tethers for Children (LATCH System)* ⇨ *73* 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 say that the top tether must be anchored. Refer to the instructions that came with the child restraint and see *Lower Anchors and Tethers for Children (LATCH System)* ⇨ *73*.

In Canada, the law requires that forward-facing child restraints have a top tether, and that the tether be attached.

If the child restraint or vehicle seat position does not have the LATCH 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* ⇨ *72*.

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 restraint. Ensure the seat belt webbing is routed as direct as possible, and is not caught on seat handles or plastic trim. The child restraint instructions will show you how.

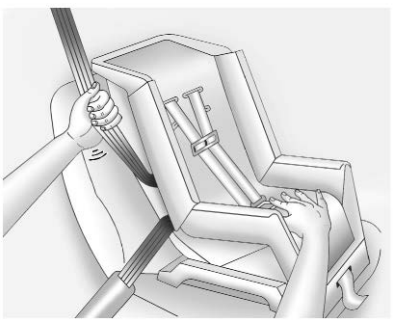


3. Push the latch plate into the buckle until it clicks.

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



4. Pull the shoulder belt all the way out of the retractor to set the lock. When the retractor lock is set, the belt can be tightened but not pulled out of the retractor.



5. To tighten the belt, push down on the child restraint, pull the shoulder portion of the belt to tighten the lap portion of the belt, and feed the shoulder belt back into the retractor. When installing a forward-facing child restraint, it may be helpful to use your knee to push down on the child restraint as you tighten the belt.

   There must not be direct contact of the child restraint to the buckle release pushbutton. If there is contact, reposition the child restraint using the instructions that came with the child restraint. If there is still contact, use another seating position or child restraint.

   Try to pull the belt out of the retractor to make sure the retractor is locked. If the retractor is not locked, repeat Steps 4 and 5.

6. Tighten the top tether. See *Lower Anchors and Tethers for Children (LATCH System)* ⇨ *73*.

7. If the child restraint has a top tether, follow the child restraint manufacturer's instructions regarding the use of the top tether. See *Lower Anchors and Tethers for Children (LATCH System)* ⇨ *73*.

8. Before placing a child in the child restraint, make sure it is securely held in place. To check, firmly grip the child restraint at the seat belt path and attempt to move it side to side and back and forth. When the child restraint is properly installed, there should be no more than 2.5 cm (1 in) of movement.

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.

Many child restraints are too wide to be correctly secured in the center rear seat, although some will fit there. If the center seat position is too narrow for the child restraint, secure it in a rear outboard seat position.

If a rear-facing child restraint is installed in the rear center seat, ensure that the second-row arm rest remains in the stowed (closed) position. If the arm rest cannot be stowed, install the child restraint in another seating position.

## 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* ⇨ *72*.

In addition, the vehicle has a passenger sensing system which is designed to turn off the front outboard passenger frontal airbag and knee airbag under certain conditions. See *Passenger Sensing System* ⇨ *61* and *Passenger Airbag Status Indicator* ⇨ *103* for more information, including important safety information.

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

**⚠ Warning**

A child in a rear-facing child restraint can be seriously injured or killed if the front outboard passenger frontal 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

(Continued)

**Warning (Continued)**

or killed if the front outboard passenger frontal airbag inflates and the passenger seat is in a forward position.

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

Secure rear-facing child restraints in a rear seat, even if the airbag(s) are off. If you secure a forward-facing child restraint in the front outboard passenger seat, always move the seat as far back as it will go. It is better to secure the child restraint in a rear seat.

See *Passenger Sensing System* ⇨ *61* for additional information.

If the child restraint uses a top tether, see *Lower Anchors and Tethers for Children (LATCH System)* ⇨ *73* for top tether anchor locations.

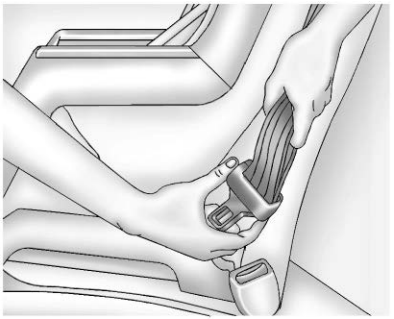
Do not secure a child seat in a position without a top tether anchor if a national or local law requires that the top tether be anchored, or if the instructions that come with the child restraint say that the top tether must be anchored.

In Canada, the law requires that forward-facing child restraints have a top tether, and that the tether be attached.

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 seatback to an upright position, if needed, to get a tight installation of the child restraint.

   When the passenger sensing system has turned off the front outboard passenger frontal airbag and knee airbag, the OFF indicator on the passenger airbag status indicator should light and stay lit when you start the vehicle. See *Passenger Airbag Status Indicator* ⇨ *103*.
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 restraint. Ensure the seat belt webbing is routed as direct as possible, and is not caught on seat handles or plastic trim. The child restraint instructions will show you how.

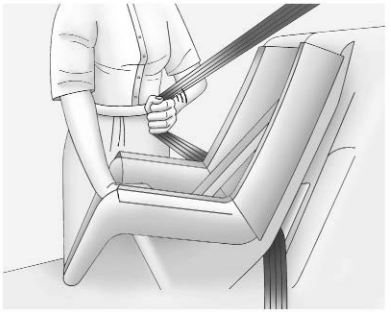


Tilt the latch plate to adjust the belt if needed.

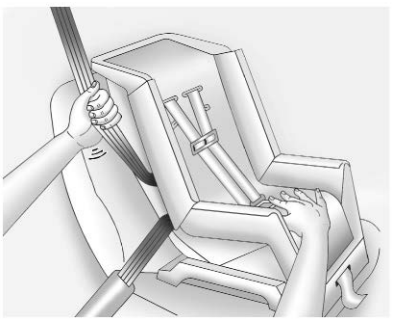


4. Push the latch plate into the buckle until it clicks.

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



5. Pull the shoulder belt all the way out of the retractor to set the lock. When the retractor lock is set, the belt can be tightened but not pulled out of the retractor.



6. To tighten the belt, push down on the child restraint, pull the shoulder portion of the belt to tighten the lap portion of the belt, and feed the shoulder belt back into the retractor.

   When installing a forward-facing child restraint, it may be helpful to use your knee to push down on the child restraint as you tighten the belt.

   There must not be direct contact of the child restraint to the buckle release pushbutton. If there is contact, move the seat upward and repeat prior installation steps. If there is still contact, reposition the child restraint using the instructions that came with the child restraint. If there is still contact, use another seating position or child restraint.

   Try to pull the belt out of the retractor to make sure the retractor is locked. If the retractor is not locked, repeat Steps 5 and 6.

7. Before placing a child in the child restraint, make sure it is securely held in place. To check, firmly grip the child restraint at the seat belt path and attempt to move it side to side and back and forth. When the child restraint is properly installed, there should be no more than 2.5 cm (1 in) of movement.

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.

If a child restraint has been installed and the ON indicator is lit, see “If the On Indicator Is Lit for a Child Restraint” under *Passenger Sensing System* ⇨ *61*.

To remove the child restraint, unbuckle the vehicle seat belt and let it return to the stowed position.

# Storage

**Storage Compartments**
Storage Compartments ....85
Glove Box ....85
Cupholders ....85
Center Console Storage ....85
**Additional Storage Features**
Rear Compartment/Storage Panel Cover ....86
Cargo Cover ....87
Cargo Tie-Downs ....87
Cargo Management System ....88
Convenience Net ....88
**Roof Rack System**
Roof Rack System ....88

## 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

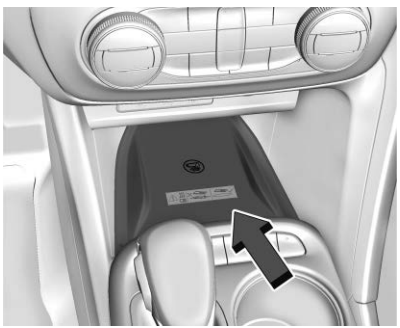
Lift up on the glove box lever to open it.

### Cupholders

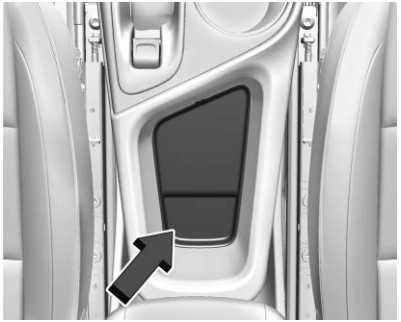
Two cupholders are in the center console. Cupholders may be located in the rear seat armrest. To access, pull the armrest down.



### Center Console Storage



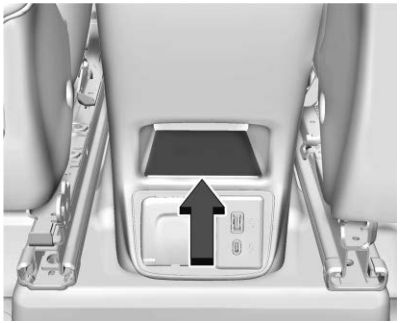
There is a storage area in the center console in front of the shift lever.



There is also a storage area in the center console in front of the armrest.



The center console has storage under the armrest. Push the latch and lift the armrest to open. There may be a small storage bin inside. Remove the small bin to access more storage.



There may also be a storage area in the center console for passengers in the rear.

# Additional Storage Features

## Rear Compartment/Storage Panel Cover

### Quarter Lower Storage Panel



The quarter lower storage panel can be removed on the passenger side. Lift the load floor to access and pull the panel to remove.

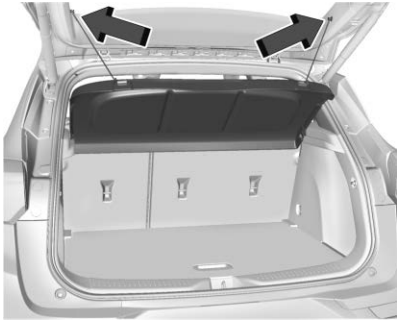
## Cargo Cover

**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.



Use the cargo cover to cover items in the rear of the vehicle.

**Installing the Cargo Cover**

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

**Removing the Cargo Cover**

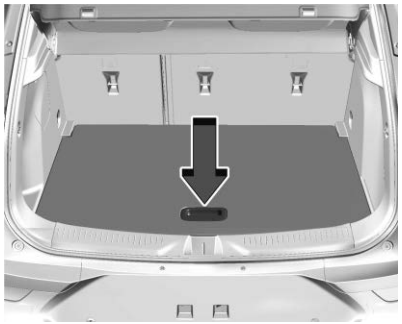
Disengage the cords on the liftgate, lift up on the cover, and pull the cover out of the vehicle.

## Cargo Tie-Downs



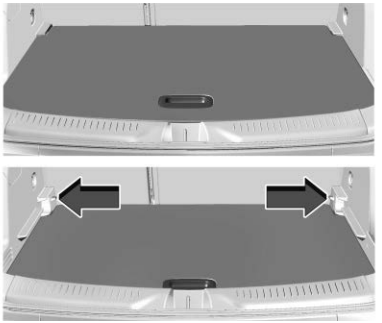
The vehicle may be equipped with four cargo tie-downs in the rear compartment.

## Cargo Management System



Lift the load floor to access the cargo management system.

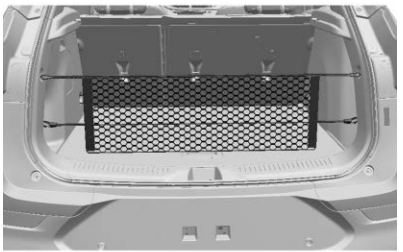
After storing items, make sure to properly secure the load floor.



The cargo management system has a height adjustment. Place the load floor on the holders.

To access the spare tire, lift the load floor and place it into the load floor holding slots. See *Tire Changing* ⇨ *272*.

## Convenience Net



This vehicle may have a convenience net in the rear of the vehicle. Attach it to the cargo tie-downs for storing small loads.

Do not use the net to store heavy loads.

## Roof Rack System

**⚠ Warning**

If something is carried on top of the vehicle that is longer or wider than the roof rack — like paneling, plywood, or a mattress —

(Continued)

**Warning (Continued)**

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 dealer.

**Caution**

Loading cargo on the roof rack that weighs more than 75 kg (165 lb) or hangs over the rear or sides of the vehicle may damage the vehicle. Do not load cargo exceeding 75 kg (165 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 center of gravity higher. Avoid high speeds, sudden starts, sharp turns, sudden braking, or abrupt maneuvers; 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* ⇨ *162*.

# Instructions and Controls


**Controls**
- Steering Wheel Adjustment ..... 91
- Heated Steering Wheel ..... 91
- Horn ..... 91
- Windshield Wiper/Washer ..... 91
- Rear Window Wiper/Washer ..... 93
- Compass ..... 94
- Clock ..... 94
- Power Outlets ..... 94
- Wireless Charging ..... 95

**Warning Lights, Gauges, and Indicators**
- Warning Lights, Gauges, and Indicators ... 98
- Instrument Cluster ..... 99
- Speedometer ..... 100
- Odometer ..... 100
- Trip Odometer ..... 100
- Tachometer ..... 100
- Fuel Gauge ..... 100
- Engine Coolant Temperature Gauge ..... 101
- Seat Belt Reminders ..... 102
- Airbag Readiness Light ..... 102
- Passenger Airbag Status Indicator ..... 103
- Charging System Light ..... 103
- Malfunction Indicator Lamp (Check Engine Light) ..... 104
- Brake System Warning Light ..... 105
- Electric Parking Brake Light ..... 106
- Service Electric Parking Brake Light ..... 106
- Antilock Brake System (ABS) Warning Light ..... 106
- All-Wheel-Drive Light ..... 107
- Lane Keep Assist (LKA) Light ..... 107
- Automatic Emergency Braking (AEB) Disabled Light ..... 107
- Vehicle Ahead Indicator ..... 107
- Pedestrian Ahead Indicator ..... 108
- Traction Off Light ..... 108
- Traction Control System (TCS)/ Electronic Stability Control Light ..... 108
- Electronic Stability Control (ESC) Off Light ..... 108
- Engine Coolant Temperature Warning Light ..... 109
- Tire Pressure Light ..... 109
- Engine Oil Pressure Light ..... 109
- Low Fuel Warning Light ..... 110
- Auto Stop Indicator ..... 110
- Security Light ..... 110
- High-Beam On Light ..... 111
- Lamps On Reminder ..... 111
- Cruise Control Light ..... 111
- Adaptive Cruise Control Light ..... 111
- Door Ajar Light ..... 111

**Information Displays**
- Driver Information Center (DIC) ..... 112
- Vehicle Status ..... 113

**Vehicle Messages**
- Vehicle Messages ..... 115
- Engine Power Messages ..... 115
- Vehicle Speed Messages ..... 116

**Universal Remote System**
- Universal Remote System ..... 116
- Universal Remote System Programming ..... 116
- Universal Remote System Operation ..... 118

# Controls

## Steering Wheel Adjustment



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.

## 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 start heating.

## Horn

Press on the steering wheel pad to sound the horn.

## Windshield Wiper/Washer

**Warning**

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

**Warning**

Before driving the vehicle, always clear snow and ice from the hood, windshield, washer nozzles, roof, and rear of the vehicle, including all lamps and windows. Reduced visibility from snow and ice buildup could lead to a crash.

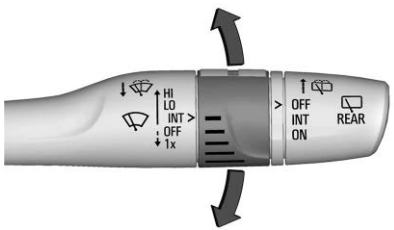
With the ignition on or in accessory mode, move the windshield wiper lever to select the wiper speed.

**Windshield Wiper with Intermittent Wipes (INT Shown, Rainsense Similar)**




**HI :** Use for fast wipes.

**LO :** Use for slow wipes.




**INT :** Use for intermittent wipes or Rainsense, if equipped and enabled. To adjust wipe frequency, turn the band up for more frequent wipes or down for less frequent wipes. If Rainsense is enabled, 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.

Clear snow and ice from the wiper blades before using them. If frozen to the windshield, carefully loosen or thaw them. Damaged blades should be replaced. See *Wiper Blade Replacement* ⇨ *241*. Heavy snow or ice can overload the wiper motor.

**Wiper Parking**

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

If the windshield 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 windshield.

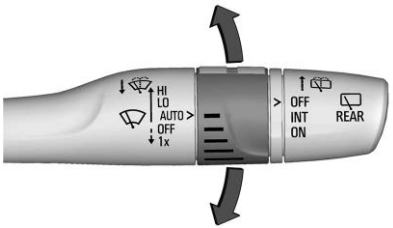
If the ignition is turned off while the wipers are performing wipes due to windshield washing, the wipers continue to run until they reach the base of the windshield.

**Rainsense**

If equipped with Rainsense, a sensor located near the top center of the windshield detects the amount of water on the windshield and automatically controls the frequency of the windshield wiper.

When Rainsense is enabled, the normal intermittent control operates as a sensitivity control.

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




**AUTO :** Move the windshield wiper lever to AUTO. Turn the band on the wiper lever to adjust the sensitivity.

- Turn the band up for more sensitivity to moisture.
- Turn the band down for less sensitivity to moisture.

- Move the windshield wiper lever out of the AUTO position to deactivate Rainsense.

To turn the Rainsense feature on or off, select Settings > Vehicle > Comfort and Convenience > Rainsense Wipers > Select ON or OFF.

**Wiper Arm Assembly Protection**

When using an automatic car wash, move the windshield wiper lever to OFF. This disables the automatic Rainsense windshield wipers and/or manual windshield 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 windshield.

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

**Windshield Washer**

**:** Pull the windshield wiper lever toward you to spray windshield washer fluid and activate the windshield wipers. The wipers will continue until the lever is released or the maximum wash time is reached. When the windshield wiper lever is released, additional wipes may occur depending on how long the windshield washer had been activated. See *Washer Fluid* ⇨ *235* for information on filling the windshield washer fluid reservoir.

## Rear Window Wiper/Washer

The ignition must be on or in ACC/ACCESSORY to operate the rear window wiper/washer.




**Rear Wiper with Rainsense Shown, without Rainsense Similar**

Turn the end of the windshield wiper lever to operate the rear window wiper/washer.

**OFF :** Turns the wiper off.

**INT :** Intermittent wipes.

**ON :** Slow wipes.

**:** Push the windshield wiper lever forward to spray washer fluid on the rear window and the Rear Mirror Camera Lens. If equipped, See *Rear Camera Mirror* ⇨ *29*. The wipers will clear the rear window and either stop or return to your preset speed. For more washer cycles, press and hold the lever.

The rear window wiper/washer will not operate if the liftgate is open or ajar. If the liftgate 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.

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

**Reverse Gear Wipes**

If the rear wiper control is off, the rear wiper will automatically operate continuously when the vehicle is in R (Reverse) and the front windshield wiper is performing low or high speed wipes. If the rear wiper control is off,

the vehicle is in R (Reverse), and the front windshield wiper is performing interval wipes, then the rear wiper automatically performs interval wipes.

This feature can be turned on or off. Go to Settings > Vehicle > Comfort and Convenience > Reverse Gear Wipes > Select ON or OFF.

The windshield washer reservoir is used for the windshield and the rear window. Check the fluid level in the reservoir if either washer is not working. See *Washer Fluid* ⇨ *235*.

**Rear Camera Washer**




If equipped, push the windshield 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* ⇨ *29*.

## Compass

The vehicle may have a compass display on the Driver Information Center (DIC). The compass receives its heading and other information from the Global Positioning System (GPS) antenna, 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.

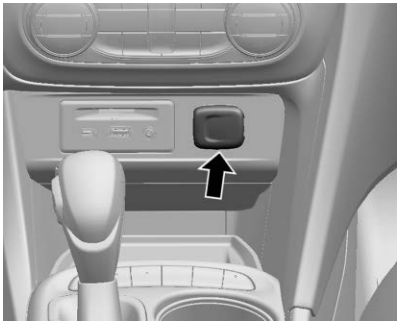
## Clock

Set the time and date using the infotainment system. See "Date/Time" under *Settings* ⇨ *139*.

## Power Outlets

### Power Outlet 12-Volt Direct Current

The vehicle has one 12-volt accessory power outlet that can be used to plug in electrical equipment, such as a cell phone or MP3 player.



**⚠ Warning**

Power is always supplied to the rear cargo power outlet. Do not leave electrical equipment plugged in when the vehicle is not in use because the vehicle could catch fire and cause injury or death.

**Caution**

Leaving electrical equipment plugged in for an extended period of time while the ignition is off will drain the battery. Always

(Continued)

| Caution (Continued) |
| --- |
| unplug electrical equipment when not in use and do not plug in equipment that exceeds the maximum 15 amp rating. |

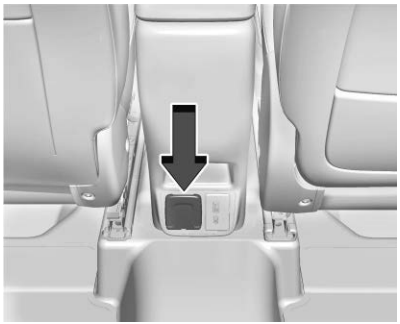
Certain accessory plugs may not be compatible with the accessory power outlet and could overload vehicle and adapter fuses. If a problem is experienced, see your dealer.

When adding electrical equipment, be sure to follow the proper installation instructions included with the equipment. See *Add-On Electrical Equipment* ⇨ *218*.

| 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 cell phone charge cords. |

### Power Outlet 110V/120V Alternating Current

If equipped with this power outlet, it can be used to plug in electrical equipment that uses a maximum limit of 150 watts.



The power outlet is on the rear of the center console.

An indicator light on the outlet turns on to show it is in use. The light comes on when the ignition is on, equipment requiring less than 150 watts is plugged into the outlet, and no system fault is detected.

The indicator light does not come on when the ignition is off or if the equipment is not fully seated into the outlet.

If equipment is connected using more than 150 watts or a system fault is detected, a protection circuit shuts off the power supply and the indicator light turns off. To reset the circuit, unplug the item and plug it back in or turn the Retained Accessory Power (RAP) off and then back on. See *Retained Accessory Power (RAP)* ⇨ *170*. The power restarts when equipment using 150 watts or less is plugged into the outlet and a system fault is not detected.

The power outlet is not designed for and may not work properly, if the following are plugged in:

- Equipment with high initial peak wattage, such as compressor-driven refrigerators and electric power tools
- Other equipment requiring an extremely stable power supply, such as microcomputer-controlled electric blankets and touch sensor lamps
- Medical equipment

## Wireless Charging

If equipped and enabled, the vehicle has wireless charging in the storage bin at the front of the floor console. 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 (15 W), as requested by the compatible smartphone. See *Radio Frequency Statement* ⇨ *312*.

**⚠ Warning**

Wireless charging may 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.

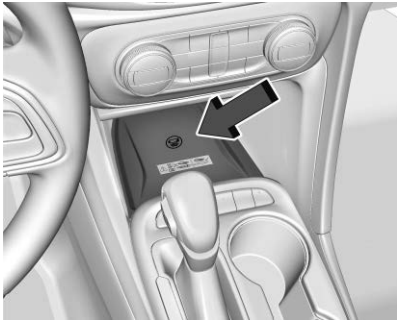
The vehicle must be on, in accessory mode, or Retained Accessory Power (RAP) must be active. The wireless charging feature may not correctly indicate charging when the vehicle is in RAP, during a Bluetooth phone call, or when phone projection (e.g. Apple CarPlay/Android Auto) is active. See *Retained Accessory Power (RAP)* ⇨ *170*.

The operating temperature is −40 °C (−40 °F) to 85 °C (185 °F) for the charging system and 0 °C (32 °F) to 35 °C (95 °F) for the phone. A charging stopped alert may be displayed on the infotainment screen, if the wireless charger or smartphone are outside of normal operating temperature. Charging will automatically resume when a normal operating temperature is reached.

**⚠ Warning**

Remove all objects from the charger before charging your compatible smartphone. Objects, such as coins, keys, rings, paper clips, or cards, between the smartphone and charger may 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 charger, to prevent burns.



To charge a compatible smartphone:

1. Confirm the smartphone is capable of wireless charging.
2. Remove all objects from the charging pad. The system may not charge if there are any objects between the smartphone and charger.
3. Place the smartphone face up against the rear of the charger.

   To maximize the charge rate, ensure the smartphone is fully seated and centered in the holder with nothing under it.

A thick smartphone case may prevent the charger from working, or reduce the charging performance. See your dealer for additional information.

4. A green ⚡ will appear on the infotainment display, next to the phone icon. This indicates that the smartphone is detected.
5. If a smartphone is placed on the charger and ⚡ turns off or turns yellow, remove the smartphone and any objects from the pad. Turn the smartphone 180 degrees and wait a few seconds before placing/aligning it on the pad again.
6. If a smartphone is placed on the charger and ⚡ turns red, the charger and/or the smartphone is overheated. Remove the smartphone and any objects from the charger in order to cool the system.

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

For vehicles with wireless phone projection, the smartphone may overheat during wireless charging. The smartphone may slow down, stop charging, or shut down to protect the battery. The phone may need to be removed from its case to prevent overheating. The ⚡ may flash while the phone is cooling down enough for wireless charging to automatically resume. This is normal. Individual phone performance may vary.

**Software Acknowledgements**

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

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**Freescale-WCT library**

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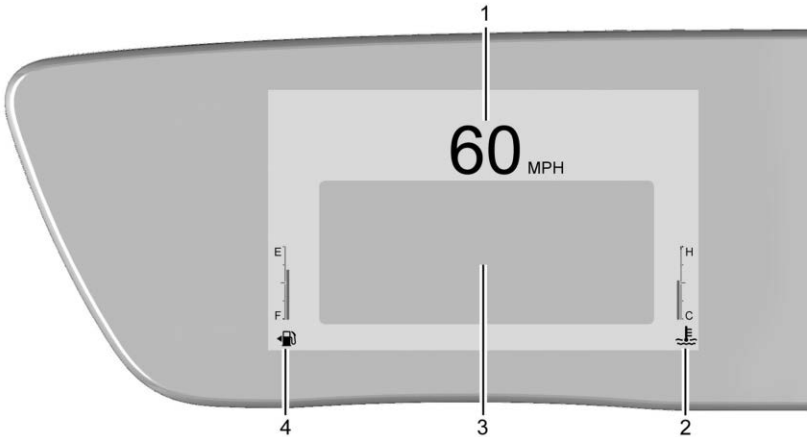
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## Warning Lights, Gauges, and Indicators

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




**English Info Layout Shown, Other Layouts, and Metric Similar**

1. *Speedometer* ⇨ *100*
2. *Engine Coolant Temperature Gauge* ⇨ *101*
3. *Driver Information Center (DIC)* ⇨ *112*
4. *Fuel Gauge* ⇨ *100*

### Reconfigurable Instrument Cluster

The cluster display layout can be changed.

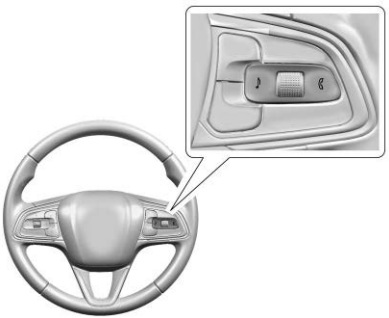
There are four selectable views:

**Clean:** Displays no information zones.

**Info:** Displays one information zone under the speedometer.

**Infotainment:** Displays one information zone under the speedometer.

**Gauge:** Displays no information zones and the gauges are located to the left and right of the speedometer.



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

To change the cluster configuration and the gauge faces, press and hold the thumbwheel and use ∧ or ∨ on the right steering wheel control. Press the thumbwheel on the right steering wheel control to select the desired option from the list.

The following conditional gauges may be displayed while in a particular driver mode:

- Engine Oil Temperature
- Engine Oil Pressure
- Voltmeter
- Transmission Temperature

## Speedometer

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

## Odometer

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

## Trip Odometer

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

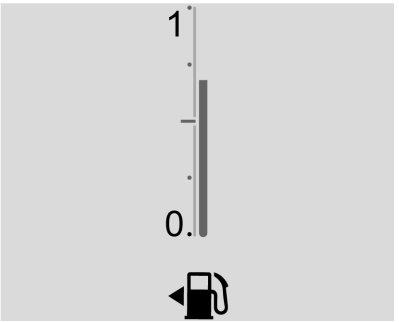
The trip odometer is accessed and reset through the Vehicle Status. See *Vehicle Status* ⇨ *113*.

## Tachometer

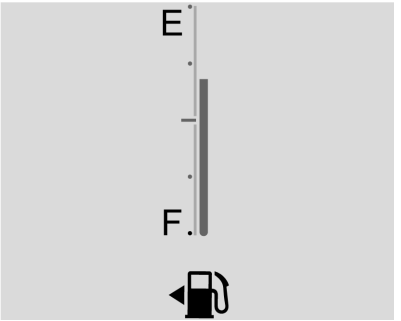
The tachometer displays the engine speed in revolutions per minute (rpm).

The tachometer may vary by several hundred rpm, during Auto Stop mode, when the engine is shutting off and restarting.

## Fuel Gauge




**Metric Info Layout Shown, Other Layouts Similar**




**English Info Layout Shown, Other Layouts Similar**

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.

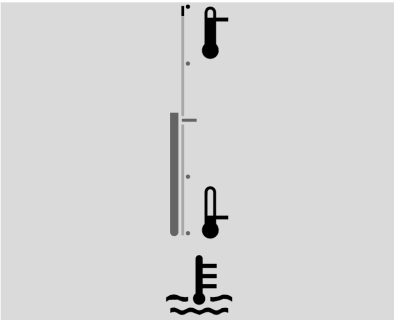
When the indicator nears empty, the low fuel light comes on. There still is a little fuel left, but the vehicle should be refueled soon.

The fuel gauge may:

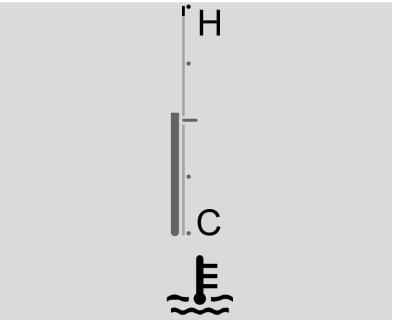
- Take a little more, or less fuel to fill up than it indicates. For example, the gauge may have indicated the tank is half full, but it actually will take a little more, or less than half the tank's capacity to fill the tank.
- Moves a little while turning a corner, speeding up, or braking.
- Take a few seconds to stabilize after the ignition is turned on and goes back to empty when the ignition is turned off.

These are normal conditions, none of which indicate a problem with the fuel gauge.

## Engine Coolant Temperature Gauge



**Metric Info Layout Shown, Other Layouts Similar**




**English Info Layout Shown, Other Layouts Similar**

This gauge shows the engine coolant temperature.

If the pointer moves toward the warning area at the high end of the gauge, the engine is too hot.

This reading indicates the same thing as the warning light. It means that the engine coolant has overheated. If the vehicle has been operating under normal driving conditions, pull off the road, stop the vehicle, and turn off the engine as soon as possible. See *Engine Overheating* ⇨ *234*.

## 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 buckled, neither the light nor the chime comes on.

### Front Passenger Seat Belt Reminder Light

The vehicle may have a front passenger seat belt reminder light near the passenger airbag status indicator. See *Passenger Sensing System* ⇨ *61*.



When the vehicle is started, this light flashes and a chime may come on to remind passengers to fasten their seat belt.

Then the light stays on solid until the belt is buckled. This cycle continues several times if the front passenger remains or becomes unbuckled while the vehicle is moving.

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

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

## Airbag Readiness Light

This light shows if there is an electrical problem with the airbag system. It is located in the instrument cluster. The system check includes the airbag sensor(s), the passenger sensing system, the pretensioners, the airbag modules, the wiring, and the crash sensing and diagnostic module. For more information on the airbag system, see *Airbag System* ⇨ *55*.



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.

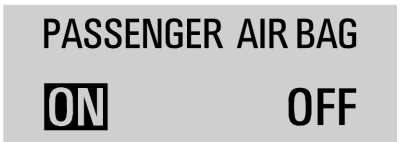
**⚠ Warning**

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 Center (DIC) message may also come on.

## Passenger Airbag Status Indicator

The vehicle has a passenger sensing system. See *Passenger Sensing System* ⇨ *61* for important safety information. The overhead console has a passenger airbag status indicator.




**United States**



**Canada**

When the vehicle is started, the passenger airbag status indicator will light ON and OFF, or the symbol for on and off, for several seconds as a system check. Then, after several more seconds, the status indicator will light either ON or OFF, or either the on or off symbol, to let you know the status of the front outboard passenger frontal airbag and knee airbag.

If the word ON, or the on symbol, is lit on the passenger airbag status indicator, it means that the front outboard passenger frontal airbag and knee airbag are allowed to inflate.

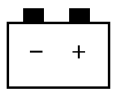
If the word OFF, or the off symbol is lit, on the airbag status indicator, it means that the passenger sensing system has turned off the front outboard passenger frontal airbag and knee airbag.

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 passenger sensing system. See your dealer for service.

**⚠ Warning**

If the airbag readiness light ever comes on and stays on, it means that something may be wrong with the airbag system. To help avoid injury to yourself or others, have the vehicle serviced right away. See *Airbag Readiness Light* ⇨ *102* for more information, including important safety information.

## 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.

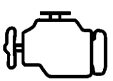
If the light stays on, or comes on while driving, there may be a problem with the electrical charging system. Have it checked by your dealer. Driving while this light is on could drain the battery.

When this light comes on, or is flashing, the Driver Information Center (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. Find a safe place to stop the vehicle.

## 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 on and the engine is not running. See *Ignition Positions* ⇨ *166*.



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 tires that do not meet the original tire 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* ⇨ *220*.

**If the light is flashing:** A malfunction has been detected that could damage the emission control system and increase vehicle emissions. Diagnosis and service may be required.

To help prevent damage, reduce vehicle speed and avoid hard accelerations and uphill grades. If towing a trailer, reduce the amount of cargo being hauled as soon as possible.

If the light continues to flash, find a safe place to park. Turn the vehicle off and wait at least 10 seconds before restarting the engine. If the light is still flashing, follow the previous guidelines and see your dealer for service as soon as possible.

**If the light is on steady:** A malfunction has been detected. Diagnosis and service may be required.

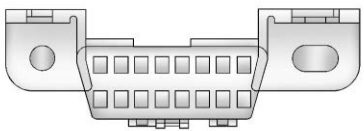
Check the following:

- If fuel has been added to the vehicle using the capless funnel adapter, make sure that it has been removed. See “Filling the Tank with a Portable Gas Can” under *Filling the Tank* ⇨ *208*. The diagnostic system can detect if the adapter has been left installed in the vehicle, allowing fuel to evaporate into the atmosphere. A few driving trips with the adapter removed may turn off the light.
- 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 *Recommended Fuel (1.3L L3 Engine)* ⇨ *206 Recommended Fuel (1.2L L3 Engine)* ⇨ *206*.

If the light remains on, see your dealer.

### 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).



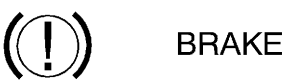
The DLC is under the instrument panel to the left of the steering wheel. Connecting devices that are not used to perform an Emissions Inspection/Maintenance test or to service the vehicle may affect vehicle operation. See *Add-On Electrical Equipment* ⇨ *218*. See your dealer if assistance is needed.

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 on while the engine is off.
- 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 been recently serviced.

See your dealer if the vehicle will not pass or cannot be made ready for the test.

## Brake System Warning Light




**Metric** **English**

**⚠ Warning**

The brake system might not be working properly if the brake system warning light is on. Driving with the brake system warning light 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.

This light comes on briefly when the vehicle is turned on to show that the light is working. If it does not come on then, have it fixed so it will be ready to warn you if there is a problem.

If the light comes on and stays on, there is a brake problem. Have the brake system inspected right away. This light may come on if the brake fluid is low. See *Brake Fluid* ⇨ *237*.

If the light comes on while driving, pull off the road and stop carefully. The brake system has electric brake boost. Vehicle speed may be limited when the brake system warning light comes on. The brake pedal might be harder to push, or the brake 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 *Transporting a Disabled Vehicle* ⇨ *279*.

## Electric Parking Brake Light



Metric




English

This 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 Center (DIC).

If the light does not come on, or remains flashing, see your dealer.

## Service Electric Parking Brake Light



This light may come on briefly when the vehicle is turned on. If it does not come on, have it fixed so it will be ready to warn if there is a problem.

If this light stays on or comes on while driving, there is a problem with the Electric Parking Brake (EPB). Take the vehicle to a dealer as soon as possible. In addition to the parking brake, other safety functions that utilize the EPB may also be degraded. A message may also display in the Driver Information Center (DIC). See *Electric Parking Brake* ⇨ *176*.

## Antilock Brake System (ABS) Warning Light




This light comes on briefly when the vehicle is turned on to show that the light is working. If it does not come on then, have it fixed so it will be ready to warn you if there is a problem.

If the ABS warning light stays on, or comes on 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 on, the vehicle has regular brakes, but ABS is not functioning.

If both the ABS warning light and the brake system warning light are on, ABS is not functioning and there is a problem with the regular brakes. See your dealer for service.

See *Brake System Warning Light* ⇨ *105*.

## All-Wheel-Drive Light




**All-Wheel-Drive Light**




**Front-Wheel-Drive Light**

If equipped, the corresponding light comes on when an All-Wheel Drive (AWD) mode or Front-Wheel-Drive mode is selected. See *All-Wheel Drive* ⇨ *175*.

If the light turns amber, there may be a malfunction. See your dealer.

## Lane Keep Assist (LKA) Light



If equipped, the Lane Keep Assist Light may display the following colors:

- Blank: LKA is disabled.
- White: Appears when the vehicle starts. A steady white light indicates that LKA is not ready to assist.
- Green: Appears when LKA is turned on and ready to assist. LKA will gently turn the steering wheel if the vehicle approaches a detected lane marking.
- Amber: Appears when LKA is active. The light flashes amber as a Lane Departure Warning (LDW) alert to indicate that the lane marking has been unintentionally crossed. If the system detects you are steering intentionally (to pass or change lanes), the LDW alert may not display.

LKA will not assist or alert if the turn signal 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)* ⇨ *204*.

## Automatic Emergency Braking (AEB) Disabled Light



This indicator displays when you turn off Automatic Emergency Braking (AEB) or Front Pedestrian Braking (FPB).

This indicator will also display if AEB or FPB is unavailable due to malfunction, weather conditions, or if the windshield is not clean.

See *Automatic Emergency Braking (AEB)* ⇨ *199*.

See *Front Pedestrian Braking (FPB) System* ⇨ *201*.

## 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* ⇨ *197*.

## Pedestrian Ahead Indicator



If equipped, this indicator will display amber when a nearby pedestrian is detected in front of the vehicle.

See *Front Pedestrian Braking (FPB) System* ⇨ *201*.

## Traction Off Light




This light comes on briefly when the vehicle is turned on to show that the light is working. If it does not come on then, have it fixed so it will be ready to warn you if there is a problem.

The traction off light comes on when the Traction Control System (TCS) has been turned off. If StabiliTrak/Electronic Stability Control (ESC) is turned off, TCS is also turned off. To turn TCS and ESC off and on, see *Traction Control/ Electronic Stability Control* ⇨ *178*.

If TCS is off, wheel slip during acceleration is not limited unless necessary to help protect the driveline from damage. Adjust driving accordingly.

## Traction Control System (TCS)/ Electronic Stability Control Light



This light comes on briefly when the vehicle is turned on to show that the light is working. If it does not come on then, have it fixed so it will be ready to warn you if there is a problem.

If the light is on and not flashing, the TCS and potentially the StabiliTrak/ESC system are not fully operational and may not assist in maintaining control. Adjust driving accordingly. If the condition persists, see your dealer as soon as possible. A Driver Information Center (DIC) message may display.

The light flashes when the TCS and/or the StabiliTrak/ESC system is actively working.

See *Traction Control/Electronic Stability Control* ⇨ *178*.

## Electronic Stability Control (ESC) Off Light




This light comes on briefly when the vehicle is turned on to show that the light is working. If it does not come on then, have it fixed so it will be ready to warn you if there is a problem.

This light comes on when the StabiliTrak/ Electronic Stability Control (ESC) system is turned off. If StabiliTrak/ESC is off, the Traction

Control System (TCS) is also off. To turn ESC off and on, see *Traction Control/Electronic Stability Control* ⇨ *178*.

If ESC and TCS are off, the systems do not assist in controlling the vehicle. Adjust driving accordingly.

## Engine Coolant Temperature Warning Light



| 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* ⇨ *234*. |

On some vehicles this light comes on briefly while starting the vehicle. If it does not, have the vehicle serviced by the dealer. If the system is working normally the indicator light goes off. For vehicles with the reconfigurable cluster, this light may not come on when starting the vehicle.

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* ⇨ *234*.

## Tire Pressure Light



If equipped with the Tire Pressure Monitor System (TPMS), this light comes on briefly when the vehicle is started. It provides information about tire pressures and the TPMS.

**When the Light Is On Steady**

This indicates that one or more of the tires are significantly underinflated.

A Driver Information Center (DIC) tire pressure message may also display. Stop as soon as possible, and inflate the tires to the pressure value shown on the Tire and Loading Information label. See *Tire Pressure* ⇨ *260*.

**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 every time the vehicle is started. See *Tire Pressure Monitor Operation* ⇨ *262*.

## Engine Oil Pressure Light

| Caution |
| --- |
| Driving the vehicle with low engine oil pressure can damage the engine and the repairs would not be covered by the vehicle warranty. |
| (Continued) |

**Caution (Continued)**

If the engine oil pressure light comes on while driving:

1. Stop in a safe location and turn off the engine.
2. Check the oil level. See *Engine Oil* ⇨ *226*.
3. Add oil if the oil level is below the normal operating range.
4. Restart the vehicle. If the engine oil pressure light stays on for more than 10 seconds, turn the vehicle back off. Do not restart the vehicle. See your dealer for service.



This light should come on briefly when the engine starts. When the engine is off and the vehicle is on, the light should remain illuminated. If it does not come on under either condition, contact your dealer.

If the light comes on and stays on when the engine is running, it may not have adequate oil pressure. The oil level may be low or there may be some other oil system problem. Turn the engine off when it is safe to do so and contact your dealer.

## Low Fuel Warning Light



**Caution**

Driving the vehicle with low fuel levels may cause damage to vehicle components. Add fuel as soon as possible after the Low Fuel Warning Light displays. Do not continue to drive prolonged distances with low fuel levels.

A Low Fuel Warning Light near the fuel gauge comes on briefly when the ignition is turned on as a check to show it is working.

It also comes on when the fuel gauge indicator nears empty. The light turns off when fuel is added. If it does not, have the vehicle serviced.

## Auto Stop Indicator



This light comes on when the engine is in an Auto Stop.

See *Stop/Start System* ⇨ *168*.

## 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 *Immobilizer Operation* ⇨ *27*.

## High-Beam On Light



This light comes on when the high-beam headlamps are in use. See *Headlamp High/Low-Beam Changer* ⇨ *121*.

### IntelliBeam Light




If equipped, this light comes on when the IntelliBeam system is enabled. See *High-Beam Systems* ⇨ *119*.

## Lamps On Reminder



This light comes on when the exterior lamps are in use, except when only the Daytime Running Lamps (DRL) are active. See *Exterior Lamp Controls* ⇨ *119*.

## Cruise Control Light



If equipped, 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.

The light turns off when the cruise control is turned off. See *Cruise Control* ⇨ *180*.

## Adaptive Cruise Control Light



If equipped, this light is white when the Adaptive Cruise Control (ACC) is on and ready, and turns green when the ACC is set and active.

See *Adaptive Cruise Control (Camera)* ⇨ *182*.

## Door Ajar Light

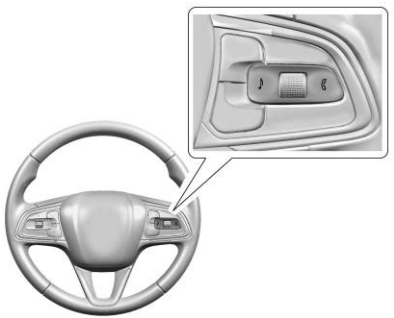


This light comes on when a door is open or not securely latched. Before driving, check that all doors are properly closed.

# Information Displays

## Driver Information Center (DIC)

The DIC is displayed in the instrument cluster. It shows the status of many vehicle systems.



**∧ 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 certain displays.

### DIC Information Display Options

Select which info display to view on the DIC by selecting Show in Cluster in the Vehicle Status on the infotainment display. See *Vehicle Status* ⇨ *113*.

### DIC Information Displays

The following is the list of all possible DIC information displays and their locations. Some of the information displays may not be available for your particular vehicle.

**Infotainment:** Displays the actively playing audio.

**Trip Information:** Trip 1 or 2 displays the current distance traveled, in either kilometers (km) or miles (mi), since the trip odometer was last reset. To reset the current trip, touch and hold the touchscreen display when trip odometer is displayed.

The Average Fuel Economy display shows the approximate average liters 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 along with the trip odometer by touching and holding the touchscreen display when trip odometer is displayed.

**Battery Voltage:** Shows the current battery voltage.

**Oil Life:** Shows an estimate of the remaining oil 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* ⇨ *226*. In addition to the engine oil life system monitoring the oil life, additional maintenance is recommended. See *Maintenance Schedule* ⇨ *293*.

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. To reset, see *Engine Oil Life System* ⇨ *228*.

**Fuel Economy:** Displays information about current and average fuel economy.

**Oil Pressure:** Shows the engine oil pressure in kPa (kilopascals) or psi (pounds per square inch).

**Coolant Temperature:** Shows the temperature of the coolant in either degrees Celsius (°C) or degrees Fahrenheit (°F).

**Transmission Fluid Temperature:** Shows the temperature of the automatic transmission fluid in either degrees Celsius (°C) or degrees Fahrenheit (°F).

**Tire Pressure:** Shows the approximate pressures of all four tires. Tire pressure is displayed in either kilopascal (kPa) or in pounds per square inch (psi). If the pressure is low, the value for that tire is shown in amber. See *Tire Pressure Monitor System* ⇨ *261* and *Tire Pressure Monitor Operation* ⇨ *262*.

**Brake Pad Life:** Shows an estimate of the remaining life of the front and rear brake pads. Messages are displayed based on brake pad wear and the state of the system. Reset the Brake Pad Life display after replacing the brake pads. See *Brake Pad Life System* ⇨ *236*.

**Air Filter Life:** Shows an estimate of the remaining engine air filter 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* ⇨ *229*.

**Oil Temperature:** Shows the current oil temperature in either degrees Celsius (°C) or degrees Fahrenheit (°F).

## Vehicle Status

To access the vehicle status menu select  from the infotainment home screen. Vehicle status content is grouped together and shown on the infotainment display.

Selecting vehicle status content on the infotainment display shows the available options. Follow any message or alerts that may display. Some options may be unavailable while driving.

Touch Show in Cluster to send the desired content to the Driver Information Center (DIC) on the instrument cluster. Touch Remove from Cluster to remove the selected content from the instrument cluster. See *Driver Information Center (DIC)* ⇨ *112*.

### Options

The following is the list of all possible vehicle status content and location. Some but not all of the content and options may be available for your particular vehicle.

#### Maintenance

**Tire Pressure:** Displays the approximate pressures of all four tires. Tire pressure is displayed in either kilopascal (kPa) or in pounds per square inch (psi). If the pressure is low, the value for that tire is shown in amber. See *Tire Pressure Monitor System* ⇨ *261* and *Tire Pressure Monitor Operation* ⇨ *262*.

The following options may be chosen: Relearn Tire Pressure, and Show in Cluster.

**Brake Pad Life:** Displays an estimate of the remaining life of the front and rear brake pads. Messages are displayed based on brake pad wear and the state of the system.

The following options may be chosen: Turn Off/On, Reset Front Brake Pads, Reset Rear Brake Pads, and Show in Cluster. Reset the Brake Pad Life after replacing the brake pads. See *Brake Pad Life System* ⇨ *236*.

**Oil Life:** Displays an estimate of the remaining oil 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* ⇨ *226*. In addition to the engine oil life system monitoring the oil life, additional maintenance is recommended. See *Maintenance Schedule* ⇨ *293*.

The following options may be chosen: Reset, and Show in Cluster. The Oil Life must be reset after each oil change. It will not reset itself. Do not reset the Oil Life display at any time other than when the oil has just been changed. It cannot be reset accurately until the next oil change. To reset, see *Engine Oil Life System* ⇨ *228*.

**Engine Air Filter Life:** Displays an estimate of the remaining engine air filter life and the state of the system. Engine Air Filter Life 95% means 95% of the current air filter life remains.

Messages are displayed 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 NOW message displays, the engine air filter should be replaced as soon as possible. The Air Filter Life display must be reset after the engine air filter replacement. To reset, see *Engine Air Filter Life System* ⇨ *229*.

The following options may be chosen: Turn Off/On, Reset, and Show in Cluster.

### Gauges

**Battery Voltage:** Displays the current battery voltage.

Show in Cluster may be chosen.

**Coolant Temperature:** Displays the temperature of the coolant in either degrees Celsius (°C) or degrees Fahrenheit (°F).

Show in Cluster may be chosen.

**Transmission Fluid Temperature:** Displays the temperature of the automatic transmission fluid in either degrees Celsius (°C) or degrees Fahrenheit (°F).

Show in Cluster may be chosen.

**Oil Pressure:** Displays the engine oil pressure in kPa (kilopascals) or psi (pounds per square inch).

Show in Cluster may be chosen.

**Oil Temperature:** Displays the current oil temperature in either degrees Celsius (°C) or degrees Fahrenheit (°F).

Show in Cluster may be chosen.

### Trip

**Trip Information:** Trip 1 or 2 displays the current distance traveled, in either kilometers (km) or miles (mi), since the trip odometer was last reset.

Average Fuel Economy displays the approximate average liters 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 current, approximate average fuel economy and changes as driving conditions change.

To reset these values, touch reset on the touchscreen display when the Trip Information dialog is selected.

The following options may be chosen: Reset Trip 1, Reset Trip 2, and Show in Cluster.

**Fuel Economy:** Displays average fuel economy, the best fuel economy over the selected distance, and a bar graph showing instantaneous fuel economy. Values are displayed in liters per 100 kilometers (L/100 km) or miles per gallon (mpg). This number reflects only the approximate fuel economy and changes frequently as driving conditions change. Only the best score can be reset.

If the vehicle is equipped with an Active Fuel Management indicator, the engine operating mode will be shown in this display.

The following options may be chosen: Change Distance, Reset Best Score, and Show in Cluster. The distance for average fuel economy and the best fuel economy can be changed to: 40 km (25 mi), 80 km (50 mi), and 725 km (300 mi).

## Vehicle Messages

Messages displayed on the 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 dealer.

Follow the instructions given in the messages. The system displays messages regarding the following topics:

- Service Messages
- Fluid Levels
- Vehicle Security
- Brakes
- Ride Control Systems
- Advanced Driver Assistance Systems
- Cruise Control
- Lighting and Bulb Replacement
- Wiper/Washer Systems
- Doors and Windows
- Seat Belts
- Airbag Systems
- Engine and Transmission
- Tire 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. Under certain conditions 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 ignition has been off for 30 seconds.

## Vehicle Speed Messages

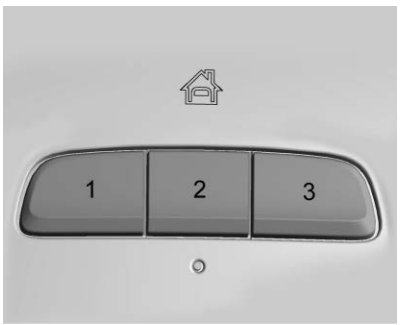
### SPEED LIMITED TO XXX KM/H (MPH)

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.

# Universal Remote System

See *Radio Frequency Statement* ⇨ *312*.

## Universal Remote System Programming




If equipped, the Universal Remote system buttons are in the overhead console.

This system can replace up to three remote control transmitters used to activate devices such as garage door openers, security systems, and home automation devices. These instructions refer to a garage door opener, but can be used for other devices.

Do not use the Universal Remote system with any garage door opener that does not have the stop and reverse feature. This includes any garage door opener model manufactured before April 1, 1982.

Keep the original hand-held transmitter for use in other vehicles as well as for future programming. Erase the programming when vehicle ownership is terminated. See "Erasing Universal Remote System Buttons" later in this section.

To program a garage door opener, park outside directly in line with and facing the garage door opener receiver. Clear all people and objects near the garage door.

Make sure the hand-held transmitter has a new battery for quick and accurate transmission of the radio-frequency signal.

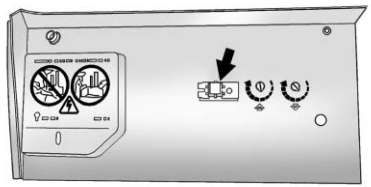
### Programming the Universal Remote System

Programming involves time-sensitive actions and may time out, requiring the procedure to be repeated. Read these instructions completely before programming the Universal Remote system. It may help to have another person assist with the programming process.

1. Hold the end of the hand-held transmitter about 3 to 8 cm (1 to 3 in) away from the Universal Remote system buttons with the indicator light in view. The hand-held transmitter was supplied by the manufacturer of the garage door opener receiver.
2. At the same time, press and hold both the hand-held transmitter button and one of the three Universal Remote system buttons to be used to operate the garage door. Do not release either button until the indicator light changes from a slow to a rapid flash or continuous light. Then release both buttons.

   Some garage door openers may require substitution of Step 2 with the procedure under "Radio Signals for Some Gate Operators" later in this section.

3. Press and hold the newly programmed Universal Remote system button for five seconds while watching the indicator light and garage door activation.
   - If the indicator light stays on continuously or the garage door moves when the button is pressed, then programming is complete. There is no need to complete Steps 4–6.
   - If the indicator light does not come on or the garage door does not move, a second button press may be required. For a second time, press and hold the newly programmed button for five seconds. If the indicator light is continuously lit, or the garage door moves, programming is complete.
   - If the indicator light flashes rapidly and the garage door does not move, continue with programming Steps 4–6.



**Learn or Smart Button**

4. After completing Steps 1–3, locate the Learn or Smart button inside the garage on the garage door opener receiver. The name and color of the button may vary by manufacturer.
5. Press and release the Learn or Smart button. Step 6 must be completed within 30 seconds of pressing this button.
6. Return to the vehicle and firmly press and hold the trained Universal Remote system button for two seconds and release. Repeat the "press/hold/release" sequence up to three times to complete the training process.

The Universal Remote system should now activate the garage door. Repeat the process for programming the two remaining buttons.

For questions or programming help, visit www.homelink.com/gm for self-help videos, or call 1-800-355-3515. For calls placed outside the U.S., Canada, or Puerto Rico, international rates will apply and may differ based on landline or mobile phone.

### Radio Signals for Some Gate Operators

Some radio-frequency laws and gate operators require transmitter signals to time out or quit after several seconds of transmission. This may not be long enough for the Universal Remote system to pick up the signal during programming.

If the programming did not work, replace Step 2 under "Programming the Universal Remote System" with the following step:

Press and hold the Universal Remote system button while pressing and releasing the hand-held transmitter button every two seconds until the signal has been successfully accepted by the Universal Remote system. The Universal Remote system indicator light will flash slowly at first and then change to a rapid flash or continuous solid-light. Proceed with Step 3 under "Programming the Universal Remote System" to complete.

## Universal Remote System Operation

### Using the Universal Remote System

Press and hold the appropriate Universal Remote system button for at least one-half second. The indicator light will come on while the signal is being transmitted.

### Erasing Universal Remote System Buttons

Erase all programmed buttons when vehicle ownership is terminated.

To erase:

1. Press and hold the two outside buttons until the indicator light begins to flash. This should take about 10 seconds.
2. Release both buttons.

### Reprogramming a Single Universal Remote System Button

To reprogram any of the system buttons:

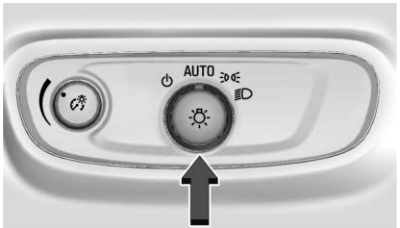
1. Press and hold any one of the buttons. Do not release the button.
2. The indicator light will begin to flash after 20 seconds. Without releasing the button, proceed with Step 1 under “Programming the Universal Remote System.”

# Lighting

**Exterior Lighting**
Exterior Lamp Controls ....119
High-Beam Systems ....119
Headlamp High/Low-Beam Changer ....121
Flash-to-Pass .... 121
Daytime Running Lamps (DRL) .... 121
Automatic Headlamp System ....121
Hazard Warning Flashers .... 122
Turn and Lane-Change Signals .... 122
**Interior Lighting**
Instrument Panel Illumination Control .... 122
Courtesy Lamps .... 123
Dome Lamps ....123
Reading Lamps ....123
**Lighting Features**
Entry Lighting ....124
Exit Lighting ....124
Battery Load Management ....124
Battery Power Protection ....125
Exterior Lighting Battery Saver ....125

# Exterior Lighting

## Exterior Lamp Controls




The exterior lamp control is on the instrument panel to the left of the steering column.

There are four positions.

⏻ : Turns the exterior lamps off and deactivates the AUTO mode. Turn ⏻ again to reactivate the AUTO mode.

In Canada, the headlamps will automatically reactivate when the vehicle is shifted out of P (Park).

**AUTO:** Turns the exterior lamps on and off automatically 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.

## High-Beam Systems

### IntelliBeam System

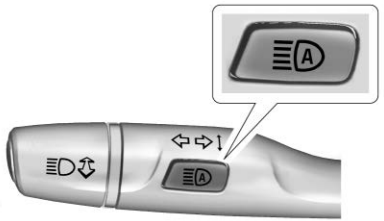
If equipped, this system turns the vehicle high-beam headlamps on and off according to surrounding traffic conditions.

The system turns the high-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 (A) on the turn signal lever when it is dark outside and the exterior lamp control is in AUTO or . The blue high-beam on light appears on the instrument cluster when the high beams are on.

**Driving with IntelliBeam**

**⚠ Warning**

Using high beams in dense exhaust, smoke, fog, snow, road spray, mist, or other airborne obstructions can cause a glare, obstructing your vision. This reduction in visibility can result in a crash. Never use

(Continued)

**Warning (Continued)**

high beams in dense exhaust, smoke, fog, snow, road spray, mist, or other airborne obstructions.

The system only activates the high beams when driving over 40 km/h (25 mph).

There is a sensor near the top center of the windshield that automatically controls the system. Keep this area of the windshield clear of debris to allow for best system performance.

The high-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 taillamps.
- The outside light is bright enough that high-beam headlamps are not required.
- The vehicle speed drops below 20 km/h (12 mph).
- The IntelliBeam system is disabled by the button on the turn signal lever. If this happens, press (A) on the turn signal 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 system is reactivated.

The high 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 windshield 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 taillamps.
- The vehicle is being driven on winding or hilly roads.

The IntelliBeam system may need to be disabled if any of the above conditions exist.

## Headlamp High/Low-Beam Changer

Push the turn signal lever away from you and release, to turn the high beams on. To return to low beams, push the lever 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

The flash-to-pass feature works with the low beams or Daytime Running Lamps (DRL) on or off.

To flash the high beams, pull the turn signal lever toward you momentarily and then release it.

## Daytime Running Lamps (DRL)

DRL can make it easier for others to see the front of your vehicle during the day. Fully functional DRL are required on all vehicles first sold in Canada.

The DRL system comes on in daylight when the following conditions are met:

- The ignition is on.
- The exterior lamp control is in AUTO.
- The light sensor determines it is daytime.

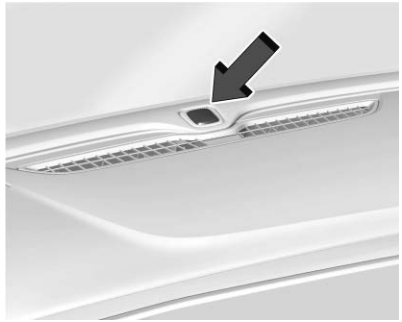
When the DRL are on, the taillamps, sidemarker lamps, instrument panel lights, and other lamps will not be on.

The DRL turn off when the headlamps are turned to ⏻ or the ignition is off. For vehicles sold in Canada, this control only works when the vehicle is parked.

The regular headlamp system should be turned on when needed.

## Automatic Headlamp System

When the exterior lamp control is set to AUTO and it is dark enough outside, the headlamps come on automatically.



There is a light sensor on top of the instrument panel. Do not cover the sensor; otherwise the headlamps will come on when they are not needed.

The system may also turn on the headlamps when driving through a parking garage or tunnel.

When it is bright enough outside, the headlamps 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 windshield wipers are activated in daylight with the engine on, and the exterior lamp control is in AUTO, the headlamps, parking lamps, 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 to disable this feature.

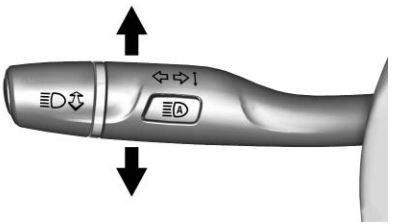
## Hazard Warning Flashers



⚠ : Press to make the front and rear turn signal lamps flash on and off. This warns others that you are having trouble.

Press ⚠ again to turn the flashers off.

## Turn and Lane-Change Signals



Move the lever all the way up or down to signal a turn.

An arrow on the instrument cluster will flash 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 complete. If the lever is moved momentarily to the lane change position, the arrow will flash three times.

The lever returns to its starting position when it is released.

If after signaling a turn or lane change, the arrow flashes rapidly or does not come on, a signal bulb may be burned out.

Have any burned out bulbs replaced. If a bulb is not burned out, check the fuse. See *Instrument Panel Fuse Block* ⇨ *251*.

# Interior Lighting

## Instrument Panel Illumination Control




This feature adjusts the brightness of all illuminated controls. The instrument panel illumination control is next to the exterior lamp control.

Push the knob in all the way until it extends out and then turn the knob clockwise or counterclockwise to brighten or dim the lights. Push the knob back in when finished.

The knob is functional at night, or when the headlamps or parking lamps are ON.

## Courtesy Lamps

The courtesy lamps come on when any door is opened, on the remote key is pressed, or when the vehicle is turned off. See *Dome Lamps* ⇨ *123*.

## Dome Lamps




The front dome lamp controls are in the overhead console.

: Press to turn the lamps off, even when any door is opened, on the remote key is pressed, or when the vehicle is turned off.

: When the button is returned to the middle position, the lamps turn on automatically when any door is opened, on the remote key is pressed, or when the vehicle is turned off

: Press to turn on the dome lamps.

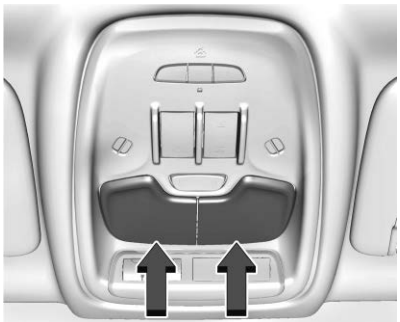



If equipped, the rear dome lamp controls are in the headliner above the rear seats.

## Reading Lamps

There are reading lamps on the overhead console and over the rear seats. These lamps come on when any door is opened, on the remote key is pressed, or when the vehicle is turned off.

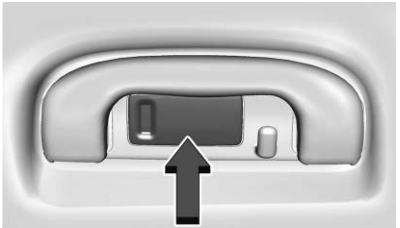
To operate, the vehicle must be on, in accessory mode, or using Retained Accessory Power (RAP).



**Front Reading Lamps**

The front reading lamps are in the overhead console.

Press the lamp lenses to turn the front reading lamps on or off.



**Rear Reading Lamps**

If equipped with dual sunroof, the rear reading lamps are over the rear seats.

Press the lamp lens to turn the rear passenger reading lamps on or off.

# Lighting Features

## Entry Lighting

The interior lamps turn on when pressing on the remote key or opening any doors, and the dome lamp control is in the door position.

Some exterior lamps also turn on when pressing on the remote key or opening any doors. Low-beam lamps will only turn on briefly at night, or in areas with limited lighting.

All lamps will eventually turn off.

Entry lighting can be disabled manually by closing all doors, pressing on the remote key, or starting the vehicle.

This feature can be changed. On the infotainment home screen, select Settings > Vehicle > Lighting.

## Exit Lighting

Some exterior lamps and interior lamps turn on when the driver door is opened after the vehicle is turned off.

The exterior and interior lamps remain on for a set amount of time, then automatically turn off.

The interior lights turn on when the vehicle is turned off.

The exterior lamps turn off immediately by turning the exterior lamp control off.

This feature can be changed. On the infotainment home screen, select Settings > Vehicle > Lighting.

## Battery Load Management

The vehicle has Electric Power Management (EPM) that estimates the battery's temperature and state of charge. It then adjusts the voltage for best performance and extended life of the battery.

When the battery's state of charge is low, the voltage is raised slightly to quickly bring the charge back up. When the state of charge is high, the voltage is lowered slightly to prevent overcharging. If the vehicle has a voltmeter gauge or a voltage display on the Driver Information Center (DIC), you may see the voltage move up or down. This is normal. If there is a problem, an alert will be displayed.

The battery can be discharged at idle if the electrical loads are very high. This is true for all vehicles. This is because the generator (alternator) may not be spinning fast enough at idle to produce all of the power needed for very high electrical loads.

A high electrical load occurs when several of the following are on, such as: headlamps, high beams, rear window defogger, climate control fan at high speed, heated seats, engine cooling fans, trailer loads, and loads plugged into accessory power outlets.

EPM works to prevent excessive discharge of the battery. It does this by balancing the generator's output and the vehicle's electrical needs. It can increase engine idle speed to generate more power whenever needed. It can temporarily reduce the power demands of some accessories.

Normally, these actions occur in steps or levels, without being noticeable. In rare cases at the highest levels of corrective action, this action may be noticeable to the driver. If so, a DIC message might be displayed and it is recommended that the driver reduce the electrical loads as much as possible.

## Battery Power Protection

This feature helps prevent the battery from being drained, if the interior courtesy lamps or reading lamps are accidentally left on. If any of these lamps are left on, they automatically turn off after 10 minutes, if the ignition is off. The lamps will not come back on again until one of the following occurs:

- The ignition is turned on.
- The doors are closed and then re-opened.

## Exterior Lighting Battery Saver

The exterior lamps turn off about 10 minutes after the vehicle 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 ⏻ position and then back to the or position.

To keep the lamps on for more than 10 minutes, the vehicle must be on or in accessory mode.

# Infotainment System

**Introduction**
Introduction .....126
Overview .....127
Steering Wheel Controls .....128
Using the System .....128
Software Updates .....130

**Radio**
AM-FM Radio .....130
Satellite Radio .....131
Radio Reception .....131
Multi-Band Antenna .....132

**Audio Players**
Avoiding Untrusted Media Devices .....132
USB Port .....132
Bluetooth Audio .....132

**Phone**
Bluetooth (Overview) .....133
Bluetooth (Pairing and Using a Phone) .....134
Apple CarPlay and Android Auto .....137

**Settings**
Settings .....139
Teen Driver .....140

**Trademarks and License Agreements**
Trademarks and License Agreements .....143

## Introduction

Read the following pages to become familiar with the features.

**⚠ Warning**

Taking your eyes off the road for too long or too often while using any infotainment feature can cause a crash. You or others could be injured or killed. Do not give extended attention to infotainment tasks while driving. Limit your glances at the vehicle displays and focus your attention on driving. Use voice commands whenever possible.

The infotainment system has built-in features intended to help avoid distraction by disabling some features when driving. These features may become disabled on the infotainment home screen when they are unavailable. Many infotainment features are also available through the instrument cluster and steering wheel controls.

Before driving:

- Become familiar with the operation, center stack controls, steering wheel controls, and infotainment display.
- Set up the audio by presetting favorite stations, setting the tone, and adjusting the speakers.
- Set up phone numbers in advance so they can be called easily by pressing a single control or by using a single voice command.

See *Distracted Driving* ⇨ *156*.

**Active Noise Cancellation**

If equipped, Active Noise Cancellation (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 dealer if related aftermarket equipment is installed.

# Overview

## Infotainment System

The infotainment system is controlled by using the infotainment display, controls on the center stack, steering wheel controls, and voice recognition, if available.




1. ⏻ (Power)
   - Press to turn the power on.
   - Press to mute/unmute the system when on.
   - Press and hold to go to the power off screen.
   - Turn to decrease or increase the volume.

**Infotainment Home Screen**

The infotainment home screen contains up to 8 application icons from the factory. Some applications are disabled when the vehicle is moving. The Application Tray contains up to 5. The Home app icon in the Application Tray cannot be moved. If a second infotainment home screen is desired, one or more of the Application Icons from the Application Tray must be moved to create more than 8 app icons so that the 9th and beyond create a second infotainment home screen. Applications and icons cannot be added to this system.

Swipe left or right across the display to access the pages of icons.

**Managing Infotainment Home Screen Icons**

1. Touch and hold any of the infotainment home screen icons to enter edit mode.
2. Continue holding the icon and drag it to the desired position.
3. Release your finger to drop the icon in the desired position.

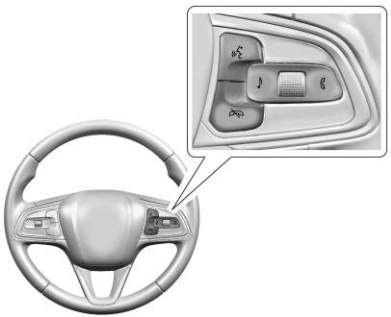
**Move an Icon to Another Page**

1. Drag the icon to the edge of the display toward the desired page.
2. Continue dragging and dropping application icons as desired.

**Move an Icon to the Application Tray**

To move an icon to the application tray on the left side of the screen, drag the icon to the applications tray.

## Steering Wheel Controls



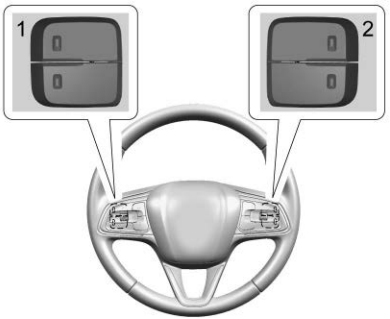
If equipped, some audio controls can be adjusted at the steering wheel.

: Press to answer an incoming call during phone projection or start voice recognition. See *Bluetooth (Pairing and Using a Phone)* ⇨ *134 Bluetooth (Overview)* ⇨ *133*.

: Press to open the audio source list.

: Press to decline an incoming call, end a current call or to mute or unmute the infotainment system when not on a call.

: Press to answer an incoming call.




The favorites and volume switches are on the back of the steering wheel.

1. Favorite: When on a radio source, press to select the next or previous audio broadcast favorite. When listening to a media device, press to select the next or previous track.
2. Volume: Press to increase or decrease the volume.

## Using the System

### Audio

Touch the Audio icon to display the active audio source page. Examples of available sources may include AM, FM, SiriusXM (if equipped), USB, AUX, and Bluetooth. See *AM-FM Radio* ⇨ *130*, *Satellite Radio* ⇨ *131*, *USB Port* ⇨ *132*, and *Bluetooth Audio* ⇨ *132*.

### Phone

Touch the Phone icon to display the Phone main page. See *Bluetooth (Pairing and Using a Phone)* ⇨ *134 Bluetooth (Overview)* ⇨ *133*.

### Settings

Touch the Settings icon to display the Settings menu. See *Settings* ⇨ *139*.

### Apple CarPlay

If equipped, touch the Apple CarPlay icon to activate Apple CarPlay after a supported device is connected. See *Apple CarPlay and Android Auto* ⇨ *137*.

### Android Auto

If equipped, touch the Android Auto icon to activate Android Auto after a supported device is connected. See *Apple CarPlay and Android Auto* ⇨ *137*.

### Application Tray

The application tray is left of the display. It shows up to five applications.

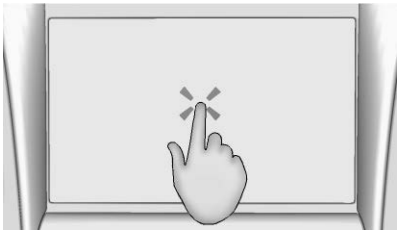
### Infotainment Display Features

Infotainment display features show on the display when available. When a feature is unavailable, it may become disabled. When a feature is touched, it may highlight.

### Infotainment Gestures

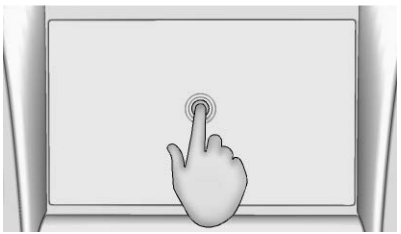
Use the following finger gestures to control the infotainment system.

**Touch/Tap**



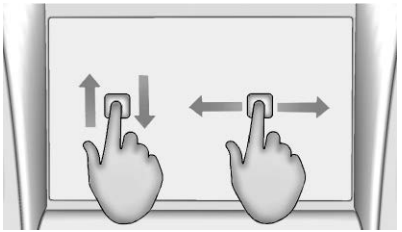
Touch/tap is used to select an icon or option, activate an application, or change the location inside a map.

**Touch and Hold**



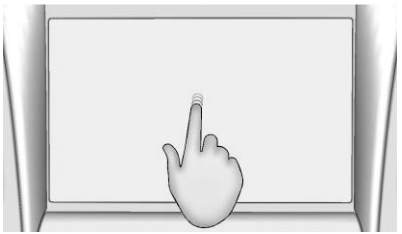
Touch and hold can be used to start another gesture, or to move or delete an application.

**Drag**



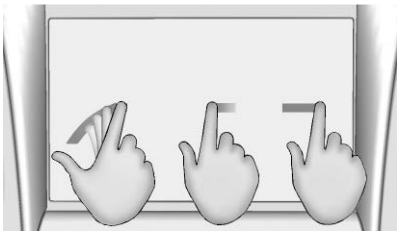
Drag is used to move applications on the infotainment home screen, or to pan the map. To drag the item, it must be held and moved along the display to the new location. This can be done up, down, right, or left. This feature is only available when vehicle is parked and not in motion.

**Nudge**



Nudge is used to move items a short distance on a list or a map. To nudge, hold and move the selected item up or down to a new location.

**Fling or Swipe**



Fling or swipe is used to scroll through a list, pan the map, or change page views. Do this by placing a finger on the display then moving it rapidly up and down or right and left.

### Cleaning High Gloss Surfaces and Vehicle Information and Radio Displays

For vehicles with high gloss surfaces or vehicle displays, use a microfiber cloth to wipe surfaces. Before wiping the surface with the microfiber cloth, use a soft bristle brush to remove dirt that could scratch the surface. Then use the microfiber cloth by gently rubbing to clean. Never use window cleaners or solvents. Periodically hand wash the microfiber cloth separately, using mild soap. Do not use bleach or fabric softener. Rinse thoroughly and air dry before next use.

## Software Updates

### Over-the-Air Software Updates

If equipped, see "Updates" under *Settings* ⇨ *139* for details on software updates.

# Radio

## AM-FM Radio

### Playing the Radio

From the infotainment home screen, touch the Audio icon to display the now playing screen for the active audio source. Touch the source button such as FM, AM, or SiriusXM in the left corner to change your source.

### Finding a Station

#### Seeking a Station

From the AM or FM screen, touch the back or forward buttons to search for the previous or next strong station.

#### Tune

Touch on the infotainment display to enter the Tune screen. Enter a frequency using the keypad.

Touch the ☆ to save the station as a favorite.

Entering a valid AM or FM frequency will automatically tune to the new station. After a short delay, the Tune screen will close and return to the now playing screen.

Touch the Go button or frequency in the list to begin playing the station. The tune page will close and return to the now playing screen.

### Storing Radio Station Favorites

Saved favorite stations will show at the bottom of the now playing screen.

AM, FM, or SiriusXM favorites can be stored by pressing and holding a favorite slot.

### Audio Settings

Audio settings vary by region.

From the now playing screen, touch ⚙ and the following may display.

#### Sound

- Equalizer

- Fade/Balance
- Sound Mode (if equipped)

**Bose AudioPilot**

If equipped, adjusts the volume based on the noise inside the vehicle and vehicle speed.

**Manage Radio Favorites**

Displays a list of audio favorites that can be moved or deleted.

**Radio Text**

When on, radio station call letters and messages from radio stations will be shown.

**Radio Text (RDS) Categories**

When on, category information about current radio content will be shown.

### Radio Text - Radio Data Systems (RDS)

RDS relies on receiving specific RDS information from radio stations and only works when the information is available. It is possible that a radio station could broadcast information that causes the radio to work improperly.

In addition, RDS features are region and country of sale specific. This means specific RDS content may not be available in your listening area or in the country you operate the vehicle.

To turn RDS features on or off, see "Audio Settings" previously.

The following RDS features may be supported by radio broadcasters in your listening area:

**Radio Text (RDS) Features**

- Display radio station call letters
- Display messages from radio stations
- Provide radio station category information (when available)

## Satellite Radio

### SiriusXM Radio Service

If equipped, vehicles with a valid SiriusXM radio subscription can receive SiriusXM programming.

SiriusXM radio has a wide variety of programming and commercial-free music, coast to coast, in digital-quality sound. In the U.S., see www.siriusxm.com or call 1-888-601-6296. In Canada, see www.siriusxm.ca or call 1-877-438-9677.

When SiriusXM is active, the channel name, number, song title, and artist appear on the display.

### Finding a Channel

From the SiriusXM now playing screen, touch ◁CH or CH▷.

To directly tune to a channel, touch the Tune icon to enter a channel number using the keypad.

### Browsing Content

Touch ☰ to view different browsing content.

Browse will include available channels you can select.

## Radio Reception

Unplug any electronic devices from the accessory power outlets if there is static interference.

### FM

FM signals only reach about 16 to 65 km (10 to 40 mi). Although the radio has a built-in electronic circuit that automatically works to

reduce interference, some static can occur, especially around tall buildings or hills, causing the sound to fade in and out.

### AM

The range for most AM stations is greater than FM, especially at night. The longer range may also cause station frequencies to interfere with each other. Storms and power lines may also interfere with radio reception. Try reducing the treble on the radio if static interference occurs.

### SiriusXM Satellite Radio Service

If equipped, SiriusXM Satellite Radio Service provides digital radio reception. Tall buildings or hills can interfere with satellite radio signals, causing the sound to fade in and out. In addition, traveling or parking under heavy foliage, bridges, garages, or tunnels may cause loss of the SiriusXM signal for a period of time. Some cellular services may interfere with SiriusXM reception causing signal loss.

### Mobile Devices

Making or receiving calls, charging, or just having a mobile device on may cause static interference. Unplug or turn off any mobile devices if this happens.

## Multi-Band Antenna

The multi-band roof antenna may be used for radio, navigation, and other communication systems, depending on the equipped options. To ensure clear reception, keep the antenna clear of obstructions, such as snow and ice. Reception can be affected by an open sunroof or roof-mounted cargo.

# Audio Players

## Avoiding Untrusted Media Devices

Only use trusted media devices. Avoid untrusted mobile and USB media devices that may contain files that affect system operation or performance.

## USB Port

The vehicle may be equipped with multiple USB ports. Music may be played from a connected USB device. Ports may also be used for charging.

**Caution**

To avoid vehicle damage, unplug all accessories and disconnect all accessory cables from the vehicle when not in use. Accessory cables left plugged into the vehicle, unconnected to a device, could be damaged or cause an electrical short if the unconnected end comes in contact with liquids or another power source such as the accessory power outlet.

### USB Audio

To play music via USB:

1. On the audio now playing screen, touch source and select USB.
2. If there is no device connected, follow the screen prompts to connect the device.
3. Supported media content will appear on the display.

## Bluetooth Audio

Music may be played from a connected Bluetooth mobile device.

Volume and song selection may be controlled by using the infotainment controls. If Bluetooth is selected and no volume is present, check the volume setting on the infotainment system or the connected mobile device.

To play music via Bluetooth:

1. On the audio now playing page, touch source and select the desired Bluetooth mobile device.
2. If there is no mobile device connected, follow the screen prompts to pair the device.
3. Supported media content will appear on the display.

#### Manage Bluetooth Devices

Managing Bluetooth devices allows you to add, delete, or select another paired mobile device.

Only one Bluetooth mobile device can be active at a time.

Some mobile devices support sending Bluetooth music information to display on the radio. For more information about supported Bluetooth features, visit your brand website. See *Online Account and Customer Support* ⇨ *306* for details.

See *Radio Frequency Statement* ⇨ *312*.

# Phone

## Bluetooth (Overview)

The vehicle's Bluetooth system can interact with a mobile device to:

- Place and receive calls in a hands-free mode.
- Share the device's address book or contact list with the vehicle.
- Stream audio (music, podcasts).
- Notify receipt of text messages.

To minimize driver distraction, before driving, and with the vehicle parked:

- Become familiar with the features of the mobile device. Organize the phone book and contact lists clearly and delete duplicate or unused entries.
- Review the controls and operation of the infotainment system.
- Pair mobile device(s) to the vehicle. The system may not work with all mobile devices. See "Pairing" later in this section.

Vehicles with a Bluetooth system can use a Bluetooth-capable mobile device with a Hands-Free Profile to make and receive phone calls. The infotainment system and voice recognition are used to control the system. The system can be used while the vehicle is on. The range of the Bluetooth system can be up to 9.1 m (30 ft). Not all mobile devices support all functions and not all mobile devices work with the Bluetooth system. See *Online Account and Customer Support* ⇨ *306* for more information about compatible mobile devices.

### Controls

Use the controls on the infotainment display and the steering wheel to operate the Bluetooth system.

#### Steering Wheel Controls

: Press and release to start voice recognition on your mobile phone that is connected through Bluetooth, Apple CarPlay, or Android Auto. If there is an incoming call, then a press and release will answer the call.

: Press to end a call, decline a call, or cancel an operation. Press to mute or unmute the infotainment system when not on a call.

**Infotainment System Controls**

For information about how to navigate the menu system using the infotainment controls, see *Using the System* ⇨ *128*.

### Audio System

When using the Bluetooth system, sound comes through the vehicle's front audio system speakers and overrides the audio system. The volume level while on a mobile device phone call can be adjusted by pressing the steering wheel volume controls or the volume controls for the infotainment system. The adjusted volume level remains the same for later calls. The volume cannot be lowered beyond a certain level.

## Bluetooth (Pairing and Using a Phone)

### Pairing

A Bluetooth-enabled mobile device must be paired to the Bluetooth system and then connected to the vehicle before it can be used. See the mobile device manufacturer's user guide for Bluetooth functions before pairing the device.

**Pairing Information**

- Select the Phone icon on the infotainment home screen.
- If no mobile device has been paired, a message on the infotainment display will show the Manage Phones option. Select this option and the Phones screen will display. See "Pairing a Phone" later in this section.
- A Bluetooth smartphone with music capability can be paired to the vehicle as a smartphone and a music player at the same time.
- Up to 10 devices can be paired to the system.
- The pairing process is disabled when the vehicle is moving.
- Pairing only needs to be completed once, unless the pairing information on the cell phone changes or the cell phone is deleted from the system.
- If multiple paired cell phones are within range of the system, the system connects to the paired cell phone that is set to First to Connect. If there is no cell phone set to First to Connect, it will connect to the cell phone which was used last. To link to a different paired cell phone, see "Linking to a Different Phone" later in this section.

**Pairing a Phone**

1. Make sure Bluetooth has been enabled on the cell phone before starting the pairing process.
2. Select the Phone icon on the infotainment home screen.
3. If no mobile device is connected, select Manage Phones and the Phones screen will display.

   If another mobile device is connected already, select Settings, select the Systems tab, and then select Phones.
4. Select Add Phone.

   If a previously added phone is disconnected, the "Add Phone" card will just be a "+" card.
5. Follow the on-screen prompts to pair the cell phone.

6. Start the pairing process on the cell phone to be paired to the vehicle. See the cell phone manufacturer's user guide for information on this process. Once the cell phone is paired, it will show as Connected.
7. Follow the instructions on the cell phone to confirm the six-digit code showing on the infotainment display and select Pair. For pairing to be successful, both the code on the cell phone and infotainment display needs to be acknowledged. Once the cell phone is paired, it will show as Connected.
8. If the vehicle name does not appear on your cell phone, there are a few ways to start the pairing process over:
   - Make sure there is not an entry for the vehicle under the previously connected list. If the vehicle and cell phone were previously paired and one still remembers the other, it will not identify as a new device when searching.
   - Turn the Bluetooth off and on the device.
   - Go back to the beginning of the Phone menus on the infotainment display and restart the pairing process.
   - Turn the cell phone off and then back on.
   - Reset the cell phone, but this step should be done as a last effort.
9. If the cell phone prompts to accept connection or allow phone book download, select Always Accept and Allow. The phone book may not be available if not accepted.
10. To pair additional cell phones, select Settings, select the Systems tab, and then select Phones.

**First to Connect Paired Phones**

If multiple paired cell phones are within range of the system, the system connects to the paired cell phone that is set as First to Connect. To enable a paired cell phone as the First to Connect phone:

1. Make sure the cell phone is turned on.
2. Select the Settings icon on the infotainment home screen.
3. Select the Systems tab.
4. Select Phone.
5. Select Options under the connected phone.
6. Select First to Connect from the cell phone's settings menu. The settings will be enabled for that device.

Cell phones and mobile devices can be added, removed, connected, and disconnected. A sub-menu will display whenever a request is made to add or manage cell phones and mobile devices.

**Accessing the Device List Screen**

There are two ways to access the device list screen:

**Using the Settings Icon**

1. Select the Settings icon on the infotainment home screen or the Settings icon on the shortcut tray near the left of the display.
2. Select the Systems tab.
3. Select Phones.

**Using the Phone Icon**

1. Select the Phone icon on the infotainment home screen or the Phone icon on the shortcut tray.

2. Select the Phones tab.

#### Disconnecting a Connected Phone

To disconnect a phone:

1. Open the Device List Screen. See "Accessing the Device List Screen" previously in this section.
2. Select Option on the phone card to show the cell phone's or mobile device's settings.
3. Select Disconnect.

#### Deleting a Paired Phone

To delete a paired phone:

1. Open the Device List Screen. See "Accessing the Device List Screen" previously in this section.
2. Select Option on the phone card to show the cell phone's or mobile device's settings.
3. Select Forget Phone.

#### Linking to a Different Phone

To link to a different cell phone, the new cell phone must be in the vehicle and paired to the Bluetooth system.

To link to a different phone:

1. Open the Device List Screen. See "Accessing the Device List Screen" previously in this section.
2. Select the new cell phone to link to from the list of available phones. See "First to Connect Paired Phones" previously in this section.
3. Select Accept on the on-screen prompt.

### Switching to Handset or Hands-Free Mode

To switch between handset or hands-free mode:

- While the active call is hands-free, select the hand free icon in the active call view to switch handset mode on or off. If not on active call view, select the phone icon to change to active call view.

  The mute icon will not be available or functional while Handset mode is active.
- While the active call is on the handset, select the Audio Output option, then select Car Speakers to switch to the hands-free mode.

### Making a Call Using Contacts

Calls can be made through the Bluetooth system using personal cell phone contact information for all cell phones that support the Phone Book feature. Verify the cell phone supports this feature and that the phone is set to allow the sharing of contacts over Bluetooth with the vehicle.

The Contacts menu accesses the phone book stored in the cell phone.

To make a call using the Contacts menu:

1. Select the Phone icon on the infotainment home screen or on the shortcut tray near the left of the display.
2. Select Contacts.
3. To search for contacts:
   - Scroll – Select the list and scroll, or use the A-Z menu to go to a certain letter. Select the name to call.

### Making a Call Using the Recents Menu

The Recents menu accesses the recents call list from your cell phone.

To make a call using the Recents menu:

1. Select the Phone icon on the infotainment home screen or on the shortcut tray near the left of the display.
2. Select Recents.
3. Select the name or number to call.

### Making a Call Using the Keypad

To make a call by dialing the numbers:

1. Select the Phone icon on the infotainment home screen or on the shortcut tray near the left of the display.
2. Select Keypad and enter a phone number.
3. Select the phone icon on the infotainment display to start dialing the number.

### Searching Contacts Using the Keypad

To search for contacts using the keypad:

1. Select the Phone icon on the infotainment home screen.
2. Select Keypad and enter partial phone numbers or contact names using the digits on the keypad to search.

   Results appear on the right side of the display. Select one to place a call.

### Accepting or Declining a Call

When an incoming call is received, the infotainment system mutes and a ring tone is heard in the vehicle.

#### Accepting a Call

There are two ways to accept a call:

- Press on the steering wheel controls.
- Select Answer on the infotainment display.

#### Declining a Call

There are two ways to decline a call:

- Press on the steering wheel controls.
- Select Decline on the infotainment display.

### Call Waiting

Call waiting must be supported on the Bluetooth cell phone and enabled by the wireless service carrier to work.

#### Accepting a Call

Press to answer, then select Switch on the infotainment display.

#### Declining a Call

Press to decline, then select Decline on the infotainment display.

#### Switching Between Calls (Call Waiting Calls Only)

To switch between calls, select Phone on the infotainment home screen to display Call View. While in Call View, select the call information of the call on hold to change calls or select the swap icon.

### Ending a Call

- Press on the steering wheel controls.
- Select on the infotainment display, next to a call, to end only that call.

### Dual Tone Multi-Frequency (DTMF) Tones

The in-vehicle Bluetooth system can send numbers during a call. This is used when calling a menu-driven phone system. Use the Keypad to enter the number.

## Apple CarPlay and Android Auto

If equipped, Android Auto and/or Apple CarPlay capability may be available through a compatible smartphone. If the phone is

paired and projections is available, Android Auto and/or Apple CarPlay icons will become illuminated on the infotainment home screen.

To use Android Auto and/or Apple CarPlay:

**For Wired Phone Projection**

1. For Android 9 smartphones and older, download the Android Auto app to your phone from the phones Google Play Store. There is no app required for Apple CarPlay.
2. Connect your Android phone or Apple iPhone by using the factory-provided phone USB cable and plugging into a USB data port. For best performance, it is highly recommended to use the device's factory-provided USB cable, which should be replaced after significant wear to maintain connection quality. Aftermarket or third-party cables may not work.
3. When the phone is first connected, to activate Apple CarPlay or Android Auto, accept the terms and conditions on both the infotainment system and the phone.
4. Follow the instructions on the phone.

The Android Auto and Apple CarPlay icons on the infotainment home screen will illuminate. Android Auto and/or Apple CarPlay may automatically launch the next time the USB is connected. If not, select the Android Auto or Apple CarPlay icon on the infotainment home screen to launch.

Select ⌂ on the center stack to return to the infotainment home screen.

**For Wireless Phone Projection**

Verify your phone is wireless compatible by visiting the Android Auto or Apple CarPlay support page.

1. For Android 9 smartphones and older, download the Android Auto app to your phone from the phones Google Play Store. There is no app required for Apple CarPlay.
2. For first time connection, make sure Bluetooth and WiFi are turned on in phone settings:
   - Connect the phone over Bluetooth. See *Bluetooth (Pairing and Using a Phone)* ⇨ *134 Bluetooth (Overview)* ⇨ *133*.
3. When the phone is first connected, to activate Apple CarPlay or Android Auto, agree to the terms and conditions on both the infotainment system and the phone.
4. Follow the instructions on the phone.

The Android Auto and Apple CarPlay icons on the infotainment home screen will illuminate. Android Auto and/or Apple CarPlay may automatically launch upon wireless connection. If not, select the Android Auto or Apple CarPlay icon on the infotainment home screen to launch.

Wireless CarPlay and/or Wireless Android Auto may experience occasional service disruption due to outside Wi-Fi interference.

To disconnect the phones wireless projection for that paired device:

1. Select Settings from the infotainment home screen.
2. Select Connections.
3. Select Phones.
4. Select the Bluetooth icon or Options on the phone card.
5. Select Connection Type from the list and choose Bluetooth Calling and Media.

Select ⌂ on the center stack to return to the infotainment home screen.

Features are subject to change. For further information on how to set up Android Auto and Apple CarPlay in the vehicle, visit your brand website. See *Online Account and Customer Support* ⇨ *306* for details.

CarPlay will not support Fast Connect on iPhones with iOS version 13 or older.

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Select ⌂ on the center stack to exit Android Auto or Apple CarPlay. To enter back into Android Auto or Apple CarPlay, press and hold ⌂ on the center stack.

If applicable, Android Auto and/or Apple CarPlay may be disabled from the infotainment system. To do this, select Home > Settings > Connections. Scroll down the list to find Android Auto or Apple CarPlay. Use the On/Off toggle to turn Android Auto or Apple CarPlay on or off for the entire system.

## Settings

To access the Settings menus:

1. Touch Settings on the infotainment home screen.
2. Touch the desired category to display a list of available options.
3. Touch to select the desired feature setting.
4. Touch the options on the infotainment display to change a setting.
5. Touch < to go back.

The Settings menu may contain the following:

### System

The menu may contain the following:

**Time/Date**

Allows setting of the clock.

**Language**

Sets the display language used on the infotainment display. It may also use the selected language for voice recognition and audio feedback.

**Phones**

Allows connecting to a different cell phone or mobile device source, disconnecting a cell phone or media device, or deleting a cell phone or media device.

**Wi-Fi Networks**

Shows connected and available Wi-Fi networks.

**Wi-Fi Hotspot**

Allows adjustment of different Wi-Fi features.

**Vehicle-to-Phone Sharing**

Allows GM apps to use vehicle data on the listed phones shown.

**Display**

Allows adjustment of the infotainment display.

**Sounds**

Allows adjustment of the infotainment system sounds.

**Vehicle Software**

Shows Updates, About, and Reset Options.

## Vehicle

The menu may contain the following:

**Teen Driver**

See *Teen Driver* ⇨ *140*.

**Rear Seat Reminder**

Allows for a chime and a message when the rear door has been opened before or during operation of the vehicle.

**Buckle to Drive**

This feature can prevent shifting out of (P) Park when the driver's, and if applicable the front passenger's, seat belt is not buckled.

**Climate and Air Quality**

Allows adjustment of different climate settings.

**Collision/Detection Systems**

Allows adjustment of different driver assistance system settings.

**Comfort and Convenience**

Allows adjustment of different comfort and convenience settings.

**Lighting**

Allows adjustment of different lighting settings.

**Power Door Locks**

Allows adjustment of different door lock settings.

**Remote Lock, Unlock, and Start**

Allows adjustment of different remote lock settings.

**Seating Position**

Allows adjustment of different seating position settings.

## Apps

The menu may contain the following:

**Audio**

Allows adjustment of different audio settings.

**Phone**

Allows adjustment of different phone settings.

**OnStar**

Allows adjustment of different OnStar settings.

## Teen Driver

If equipped, this allows multiple keys to be registered for beginner drivers to encourage safe driving habits. When the vehicle is started with a Teen Driver key, it will automatically activate certain safety systems, allow setting of some features, and limit the use of others. The Report Card will record vehicle data about driving behavior that can be viewed later. When the vehicle is started with a registered key, the Driver Information Center (DIC) displays a message that Teen Driver is active.

**To access:**

1. Touch Settings on the infotainment home screen, then touch Vehicle, and then Teen Driver.
2. Create a Personal Identification Number (PIN) by choosing a four-digit PIN. Re-enter the PIN to confirm. To change the PIN, touch Change PIN.

**The PIN is required to:**

- Set up/Add or remove keys.

- Change Teen Driver settings.
- Change or clear the Teen Driver PIN.
- Access or delete Report Card data.

**Set up/Add keys to activate Teen Driver and assign restrictions to the key:**

Any vehicle key can be registered, up to a maximum of eight keys. Label the key to tell it apart from the other keys.

**For a pushbutton start system:**

1. Start the vehicle.
2. For automatic transmissions, the vehicle must be in P (Park). For manual transmissions, the vehicle must be stopped with the parking brake set.
3. From the Settings menu, touch Vehicle and then Teen Driver.
4. Enter the PIN.
5. Place the remote key you wish to register in the transmitter pocket. The key does not need to be the one that started the vehicle.
6. From the Teen Driver menu, touch Setup Keys or Add/Remove Teen Driver Keys.
   - If the remote key has not previously been registered, the option to add the key displays. Touch Add and a confirmation message displays. Teen Driver restrictions will be applied whenever this remote key is used to operate the vehicle.
   - If the remote key has already been registered, the option to remove the key displays. If Remove is touched, the remote key is no longer registered. A confirmation message displays, and Teen Driver restrictions will not be applied if this remote key is used to operate the vehicle.

In vehicles with a pushbutton start system, if a Teen Driver and a non-Teen Driver key are both present at start up, the vehicle will recognize the non-Teen Driver key to start the vehicle. The Teen Driver settings will not be active.

**For a keyed ignition system:**

1. Start the vehicle.
2. For automatic transmissions, the vehicle must be in P (Park). For manual transmissions, the vehicle must be stopped with the parking brake set.
3. From the Settings menu, touch Vehicle and then Teen Driver.
4. Enter the PIN.
5. Touch Setup Keys or Add/Remove Teen Driver Keys. The system displays instructions for registering or unregistering a key. A confirmation message displays.

**Manage Settings or Teen Driver Settings**

Depending on the options of your vehicle, the following menu items may be displayed:

**Buckle to Drive :** When turned ON, Buckle to Drive prevents the driver from shifting out of P (Park) for a period of time after the brake pedal is pressed if the driver, or on some vehicles the detected passenger, has not buckled their seat belt. On some vehicles, Buckle to Drive is always ON when Teen Driver is active and is not configurable.

**Audio Volume Limit :** Allows a maximum audio volume to be set. Turn the audio volume limit on or off. Use the arrows to choose the maximum allowable level for the audio volume. On some infotainment systems, touch Set Audio Volume Limit to choose the maximum allowable audio volume level.

**Set Audio Volume Limit :** Use the arrows to choose the maximum allowable level for the audio volume.

**Teen Driver Speed Limiter :** Limits the maximum speed of the vehicle. When the speed limiter is turned on and the vehicle is started with a Teen Driver key, the DIC displays a message that the top speed is limited.

On certain vehicles, when the Speed Limiter is turned ON, the vehicle's maximum acceleration will be limited. The DIC will display a message that the acceleration is limited.

**Teen Driver Speed Warning :** Displays a warning in the DIC when exceeding a selectable speed. Turn the speed warning on or off and choose the desired speed warning level. The speed warning does not limit the speed of the vehicle. On some infotainment systems, touch Set Teen Driver Speed Warning to set the warning speed.

**Set Teen Driver Speed Warning :** Choose the desired speed warning level. The speed warning does not limit the speed of the vehicle.

**When Teen Driver is Active:**

- If equipped, the radio will mute when the driver seat belt, and in some vehicles the front passenger seat belt, is not buckled. The audio from any device paired to the vehicle will also be muted.
- An object placed on the front passenger seat, such as a briefcase, handbag, grocery bag, laptop, or other electronic device, could cause the passenger sensing system to falsely sense an unbuckled front passenger and mute the radio. If this happens, remove the object from the seat.
- Some safety systems, such as Automatic Emergency Braking, if equipped, cannot be turned off.
- The gap setting for Adaptive Cruise Control and alert timing for Forward Collision Alert, if equipped, cannot be changed.
- When trying to change a safety feature that is not configurable in Teen Driver, the feature may be grayed out or removed from the infotainment menu, or the DIC will display a message indicating that Teen Driver is active and the action is not available.
- Super Cruise, if equipped, is not available.
- Enhanced Low Fuel Warning (if equipped) – When the vehicle is low on fuel, the low fuel light on the instrument cluster flashes and the DIC low fuel warning cannot be dismissed.
- Do not tow a trailer if equipped with Automatic Emergency Braking.

**Report Card**

The vehicle owner must secure the driver's consent to record certain vehicle data when the vehicle is driven with a registered Teen Driver key. There is one Report Card per vehicle. Data is only recorded when a registered Teen Driver key is used to operate the vehicle.

The Report Card data is collected from the time Teen Driver is activated or the last time the Report Card was reset. The following items may be recorded:

- Distance Driven – the total distance driven.
- Maximum Speed – the maximum vehicle speed detected.
- Overspeed Warnings – the number of times the speed warning setting was exceeded.
- Wide Open Throttle – the number of times the accelerator pedal was pressed nearly all the way down.

- Forward Collision Alerts (if equipped) – the number of times the driver was notified when approaching a vehicle ahead too quickly and at potential risk for a crash.
- Forward Automatic Braking, also called Automatic Emergency Braking (if equipped) – the number of times the vehicle detected that a forward collision was imminent and applied the brakes.
- Reverse Automatic Braking (if equipped) – the number of times the vehicle detected that a rearward collision was imminent and applied the brakes.
- Traction Control – the number of times the Traction Control System activated to reduce wheel spin or loss of traction.
- Stability Control – the number of events which required the use of electronic stability control.
- Antilock Braking System Active – The number of Antilock Brake System activations.
- Tailgating Alerts (if equipped) – the number of times the driver was alerted for following a vehicle ahead too closely.

**Report Card Data**

Cumulative Data is saved for all trips until the Report Card is reset or until the maximum count is exceeded. If the maximum count is exceeded for a Report Card line item, that item will no longer be updated in the Report Card until it is reset. Each item will report a maximum of 1,000 counts. The distance driven will report a maximum of 64 374 km (40,000 mi).

To delete Report Card data, do one of the following:

- From the Report Card display, touch Reset.
- Touch Clear PIN and All Teen Driver Keys from the Teen Driver menu. This will also unregister any Teen Driver keys and delete the PIN.

**Forgotten PIN**

See your dealer to reset the PIN.

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**FCC Information**

See *Radio Frequency Statement* ⇨ *312*.

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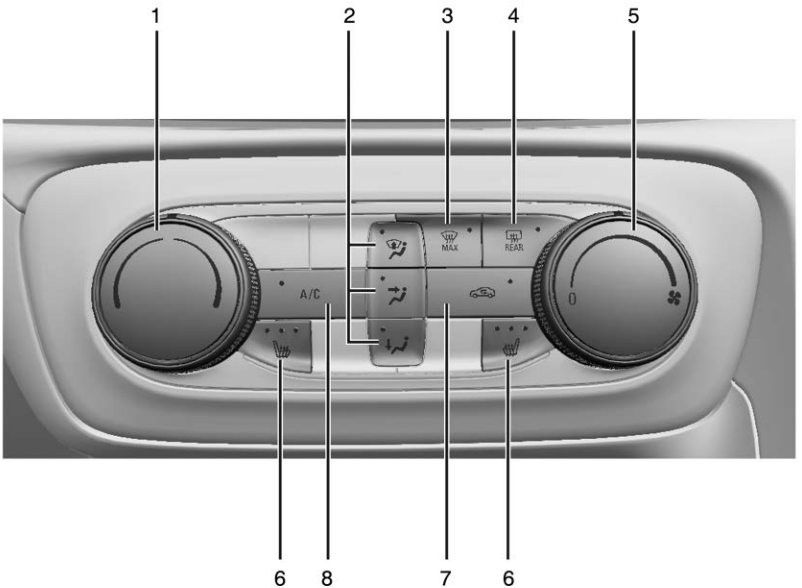
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# Climate Controls

**Climate Control Systems**
Climate Control Systems ..... 146
Dual Automatic Climate Control System ..... 149
**Air Vents**
Air Vents ..... 152
**Maintenance**
Passenger Compartment Air Filter ..... 152
Service ..... 152

## Climate Control Systems

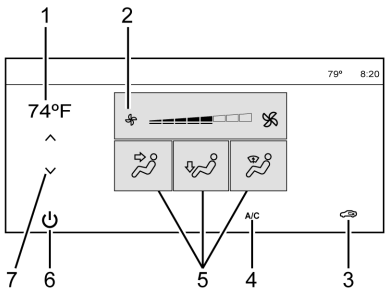



The heating, cooling, and ventilation for the vehicle can be controlled with this system.

1. Temperature Control
2. Air Delivery Mode Controls

3. MAX Defrost
4. Rear Window Defogger
5. Fan Control
6. Driver and Passenger Heated Seats (If Equipped)
7. Recirculation
8. A/C (Air Conditioning)

## Climate Control Display




1. Temperature Display
2. Fan Control
3. Recirculation
4. A/C (Air Conditioning)
5. Air Delivery Mode Controls
6. On/Off (Power)
7. Temperature Controls

The fan, air delivery mode, air conditioning, and temperature settings can be controlled by touching CLIMATE on the infotainment home screen.

**:** Turn the knob clockwise or counterclockwise to increase or decrease the fan speed or turn the fan off.

**Temperature Control :** Turn the knob clockwise or counterclockwise to increase or decrease the temperature.

**Air Delivery Mode Controls :** Press , , or to change the direction of the airflow. The indicator light in the button will turn on. Any combination of the three buttons can be selected. The indicator light in the button will turn on.

To change the current mode, select one or more of the following:

**:** Clears the windows of fog or moisture. Air is directed to the windshield.

**:** Air is directed to the instrument panel outlets.

**:** Air is directed to the floor outlets.

**MAX :** Air is directed to the windshield and the fan runs at a higher speed. Fog or frost is cleared from the windshield more quickly. When the button is pressed again, the system returns to the previous mode setting.

For best results, clear all snow and ice from the windshield before defrosting.

**A/C :** Press to turn the air conditioning system on or off. If the climate control system is turned off or the outside temperature falls below freezing, the air conditioner will not run.

**:** Press to turn on recirculation. An indicator light comes on. Air is recirculated to quickly cool the inside of the vehicle or to reduce the entry of outside air and odors.

### Rear Window Defogger

**:** Press to turn the rear window defogger on or off. An indicator light on the button comes on to show that the rear window defogger is on.

The defogger can be turned off by turning the vehicle off or to accessory mode.

If the vehicle is equipped with heated outside mirrors, they turn on when the rear window defogger button is on and help to clear fog or frost from the surface of the mirror.

See *Heated Mirrors* ⇨ *29*.

**Caution**

Do not try to clear frost or other material from the inside of the front windshield and rear window with a razor blade or anything else that is sharp. This may damage the rear window defogger grid and affect the radio's ability to pick up stations clearly. The repairs would not be covered by the vehicle warranty.

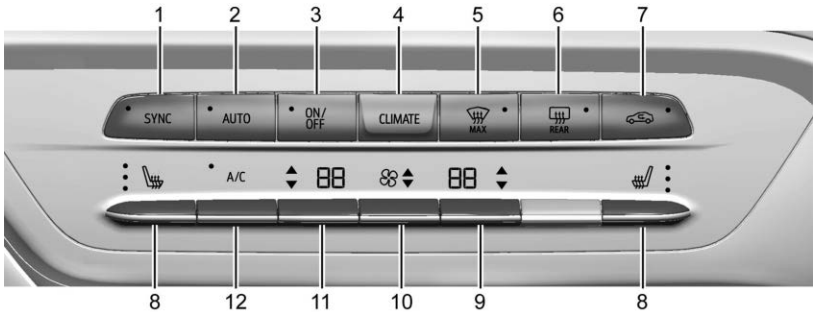
**or :** If equipped, press or to heat the driver or passenger seat. See *Heated Front Seats* ⇨ *44*.

**Afterblow Feature**

If equipped, under certain conditions, the fan may stay on or may turn on and off several times after you turn off and lock the vehicle. This is normal.

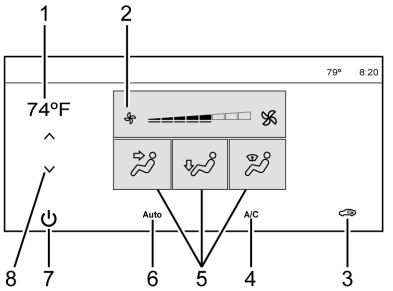
## Dual Automatic Climate Control System

The heating, cooling, and ventilation for the vehicle can be controlled with this system.




1. SYNC (Synchronized Temperature)
2. AUTO (Automatic Operation)
3. ON/OFF
4. CLIMATE
5. Max Defrost
6. Rear Window Defogger
7. Recirculation
8. Driver and Passenger Heated Seats (If Equipped)
9. Passenger Temperature Controls
10. Fan Control
11. Driver Temperature Controls
12. A/C (Air Conditioning)

### Climate Control Display




1. Temperature Display
2. Fan Control
3. Recirculation
4. A/C (Air Conditioning)
5. Air Delivery Mode Controls
6. AUTO (Automatic Operation)
7. On/Off (Power)
8. Temperature Controls

The fan, air delivery mode, air conditioning, and temperature settings can be controlled by touching CLIMATE on the infotainment home screen. A selection can then be made on the front climate control page displayed.

**Automatic Operation**

The system automatically controls the fan speed, air delivery, air conditioning, and recirculation to heat or cool the vehicle to the desired temperature.

When AUTO is pressed, all four functions operate automatically. Each function can also be manually set and the selected 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. Press AUTO.
2. Set the temperature. Allow the system time to stabilize. Adjust the temperature as needed for best comfort.

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 when automatically controlled. See under "Manual Operation" for more details.

During hands free calling the blower level may automatically reduce. The blower level can be manually adjusted if desired.

**Manual Operation**

**ON/OFF:** Press to turn the system off or on. When off is selected, the system will prevent outside air from entering the vehicle. If any climate control buttons are pressed, the system will turn on and operate at the current setting.

▲ or ▼ **:** Lift or press to increase or decrease the fan speed. The fan speed setting appears on the main display. Lifting or pressing either button cancels automatic fan control and the fan is controlled manually. Press AUTO to return to automatic operation.

▲ / ▼ **:** The temperature can be adjusted separately for the driver and the passenger. Lift or press to increase or decrease the temperature.

**SYNC:** Press to link the passenger temperature settings to the driver setting. The SYNC indicator light will turn on. When the passenger settings are adjusted, the SYNC indicator light turns off.

**Air Delivery Mode Controls:** In the climate control display, press , , or to change the direction of the airflow. The indicator light in the button will turn on. Any combination of the three buttons can be selected. The current mode appears in the display. Pressing any of the three buttons cancels automatic air delivery control and the direction of the airflow is controlled manually. Press AUTO to return to automatic operation.

To change the current mode, select one or more of the following:

**:** Clears the windows of fog or moisture. Air is directed to the windshield.

**:** Air is directed to the instrument panel outlets.

**:** Air is directed to the floor outlets.

**MAX:** Air is directed to the windshield and the fan runs at a higher speed. Fog or frost is cleared from the windshield more quickly. When the button is pressed again, the system returns to the previous mode setting.

For best results, clear all snow and ice from the windshield before defrosting.

**A/C:** Press to turn the air conditioning system on or off. If the climate control system is turned off or the outside temperature falls below freezing, the air conditioner will not run.

Pressing this button cancels automatic air conditioning and turns off the air conditioner. Press AUTO to return to automatic operation and the air conditioner runs automatically as needed. When the indicator light is on, the air conditioner runs automatically to cool the air inside the vehicle or to dry the air needed to defog the windshield faster.

**:** Press to turn on recirculation. An indicator light comes on. Air is recirculated to quickly cool the inside of the vehicle or to reduce the entry of outside air and odors.

**or :** Lift or for the highest heated seat setting. Lifting the heated seat button again will keep the heated seat at the highest setting. Press the heated seat button down to lower the heat level or turn the heated seat off. See *Heated Front Seats* ⇨ *44*.

**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. The fan speed may slightly increase to help prevent fogging. If the climate control system does not detect possible window fogging, it returns to normal operation.

### Rear Window Defogger

| Caution |
| --- |
| Do not try to clear frost or other material from the inside of the front windshield and rear window with a razor blade or anything else that is sharp. This may damage the rear window defogger grid and affect the radio's ability to pick up stations clearly. The repairs would not be covered by the vehicle warranty. |

REAR **:** Press to turn the rear window defogger on or off. An indicator light on the button comes on to show that the rear window defogger is on.

The defogger can be turned off by turning the vehicle off or to accessory mode.

The rear window defogger can be set to automatic operation. When auto rear defog is selected, the rear window defogger turns on automatically when the interior temperature is cold and the outside temperature is about 7 °C (44 °F) and below. The auto rear defogger turns off automatically.

If equipped, the heated outside mirrors turn on when the rear window defogger button is on and help to clear fog or frost from the surface of the mirror. See *Heated Mirrors* ⇨ *29*.

**Remote Start Climate Control Operation:** If equipped with remote start, the climate control system may run when the vehicle is started remotely. If equipped with heated seats or a heated steering wheel, these features may come on during a remote start. See *Remote Start* ⇨ *16*, *Heated Front Seats* ⇨ *44*, and *Heated Steering Wheel* ⇨ *91*.

### Sensor

The solar sensor, on top of the instrument panel near the windshield, monitors the solar heat.

The climate control system uses the sensor information to adjust the temperature, fan speed, recirculation, and air delivery mode for best comfort.

Do not cover the sensor; otherwise the automatic climate control system may not work properly.

### Afterblow Feature

If equipped, under certain conditions, the fan may stay on or may turn on and off several times after you turn off and lock the vehicle. This is normal.

## Air Vents

Use the louvers located on the air vents to change the direction of the airflow.

To open or close off the airflow:

- Move slider knobs away from the occupant for shut off closing.

### Operation Tips

- Clear away any ice, snow, or leaves from air inlets at the base of the windshield that could block the flow of air into the vehicle.
- Clear snow off the hood to improve visibility and help decrease moisture drawn into the vehicle, which may improve long term system performance.
- 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 hood 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.

| 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 soap solution. Damage caused by air fresheners would not be covered by the vehicle warranty. |

# 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 *Maintenance Schedule* ⇨ *293*.

See your dealer regarding replacement of the filter.

## Service

All vehicles have a label underhood 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 *Maintenance Schedule* ⇨ *293*.

| Caution |
| --- |
| Damage caused by improper refrigerant usage could lead to costly repairs and may not be covered by the vehicle warranty. Refrigerant systems should only be serviced by qualified personnel. Always use the correct refrigerant. |

# Driving and Operating


**Driving Information**
Driver Behavior ..... 155
Driving Environment ..... 155
Vehicle Design ..... 155
Driving for Better Fuel Economy ..... 155
Distracted Driving ..... 156
Defensive Driving ..... 156
Impaired Driving ..... 157
Control of a Vehicle ..... 157
Braking ..... 157
Steering ..... 157
Off-Road Recovery ..... 158
Loss of Control ..... 158
Driving on Wet Roads ..... 159
Hill and Mountain Roads ..... 160
Winter Driving ..... 160
If the Vehicle Is Stuck ..... 161
Vehicle Load Limits ..... 162

**Starting and Operating**
New Vehicle Break-In ..... 165
Ignition Positions ..... 166
Starting the Engine ..... 167
Stop/Start System ..... 168
Engine Heater ..... 169
Retained Accessory Power (RAP) ..... 170
Shifting Into Park ..... 171
Shifting out of Park ..... 171
Parking over Things That Burn ..... 172
Extended Parking ..... 172

**Engine Exhaust**
Engine Exhaust ..... 172
Running the Vehicle While Parked ..... 172

**Automatic Transmission**
Automatic Transmission ..... 173
Manual Mode ..... 174

**Drive Systems**
All-Wheel Drive ..... 175

**Brakes**
Electric Brake Boost ..... 176
Antilock Brake System (ABS) ..... 176
Electric Parking Brake ..... 176
Brake Assist ..... 177
Hill Start Assist (HSA) ..... 178

**Ride Control Systems**
Traction Control/Electronic Stability Control ..... 178

**Cruise Control**
Cruise Control ..... 180
Adaptive Cruise Control (Camera) ..... 182

**Advanced Driver Assistance Systems**
Advanced Driver Assistance Systems ..... 191
Assistance Systems for Parking or Backing ..... 192
Rear Vision Camera (RVC) ..... 192
Surround Vision System ..... 193
Park Assist ..... 195
Automatic Parking Assist (APA) ..... 195
Rear Cross Traffic Alert (RCTA) System ..... 197
Assistance Systems for Driving ..... 197
Forward Collision Alert (FCA) System ..... 197
Automatic Emergency Braking (AEB) ..... 199
Front Pedestrian Braking (FPB) System ..... 201
Side Blind Zone Alert (SBZA) ..... 202
Lane Change Alert (LCA) ..... 203
Lane Keep Assist (LKA) ..... 204

**Fuel**
Top Tier Fuel ..... 206
Recommended Fuel (1.3L L3 Engine) ..... 206
Recommended Fuel (1.2L L3 Engine) ..... 206
Prohibited Fuels ..... 207
Fuels in Foreign Countries ..... 207
Fuel Additives ..... 207
E85 or FlexFuel (1.2L L3 Engine) ..... 207
Filling the Tank ..... 208
Filling a Portable Fuel Container ..... 209

**Trailer Towing**
General Towing Information ..... 210
Driving Characteristics and Towing Tips ..... 210
Trailer Towing ..... 213
Towing Equipment ..... 216

**Conversions and Add-Ons**
Add-On Electrical Equipment ..... 218

# Driving Information

## Driver Behavior

Driving is an important responsibility. Driver behavior, the driving environment, and the vehicle's design all affect how well a vehicle performs.

Being aware of these factors can help in understanding how the vehicle handles and what can be done to avoid many types of crashes, including a rollover crash.

Most serious injuries and fatalities to unbelted occupants can be reduced or prevented by the use of seat belts. In a rollover crash, an unbelted person is significantly more likely to die than a person wearing a seat belt. In addition, avoiding excessive speed, sudden or abrupt turns, impaired driving, and aggressive driving can help make trips safer and avoid the possibility of a crash.

## Driving Environment

Be prepared for driving in inclement weather, at night, or during other times where visibility or traction may be limited, such as on curves, slippery roads, or hilly terrain. Unfamiliar surroundings can also have hidden hazards.

## Vehicle Design

Utility vehicles have a significantly higher rollover rate than other types of vehicles. This is because they have a higher ground clearance and a narrower track or shorter wheelbase than passenger cars. While these design characteristics provide the driver with a better view of the road, these vehicles do have a higher center of gravity than other types of vehicles. A utility vehicle does not handle the same as a vehicle with a lower center of gravity, like a car, in similar situations.

Safe driver behavior and understanding of the environment can help avoid a rollover crash in any type of vehicle, including utility vehicles.

## 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, see *All-Wheel Drive* ⇨ *175*.
- 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 tires properly inflated.
- Combine several trips into a single trip.
- Replace the vehicle's tires with the same TPC Spec number molded into the tire'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 judgment 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 favorite 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 cell 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 section for more information on using that system and the navigation system, if equipped, including pairing and using a cell phone.

## Defensive Driving

Defensive driving means to always expect the unexpected. The first step in driving defensively is to wear a seat belt. See *Seat Belts* ⇨ *47*.

- 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 your vehicle and the vehicle in front of you.
- Focus on the task of driving.

## Impaired Driving

Death and injury associated with impaired driving is a global tragedy.

**⚠ Warning**

Drinking alcohol or taking drugs and then driving is very dangerous. Your reflexes, perceptions, attentiveness, and judgment can be affected by even a small amount of alcohol or drugs. You can have a serious — or even fatal — collision if you drive after drinking or taking drugs.

Do not drive while under the influence of alcohol or drugs, or ride with a driver who has been drinking or is impaired by drugs. Find alternate transportation home; or if you are with a group, designate a driver who will remain sober.

## 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.

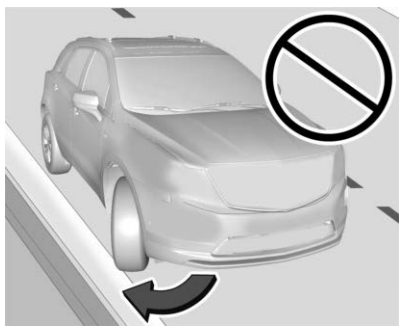
If a brake fault occurs, the brakes may lose power assist. More effort will be required to stop the vehicle and it may take longer to stop.

If the engine were to stall or stop while driving, the brake boost system, which is powered by the vehicle battery, will maintain the power assist for as long as the battery has sufficient voltage. Steer the vehicle out of the roadway and stop as soon as it is safe to do so. See *Electric Brake Boost* ⇨ *176*.

## Steering

**Caution**

To avoid damage to the steering system, do not drive over curbs, 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.



### Electric Power Steering

The vehicle is equipped with an electric power steering system, which reduces the amount of effort needed to steer the vehicle. It does not have power steering fluid. Regular maintenance is not required.

If the vehicle experiences a system malfunction and loses power steering, greater steering effort may be required. Power steering assist also may be reduced if you turn the steering wheel as far as it can turn and hold it there with force for an extended period of time.

See your dealer if there is a problem.

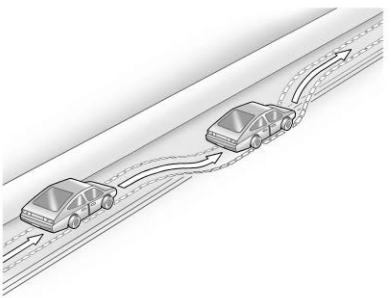
### Curve Tips

- Take curves at a reasonable speed.
- Reduce speed before entering a curve.
- Maintain a reasonable steady speed through the curve.
- Wait until the vehicle is out of the curve before accelerating gently into the straightaway.

### 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 tire 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 curve causes tires to slip and lose cornering force.
- Acceleration Skid — too much throttle causes the driving wheels to spin.

Antilock brakes help to avoid only the braking skid.

Defensive drivers avoid most skids by taking reasonable care suited to existing conditions, and by not exceeding those conditions. But skids are always possible.

If the vehicle starts to skid, 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, but if it skids again from oversteer, be ready to correct another skid if it occurs.
- Slow down and adjust your driving according to weather conditions. Stopping distance may be longer and vehicle control may be affected when traction is reduced by water, snow, ice, gravel, or other material on the road. Learn to recognize 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 tires to slide.

## 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.

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.

### Hydroplaning

Hydroplaning is dangerous. Water can build up under the vehicle's tires 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 hydroplaning, it has little or no contact with the road.

There is no hard and fast rule about hydroplaning. 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.
- Pass with caution.
- Keep windshield wiping equipment in good shape.
- Keep the windshield washer fluid reservoir filled.
- Have good tires with proper tread depth. See *Tires* ⇨ *254*.
- Turn off cruise control.
- Activate All-Wheel Drive (AWD) mode. See *All-Wheel Drive* ⇨ *175*.

## 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, tires, 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 center 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 grades, passing or no-passing zones) and take appropriate action.
- Select All-Wheel Drive (AWD) Mode. See *All-Wheel Drive* ⇨ *175*.

## Winter Driving

### Driving on Snow or Ice

**Caution**

To avoid damage to the wheels and brake components, always clear snow and ice from inside the wheels and underneath the vehicle before driving.

Snow or ice between the tires 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 tires slick.
- Turn on Traction Control. See *Traction Control/Electronic Stability Control* ⇨ *178*.
- The Antilock Brake System (ABS) improves vehicle stability during hard stops, but the brakes should be applied sooner than when on dry pavement. See *Antilock Brake System (ABS)* ⇨ *176*.

- 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 maneuvers and braking while on ice.
- Turn off cruise control.
- Select All-Wheel Drive (AWD) Mode. See *All-Wheel Drive* ⇨ *175*.

### Cold Weather Mode

In very low temperatures, a cold weather message may display on the Driver Information Center (DIC). The engine speed, transmission shift patterns, and cabin fan speed may operate differently to enable the vehicle to warm up quicker. You can manually override the cabin fan speed in cold weather mode.

### Blizzard Conditions

Stop the vehicle in a safe place and signal for help. Stay with the vehicle unless there is help nearby. If possible, use Roadside Assistance. See *Roadside Assistance Program* ⇨ *307*. To get help and keep everyone in the vehicle safe:

- Turn on the hazard warning flashers.
- 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.
- 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* ⇨ *172*.

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

**⚠ Warning**

If the vehicle's tires 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).

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* ⇨ *178*.

If equipped, select All-Wheel Drive (AWD) Mode. See *All-Wheel Drive* ⇨ *175*.

### 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 *Transporting a Disabled Vehicle* ⇨ *279*.

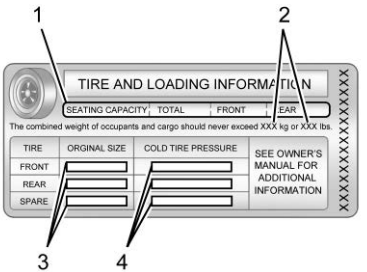
## Vehicle Load Limits

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 nonfactory-installed options. Two labels on the vehicle may show how much weight it may properly carry, the Tire and Loading Information label and the Certification/Tire 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 performance, damage the tires, and shorten the life of the vehicle.

### Tire and Loading Information Label




**Example Label**

A vehicle-specific Tire and Loading Information label is attached to the center pillar (B-pillar). The tire and loading information label shows the number of occupant seating positions (1), and the maximum vehicle capacity weight (2) in kilograms and pounds.

The Tire and Loading Information label also shows the size of the original equipment tires (3) and the recommended

cold tire inflation pressures (4). For more information on tires and inflation see *Tires* ⇨ *254* and *Tire Pressure* ⇨ *260*.

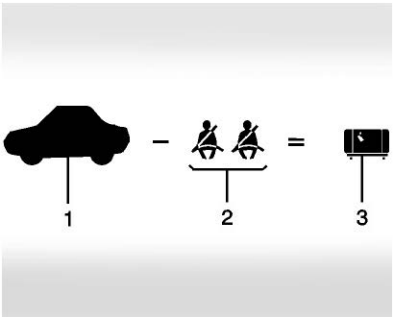
There is also important loading information on the vehicle Certification/ Tire label. It may show the Gross Vehicle Weight Rating (GVWR) and the Gross Axle Weight Rating (GAWR) for the front and rear axle. See "Certification/Tire Label" later in this section.

**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.

See *Trailer Towing* ⇨ *213* for important information on towing a trailer, towing safety rules and trailering tips.

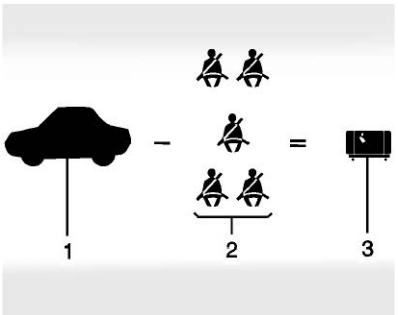
If aftermarket accessories are installed on the vehicle, for example a rooftop carrier, be sure to add the weight of all installed accessories to the combined weight of luggage and cargo.




**Example 1**

1. Vehicle Capacity Weight for Example 1 = 453 kg (1,000 lb)

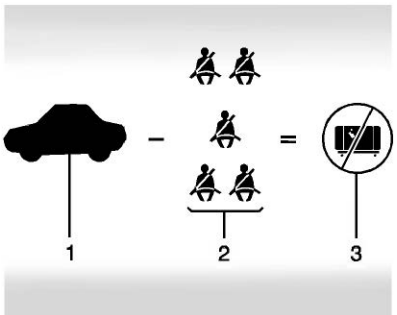
   Then subtract Accessory Weight, for example a rooftop cargo box = 15.8 kg (35 lb)
2. Subtract Occupant Weight @ 68 kg (150 lb) × 2 = 136 kg (300 lb)
3. Remaining available capacity for Cargo Weight = 301.2 kg (665 lb)




**Example 2**

1. Vehicle Capacity Weight for Example 2 = 453 kg (1,000 lb)

   Then subtract Accessory Weight, for example a rooftop cargo box = 18.1 kg (40 lb)
2. Subtract Occupant Weight @ 68 kg (150 lb) × 5 = 340 kg (750 lb)
3. Remaining available capacity for Cargo Weight = 94.9 kg (210 lb)

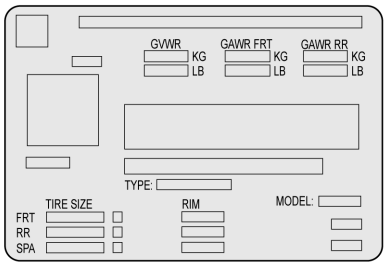



**Example 3**

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 the vehicle's tire and loading information label for specific information about the vehicle's capacity weight and seating positions. The combined weight of the driver, passengers, accessories, and cargo should never exceed the vehicle's capacity weight.

## Certification/Tire Label




**Label Example**

A vehicle-specific Certification/Tire label is attached to the center pillar (B-pillar).

The label may show the size of the vehicle's original tires 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/Tire 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 centerline.

**Caution**

Overloading the vehicle may cause damage. Repairs would not be covered by the vehicle warranty. Do not overload the vehicle.

**⚠ Warning**

Things inside the vehicle can strike and injure people in a sudden stop or turn, or in a crash.

(Continued)

**Warning (Continued)**

- Put things in the cargo area of the vehicle. In the cargo area, put them as far forward as possible. 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.
- Secure loose items in the vehicle.
- Do not leave a seat folded down unless needed.

# Starting and Operating

## New Vehicle Break-In

**Caution**

The vehicle does not need an elaborate break-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.
- Do not tow a trailer during break-in. See *Trailer Towing* ⇨ *213* for the trailer towing capabilities of the vehicle and more information.

(Continued)

**Caution (Continued)**

Following break-in, engine speed and load can be gradually increased.

On new vehicles, the various mechanical and electrical systems experience a “break-in” period during the first 6 400 km (4,000 mi) of routine driving. As the vehicle is driven, the mechanical systems adjust to provide optimal fuel economy and transmission shift performance.

Electrical systems will adapt and calibrate during the break-in period. A one-time occurrence of clicks and similar vehicle noises is normal during this process.

Normal driving charges the vehicle’s battery to achieve the best operation of the vehicle, including fuel economy and the Stop/Start System. See *Stop/Start System* ⇨ *168*.

## Ignition Positions



The vehicle has an electronic keyless ignition with pushbutton start.

The remote key must be in the vehicle for the system to operate. If the pushbutton start is not working, the vehicle may be near a strong radio antenna signal causing interference to the Keyless Access system. See *Remote Key Operation* ⇨ *9*.

### Stopping the Engine/Off (No Indicator Lights)

When the vehicle is stopped, press ENGINE START/STOP once to turn the engine off.

To shift out of P (Park), the vehicle must be on and the brake pedal must be applied.

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)* ⇨ *170*

If the vehicle is not in P (Park), the ignition will return to accessory mode and display the message SHIFT TO PARK in the Driver Information Center (DIC).

When the vehicle is shifted into P (Park), the ignition system will turn off.

The vehicle may have an electric steering column lock. The lock is activated when the vehicle is turned off and either front door is opened. A sound may be heard as the lock actuates or releases. The steering column lock may not release with the wheels turned off center. If this happens, the vehicle may not start. Move the steering wheel from left to right while attempting to start the vehicle. If this does not work, the vehicle needs service.

Do not turn the engine off when the vehicle is moving. This will cause a loss of power assist in the brake and steering systems and disable the airbags.

If the vehicle must be turned 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. Shift to P (Park) and turn the ignition off.
4. Set the electric parking brake. See *Electric Parking Brake* ⇨ *176*

**⚠ Warning**

Turning off the vehicle while moving may cause loss of power assist in the brake and steering systems and disable the airbags. While driving, only shut the vehicle off in an emergency.

If the vehicle cannot be pulled over and must be turned off while driving, press and hold ENGINE START/ STOP for longer than two seconds, or press twice in five seconds.

### Accessory Mode (Amber Indicator Light)

This mode allows you to use some electrical accessories when the engine is off.

With the ignition off, pressing the button one time without the brake pedal applied will place the ignition system in accessory mode.

The ignition will switch from accessory to OFF after five 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 the button 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. See *Starting the Engine* ⇨ *167*. The ignition will then remain on.

### Service Mode

This power mode is available for service and diagnostics, and to verify the proper operation of the malfunction indicator lamp as may be required for emission inspection purposes. With the vehicle off and the brake pedal not applied, pressing and holding the button for more than five seconds will place the vehicle in Service Mode. The instruments and audio systems will operate when the vehicle is on, but the vehicle will not be able to be driven. The engine will not start in Service Mode. Press the button again to turn the vehicle off.

## Starting the Engine

Move the shift lever to P (Park) or N (Neutral). The engine will not start in any other position. 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* ⇨ *218*.

1. The remote key must be in the vehicle. Press ENGINE START/STOPwith the brake pedal applied. When the engine begins cranking, let go of the button.

   The idle speed will go down as the engine gets warm. Do not race the engine immediately after starting it.

   If the remote key is not in the vehicle, if there is interference, or if the remote key battery is low, a Driver Information Center (DIC) will display a message. See *Remote Key Operation* ⇨ *9*

**Caution**

Cranking the engine for long periods of time, by returning the ignition to the START position immediately after cranking

(Continued)

**Caution (Continued)**

has ended, can overheat and damage the cranking motor, and drain the battery. Wait at least 15 seconds between each try, to let the cranking motor cool down.

2. If the engine does not start after five to 10 seconds, especially in very cold weather (below −18 °C or 0 °F), it could be flooded with too much gasoline. Try pushing the accelerator pedal all the way to the floor and holding it there as you press ENGINE START/ STOP. Wait at least 15 seconds between each try, to allow the cranking motor to cool down. When the engine starts, release the accelerator. If the vehicle starts briefly but then stops again, do the same thing. This clears the extra gasoline from the engine. Do not race the engine immediately after starting it. Operate the engine and transmission gently until the oil warms up and lubricates all moving parts.

## Stop/Start System

The Stop/Start system shuts off the engine to help conserve fuel. The system is designed to manage 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

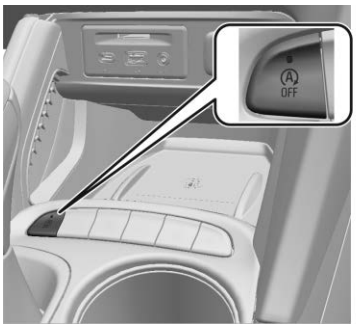
When the brakes are applied and the vehicle is at a complete stop, the engine may turn off. When stopped, the tachometer displays AUTO STOP. See *Tachometer* ⇨ *100*. When the brake pedal is released or the accelerator pedal is pressed, the engine will restart.

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 restarts may occur because:

- The climate control settings require the engine to be running to cool or heat the vehicle interior.
- The vehicle battery needs to charge.
- The vehicle battery has recently been disconnected.
- Minimum vehicle speed has not been reached since the last Auto Stop.
- The accelerator pedal is pressed.
- The engine or transmission is not at the required operating temperature.
- The outside temperature is not in the required operating range.
- The vehicle transmission is shifted out of D (Drive) to any gear other than P (Park).
- Certain driver modes have been selected.
- The vehicle is on a steep hill or grade.
- The driver door has been opened or driver seat belt has been unbuckled.
- The hood has been opened.
- The Auto Stop has reached the maximum allowed time.

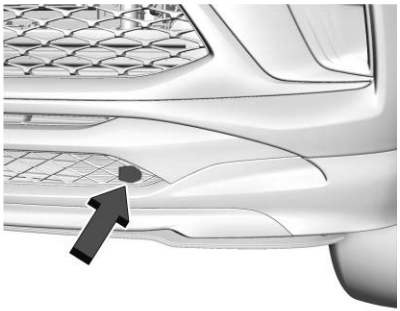
### Auto Stop Disable Switch




The automatic engine stop/start feature can be disabled and enabled by pressing the switch with the A OFF symbol. Auto Stop is enabled each time you start the vehicle.

When the indicator above A OFF is illuminated, the system is disabled.

## Engine Heater



**⚠ 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.

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 coolant heater operation at temperatures above −18 °C (0 °F).

**To Use the Engine Heater**

1. Turn off the engine.
2. Remove the heater cord from the rear compartment.
3. Check the heater cord for damage. If it is damaged, do not use it. See your dealer for a replacement.
4. Plug the cord into the receptacle in the front fascia.
5. Plug the other end of the cord 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.

(Continued)

**Warning (Continued)**

- 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.
- 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 hood 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.

The length of time the heater should remain plugged in depends on several factors, including where you park your vehicle. See your local dealer for advice.

## Retained Accessory Power (RAP)

When the vehicle 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 vehicle is on or in accessory mode:

- 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 Outlet
- Audio System
- OnStar System

## Shifting Into Park

**Warning**

It can be dangerous to get out of the vehicle if the shift lever is not fully in P (Park) with the parking brake firmly set. The vehicle can roll. 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, use the steps that follow. If you are pulling a trailer, see *Driving Characteristics and Towing Tips* ⇨ *210*.

To shift into P (Park):

1. Hold the brake pedal down and set the parking brake. See *Electric Parking Brake* ⇨ *176*
2. Hold the button on the shift lever and push the lever toward the front of the vehicle into P (Park).
3. Turn the vehicle off.

### 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 set. 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 set the parking brake and shift to P (Park). See *Shifting Into Park* ⇨ *171*. If you are towing a trailer, see *Driving Characteristics and Towing Tips* ⇨ *210*.

If you have to leave the vehicle with the engine running, the vehicle must be in P (Park) and the parking brake set.

Release the button and check that the shift lever cannot be moved out of P (Park).

### Torque Lock

Torque lock is when the weight of the vehicle puts too much force on the parking pawl in the transmission. This happens when parking on a hill and shifting the transmission into P (Park) is not done properly and then it is difficult to shift out of P (Park). To prevent torque lock, set the parking brake and then shift into P (Park). To find out how, see *Shifting Into Park* ⇨ *171* listed previously.

If torque lock does occur, the vehicle may need to be pushed uphill by another vehicle to relieve the parking pawl pressure, so you can shift out of P (Park).

## Shifting out of Park

To shift out of P (Park):

1. Apply the brake pedal.
2. Turn the vehicle on.
3. Press the shift lever button.
4. Move the shift lever.

If you still are unable to shift out of P (Park):

1. Fully release the shift lever button.
2. Hold the brake pedal down and press the shift lever button again.

3. Move the shift lever.

If equipped, the Buckle to Drive feature may prevent shifting from P (Park). See *Buckle To Drive* ⇨ *48*.

If you still cannot move the shift lever from P (Park), 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* ⇨ *171* and *Engine Exhaust* ⇨ *172*.

If the vehicle is left parked and running with the remote key outside the vehicle, it will continue to run for up to 20 minutes.

If the vehicle is left parked and running with the remote key inside the vehicle, it will continue to run for up to 60 minutes.

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 tail pipes).
- The exhaust smells or sounds strange or different.

(Continued)

**Warning (Continued)**

- The exhaust system leaks due to corrosion or damage.
- The vehicle exhaust system has been modified, damaged, or improperly repaired.
- 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.

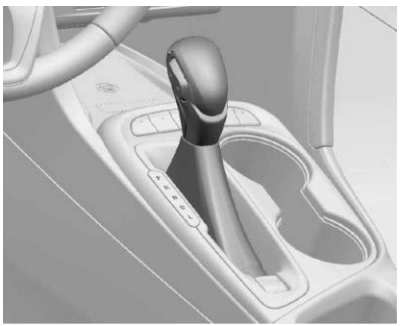
## Running the Vehicle While Parked

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* ⇨ *171* and *Engine Exhaust* ⇨ *172*.

If parking on a hill and pulling a trailer, see *Driving Characteristics and Towing Tips* ⇨ *210*.

## Automatic Transmission



**P :** This position locks the front wheels. Use P (Park) when starting the engine because the vehicle cannot move easily.

**⚠ Warning**

It is dangerous to get out of the vehicle if the transmission is not in P (Park) with the parking brake set. The vehicle can roll.

Do not leave the vehicle when the engine is running. If the engine has been left running, the vehicle can move suddenly. You or others could be injured. To be sure the vehicle will not move, even when on fairly level ground, always set the parking brake and place the transmission into P (Park). See *Shifting Into Park* ⇨ *171* and *Driving Characteristics and Towing Tips* ⇨ *210*.

The vehicle has an automatic transmission shift lock control system. You must fully apply the regular brake first and then press the shift lever button before shifting from P (Park) when the ignition is on. If you cannot shift out of P (Park), ease pressure on the shift lever, then push the shift lever all the way into P (Park) as you maintain brake application. Then press the shift lever button and move the shift lever into another gear. See *Shifting out of Park* ⇨ *171*

**R :** Use this gear to back up.

**Caution**

Shifting to R (Reverse) while the vehicle is moving forward could damage the transmission. The repairs would not be covered by the vehicle warranty. Shift to R (Reverse) only after the vehicle is stopped.

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* ⇨ *161*

**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.

**Caution**

A transmission hot message may display if the automatic transmission fluid is too hot. Driving under this condition can damage the vehicle. Stop and idle the engine to cool the automatic transmission fluid. This message clears when the transmission fluid has cooled sufficiently.

**D :** This position is for normal driving. If more power is needed for passing, press the accelerator pedal down.

**Caution**

If the vehicle does not shift gears, the transmission could be damaged. Have the vehicle serviced right away.

**Caution**

Spinning the tires 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 tires. When stopping on a hill, use the brakes to hold the vehicle in place.

**L :** Allows the driver to select the range of gear positions. See *Manual Mode* ⇨ *174*.

### Operating Modes

The transmission may operate in a lower gear than normal to improve vehicle performance. The engine speed may be higher and there may be an increase in noise during the following conditions:

- When climbing a grade.
- When driving downhill.
- When driving in hot temperatures or at high altitude.

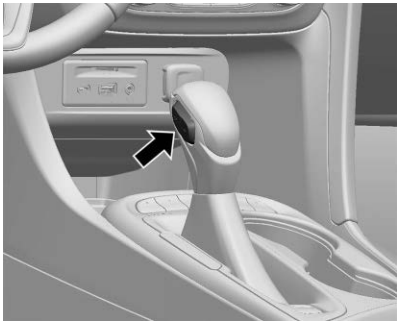
## Manual Mode

### Electronic Range Select (ERS) Mode

ERS or manual mode allows for the selection of the range of gear positions. Use this mode when driving downhill or towing a trailer to limit the top gear and vehicle speed. The shift position indicator within the Driver Information Center (DIC) will display a number next to the L indicating the highest available gear under manual mode and the driving conditions when manual mode was selected.

To use this feature:

1. Move the shift lever to L (Manual Mode).



2. Press the plus/minus button on the shift lever, to increase or decrease the gear range available.

When shifting to L (Manual Mode), the transmission will shift to a preset lower gear range. For this preset range, the highest gear available is displayed next to the L in the DIC. See *Driver Information Center (DIC)* ⇨ *112* for more information. All gears below that number are available to use. For example, when 4 (Fourth) is shown next to the L, 1 (First) through 4 (Fourth) gears are shifted automatically. To shift to 5 (Fifth) gear, press the + (Plus) button or shift into D (Drive).

L (Manual Mode) will prevent shifting to a lower gear range if the engine speed is too high. If vehicle speed is not reduced within the time allowed, the lower gear range shift will not be completed. Slow the vehicle, then press the – (Minus) button to the desired lower gear range.

While using the ERS, cruise control can be used.

# Drive Systems

## All-Wheel Drive

Vehicles with this feature can operate in All-Wheel Drive (AWD) Mode.

The AWD system delivers power to all four wheels and the system adjusts as needed to improve traction.




Press the AWD button on the center console to activate the system. The AWD light will flash briefly while the system is engaging and stay lit to indicate AWD is active. Press the button again to disable the system. The light will flash briefly while the system disables and then stay off.

The AWD Mode will stay selected until the mode is changed.

When operated in two-wheel drive, the vehicle will deliver power to the front wheels only and may provide better fuel economy.

When using a compact spare tire on an AWD vehicle, the system automatically detects the compact spare and reduces AWD performance to protect the system. To restore full AWD

operation and prevent excessive wear on the system, replace the compact spare with a full-size tire as soon as possible. See *Compact Spare Tire* ⇨ *276*.

# 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 pressed 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* ⇨ *106*.

ABS does not change the time needed to get a 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 that vehicle 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 Electric Parking Brake (EPB) can always be applied, even if the vehicle is off. In case of insufficient electrical power, the EPB cannot be applied or released. To prevent draining the battery, avoid unnecessary repeated cycles of the EPB.

The system has a red parking brake status light and an amber service parking brake warning light. See *Electric Parking Brake Light* ⇨ *106* and *Service Electric Parking Brake Light* ⇨ *106*. There are also parking brake-related Driver Information Center (DIC) messages.

Before leaving the vehicle, check the red parking brake status 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. Pull the EPB switch momentarily.

The red parking brake status light will flash and then stay on once the EPB is fully applied. If the red parking brake status light flashes continuously, 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 red parking brake status light is flashing. See your dealer.

If the amber service parking brake warning light is on, pull the EPB switch. Continue to hold the switch until the red parking brake status light remains on. If the amber service parking brake warning light is on, see your dealer.

If the EPB is applied while the vehicle is moving, the vehicle will decelerate as long as the switch is pulled. If the switch is pulled 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, or at the request of other safety functions that utilize the EPB.

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 red parking brake status light is off.

If the amber service parking brake warning light is on, release the EPB by pressing and holding the EPB switch. Continue to hold the switch until the red parking brake status 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.

If you are towing a trailer and parking on a hill, see *Driving Characteristics and Towing Tips* ⇨ *210*.

### 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 warnings provided by this system. Failure to use proper care when driving may result in injury, death, or vehicle damage. See *Defensive Driving* ⇨ *156*.

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. HSA brake hold duration may be selectable. Standard Hold automatically releases the brakes after a few seconds. Extended Hold applies the Electric Parking Brake if the accelerator pedal is not applied within a few minutes. If hold duration is selectable, see "Extended Hill Start Assist" in Settings > Vehicle > Collision / Detection Systems. 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), an electronic stability control system. These systems help limit wheel slip 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. When this happens, TCS applies the brakes to the spinning wheels and reduces engine power to limit wheel spin.

StabiliTrak/ESC activates when the vehicle senses a difference between the intended path and the direction the vehicle is actually traveling. StabiliTrak/ESC selectively applies braking pressure to any one of the vehicle wheel brakes to assist the driver in keeping the vehicle on the intended path.

If cruise control is being used and TCS or StabiliTrak/ESC begins to limit wheel spin, cruise control will disengage. Cruise control may be turned back on when road conditions allow.

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* ⇨ *161* 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 displays in the Driver Information Center (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:

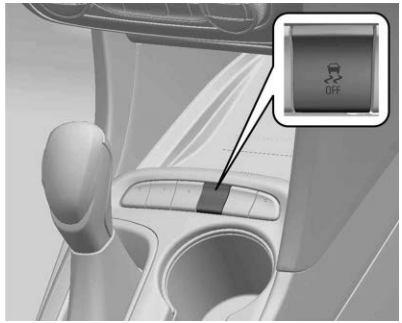
1. Stop the vehicle.
2. Turn the engine off and wait 15 seconds.
3. Start the engine.

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. |

StabiliTrak/ESC will automatically turn on if the vehicle exceeds approximately 56 km/h (35 mph) and cannot be turned off again until speed is reduced. Traction control will remain off.




To turn off only TCS, press and release . The traction off light illuminates in the instrument cluster.

To turn TCS on again, press and release . The traction off light in the instrument cluster will turn off.

If TCS is limiting wheel spin when is pressed, the system will not turn off until the wheels stop spinning.

To turn off both TCS and StabiliTrak/ESC, press and hold until the traction off light and StabiliTrak/ESC OFF light illuminate and stay on in the instrument cluster.

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.

Adding accessories can affect the vehicle performance. See *Accessories and Modifications* ⇨ *220*

## Cruise Control

Cruise control, if equipped, allows the vehicle to maintain a speed of about 40 km/h (25 mph) or more without active acceleration. Cruise control does not work at speeds below 40 km/h (25 mph).

**⚠ 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 tire traction can cause excessive wheel slip, and you could lose control. Do not use cruise control on slippery roads.

Cruise control will disengage if:

- The Traction Control System (TCS) or StabiliTrak/Electronic Stability Control (ESC) system begins to limit wheel spin. See *Traction Control/Electronic Stability Control* ⇨ *178*.
- TCS or StabiliTrak/ESC is turned off.
- A collision alert occurs. See *Forward Collision Alert (FCA) System* ⇨ *197*.
- The brakes are applied.



**:** Press to turn cruise control on and off. A white indicator light appears in the instrument cluster when cruise control is turned on.

**+RES :** If there is a set speed in memory, briefly press up and release to resume to that speed or press and hold to accelerate. If cruise control is already engaged, use to increase vehicle speed.

**−SET :** Briefly press down and release to select the set speed and engage cruise control. If cruise control is already engaged, use to decrease vehicle speed.

**:** Press to disengage cruise control without erasing the set speed from memory.

### Setting Cruise Control

If cruise control is on when not in use, −SET or +RES could be pressed and engage cruise control when not desired. Keep cruise control off when it is not being used. Press to turn off cruise control.

To choose the set speed and engage cruise control:

1. Press .
2. Accelerate to the desired speed.
3. Press and release the thumbwheel down to −SET. The set speed is displayed briefly in the instrument cluster.

4. Remove your foot from the accelerator pedal.

The cruise control indicator on the instrument cluster turns green after cruise control has been set to the desired speed. See *Instrument Cluster* ⇨ *99*.

**Resuming a Set Speed**

If cruise control is engaged and then the brakes are applied or is pressed, cruise control is disengaged without erasing the set speed from memory.

Once the vehicle speed reaches about 40 km/h (25 mph) or more, press +RES. The vehicle returns to the previous set speed.

**Increasing Speed While Using Cruise Control**

If cruise control is already engaged:

- Press and hold +RES up until the vehicle accelerates to the desired speed, then release it.
- To increase the set speed in small increments, briefly press +RES up. For each press, the vehicle goes about 1 km/h (1 mph) faster.

The speedometer reading can be displayed in either English or metric units. See *Instrument Cluster* ⇨ *99*. The increment value used depends on the units displayed.

**Reducing Speed While Using Cruise Control**

If cruise control is already engaged:

- Press and hold −SET down until the desired lower speed is reached, then release it.
- To decrease the set speed in small increments, briefly press −SET down. For each press, the vehicle goes about 1 km/h (1 mph) slower.

The speedometer reading can be displayed in either English or metric units. See *Instrument Cluster* ⇨ *99*. The increment value used depends on the units displayed.

**Passing Another Vehicle While Using Cruise Control**

To pass another vehicle when cruise control is engaged, use the accelerator pedal to increase the vehicle speed. When you take your foot off the accelerator pedal, the vehicle will slow down to the previous set cruise speed. While pressing the accelerator pedal or shortly following the release to override cruise control, briefly pressing −SET will result in cruise control set to the current vehicle speed.

**Using Cruise Control on Hills**

How well cruise control works on hills depends upon the vehicle speed, load, and the steepness of the hills. When going up steep hills, you might have to step on the accelerator pedal to maintain the vehicle speed. When going downhill, you might have to brake or shift to a lower gear to keep your speed down. If the brake pedal is applied, cruise control will disengage.

**Ending Cruise Control**

There are four ways to end cruise control:

- Lightly apply the brake pedal.
- Press .
- Press .
- Shift the transmission to N (Neutral).

**Erasing Speed Memory**

The cruise control set speed is erased from memory if is pressed or if the vehicle is turned off.

## Adaptive Cruise Control (Camera)

If equipped, Adaptive Cruise Control (ACC) allows the cruise control set speed and following gap to be selected. 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 a windshield mounted front camera sensor.

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 the vehicle speed when the Traction Control System (TCS) or StabiliTrak/ Electronic Stability Control (ESC) system activates, ACC may automatically disengage. See *Traction Control/Electronic Stability Control* ⇨ *178*. When road conditions allow ACC to be safely used, ACC can be turned back on. Disabling the TCS or StabiliTrak/ ESC system will disengage and prevent engagement of ACC.

ACC can reduce the need for you to frequently brake and accelerate, especially when used on expressways, freeways, and interstate highways. When used on other roads, you may need to take over the control of braking or acceleration more often.

**⚠ 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" later 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* ⇨ *156*

**⚠ Warning**

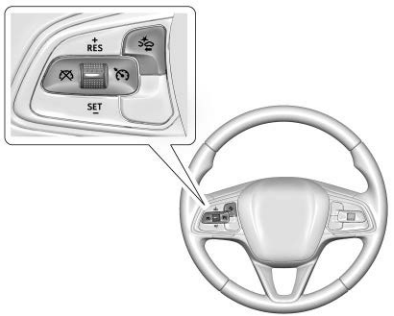
ACC will not detect or brake for children, pedestrians, animals, or other objects.

Do not use ACC when:

(Continued)

**Warning (Continued)**

- On winding and hilly roads or when the camera sensor is blocked by snow, ice, or dirt. The system may not detect a vehicle ahead. Keep the windshield and headlamps clean.
- When visibility is poor due to rain, snow, fog, dirt, insect residue, or dust; when other foreign objects obscure the camera's view; or when the vehicle in front or oncoming traffic causes additional environmental obstructions, such as road spray. ACC performance is limited under these conditions.
- On slippery roads where fast changes in tire traction can cause excessive wheel slip.
- With extremely heavy cargo loaded in the cargo area or rear seat.
- When towing a trailer.




: Press to turn the system on or off. The indicator turns white on the instrument cluster when ACC is turned on.

+RES : Press the control up briefly to resume the previous set speed or to increase vehicle speed if ACC is already activated. To increase speed by about 1 km/h (1 mph), press +RES up briefly. To increase speed to the next 5 km/h (5 mph) mark on the speedometer, hold +RES.

SET– : Press the control down briefly to set the speed and activate ACC or to decrease vehicle speed if ACC is already activated. To decrease speed by about 1 km/h (1 mph), press SET– down briefly. To decrease speed to the next 5 km/h (5 mph) mark on the speedometer, hold SET–.

: Press to disengage ACC without erasing the selected set speed.

: Press to select a following gap setting for ACC of Far, Medium, or Near.

The speedometer reading can be displayed in either English or metric units. See *Instrument Cluster* ⇨ *99*. The increment value used depends on the units displayed.

### 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* ⇨ *115*.



**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.

It is recommended to switch from ACC to regular cruise control only, when there are no vehicles ahead of your vehicle.

**⚠ 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 ACC when not desired. Keep off when cruise is not being used.

Select the set speed desired for ACC. This is the vehicle speed when no vehicle is detected in its path.

While the vehicle is moving, ACC will not set at a speed less than 5 km/h (3 mph), although it can be resumed.

The minimum allowable set speed is 25 km/h (15 mph).

To set ACC while moving:

1. Press .
2. Get up to the desired speed.
3. Press SET– down and release.
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 and the brake pedal is applied.



The ACC indicator displays on the instrument cluster. When ACC is turned on, the indicator will be lit white.

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, press +RES up briefly.

- If the vehicle is moving more than 5 km/h (3 mph), it returns to the previous set speed.
- If the vehicle is stopped with the brake pedal applied, press +RES up and release the brake pedal. ACC will hold the vehicle until +RES or the accelerator pedal is pressed.

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, the vehicle speed will increase to the set speed under the following conditions:

- There is no vehicle ahead.
- The vehicle ahead is beyond the selected following gap.
- The vehicle speed is not being limited because of a sharp turn.

### 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. Briefly press down and release SET– and release 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. While overridden, the ACC indicator will turn blue on the instrument cluster.

- Press and hold +RES up until the desired set speed is displayed, then release it.
- To increase vehicle speed in smaller increments, press +RES up briefly. For each press, the vehicle goes about 1 km/h (1 mph) faster.
- To increase vehicle speed in larger increments, hold +RES up. While holding +RES, the vehicle speed increases to the next 5 km/h (5 mph) step, then continues to increase by 5 km/h (5 mph) at a time.

The set speed can also be increased while the vehicle is stopped.

- If stopped with the brake pedal applied, press +RES up until the desired set speed is displayed.
- If ACC is holding the vehicle at a stop and there is another vehicle directly ahead, pressing +RES up will increase the set speed.
- Pressing +RES up when there is no longer a vehicle ahead or the vehicle ahead is pulling away and the brake is not applied 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.

### 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 press SET– down. The vehicle will now cruise at the lower speed.
- Press and hold SET– down until the desired lower speed is reached, then release it.
- To decrease the vehicle speed in smaller increments, press SET– down briefly. For each press, the vehicle goes about 1 km/h (1 mph) slower.
- To decrease the vehicle speed in larger increments, hold SET– down. While holding SET–, the vehicle speed decreases to the next 5 km/h (5 mph) step, then continues to decrease by 5 km/h (5 mph) at a time.

The set speed can also be decreased while the vehicle is stopped.

- If stopped with the brake applied, press or hold SET– down until the desired set speed is displayed.

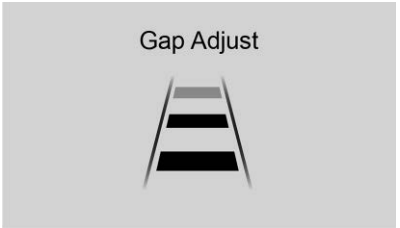
### Selecting the Follow Distance Gap

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.




**Far Gap Setting**




**Medium Gap Setting**



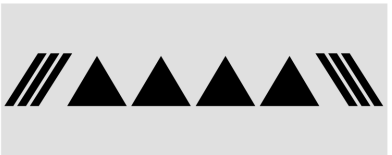

**Near Gap Setting**

When pressed, the current gap setting displays briefly on the instrument cluster. 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* ⇨ *197*.

### Alerting the Driver



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, the red collision alert symbol will flash on the windshield. Eight beeps will sound from the front.

See *Defensive Driving* ⇨ *156*.

### Approaching and Following a Vehicle



The vehicle ahead indicator is in the instrument cluster. It 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 a detected vehicle ahead at the selected following gap. The vehicle speed increases or decreases to follow a detected vehicle in front of your vehicle. When that vehicle is traveling slower than your vehicle 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.

### Passing a Vehicle While Using ACC

If the set speed is high enough, and the left turn signal is used to pass a vehicle ahead in the selected following gap, ACC may assist by gradually accelerating the vehicle prior to the lane change.

**⚠ Warning**

When using ACC to pass a vehicle or perform a lane change, the following distance to the vehicle being passed may be reduced. ACC may not apply sufficient acceleration or braking when passing a vehicle or performing a lane change. Always be ready to manually accelerate or brake to complete the pass or lane change.

### 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

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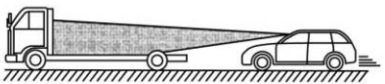
**Warning (Continued)**

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 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.

### Irregular Objects Affecting ACC

ACC may have difficulty detecting the following objects:

- Vehicles in front of your vehicle that have a rear aspect that is low, small, or irregular
- An empty truck or trailer that has no cargo in the cargo bed
- Vehicles with cargo extending from the back end
- Non-standard shaped vehicles, such as vehicle transport, vehicles with a side car fitted, or horse carriages
- Vehicles that are low to the road surface
- Objects that are close to the front of your vehicle
- Vehicles on which extremely heavy cargo is loaded in the cargo area or rear seat



### ACC Automatically Disengages

ACC may automatically disengage and the driver will need to manually apply the brakes to slow the vehicle if:

- The front camera is blocked or visibility is reduced.
- The Traction Control System (TCS) or StabiliTrak/ESC system has activated or been disabled.
- There is a fault in the system.
- A DIC message displays to indicate that ACC is temporarily unavailable.

The ACC indicator will turn white when ACC is no longer active.

In some cases, when ACC is temporarily unavailable, regular cruise control may be used. See “Switching Between ACC and Regular

Cruise Control" in this section. Always consider driving conditions before using either cruise control system.

### Notification to Resume ACC

ACC will maintain a follow gap behind a detected vehicle and slow your vehicle to a stop behind that vehicle.

When the vehicle ahead drives away, ACC resumes automatically if the stop was brief. If necessary, press +RES up or the accelerator pedal to resume ACC. If stopped for more than two minutes or if the driver door is opened and the driver seat belt is unbuckled, the ACC automatically applies the Electric Parking Brake (EPB) to hold the vehicle. The EPB status light will turn on. See *Electric Parking Brake* ⇨ *176*. To release the EPB, press the accelerator pedal.

If the stopped vehicle ahead has driven away and ACC has not resumed, the vehicle ahead indicator will flash and three beeps will sound as a reminder to check traffic ahead before proceeding.

A DIC warning message may display indicating to shift to P (Park) before exiting the vehicle. See *Vehicle Messages* ⇨ *115*.

**⚠ Warning**

If ACC has stopped the vehicle, and if ACC is disengaged, turned off, or canceled, 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, indicating ACC 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.

### Curves in the Road

**⚠ Warning**

On curves, 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 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 curves, 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

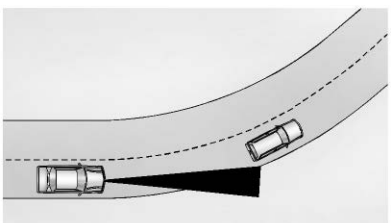
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**Warning (Continued)**

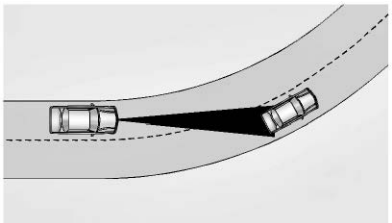
into a vehicle ahead of you, or lose control of your vehicle. Give extra attention in curves and be ready to use the brakes if necessary. Select an appropriate speed while driving in curves.

ACC may operate differently in a sharp curve. It may reduce the vehicle speed if the curve is too sharp.

ACC automatically slows the vehicle down while navigating the curve and may increase speed out of the curve, but will not exceed the set speed.



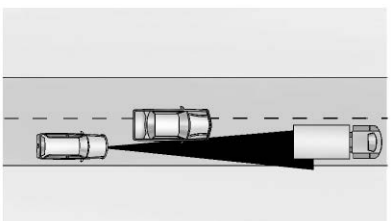
When following a vehicle and entering a curve, ACC may not detect the vehicle ahead and accelerate to the set speed. When this happens, the vehicle ahead indicator will not appear.



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 or stationary objects when entering or exiting a curve. 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.

### Objects Not Directly in Front of Your Vehicle

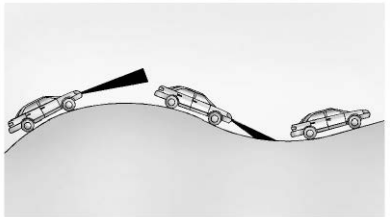
The detection of objects in front of the vehicle may not be possible if:

- The vehicle or object ahead is not within your lane.
- The vehicle ahead is shifted, not centered, or is shifted to one side of the lane.

### Driving in Narrow Lanes

Vehicles in adjacent traffic lanes or roadside objects may be incorrectly detected when located along the roadway.

### 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.

### Disengaging ACC

There are three ways to disengage ACC:

- Step lightly on the brake pedal.
- Press .
- Press .

### Erasing Speed Memory

The ACC set speed is erased from memory if is pressed or if the ignition is turned off.

### Weather Conditions Affecting ACC

If the interior temperature is extremely high, the instrument cluster may indicate that ACC is temporarily unavailable. This can be caused by extreme hot weather conditions with direct sunlight on the front camera. ACC will return to normal operation once the cabin temperature is lower.

Conditions that are associated with low visibility, such as fog, rain, snow, or road spray, may limit ACC performance. Water droplets from rain or snow that remain on the windshield may also limit ACC's ability to detect objects.

**⚠ Warning**

Camera visibility may be limited and the ACC system may not work properly if the windshield is not clear. Do not use ACC if moisture is present on the inside of the windshield or the windshield washer is used in cold weather. Turn on the front defroster and make sure the windshield is clear before using ACC. Before driving, check that the windshield wipers are in good condition and replace them if worn.

### Lighting Conditions Affecting ACC

The ACC front camera can be affected by poor lighting conditions, and ACC may have limited performance when:

- There are changes in brightness, such as entering and exiting tunnels, bridges, and overpasses.
- Low sun angles cause the camera to not detect objects, or it is more difficult to detect objects in the same traffic lane.
- Lighting is poor in the evening or early morning
- There are multiple changes in brightness or shadows along the vehicle roadway.
- In a tunnel without the headlamps on, or in a tunnel when there is a vehicle in front that does not have its taillamps on.
- Subjected to strong light from opposing lane traffic in the front of the vehicle, such as high-beam headlamps from oncoming traffic.

### Accessory Installations and Vehicle Modifications

Do not install or place any object around the front camera windshield area that would obstruct the front camera view.

Do not install objects on top of the vehicle that overhang and obstruct the front camera, such as a canoe, kayak, or other items that can be transported on a roof rack system. See *Roof Rack System* ⇨ *88*.

Do not modify the hood, headlamps, or fog lamps, as this may limit the camera's ability to detect an object.

### Cleaning the Sensing System

The camera sensor on the windshield behind the rearview mirror can become blocked by snow, ice, dirt, mud, or debris. This area needs to be cleaned for ACC to operate properly.

The vehicle headlamps may need to be cleaned due to dirt, snow, or ice. Objects that are not illuminated correctly may be difficult to detect.

If ACC will not operate, regular cruise control may be available. See "Switching Between ACC and Regular Cruise Control" in this section. Always consider driving conditions before using either cruise control system.

For cleaning instructions, see "Washing the Vehicle" under *Exterior Care* ⇨ *283*.

## Advanced Driver Assistance Systems

This vehicle may have features that work together to help avoid crashes or reduce crash damage while driving, backing, 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* ⇨ *156*.

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 Alert**

Some driver assistance features alert the driver of obstacles by beeping. To view available settings for this feature, touch the Settings icon on the infotainment home page. Select "Vehicle" to display the list of available options and select "Comfort and Convenience".

**Cleaning**

Depending on vehicle options, keep these areas of the vehicle clean to ensure the best driver assistance feature performance. Driver Information Center (DIC) messages may display when the systems are unavailable or blocked.





- Front and rear bumpers and the area below the bumpers
- Front grille and headlamps
- Front camera lens in the front grille or near the front emblem
- Front side and rear side panels
- Outside of the windshield 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

**Radio Frequency**

This vehicle may be equipped with driver assistance systems that operate using radio frequency. See *Radio Frequency Statement* ⇨ *312*.

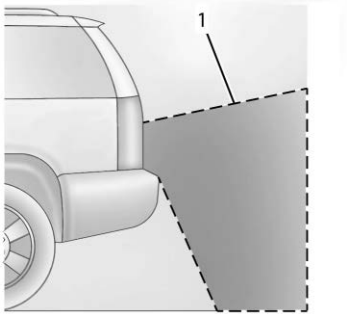
## Assistance Systems for Parking or Backing

If equipped, the Rear Vision Camera (RVC), Rear Park Assist (RPA), Front Park Assist (FPA), Surround Vision, Front Vision Camera, and Rear Cross Traffic Alert (RCTA) may help the driver park or avoid objects. Always check around the vehicle when parking or backing.

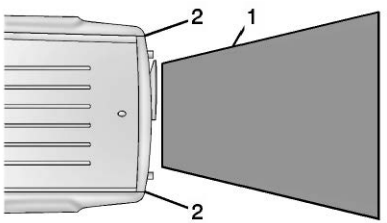
## Rear Vision Camera (RVC)

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 Home or Back on the infotainment display, shift into P (Park), or reach a vehicle speed of approximately 12 km/h (8 mph). Select Front or

Rear Camera to view the front or rear camera views. Select Guidance Lines on the camera screen to enable or disable the guidance lines.




1. View Displayed by the Rear Vision Camera




1. View Displayed by the Rear Vision 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 display to show that RPA or RCTA has detected an object. This triangle changes from amber to red and increases in size the closer the object.

**⚠ 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.

## Surround Vision System

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 license plate.

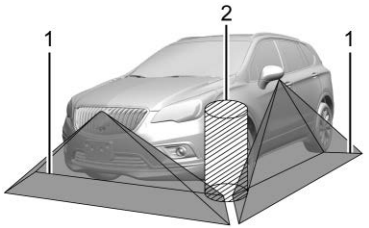
The Surround Vision system can be accessed by selecting CAMERA in the infotainment display or when the vehicle is shifted into R (Reverse). To return to the previous screen sooner, press any button on the infotainment system, shift into P (Park), or reach a vehicle speed of approximately 12 km/h (8 mph).

**⚠ 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.

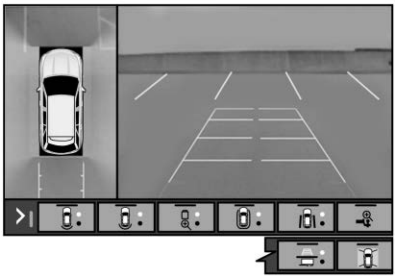



1. Views Displayed by the Surround Vision Cameras
2. Area Not Shown




1. Views Displayed by the Surround Vision Cameras
2. Area Not Shown

**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 back 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.

**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 are not available when Side Forward/ Rearward view is active.

**Guidance Lines :** Displays available guidelines. The horizontal markings represent distance from the vehicle.

**Top Down View :** Displays an image of the area surrounding the vehicle, along with other views in the infotainment display. Top Down can be enabled or disabled by pressing the Top Down View button multiple times.

## Park Assist

If equipped with Rear Park Assist (RPA) and Front Park Assist (FPA), as the vehicle moves at speeds of less than 8 km/h (5 mph) the sensors on the bumpers may detect objects up to 2.5 m (8 ft) behind the vehicle and 1.2 m (4 ft) in front of the vehicle within a zone 25 cm (10 in) 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.

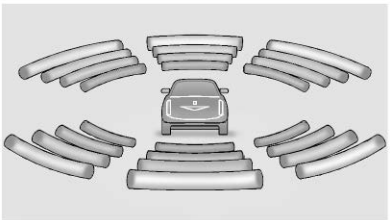
**⚠ Warning**

The Park Assist system does not detect children, pedestrians, bicyclists, 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

(Continued)

**Warning (Continued)**

Assist, always check the area around the vehicle and check all mirrors before moving forward or backing.



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 will change color from yellow, to amber, to red.

When an object is first detected in the rear, one beep will sound from the rear. 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. Beeps for FPA are higher pitched than for RPA.

### Turning the Features On or Off

Park Assist and RPA symbols can be turned on or off through vehicle settings. To view a list of available options from the infotainment home page, touch Settings > Vehicle > Collision Detection Systems.

Turn off RPA when towing a trailer.

## Automatic Parking Assist (APA)

If equipped, APA searches for and steers the vehicle into parallel and perpendicular parking spots. When using APA, you must still shift gears, 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 always detect objects in the parking space, objects that are not rigid (e.g. shrubs and chain-link fences), objects below the bumper, objects high off the ground (e.g. flatbed trucks), hanging objects, objects below ground level (e.g.

(Continued)

**Warning (Continued)**

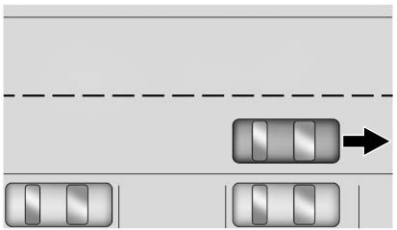
large potholes), or moving objects (e.g. pedestrians, cyclists, vehicles). Always verify that the parking space is appropriate for parking a vehicle. APA may not respond to changes in the parking space, such as movement of an adjacent vehicle, or a person or object entering the parking space. APA does not detect or avoid traffic that is behind or alongside of the vehicle. Always be prepared to stop the vehicle during the parking maneuver.

Press switch P on the center 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 centered 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 turn signal or, if available, change the side selection in the infotainment display.

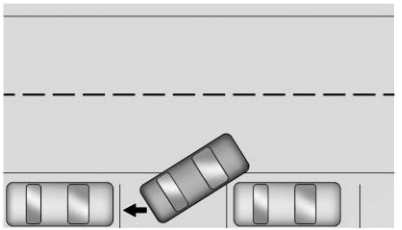
To switch the parking mode between parallel and perpendicular, touch icons on screen during the search process or, if available, change the parking mode in the infotainment display.



After completely passing a large enough 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 maneuvering 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 hands from the steering wheel. APA uses idle speed and braking to park. If idle speed is not sufficient, gently press the accelerator.

Check surroundings and be prepared to stop to avoid vehicles, pedestrians, or objects not detected by the system.

In case 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 maneuver.

A progress arrow displays the status of the parking maneuver. Depending on the space size, additional maneuvers may be required, and there will be additional instructions. When changing gears, allow the automatic steering to complete before continuing the parking maneuver. APA will beep and display a PARKING COMPLETE message. Apply the brakes and place 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 unbuckled 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 curves to calibrate.

## Rear Cross Traffic Alert (RCTA) System

If equipped, when the vehicle is shifted into R (Reverse), 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 side of the vehicle. When an object is detected, either three beeps sound from the left or right depending on the direction of the detected vehicle.

Use caution while backing up 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

RCTA can be turned on or off through vehicle personalization. To view available settings for this feature, touch the Settings icon on the infotainment home page. Select “Vehicle” to display the list of available options and select “Collision/Detection Systems”.

## 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 windshield and rapidly beeps. 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).

**⚠ Warning**

FCA is a warning system and does not apply the brakes. When approaching a slower-moving or stopped vehicle ahead too rapidly, 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, guardrails, bridges, construction barrels, or other objects. Be ready to take action and apply the brakes. See *Defensive Driving* ⇨ *156*.

FCA can be disabled through vehicle personalization. To view available settings for this feature, touch the Settings icon on the infotainment home page. Select "Vehicle" to display the list of available options and select "Collision/Detection Systems".

### 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 curves, highway 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**

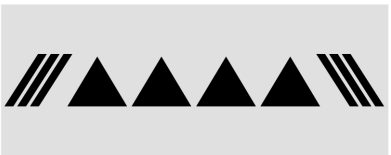
FCA does not provide a warning to help avoid a crash, unless it detects a vehicle. FCA may not detect a vehicle ahead if the FCA sensor is blocked by dirt, snow, or ice, or if the windshield is damaged. It may also not detect a vehicle on winding or hilly roads, or in conditions that can limit

(Continued)

**Warning (Continued)**

visibility such as fog, rain, or snow, or if the headlamps or windshield are not cleaned or in proper condition. Keep the windshield, headlamps, and FCA sensors clean and in good repair.

**Collision Alert**



When your vehicle approaches another detected vehicle too rapidly, the red FCA display will flash on the windshield.

Also, eight rapid high-pitched beeps will sound from the front. 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 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. 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 Center (DIC)* ⇨ *112*. The minimum following time is 0.5 seconds away. If there is no vehicle detected ahead, or the vehicle ahead is out of sensor range, dashes will be displayed.

### 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 windshield in front of the rearview mirror.
- Clean the entire front of the vehicle.
- Clean the headlamps.

## Automatic Emergency Braking (AEB)

The AEB system may help avoid or reduce the harm caused by a front-end crashes. AEB also includes Intelligent Brake Assist (IBA). When the system detects a vehicle ahead in your path that is traveling 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* ⇨ *197*.

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 crashes. 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 crash. If this happens, AEB may hold the vehicle at rest momentarily. A firm press the accelerator pedal will release the brake.

**⚠ 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 press 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.

AEB and IBA can be disabled through vehicle personalization. To view available settings for this feature, touch the Settings icon on the infotainment home page. Select “Vehicle” to display the list of available options and select “Collision/Detection Systems”.

**⚠ Warning**

Using AEB or IBA 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.

A system unavailable message may display if:

- The front of the vehicle or windshield 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 the harm caused by front-end crashes with nearby pedestrians when driving in a forward gear. FPB displays an amber indicator, , when a nearby pedestrian is detected ahead. The indicator may also be white depending on the equipped instrument cluster. See *Instrument Cluster* ⇨ *99*. When approaching a detected pedestrian too quickly, FPB provides a red flashing alert on the windshield and rapidly beeps. 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)* ⇨ *199*.

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 nighttime 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 nighttime conditions, fog, rain, or snow.
- If the FPB sensor is blocked by dirt, snow, or ice.
- If the headlamps or windshield are not cleaned or in proper condition.

Be ready to take action and apply the brakes. For more information, see *Defensive Driving* ⇨ *156*. Keep the windshield, headlamps, and FPB sensor clean and in good repair.

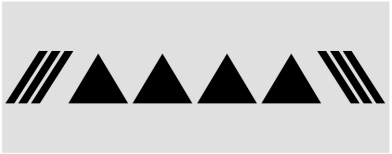
FPB can be set to Off, Alert, or Alert and Brake through vehicle personalization. To view available settings for this feature, touch the Settings icon on the infotainment home page. Select “Vehicle” to display the list of available options and select “Collision/ Detection Systems”.

### Detecting the Pedestrian Ahead



FPB alerts and automatic braking will not occur unless the FPB system detects a pedestrian. When a nearby pedestrian is detected in front of the vehicle, the pedestrian ahead indicator will display amber or white depending on the equipped instrument cluster. See *Instrument Cluster* ⇨ *99*.

### Front Pedestrian Alert



When the vehicle approaches a pedestrian ahead too rapidly, the red FPB alert display will flash on the windshield. Eight rapid high-pitched beeps will sound from the front. 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 personalization. To view available settings for this feature, touch the Settings icon on the infotainment home page. Select “Vehicle” to display the list of available options and select “Collision/Detection Systems”.

**⚠ 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 windshield in front of the rearview 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 turn signal 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.

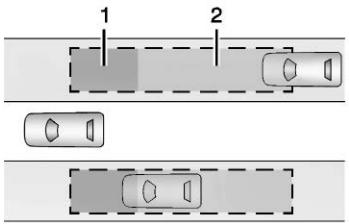
## Lane Change Alert (LCA)

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 mirror and will flash if the turn signal is on.

**⚠ Warning**

LCA does not alert the driver to vehicles outside of the system detection zones, pedestrians, 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 turn signals.

**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 70 m (230 ft) behind the vehicle.

### How the System Works

The LCA symbol lights up in the outside 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 turn signals.



**Left Outside Mirror Display**



**Right Outside 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 outside 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 turn signal is activated in the same direction as a detected vehicle, this display will flash as an extra warning not to change lanes.

LCA can be disabled. When you disable LCA, Side Blind Zone Alert is also disabled.To view available settings from the infotainment

screen, touch Settings > Vehicle > Collision/ Detection Systems. 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 highway road 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* ⇨ *283*. 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 light up 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.

### Radio Frequency Information

See *Radio Frequency Statement* ⇨ *312*.

## Lane Keep Assist (LKA)

**⚠ 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.
- Detect lane markings under poor weather or visibility conditions. This can occur if the windshield 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

(Continued)

**Warning (Continued)**

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 windshield, headlamps, and camera sensors clean and in good repair. Do not use LKA in bad weather conditions.

**⚠ 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.

If equipped, LKA may help avoid crashes due to unintentional lane departures. This system uses a camera to detect lane markings. The LKA system can be ready to assist above approximately 50 km/h (31 mph). LKA may assist by gently turning the steering wheel if the vehicle approaches a detected lane marking. It may also provide a Lane Departure Warning (LDW) alert if the vehicle unintentionally crosses a detected lane marking. LKA will not assist or alert if the turn signal is active in the direction of the lane departure, or if it detects that you are accelerating, braking, or actively steering. LKA can be overridden by turning the steering wheel. If the system detects you are steering intentionally across a lane marker, the LDW may not be given. Do not expect the LDW to occur when you are intentionally crossing a lane marker.

## How the System Works

The LKA camera sensor is on the windshield ahead of the rearview mirror.

To turn LKA on and off, press  on the center console.

LKA may not be available in extremely cold temperatures of less than approximately −30° F (−34° C).

When on,  is white and changes 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 turn signal in that direction. It may also provide an LDW alert by flashing  amber as the lane marking is crossed. Additionally, there may be three chimes 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, chime, or Driver Information Center (DIC) message 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 windshield may help.

A system unavailable message may display if the camera is blocked. The LKA system does not need service.

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

## Top Tier Fuel

GM recommends the use of TOP TIER Detergent Gasoline to keep the engine clean, reduce engine deposits, and maintain optimal vehicle performance. Look for the TOP TIER Logo or see www.toptiergas.com for a list of TOP TIER Detergent Gasoline marketers and applicable countries.

TOP TIER
Detergent Gasoline

CATEGORIE SUPERIEURE
Essences Détergentes

## Recommended Fuel (1.3L L3 Engine)




Regular unleaded gasoline meeting ASTM specification D4814 with a posted octane rating (R+M)/2 of 87 or greater is recommended. Do not use gasoline with a posted octane rating of less than 87, as this will result in reduced performance and driveability. If heavy knocking is heard when using gasoline rated at 87 or greater, the engine needs service.

Do not use any fuel labeled E85 or FlexFuel. Do not use gasoline with ethanol levels greater than 15% by volume.

## Recommended Fuel (1.2L L3 Engine)




If the vehicle has a yellow fuel cap or a yellow sticker on the fuel door, E85 or FlexFuel can be used. If the vehicle does not have a yellow fuel cap or yellow sticker, do not use gasoline with ethanol levels greater than 15% by volume. See *E85 or FlexFuel (1.2L L3 Engine)* ⇨ *207*.

Regular unleaded gasoline meeting ASTM specification D4814 with a posted octane rating (R+M)/2 of 87 or greater is recommended. Do not use gasoline with a posted octane rating of less than 87, as this will result in

reduced performance and driveability. If heavy knocking is heard when using gasoline rated at 87 or greater, the engine needs service.

## Prohibited Fuels

**Caution**

Do not use fuels with any of the following conditions; doing so may damage the vehicle and void its warranty:

- For vehicles that are not FlexFuel, fuel labeled greater than 15% ethanol by volume, such as mid-level ethanol blends (16–50% ethanol), E85, or FlexFuel.
- Fuel with any amount of methanol, methylal, ferrocene, and aniline. These fuels can corrode metal fuel system parts or damage plastic and rubber parts.
- Fuel containing metals such as methylcyclopentadienyl manganese tricarbonyl (MMT), which can damage the emissions control system and spark plugs.

(Continued)

**Caution (Continued)**

- Fuel with a posted octane rating of less than the recommended fuel. Using this fuel will lower fuel economy and performance, and may decrease the life of the emissions catalyst.

## Fuels in Foreign Countries

The U.S., Canada, and Mexico post fuel octane ratings in anti-knock index (AKI). For fuel not to use in a foreign country, see *Prohibited Fuels* ⇨ *207*.

## Fuel Additives

TOP TIER Detergent Gasoline is highly recommended for use with your vehicle. If your country does not have TOP TIER Detergent Gasoline, add ACDelco Fuel System Treatment Plus – Gasoline to the vehicle's gasoline fuel tank at every oil change or 15 000 km (9,000 mi), whichever occurs first. TOP TIER Detergent Gasoline and ACDelco Fuel System Treatment Plus – Gasoline will help keep your vehicle's engine fuel deposit free and performing optimally.

## E85 or FlexFuel (1.2L L3 Engine)

Vehicles with a yellow fuel cap can use either unleaded gasoline or fuel containing up to 85% ethanol (E85). All other vehicles should use only the unleaded gasoline as described in Recommended Fuel.

The use of E85or FlexFuel is encouraged when the vehicle is designed to use it. E85or FlexFuel is made from renewable sources.

To help locate fuel stations that carry E85 or FlexFuel, the U.S. Department of Energy has an alternative fuel website. See www.afdc.energy.gov/afdc/locator/stations.

E85 or FlexFuel should meet ASTM Specification D 5798 or CAN/CGSB–3.512 in Canada. Do not use the fuel if the ethanol content is greater than 85%. Fuel mixtures that do not meet ASTM or CGSB specifications can affect driveability and could cause the malfunction indicator lamp to come on.

The starting characteristics of E85 or FlexFuel make it unsuitable for use when temperatures fall below −18 °C (0 °F). Use gasoline or add gasoline to the E85 or FlexFuel.

Because E85 or FlexFuel has less energy per liter (gallon) than gasoline, the vehicle will need to be refilled more often. See *Filling the Tank* ⇨ *208*.

The only GM approved aftermarket additive is ACDelco Fuel System Treatment Plus-FlexFuel. Follow the instructions on the bottle for proper use. This product is available at your GM dealer.

**Caution**

Some additives are not compatible with E85 or FlexFuel and can harm the vehicle's fuel system. Use only additives approved by GM for E85 or FlexFuel vehicles. Damage caused by unapproved additives would not be covered by the vehicle warranty.

**Caution**

Do not use fuel containing methanol. It can corrode metal parts in the fuel system and also damage plastic and rubber parts. That damage would not be covered under the vehicle warranty.

To help keep the engine running efficiently, fill the tank with gasoline, up to E15, after filling the tank with E85 one or two times.

## Filling the Tank

An arrow on the fuel gauge indicates which side of the vehicle the fuel door is on. See *Fuel Gauge* ⇨ *100*.

**⚠ Warning**

Fuel vapors and fuel fires burn violently and can cause injury or death.

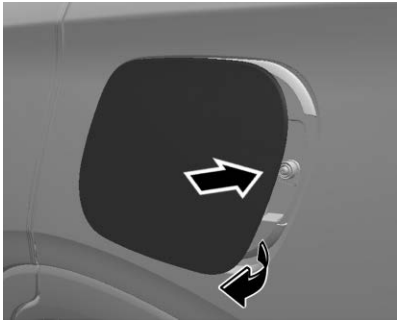
Follow these guidelines to help avoid injuries to you and others:

- Read and follow all the instructions on the fuel pump island.
- Turn off the engine when refueling.
- Keep sparks, flames, and smoking materials away from fuel.
- Do not leave the fuel pump unattended.
- Avoid using electronic devices while refueling.

(Continued)

**Warning (Continued)**

- 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 fill nozzle is inserted too quickly. This spray can happen if the tank is nearly full, and is more likely in hot weather. Insert the fill nozzle slowly and wait for any hiss noise to stop before beginning to flow fuel.



To open the fuel door, push and release the rearward center edge of the door.

The capless refueling system does not have a fuel cap. Fully insert and latch the fill nozzle, then begin fueling.

**⚠ 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 fires.

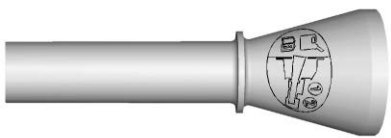
Be careful not to spill fuel. Wait five seconds after you have finished pumping before removing the fill nozzle. Clean fuel from painted surfaces as soon as possible. See *Exterior Care* ⇨ *283*. Push the fuel door closed until it latches.

**⚠ Warning**

If a fire starts while you are refueling, 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.

**Filling the Tank with a Portable Fuel Container**

If the vehicle runs out of fuel and must be filled from a portable fuel container:



1. Locate the capless funnel adapter from the rear cargo area under the load floor tray.
2. Insert and latch the funnel into the capless fuel system.

**⚠ Warning**

Attempting to refuel from a portable fuel container without using the funnel adapter may cause fuel spillage and damage the capless fuel system. This could cause a fire. You or others could be badly burned and the vehicle could be damaged.

3. Remove and clean the funnel adapter and return it to the storage location.

## Filling a Portable Fuel Container

**⚠ Warning**

Never fill a portable fuel container while it is in the vehicle. Static electricity discharge from the container can ignite the fuel vapor. You or others could be badly burned and the vehicle could be damaged. To help avoid injury to you and others:

(Continued)

**Warning (Continued)**

- Dispense fuel only into approved containers.
- Do not fill a container while it is inside a vehicle, in a vehicle's trunk, in a pickup bed, or on any surface other than the ground.
- Bring the fill nozzle in contact with the inside of the fill opening before operating the nozzle. Maintain contact until filling is complete.
- Keep sparks, flames, and smoking materials away from fuel.
- Avoid using electronic devices while pumping fuel.

# Trailer Towing

## General Towing Information

Only use towing equipment that has been designed for the vehicle. Contact your dealer or trailering dealer for assistance with preparing the vehicle to tow a trailer. Read the entire section before towing a trailer.

To tow a disabled vehicle, see *Transporting a Disabled Vehicle* ⇨ *279*. To tow the vehicle behind another vehicle such as a motor home, see *Recreational Vehicle Towing* ⇨ *280*.

## 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 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. Trailering affects vehicle handling, acceleration, braking, and durability. Successful and safe trailering requires proper use of the correct equipment.

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 towing a trailer.

When towing a trailer:

- Follow all state and local laws that apply to trailer towing. These requirements vary from state to state.
- Install extended side view mirrors on your vehicle if your visibility is limited or restricted while towing. State laws may require the use of extended side view mirrors.
- Do not tow a trailer during the first 800 km (500 mi) of vehicle use to prevent damage to the vehicle.
- Perform the first oil change before heavy towing.

- Do not drive over 80 km/h (50 mph) and do not make starts at full acceleration during the first 800 km (500 mi) of trailer towing.
- Tow in D (Drive). If equipped, Tow/Haul Mode is recommended for heavier trailers. If the transmission downshifts too often, a lower gear may be selected using Manual Mode. See *Manual Mode* ⇨ *174*.

If equipped, the following driver assistance features should be turned off when towing a trailer, or may turn off automatically when a trailer is detected:

- Park assist
- Automatic Parking Assist (APA)
- Reverse Automatic Braking (RAB)
- Rear Cross Traffic Alert (RCTA)
- Rear Cross Traffic Braking (RCTB)
- Lane Change Alert (LCA)
- Super Cruise and Adaptive Cruise Control (ACC), unless equipped with trailering functionality. See *Adaptive Cruise Control (Camera)* ⇨ *182*.

Automatic Emergency Braking (AEB), and Front Pedestrian Braking (FPB) should be set to Alert unless equipped with Super Cruise.

**⚠ Warning**

To prevent serious injury or death from carbon monoxide (CO), when towing a trailer:

- Do not drive with the liftgate, trunk/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 brings in only outside air. See "Climate Control Systems" in the Index.

For more information about carbon monoxide, see *Engine Exhaust* ⇨ *172*.

Towing a trailer requires experience. The combination of the vehicle and trailer is longer and not as responsive as the vehicle itself. Become familiar with handling and braking by driving on a level road surface before driving on public roads.

The trailer structure, the tires, and the brakes must all be rated to carry the intended cargo. 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, tires, and mirrors. See *Towing Equipment* ⇨ *216*. If the trailer has electric brakes, start the combination moving and then manually apply the trailer brake controller to check the trailer brakes work. During the trip, occasionally check that the cargo 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 to help avoid heavy braking and sudden turns.

### Passing

More passing 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. It is necessary to go much farther beyond the passed vehicle before returning to the lane. Pass on level roadways. Avoid passing on hills if possible.

### Backing Up

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 back up 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 contact the vehicle.

Make wide turns when towing to prevent the trailer from crossing over soft shoulders or curbs, or striking road signs, trees, or other objects. Always signal turns well in advance. Do not steer or brake suddenly.

### Towing on Grades

Reduce speed and shift to a lower gear before descending a long or steep downhill grade. If the transmission is not downshifted, the brakes may overheat, resulting in reduced braking efficiency.

Tow in D (Drive). If the transmission shifts too often under heavy loads and/or hilly conditions, consider shifting the transmission to a lower gear, or if equipped, use Tow/Haul Mode.

Coolant boils at a lower temperature at higher altitudes than at lower altitudes. If the vehicle is turned off Immediately after towing at a high altitude on steep uphill grades, the vehicle may show signs of overheating. To avoid this, let the vehicle run, preferably on level ground, with the transmission in P (Park) for a few minutes before turning the vehicle off.

### Viewing Systems

If equipped, the viewing systems on the vehicle can improve visibility while hitching, backing up, and driving with a trailer. See *Advanced Driver Assistance Systems* ⇨ *191*.

### 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 and hold the brake pedal, but do not shift into P (Park). Turn the wheels toward 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 support 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 vehicle.

- Shift into the desired gear.
- Release the parking brake.

2. Let up on 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

A vehicle used to tow trailers requires service more often. See *Maintenance Schedule* ⇨ *293*. It is especially important to check the automatic transmission 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* ⇨ *234*.

## Trailer Towing

If equipped with a diesel engine, see the Duramax diesel supplement.

**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 dealer for important information about towing a trailer with the vehicle.

The following information contains trailering tips and safety rules important for your safety and that of your passengers. Read this section carefully before towing a trailer.

### Trailer Weight

**⚠ Warning**

Never exceed the towing capacity for your vehicle.

Safe trailering requires monitoring the weight, speed, altitude, road grades, outside temperature, dimensions of the front of the trailer, and how frequently the vehicle is used to tow a trailer.

### Trailer Weight Ratings

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:

- Gross Combined Weight Rating (GCWR)
- Gross Vehicle Weight Rating (GVWR)
- Maximum Trailer Weight Rating
- Maximum Trailer Tongue Weight Rating
- Gross Axle Weight Rating - Rear (GAWR-RR)

See “Weight-Distributing Hitch Adjustment” under *Towing Equipment* ⇨ *216* to determine if equalizer bars are required to obtain the maximum trailer weight rating.

See “Trailer Brakes” under *Towing Equipment* ⇨ *216* to determine if brakes are required based on your trailer's weight.

The only way to be sure the weight ratings are not exceeded is to verify with a scale.

**⚠ 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 dealer for advice and information about towing a trailer.

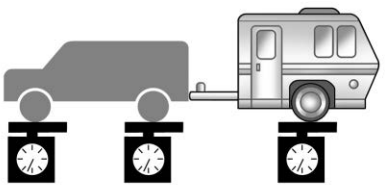
### Gross Combined Weight Rating (GCWR)

GCWR is the total allowable weight of the completely loaded vehicle and trailer including any passengers, cargo, equipment, and accessories. Do not exceed the GCWR for your vehicle. The GCWR for the vehicle is on the tow rating chart later in this section.

To check that the weight of the vehicle and trailer are within the GCWR for the vehicle, follow these steps:

1. Start with the "curb weight."
2. Add the weight of the trailer loaded with cargo and ready for the trip.
3. Add the weight of all passengers.
4. Add the weight of all cargo in the vehicle.
5. Add the weight of hitch hardware such as a draw bar, ball, load equalizer bars, or sway bars.
6. Add the weight of any accessories or aftermarket equipment added to the vehicle.

The GCWR can also be confirmed by weighing the truck and trailer on a public scale. The truck and trailer should be loaded for the trip with passengers and cargo.



### Gross Vehicle Weight Rating (GVWR)

For information about the vehicle's maximum load capacity, see *Vehicle Load Limits* ⇨ *162*. 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 Rating

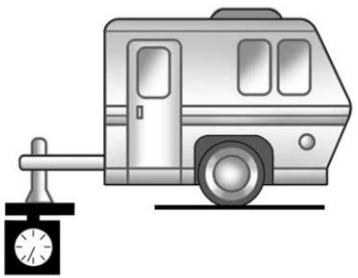
The maximum trailer weight rating is calculated assuming only the driver is in the tow vehicle and it has all the required trailering equipment. The weight of additional optional equipment, passengers, and cargo in the tow vehicle must be subtracted from the maximum trailer weight.

Use the tow rating chart to determine how much the trailer can weigh, based on the vehicle model, powertrain and trailering options.

| Vehicle | Maximum Trailer Weight | GCWR |
|---|---|---|
| 1.2L CVT Front-Wheel Drive | 454 kg (1,000 lb) | 2,050 kg (4,519 lb) |
| 1.3L CVT Front-Wheel Drive | 454 kg (1,000 lb) | 2,070 kg (4,563 lb) |
| 1.3L AT All-Wheel Drive | 454 kg (1,000 lb) | 2,130 kg (4,695 lb) |

### 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.

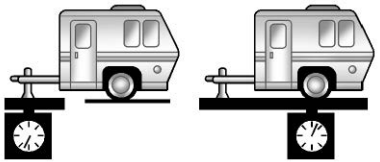


Do not exceed a maximum trailer tongue weight of 45.36 kg (100 lb).

The trailer tongue weight contributes to the Gross Vehicle Weight (GVW). GVW includes the curb 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 10–15% of the total loaded trailer weight (2). Some specific trailer types, such as boat trailers, fall outside of this range. See 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 trailer tongue. Calculate the trailer load balance percentage to see if the weights and distribution 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 of 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 or 227 kg (500 lb), whichever is less.

For additional assistance with trailering or additional information, see your dealer.

## Towing Equipment

### Hitches

**⚠ Warning**

In order to avoid serious injury or property damage, always follow the hitch manufacturer's instructions when securing your draw bar/coupling device to the vehicle's hitch receiver.

Ensure that the draw bar/coupling device is secured with a locking retainer pin or other means such that rotation of the pin or locking mechanism will not cause the pin to back out or loosen during use. Failure to correctly secure the draw bar/coupling device to the receiver can result in separation of the hitch/receiver while towing.

Always use the correct hitch equipment for your vehicle. Crosswinds, getting passed by large trucks, and rough roads can affect the vehicle and trailer combination.

Proper hitch equipment for your vehicle helps maintain control of the vehicle-trailer combination. Many trailers can be towed using

a weight-carrying hitch with 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* ⇨ *213* 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.

Consider using mechanical sway controls with any trailer. Ask a trailering professional about sway controls or see the trailer manufacturer's recommendations and instructions.

### Tires

- Do not tow a trailer while using a compact spare tire on the vehicle.
- Tires must be properly inflated to support loads while towing a trailer. See *Tires* ⇨ *254* for instructions on proper tire inflation.

### Safety Chains

**⚠ Warning**

Always cross trailer safety chains and never allow them to drag on the ground. Improper installation can result in damage to the chains and could lead to loss of control of the trailer and tow vehicle. Serious injury can occur if the trailer detaches from the tow vehicle.

Always attach safety chains between the vehicle and the trailer, and then attach the chains to the holes on the trailer hitch. 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. Use trailer braking equipment meeting or exceeding the Canadian Standards Association (CSA) requirement CAN3-D313.

State 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 state to state. Read and follow the instructions for the trailer brakes so they are installed, adjusted, and maintained properly.

**⚠ Warning**

Never attempt to tamper with the hydraulic brake system for your trailer brakes. Do not connect a trailer's hydraulic brake system directly to your vehicle's hydraulic brake system. If you do, both the vehicle antilock brakes and the trailer brakes may not function, which could result in a crash.

### Trailer Lamps

Always check 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 turn signals 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 Tires

Special Trailer (ST) tires differ from vehicle tires. ST tires 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 tire pressures are low only based on a visual inspection.

Always check all trailer tire pressures before each trip when the tires are cool. Low trailer tire pressure is a leading cause of trailer tire blow-outs.

Trailer tires deteriorate over time. The trailer tire sidewall will show the week and year the tire was manufactured. Many trailer tire manufacturers recommend replacing tires more than six years old.

Overloading is another leading cause of trailer tire blow-outs. Never load your trailer with more weight than the tires are designed to support. The load rating is located on the trailer tire sidewall.

Always know the maximum speed rating for the trailer tires before driving. This may be significantly lower than the vehicle tire speed rating. The speed rating may be on the trailer tire sidewall. If the speed rating is not shown, the default trailer tire 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)* ⇨ *104*. A device connected to the DLC — such as an aftermarket fleet or driver-behavior tracking device — may interfere with vehicle systems. This could affect vehicle

(Continued)

**Warning (Continued)**

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 to not 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* ⇨ *64* and *Adding Equipment to the Airbag-Equipped Vehicle* ⇨ *65*.

# Vehicle Care


**General Information**
- General Information ..... 220
- California Perchlorate Materials Requirements ..... 220
- Accessories and Modifications ..... 220

**Vehicle Checks**
- Doing Your Own Service Work ..... 221
- Hood ..... 221
- Engine Compartment Overview ..... 223
- Engine Oil ..... 226
- Engine Oil Life System ..... 228
- Automatic Transmission Fluid ..... 228
- Engine Air Filter Life System ..... 229
- Engine Air Cleaner/Filter ..... 229
- Cooling System ..... 230
- Engine Overheating ..... 234
- Washer Fluid ..... 235
- Brakes ..... 236
- Brake Pad Life System ..... 236
- Brake Fluid ..... 237
- Battery - North America ..... 238
- All-Wheel Drive ..... 240
- Starter Switch Check ..... 240
- Automatic Transmission Shift Lock Control Function Check ..... 240
- Park Brake and P (Park) Mechanism Check ..... 240
- Wiper Blade Replacement ..... 241
- Windshield Replacement ..... 242
- Gas Strut(s) ..... 242

**Headlamp Aiming**
- Front Headlamp Aiming ..... 243

**Bulb Replacement**
- Bulb Replacement ..... 243
- Halogen Bulbs ..... 243
- LED Lighting ..... 243
- Taillamps, Turn Signal, Sidemarker, Stoplamps, and Back-Up Lamps (Uplevel) ..... 244
- Taillamps, Turn Signal, Sidemarker, Stoplamps, and Back-Up Lamps (Base Level) ..... 244

**Electrical System**
- Electrical System Overload ..... 246
- Fuses and Circuit Breakers ..... 248
- Engine Compartment Fuse Block ..... 248
- Instrument Panel Fuse Block ..... 251
- Rear Compartment Fuse Block ..... 253

**Wheels and Tires**
- Tires ..... 254
- All-Season Tires ..... 255
- Winter Tires ..... 255
- Tire Sidewall Labeling ..... 256
- Tire Designations ..... 257
- Tire Terminology and Definitions ..... 258
- Tire Pressure ..... 260
- Tire Pressure for High-Speed Operation ..... 261
- Tire Pressure Monitor System ..... 261
- Tire Pressure Monitor Operation ..... 262
- Tire Inspection ..... 265
- Tire Rotation ..... 265
- When It Is Time for New Tires ..... 266
- Buying New Tires ..... 267
- Different Size Tires and Wheels ..... 268
- Uniform Tire Quality Grading ..... 268
- Wheel Alignment and Tire Balance ..... 270
- Wheel Replacement ..... 270
- Tire Traction Devices ..... 270
- If a Tire Goes Flat ..... 271
- Tire Changing ..... 272
- Compact Spare Tire ..... 276

**Jump Starting**
- Jump Starting - North America ..... 277

**Towing the Vehicle**
- Transporting a Disabled Vehicle ..... 279
- Recreational Vehicle Towing ..... 280

**Appearance Care**
- Exterior Care ..... 283

Interior Care ..... 288
Floor Mats ..... 291

# General Information

For service and parts needs, visit your dealer. You will receive genuine GM parts and GM-trained and supported service people.

Genuine GM parts have one of these marks:







## California Perchlorate Materials Requirements

Certain types of automotive applications, such as airbag initiators, seat belt pretensioners, and lithium batteries contained in electronic keys, may contain perchlorate materials. Perchlorate Material – special handling may apply. See www.dtsc.ca.gov/hazardouswaste/perchlorate.

## 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, Driver Assistance Systems, and electronic systems like antilock 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 accessorize the vehicle using genuine GM Accessories installed by a dealer technician.

Also, see *Adding Equipment to the Airbag-Equipped Vehicle* ⇨ *65*.

# 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.

**Caution**

Even small amounts of contamination can cause damage to vehicle systems. Do not allow contaminants to contact the fluids, reservoir caps, or dipsticks.

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. To order the proper service manual, see *Publication Ordering Information* ⇨ *311*.

This vehicle has an airbag system. Before attempting to do your own service work, see *Servicing the Airbag-Equipped Vehicle* ⇨ *64*.

If equipped with remote start, open the hood before performing any service work to prevent remote starting the vehicle accidentally. See *Remote Start* ⇨ *16*.

Keep a record with all parts receipts and list the mileage and the date of any service work performed. See *Maintenance Records* ⇨ *299*.

## Hood

**⚠ Warning**

For vehicles with auto engine stop/start, turn the vehicle off before opening the hood. If the vehicle is on, the engine will start when the hood is opened. You or others could be injured.

**⚠ Warning**

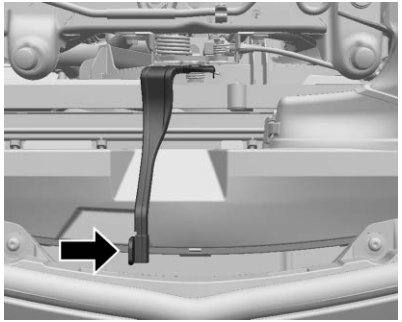
Components under the hood can get hot from running the engine. To help avoid the risk of burning unprotected skin, never touch these components until they have cooled, and always use a glove or towel to avoid direct skin contact.

Clear any snow from the hood before opening.

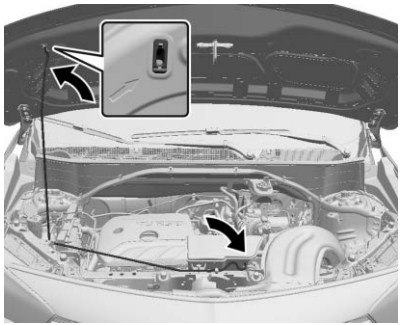
To open the hood:



1. Pull the hood release handle inside the vehicle. It is located on the lower left side of the instrument panel.



2. Go to the front of the vehicle and move the secondary hood release lever toward the right side of the vehicle.



3. Lift the hood and release the hood prop from its retainer, above the radiator. Securely place the hood prop into the slot on the underside of the hood.

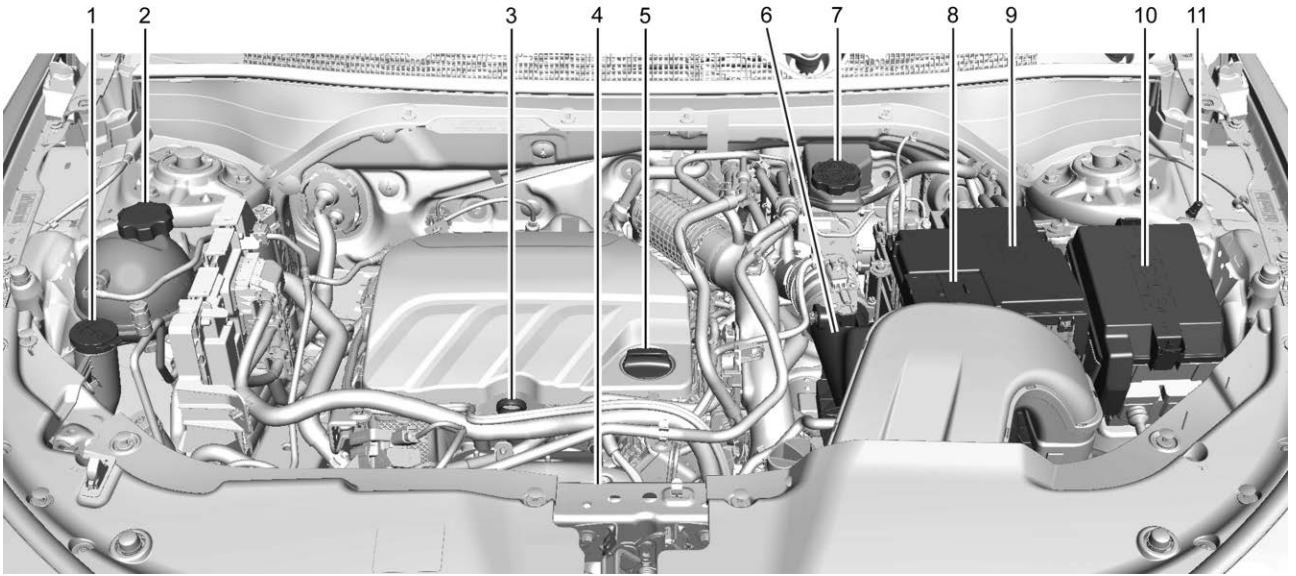
To close the hood:

1. Before closing the hood, be sure all filler caps are on properly, and all tools are removed.
2. Lift the hood and remove the hood prop rod from the underside of the hood. Return the prop rod to its retainer. The prop rod must click into place when returning it to the retainer to prevent hood damage.
3. Lower the hood 30 cm (12 in) above the vehicle and release it so it fully latches. Check to make sure the hood is closed and repeat the process if necessary.

**⚠ Warning**

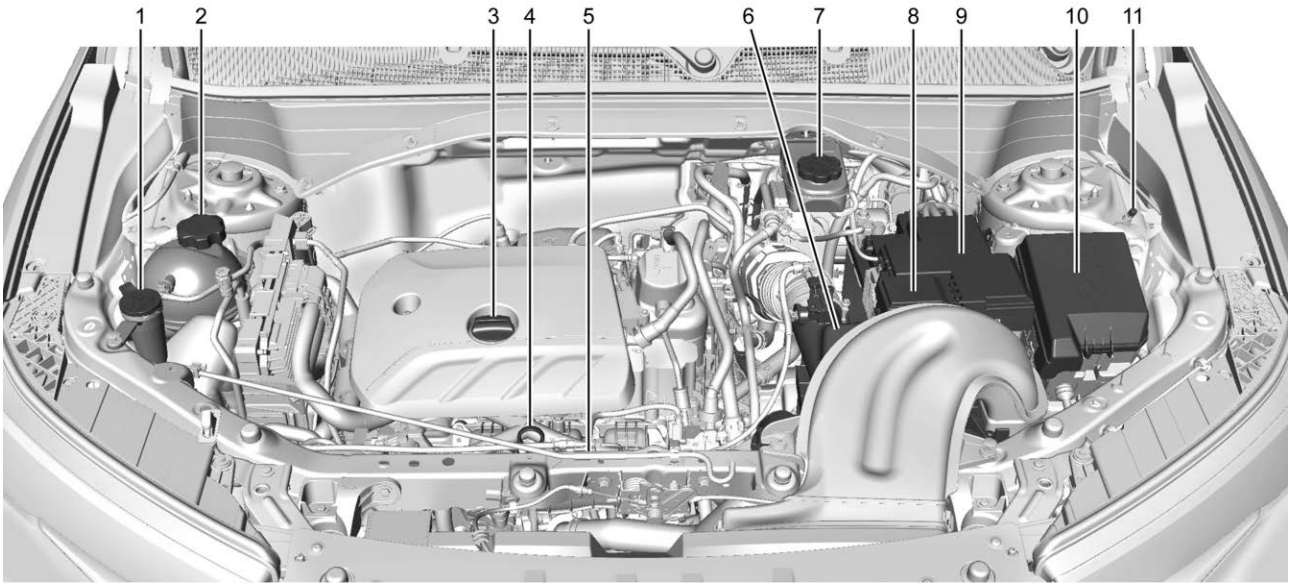
Do not drive the vehicle if the hood is not latched completely. The hood could open fully, block your vision, and cause a crash. You or others could be injured. Always close the hood completely before driving.

## Engine Compartment Overview




1.2L L3 Engine (LBP)

1. Windshield Washer Fluid Reservoir. See *Washer Fluid* ⇨ *235*.
2. Engine Coolant Surge Tank and Pressure Cap. See *Cooling System* ⇨ *230*.
3. Engine Oil Dipstick. See *Engine Oil* ⇨ *226*.
4. Engine Cooling Fan (Out of View). See *Cooling System* ⇨ *230*.
5. Engine Oil Fill Cap. See *Engine Oil* ⇨ *226*.
6. Engine Air Filter. See *Engine Air Cleaner/ Filter* ⇨ *229*.
7. Brake Fluid Reservoir. See *Brakes* ⇨ *236*.
8. Positive (+) Battery Terminal. See *Jump Starting - North America* ⇨ *277*.
9. Battery. See *Battery - North America* ⇨ *238*.
10. Fuse Block. See *Engine Compartment Fuse Block* ⇨ *248*.
11. Remote Negative (–) Battery Terminal. See *Jump Starting - North America* ⇨ *277*.




**1.3L L3 Engine (L3T)**

1. Windshield Washer Fluid Reservoir. See *Washer Fluid* ⇨ *235*.
2. Engine Coolant Surge Tank and Pressure Cap. See *Cooling System* ⇨ *230*.
3. Engine Oil Fill Cap. See *Engine Oil* ⇨ *226*.
4. Engine Oil Dipstick. See *Engine Oil* ⇨ *226*.
5. Engine Cooling Fan (Out of View). See *Cooling System* ⇨ *230*.
6. Engine Air Filter. See *Engine Air Cleaner/ Filter* ⇨ *229*.

7. Brake Fluid Reservoir. See *Brakes* ⇨ *236*.
8. Positive (+) Battery Terminal. See *Jump Starting - North America* ⇨ *277*.
9. Battery. See *Battery - North America* ⇨ *238*.
10. Fuse Block. See *Engine Compartment Fuse Block* ⇨ *248*.
11. Remote Negative (-) Battery Terminal. See *Jump Starting - North America* ⇨ *277*.

## 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* ⇨ *228*.
- 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* ⇨ *223* 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 Center (DIC) message displays, check the oil level.

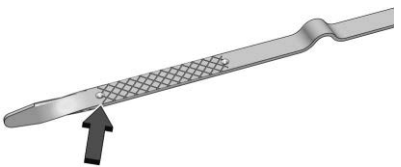
Follow these guidelines:

- 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 grades 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



**L3T 1.3L L3 Engine**



**LBP 1.2L L3 Engine**

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* ⇨ *301*.

**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 you find that you have an oil level above the operating range, i.e., the engine has so much oil that the oil level gets above the MAX mark, the engine could be damaged. You should drain out the excess oil or limit driving of the vehicle and seek a service professional to remove the excess amount of oil.

See *Engine Compartment Overview* ⇨ *223* for the location of the engine oil fill cap.

Add enough oil to put the level somewhere in the proper operating range between the MIN and MAX marks. Push the dipstick all the way back in when through.

## Selecting the Right Engine Oil

Selecting the right engine oil depends on both the proper oil specification and viscosity grade. See *Recommended Fluids and Lubricants* ⇨ *298*.

### Specification

Use full synthetic engine oils that meet the dexos1 specification.

Engine oils that have been approved by GM as meeting the dexos1 specification are marked with the dexos1 approved logo. See www.gmdexos.com.

dexos™1
GM APPROVED - GEN 3

**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 dexos1 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 might 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.

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.

### How to Reset the Engine Oil Life System

Reset the system whenever the engine oil is changed so that the system can calculate the next engine oil change. Always reset the engine oil life to 100% after every oil change. It will not reset itself. To reset the engine oil life system:

1. Place the vehicle in P (Park).
2. From the infotainment home screen, select Vehicle Status > Maintenance > Oil Life > Reset. See *Vehicle Status* ⇨ *113*.
3. Follow the menu and select Reset on the display screen. Then select Reset to confirm the reset. The percentage will change to 100%.

If the vehicle has a CHANGE ENGINE OIL SOON message and it comes back on when the vehicle is started and/or the OIL LIFE REMAINING is near 0%, the engine oil life system has not been reset. Repeat the procedure.

## Automatic Transmission Fluid

### How to Check Automatic Transmission Fluid

It is not necessary to check the transmission fluid level. 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.

There is a special procedure for checking and changing the transmission fluid. Because this procedure is difficult, you should have this done at your dealer.

Change the fluid at the intervals listed in *Maintenance Schedule* ⇨ *293* , and be sure to use the fluid listed in *Recommended Fluids and Lubricants* ⇨ *298*.

## 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 Center (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 is changed.

If the DIC displays a message to check the engine air filter system, see your dealer.

### How to Reset Engine Air Filter Life System

To reset:

1. Place the vehicle in P (Park).
2. On the infotainment home screen, select Vehicle Status > Maintenance > Engine Air Filter Life.

   See *Vehicle Status* ⇨ *113* for instructions on navigating and selecting items.
3. Touch Reset.
4. Touch Yes to confirm.

## 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* ⇨ *223*.

### When to Inspect the Engine Air Cleaner/Filter

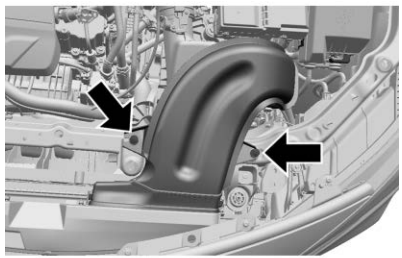
If the vehicle is not equipped with the engine air filter life system, see *Maintenance Schedule* ⇨ *293* for intervals on inspecting and replacing the engine air cleaner/filter.

### How to Inspect the Engine Air Cleaner/Filter

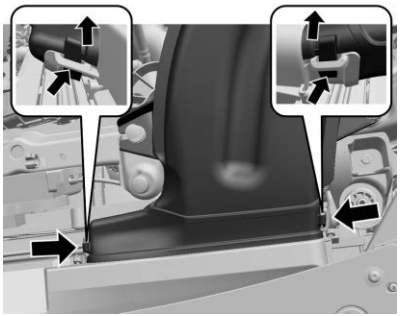
Do not start the engine or have the engine running with the engine air cleaner/filter housing open. Before removing the engine air cleaner/filter, make sure that the engine air cleaner/filter housing and nearby components are free of dirt and debris. Do not clean the engine air cleaner/filter with water or compressed air.

To inspect or replace the air cleaner/filter:

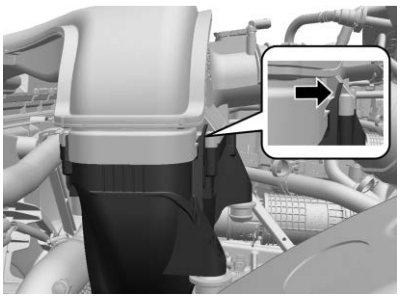
**1.2L L3 Engine Shown, 1.3L L3 Engine Similar**



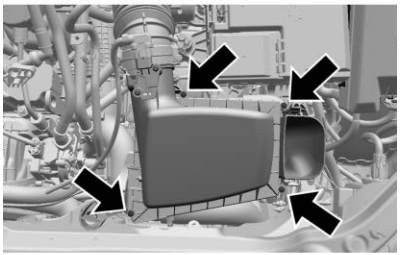
1. Remove the two push pins.



2. Press a hook both sides and disassemble two hooks.



3. Disassemble the duct.



4. Remove four screws, tilt the cover, and slide it out of the assembly.

**⚠ Warning**

If part replacement is necessary, the part must be replaced with one of the same part number or with an equivalent part. Use of a replacement part without the same fit, form, and function may result in personal injury or damage to the vehicle.

5. Inspect or replace the engine air cleaner/filter.
6. Lower the cover, slide it into the assembly, then secure with the screws.
7. If equipped, reset the engine air filter life system after replacing the engine air filter. See *Engine Air Filter Life System* ⇨ *229*.

See *Maintenance Schedule* ⇨ *293* for replacement intervals.

**⚠ Warning**

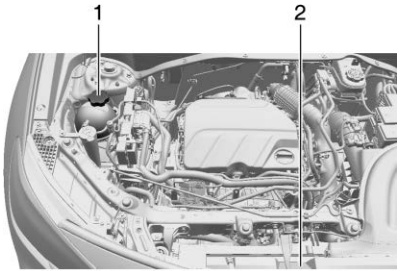
Operating the engine with the air cleaner/filter off can cause you or others to be burned. The air cleaner not only cleans the air; it helps to stop flames if the engine backfires. Use caution when working on the engine and do not drive with the air cleaner/filter off.

**Caution**

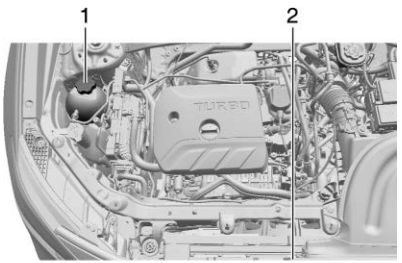
If the air cleaner/filter is off, dirt can easily get into the engine, which could damage it. Always have the air cleaner/filter in place when driving.

## Cooling System

The cooling system allows the engine to maintain the correct working temperature.




1.2L L3 Engine (LBP)




1.3L L3 Engine (L3T)

1. Engine Coolant Surge Tank and Pressure Cap
2. Engine Cooling Fan (Out of View)

**⚠ Warning**

An underhood electric fan can start up even when the engine is not running and can cause injury. Keep hands, clothing, and tools away from any underhood 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 cooling system in the vehicle is filled with DEX-COOL engine coolant. This coolant is designed to remain in the vehicle for five years or 240 000 km (150,000 mi), whichever occurs first.

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* ⇨ *234*.

### What to Use

**⚠ Warning**

Plain water, or other liquids such as alcohol, can boil before the proper coolant mixture will. With plain water or the wrong mixture, the engine could get too hot but there would not be an overheat warning. The engine could catch fire and you or others could be burned.

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 aluminum parts.
- Helps keep the proper engine temperature.

**Caution**

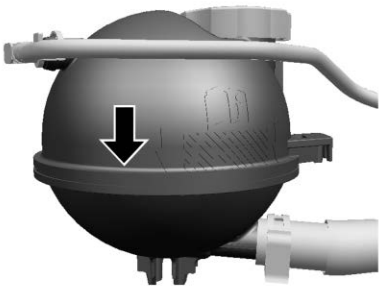
Do not use anything other than a mix of DEX-COOL coolant that meets GM Standard GMW3420 and clean, drinkable water. Anything else can cause damage to the engine cooling system and the vehicle, which would not be covered by the vehicle warranty.

Never dispose of engine coolant by putting it in the trash, pouring it on the ground, or into sewers, streams, or bodies of water. Have the coolant changed by an authorized service center, 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.

It is normal to see coolant moving in the upper coolant hose return line when the engine is running.



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 is not at or above the mark pointed to, add a 50/50 mixture of clean drinkable water and DEX-COOL coolant.

Be sure the cooling system is cool before this is done.

If no coolant is visible in the coolant surge tank, add coolant as follows:

### How to Add Coolant to the Coolant Surge Tank

**⚠ Warning**

Steam and scalding liquids from a hot cooling system are under pressure. Turning the pressure cap, even a little, can cause them to come out at high speed and you could be burned. Never turn the cap when the cooling system, including the pressure cap, is hot. Wait for the cooling system and pressure cap to cool.

**⚠ Warning**

Plain water, or other liquids such as alcohol, can boil before the proper coolant mixture will. With plain water or the wrong mixture, the engine could get too hot but there would not be an overheat warning. The engine could catch fire and you or others could be burned.

**⚠ 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.

**Caution**

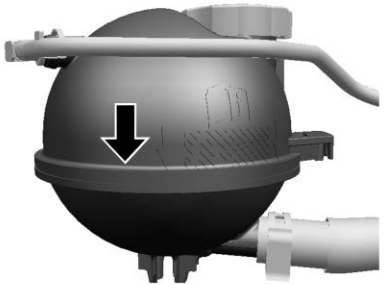
Failure to follow the specific coolant fill procedure could cause the engine to overheat and could cause system damage. If coolant is not visible in the surge tank, contact your dealer.

If no problem is found, check to see if coolant is visible in the coolant surge tank. If coolant is visible but the coolant level is not at the indicated level mark, add a 50/50 mixture of clean, drinkable water and DEX-COOL coolant at the coolant surge tank, but be sure the cooling system, including the coolant surge tank pressure cap, is cool before you do it.




1. Remove the coolant surge tank pressure cap when the cooling system, including the coolant surge tank pressure cap and upper radiator hose, is no longer hot.

   Turn the pressure cap slowly counterclockwise about one-quarter of a turn. If you hear a hiss, wait for that to stop. This will allow any pressure still left to be vented out the discharge hose.
2. Keep turning the pressure cap slowly and remove it.



3. Fill the coolant surge tank with the proper mixture to the indicated level mark.
4. With the coolant surge tank pressure cap off, start the engine and let it run until you can feel the upper radiator hose getting hot. Watch out for the engine cooling fan.

   By this time, the coolant level inside the coolant surge tank may be lower. If the level is lower, add more of the proper mixture to the coolant surge tank until the level reaches the indicated level mark.
5. Replace the pressure cap tightly.
6. Verify coolant level after the engine is shut off and the coolant is cold. If necessary, repeat coolant fill procedure Steps 1–6.

If the coolant still is not at the proper level when the system cools down again, see your dealer.

| 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 Fill Instruction

If equipped, this feature assists in filling and removing air from the cooling system after service of components or when coolant is added after being too low.

To activate the fill and air removal process:

1. With a cold system, open the surge tank cap and add coolant to the indicated mark on the surge tank.
2. Connect the vehicle to a battery charger.
3. Turn the ignition to Service Mode. See *Ignition Positions* ⇨ *166*.
4. Turn off the air conditioning.
5. Set the parking brake.
6. At the same time, press the accelerator and the brake for two seconds, then release.

At the end of the cycle, check the coolant level in the surge tank and add coolant if it is low. Turn off the vehicle, allow the Engine Control Module (ECM) to go to sleep, about two minutes, and repeat Steps 3-7.

Listen for pump activation and movement of the control valves while watching the level of the coolant in the surge tank. If the tank empties, turn the ignition off, carefully remove the surge tank cap, refill to the indicated mark, and repeat Steps 4-7. The fill and air removal process will run for approximately 10 minutes.

## Engine Overheating

The vehicle has an engine coolant temperature gauge to warn of the engine overheating. See *Engine Coolant Temperature Gauge* ⇨ *101*.

If the decision is made not to lift the hood when this warning appears, get service help right away. See *Roadside Assistance Program* ⇨ *307*.

If the decision is made to lift the hood, 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 come out at high speed and you could be burned. Never turn the cap when the cooling system, including the pressure cap, 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

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 overheat zone, the vehicle can be driven. Continue to drive the vehicle slowly for about 10 minutes. Keep a safe vehicle 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.

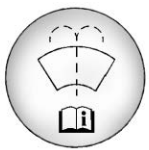
If there is no sign of steam, idle the engine for three minutes while parked. If the warning is still displayed, turn off the engine until it cools down.

## Washer Fluid

### What to Use

When the vehicle needs windshield washer fluid, 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



Open the cap with the washer symbol on it. Add washer fluid until the tank is full. See *Engine Compartment Overview* ⇨ *223* 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, and may also clog the washer nozzle.
- Do not use engine coolant (antifreeze) in the windshield washer. It can damage the windshield 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 linings have built-in wear indicators that make a high-pitched warning sound when the brake linings are worn and new linings 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 linings could result in costly brake repairs.

Some driving conditions or climates can cause a brake squeal when the brakes are first applied, clearing up following several applications. This does not mean something is wrong with the brakes.

Properly torqued wheel nuts are necessary to help prevent brake pulsation. When tires are rotated, inspect brake linings for wear and evenly tighten wheel nuts in the proper sequence to torque specifications. See *Capacities and Specifications* ⇨ *301*.

Brake pads should be replaced as complete axle 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 can change in many ways if the wrong brake parts are installed or if parts are improperly installed.

## Brake Pad Life System

### When to Change Brake Pads

If equipped, this system estimates the remaining life of the front and rear brake pads. Brake pad life is displayed in the Driver Information Center (DIC), along with a percentage for each axle. The system must be reset every time the brake pads are changed.

When the system has determined that the brake pads need to be replaced, a message will display.

Brake pads should always be replaced as complete axle sets.

### How to Reset the Brake Pad Life System

When the ignition is turned on after new pads and wear sensors are installed, a message will display. Follow the prompts to reset the system.

The brake pad life system can also be manually reset:

1. Display Brake Pad Life on the DIC. See *Driver Information Center (DIC)* ⇨ *112*.
2. Press and hold ✓ or the thumbwheel. Select front or rear pads as appropriate.

3. Select YES on the confirmation message. Repeat for pads on the other axle if they were also replaced.

### How to Disable the Brake Pad Life System

The brake pad life system can be turned off. This may be necessary if aftermarket brake pads without wear sensors are installed. When the system is turned off, the front and rear brake pad life percentages will not display. However, the built-in wear indicators that make a high-pitched warning sound when the brake pads are worn can still determine when the pads should be replaced. See *Brakes* ⇨ *236*.

To turn off the brake pad life system:

1. Display Brake Pad Life on the DIC. See *Driver Information Center (DIC)* ⇨ *112*.
2. Select DISABLE

To turn the brake pad life system back on, follow the above steps but select ENABLE in Step 2.

## Brake Fluid



The brake master cylinder reservoir is filled with GM approved DOT 4 brake fluid as indicated on the reservoir cap. See *Engine Compartment Overview* ⇨ *223* 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* ⇨ *105*.

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* ⇨ *293*.

**What to Add**

Use only GM approved DOT 4 brake fluid from a clean, sealed container. See *Recommended Fluids and Lubricants* ⇨ *298*.

**⚠ 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 - North America

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. For replacement of the battery, see your dealer.

### Stop/Start System

If equipped, the Stop/Start system shuts off the engine to help conserve fuel. See *Stop/Start System* ⇨ *168*. It 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.

**⚠ Warning**

**WARNING:** Battery posts, terminals and related accessories can expose you to chemicals including lead and lead compounds, which are known to the State of California to cause cancer and birth defects or other reproductive harm. Wash hands after handling. For more information go to www.P65Warnings.ca.gov.

See *California Proposition 65 Warning* ⇨ *1*.

### Vehicle Storage

**⚠ Warning**

Batteries have acid that can burn you and gas that can explode. You can be badly hurt if you are not careful. Always wear eye protection. See *Jump Starting - North America* ⇨ *277* for tips on working around a battery without getting hurt.

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.

### Negative Battery Cable Disconnection

**⚠ Warning**

Before disconnecting the negative battery cable, turn off all features, turn the ignition off, and remove the key, if equipped, from

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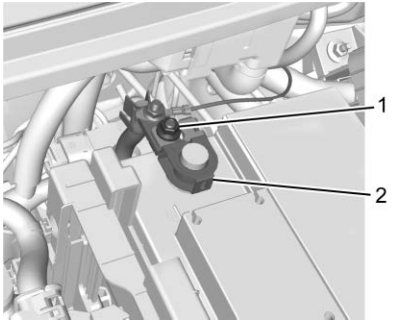
**Warning (Continued)**

the vehicle. If this is not done, you or others could be injured, and the vehicle could be damaged.

**Caution**

If the battery is disconnected with the ignition on or the vehicle in Retained Accessory Power (RAP), the OnStar back-up battery will be permanently discharged and will need to be replaced.

1. Make sure the lamps, features, and accessories are turned off.
2. Turn the ignition off and remove the key, if equipped.




3. Loosen the negative battery cable nut (1).
4. Remove the negative battery cable (2) from the battery.

### Negative Battery Cable Reconnection

**Caution**

When reconnecting the battery:

- Use the original nut from the vehicle to secure the negative battery cable. Do not use a different nut. If you need a replacement nut, see your dealer.

(Continued)

**Caution (Continued)**

- Tighten the nut with a hand tool. Do not use an impact wrench or power tools to tighten the nut.

The vehicle could be damaged if these guidelines are not followed.

**Caution**

Do not use paints, lubricants, or corrosion inhibitors on the nut that secures the negative battery cable to the vehicle. This could damage the vehicle.

1. Install the negative battery cable (2) to the battery.
2. Install the negative battery cable nut (1) and tighten.
3. Turn the ignition on.

## 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.

## Automatic Transmission Shift Lock Control Function 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. It should be parked on a level surface.
2. Apply the parking brake. Be ready to apply the regular brake immediately if the vehicle begins to move.
3. With the engine off, turn the ignition on, but do not start the engine. Without applying the regular brake, try to move the shift lever out of P (Park) with normal effort. If the shift lever moves out of P (Park), 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, set 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

| Caution |
| --- |
| Allowing the wiper arm to touch the windshield when no wiper blade is installed could damage the windshield. Any damage that occurs would not be covered by the vehicle warranty. Do not allow the wiper arm to touch the windshield. |

Windshield wiper blades should be replaced periodically. See *Maintenance Schedule* ⇨ *293*.

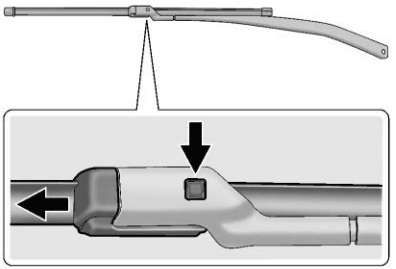
Replacement blades come in different types and are removed in different ways. For proper type and length, see your dealer.

### Front Wiper Blade Replacement

| Caution |
| --- |
| Damage may occur if the wiper blades are not in contact with the windshield before turning on the wiper system. |

To replace the front wiper blades:

1. Lift the wiper arm from the windshield until no further movement is possible.



2. Press the release button on the top side of the wiper and pull the wiper blade out of the end of the wiper arm.
3. Install the wiper blade connector by sliding it into the end of the wiper arm until the button on the wiper blade clicks into place.
4. Place the wiper arm and wiper blade back on the windshield.

### Rear Wiper Blade Replacement



1. Lift the wiper arm away from the rear windshield.
2. Push the wiper blade away from the wiper arm.
3. Once the blade pin disengages from the wiper arm, remove the wiper blade by sliding the blade off the arm.
4. Reverse Steps 1–3 to install a new wiper blade.

## Windshield Replacement

### Driver Assistance Systems

When a windshield replacement is needed and the vehicle is equipped with a front-looking camera sensor for the Driver Assistance Systems, the windshield must be installed according to GM specifications for these systems to work properly. If it is not, there may be unexpected behavior and/or messages from these systems.

## Gas Strut(s)

Your vehicle may be equipped with gas strut(s) to provide assistance in lifting and holding open the hood/trunk/liftgate system in full open position.

**⚠ Warning**

If the gas struts that hold open the hood, trunk, and/or liftgate fail, you or others could be seriously injured. Take the vehicle to your dealer for service immediately. Visually inspect the gas struts for signs of wear, cracks, or other damage periodically.

(Continued)

**Warning (Continued)**

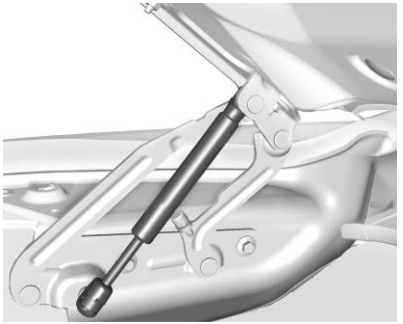
Check to make sure the hood/trunk/liftgate is held open with enough force. If struts are failing to hold the hood/trunk/liftgate, do not operate. Have the vehicle serviced.

**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.



Hood



Trunk



Liftgate

# Headlamp Aiming

## Front Headlamp Aiming

Headlamp aim has been preset and should need no further adjustment.

If the vehicle is damaged in a crash, the headlamp aim may be affected. If adjustment to the headlamps is necessary, see your dealer.

# Bulb Replacement

Switch off the ignition and switch off the relevant switch or close the doors. Only hold a new bulb at the base! Do not touch the bulb glass with bare hands.

For any bulb-changing procedure not listed in this section, contact your dealer.

After driving in heavy rain or washing, some exterior lamp lenses could appear frosty.

This condition is caused by the temperature difference between the lamp inside and outside. This is similar to the condensation on your windows inside your vehicle during the rain and does not indicate a problem with your vehicle.

If the water leaks into the light bulb circuitry, have the vehicle checked, we recommend an authorized repairer.

| Caution |
| --- |
| Do not replace incandescent bulbs with aftermarket LED replacement bulbs. This can cause damage to the vehicle electrical system. |

### Desiccant (If equipped)

This vehicle is equipped with desiccant to reduce fogging inside the head lamp due to moisture.

The desiccant is consumable and its performance may change based on the used period and environment.

If fogging inside the head lamp due to moisture continues for a long time, see your dealer for service.

## Halogen Bulbs

| ⚠ Warning |
| --- |
| Halogen bulbs have pressurized gas inside and can burst if you drop or scratch the bulb. You or others could be injured. Be sure to read and follow the instructions on the bulb package. |

## LED Lighting

This vehicle has several LED lamps. For replacement of any LED lighting assembly, contact your dealer.

## Taillamps, Turn Signal, Sidemarker, Stoplamps, and Back-Up Lamps (Uplevel)

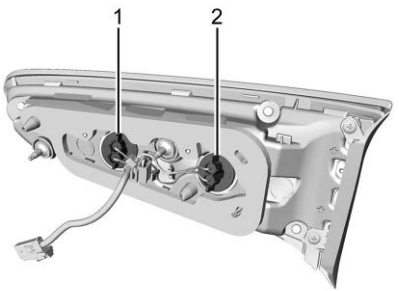
| Caution |
| --- |
| Improper lamp assembly removal and installation can cause leaks and water intrusion which may cause damage to the taillamp. Do not remove the taillamp assembly to replace a bulb. Use the liftgate opening to access the bulb. |

The stoplamp/taillamp/turn signal lamp/side marker lamp and liftgate inboard taillamp are LEDs. To replace, see your dealer.

## Taillamps, Turn Signal, Sidemarker, Stoplamps, and Back-Up Lamps (Base Level)

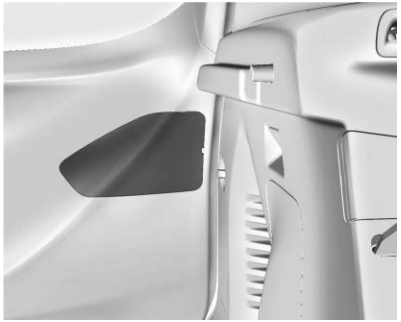
| Caution |
| --- |
| Improper lamp assembly removal and installation can cause leaks and water intrusion which may cause damage to the taillamp. Do not remove the taillamp assembly to replace a bulb. Use the liftgate opening to access the bulb. |

### Liftgate Inboard Taillamp




**Driver Side Shown, Passenger Side Similar**

1. Taillamp
2. Taillamp

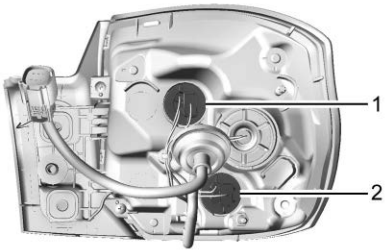


1. Remove the bulb access door on liftgate.



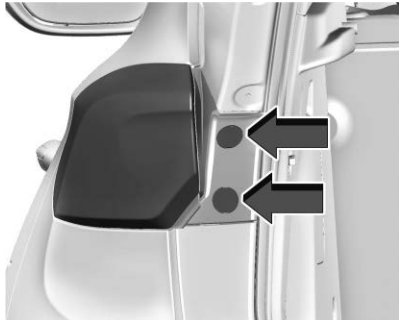
2. Remove the bulb from the bulb socket and replace with a new bulb.
3. Insert the bulb socket and attach the plug connector.
4. Reassemble the cover.

### Stop lamp/Taillamp, Turn Signal, and Sidemarker Lamp

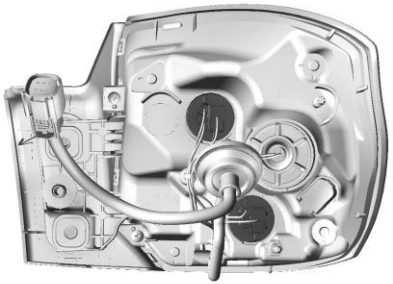



**Driver Side Shown, Passenger Side Similar**

1. Stop lamp/Taillamp
2. Turn signal lamp

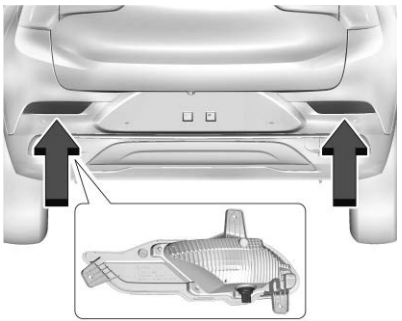


1. Remove and retain both screws attaching the taillamp assembly to the vehicle body.
2. Pull the taillamp assembly straight back to detach it from the vehicle body. Take care that the cable duct remains in place.



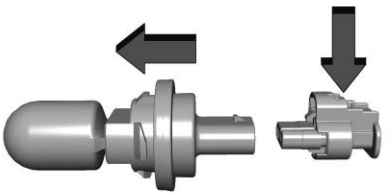
3. Remove the bulb socket from the taillamp assembly.
4. Remove the old bulb from the bulb socket by pulling it straight out.
5. Insert a new bulb into the bulb socket.
6. Install the bulb socket into the taillamp assembly.
7. Install the taillamp assembly to the vehicle body with the two screws.

**Rear Back-Up Lamp**



The bulbs are accessible from the underside of the vehicle.

1. Turn the bulb holder anti-clockwise and remove it from reflector.



2. Disengage the bulb socket from the plug connector by pressing the retaining lug.
3. Remove and replace the bulb socket with bulb and attach the plug connector.
4. Insert the bulb socket into the reflector and turn clockwise to engage.

# Electrical System

## Electrical System Overload

The vehicle has fuses and circuit breakers to protect against an electrical system overload.

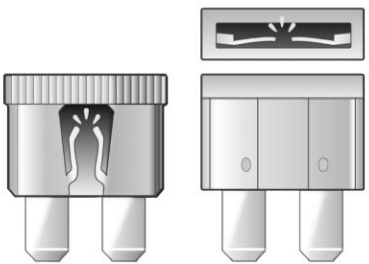
When the current electrical load is too heavy, the circuit breaker opens and closes, protecting the circuit until the current load returns to

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.

If there is a problem on the road and a fuse needs to be replaced, the same amperage fuse can be borrowed.

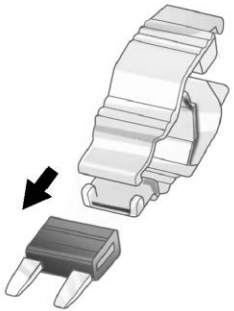
To check a fuse, look at the band inside the fuse. If the band is broken or melted, replace the fuse. Be sure to replace a bad fuse with a fuse of the identical size and rating.

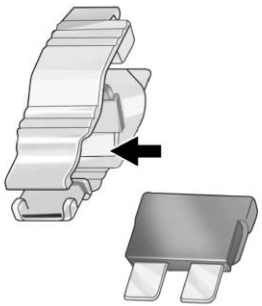




### Replacing a Blown Fuse

1. Turn off the vehicle.
2. Locate the fuse puller in the engine compartment fuse block.





3. Use the fuse puller to remove the fuse from the top or side.

4. If the fuse must be replaced immediately, borrow a replacement fuse with the same amperage from the fuse block. Choose a vehicle feature that is not needed to safely operate the vehicle. Repeat Steps 2-3.
5. Insert the replacement fuse into the empty slot of the blown fuse.

At the next opportunity, see your dealer to replace the blown fuse.

### 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.

### Windshield Wipers

If the wiper motor overheats due to heavy snow or ice, the windshield 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 windshield before using the windshield 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.



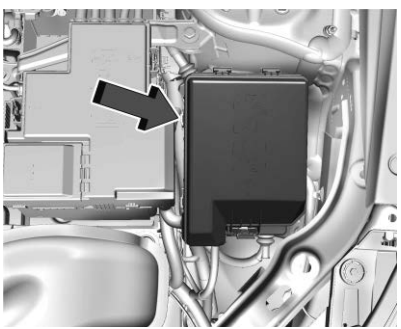
**⚠ Warning**

Installation or use of fuses that do not meet GM's original fuse specifications is dangerous. The fuses could fail, and result in a fire. You or others could be injured or killed, and the vehicle could be damaged.

See *Accessories and Modifications* ⇨ *220* and *General Information* ⇨ *220*.

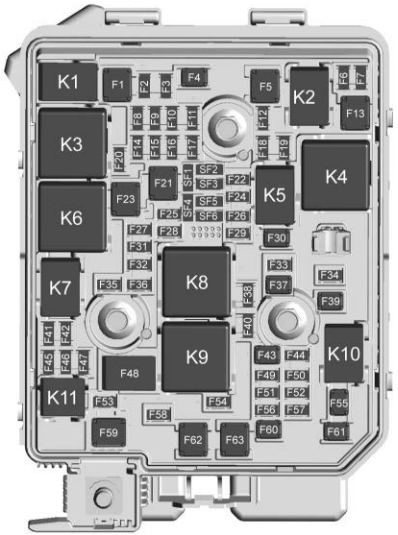
To check or replace a blown fuse, see *Electrical System Overload* ⇨ *246*.

## Engine Compartment Fuse Block



To remove the fuse block cover, squeeze the clip and lift it up.

| Caution |
| --- |
| Spilling liquid on any electrical component on the vehicle may damage it. Always keep the covers on any electrical component. |




The vehicle may not be equipped with all of the fuses, relays, and features shown.

| Micro Fuses | Usage |
| --- | --- |
| F02 | CLSTR |
| F03 | N/A |
| F06 | OSRVM DEFOG |
| F07 | L/GATE RELSE |
| F08 | N/A |
| F09 | VENT SEAT |
| F10 | N/A |
| F11 | N/A |
| F12 | N/A |
| F14 | ISRVM REAR VIEW CAMERA |
| F15 | N/A |
| F16 | HDLP LVL |
| F17 | N/A |
| F18 | FTZM |
| F19 | N/A |
| F20 | N/A |

| Micro Fuses | Usage |
|---|---|
| F22 | TRLR ST/TRN LT - TRLR |
| F24 | ESCL |
| F25 | ECM TCM RUN/CRNK |
| F26 | FRT/REAR WSW PUMP |
| F27 | IGN COIL-GAS |
| F28 | AERO SH |
| F29 | AHL AFL MDL |
| F31 | ECM PT2 |
| F32 | ENG COMP2 |
| F33 | RVC |
| F34 | FRT FOG LP |
| F35 | ENG COMP1 |
| F36 | ECM PT1 |
| F38 | TRLR PRK LAMP - TRLR |
| F40 | N/A |
| F41 | REAR WPR |

| Micro Fuses | Usage |
|---|---|
| F42 | HORN |
| F44 | REAR WPR PRK |
| F45 | A/C CLTCH |
| F46 | N/A |
| F47 | ECM BATT-GAS |
| F49 | HDLP HI LH |
| F50 | N/A |
| F51 | HDLP HI RH |
| F52 | TRLR ST/TRN RT - TRLR |
| F53 | AUX WATER PUMP |
| F54 | PEPS |
| F56 | CNSTR VENT SOL-GAS |
| F57 | N/A |
| F58 | TCM BATT |

| Spare Fuses | Usage |
|---|---|
| SF01 | SPARE |
| SF02 | SPARE |
| SF03 | SPARE |
| SF04 | SPARE |
| SF05 | SPARE |
| SF06 | SPARE |

| ET Fuses | Usage |
|---|---|
| F48 | N/A |

| J-Case Fuses | Usage |
|---|---|
| F01 | N/A |
| F05 | N/A |
| F13 | REAR WNDW DEFOG |
| F21 | E-BOOST PWR1 |
| F23 | STRTR PINION |
| F59 | N/A |

| J-Case Fuses | Usage |
|---|---|
| F62 | N/A |
| F63 | N/A |

| M-case Fuses | Usage |
|---|---|
| F04 | FRT WPR |
| F30 | STRTR SOL |
| F37 | AUX OIL PUMP |
| F39 | N/A |
| F43 | PWR WNDW RT |
| F55 | PWR WNDW LT |
| F60 | N/A |
| F61 | N/A |

| Mini Relays | Usage |
|---|---|
| K03 | RUN/CRNK |
| K04 | REAR DEFOG |
| K06 | STRTR PINION |
| K08 | PT RLY |
| K09 | N/A |

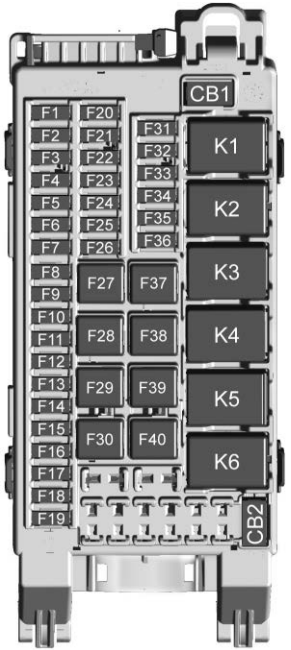
| HC Micro Relays | Usage |
|---|---|
| K01 | N/A |
| K02 | N/A |
| K05 | STRTR SOL |
| K07 | A/C CNTRL |
| K10 | N/A |

| Ultra Micro Relays | Usage |
|---|---|
| K11 | N/A |

## Instrument Panel Fuse Block



The instrument panel fuse block is on the underside of the driver side instrument panel. To access the fuses, open the fuse cover by pulling out. To reinstall the cover, insert the top tab first, then push the cover back into its original location.




| Fuse | Usage |
|---|---|
| F01 | LUMBAR |
| F02 | SUNROOF |
| F03 | VBAT_3 |
| F04 | VBAT_7 |
| F05 | VBAT_6 |
| F06 | AUTO HVAC |
| F07 | CGM |
| F08 | ST_WHL_HTR |
| F09 | DISPLAY |
| F10 | RADIO |
| F11 | ONSTAR (ERA) |
| F12 | PARK_ASSIST |
| F13 | MAN. HVAC |
| F14 | WL CHARGER |
| F15 | VBAT_2 |
| F16 | VBAT_1 |

| Fuse | Usage |
|---|---|
| F17 | SWC BKLT |
| F18 | N/A |
| F19 | N/A |
| F20 | CLOCK SPRING |
| F21 | OCC SEN |
| F22 | DLC |
| F23 | SDM |
| F24 | IGN_SW/ESCL |
| F25 | PWR L-GATE MDL |
| F26 | SEC FUSE-2 |
| F27 | PWR SEAT CO-DR |
| F28 | VBAT_8 |
| F29 | DC-DC AT |
| F30 | PWR L-GATE MDL |
| F31 | OSRVM |
| F32 | FRT HS PWR-1 |

| Fuse | Usage |
|---|---|
| F33 | VBAT_4 |
| F34 | FRT HS PWR-2 |
| F35 | AMPLIFIER |
| F36 | ONSTAR (TCP) |
| F37 | PWR SEAT DR |
| F38 | DC-DC_400W |
| F39 | SEC FUSE-1 |
| F40 | HVAC_BLOWER |

| Circuit Breaker | Usage |
|---|---|
| CB1 | N/A |
| CB2 | APO |

| Relay | Usage |
|---|---|
| K01 | i-RAP_ACC |
| K02 | RUN |
| K03 | LOGISTICS |
| K04 | N/A |
| K05 | N/A |
| K06 | N/A |

## Rear Compartment Fuse Block



The rear compartment fuse block is behind a cover on the driver side of the rear compartment. To access the fuses, remove the cover.



| Fuse | Usage |
|---|---|
| F01 | N/A |
| F02 | RDCM ELEC |
| F03 | N/A |
| F04 | N/A |
| F05 | DC/AC INVERTER |
| F06 | N/A |
| F07 | RDCM |
| F08 | RR SEAT HEAT PWR1 |
| F09 | N/A |
| F10 | RR SEAT HEAT PWR2 |
| F11 | N/A |
| F12 | N/A |
| F13 | N/A |
| F14 | N/A |
| F15 | N/A |
| F16 | N/A |

| Fuse | Usage |
|---|---|
| F17 | N/A |
| F18 | N/A |
| F19 | N/A |
| F20 | N/A |
| F21 | N/A |

| Circuit Breakers | Usage |
|---|---|
| CB1 | N/A |

| Relays | Usage |
|---|---|
| K01 | N/A |
| K02 | N/A |
| K03 | N/A |
| K04 | N/A |
| K05 | N/A |

# Wheels and Tires

## Tires

Every new GM vehicle has high-quality tires made by a leading tire manufacturer. See the warranty manual for information regarding the tire warranty and where to get service. For additional information refer to the tire manufacturer.

**⚠ Warning**

- Poorly maintained and improperly used tires are dangerous.
- Overloading the tires can cause overheating as a result of too much flexing. There could be a blowout and a serious crash. See *Vehicle Load Limits* ⇨ *162*.
- Underinflated tires pose the same danger as overloaded tires. The resulting crash could cause serious injury. Check all tires frequently

(Continued)

**Warning (Continued)**

to maintain the recommended pressure. Tire pressure should be checked when the tires are cold.

- Overinflated tires are more likely to be cut, punctured, or broken by a sudden impact — such as when hitting a pothole. Keep tires at the recommended pressure.
- Worn or old tires can cause a crash. If the tread is badly worn, replace them.
- Replace any tires that have been damaged by impacts with potholes, curbs, etc.
- Improperly repaired tires can cause a crash. Only your dealer or an authorized tire service center should repair, replace, dismount, and mount the tires.

(Continued)

**Warning (Continued)**

- Do not spin the tires in excess of 56 km/h (35 mph) on slippery surfaces such as snow, mud, ice, etc. Excessive spinning may cause the tires to explode.

## All-Season Tires

This vehicle may come with all-season tires. These tires are designed to provide good overall performance on most road surfaces and weather conditions. Original equipment tires designed to GM's specific tire performance criteria have a TPC specification code molded onto the sidewall.

Consider installing winter tires on the vehicle if frequent driving on snow or ice-covered roads is expected. All-season tires provide adequate performance for most winter driving conditions, but they may not offer the same level of traction or performance as winter tires on snow or ice-covered roads. See *Winter Tires* ⇨ *255*.

## Winter Tires

This vehicle was not originally equipped with winter tires. Winter tires are designed for increased traction on snow and ice-covered roads. Consider installing winter tires on the vehicle if frequent driving on ice or snow covered roads is expected. See your dealer for details regarding winter tire availability and proper tire selection. Also, see *Buying New Tires* ⇨ *267*.

With winter tires, there may be decreased dry road traction, increased road noise, and shorter tread life. After changing to winter tires, be alert for changes in vehicle handling and braking.

If using winter tires:

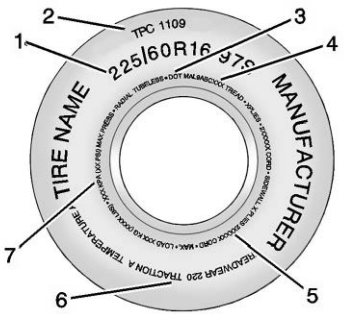
- Use tires of the same brand and tread type on all four wheel positions.
- Use only radial ply tires of the same size, load range, and speed rating as the original equipment tires.

Winter tires with the same speed rating as the original equipment tires may not be available for H, V, W, Y, and ZR speed rated tires. If

winter tires with a lower speed rating are chosen, never exceed the tire's maximum speed capability.

## Tire Sidewall Labeling

Useful information about a tire is molded into its sidewall. The examples show a typical passenger vehicle tire and a compact spare tire sidewall.




**Passenger Tire Example**

**(1) Tire Size :** The tire size is a combination of letters and numbers used to define a particular tire's width, height, aspect ratio, construction type, and service description. See the "Tire Size" illustration in this section.

**(2) TPC Spec (Tire Performance Criteria Specification) :** Original equipment tires designed to GM's specific tire performance criteria have a TPC specification code molded onto the sidewall. GM's TPC specifications meet or exceed all federal safety guidelines.

**(3) DOT (Department of Transportation) :** The Department of Transportation (DOT) code indicates that the tire is in compliance with the U.S. Department of Transportation Motor Vehicle Safety Standards.

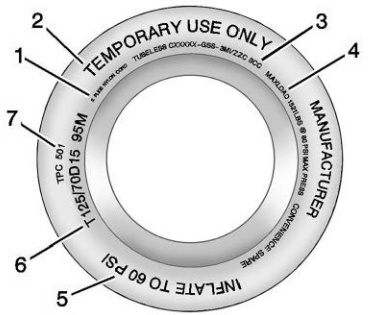
**DOT Tire Date of Manufacture :** The last four digits of the TIN indicate the tire manufactured date. The first two digits represent the week and the last two digits, the year. For example, the third week of the year 2020 would have a 4-digit DOT date of 0320. Week 01 is the first full week (Sunday through Saturday) of each year.

**(4) Tire Identification Number (TIN) :** The letters and numbers following the DOT (Department of Transportation) code are the Tire Identification Number (TIN). The TIN shows the manufacturer and plant code, tire size, and date the tire was manufactured. The TIN is molded onto both sides of the tire, although only one side may have the date of manufacture.

**(5) Tire Ply Material :** The type of cord and number of plies in the sidewall and under the tread.

**(6) Uniform Tire Quality Grading (UTQG) :** Tire manufacturers are required to grade tires based on three performance factors: tread wear, traction, and temperature resistance. For more information see *Uniform Tire Quality Grading* ⇨ *268*.

**(7) Maximum Cold Inflation Load Limit :** Maximum load that can be carried and the maximum pressure needed to support that load.




**Compact Spare Tire Example**

**(1) Tire Ply Material :** The type of cord and number of plies in the sidewall and under the tread.

**(2) Temporary Use Only :** The compact spare tire or temporary use tire should not be driven at speeds over 80 km/h (50 mph). The compact spare tire is for emergency use when a regular road tire has lost air and gone flat. If the vehicle has a compact spare tire, see *Compact Spare Tire* ⇨ *276* and *If a Tire Goes Flat* ⇨ *271*.

**(3) Tire Identification Number (TIN) :** The letters and numbers following the DOT (Department of Transportation) code are the Tire Identification Number (TIN). The TIN shows the manufacturer and plant code, tire size, and date the tire was manufactured. The TIN is molded onto both sides of the tire, although only one side may have the date of manufacture.

**(4) Maximum Cold Inflation Load Limit :** Maximum load that can be carried and the maximum pressure needed to support that load.

**(5) Tire Inflation :** The temporary use tire or compact spare tire should be inflated to 420 kPa (60 psi). For more information on tire pressure and inflation see *Tire Pressure* ⇨ *260*.

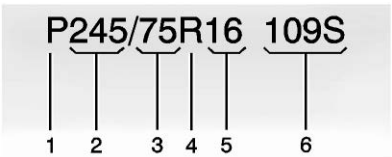
**(6) Tire Size :** A combination of letters and numbers define a tire's width, height, aspect ratio, construction type, and service description. The letter “T” as the first character in the tire size means the tire is for temporary use only.

**(7) TPC Spec (Tire Performance Criteria Specification) :** Original equipment tires designed to GM's specific tire performance criteria have a TPC specification code molded onto the sidewall. GM's TPC specifications meet or exceed all federal safety guidelines.

## Tire Designations

### Tire Size

The example shows a typical passenger vehicle tire size.




**Passenger (P-Metric) Tire**

**(1) Passenger (P-Metric) Tire :** The United States version of a metric tire sizing system. The letter "P" as the first character in the tire size means a passenger vehicle tire engineered to standards set by the U.S. Tire and Rim Association.

**(2) Tire Width :** The 3-digit number indicates the tire section width in millimeters from sidewall to sidewall.

**(3) Aspect Ratio :** A 2-digit number that indicates the tire height-to-width measurements. For example, if the tire size aspect ratio is 75, as shown in item (3) of the illustration, it would mean that the tire's sidewall is 75 percent as high as it is wide.

**(4) Construction Code :** A letter code is used to indicate the type of ply construction in the tire. The letter "R" means radial ply construction; the letter "D" means diagonal or bias ply construction.

**(5) Rim Diameter :** Diameter of the wheel in inches.

**(6) Service Description :** These characters represent the load index and speed rating of the tire. The load index represents the load carrying capacity a tire is certified to carry. The speed rating is the maximum speed a tire is certified to carry a load.

## Tire Terminology and Definitions

**Air Pressure :** The amount of air inside the tire pressing outward on each square inch of the tire. Air pressure is expressed in kPa (kilopascal) or psi (pounds per square inch).

**Aspect Ratio :** The relationship of a tire's height to its width.

**Belt :** A rubber coated layer of cords that is located between the plies and the tread. Cords may be made from steel or other reinforcing materials.

**Bead :** The tire bead contains steel wires wrapped by steel cords that hold the tire onto the rim.

**Bias Ply Tire :** A pneumatic tire in which the plies are laid at alternate angles less than 90 degrees to the centerline of the tread.

**Cold Tire Pressure :** The amount of air pressure in a tire, measured in kPa (kilopascal) or psi (pounds per square inch) before a tire has built up heat from driving. See *Tire Pressure* ⇨ *260*.

**DOT Markings :** A code molded into the sidewall of a tire signifying that the tire is in compliance with the U.S. Department of Transportation (DOT) Motor Vehicle Safety Standards. The DOT code includes the Tire Identification Number (TIN), an alphanumeric designator which can also identify the tire manufacturer, production plant, brand, and date of production.

**GVWR :** Gross Vehicle Weight Rating. See *Vehicle Load Limits* ⇨ *162*.

**GAWR FRT :** Gross Axle Weight Rating for the front axle. See *Vehicle Load Limits* ⇨ *162*.

**GAWR RR :** Gross Axle Weight Rating for the rear axle. See *Vehicle Load Limits* ⇨ *162*.

**Intended Outboard Sidewall :** The side of an asymmetrical tire, that must always face outward when mounted on a vehicle.

**Kilopascal (kPa) :** The metric unit for air pressure.

**Light Truck (LT-Metric) Tire :** A tire used on light duty trucks and some multipurpose passenger vehicles.

**Load Index :** An assigned number ranging from 1 to 279 that corresponds to the load carrying capacity of a tire.

**Maximum Inflation Pressure :** The maximum air pressure to which a cold tire can be inflated. The maximum air pressure is molded onto the sidewall.

**Maximum Load Rating :** The load rating for a tire at the maximum permissible inflation pressure for that tire.

**Occupant Distribution :** Designated seating positions.

**Outward Facing Sidewall :** The side of an asymmetrical tire that has a particular side that faces outward when mounted on a vehicle. The side of the tire that contains a whitewall, bears white lettering, or bears manufacturer, brand, and/or model name molding that is higher or deeper than the same moldings on the other sidewall of the tire.

**Passenger (P-Metric) Tire :** A tire used on passenger cars and some light duty trucks and multipurpose vehicles.

**Recommended Inflation Pressure :** Vehicle manufacturer's recommended tire inflation pressure as shown on the tire placard. See *Tire Pressure* ⇨ *260* and *Vehicle Load Limits* ⇨ *162*.

**Radial Ply Tire :** A pneumatic tire in which the ply cords that extend to the beads are laid at 90 degrees to the centerline of the tread.

**Rim :** A metal support for a tire and upon which the tire beads are seated.

**Sidewall :** The portion of a tire between the tread and the bead.

**Speed Rating :** An alphanumeric code assigned to a tire indicating the maximum speed at which a tire can operate.

**Traction :** The friction between the tire and the road surface. The amount of grip provided.

**Tread :** The portion of a tire that comes into contact with the road.

**Treadwear Indicators :** Narrow bands, sometimes called wear bars, that show across the tread of a tire when only 1.6 mm (1/16 in) of tread remains. See *When It Is Time for New Tires* ⇨ *266*.

**UTQGS (Uniform Tire Quality Grading Standards) :** A tire information system that provides consumers with ratings for a tire's traction, temperature, and treadwear. Ratings are determined by tire manufacturers using government testing procedures. The ratings are molded into the sidewall of the tire. See *Uniform Tire Quality Grading* ⇨ *268*.

**Vehicle Capacity Weight :** The number of designated seating positions multiplied by 68 kg (150 lbs) plus the rated cargo load. See *Vehicle Load Limits* ⇨ *162*.

**Vehicle Maximum Load on the Tire :** Load on an individual tire due to curb weight, accessory weight, occupant weight, and cargo weight.

**Vehicle Placard :** A label permanently attached to a vehicle showing the vehicle's capacity weight and the original

equipment tire size and recommended inflation pressure. See “Tire and Loading Information Label” under *Vehicle Load Limits* ⇨ *162*.

## Tire Pressure

Tires need the correct amount of air pressure to operate effectively.

**⚠ Warning**

Neither tire underinflation nor overinflation is good. Underinflated tires, or tires that do not have enough air, can result in:

- Tire overloading and overheating, which could lead to a blowout
- Premature or irregular wear
- Poor handling
- Reduced fuel economy for internal combustion engine vehicles
- Reduced range for electric vehicles

(Continued)

**Warning (Continued)**

Overinflated tires, or tires that have too much air, can result in:

- Unusual wear
- Poor handling
- Rough ride
- Needless damage from road hazards

The Tire and Loading Information label on the vehicle indicates the original equipment tires and the correct cold tire inflation pressures. The recommended pressure is the minimum air pressure needed to support the vehicle's maximum load carrying capacity. See *Vehicle Load Limits* ⇨ *162*.

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 tires once a month or more. Do not forget the spare, if the vehicle has one. The compact spare cold tire pressure should be at 420 kPa (60 psi). See *Compact Spare Tire* ⇨ *276*.

### How to Check

Use a good quality pocket-type gauge to check tire pressure. Proper tire inflation cannot be determined by looking at the tire. Check the tire inflation pressure when the tires 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 tire valve stem. Press the tire gauge firmly onto the valve to get a pressure measurement. If the cold tire inflation pressure matches the recommended pressure on the Tire and Loading Information label, no further adjustment is necessary. If the 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 center of the tire valve to release air.

Recheck the tire pressure with the tire gauge.

Put the valve caps back on the valve stems to keep out dirt and moisture. Use only valve caps designed for the vehicle by GM. TPMS sensors could be damaged and would not be covered by the vehicle warranty.

## Tire Pressure for High-Speed Operation

**⚠ Warning**

Driving at high speeds, 160 km/h (100 mph) or higher, puts additional strain on tires. Sustained high-speed driving causes excessive heat buildup and can cause sudden tire failure. This could cause a crash, and you or others could be killed. Some high-speed rated tires require inflation pressure adjustment for

(Continued)

**Warning (Continued)**

high-speed operation. When speed limits and road conditions allow the vehicle to be driven at high speeds, make sure the tires are rated for high-speed operation, are in excellent condition, and are set to the correct cold tire inflation pressure for the vehicle load.

## Tire Pressure Monitor System

The Tire Pressure Monitor System (TPMS) uses radio and sensor technology to check tire pressure levels. The TPMS sensors monitor the air pressure in your tires and transmit tire pressure readings to a receiver located in the vehicle.

Each tire, including the spare (if provided), should be checked monthly when cold and inflated to the inflation pressure recommended by the vehicle manufacturer on the vehicle placard or tire inflation pressure label. (If your vehicle has tires of a different size than the size indicated on the vehicle placard or tire inflation pressure label, you should determine the proper tire inflation pressure for those tires.)

As an added safety feature, your vehicle has been equipped with a tire pressure monitoring system (TPMS) that illuminates a low tire pressure telltale when one or more of your tires is significantly under-inflated.

Accordingly, when the low tire pressure telltale illuminates, you should stop and check your tires as soon as possible, and inflate them to the proper pressure. Driving on a significantly under-inflated tire causes the tire to overheat and can lead to tire failure. Under-inflation also reduces energy efficiency and tire tread life, and may affect the vehicle's handling and stopping ability.

Please note that the TPMS is not a substitute for proper tire maintenance, and it is the driver's responsibility to maintain correct tire pressure, even if under-inflation has not reached the level to trigger illumination of the TPMS low tire pressure telltale.

Your vehicle has also been equipped with a TPMS malfunction indicator to indicate when the system is not operating properly. The TPMS malfunction indicator is combined with the low tire pressure telltale. When the system detects a malfunction, the telltale will flash for approximately 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 tire pressure as intended. TPMS malfunctions may occur for a variety of reasons, including the installation of replacement or alternate tires or wheels on the vehicle that prevent the TPMS from functioning properly. Always check the TPMS malfunction telltale after replacing one or more tires or wheels on your vehicle to ensure that the replacement or alternate tires and wheels allow the TPMS to continue to function properly.

See *Tire Pressure Monitor Operation* ⇨ *262*.

See *Radio Frequency Statement* ⇨ *312*.

## Tire Pressure Monitor Operation

This vehicle may have a Tire Pressure Monitor System (TPMS). The TPMS is designed to warn the driver when a low tire pressure condition exists. TPMS sensors are mounted onto each tire and wheel assembly, excluding the spare tire and wheel assembly. The TPMS sensors monitor the air pressure in the tires and transmit the tire pressure readings to a receiver located in the vehicle.



When a low tire pressure condition is detected, the TPMS illuminates the low tire pressure warning light located on the instrument cluster. If the warning light comes on, stop as soon as possible and inflate the tires to the recommended pressure shown on the Tire and Loading Information label. See *Vehicle Load Limits* ⇨ *162*.

A message to check the pressure in a specific tire may display in the Driver Information Center (DIC). The low tire pressure warning light and the DIC warning message, if equipped, come on at each ignition cycle until the tires are inflated to the correct inflation pressure. Using the DIC, it may be possible to view the tire pressure levels. For additional information and details about the DIC operation and displays, see *Driver Information Center (DIC)* ⇨ *112*.

The low tire 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 Tire and Loading Information label shows the size of the original equipment tires and the correct inflation pressure for the tires when they are cold. See *Vehicle Load Limits* ⇨ *162*, for an example of the Tire and Loading Information label and its location. Also see *Tire Pressure* ⇨ *260*.

The TPMS can warn about a low tire pressure condition, but it does not replace normal tire maintenance. See *Tire Inspection* ⇨ *265*, *Tire Rotation* ⇨ *265*, and *Tires* ⇨ *254*.

**Caution**

Tire sealant materials are not all the same. A non-approved tire sealant could damage the TPMS sensors. TPMS sensor damage caused by using an incorrect tire sealant is not covered by the vehicle warranty.

(Continued)

**Caution (Continued)**

Always use only the GM approved tire sealant available through your dealer or included in the vehicle.

### 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 tire pressure warning light, defined above, flashes for about one minute and then stays on for the remainder of the ignition cycle. A DIC warning message may also display. The malfunction light and DIC warning message, if equipped, 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 tires has been replaced with the spare tire. The spare tire does not have a TPMS sensor. The malfunction light and the DIC message, if equipped, should go off after the road tire is replaced and the sensor matching process is performed successfully. See "TPMS Sensor Matching Process" later in this section.
- The TPMS sensor matching process was not done or not completed successfully after rotating the tires. The malfunction light and the DIC message, if equipped, should go off after successfully completing the sensor matching process. See "TPMS Sensor Matching Process" later in this section.
- One or more TPMS sensors are missing or damaged. The malfunction light and the DIC message, if equipped, should go off when the TPMS sensors are installed and the sensor matching process is performed successfully. See your dealer for service.
- Replacement tires or wheels do not match the original equipment tires or wheels. Tires and wheels other than those recommended could prevent the TPMS from functioning properly. See *Buying New Tires* ⇨ *267*.
- 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 tire pressure condition. See your dealer for service if the TPMS malfunction light and DIC message, if equipped, come on and stay on.

### Tire Fill Alert (If Equipped)

This feature provides visual and audible alerts outside the vehicle to help when inflating an underinflated tire to the recommended cold tire pressure.

When the low tire pressure warning light comes on:

1. Park the vehicle in a safe, level place.
2. Set the parking brake firmly.
3. Place the vehicle in P (Park).
4. Add air to the tire that is underinflated. The turn signal lamp will flash. When the recommended pressure is reached, the horn sounds once and the turn signal lamp will stop flashing and briefly turn solid.

Repeat these steps for all underinflated tires that have illuminated the low tire pressure warning light.

**⚠ Warning**

Overinflating a tire could cause the tire to rupture and you or others could be injured. Do not exceed the maximum pressure listed on the tire sidewall. See *Tire Sidewall Labeling* ⇨ *256* and *Vehicle Load Limits* ⇨ *162*.

If the tire is overinflated by more than 35 kPa (5 psi), the horn will sound multiple times and the turn signal lamp will continue to flash for several seconds after filling stops.

To release and correct the pressure, while the turn signal lamp is still flashing, briefly press the center of the valve stem. When the recommended pressure is reached, the horn sounds once.

If the turn signal lamp does not flash within 15 seconds after starting to inflate the tire, the tire fill alert has not been activated or is not working.

If the hazard warning flashers are on, the tire fill alert visual feedback will not work properly.

The TPMS will not activate the tire 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 tire.
- There is a malfunction in the TPMS.
- There is a malfunction in the horn or turn signal lamps.
- The TPMS sensor identification code is not registered to the system.
- The TPMS sensor battery is low.

If the tire 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 tire fill alert feature is not working, use a tire pressure gauge.

### TPMS Sensor Matching Process

Each TPMS sensor has a unique identification code. The identification code needs to be matched to a new tire/wheel position after rotating the vehicle's tires or replacing one or more of the TPMS sensors. Also, the TPMS sensor matching process should be performed after replacing a spare tire with a road tire containing the TPMS sensor. The malfunction light and the DIC message, if equipped, should go off at the next ignition cycle. The sensors are matched to the tire/wheel positions, using a TPMS relearn tool, in the following order: driver side front tire, passenger side front tire, passenger side rear tire, and driver side rear. See your dealer for service or to purchase a relearn tool. A TPMS relearn tool can also be purchased. See Tire Pressure Monitor Sensor Activation Tool at www.gmtoolsandequipment.com or call 1-800-GM TOOLS (1-800-468-6657).

There are two minutes to match the first tire/wheel position, and five minutes overall to match all four tire/wheel positions. If it takes longer, the matching process stops and must be restarted.

The TPMS sensor matching process is:

1. Set the parking brake.
2. Turn the ignition on without starting the vehicle or place the vehicle in Service Mode. See *Ignition Positions* ⇨ *166*.

3. Select Tire Pressure in the Vehicle Status on the infotainment display. To access the vehicle status menu touch from the list of home page icons displayed on the left side of the infotainment display.
4. Touch Maintenance and touch Tire Pressure in Maintenance.
5. Touch Relearn Tire Pressure to begin the sensor matching process. A message requesting acceptance of the process may display.
6. If requested, touch Relearn to confirm the selection. The horn sounds twice to signal the receiver is in relearn mode and the RELEARNING TIRE PRESSURE message displays on the infotainment display.
7. Start with the driver side front tire.
8. Place the relearn tool against the tire 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 tire and wheel position.
9. Proceed to the passenger side front tire, and repeat the procedure in Step 8.
10. Proceed to the passenger side rear tire, and repeat the procedure in Step 8.
11. Proceed to the driver side rear tire, and repeat the procedure in Step 8. The horn sounds two times to indicate the sensor identification code has been matched to the driver side rear tire, and the TPMS sensor matching process is no longer active. The RELEARNING TIRE PRESSURE message on the infotainment display goes off.
12. Turn the vehicle off.
13. Set all four tires to the recommended air pressure level as indicated on the Tire and Loading Information label.

## Tire Inspection

We recommend that the tires, including the spare tire, if the vehicle has one, be inspected for signs of wear or damage at least once a month.

Replace the tire if:

- The indicators at three or more places around the tire can be seen.
- There is cord or fabric showing through the tire's rubber.
- The tread or sidewall is cracked, cut, or snagged deep enough to show cord or fabric.
- The tire has a bump, bulge, or split.
- The tire has a puncture, cut, or other damage that cannot be repaired well because of the size or location of the damage.

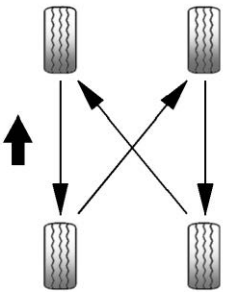
## Tire Rotation

Tires should be rotated according to the interval specified in the Maintenance Schedule. See *Maintenance Schedule* ⇨ *293*.

Tires are rotated to achieve a more uniform wear for all tires. The first rotation is the most important.

Anytime unusual wear is noticed, rotate the tires as soon as possible, check for proper tire inflation pressure, and check for damaged tires or wheels. If the unusual wear continues after the rotation, check

the wheel alignment. See *When It Is Time for New Tires* ⇨ *266* and *Wheel Replacement* ⇨ *270*.



Use this rotation pattern when rotating the tires.

Do not include the compact spare tire in the tire rotation.

Adjust the front and rear tires to the recommended inflation pressure on the Tire and Loading Information label after the tires have been rotated. See *Tire Pressure* ⇨ *260* and *Vehicle Load Limits* ⇨ *162*.

Reset the Tire Pressure Monitor System. See *Tire Pressure Monitor Operation* ⇨ *262*.

Check that all wheel nuts are properly tightened. See "Wheel Nut Torque" under *Capacities and Specifications* ⇨ *301*, and "Removing the Flat Tire and Installing the Spare Tire" under *Tire Changing* ⇨ *272*.

**⚠ Warning**

Rust or dirt on a wheel, or on the parts to which it is fastened, can cause wheel nuts to become loose over 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 paper towel can be used; however, use a scraper or wire brush later to remove all rust or dirt.

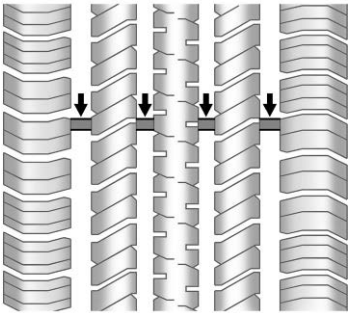
Lightly coat the inner diameter of the wheel hub opening with wheel bearing grease after a wheel change or tire rotation to prevent corrosion or rust buildup.

**⚠ Warning**

Do not apply grease to the wheel mounting surface, wheel conical seats, or the wheel nuts or bolts. Grease applied to these areas could cause a wheel to become loose or come off, resulting in a crash.

## When It Is Time for New Tires

Factors, such as maintenance, temperatures, driving speeds, vehicle loading, and road conditions affect the wear rate of the tires.



Treadwear indicators are one way to tell when it is time for new tires. Treadwear indicators appear when the tires have only 1.6 mm (1/16 in) or less of tread remaining. See *Tire Inspection* ⇨ *265* and *Tire Rotation* ⇨ *265*.

The rubber in tires ages over time. This also applies to the spare tire, if the vehicle has one, even if it is never used. Multiple factors including temperatures, loading conditions, and inflation pressure maintenance affect how fast aging takes place. GM recommends that tires, including the spare if equipped, be replaced after six years, regardless of tread wear. To identify the age of a tire, use the tire manufacture date, which is the last four digits of the DOT Tire Identification Number (TIN) molded into one side of the tire sidewall. The last four digits of the TIN indicate the tire manufactured date. The first two digits represent the week and the last two digits, the year. For example, the third week of the year 2020 would have a 4-digit DOT date of 0320. Week 01 is the first full week (Sunday through Saturday) of each year.

### Vehicle Storage

Tires 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 aging. This area should be free of grease, gasoline, or other substances that can deteriorate rubber.

Parking for an extended period can cause flat spots on the tires that may result in vibrations while driving. When storing a vehicle for at least a month, remove the tires or raise the vehicle to reduce the weight from the tires.

## Buying New Tires

GM has developed and matched specific tires for the vehicle. The original equipment tires installed were designed to meet General Motors Tire Performance Criteria Specification (TPC Spec) system rating. When replacement tires are needed, GM strongly recommends buying tires 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 tire pressure monitoring performance. GM's TPC Spec number is molded onto the tire's sidewall near the tire size.

GM recommends replacing worn tires in complete sets of four. Uniform tread depth on all tires will help to maintain the performance of the vehicle. Braking and handling performance may be adversely affected if all the tires are not replaced at the same time. If proper rotation and maintenance have been done, all four tires should wear out at about the same time. However, if it is necessary to replace only one axle set of worn tires, place the new tires on the rear axle. See *Tire Rotation* ⇨ *265*.

**⚠ Warning**

Tires could explode during improper service. Attempting to mount or dismount a tire could cause injury or

(Continued)

**Warning (Continued)**

death. Only your dealer or authorized tire service center should mount or dismount the tires.

**⚠ Warning**

Mixing tires of different sizes (other than those originally installed on the vehicle), brands, tread patterns, or types may cause loss of vehicle control, resulting in a crash or other vehicle damage. Use the correct size, brand, and type of tire on all wheels.

**⚠ Warning**

Using bias-ply tires on the vehicle may cause the wheel rim flanges to develop cracks after many miles of driving. A tire and/or wheel could fail suddenly and cause a crash. Use only radial-ply tires with the wheels on the vehicle.

Winter tires with the same speed rating as the original equipment tires may not be available for H, V, W, Y and ZR speed rated tires. Never exceed the winter tires' maximum speed capability when using winter tires with a lower speed rating.

If the vehicle tires must be replaced with a tire 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 tires.

The Tire and Loading Information label indicates the original equipment tires on the vehicle. See *Vehicle Load Limits* ⇨ *162*.

## Different Size Tires and Wheels

**⚠ Warning**

If different sized wheels are used, there may not be an acceptable level of performance and safety if tires not recommended for those wheels are selected. This increases the chance of a crash and serious injury. Only use GM specific wheel and tire

(Continued)

**Warning (Continued)**

systems developed for the vehicle, and have them properly installed by a GM certified technician.

If wheels or tires are installed that are a different size than the original equipment wheels and tires, 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 (AWD), the performance of these systems can also be affected.

See *Buying New Tires* ⇨ *267* and *Accessories and Modifications* ⇨ *220*.

## Uniform Tire Quality Grading

The following information relates to the system developed by the United States National Highway Traffic Safety Administration (NHTSA), which grades tires by treadwear, traction, and temperature performance. This applies

only to vehicles sold in the United States. The grades are molded on the sidewalls of most passenger car tires. The Uniform Tire Quality Grading (UTQG) system does not apply to deep tread, winter tires, compact spare tires, tires with nominal rim diameters of 10 to 12 inches (25 to 30 cm), or to some limited-production tires.

While the tires available on General Motors passenger cars and light trucks may vary with respect to these grades, they must also conform to federal safety requirements and additional General Motors Tire Performance Criteria (TPC) standards.

Quality grades can be found where applicable on the tire sidewall between tread shoulder and maximum section width. For example:

**Treadwear 200 Traction AA Temperature A**

All Passenger Car Tires Must Conform to Federal Safety Requirements In Addition To These Grades.

**Treadwear**

The treadwear grade is a comparative rating based on the wear rate of the tire when tested under controlled conditions on a specified government test course. For example, a tire graded 150 would wear one and one-half (1½) times as well on the government course as a tire graded 100. The relative performance of tires depends upon the actual conditions of their use, however, and may depart significantly from the norm due to variations in driving habits, service practices and differences in road characteristics and climate.

**Traction**

The traction grades, from highest to lowest, are AA, A, B, and C. Those grades represent the tire's ability to stop on wet pavement as measured under controlled conditions on specified government test surfaces of asphalt and concrete. A tire marked C may have poor traction performance. Warning: The traction grade assigned to this tire is based on straight-ahead braking traction tests, and does not include acceleration, cornering, hydroplaning, or peak traction characteristics.

**Temperature**

The temperature grades are A (the highest), B, and C, representing the tire's resistance to the generation of heat and its ability to dissipate heat when tested under controlled conditions on a specified indoor laboratory test wheel. Sustained high temperature can cause the material of the tire to degenerate and reduce tire life, and excessive temperature can lead to sudden tire failure. The grade C corresponds to a level of performance which all passenger car tires must meet under the Federal Motor Safety Standard No. 109. Grades B and A represent higher levels of performance on the laboratory test wheel than the minimum required by law. Warning: The temperature grade for this tire is established for a tire that is properly inflated and not overloaded. Excessive speed, underinflation, or

excessive loading, either separately or in combination, can cause heat buildup and possible tire failure.

## Wheel Alignment and Tire Balance

The tires and wheels were aligned and balanced at the factory to provide the longest tire life and best overall performance. Adjustments to wheel alignment and tire balancing are not necessary on a regular basis. Consider an alignment check if there is unusual tire wear or the vehicle is significantly pulling to one side or the other. Some slight pull to the left or right, depending on the slope 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 tires 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 aluminum 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 Tire 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. Tires can lose air and cause loss of control, resulting in a crash. Always use the correct wheel, wheel bolts, and wheel nuts for replacement.

**⚠ 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.

**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 tire or tire chain clearance to the body and chassis.

## Tire Traction Devices

**⚠ Warning**

If the vehicle has 245/45R19 size tires, do not use tire chains. There is not enough clearance. Tire chains used on a vehicle

(Continued)

**Warning (Continued)**

without the proper amount of clearance can cause damage to the brakes, suspension, or other vehicle parts. The area damaged by the tire chains could cause loss of control and a crash. Use another type of traction device only if its manufacturer recommends it for the vehicle's tire size combination and road conditions. Follow that manufacturer's instructions. To avoid vehicle damage, drive slow and readjust or remove the traction device if it contacts the vehicle. Do not spin the wheels. If traction devices are used, install them on the tires of the drive axle only.

**Caution**

If the vehicle is equipped with tire size 225/55R18, use tire winter traction devices only where legal and only when necessary. Only use textile traction devices, such as tire snow socks, that are the proper size for the tires. Install them on the tires of the front axle only. Drive slowly and

(Continued)

**Caution (Continued)**

follow the traction device manufacturer's instructions. Driving too fast or spinning the wheels, with the traction device installed, can damage the traction device.

## If a Tire Goes Flat

It is unusual for a tire to blow out while driving, especially if the tires are maintained properly. It is much more likely for a tire to experience a slow leak. See *Tires* ⇨ *254*.

In the event of a blowout, follow these tips:

- A front tire blowout causes the vehicle to pull toward the side of the flat. 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.
- 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.

**⚠ Warning**

Driving on a flat tire will cause permanent damage to the tire. Re-inflating a tire after it has been driven on while severely underinflated or flat may cause a blowout and a serious crash. Never attempt to re-inflate a tire that has been driven on while severely underinflated or flat. Have your dealer or an authorized tire service center repair or replace the flat tire 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 tire. 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 tire.

If a tire goes flat, avoid further tire and wheel damage by driving slowly to a level place, well off the road, if possible. Turn on the hazard warning flashers. See *Hazard Warning Flashers* ⇨ *122*.

If your vehicle is loaded at or near maximum cargo capacity, it may be difficult to fit the jack under the vehicle due to the environment (shoulder slope, road debris, etc.). Removal of some weight may improve the ability to fit the jack under the vehicle at the correct jacking location.

**⚠ Warning**

Changing a tire 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 tire. To help prevent the vehicle from moving:

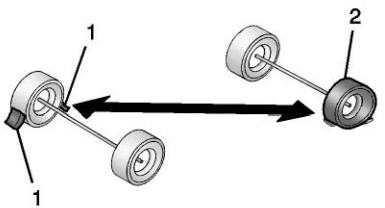
1. Set the parking brake firmly.
2. Put the vehicle in P (Park).
3. Turn the vehicle off and do not restart the vehicle while it is raised.

(Continued)

**Warning (Continued)**

4. Do not allow passengers to remain in the vehicle.
5. Place wheel blocks, if equipped, on both sides of the tire at the opposite corner of the tire being changed.

To safely change a flat tire:

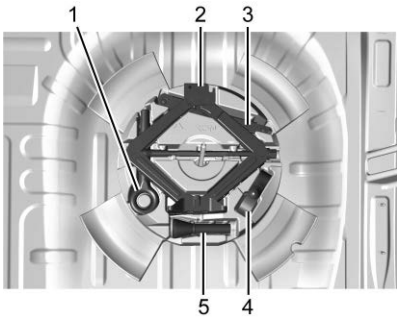



1. If equipped, place wheel blocks (1), as shown, to prevent the vehicle from moving.
2. Use the jacking equipment to change the flat tire (2). See *Tire Changing* ⇨ *272*.

## Tire Changing

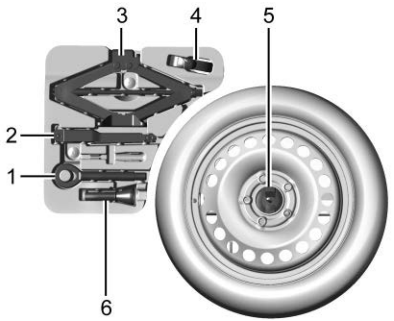
### Removing the Spare Tire and Tools

The spare tire and tools are located under the load floor in the rear of the vehicle.




**Without Subwoofer**

1. Tow Eye
2. Jack
3. Wrench
4. Strap
5. Funnel




**With Subwoofer**

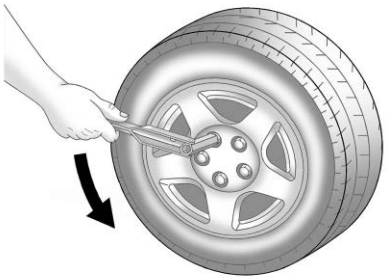
1. Tow Eye
2. Wrench
3. Jack
4. Strap
5. Wing Nut
6. Funnel

To access the spare tire and tools:

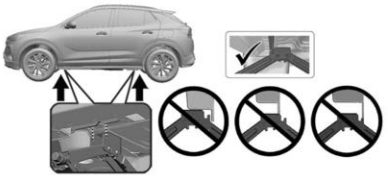
1. Open the liftgate. See *Liftgate* ⇨ *20*.
2. Remove the load floor.
3. Turn the wing nut counterclockwise and remove the spare tire. Place the spare tire next to the tire being changed.
4. Remove the jack and tools and place them near the tire being changed.

### Removing the Flat Tire and Installing the Spare Tire

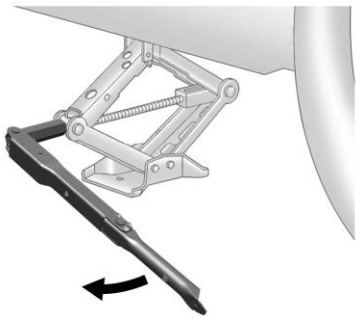
1. Do a safety check before proceeding. See *If a Tire Goes Flat* ⇨ *271*.



2. Turn the wheel wrench counterclockwise to loosen the wheel nuts. Do not remove them yet.



3. Place the jack at the position marked with a half circle.



4. Place the hex tube end of the wrench over the hex head of the jack to attach it.
5. Turn the wheel wrench clockwise until the lift head is firmly contacting the proper lifting point nearest the flat tire.

**⚠ 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 tire. 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 tire.

6. Turn the wheel wrench clockwise to raise the vehicle far enough off the ground so there is enough room for the spare tire to fit underneath the wheel well.
7. Turn the wheel nuts counterclockwise to remove them.
8. Remove the flat tire.

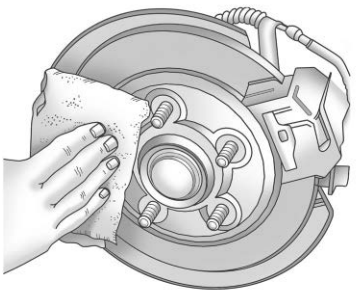
**⚠ Warning**

Rust or dirt on a wheel, or on the parts to which it is fastened, can cause wheel nuts to become loose over time. The

(Continued)

**Warning (Continued)**

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 paper towel can be used; however, use a scraper or wire brush later to remove all rust or dirt.



9. Remove any rust or dirt from the wheel bolts, mounting surfaces, and spare wheel.
10. Place the spare tire 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.

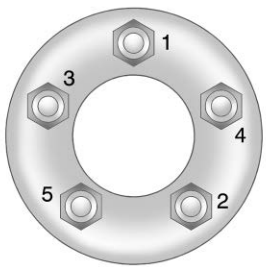
11. Reinstall the wheel nuts. Turn each nut clockwise, by hand, until the wheel is held against the hub.
12. Lower the vehicle by turning the wheel wrench counterclockwise. Lower the jack completely.

**⚠ 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* ⇨ *301* for original equipment wheel nut torque specifications.

**Caution**

Improperly tightened wheel nuts can lead to brake pulsation and rotor damage. To avoid expensive brake repairs, evenly tighten the wheel nuts in the proper sequence and to the proper torque specification. See *Capacities and Specifications* ⇨ *301* for the wheel nut torque specification.




13. Tighten the wheel nuts firmly with the wheel wrench in a crisscross sequence, as shown.

**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.

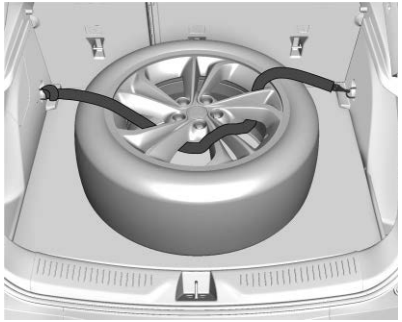
## Storing a Flat or Spare Tire and Tools

**⚠ Warning**

Storing a jack, a tire, 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.

### Storing the Flat Tire and Tools

1. Return the jack and tools to their original storage location.
2. Replace the load floor.
3. Place the flat tire, lying flat, in the rear storage compartment.
4. Attach one end of the strap to a cargo tie-down in the rear of the vehicle.



5. Route the strap through the wheel, as shown.
6. Attach the other end of the strap to the other cargo tie-down in the rear of the vehicle.
7. Tighten the strap.

**Storing the Compact Spare Tire and Tools**

Reverse the instructions for removing the spare tire and tools to store the spare tire.

The compact spare tire is for temporary use only. Replace the compact spare tire with a full-size tire as soon as you can. See *Compact Spare Tire* ⇨ *276*.

## Compact Spare Tire

**⚠ Warning**

Driving with more than one compact spare tire 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 tire at a time.

If this vehicle has a compact spare tire, 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 tire is correctly inflated after being installed on the vehicle. The compact spare tire is designed for temporary use only. The vehicle will perform differently with the spare tire installed and it is recommended that the vehicle speed be limited to 80 km/h (50 mph). To conserve the tread of the spare tire, have the standard tire repaired or replaced as soon as convenient and return the spare tire to the storage area.

When using a compact spare tire, the AWD (if equipped), ABS, and Traction Control systems may engage until the spare tire is recognized 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 tire, wheel, and other parts of the vehicle.

Do not use the compact spare on other vehicles.

Do not mix the compact spare tire or wheel with other wheels or tires. They will not fit. Keep the spare tire and its wheel together.

**Caution**

Tire chains will not fit the compact spare. Using them can damage the vehicle and the chains. Do not use tire chains on the compact spare.

# Jump Starting

## Jump Starting - North America

For more information about the vehicle battery, see *Battery - North America* ⇨ *238*.

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**

**WARNING:** Battery posts, terminals and related accessories can expose you to chemicals including lead and lead compounds, which are known to the State of California to cause cancer and birth defects or other reproductive harm. Wash hands after handling. For more information go to www.P65Warnings.ca.gov.

See *California Proposition 65 Warning* ⇨ *1*.

**⚠ 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.

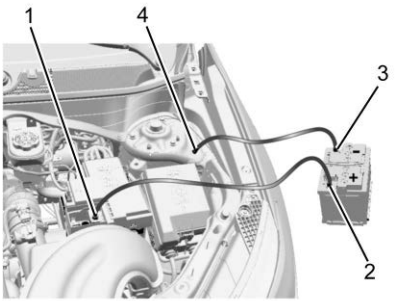
If you do not follow these steps exactly, some or all of these things can hurt you.

**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.

**Caution**

If the jumper cables 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 jumper cables in the correct order, making sure that the cables do not touch each other or other metal.




**Connection Points and Sequence**

1. Discharged Battery Positive (+) Terminal
2. Good Battery Positive (+) Terminal

3. Good Battery Negative (–) Terminal
4. Discharged Battery Negative (–) Grounding Point

The discharged battery positive (+) terminal is in the engine compartment on the driver side of the vehicle.

The discharged battery negative (–) grounding point is the engine block or an engine mounting bolt. Connect to a spot as far away from the discharged battery as possible.

The good battery negative (–) terminal and good battery positive (+) terminal are on the battery of the vehicle providing the jump start.

The discharged battery positive (+) terminal is under a trim cover. Open 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 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. Set the parking brake firmly and put the shift lever in P (Park) with an automatic transmission, or Neutral with a manual transmission.

**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 underhood 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 flashlight 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 discharged battery positive (+) terminal.
6. Connect the other end of the red positive (+) cable to the good battery positive (+) terminal.
7. Connect one end of the black negative (–) cable to the good battery negative (–) terminal.
8. Connect the other end of the black negative (–) cable to the discharged battery negative (–) grounding point.
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.

**Jumper Cable Removal**

Reverse the sequence exactly when removing the jumper cables.

After starting the disabled vehicle and removing the jumper cables, allow it to idle for several minutes.

# Towing the Vehicle

## Transporting a Disabled Vehicle

**Caution**

Incorrectly transporting a disabled vehicle may cause damage to the vehicle. Use proper tire straps to secure the vehicle to the flatbed tow truck. Do not strap or hook to any frame, underbody, or suspension component not specified below. Do not move vehicles with drive axle tires on the ground. Damage is not covered by the vehicle warranty.

**Caution**

The vehicle may be equipped with an Electric Parking Brake (EPB) and/or a mechanical transmission range select shifter. In the event of a loss of 12-volt battery power, the EPB cannot be released, and the vehicle cannot be shifted to N (Neutral). Tire skates or dollies must be used under the non-rolling tires to prevent damage while loading/unloading the vehicle. Dragging the vehicle will cause damage not covered by the vehicle warranty.

**Caution**

The vehicle may be equipped with a tow eye. Improper use of the tow eye may cause damage to the vehicle and is not covered by the vehicle warranty. If equipped, use the tow eye to load the vehicle onto a flatbed tow truck from a flat road surface, or to move the vehicle a very short distance at a walking pace. The tow eye is not designed

(Continued)

**Caution (Continued)**

for off-road recovery. The vehicle must be in N (Neutral) with the Electric Parking Brake (EPB) released when using the tow eye.

Contact a professional towing service if the disabled vehicle must be transported. GM recommends a flatbed tow truck to transport a disabled vehicle. Use ramps to help reduce approach angles, if necessary.

If equipped, a tow eye may be located near the spare tire or emergency jack. Do not use the tow eye to pull the vehicle from the snow, mud, sand, or ditch. Tow eye threads may have right- or left-hand threads. Use caution when installing or removing the tow eye.

The vehicle must be in N (Neutral) and the Electric Parking Brake (EPB) must be released when loading the vehicle onto a flatbed tow truck.

- If the 12-volt battery is dead and/or EPB is not released, the vehicle will not move. Try to jump start the vehicle with a known, good 12-volt battery, shift the car into N (Neutral), and release the EPB. Refer to *Jump Starting - North America* ⇨ 277.
- If unsuccessful, use tire skates or dollies under the non-rolling tires to prevent vehicle damage.

### Front Tow Eye Attachment Point



Carefully open the cover on the fascia by using the small notch that conceals the tow eye socket.

Install the tow eye into the socket and turn it until it is fully tightened. When the tow eye is removed, reinstall the cover with the notch in the original position.

## 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:

- What is the towing capacity of the towing vehicle? Be sure to read the tow vehicle manufacturer's recommendations.
- What is the distance that will be traveled? Some vehicles have restrictions on how far and how long they can tow.
- Is the proper towing equipment going to be used? See your dealer or trailering professional for additional advice and equipment recommendations.
- Is the vehicle ready to be towed? Just as preparing the vehicle for a long trip, make sure the vehicle is prepared to be towed.

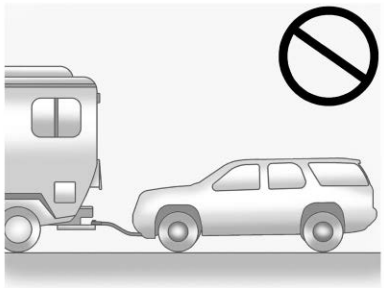
**Caution**

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.

**Caution**

Do not install tow hardware that interferes with the lower shutters. Shutters cannot be removed. Removal of the shutters can cause damage to the engine that will not be covered by the vehicle warranty. If using tow hardware, only install hardware that does not require the removal of the shutters.

## Dinghy Towing (Front-Wheel-Drive Vehicles)

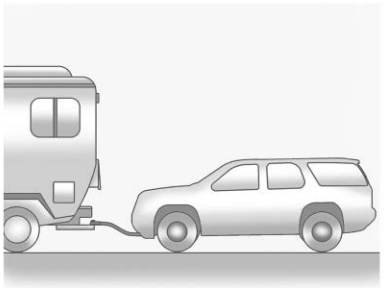


**Caution**

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 was not designed to be towed with all four wheels on the ground.

## Dinghy Towing (All-Wheel-Drive Vehicles Only)



To dinghy tow the vehicle from the front with all four wheels on the ground:

1. Position the vehicle behind the tow vehicle, lining it up with the tow bar.
2. Leave the vehicle running. Shift the transmission to N (Neutral).
3. Apply the parking brake to prevent vehicle rollaway.
4. Connect the vehicle to the tow bar hardware.
5. Release the parking brake.

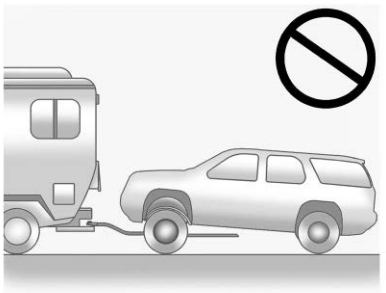
6. Leave the transmission in N (Neutral) and turn the vehicle off. You may hear a continuous chime, which is normal.
7. Open the hood and disconnect the negative battery terminal. See *Battery - North America* ⇨ *238*.
8. Cover the negative battery post with a non-conductive material to prevent any contact with the negative battery terminal.

| Caution |
| --- |
| If 113 km/h (70 mph) is exceeded while towing the vehicle, it could be damaged. Never exceed 113 km/h (70 mph) while towing the vehicle. |

To disconnect the towed vehicle:

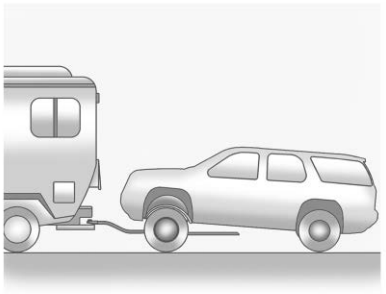
1. Park on a level surface.
2. Make sure that the ignition is off.
3. Remove any tape, glue, or excess material from the negative battery post.
4. Connect the battery. See "Negative Battery Cable Reconnection" under *Battery - North America* ⇨ *238*.
5. Apply the parking brake.
6. Disconnect the vehicle from the tow vehicle.
7. Release the parking brake.

### Dolly Towing (All-Wheel-Drive Vehicles)



All-wheel-drive vehicles must not be towed with two wheels on the ground.

### Dolly Towing (Front-Wheel-Drive Vehicles Only)

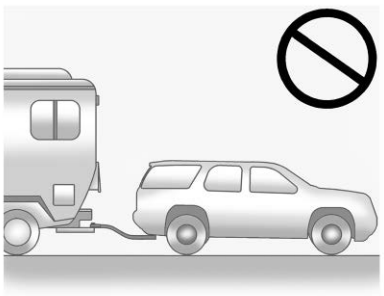


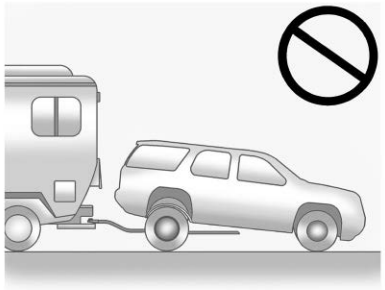
To tow a front-wheel-drive vehicle from the front with two wheels on the ground:

1. Put the front wheels on a dolly.
2. Move the shift lever to P (Park).
3. Set the parking brake.
4. Clamp the steering wheel in a straight-ahead position with a clamping device designed for towing.
5. Turn the vehicle off.
6. Secure the vehicle to the dolly.
7. Release the parking brake.

8. Disconnect the negative battery cable at the battery. See “Negative Battery Cable Disconnection” *Battery - North America* ⇨ *238*.
9. Cover the negative battery post with a non-conductive material to prevent any contact with the negative battery terminal.

### 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* ⇨ *298*.

### 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 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.

If using an automatic car wash, follow the car wash instructions. The windshield 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.

**Cleaning Underhood Components**

**Caution**

Do not power wash any component under the hood that has this  symbol.

This could cause damage that would not be covered by the vehicle warranty.

Solvents or aggressive cleaners may harm underhood components. The usages of these chemicals should be avoided.

Recommend water only.

A pressure washer may be used, but care must be utilized. The following criteria must be followed:

- Water pressure must be kept below 14 000 KPa (2,000 PSI).
- Water temperature must be below 80 °C (180 °F).
- Spray nozzle with a 40 degree wide angle spray pattern or wider must be used.
- Nozzle must be kept at least 30 cm (1 ft) away from all surfaces.

## 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 basecoat/clearcoat paint finish may damage it. Use only non-abrasive waxes and polishes that are made for a basecoat/clearcoat paint finish on the vehicle. |

To keep the paint finish looking new, keep the vehicle garaged or covered whenever possible.

**Protecting Exterior Bright Metal Moldings**

| Caution |
| --- |
| Failure to clean and protect the bright metal moldings can result in a hazy white finish or pitting. This damage would not be covered by the vehicle warranty. |

The bright metal moldings on the vehicle are aluminum, chrome, or stainless steel. To prevent damage always follow these cleaning instructions:

- Be sure the molding is cool to the touch before applying any cleaning solution.
- Use only approved cleaning solutions for aluminum, chrome, or stainless steel. Some cleaners are highly acidic or contain alkaline substances and can damage the moldings.
- 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 molding 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.

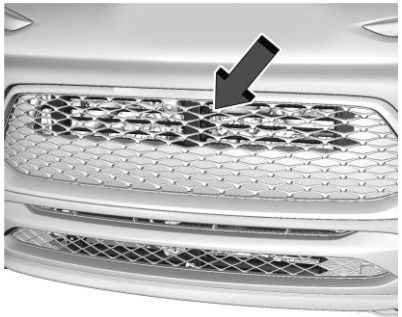
| Caution |
| --- |
| Failure to clean lamps properly can cause damage to the lamp cover that would not be covered by the vehicle warranty. |

| 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 hood and windshield, when washing the vehicle.

### Shutter System



The vehicle may have a shutter system designed to help improve fuel economy. Keep the shutter system clear of debris, snow and ice. If the check engine light is activated, please check to see if the shutter system is clear of debris, snow or ice.

### Windshield and Wiper Blades

Clean the outside of the windshield with glass cleaner.

Clean rubber blades using a lint-free cloth or paper towel soaked with windshield washer fluid or a mild detergent. Wash the windshield thoroughly when cleaning the blades. Bugs, road grime, sap, and a buildup 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.

### Tires

Use a stiff brush with tire cleaner to clean the tires.

| Caution |
| --- |
| Using petroleum-based tire dressing products on the vehicle may damage the paint finish and/or tires. When applying (Continued) |

| Caution (Continued) |
| --- |
| a tire 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 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 trim, 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 tire/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 attachment, connections, binding, leaks, cracks, chafing, etc. Inspect disc brake pads for wear and rotors 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, hood hinges, liftgate hinges, and steel fuel door 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 discolorations, 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. Before using cleaners, read and follow all safety instructions on the label. While cleaning the interior, open the doors and windows for proper ventilation. Newspapers or dark garments can transfer color to the vehicle's interior.

**Caution**

Immediately remove cleaners, hand lotions, sunscreen, and insect repellent from all interior surfaces or permanent damage may result.

**Caution**

Use cleaners specifically designed for the surfaces being cleaned to prevent permanent damage to the vehicle. Apply all cleaners directly to a cleaning cloth. Do not spray cleaners on any switches or controls.

When using liquid soap cleaners, follow the directions on the specific cleaner or soap solution for dilution instructions.

**Caution**

To prevent damage:

- 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 get any exposed electrical components wet.
- Do not use laundry detergents or dishwashing soaps with degreasers. 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.
- Do not use disinfecting wipes that are scented or contain bleach. Do not use wipes or cleaners that show

(Continued)

**Caution (Continued)**

a color transfer to the wipe or change the appearance of the interior surface when used.

- Do not use scented or gel-type hand sanitizers. If hand sanitizer comes in contact with interior surfaces of the vehicle, blot immediately and clean with a soft cloth dampened with a mild soap and water solution.

### Interior Glass

To clean, use a microfiber 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 windshield 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 Moldings

Clean coated moldings.

- When lightly soiled, wipe with a sponge or soft, lint-free cloth dampened with water.
- When heavily soiled, use warm soapy water.

### Vinyl/Rubber

If equipped with vinyl floor and rubber floor mats, use a soft cloth and/or brush dampened with water to remove dust and loose dirt. For more thorough cleaning, use a mild soap and water solution.

**⚠ Warning**

Do not use cleaners that contain silicone, wax-based products, or cleaners that increase gloss on vinyl/rubber floor and mats. These cleaners can permanently change the appearance and feel of the vinyl/rubber and can make the floor slippery. Your foot could slip while operating the vehicle, and you could lose control, resulting in a crash. You or others could be injured.

### Fabric/Carpet/Suede

Start by vacuuming the surface using a soft brush attachment. If a rotating vacuum brush attachment is 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 soils, remove as much as possible prior to vacuuming.

To clean:

1. Saturate a clean, lint-free colorfast 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 center. Fold the cleaning cloth to a clean area frequently to prevent forcing the soil into the fabric.
4. Continue gently rubbing the soiled area until there is no longer any color 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 colorfastness 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 Status and Radio Displays

Use a microfiber 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 microfiber cloth. Never use window cleaners or solvents. Periodically hand wash the microfiber 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

**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 dry naturally. Never use heat, steam, or spot removers. Do not use liquids that contain alcohol or solvents on leather seats. 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.

**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,

(Continued)

**Caution (Continued)**

blot immediately and clean with a soft cloth dampened with a mild soap solution. Damage caused by air fresheners would not be covered by the vehicle warranty.

Use compressed air or a vacuum to remove liquid or dust under the Multi-Functional Controller (MFC) cap, if equipped.

Use a soft bristle brush to remove dust from knobs and crevices on the instrument cluster. 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 and water solution.

Do not use cleaners that increase gloss, especially on the instrument panel. Reflected glare can decrease visibility through the windshield under certain conditions.

### 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

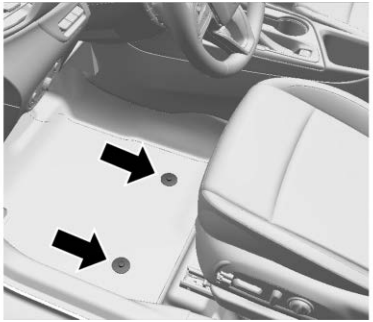
**⚠ Warning**

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 use.

- The original equipment floor mats are designed for your vehicle. If the floor mats need to be replaced, it is recommended that GM-certified floor mats are purchased. Non-GM 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.

The driver side floor mat is held in place by a button-type retainer.



**Removing and Replacing the Floor Mats**

1. Pull up on the rear of the floor mat to unlock the retainers and remove.
2. Reinstall by lining up the floor mat retainer openings over the carpet retainers and snap into position.
3. Make sure the floor mat is properly secured in place. Verify the floor mat does not interfere with the pedals.

### Cleaning Rubber Floor Mats (All-Weather Mats and Floor Liners)

See “Vinyl/Rubber” under *Interior Care* ⇨ *288* for important cleaning information.

# Service and Maintenance

**General Information**
General Information ..... 292
**Maintenance Schedule**
Maintenance Schedule ..... 293
**Multi-Point Vehicle Inspection (MPVI)**
Multi-Point Vehicle Inspection (MPVI) .... 295
**Special Application Services**
Special Application Services ..... 296
**Recommended Fluids, Lubricants, and Parts**
Recommended Fluids and Lubricants ..... 298
**Maintenance Records**
Maintenance Records ..... 299

## 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 dealer 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 dealer recognizes the importance of providing competitively priced maintenance and repair services. With trained technicians, the dealer is the place for routine maintenance such as oil changes and tire rotations and additional maintenance items like tires, 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 Tire Rotation and Required Services are the responsibility of the vehicle owner. It is recommended to have your dealer 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 Tire and Loading Information label. See *Vehicle Load Limits* ⇨ *162*.
- Are driven on reasonable road surfaces within legal driving limits.
- Use the recommended fuel. See *Recommended Fuel (1.3L L3 Engine)* ⇨ *206* *Recommended Fuel (1.2L L3 Engine)* ⇨ *206*.

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, see your dealer to have a trained technician do the work. See *Doing Your Own Service Work* ⇨ *221*.

## Maintenance Schedule

### Tire Rotation and Required Services Every 12 000 km (7,500 mi)

Tires are rotated to achieve a more uniform wear for all tires. The first rotation is the most important.

Anytime unusual wear is noticed, rotate the tires as soon as possible, check for proper tire inflation pressure, and check for damaged tires or wheels. If the unusual wear continues after the rotation, check the wheel alignment. See *When It Is Time for New Tires* ⇨ *266* and *Wheel Replacement* ⇨ *270*.

- Perform Multi-Point Vehicle Inspection. See *Multi-Point Vehicle Inspection (MPVI)* ⇨ *295*.
- Lubricate body components. See *Exterior Care* ⇨ *283*.

## Additional Required Services — Normal Service

**Every 12 000 km (7,500 mi)**

- Check engine oil level and oil life percentage. If needed, change engine oil and filter, and reset oil life system. Or when the CHANGE ENGINE OIL SOON message displays, have the engine oil and filter changed within the next 1 000 km (600 mi). If driven under the best conditions, the engine oil life system may not indicate the need for vehicle service for up to a year. The engine oil and filter must be changed at least once a year and the oil life system must be reset. Your trained dealer technician can perform this work. If the engine oil life system is reset accidentally, service the vehicle within 5 000 km (3,000 mi) since the last service. Reset the oil life system when the oil is changed. See *Engine Oil Life System* ⇨ *228*.
- 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* ⇨ *229*.

**Every 36 000 km (22,500 mi)**

- Passenger compartment air filter replacement (or every 24 months, whichever occurs first). More frequent replacement may be needed if the vehicle is driven in areas with heavy traffic, poor air quality, areas with high dust levels or are sensitive to environmental allergens. Filter replacement may also be needed if you notice reduced airflow, windows fogging up, or odors. Your local GM Service location can help you determine when it is the right time to replace your filter.

**Every 96 000 km (60,000 mi)**

- Replace spark plugs. Inspect spark plug wires and/or boots.

**Every 161 000 km (100,000 mi)**

- Replace hood and/or body lift support gas struts. Or every 10 years, whichever comes first. See *Gas Strut(s)* ⇨ *242*.

**Every 240 000 km (150,000 mi)**

- Change rear axle fluid, if equipped with AWD. 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.
- Drain and fill engine cooling system. Or every six years, whichever comes first. See *Cooling System* ⇨ *230*.
- 1.2L L3 LBP Engine — Replace the oil pump drive belt and timing belt. Or every 15 years, whichever comes first.

## Severe Conditions Requiring More Frequent Maintenance*

- Public service, military, or commercial use vehicles to include the following:
  - Ambulances, police cars, and emergency rescue vehicles.
  - Civilian vehicles such as light duty pick-up trucks, SUVs, and passenger cars that are used in military applications.

  - Recovery vehicles such as tow trucks and flatbed single vehicle carriers or any vehicle that is consistently used in towing trailers or other loads.
  - High use commercial vehicles such as courier delivery vehicles, private security patrol vehicles, or any vehicles that operate on a 24–hour basis.
  - Any vehicle consistently operated in a high sand or dust environment such as those used on oil pipelines and similar applications.
- Vehicles that are regularly used for short trips of 6 km (4 mi) or less.

  The oil life indicator will show you when to change the oil and filter. Under severe conditions the indicator may come on before 12 000 km (7,500 mi).

  * Footnote: Under extreme driving conditions listed above, it may be necessary to replace your spark plugs at more frequent intervals. For further assistance in determining the most suitable service maintenance intervals for your vehicle, please contact your authorized GM Dealer.

  Extreme service is for vehicles mainly driven off-road in four-wheel drive or used in farming, mining, forestry, or snow plowing.

### Additional Required Services — Severe Service

**Every 72 000 km (45,000 mi)**

- CVT transmission (MRG) — Change transmission fluid and filter.
- 9 Speed Automatic Transmission (M3F) — Change automatic transmission fluid only.

**Every 120 000 km (75,000 mi)**

- Change rear axle fluid, if equipped with AWD. 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.

### Owner Checks and Services

**Every Five Years**

- Replace brake fluid every five years. See *Brake Fluid* ⇨ *237*.

**Every Seven Years**

- Replace Air Conditioning Desiccant 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.

## Multi-Point Vehicle Inspection (MPVI)

A Multi Point Vehicle Inspection (MPVI) completed by a trained technician is a maintenance assessment of your vehicle. The benefit of the MPVI is to identify service items that require immediate attention and those that may require attention in the future.

The technician will perform the following checks on your vehicle. You can obtain a copy of the appropriate MPVI checklist on your country's GM Certified Service website. For a complete list of checks, inspections, and services, see your dealer.

Some items may not apply to your vehicle and/or region.

**Diagnostics**

- OnStar active, if equipped
- Service history/recall check

**Engine Oil and Filter**

- Engine oil
- Oil life monitor
  - Reset oil life monitor

**Exterior Lights**

- Visual inspection

**Windshield and Wipers**

- Visual inspection

**12 Volt Battery**

- Battery visual inspection
- Battery test results
- Battery cables and connections

**Systems, Fluids, and Visible Leak Inspection**

- Engine oil
- Transmission
- Drive axle
- Transfer case
- Engine cooling system
- Power steering, if equipped
- Fuel system
- Windshield washer fluid

**Tire Inspection**

- Tire pressure, tread depth, and wear
- Rotation, if applicable
- Alignment check, optional
- Reset tire pressure monitor
- Check tire sealant expiration date, if equipped
- Check spare tire, if equipped

**Brakes**

- Check brake system

**Visible and Functional Inspections**

- Seat belt components
- Exhaust system
- Accelerator pedal
- Passenger compartment air filter, if equipped
- Engine air filter
- Hoses
- Belts
- Shocks and struts
- Steering components
- Axle boots or driveshaft and u-joints
- Compartment lift struts, if equipped
- Floor mats secured, no interference with pedals
- Horn
- Ignition lock, if equipped
- Starter switch
- Evaporative control system

**Lubricate**

- Chassis components

## Special Application Services

- Severe Commercial Use Vehicles Only: Lubricate chassis components every oil change.

- Have underbody flushing service performed. See "Underbody Maintenance" in *Exterior Care* ⇨ *283*.

# 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 dealer.

| Usage | Fluid/Lubricant |
|---|---|
| Automatic Transmission - Continuously Variable Ratio (CVT) | High Performance CVT Fluid. See your dealer. |
| Automatic Transmission (9 Speed) | DEXRON VI Automatic Transmission Fluid. |
| Engine Coolant | 50/50 mixture of clean, drinkable water and use only DEX-COOL Coolant. See *Cooling System* ⇨ *230*. |
| Engine Oil | Engine oil meeting the dexos1 specification of the proper SAE viscosity grade. ACDelco dexos1 full synthetic is recommended. See *Engine Oil* ⇨ *226*. |
| Hood and Door Hinges | Multi-Purpose Lubricant, Superlube. See your dealer. |
| Hood 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 4 Hydraulic Brake Fluid. |
| Rear Axle (All-Wheel Drive) | See your dealer. |
| Windshield Washer | Automotive windshield washer fluid that meets regional freeze protection requirements. |

## 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 | Services Performed |
|---|---|---|---|
| | | | |
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# Technical Data

**Vehicle Identification**
Vehicle Identification Number (VIN) ..... 300
Service Parts Identification ..... 300
**Vehicle Data**
Capacities and Specifications ..... 301
Engine Drive Belt Routing ..... 303

# 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 windshield from outside. The Vehicle Identification Number (VIN) also appears on the Vehicle Certification label 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* ⇨ *301* for the vehicle's engine code.

## Service Parts Identification

There may be a large barcode on the certification label on the center 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 in the rear storage area.

# Vehicle Data

## Capacities and Specifications

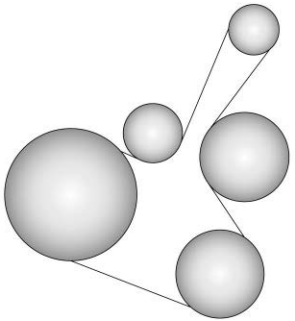
| Application | Capacities | |
|---|---|---|
| | Metric | English |
| Air Conditioning Refrigerant | For the air conditioning system refrigerant type and charge amount, see the refrigerant label under the hood. See your dealer for more information. | |
| Engine Cooling System* | | |
| 1.2L L3 Gas Engine | 6.3 L | 6.7 qt |
| 1.3L L3 Gas Engine | 7.4 L | 7.8 qt |
| Engine Oil with Filter | | |
| 1.2L L3 Gas Engine | 4.0 L | 4.2 qt |
| 1.3L L3 Gas Engine | 4.5 L | 4.8 qt |
| Fuel Tank | 50 L | 13.2 gal |
| Transfer Case Fluid | 0.23 L | 0.24 qt |
| Wheel Nut Torque | 140 N•m | 100 lb ft |

| Application | Capacities | |
|---|---|---|
| | Metric | English |
| 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. | | |

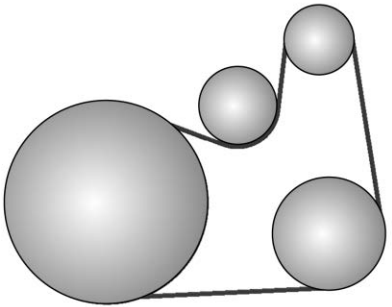
## Engine Specifications

| Engine | VIN Code | Transmission | Spark Plug Gap |
|---|---|---|---|
| 1.2L L3 Gas Engine (LBP) | P | Automatic | 0.6 - 0.7 mm (0.024-0.028 in) |
| 1.3L L3 Gas Engine (L3T) | L | Automatic | 0.65 - 0.75 mm (0.025-0.030 in) |
| Spark plug gaps are preset by the manufacturer. Re-gapping the spark plug is not recommended and can damage the spark plug. | | | |

## Engine Drive Belt Routing



1.2L L3 Gas Engine



1.3L L3 Gas Engine

# Customer Information

**Customer Information**
Customer Satisfaction Procedure ..... 304
Customer Assistance Offices ..... 306
Customer Assistance for Text Telephone (TTY) Users ..... 306
Online Account and Customer Support .. 306
GM Mobility Reimbursement Program (U.S. Only) ..... 307
Roadside Assistance Program ..... 307
Scheduling Service Appointments ..... 309
Courtesy Transportation Program ..... 309
Collision Damage Repair ..... 310
Publication Ordering Information ..... 311
Radio Frequency Statement ..... 312

**Reporting Safety Defects**
Reporting Safety Defects to the United States Government ..... 312
Reporting Safety Defects to the Canadian Government ..... 313
Reporting Safety Defects to General Motors ..... 313

**Vehicle Data Recording and Privacy**
Vehicle Data Recording and Privacy ..... 313
Cybersecurity ..... 313
Event Data Recorders ..... 314
OnStar ..... 314

## Customer Satisfaction Procedure

Your satisfaction and goodwill are important to your dealer and to Buick. Normally, any concerns with the sales transaction or the operation of the vehicle will be resolved by your dealer's sales or service departments. Sometimes, however, despite the best intentions of all concerned, misunderstandings can occur. If your concern has not been resolved to your satisfaction, the following steps should be taken:

**STEP ONE:** Discuss your concern with a member of dealership management. Normally, concerns can be quickly resolved at that level. If the matter has already been reviewed with the sales, service, or parts manager, contact the owner of your dealership or the general manager.

**STEP TWO:** If after contacting a member of dealership management, it appears your concern cannot be resolved by your dealership without further help, in the U.S., call 1-800-521-7300. In Canada, contact General Motors of Canada Customer Care Centre at 1-800-263-3777 (English) or 1-800-263-7854 (French).

We encourage you to call the toll-free number in order to give the inquiry prompt attention. Have the following information available to give the Customer Assistance representative:

- Vehicle Identification Number (VIN). This is available from the vehicle registration or title, or the plate at the top left of the instrument panel and visible through the windshield.
- Dealership name and location.
- Vehicle delivery date and present mileage.

When contacting Buick, remember that your concern will likely be resolved at a dealer's facility. That is why we suggest following Step One first.

**STEP THREE — U.S. Owners:** Both GM and your GM dealer are committed to making sure you are completely satisfied with the new vehicle. However, if you continue to remain unsatisfied after following the procedure outlined in Steps One and Two, you can file with the Better Business Bureau (BBB) AUTO LINE® Program to enforce any additional rights you may have.

The BBB AUTO LINE Program is an out-of-court program administered by BBB National Programs, Inc. to settle automotive disputes regarding vehicle repairs or the interpretation of the New Vehicle Limited Warranty. Although you may be required to resort to this informal dispute resolution program prior to filing a court action, use of the program is free of charge and your case will generally be heard within 40 days. If you do not agree with the decision given in your case, you may reject it and proceed with any other venue for relief available to you. When contacting the BBB AUTO LINE, you will need to provide the following information: Owner's name and address, Vehicle identification number (VIN), the Year, Make, Model, mileage of the vehicle and provide a description of the concern.

Contact the BBB AUTO LINE Program using the toll-free telephone number or write them at the following address:

BBB AUTO LINE Program
BBB National Programs, Inc.
1676 International Drive
Suite 550
McLean, VA 22102

Telephone: 1-800-955-5100
www.bbbautoline.org

This program is available in all 50 states and the District of Columbia. Eligibility is limited by vehicle age, mileage, and other factors. General Motors reserves the right to change eligibility limitations and/or discontinue its participation in this program.

**STEP THREE — Canadian Owners:** In the event that you do not feel your concerns have been addressed after following the procedure outlined in Steps One and Two, General Motors of Canada Company wants you to be aware of its participation in a no-charge Mediation/Arbitration program. General Motors of Canada Company has committed to binding arbitration of owner disputes involving factory-related vehicle service claims. The program provides for the review of the facts involved by an impartial third party arbiter, and may include an informal hearing before the arbiter. The program is designed so that the entire dispute settlement process, from the time you file your complaint to the final decision, should be completed in about 70 days. We believe our impartial program offers advantages over courts in most jurisdictions because it is informal, quick, and free of charge.

For further information concerning eligibility in the Canadian Motor Vehicle Arbitration Plan (CAMVAP), call toll-free 1-800-207-0685, or call

the General Motors Customer Care Centre, 1-800-263-3777 (English), 1-800-263-7854 (French), or write to:

Mediation/Arbitration Program
c/o Customer Care Centre
General Motors of Canada Company
500 Wentworth Street W
Oshawa, ON L1J 0C5

The inquiry should be accompanied by the Vehicle Identification Number (VIN).

## Customer Assistance Offices

Buick is committed to assisting customers. Visit us online at www.buick.com/support (U.S.) or www.my.buick.ca (Canada) to chat with us or find answers to commonly asked questions, tips, vehicle how-to instructions, and available support services.

Need more help? Use the phone numbers or mailing addresses below for additional assistance.

### United States and Puerto Rico

Buick Customer Assistance Center
P.O. Box 33136
Detroit, MI 48232-5136

1-800-521-7300

TTY: Dial 711 relay service and contact 1-800-833-2438

Roadside Assistance: 1-800-252-1112

### Canada

Customer Care Centre
General Motors of Canada Company
500 Wentworth Street W
Oshawa, ON L1J 0C5

1-800-263-3777 (English)

1-800-263-7854 (French)

1-800-263-3830 (For Text Telephone devices (TTYs))

Roadside Assistance: 1-800-268-6800

### All Overseas Locations

Please contact the local General Motors Business Unit.

## Customer Assistance for Text Telephone (TTY) Users

To assist customers who are deaf, hard of hearing, or speech-impaired and/or who use Text Telephones (TTYs), please dial the national 711 relay service and contact 1-800-833-2438. TTY users in Canada can dial 1-800-263-3830.

## Online Account and Customer Support

### Create a Buick Account (U.S.) at buick.com

Learn more about your vehicle features, shop for and manage your connected services and OnStar plans, and access diagnostic information specific to your vehicle.

#### Membership Benefits

**:** Download owner's manuals and view vehicle-specific how-to videos.

**:** View maintenance schedules, alerts, and Vehicle Diagnostic Information. Schedule service appointments.

**:** View service records from your dealership and add your own.

**:** Select a dealer and view locations, maps, phone numbers, and hours.

**:** Track your vehicle's warranty information.

**:** View active recalls by Vehicle Identification Number (VIN). See *Vehicle Identification Number (VIN)* ⇨ *300*.

: Manage your profile and payment information. View your GM Rewards Card earnings and My Buick Rewards points.

: Chat with online help representatives.

Visit buick.com and create an account today.

### Buick Account (Canada)

Visit your Buick Account at buick.ca/en (English) or buick.ca/fr (French) to access similar benefits.

## GM Mobility Reimbursement Program (U.S. Only)

GENERAL MOTORS MOBILITY

This program is available to qualified applicants for cost reimbursement, up to certain limits, of eligible aftermarket adaptive equipment required for the vehicle, such as hand controls or a wheelchair/scooter lift for the vehicle.

To learn about the GM Mobility program, call the GM Mobility Assistance Center at 1-800-323-9935. Text Telephone (TTY) users, please dial the national 711 relay service and contact 1-800-323-9935.

## Roadside Assistance Program

For U.S.-purchased vehicles, call 1-800-252-1112; (Text Telephone (TTY): 1-888-889-2438).

For Canadian-purchased vehicles, call 1-800-268-6800.

Service is available 24 hours a day, 365 days a year.

### Calling for Assistance

When calling Roadside Assistance, have the following information ready:

- Your name, home address, and home telephone number
- Telephone number of your location
- Location of the vehicle
- Model, year, color, and license plate number of the vehicle
- Odometer reading and Vehicle Identification Number (VIN)
- Description of the problem

### Coverage

Services are provided for the duration of the vehicle's powertrain warranty.

In the U.S., anyone driving the vehicle is covered. In Canada, a person driving the vehicle without permission from the owner is not covered.

Roadside Assistance is not a part of the New Vehicle Limited Warranty. General Motors North America and Buick reserve the right to make any changes or discontinue the Roadside Assistance program at any time without notification.

General Motors North America and Buick reserve the right to limit services or payment to an owner or driver if they decide the claims are made too often, or the same type of claim is made many times.

### Services Provided

- **Emergency Fuel Delivery:** Delivery of enough fuel for the vehicle to get to the nearest service station.

- **Lock-Out Service:** Service to unlock the vehicle if you are locked out. A remote unlock may be available if you have OnStar. For security reasons, the driver must present identification before this service is given.
- **Emergency Tow from a Public Road or Highway:** Tow to the nearest Buick dealer for warranty service, or if the vehicle was in a crash and cannot be driven. Assistance is not given when the vehicle is stuck in sand, mud, or snow.
- **Flat Tire Change:** Service to change a flat tire with the spare tire. The spare tire, if equipped, must be in good condition and properly inflated. It is the owner's responsibility for the repair or replacement of the tire if it is not covered by the warranty.
- **Battery Jump Start:** Service to jump start a dead battery.
- **Trip Interruption Benefits and Assistance:** If your trip is interrupted due to a warranty event, incidental expenses may be reimbursed within the Powertrain warranty period. Items considered are reasonable and customary hotel, meals, rental car, or a vehicle being delivered back to the customer, up to 500 miles.

### Services Not Included in Roadside Assistance

- Impound towing caused by violation of any laws
- Reimbursement of legal fines
- Reimbursement of police mandated tows
- Mounting, dismounting, or changing of snow tires, chains, or other traction devices
- Towing of anything attached to the vehicle like boats, campers, trailers, cargo boxes, etc.
- Vehicles stranded due to off-road driving

Service is not provided if a vehicle is in an area that is not accessible to the service vehicle or is not a regularly traveled or maintained public road, which includes ice and winter roads. Service is not provided on restricted roadways which can include and is not limited to, some highways, tunnels, toll roads, toll bridges, turnpikes, and service roads.

### Services Specific to Canadian-Purchased Vehicles

- **Fuel Delivery:** Reimbursement is up to 7 liters. Diesel fuel delivery may be restricted. Propane and other fuels are not provided through this service.
- **Lock-Out Service:** Vehicle registration is required.
- **Trip Interruption Benefits and Assistance:** Must be traveling and over 150 km from where your trip was started to qualify. Pre-authorization, original detailed receipts, and a copy of the repair orders are required. Once authorization has been received, the Roadside Assistance advisor will help to make arrangements and explain how to receive payment.
- **Alternative Service:** If assistance cannot be provided right away, the Roadside Assistance advisor may give permission to get local emergency road service. You will receive payment, up to $100, after sending the original receipt to Roadside Assistance. Mechanical failures may be covered, however any cost for parts and labor for repairs not covered by the warranty are the owner's responsibility.

## Scheduling Service Appointments

When the vehicle requires warranty service, contact your dealer and request an appointment. By scheduling a service appointment and advising the service consultant of your transportation needs, your dealer can help minimize your inconvenience.

If the vehicle cannot be scheduled into the service department immediately, keep driving it until it can be scheduled for service, unless, of course, the problem is safety related. If it is, please call your dealership, let them know this, and ask for instructions.

If your dealer requests you to bring the vehicle for service, you are urged to do so as early in the work day as possible to allow for same-day repair.

## Courtesy Transportation Program

To enhance your ownership experience, we and our participating dealers are proud to offer Courtesy Transportation, a customer support program for vehicles with the Bumper-to-Bumper (Base Warranty Coverage period in Canada), Federal Emission, Extended Powertrain or Electric specific warranties in both the U.S. and Canada.

Several Courtesy Transportation options are available to assist in reducing inconvenience when warranty repairs are required.

Courtesy Transportation is not a part of the New Vehicle Limited Warranty. A separate manual entitled "Limited Warranty and Owner Assistance Information" produced for new vehicles provides detailed warranty coverage information.

### Transportation Options

Warranty service can generally be completed while you wait. However, if you are unable to do so, your dealer may offer the following transportation options:

#### Shuttle Service

This includes one-way or round-trip shuttle service within reasonable time and distance parameters of your dealer's area.

#### Public Transportation, Ridesharing App, or Fuel Reimbursement

If overnight warranty repairs are needed, and public transportation or a ridesharing app is used, the expense must be supported by original receipts and within the maximum amount allowed by GM. If U.S. customers arrange their own transportation, limited reimbursement for reasonable fuel expenses may be available. Claim amounts should reflect actual costs and be supported by original receipts. See your dealer for information.

#### Courtesy Rental Vehicle

For an overnight warranty repair, the dealer may provide an available courtesy rental vehicle or provide for reimbursement of a rental vehicle. Reimbursement is limited and must be supported by original receipts as well as a signed and completed rental agreement and meet state/provincial, local, and rental vehicle provider requirements. Requirements vary and may include minimum age requirements, insurance coverage, credit card, etc. Additional fees such as fuel, rental vehicle insurance, taxes, levies, usage fees, excessive mileage, or rental usage beyond the completion of the repair are also your responsibility.

It may not be possible to provide a like vehicle as a courtesy rental.

### Additional Program Information

All program options, such as shuttle service, may not be available at every dealer. Contact your dealer for specific availability.

General Motors reserves the right to unilaterally modify, change, or discontinue Courtesy Transportation at any time and to resolve all questions of claim eligibility pursuant to the terms and conditions described herein at its sole discretion.

## Collision Damage Repair

If the vehicle is involved in a collision and it is damaged, have the damage repaired by a qualified technician using the proper equipment and quality replacement parts. Poorly performed collision repairs diminish the vehicle resale value, and safety performance can be compromised in subsequent collisions.

### Collision Parts

Genuine GM Collision parts are new parts made with the same materials and construction methods as the parts with which the vehicle was originally built. Genuine GM Collision parts are the best choice to ensure that the vehicle's designed appearance, durability, and safety are preserved. The use of Genuine GM parts can help maintain the GM New Vehicle Limited Warranty.

Recycled original equipment parts may also be used for repair. These parts are typically removed from vehicles that were total losses in prior crashes. In most cases, the parts being recycled are from undamaged sections of the vehicle. A recycled original equipment GM part may be an acceptable choice to maintain the vehicle's originally designed appearance and safety performance; however, the history of these parts is not known. Such parts are not covered by the GM New Vehicle Limited Warranty, and any related failures are not covered by that warranty.

Aftermarket collision parts are also available. These are made by companies other than GM and may not have been tested for the vehicle. As a result, these parts may fit poorly, exhibit premature durability/corrosion problems, and may not perform properly in subsequent collisions. Aftermarket parts are not covered by the GM New Vehicle Limited Warranty, and any vehicle failure related to such parts is not covered by that warranty.

### Repair Facility

GM also recommends that you choose a collision repair facility that meets your needs before you ever need collision repairs. Your dealer may have a collision repair center with GM-trained technicians and state-of-the-art equipment, or be able to recommend a collision repair center that has GM-trained technicians and comparable equipment.

### Insuring the Vehicle

Protect your investment in the GM vehicle with comprehensive and collision insurance coverage. There are significant differences in the quality of coverage afforded by various insurance policy terms. Many insurance policies provide reduced protection to the GM vehicle by limiting compensation for damage repairs through the use of aftermarket collision parts. Some insurance companies will not specify aftermarket collision parts. When purchasing insurance, we recommend that you ensure that the vehicle will be repaired with GM original equipment collision parts. If such insurance coverage is not available from your current insurance carrier, consider switching to another insurance carrier.

If the vehicle is leased, the leasing company may require you to have insurance that ensures repairs with Genuine GM Original Equipment Manufacturer (OEM) parts or Genuine Manufacturer replacement parts. Read the lease carefully, as you may be charged at the end of the lease for poor quality repairs.

### If a Crash Occurs

If there has been an injury, call emergency services for help. Do not leave the scene of a crash until all matters have been taken care of. Move the vehicle only if its position puts you in danger, or you are instructed to move it by a police officer.

Give only the necessary information to police and other parties involved in the crash.

For emergency towing see *Roadside Assistance Program* ⇨ *307*.

Gather the following information:

- Driver name, address, and telephone number
- Driver license number
- Owner name, address, and telephone number
- Vehicle license plate number
- Vehicle make, model, and model year
- Vehicle Identification Number (VIN)
- Insurance company and policy number
- General description of the damage to the other vehicle

Choose a reputable repair facility that uses quality replacement parts. See "Collision Parts" earlier in this section.

If the airbag has inflated, see *What Will You See After an Airbag Inflates?* ⇨ *60*.

### Managing the Vehicle Damage Repair Process

In the event that the vehicle requires damage repairs, GM recommends that you take an active role in its repair. If you have a pre-determined repair facility of choice, take the vehicle there, or have it towed there. Specify to the facility that any required replacement collision parts be original equipment parts, either new Genuine GM parts or recycled original GM parts. Remember, recycled parts will not be covered by the GM vehicle warranty.

Insurance pays the bill for the repair, but you must live with the repair. Depending on your policy limits, your insurance company may initially value the repair using aftermarket parts. Discuss this with the repair professional, and insist on Genuine GM parts. Remember, if the vehicle is leased, you may be obligated to have the vehicle repaired with Genuine GM parts, even if your insurance coverage does not pay the full cost.

If another party's insurance company is paying for the repairs, you are not obligated to accept a repair valuation based on that insurance company's collision policy repair limits, as you have no contractual limits with that company. In such cases, you can have control of the repair and parts choices as long as the cost stays within reasonable limits.

## Publication Ordering Information

### Service Manuals

Service manuals have the diagnosis and repair information on the engine/propulsion, transmission, axle, suspension, brakes, electrical system, steering system, body, etc.

### Customer Literature

Owner's manuals are written specifically for owners and are intended to provide basic operational information about the vehicle. The owner's manual includes the Maintenance Schedule for all models.

Customer literature publications available for purchase include owner's manuals, warranty manuals, and portfolios. Portfolios include an owner's manual, warranty manual, if applicable, and zip lock bag or pouch.

### Current and Past Models

Service manuals and customer literature are available for many GM vehicles.

To check availability and to order, call 1-800-551-4123 Monday–Friday, 8:00 a.m.–6:00 p.m. Eastern Time

For credit card orders only (VISA, MasterCard, or Discover), see Helm, Inc. at: www.helminc.com.

To order by mail, write to:

Helm, Incorporated
Attention: Customer Service
47911 Halyard Drive
Plymouth, MI 48170

Make checks payable in U.S. funds.

## Radio Frequency Statement

This vehicle uses license-exempt transmitters / receivers / systems that operate on a radio frequency that complies with Part 15/Part 18 of the Federal Communications Commission (FCC) rules and with Innovation, Science and Economic Development (ISED) Canada's license-exempt RSS(s) / RSP-100 / ICES-GEN.

Operation is subject to the following two conditions:

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

Changes or modifications to any of these systems by other than an authorized service facility could void authorization to use this equipment.

# Reporting Safety Defects

## Reporting Safety Defects to the United States Government

If you believe that your vehicle has a defect which could cause a crash or could cause injury or death, you should immediately inform the National Highway Traffic Safety Administration (NHTSA) in addition to notifying General Motors.

If NHTSA receives similar complaints, it may open an investigation, and if it finds that a safety defect exists in a group of vehicles, it may order a recall and remedy campaign. However, NHTSA cannot become involved in individual problems between you, your dealer, or General Motors.

To contact NHTSA, you may call the Vehicle Safety Hotline toll-free at 1-888-327-4236 (TTY: 1-877-561-7439); go to *https://www.safercar.gov;* or write to:

Administrator, NHTSA
1200 New Jersey Avenue, S.E.,
Washington, D.C. , 20590

You can also obtain other information about motor vehicle safety from *https://www.safercar.gov*.

## Reporting Safety Defects to the Canadian Government

If you live in Canada, and you believe that the vehicle has a safety defect, notify Transport Canada immediately, and notify General Motors of Canada Company. Call Transport Canada at 1-800-333-0510; go to:

www.tc.gc.ca/recalls (English)

www.tc.gc.ca/rappels (French)

or write to:

Transport Canada
Motor Vehicle Safety Directorate
Defect Investigations and Recalls Division
80 Noel Street
Gatineau , QC J8Z 0A1

## Reporting Safety Defects to General Motors

In addition to notifying NHTSA (or Transport Canada) in a situation like this, notify General Motors.

In the U.S., call 1-800-521-7300, or write:

Buick Customer Assistance Center
P.O. Box 33136
Detroit, MI 48232–5136

In Canada, call 1-800-263-3777 (English) or 1-800-263-7854 (French), or write:

General Motors of Canada Company
Customer Care Centre
500 Wentworth Street W
Oshawa, ON L1J 0C5

In Mexico, call 800-200-2842 or 800-466-0818.

In other Central America and Caribbean Countries, call 52-555-901-2369.

# Vehicle Data Recording and Privacy

The vehicle has a number of computers that record information about the vehicle's performance and how it is driven or used. For example, the vehicle uses computer modules to monitor and control engine and transmission performance, to monitor the conditions for airbag deployment and deploy them in a crash, and, if equipped, to provide antilock braking to help the driver control the vehicle. These modules may store data to help the dealer technician service the vehicle or to help GM improve safety or features. Some modules may also store data about how the vehicle is operated, such as rate of fuel consumption or average speed. These modules may retain personal preferences, such as radio presets, seat positions, and temperature settings.

## 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 unauthorized 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 unauthorized 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 minimize security risks, please do not connect your vehicle electronic systems to unauthorized 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 dealer.

## Event Data Recorders

This vehicle is equipped with an Event Data Recorder (EDR). The main purpose of an EDR is to record, in certain crash or near crash-like situations, such as an air bag deployment or hitting a road obstacle, data that will assist in understanding how a vehicle's systems performed. The EDR is designed to record data related to vehicle dynamics and safety systems for a short period of time, typically 30 seconds or less. The EDR in this vehicle is designed to record such data as:

- How various systems in your vehicle were operating;
- Whether or not the driver and passenger safety belts were buckled/fastened;
- How far (if at all) the driver was depressing the accelerator and/or brake pedal; and,
- How fast the vehicle was traveling.

These data can help provide a better understanding of the circumstances in which crashes and injuries occur.

**Note**
EDR data are recorded by your vehicle only if a non-trivial crash situation occurs; no data are recorded by the EDR under normal driving conditions and no personal data (e.g., name, gender, age, and crash location) are recorded. However, other parties, such as law enforcement, could combine the EDR data with the type of personally identifying data routinely acquired during a crash investigation.

To read data recorded by an EDR, special equipment is required, and access to the vehicle or the EDR is needed. In addition to the vehicle manufacturer, other parties, such as law enforcement, that have the special equipment, can read the information if they have access to the vehicle or the EDR.

GM will not access these data or share it with others except: with the consent of the vehicle owner or, if the vehicle is leased, with the consent of the lessee; in response to an official request by police or similar government office; as part of GM's defense of litigation through the discovery process; or, as permitted by law. Data that GM collects or receives may also be used for GM research needs or may be made available to others for research purposes, where a need is shown and the data is not tied to a specific vehicle or vehicle owner.

## OnStar

If the vehicle is equipped with OnStar and has an active service plan, additional data may be collected and transmitted through the OnStar system. This includes information about the vehicle's operation; collisions involving the vehicle; the use of the vehicle and its features, including infotainment; and the location and approximate GPS speed of the vehicle. Refer to the OnStar Terms and Conditions and Privacy Statement on the OnStar website.

See *OnStar Additional Information* ⇨ *316*.

# OnStar

**OnStar Overview**
OnStar Overview ..... 315
**OnStar Services**
Emergency ..... 316
Security ..... 316
**OnStar Additional Information**
OnStar Additional Information ..... 316

## OnStar Overview





White OnStar Button

Blue OnStar Button

Red Emergency Button

This vehicle may be equipped with a comprehensive, in-vehicle system that can connect to an OnStar Advisor for Emergency, Security, Navigation, Connections, and Diagnostics Services. OnStar services may require a paid service plan and data plan. OnStar requires the vehicle battery and electrical system, cellular service, and GPS satellite signals to be available and operating. OnStar acts as a link to existing emergency service providers. OnStar may collect information about you and your vehicle, including location information. See OnStar User Terms, Privacy Statement, and Software Terms for more details including system limitations at www.onstar.com (U.S.) or www.onstar.ca (Canada).

The OnStar system status light is next to the OnStar buttons. If the status light is:

- Solid Green: System is ready.
- Flashing Green: On a call.
- Red: Indicates a problem.
- Off: System is off. Press twice to speak with an OnStar Advisor.

Press or call 1-888-4ONSTAR (1-888-466-7827) to speak to an Advisor.

Press to answer and end incoming calls with a live OnStar Advisor.

Press to connect to an Advisor to:

- Verify account information or update contact information.
- Get driving directions.
- Receive a Diagnostic check of the vehicle's key operating systems.
- Receive Roadside Assistance.
- Manage Wi-Fi Settings, if equipped.

Press SOS to get a priority connection to an OnStar Advisor available 24/7 to:

- Get help for an emergency.
- Be a Good Samaritan or respond to an AMBER Alert.
- Get assistance in severe weather or other crisis situations and find evacuation routes.

# OnStar Services

## Emergency

Emergency Services require an active safety and security plan. With Automatic Crash Response, built-in sensors can automatically alert a specially trained OnStar Advisor who is immediately connected in to the vehicle to help.

Press SOS for a priority connection to an OnStar Advisor who can contact emergency service providers, direct them to your exact location, and relay important information.

With OnStar Crisis Assist, specially trained Advisors are available 24 hours a day, 7 days a week, to provide a central point of contact, assistance, and information during a crisis.

With Roadside Assistance, Advisors can locate a nearby service provider to help with a flat tire, a battery jump, or an empty gas tank.

## Security

If equipped, OnStar provides these services:

- With Stolen Vehicle Assistance, OnStar Advisors can use GPS to pinpoint the vehicle and help authorities quickly recover it.
- With Remote Ignition Block, if equipped, OnStar can block the vehicle from being restarted.
- With Stolen Vehicle Slowdown, if equipped, OnStar can work with law enforcement to gradually slow the vehicle down.

### Theft Alarm Notification

If equipped, if the doors are locked and the vehicle alarm sounds, a notification by text, email, or phone call will be sent. If the vehicle is stolen, an OnStar Advisor can work with authorities to recover the vehicle.

# OnStar Additional Information

### In-Vehicle Audio Messages

Audio messages may play important information at the following times:

- Prior to vehicle purchase. Press Oh to set up an account.
- After change in ownership and at 90 days.

### Transferring Service

Press Oh to request account transfer eligibility information. The Advisor can cancel or change account information.

### Selling/Transferring the Vehicle

Call 1-888-4ONSTAR (1-888-466-7827) immediately to terminate your OnStar or connected services if the vehicle is disposed of, sold, transferred, or if the lease ends.

### Reactivation for Subsequent Owners

Press Oh and follow the prompts to speak to an Advisor as soon as possible. The Advisor will update vehicle records and explain OnStar or connected service options.

## How OnStar Service Works

Automatic Crash Response, Emergency Services, Crisis Assist, Stolen Vehicle Assistance, Remote Services, and Roadside Assistance are available on most vehicles. Not all OnStar services are available everywhere or on all vehicles. For more information, a full description of OnStar services, system limitations, and OnStar User Terms, Privacy Statement, and Software Terms:

- Call 1-888-4ONSTAR (1-888-466-7827).
- See www.onstar.com (U.S.).
- See www.onstar.ca (Canada).
- Call TTY 1-877-248-2080.
- Press to speak with an Advisor.

OnStar or connected services cannot work unless the vehicle is in a place where OnStar has an agreement with a wireless service provider for service in that area. The wireless service provider must also have coverage, network capacity, reception, and technology compatible with OnStar or connected services. Service involving location information about the vehicle cannot work unless GPS signals are available, unobstructed, and compatible with the OnStar hardware. OnStar or connected services may not work if the OnStar equipment is not properly installed or it has not been properly maintained. If equipment or software is added, connected, or modified, OnStar or connected services may not work. Other problems beyond the control of OnStar — such as hills, tall buildings, tunnels, weather, electrical system design and architecture of the vehicle, damage to the vehicle in a crash, or wireless phone network congestion or jamming — may prevent service.

See *Radio Frequency Statement* ⇨ *312*.

## Services for People with Disabilities

Advisors provide services to help with physical disabilities and medical conditions.

Press to help:

- Locate a gas station with an attendant to pump gas.
- Find a hotel, restaurant, etc., that meets accessibility needs.
- Provide directions to the closest hospital or pharmacy in urgent situations.

## TTY Users

OnStar has the ability to communicate to deaf, hard-of-hearing, or speech-impaired customers while in the vehicle. The available TTY system can provide in-vehicle access to all OnStar services, except Virtual Advisor and OnStar Turn-by-Turn Navigation.

If equipped, TTY mode can be turned on or off by touching Settings, then Apps, and then Phone. When TTY mode is on, phone calls can be made or received with OnStar using the infotainment display.

## OnStar Personal Identification Number (PIN)

A PIN is needed to access some OnStar services. The PIN will need to be changed the first time when speaking with an Advisor. To change the OnStar PIN, contact an OnStar Advisor by pressing or calling 1-888-4ONSTAR.

## Warranty

OnStar equipment may be warranted as part of the vehicle warranty.

### Languages

The vehicle can be programmed to respond in multiple languages. Press and ask for an Advisor. Advisors are available in English, Spanish, and French. Available languages may vary by country.

### Potential Issues

OnStar cannot perform Remote Door Unlock or Stolen Vehicle Assistance after the vehicle has been off continuously for an extended period of time without an ignition cycle. To find out the duration of time that applies for the vehicle, contact an OnStar Advisor by pressing or calling 1-888-4ONSTAR. If the vehicle has not been started for an extended period of time, OnStar can contact Roadside Assistance or a locksmith to help gain access to the vehicle.

### Global Positioning System (GPS)

- Obstruction of the GPS can occur in a large city with tall buildings; in parking garages; around airports; in tunnels and underpasses; or in an area with very dense trees. If GPS signals are not available, the OnStar system should still operate to call OnStar. However, OnStar could have difficulty identifying the exact location.
- In emergency situations, OnStar can use the last stored GPS location to send to emergency responders.

A temporary loss of GPS can cause loss of the ability to send a Turn-by-Turn Navigation route. The Advisor may give a verbal route or may ask for a call back after the vehicle is driven into an open area.

### Cellular and GPS Antennas

Cellular reception is required for OnStar to send remote signals to the vehicle. Do not place items over or near the antenna to prevent blocking cellular and GPS signal reception.

### Unable to Connect to OnStar Message

If there is limited cellular coverage or the cellular network has reached maximum capacity, this message may come on. Press to try the call again or try again after driving a few miles into another cellular area.

### Vehicle and Power Issues

OnStar services require a vehicle electrical system, wireless service, and GPS satellite technologies to be available and operating for features to function properly. These systems may not operate if the battery is discharged or disconnected.

### Add-on Electrical Equipment

The OnStar system is integrated into the electrical architecture of the vehicle. Do not add any electrical equipment. See *Add-On Electrical Equipment* ⇨ *218*. Added electrical equipment may interfere with the operation of the OnStar system and cause it to not operate.

### Vehicle Software Updates

OnStar or GM may remotely deliver software updates or changes to the vehicle without further notice or consent. These updates or changes may enhance or maintain safety, security, or the operation of the vehicle or the vehicle systems. Software updates or changes may affect or erase data or settings that are stored in the vehicle, such as saved navigation destinations or pre-set radio stations. Neither OnStar nor GM is responsible for any affected or erased data or settings. These updates or changes may also collect personal information. Such collection is described in the OnStar privacy statement or separately disclosed at the time of installation. These updates

or changes may also cause a system to automatically communicate with GM servers to collect information about vehicle system status, identify whether updates or changes are available, or deliver updates or changes. An active OnStar agreement constitutes consent to these software updates or changes and agreement that either OnStar or GM may remotely deliver them to the vehicle.

### Privacy

The complete OnStar Privacy Statement may be found at www.onstar.com (U.S.), or www.onstar.ca (Canada). We recommend that you review it. If you have any questions, call 1-888-4ONSTAR (1-888-466-7827) or press  to speak with an Advisor. Users of wireless communications are cautioned that the privacy of any information sent via wireless cellular communications cannot be assured. Third parties may unlawfully intercept or access transmissions and private communications without consent.

### OnStar - Software Acknowledgements

To obtain the source code under GPL, LGPL, MPL, and other open source licenses, that is contained in this product, please visit https://opensource.lge.com. In addition to the source code, all referred license terms, warranty disclaimers, and copyright notices are available for download. This offer is valid for a period of three years after our last shipment of this product. This offer is valid to anyone in receipt of this information.

*Provided through LG Electronics Inc., who is solely responsible for provisions of related OSS compliance.

# Connected Services

**Connected Services**

Navigation ..... 320
Connections ..... 320
Diagnostics ..... 322

## Navigation

Navigation requires a specific OnStar or connected service plan.

Press to receive Turn-by-Turn directions or have them sent to the vehicle's navigation screen, if equipped. Select Turn-by-Turn Directions from the Services tab of the OnStar app to call an Advisor or select a recent or favorite destination. Touch the navigation icons to select home, address, or place. A destination transfer from OnStar will show the detail view of the destination when it is transferred from OnStar to the Navigation application. See www.onstar.com for a coverage map. Services vary by model. Map coverage is available in the United States and Canada.

### Turn-by-Turn Navigation

1. Press to connect to an Advisor.
2. Request directions to be downloaded to the vehicle.
3. Follow the voice-guided commands.

### Using Voice Commands During a Planned Route

Functionality of the Voice Command button, if equipped, may vary by vehicle and region. For some vehicles, press to open the OnStar app on the infotainment display.

#### Send Destination to Vehicle

Directions can be sent to the vehicle's navigation screen, if equipped.

Press , then ask the Advisor to download directions to the vehicle's navigation system, if equipped. After the call ends, the navigation screen will provide prompts to begin driving directions. Routes that are sent to the navigation screen can only be canceled through the navigation system.

See www.onstar.com (U.S.) or www.onstar.ca (Canada).

## Connections

The following services help with staying connected.

For coverage maps, see www.onstar.com (U.S.) or www.onstar.ca (Canada).

**Ensuring Security**

- Change the default passwords for the Wi-Fi hotspot and myBuick application. Make these passwords different from each other and use a combination of letters and numbers to increase the security.
- Change the default name of the Service Set Identifier (SSID). This is your network's name that is visible to other wireless devices. Choose a unique name and avoid family names or vehicle descriptions.

**Wi-Fi Hotspot**

If equipped, the vehicle has a built-in Wi-Fi hotspot that provides access to the Internet and web content at 4G LTE speed. Up to seven mobile devices can be connected. A data plan is required. Use the in-vehicle controls only when it is safe to do so.

1. To retrieve Wi-Fi hotspot information, press to open the OnStar app on the infotainment display, then select Wi-Fi Hotspot. On some vehicles, touch Wi-Fi or Wi-Fi Settings on the screen.
2. The Wi-Fi settings will display the Wi-Fi hotspot name (SSID), password, and on some vehicles, the connection type (no Internet connection, 3G, 4G, 4G LTE), and signal quality (poor, good, excellent). The LTE icon shows connection to Wi-Fi. It is possible that the icon may not illuminate even though the vehicle has an active connection.
3. To change the SSID or password, press or call 1-888-4ONSTAR to connect with an Advisor. On some vehicles, the SSID and password can be changed in the Wi-Fi Hotspot menu.

After initial set-up, your vehicle's Wi-Fi hotspot will connect automatically to your mobile devices. Manage data usage by turning Wi-Fi on or off on your mobile device, by using the myBuick app, or by contacting an OnStar Advisor. On some vehicles, Wi-Fi can also be managed from the Wi-Fi Hotspot menu.

**myBuick App**

Access the myBuick app from your vehicle's infotainment screen, if equipped, or download the myBuick mobile app to compatible Apple and Android smartphones, if available. Buick users can access the following services:

- Remotely start/stop the vehicle, if factory-equipped.
- Lock/unlock doors, if equipped with automatic locks.
- Activate the horn and lamps.
- Check the vehicle's fuel level, oil life, or tire pressure, if factory-equipped with the Tire Pressure Monitor System.
- Send destinations to the vehicle.
- Locate the vehicle on a map (U.S. market only).
- Turn the vehicle's Wi-Fi hotspot on/off, manage settings, and monitor data consumption, if equipped.
- Locate a dealer and schedule service.
- Request Roadside Assistance.
- Set a parking reminder with pin drop, take a photo, make a note, and set a timer.
- Connect with Buick on social media.

Features are subject to change. For myBuick app information and compatibility, see my.buick.com.

An active OnStar or connected service plan may be required. A compatible device, factory-installed remote start, and

power locks are required. Data rates apply. See www.onstar.com for details and system limitations.

### Remote Services

Contact an OnStar Advisor to unlock the doors or sound the horn and flash the lamps.

### Marketplace

OnStar Advisors can provide offers from restaurants and retailers on your route, help locate hotels, or book a room. These services vary by market.

## Diagnostics

By monitoring and reporting on the vehicle's key systems, OnStar Advanced Diagnostics, if equipped, provides a way to keep up on maintenance. Capabilities vary by model. See www.onstar.com for details and system limitations. Features are subject to change. For updates on feature capabilities, see my.buick.com. Message and data rates may apply.

# Index

## A


About Driving the Vehicle..... 2
Accessories and Modifications..... 220
Accessory Power..... 170
Adaptive
  Cruise Control..... 111, 182
Additional
  OnStar Information..... 316
Add-On Electrical Equipment..... 218
Advanced
  Driver Assistance Systems..... 191
Agreements
  Trademarks and License..... 143
Air
  Cleaner/Filter, Engine..... 229
  Conditioning..... 149
  Filter Life System..... 229
  Filter, Passenger Compartment..... 152
  Vents..... 152
Airbags
  Adding Equipment to the Vehicle..... 65
  Passenger Status Indicator..... 103
  Readiness Light..... 102
  Replacing System Parts after a Crash..... 66
  Servicing Airbag-Equipped Vehicles..... 64
Airbag System..... 55
  Check..... 65
  How Does an Airbag Restrain?..... 60
  Passenger Sensing System..... 61
  What Makes an Airbag Inflate?..... 60
  What Will You See after an Airbag Inflates?..... 60
  When Should an Airbag Inflate?..... 59
  Where Are the Airbags?..... 57
Air Conditioning..... 146
Alarm
  Vehicle Security..... 26
Alert
  Lane Change (LCA)..... 203
  Rear Cross Traffic..... 197
  Side Blind Zone (SBZA)..... 202
All-Season Tires..... 255
All-Wheel Drive..... 175, 240
  Light..... 107
AM-FM Radio..... 130
Antenna
  Multi-band..... 132
Antilock Brake System (ABS)..... 176
  Warning Light..... 106
Appearance Care
  Exterior..... 283
  Interior..... 288
Apple CarPlay and Android Auto..... 137
Armrest
  Rear Seat..... 47
Assistance Program, Roadside..... 307

Assistance Systems
Advanced... 191
Automatic Emergency Braking (AEB)... 199
Automatic Parking Assist (APA)... 195
Blind Zone Alert (SBZA)... 202
Driving... 197
Forward Collision Alert (FCA) System... 197
Front Pedestrian Braking (FPB)... 201
Lane Change Alert (LCA)... 203
Lane Keep Assist (LKA)... 204
Parking... 195
Parking and Backing... 192
Rear Cross Traffic Alert (RCTA)... 197
Rear Vision Camera (RVC)... 192
Surround Vision System... 193
Audio
Bluetooth... 132
Automatic
Door Locks... 19
Emergency Braking (AEB) Disabled Light... 107
Headlamp System... 121
Parking Assist (APA)... 195
Transmission... 173
Transmission Fluid... 228
Transmission Shift Lock Control Function Check... 240
Automatic Transmission
Manual Mode... 174
Auto Stop
Indicator... 110
Avoiding Untrusted Media Devices... 132

## B

Battery
Exterior Lighting Battery Saver... 125
Load Management... 124
Power Protection... 125
Battery - North America... 238, 277
Blade Replacement, Wiper... 241
Bluetooth
Audio... 132
Overview... 133, 134
Brake
Fluid... 237
Pad Life System... 236
System Warning Light... 105
Brake Pad Life System... 236
Brakes... 236
Antilock... 176
Brake Assist... 177
Electric Brake Boost... 176
Electric Parking Brake... 176
Braking... 157
Automatic Emergency (AEB)... 199
Front Pedestrian (FPB) System... 201
Break-In, New Vehicle... 165
Buckle To Drive... 48
Bulb Replacement... 243
Halogen Bulbs... 243
Headlamp Aiming... 243
Taillamps, Turn Signal, Sidemarker, Stoplamps, and Backup Lamps... 244
Buying New Tires... 267

## C

Calibration
Compass... 94
California
Perchlorate Materials Requirements... 220
California Proposition 65 Warning... 1
Camera
Rear Vision (RVC)... 192
Canadian Vehicle Owners... 2
Capacities and Specifications... 301
Carbon Monoxide
Engine Exhaust... 172
Liftgate... 20
Winter Driving... 160
Cargo
Cover... 87
Management System... 88
Tie-Downs... 87
Caution, Danger, and Warning... 2
Center Console
Storage... 85

Charging
System Light 103
Wireless 95
Check Engine Light (Malfunction Indicator) 104
Child Restraints
Infants and Young Children 68
Lower Anchors and Tethers for Children 73
Older Children 66
Securing 79, 81
Systems 70
Child Safety Locks 20
Circuit Breakers 248
Cleaning
Exterior Care 283
Interior Care 288
Climate Control Systems 146
Air Conditioning 146
Dual Automatic 149
Heating 146
Clock 94
Cluster, Instrument 99
Collision Alert
Forward (FCA) System 197
Collision Damage Repair 310
Compact Spare Tire 276
Compartments
Storage 85
Compass 94
Connected Services
Connections 320
Diagnostics 322
Navigation 320
Connections
Connected Services 320
Control
Traction and Electronic Stability 178
Control of a Vehicle 157
Controls
Steering Wheel 128
Convenience Net 88
Convex Mirrors 28
Coolant
Engine Temperature Gauge 101
Engine Temperature Warning Light 109
Cooling 146, 149
Cooling System 230
Courtesy Lamps 123
Courtesy Transportation Program 309
Cover
Cargo 87
Covers
Rear Compartment/Storage Panel 86
Cruise Control 180
Adaptive 182
Light 111
Cupholders 85
Customer Assistance
Offices 306
Text Telephone (TTY) Users 306
Customer Information
Publications Ordering Information 311
Customer Satisfaction Procedure 304
Customer Support
and Online Account 306
Cybersecurity 313

## D

Damage Repair, Collision 310
Danger, Warning, and Caution 2
Dashboard 4
Data Collection
OnStar 314
Data Recorders, Event 314
Daytime Running Lamps (DRL) 121
Defensive Driving 156
Delayed Locking 19
Diagnostics
Connected Services 322
Disabled Vehicle
Transporting 279
Distracted
Driving 156
Distracted Driving 156
Dome Lamps 123

Door
Ajar Light... 111
Delayed Locking... 19
Locks... 17
Power Locks... 19
Drive Belt Routing, Engine... 303
Driver
Assistance Systems, Advanced... 191
Behavior... 155
Information Center (DIC)... 112
Teen... 140
Drive Systems
All-Wheel Drive... 175, 240
Driving
Assistance Systems... 197
Better Fuel Economy... 155
Characteristics and Towing Tips... 210
Defensive... 156
Environment... 155
Hill and Mountain Roads... 160
If the Vehicle is Stuck... 161
Impaired... 157
Loss of Control... 158
Off-Road Recovery... 158
Vehicle Load Limits... 162
Wet Roads... 159
Winter... 160
Driving the Vehicle... 2
Dual
Automatic Climate Control System... 149

## E

E85 or FlexFuel... 207
Electric
Brake Boost... 176
Parking Brake... 176
Parking Brake Light... 106
Electrical
Equipment, Add-On... 218
System Overload... 246
Electrical System
Engine Compartment Fuse Block... 248
Fuses and Circuit Breakers... 248
Instrument Panel Fuse Block... 251
Rear Compartment Fuse Block... 253
Electronic Stability Control (ESC) Off
Light... 108
Emergency
OnStar... 316
Engine
Air Cleaner/Filter... 229
Air Filter Life System... 229
Check Light (Malfunction Indicator)... 104
Compartment Overview... 223
Coolant Temperature Gauge... 101
Coolant Temperature Warning Light... 109
Cooling System... 230
Drive Belt Routing... 303
Exhaust... 172
Heater... 169
Oil Life System... 228
Oil Pressure Light... 109
Overheating... 234
Power Messages... 115
Running While Parked... 172
Starting... 167
Entry Lighting... 124
Equipment, Towing... 216
Event Data Recorders... 314
Exit Lighting... 124
Extended Parking... 172
Extender, Seat Belt... 54
Exterior
Lamp Controls... 119
Lighting Battery Saver... 125

## F

Filter
Engine Air Cleaner... 229
Flashers, Hazard Warning... 122
Flash-to-Pass... 121
Flat Tire... 271
Changing... 272
Floor Mats... 291
Fluid
Automatic Transmission... 228

Brakes... 237
Washer... 235
Folding Mirrors... 29
Folding Seatback... 45
Frequency Statement
Radio... 312
Front
Heated Seats... 44
Front Seats
Adjustment... 38
Fuel
Recommended... 206
Additives... 207
E85... 207
Economy, Driving for Better... 155
Filling a Portable Fuel Container... 209
Filling the Tank... 208
Foreign Countries... 207
Gauge... 100
Low Fuel Warning Light... 110
Prohibited Fuels... 207
Top Tier... 206
Fuses
Engine Compartment Fuse Block... 248
Fuses and Circuit Breakers... 248
Instrument Panel Fuse Block... 251
Rear Compartment Fuse Block... 253


## G


Garage Door Opener... 116
Programming... 116
Gas Strut(s)... 242
Gauges
Engine Coolant Temperature... 101
Fuel... 100
Odometer... 100
Speedometer... 100
Tachometer... 100
Trip Odometer... 100
Warning Lights and Indicators... 98
General Information
Service and Maintenance... 292
Towing... 210
Vehicle Care... 220
Glove Box... 85
GM Mobility Reimbursement Program... 307


## H


Halogen Bulbs... 243
Hazard Warning Flashers... 122
Headlamps
Aiming... 243
Automatic... 121
Bulb Replacement... 243
Daytime Running Lamps (DRL)... 121
Flash-to-Pass... 121
High/Low Beam Changer... 121
High-Beam On Light... 111
Lamps On Reminder... 111
Head Restraints... 37
Heated
Front Seats... 44
Mirrors... 29
Steering Wheel... 91
Heater
Engine... 169
Heating... 146, 149
High-Beam On Light... 111
High-Beam Systems... 119
High-Speed Operation... 261
Hill and Mountain Roads... 160
Hill Start Assist (HSA)... 178
Hood... 221
Horn... 91
How to Wear Seat Belts Properly... 49
HVAC... 146, 149


## I


Ignition Positions... 166
Immobilizer... 27
Indicator
Auto Stop... 110
Pedestrian Ahead... 108
Vehicle Ahead... 107

Indicators
Warning Lights and Gauges..... 98
Infants and Young Children, Restraints..... 68
Information
Publication Ordering..... 311
Infotainment
Using the System..... 128
Inspection
Multi-Point Vehicle..... 295
Instrument Cluster..... 99
Instrument Panel Overview..... 4
Interior
Rearview Mirrors..... 29
Introduction..... 2, 126

## J

Jump
Starting - North America..... 277

## K

Keys..... 8
Remote..... 9
Remote Operation..... 9

## L

Labeling, Tire Sidewall..... 256
Lamps
Courtesy..... 123
Daytime Running (DRL)..... 121
Dome..... 123
Exterior Controls..... 119
Exterior Lighting Battery Saver..... 125
Flash-to-Pass..... 121
High/Low Beam Changer..... 121
Malfunction Indicator (Check Engine)..... 104
On Reminder..... 111
Reading..... 123
Lane
Keep Assist Light..... 107
Lap-Shoulder Belt..... 51
LATCH System
Replacing Parts after a Crash..... 79
LED Lighting..... 243
Liftgate..... 20
Lighting
Entry..... 124
Exit..... 124
Illumination Control..... 122
LED..... 243
Lights
Adaptive Cruise Control..... 111
Airbag Readiness..... 102
All-Wheel-Drive..... 107
Antilock Brake System (ABS) Warning..... 106
Automatic Emergency Braking (AEB) Disabled..... 107
Brake System Warning..... 105
Charging System..... 103
Check Engine (Malfunction Indicator)..... 104
Cruise Control Light..... 111
Door Ajar..... 111
Electric Parking Brake..... 106
Electronic Stability Control (ESC), Off..... 108
Engine Coolant Temperature Warning..... 109
Engine Oil Pressure..... 109
Gauges and Indicators..... 98
High-Beam On..... 111
Lane Keep Assist..... 107
Low Fuel Warning..... 110
Seat Belt Reminders..... 102
Security..... 110
Service Electric Parking Brake..... 106
Tire Pressure..... 109
Traction Control System (TCS)/ Electronic Stability Control Light..... 108
Traction Off..... 108
Locks
Automatic Door..... 19
Delayed Locking..... 19
Door..... 17
Lockout Protection..... 19
Power Door..... 19
Safety..... 20

Loss of Control..... 158
Lower Anchors and Tethers for Children (LATCH System)..... 73
Low Fuel Warning Light..... 110
Lumbar Adjustment
Front Seats..... 41

## M

Maintenance
Records..... 299
Maintenance Schedule..... 293
Recommended Fluids and Lubricants..... 298
Malfunction Indicator Lamp..... 104
Manual
Mode..... 174
Media
Avoiding Untrusted Devices..... 132
Memory Seats..... 41
Messages
Engine Power..... 115
Vehicle..... 115
Vehicle Speed..... 116
Mirrors
Automatic Dimming Rearview..... 29
Convex..... 28
Folding..... 29
Heated..... 29
Interior Rearview..... 29
Manual Rearview..... 29
Power..... 28
Rear Camera..... 29
Tilt in Reverse..... 29
Monitor System, Tire Pressure..... 261
Multi-band Antenna..... 132
Multi-Point Vehicle Inspection (MPVI)..... 295

## N

Navigation
Connected Services..... 320
Net, Convenience..... 88
New Vehicle Break-In..... 165

## O

Odometer..... 100
Trip..... 100
Off-Road
Recovery..... 158
Oil
Engine..... 226
Engine Oil Life System..... 228
Pressure Light..... 109
Older Children, Restraints..... 66
Online Account and Customer Support..... 306
OnStar..... 314
Additional Information..... 316
Overview..... 315
OnStar Emergency..... 316
OnStar Security..... 316
Outlets
Power..... 94
Overheating, Engine..... 234
Overview..... 127
Instrument Panel..... 4

## P

Park
Assist..... 192, 195
Shifting Into..... 171
Shifting Out of..... 171
Parking
Brake and P (Park) Mechanism Check..... 240
Extended..... 172
Over Things That Burn..... 172
Parking Assist
Automatic..... 195
Parking or Backing
Assistance Systems..... 192
Passenger
Airbag Status Indicator..... 103
Compartment Air Filter..... 152
Sensing System..... 61
Pedestrian Ahead Indicator..... 108
Perchlorate Materials Requirements, California..... 220

Phone
Apple CarPlay and Android Auto..... 137
Bluetooth..... 133, 134
Port
USB..... 132
Power
Door Locks..... 19
Mirrors..... 28
Outlets..... 94
Protection, Battery..... 125
Retained Accessory (RAP)..... 170
Seat Adjustment..... 39
Windows..... 32
Pregnancy, Using Seat Belts..... 54
Privacy
Vehicle Data Recording..... 313
Program
Courtesy Transportation..... 309
Prohibited Fuels..... 207
Proposition 65 Warning
California..... 1
Publication Ordering Information..... 311

## R

Radiator..... 230
Radio
AM-FM Radio..... 130
Frequency Statement..... 312
Reception..... 131
Satellite..... 131
Reading Lamps..... 123
Rear
Camera Mirror..... 29
Seat Armrest..... 47
Seats..... 46
Window Washer/Wiper..... 93
Rear Compartment/Storage Panel Cover..... 86
Rearview Mirrors..... 29
Automatic Dimming..... 29
Reclining Seatbacks..... 40
Recommended
Fuel..... 206
Recommended Fluids and Lubricants..... 298
Records
Maintenance..... 299
Recreational Vehicle Towing..... 280
Reimbursement Program, GM Mobility..... 307
Remote
Key..... 9
Key Operation..... 9
Start..... 16
Replacement Parts
Airbags..... 66
Replacing
Airbag System..... 66
LATCH System Parts After a Crash..... 79
Seat Belt System Parts after a Crash..... 55
Reporting Safety Defects
Canadian Government..... 313
General Motors..... 313
U.S. Government..... 312
Restraints
Where to Put..... 72
Retained Accessory Power (RAP)..... 170
Reverse Tilt Mirrors..... 29
Roads
Driving, Wet..... 159
Roadside Assistance Program..... 307
Roof
Rack System..... 88
Sunroof..... 33
Rotation, Tires..... 265
Routing, Engine Drive Belt..... 303
Running the Vehicle While Parked..... 172

## S

Safety
Locks..... 20
Safety Defects Reporting
Canadian Government..... 313
General Motors..... 313
U.S. Government..... 312
Safety System Check..... 54
Satellite Radio..... 131
Scheduling Appointments..... 309
Seat Belts..... 47

Buckle To Drive... 48
Care... 55
Extender... 54
How to Wear Seat Belts Properly... 49
Lap-Shoulder Belt... 51
Reminders... 102
Replacing after a Crash... 55
Use During Pregnancy... 54
Seats
Adjustment, Front... 38
Folding Seatback... 45
Head Restraints... 37
Heated Front... 44
Lumbar Adjustment, Front... 41
Memory... 41
Power Adjustment, Front... 39
Rear... 46
Reclining Seatbacks... 40
Securing Child Restraints... 79, 81
Security
Light... 110
OnStar... 316
Vehicle... 26
Vehicle Alarm... 26
Service... 152
Maintenance Records... 299
Accessories and Modifications... 220
Climate Control System... 146
Doing Your Own Work... 221
Electric Parking Brake Light... 106
Maintenance, General Information... 292
Parts Identification... 300
Scheduling Appointments... 309
Services
Special Application... 296
Servicing the Airbag... 64
Settings... 139
Shifting
Into Park... 171
Out of Park... 171
Shift Lock Control Function Check, Automatic Transmission... 240
Sidemarker
Bulb Replacement... 244
Signals, Turn and Lane-Change... 122
Software Updates... 130
Spare Tire
Compact... 276
Special Application Services... 296
Specifications and Capacities... 301
Speedometer... 100
Start
Remote... 16
Start Assist, Hill... 178
Starter Switch Check... 240
Starting the Engine... 167
Status
Vehicle... 113
Steering... 157
Heated Wheel... 91
Wheel Adjustment... 91
Wheel Controls... 128
Stop/Start System... 168
Stoplamps and Back-Up Lamps
Bulb Replacement... 244
Storage
Center Console... 85
Compartments... 85
Convenience Net... 88
Cupholders... 85
Glove Box... 85
Rear Compartment/Storage Panel Cover... 86
Roof Rack System... 88
Storage Areas
Cargo Cover... 87
Cargo Management System... 88
Struts
Gas... 242
Stuck Vehicle... 161
Sunroof... 33
Sun Visors... 33
Surround
Vision System... 193
Symbols... 3
System
Airbag... 55

Brake Pad Life... 236
Engine Air Filter Life... 229
Roof Rack... 88
Systems
High-Beam... 119

## T

Tachometer... 100
Taillamps
Bulb Replacement... 244
Teen Driver... 140
Text Telephone (TTY) Users... 306
Theft-Deterrent Systems... 27
Immobilizer... 27
Time... 94
Tires... 254
All-Season... 255
Buying New Tires... 267
Changing... 272
Compact Spare... 276
Designations... 257
Different Size... 268
If a Tire Goes Flat... 271
Inspection... 265
Pressure... 260, 261
Pressure Light... 109
Pressure Monitor Operation... 262
Pressure Monitor System... 261
Rotation... 265
Sidewall Labeling... 256
Terminology and Definitions... 258
Traction Devices... 270
Uniform Tire Quality Grading... 268
Wheel Alignment and Tire Balance... 270
Wheel Replacement... 270
When It Is Time for New Tires... 266
Winter... 255
Top Tier Fuel... 206
Towing
Driving Characteristics... 210
Equipment... 216
General Information... 210
Recreational Vehicle... 280
Trailer... 213
Traction
Control System (TCS)/Electronic Stability Control Light... 108
Control/Electronic Stability Control... 178
Off Light... 108
Traction Devices, Tires... 270
Trademarks and License Agreements... 143
Trailer
Towing... 213
Transmission
Automatic... 173
Fluid, Automatic... 228
Transportation Program, Courtesy... 309
Transporting
a Disabled Vehicle... 279
Trip Odometer... 100
TTY Users
Customer Assistance... 306
Turn and Lane-Change Signals... 122
Turn Signal
Bulb Replacement... 244

## U

Uniform Tire Quality Grading... 268
Universal Remote System... 116
Operation... 118
Programming... 116
Updates
Software... 130
USB Port... 132
Using
Infotainment System... 128
This Manual... 2

## V

Vehicle
Ahead Indicator... 107
Alarm System... 26
Canadian Owners... 2
Control... 157
Data Recording and Privacy... 313
Design... 155

Identification Number (VIN)..... 300
Load Limits..... 162
Messages..... 115
Security..... 26
Speed Messages..... 116
Status..... 113
Symbols..... 3
Vehicle Care
Tire Pressure..... 260
Ventilation, Air..... 152
Visors..... 33

## W

Warning
Brake System Light..... 105
Caution and Danger..... 2
Hazard Flashers..... 122
Lights, Gauges, and Indicators..... 98
Washer Fluid..... 235
Wheels
Alignment and Tire Balance..... 270
Different Size..... 268
Replacement..... 270
When It Is Time for New Tires..... 266
Where to Put the Restraint..... 72
Windows..... 32
Power..... 32
Windshield
Replacement..... 242
Wiper/Washer..... 91
Winter
Driving..... 160
Tires..... 255
Wiper
Blade Replacement..... 241
Rear Washer..... 93
Wireless Charging..... 95

## Scan to Access

- Owner's Manuals
- Warranty Information
- Connected Services
- My Buick Rewards
- myBuick Mobile App
- How-To Videos
- Vehicle Diagnostics
- Scheduled Maintenance
- Vehicle Features
- Many Additional Resources

**United States**

**Canada**

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**United States**

Customer Assistance
1-800-521-7300
Roadside Assistance
1-800-252-1112

**United States and Canada**

Connected Services
1-888-4-ONSTAR

**Canada**

Customer Assistance
1-800-263-3777
Roadside Assistance
1-800-268-6800

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