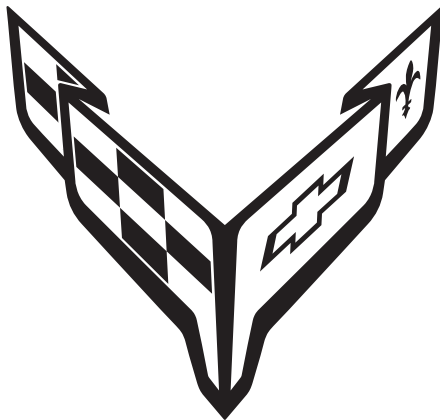




2025



***CORVETTE***

Essential Operating  
and Safety Information



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## Introduction

### California Proposition 65 Warning



# WARNING

Operating, servicing and maintaining a passenger vehicle or off-highway motor vehicle can expose you to chemicals including engine exhaust, carbon monoxide, phthalates, and lead, which are known to the State of California to cause cancer and birth defects or other reproductive harm. To minimize exposure, avoid breathing exhaust, do not idle engine except as necessary, service your vehicle in a well-ventilated area and wear gloves or wash your hands frequently when servicing your vehicle. For more information go to [www.P65Warnings.ca.gov/passenger-vehicle](http://www.P65Warnings.ca.gov/passenger-vehicle).

## Introduction

This document includes essential operating and safety information for your vehicle.

For complete operating information and instructions, see the Owner's Manual on the myChevrolet in the vehicle infotainment system, at [www.chevrolet.com](http://www.chevrolet.com), or on the myChevrolet mobile app.

To verify your vehicle has a downloaded Owner's Manual in the infotainment system, go to the myChevrolet, touch the Settings icon, and touch Owner's Manual Details.

If your vehicle has a downloaded Owner's Manual, the downloaded version is accurate at the time of installation. To ensure you are viewing the most up-to-date, connected version of the Owner's Manual, accept the Terms and Conditions and have an active Wi-Fi or data connection. If there are discrepancies between the digital and printed versions of the essential operating and safety information in this manual and the Owner's Manual, refer to the connected version of the Owner's Manual on the myChevrolet app in the vehicle's infotainment system for the most up-to-date version. Up-to-date versions of

the Owner's Manual are also accessible at [www.chevrolet.com](http://www.chevrolet.com) and on the myChevrolet mobile app.

To view digital versions or to order printed versions of the Owner's Manual or warranty information, or to view additional vehicle information, scan the code below or visit [chevrolet.com/support/vehicle/manuals-guides](http://chevrolet.com/support/vehicle/manuals-guides) (U.S.); [chevrolet.ca/en/support/vehicle/manuals-guides](http://chevrolet.ca/en/support/vehicle/manuals-guides) (Canada):



United States



Canada

Keep this manual in the vehicle for quick reference.

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

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



## Canadian Vehicle Owners

You can obtain a copy of this guide in French from your dealer, at [www.helminc.com](http://www.helminc.com), or from the following address:

### 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.

## 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

Some of the vehicle components and labels use symbols instead of text relating to a specific feature, control, message, gauge, or indicator.

### Vehicle Symbol Chart

This chart defines the symbols that may be found on the vehicle.

 : Air Conditioning System

 : Air Conditioning Refrigerant Oil

 : Airbag Readiness Light

 : Antilock Brake System (ABS)

 : Brake System Warning Light

 : Carbon Monoxide

 : Dispose of Used Components Properly

 : Do Not Apply High Pressure Water

 : Electric All-Wheel Drive

 : Engine Coolant Temperature

 : Flame/Fire Prohibited

 : Flammable

 : Fuse Block Cover Lock Location

 : Fuses

 : Hybrid Battery Charging (Charge+)

 : ISOFIX/LATCH System Child Restraints

 : Keep Fuse Block Covers Properly Installed

 : Lane Keep Assist

 : Malfunction Indicator Lamp

 : Oil Pressure

 : Park Assist

 : Power

 : Rear Cross Traffic Alert

 : Registered Technician

 : Remote Start

 : Risk of Electrical Fire

 : Seat Belt Reminders

 : Side Blind Zone Alert

 : Tire Pressure Monitor

 : StabiliTrak/Electronic Stability Control (ESC)

 : Under Pressure

### **Additional Instructions or Information**

The following symbols are used to indicate additional instructions or information.

 : 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.”

## Keys, Doors, and Windows

### Keys and Locks

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## 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 mechanical key can be used to open the vehicle if power to the vehicle is lost.



Convertible Shown, Coupe Similar



Convertible Shown, Coupe Similar

Press the button on the side to remove the mechanical key. Never pull the mechanical key out without pressing the button.

This vehicle has a Keyless Access system with pushbutton start. See your owner's manual for information on starting the vehicle.

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

## 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.

(Continued)

### Warning (Continued)

- Do not pull the manual door release handle (located on the floor) while the vehicle is in motion. The door may open with only a single pull.
- 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 or unlock a door from the outside, press  or  on the remote key.



For Keyless Access, hold the remote key within 1 m (3 ft) of the door handle. Grip and press the door handle touchpad. See your owner's manual. This feature can be programmed. To view available settings from the infotainment screen, touch Settings > Vehicle > Remote Lock, Unlock, Start.

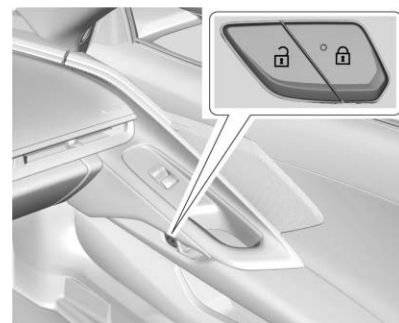


#### Convertible Shown, Coupe Similar

To lock or unlock the doors from the inside, use the driver power door lock switch.

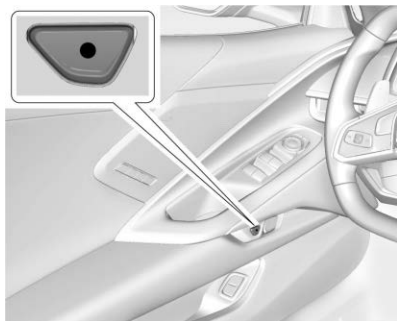
 : Press to lock the doors. The indicator light in the switch will illuminate when locked.

 : Press to unlock the doors.



The passenger power door lock switch can also be used to lock or unlock the doors.

The fuel door, hood, and hatch/trunk are also locked and unlocked using either power door lock switch.

**Convertible Shown, Coupe Similar**

To open a door from the inside, press the door unlatch button.

**Loss of Vehicle Electrical Power**

If the vehicle has lost battery power, open the doors manually.

**From Inside the Vehicle**

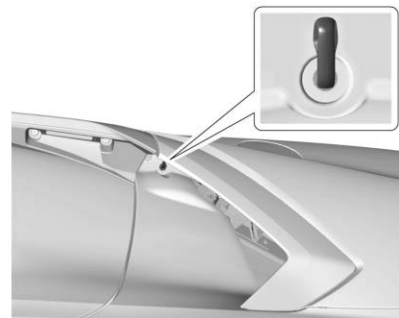
Pull the driver door release handle.



Pull the passenger door release handle.

**From Outside the Vehicle**

There is a backup key cylinder to open the left hand door.



In the air inlet located on the body, rearward of the left door handle.

**Free-Turning Locks**

The key lock cylinder turns freely when either the wrong key is used, or the correct key is not fully inserted. The free-turning lock feature prevents the lock cylinder from being forced open. To reset the lock cylinder, ensure that the correct key is fully inserted into the lock cylinder. Rotate the key until you feel the lock

cylinder click back into place. Remove the key and reinsert fully, then rotate the key to unlock the vehicle.

## Doors

### Hood

#### Hood Release

#### 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. When the hood is not closed, the vehicle will not exceed 42 km/h (26 mph). Close the hood to drive faster than 42 km/h (26 mph).

#### Warning

When closing the hood, keep hands out of the opening between the body and the trunk. The vehicle features a self closing power latch. You or others could be injured.

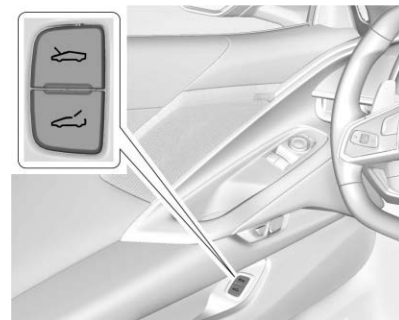
The hood compartment can be accessed in several ways.

Ensure the hood is clear of any objects before opening.

This vehicle prevents from shifting out of P (Park) when the hood is not closed. Close the hood to shift out of P (Park). Confirm the hood is closed by checking that the hood is flush with the surrounding components.

If the hood is closed but the ajar message is still present, then the transmission lockout can be overridden by holding the brake for 20 seconds and then shifting into D (Drive). In this case, the vehicle will not exceed 42 km/h (26 mph). See your dealer for service.

#### Driver Door Hood Latch Release Button



1. With the transmission in P (Park), press  on the bottom of the driver door to release the hood.
2. From the front of the vehicle, lift the hood slightly until the gas strut system automatically raises and holds it in the fully open position.
3. The hood light and Open Hood message will display in the Driver Information Center (DIC) when the hood is open.

#### Using the Remote Key

1. Press  twice on the remote key to release the hood.

- From the front of the vehicle, lift the hood slightly until the gas strut system automatically raises and holds it in the fully open position.
- The hood light and Open Hood message will display in the Driver Information Center (DIC) when the hood is open.

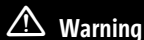
### Front Fascia Touchpad



- If equipped, locate the touchpad in the grill opening near the driver side headlight.
- Press the touchpad once to release the hood. The remote key must be within 1 m (3 ft) of the hood.

- From the front of the vehicle, lift the hood slightly until the gas strut system automatically raises and holds it in the fully open position.
- The hood light and Open Hood message will display in the Driver Information Center (DIC) when the hood is open.

### Operating The Hood When There Is No Electrical Power



#### Warning

When closing the hood, keep hands out of the opening between the body and the trunk. The vehicle features a self closing power latch. You or others could be injured.

The manual release cable should only be used for service and/or emergency use, such as a loss of vehicle electrical power.

To enter the vehicle in the event electrical power has been lost, see "Loss of Vehicle Electrical Power" under *Door Locks* ⇨ 6.

### To open the hood:



- Locate the manual release cable loop to the left of the brake pedal.
- Pull the manual release cable twice to release the hood.
- From the front of the vehicle, lift the hood slightly until the gas strut system automatically raises and holds it in the fully open position.

### To close the hood:

- Before closing the hood, make sure all cargo is properly stowed and does not go above or across the hood seal.

2. To close the hood, either drop the hood about 0.3 meters (1 ft) from the latch, or lower the hood until it is secured in the latch and push briefly on the outside of the top of the hood until the latch clicks into engagement, then let go of the hood. The hood will then close automatically.
3. Check to make sure the hood is latched completely. Push down on the hood to latch if it does not latch completely. Repeat this step with additional force if necessary.

If the hood remains open for more than 10 minutes, the vehicle will enter sleep mode and the hood may not power latch. To exit sleep mode press the front fascia touchpad or the  on the remote key, or open any door and then push briefly on the outside of the top of the hood until the latch clicks into engagement, then let go of the hood. The hood will then close automatically. Ensure the hood is completely closed to avoid the Hood Open message in the Driver Information Center (DIC).

### Emergency Hood Release Button



The underhood compartment may be equipped with a glow-in-the-dark emergency hood release button. This button will glow following exposure to light. Press the button to open the hood from inside the underhood compartment.

### Storing Your Vehicle

#### Warning

The emergency hood release button inside the underhood compartment will not function when the battery is disconnected or depleted. To avoid personal injury or death, always keep the hood fully closed and latched when storing the vehicle. If the hood is not latched, a person could climb into the underhood compartment and inadvertently close the hood. People should never climb inside the underhood compartment. Never shut the hood when a person is inside.

See “Opening The Hood When There Is No Electrical Power,” earlier in this section.

## Vehicle Security

### Immobilizer Operation

The vehicle has a passive theft-deterrent system.



The security light comes on in the instrument cluster if there is a problem with arming or disarming the theft-deterrent system. This light also comes on briefly when the engine is started.

The system is automatically armed when the ignition is turned off.

The immobilization system is disarmed when the ignition is turned on or placed in accessory mode and a valid remote key is found in the vehicle.

You do not have to manually arm or disarm the system.

The system has one or more remote keys that are matched to an immobilizer control unit in the vehicle. Only a correctly matched remote key starts the vehicle. The vehicle may not start if the remote key is damaged.

If the engine does not start and the security light comes on, there may be a problem with the immobilizer system. Try starting the vehicle again.

If the vehicle does not start and the remote key appears to be undamaged, try another remote key. Or, place the remote key in the cupholder backup location. See your owner's manual. If the engine still does not start with the other remote key, or with the remote key in the cupholder backup location, the vehicle needs service. If the engine does start, the first remote key may be faulty. See your dealer or have a new remote key programmed to the vehicle.

The immobilizer system can 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" in your owner's manual.

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

## Interior Mirrors

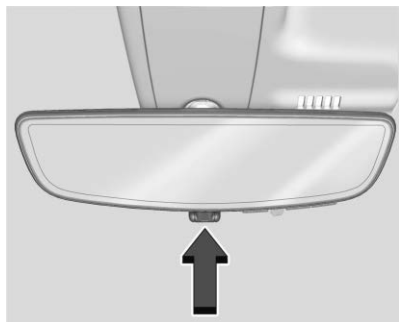
### Rear Camera Mirror



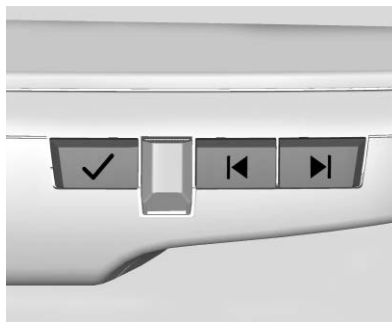
#### Warning

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.

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



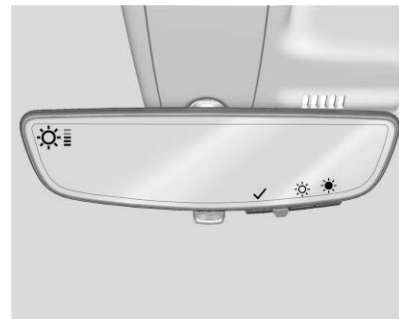
Pull the tab to turn on the display. Push the tab to turn it off. When the display is off, the automatic dimming function is active. Adjust the mirror for a clear view of the area behind the vehicle while the display is off.



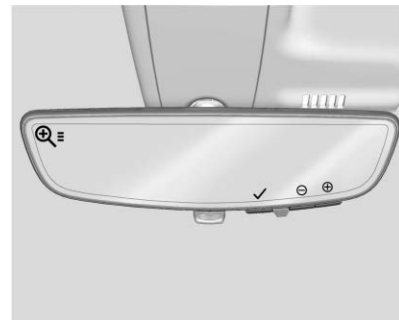
Press ✓ to scroll through the adjustment options.

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.

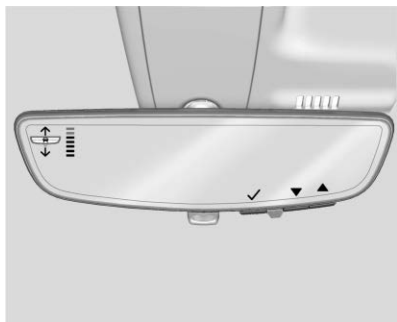
The adjustment options are:



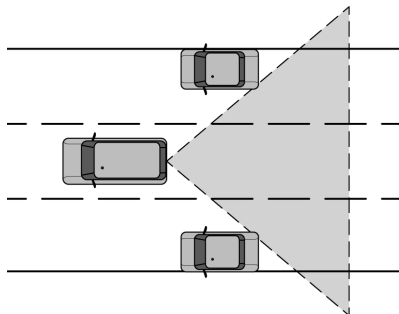
- Brightness



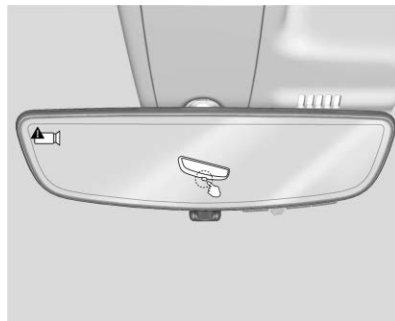
- Zoom



- Tilt



### Troubleshooting



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

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

- There is glare from the sun or headlights. This may obstruct objects from view. If needed, push the tab to turn off the display.
- Dirt, snow, or other debris blocks the camera lens. Clean the lens with a soft damp cloth.

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

If the camera is located on the retractable hardtop, the Rear Camera Mirror will not work with the convertible top down. Use the tab to switch to standard mirror display.

### 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.



## Seats and Restraints

### Head Restraints

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## Head Restraints

The vehicle's front seats have head restraints in the outboard seating positions that cannot be adjusted.

The front seat outboard head restraints are not removable.

## Front Seats

### Power Seat Adjustment



#### 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.



#### Warning

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



To adjust the seat:

- 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. This adjustment will also change the seatback position. Readjustment of the seatback may be required.
- Raise or lower the seat by moving the rear of the control up or down.

To adjust the seatback, see *Reclining Seatbacks* ⇨ 17.

To adjust the lumbar support, see *Lumbar Adjustment* ⇨ 18.

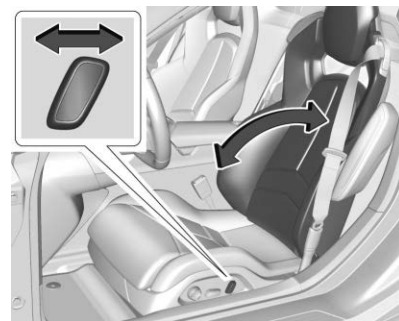
### Obstructions

If something has blocked the seat during movement, the movement may stop. Remove the obstruction and try the adjustment again. If movement is still not available, see your dealer.

### Seat Travel Limit

If the seat or seatback is moved rearward or reclined and makes contact with the carpet behind the seat, the seat will automatically move forward a small distance. The seat movement will stop until all switches are released and reactivated.

## Reclining Seatbacks



To adjust the seatback:

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

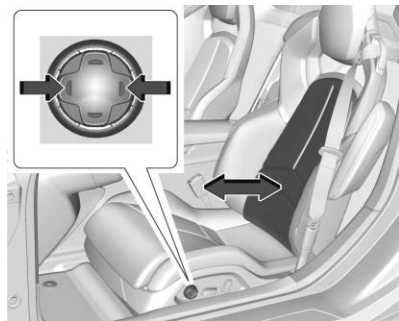
### Warning

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.

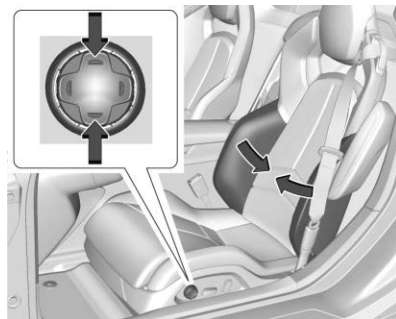
(Continued)

**Warning (Continued)**

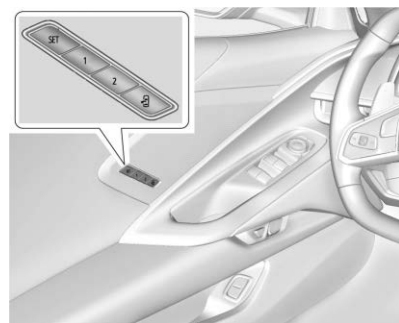
For proper protection when the vehicle is in motion, have the seatback upright. Then sit well back in the seat and wear the seat belt properly.

**Lumbar Adjustment**

If equipped, press and hold the control forward to increase or rearward to decrease lumbar support.

**Bolster Adjustment**

If equipped, press and hold the control upward to increase or downward to decrease the side bolster 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. Drivers with remote key 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 cancelled 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 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 remote key from the vehicle.

3. Start the vehicle with the initial 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. ADIC 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 > Select 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 vehicle 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 vehicle 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.

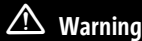
### Cancel Memory Seating Recalls

- 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

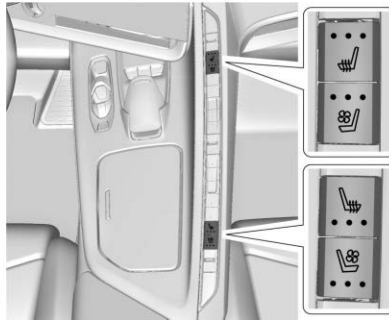
If something has blocked the seat while recalling a memory position, the recall may stop. Remove the obstruction and try the recall again. If the memory position still does not recall, see your dealer.

## Heated and Ventilated Front Seats



### Warning

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



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

Press or to heat the driver or passenger seat.

Press or if equipped, to ventilate the driver or passenger seat. A ventilated seat has a fan that circulates air through the seat. The air is not cooled.

Press the button once for the highest setting. With each press of the button, the seat will change to the next lower setting, and then to the off setting. The indicator lights show three for the highest setting and one for 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.

### Auto Heated and Ventilated Seats

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

The active high, medium, low, or off heated or ventilated seat level will be indicated by the manual heated and ventilated seat buttons on the console.

Use the manual heated and ventilated seat buttons on the console to turn auto heated or ventilated seats off. If the passenger seat is unoccupied, the auto heated or ventilated seats feature will not activate that seat. To enable or disable auto heated or ventilated seats, select Settings > Vehicle > Climate and Air Quality > Auto Cooled or Auto Heated Seats > ON or OFF.

If equipped with a heated steering wheel, the auto heated steering wheel activation will follow the heated seat auto activation and the heated wheel indicator will follow the state of the steering wheel heat.

### Remote Start Heated and Ventilated Seats

During a remote start (if equipped), the heated or ventilated seats can be turned on automatically. When it is cold outside, the heated seats turn on, and when it is hot outside the ventilated seats turn on. The heated and ventilated seat indicators and heated steering wheel indicator may come on during this operation. The heated or ventilated seats are canceled when the vehicle is turned on. Press the heated or ventilated seat button to use the heated or ventilated seats after the vehicle is started.

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

To enable or disable remote start heated or ventilated seats, select Settings > Vehicle > Remote Lock, Unlock, and Start > Remote Start Auto Heat Seats or Remote Start Auto Cool Seats > ON or OFF. See your owner's manual.

## Seat Belts

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

### Warning

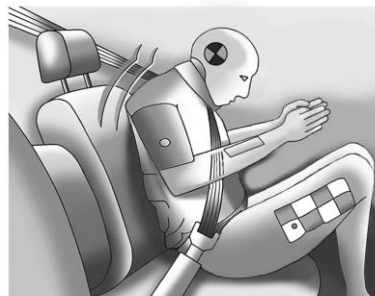
Do not let anyone ride where a seat belt cannot be worn properly. In a crash, if you or your passenger(s) are not wearing seat belts, injuries can be much worse than if you are wearing seat belts. You can be seriously injured or killed by hitting things inside the vehicle harder or by being ejected from 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* ⇨ 48.

### 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.

## How to Wear Seat Belts Properly

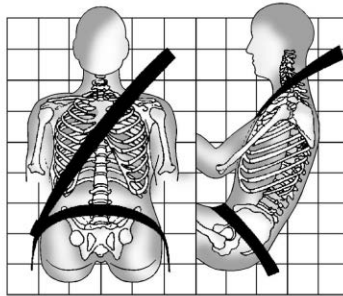
Follow these rules for everyone's protection.

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* ⇨ 38 or

*Infants and Young Children* ⇨ 40. 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.



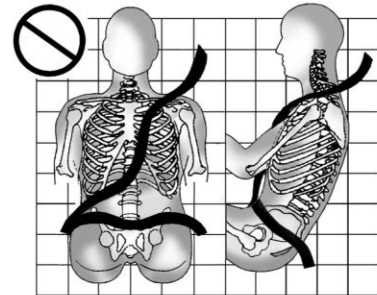
- Sit up straight and always keep your feet on the floor in front of you (if possible).
- Wear the lap part of the belt low and snug on the hips, just touching the thighs. In a crash, this applies force to the strong pelvic bones and you would be less likely

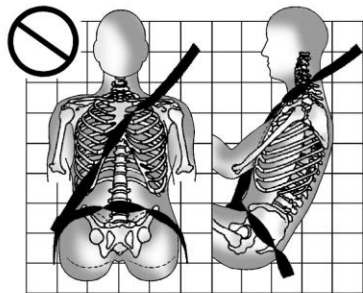
to slide under the lap belt. If you slid under it, the belt would apply force on your abdomen. This could cause serious or even fatal injuries.

- 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.

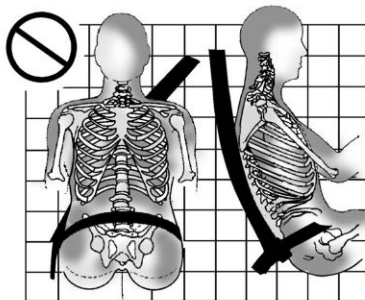
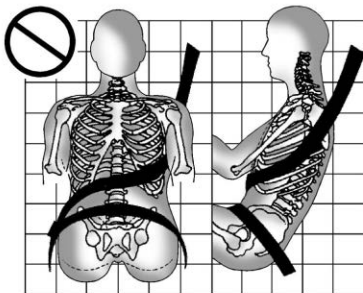
### Warning

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

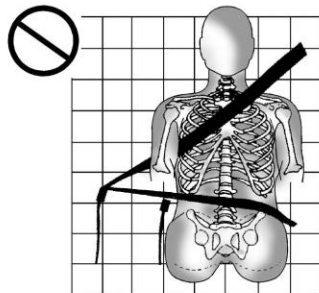




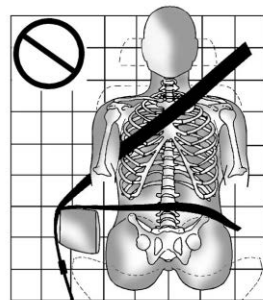
Never allow the lap or shoulder belt to become loose or twisted.



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.

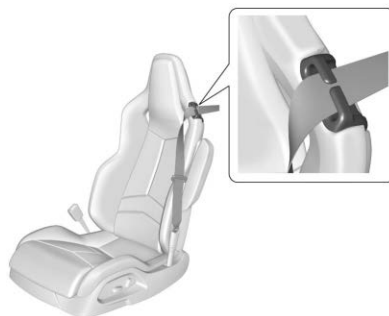
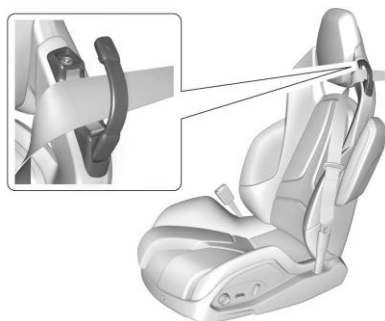
 **Warning**

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.

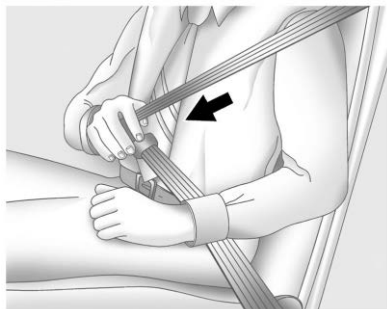
**GT1 Seat****GT2/Competition Seat**

1. The seat has a seat belt guide. The seat belt must be routed through the guide to properly position the shoulder belt on occupants whose shoulder is below the guide when seated. To use the seat belt guide:

**GT1 Seat:** Slide the edge of the belt webbing through the opening on the guide. Be sure the belt is not twisted. If a child will be riding in the vehicle, see *Older Children* ⇨ 38 or *Infants and Young Children* ⇨ 40.

**GT2/Competition Seat:** Unsnap the guide to open it. Route the seat belt webbing onto the open guide and snap the guide closed. Be sure the belt is not twisted. If a child will be riding in the vehicle, see *Older Children* ⇨ 38 or *Infants and Young Children* ⇨ 40.

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



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

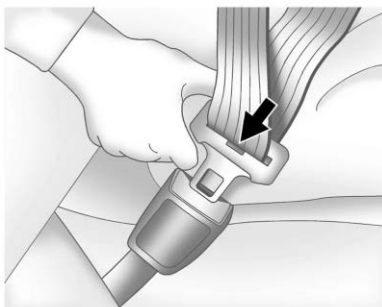
The lap-shoulder belt may lock if you pull the belt across you very quickly. If this happens, let the belt go back slightly to unlock it. Then pull the belt across you more slowly.

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* ⇨ 42. 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* ⇨ 33.

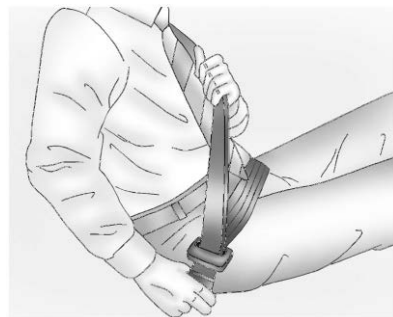
If the shoulder portion of the driver belt is pulled out all the way, the shoulder belt retractor lock feature may be engaged. If this happens, let the belt go back all the way and start again. If the locking feature stays engaged after letting the belt go back to stowed position on the seat, move the seat rearward or recline the seat until the shoulder belt retractor lock releases.



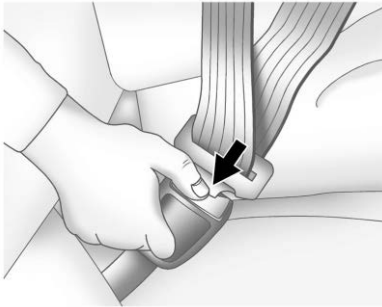
4. Push the latch plate into the buckle until it clicks.

Pull up on the latch plate to make sure it is secure. If the belt is not long enough, see *Seat Belt Extender* ⇨ 27.

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



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



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.

### Seat Belt Pretensioners

This vehicle has seat belt pretensioners for the front 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* ⇨ 28.

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.

### 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* ⇨ 48.

Keep seat belts clean and dry. See *Seat Belt Care* ⇨ 28.

## 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 and seat belt guides 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* ⇨ 49.

## Airbag System

The vehicle has the following airbags:

- A frontal airbag for the driver
- A frontal 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

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

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?* ⇨ 31.

(Continued)

### Warning (Continued)

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 the 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

(Continued)

**Warning (Continued)**

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 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* ⇨ 38 or *Infants and Young Children* ⇨ 40.



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* ⇨ 49.

**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.



**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.

 **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 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.

## When Should an Airbag Inflate?

This vehicle is equipped with airbags. See *Airbag System* ⇨ 29. 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 crash severity or occupant interaction.

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.

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?* ⇨ 30.

## 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.

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?* ⇨ 31.

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

## What Will You See After an Airbag Inflates?

After the frontal and seat-mounted side impact airbags inflate, they quickly deflate, so quickly that some people may not even realize the airbags inflated. Some components of the airbag module may be hot for several minutes. For location of the airbags, see *Where Are the Airbags?* ⇨ 30.

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. If any of these systems are damaged in the crash they may not operate as normal.

In the event of a crash with airbag inflation, a vehicle equipped with a hybrid drive unit (E-Ray) propulsion system will be disabled to prevent the risk of electrical shock. The vehicle will not be drivable and must be towed to a dealership for repair.



### Warning

A crash severe enough to inflate the airbags may have also damaged important functions in the vehicle, such as the fuel, electrical, braking and steering systems.

- For vehicles equipped with a hybrid drive unit (E-Ray) propulsion system, do not attempt to drive the vehicle. Always have the vehicle towed to a dealership for repair.

(Continued)

**Warning (Continued)**

- For other vehicles, even 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 and drive 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* ⇨ 128 and *Event Data Recorders* ⇨ 129.
- Let only qualified technicians work on the airbag system. Improper service can mean that the 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.

**PASSENGER AIR BAG****ON****OFF****United States****Canada and Mexico**

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* ⇨ 49.

The passenger sensing system turns off the front outboard passenger frontal 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 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.

Rear-facing child restraints should not be transported in the vehicle, even if the airbag is off.

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 passenger frontal airbag, no system is fail-safe. No one can guarantee

(Continued)

### Warning (Continued)

that an airbag will not inflate under some unusual circumstance, even though the airbag is off.

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 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.

When the passenger sensing system has turned off the front outboard passenger frontal airbag, the OFF indicator will light and stay lit as a reminder that the airbag is off. See *Passenger Airbag Status Indicator* ⇨ 49.

The passenger sensing system is designed to turn on the front outboard passenger frontal 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 airbag to be enabled, the ON indicator will light and stay lit as a reminder that the airbag is 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, 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* ⇨ 49 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 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* ⇨ 44.

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.

6. Restart the vehicle.

The passenger sensing system may or may not turn off the airbag for a child in a child restraint depending upon the child's size. It is better to secure child restraints in a rear seat. Consider using another vehicle to transport the child when a rear seat is not available. 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:

1. Turn the vehicle off.
2. Remove any additional material from the seat, such as blankets, cushions, seat covers, seat heaters, or seat massagers.

- Place the seatback in the fully upright position.
- Have the person sit upright in the seat, centered on the seat cushion, with legs comfortably extended.
- 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.
- 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

(Continued)

**Warning (Continued)**

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* ⇨ 37 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 your owner's manual.

 **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, 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 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* ⇨ 33.

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

## 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* ⇨ 49.

### 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

(Continued)

**Caution (Continued)**

airbag module replaced. For the location of the airbags, see *Where Are the Airbags?* ⇨ 30. 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* ⇨ 49.

**Child Restraints  
Older Children**

Older children who have outgrown booster seats should wear the vehicle seat belts. See *How to Wear Seat Belts Properly* ⇨ 23.

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, 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.

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.

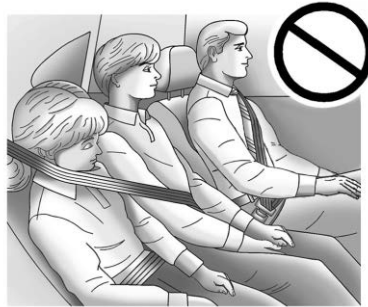
 **Warning**

Never allow more than one child to wear the same seat belt. The seat belt cannot properly spread the impact forces. In

(Continued)

**Warning (Continued)**

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

(Continued)

**Warning (Continued)**

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

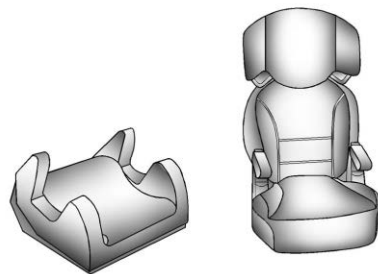
A rear-facing child restraint provides restraint with the seating surface against the back of the infant.

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* ⇨ 38.

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

### 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, 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. 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 of the United States and Canada, 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.

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

Some child restraints have a LATCH system. As part of the LATCH system, your child restraint may have lower attachments and/or a top tether. The LATCH system can help hold the child restraint in place during driving or in a crash. Some vehicles have lower and/or top tether anchors designed to secure a child restraint with lower attachments and/or a top tether.

Some child restraints with a top tether are designed to be used whether the top tether is anchored or not. Other child restraints require

that the top tether be anchored. A national or local law may require that the top tether be anchored.

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

Your vehicle does not have lower anchors or top tether anchors to secure a child restraint with the LATCH system. If a national or local law requires that your top tether be anchored, do not use a child restraint in this vehicle because a top tether cannot be properly anchored. You must use the seat belts to secure your child restraint in this vehicle, unless a national or local law requires that the top tether be anchored. Refer to the child restraint instructions and instructions in this manual for securing a child restraint using the vehicle's seat belts. See *Securing Child Restraints* ⇨ 44.

## Securing Child Restraints

This vehicle has airbags. In addition, the vehicle has a passenger sensing system which is designed to turn off the front outboard passenger frontal airbag under certain conditions. See *Passenger Sensing*

*System* ⇨ 33 and *Passenger Airbag Status Indicator* ⇨ 49 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 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 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.

(Continued)

### Warning (Continued)

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

See *Passenger Sensing System* ⇨ 33 for additional information.

Rear-facing child restraints should not be installed in the vehicle, even if the airbag is off.

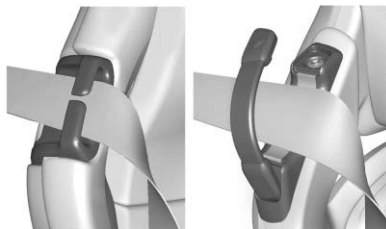
Do not secure a child seat in a position without a top tether anchor if a national or local law requires that the top tether be anchored, or if the instructions that come with the child restraint say that the top tether must be anchored.

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:

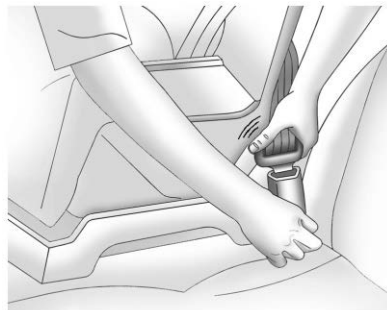
1. Move the seat as far back as it will go before securing the forward-facing child restraint. Move the seat upward or the seatback to an upright position, if needed, to get a tight installation of the child restraint.

When the passenger sensing system has turned off the front outboard passenger frontal airbag, the OFF indicator on the passenger airbag status indicator should light and stay lit when you start the vehicle. See *Passenger Airbag Status Indicator* ⇨ 49.



2. Be sure that the shoulder belt is routed through the seat belt guide. See *Lap-Shoulder Belt* ⇨ 25 for proper belt routing.

3. Put the child restraint on the seat.
4. 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.

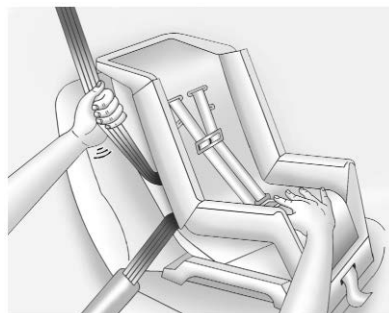


5. Push the latch plate into the buckle until it clicks.

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



6. 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.



7. 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 6 and 7.

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.

If the airbag is 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* ⇨ 33.

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

## Instruments and Controls

### Controls

Windshield Wiper/Washer ..... 47

### Warning Lights, Gauges, and Indicators

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Brake System Warning Light ..... 50

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## Controls

### 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 lights and windows. Reduced visibility from snow and ice buildup could lead to a crash.

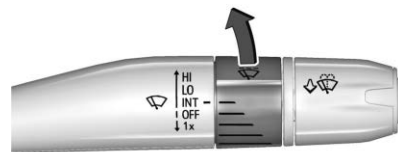


The windshield wiper/washer lever is on the right side of the steering column.

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

**HI:** Use for fast wipes.

**LO:** Use for slow wipes.



**INT:** Move the lever up to INT for intermittent wipes, then turn the  band up for more frequent wipes or down for less frequent wipes.

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

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

  : Pull the windshield wiper lever toward you to spray washer fluid and activate the wipers. The wipers will continue until the lever is released or the maximum wash time is reached. When the lever is released, additional wipes may occur depending on how long the

windshield washer had been activated. See your owner's manual for information on filling the windshield washer fluid reservoir.

Heavy snow or ice can overload the wiper motor. If frozen to the windshield, carefully loosen or thaw them. Damaged blades should be replaced. See your owner's manual.

### 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.

## 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.

### 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* ➔ 33.



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* ⇨ 29.



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

(Continued)

### Warning (Continued)

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* ⇨ 33 for important safety information. The overhead console has a passenger airbag status indicator.

### PASSENGER AIR BAG

**ON**

**OFF**

United States



Canada and Mexico

When the vehicle is started, the passenger airbag status indicator will light ON and OFF, or the symbols 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 the on or off symbol, to let you know the status of the front outboard passenger frontal 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 is 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.

If, after several seconds, both status indicator lights remain on, if there are no lights at all, or if the airbag readiness light is on, there may

be a problem with the lights or the passenger sensing system. See your dealer for service right away.



### 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* ⇨ 49 for more information, including important safety information.

## Brake System Warning Light



**BRAKE**

**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 your owner's manual.

If the light comes on while driving, pull off the road and stop carefully. If equipped with 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* ⇨ 119.

## 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* ⇨ 105.

**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* ⇨ 107.

## Lighting

### Exterior Lighting

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## Exterior Lighting

### Exterior Lamp Controls



There are four positions:

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

For vehicle first sold in Canada, the headlamps will automatically reactivate when the vehicle is shifted out of P (Park).

**AUTO**: Sets the exterior lamps to automatic mode. AUTO mode turns the exterior lamps on and off depending on how much light is available outside the vehicle.

To override AUTO mode, turn the control to **OFF**.

To reset to AUTO mode, turn the control to **OFF** and then release back to AUTO. Automatic mode also resets when the vehicle is turned off and then back on again if the control is left in the AUTO position.

**OFF**: Turns on all lamps, except the headlamps.

The parking lamp indicator light comes on and stays on when the parking lamps are on with the vehicle off and the vehicle in accessory mode.

**HEAD**: Turns on the headlamps together with the parking lamps and instrument panel lights.

### IntelliBeam System

If equipped, this system turns the 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 **OFF** comes on in the instrument cluster when the IntelliBeam system is enabled.

Do not use the IntelliBeam in dense exhaust, smoke, fog, snow, road spray, mist, or other airborne obstructions

### Turning the IntelliBeam On and Off

To enable the IntelliBeam system, activate the high/low-beam changer two times within two seconds while the exterior lamp control is in AUTO or .

### Driving with IntelliBeam

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

The blue high-beam on light appears on the instrument cluster when the high beams are on.

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 fog lamps are turned On, if equipped.
- 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 can be disabled by manually selecting the high-beams or flash to pass. If this happens, re-enable the IntelliBeam system as described above. 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 automatic high-beam headlamps may need to be disabled if any of the above conditions exist.

### Hazard Warning Flashers



The hazard warning flashers warn others that you have a problem. The button is on the overhead console.

 : Press to make the front and rear turn signal lamps flash on and off. Press again to turn the flashers off.

The hazard warning flashers work no matter what mode the ignition is in, even if the ignition is turned off.

When the hazard warning flashers are on, the turn signals will not work.

## Driving and Operating

### Driving Information

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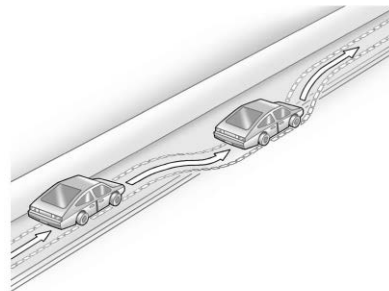
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## Driving Information

### 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.

## Hill and Mountain Roads

Driving on steep hills or through mountains is different than driving on flat or rolling terrain.

Tips include:

- When driving downhill in D (Drive), the vehicle may automatically downshift to assist with speed control.
- A lower gear may also be selected to provide further speed control.



### 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.

## 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

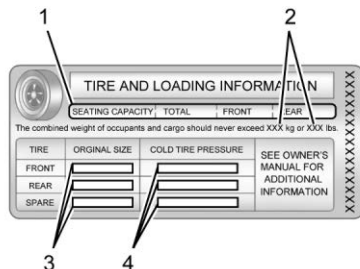
weight it may properly carry: the Tire and Loading Information label and the Certification label.



### 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



### Label Example

A vehicle-specific Tire and Loading Information label is attached to the center pillar (B-pillar). This 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* ⇨ 101 and *Tire Pressure* ⇨ 105.

There is also important loading information on the vehicle Certification 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 Label" later in this section.

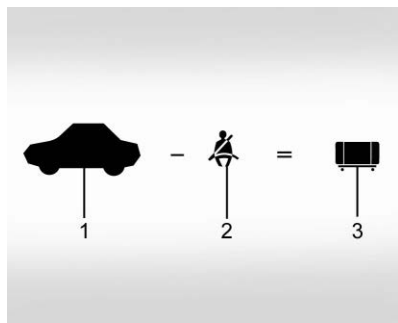
### Steps for Determining Correct Load Limit–

1. Locate the statement "The combined weight of occupants and cargo should never exceed XXX kg or XXX lbs." on your vehicle's placard.
2. Determine the combined weight of the driver and passengers that will be riding in your vehicle.
3. Subtract the combined weight of the driver and passengers from XXX kg or XXX lbs.
4. The resulting figure equals the available amount of cargo and luggage load capacity. For example, if the "XXX" amount equals 1400 lbs. and there will be five 150 lb passengers in your

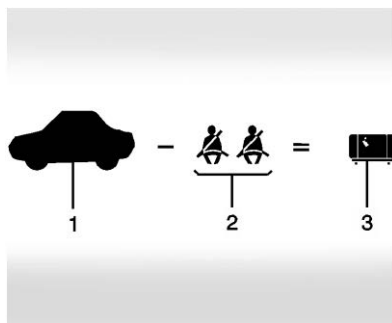
vehicle, the amount of available cargo and luggage load capacity is 650 lbs. (1400-750 (5 x 150) = 650 lbs.)

5. Determine the combined weight of luggage and cargo being loaded on the vehicle. That weight may not safely exceed the available cargo and luggage load capacity calculated in Step 4.
6. If your vehicle will be towing a trailer, load from your trailer will be transferred to your vehicle. Consult this manual to determine how this reduces the available cargo and luggage load capacity of your vehicle."

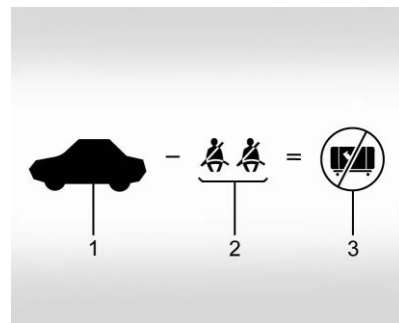
This vehicle is neither designed nor intended to tow a trailer.

**Example 1**

1. Vehicle Capacity Weight for Example 1 = 181 kg (400 lbs)
2. Subtract Occupant Weight @ 68 kg (150 lbs)  $\times 1 = 68$  kg (150 lbs)
3. Available Occupant and Cargo Weight = 113 kg (250 lbs)

**Example 2**

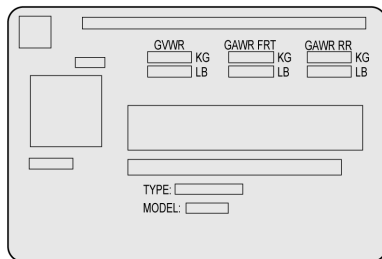
1. Vehicle Capacity Weight for Example 2 = 181 kg (400 lbs)
2. Subtract Occupant Weight @ 68 kg (150 lbs)  $\times 2 = 136$  kg (300 lbs)
3. Available Cargo Weight = 45 kg (100 lbs)

**Example 3**

1. Vehicle Capacity Weight for Example 3 = 181 kg (400 lbs)
2. Subtract Occupant Weight @ 91 kg (200 lbs)  $\times 2 = 181$  kg (400 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 and cargo should never exceed the vehicle's capacity weight.

## Certification Label



A vehicle-specific Certification label is attached to either the rear edge of the driver door or the B-pillar. It may show the gross weight capacity of the vehicle, called the Gross Vehicle Weight Rating (GVWR). The GVWR includes the weight of the vehicle, all occupants, fuel and cargo.

**Caution**

Overloading the vehicle may cause damage. Repairs would not be covered by the vehicle warranty. Do not overload the vehicle.

 **Warning**

Things you put inside your vehicle can strike and injure people in a sudden stop or turn, or in a crash.

- Put things in the rear area of your vehicle. Try to spread the weight evenly.
- Never stack heavier things, like suitcases, inside the vehicle so that some of them are above the tops of the seats.
- Do not leave an unsecured child restraint in your vehicle.
- When you carry something inside the vehicle, secure it whenever you can.

## Starting and Operating

### Shifting Into Park

 **Warning**

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).

To shift into P (Park):

1. Hold the brake pedal down and set the parking brake. See *Electric Parking Brake* ⇨ 74.
2. Press the P (Park) switch on the center console. The P indicator will turn red when the vehicle is in P (Park). See *Dual Clutch Transmission* ⇨ 61.
3. Press ENGINE START/STOP to turn the engine off.

If the vehicle is shifted into P (Park) on a hill, the Electric Parking Brake (EPB) may apply automatically. The EPB may not release when the EPB switch is used. The EPB should automatically release when the vehicle is shifted out of P (Park).

### Leaving the Vehicle with the Engine Running

#### Warning

It can be dangerous to leave the vehicle with the engine running. It could overheat and catch fire.

It is dangerous to get out of the vehicle if the vehicle is not in P (Park) with the parking brake firmly 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).

If you have to leave the vehicle with the engine running, be sure the vehicle is in P (Park) and the parking brake is set before you leave it.

### Shifting out of Park

This vehicle is equipped with an electronically controlled transmission.

If the vehicle has a battery with low voltage, try charging or jump starting the battery. See *Jump Starting - North America* ⇨ 115.

To shift out of P (Park):

1. Ensure the engine is running.
2. Apply the brake pedal.
3. Press or pull the desired switch on the center console. For N (Neutral) press and hold the N (Neutral) switch until the N indicator illuminates red.

The P indicator will turn white and the gear indicator on the shift switch will turn red when the vehicle is no longer in P (Park).

If equipped, the Buckle to Drive feature may prevent shifting from P (Park). See your owner's manual.

If the vehicle cannot shift from P (Park), a Driver Information Center (DIC) message will display. 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* ⇨ 59 and *Engine Exhaust* ⇨ 61.

If the vehicle is left parked and running with the remote key outside the vehicle, it will continue to run for up to 15 minutes.

If the vehicle is left parked and running with the remote key inside the vehicle, it will continue to run for up to 30 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.
- 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.

(Continued)

### Warning (Continued)

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.

### Warning

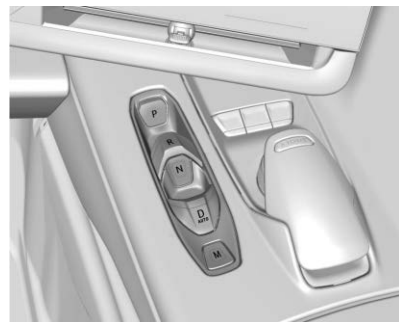
To prevent exhaust gases from entering the vehicle and heat from damaging the vehicle, the engine cover and all fluid fill plugs must be secured before closing the tonneau cover (convertible only) and operating the vehicle. Make sure all bolts are torqued to GM specifications.

## 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* ⇨ 59 and *Engine Exhaust* ⇨ 61.

## Dual Clutch Transmission



This vehicle is equipped with a dual clutch transmission that contains an integrated rear differential. The dual clutch transmission provides an extremely connected feel due to the direct connection between the engine and gear box. This arrangement provides very fast shift times for maximum performance. Automatic driving mode is selected by pulling D on the transmission range selection panel

and provides fully automatic shifting operation which can be further refined using driver mode control. Upshifts may be delayed regardless of mode selection or ambient temperature until the engine is warmed up. Manual operation can also be selected. See Manual Mode later in this section.

This transmission is electronically controlled. The shift switches are on the center console. The selected gear position will illuminate red on the shift switch, while all others will display in white. The indicator on the shift switch may flash if the shift is not immediate or if the gear is not fully engaged. This may occur in very cold conditions or when Double Paddle Declutch is used.

The transmission does not operate when the vehicle is off.

If the vehicle is in accessory mode, the transmission can be shifted into P (Park).

If ENGINE START/STOP is pressed twice while at a relatively high speed, the engine will turn off and the transmission will automatically shift into N (Neutral). Once the vehicle is stopped, P (Park) can be selected.

**P:** This position locks the drive wheels. Use P (Park) when starting the vehicle to ensure the vehicle does not move.



### Warning

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* ⇨ 59.

When the vehicle is stopped, press ENGINE START/STOP to turn off the vehicle.

The transmission will shift into P (Park) automatically unless N (Neutral) is selected.

The vehicle will not shift into P (Park) if it is moving too fast. Stop the vehicle and shift into P (Park).

To shift into and out of P (Park), see *Shifting Into Park* ⇨ 59 and *Shifting out of Park* ⇨ 60.

**R:** Use this gear to back up.

If the vehicle is shifted into R (Reverse) while the speed is too high, the vehicle will shift into N (Neutral). Reduce vehicle speed and try the shift again.

To shift into R (Reverse):

1. Bring the vehicle to a complete stop.
2. Pull the R (Reverse) switch on the center console.

To shift out of R (Reverse):

1. Bring the vehicle to a complete stop.
2. Shift into the desired gear.

At low vehicle speeds, R (Reverse) can be used to rock the vehicle back and forth to get out of snow, ice, or sand without damaging the transmission. See your owner's manual.

**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**

The vehicle is not designed to stay in N (Neutral) for extended periods of time. It will automatically shift into P (Park).

To shift into N (Neutral), press and hold the N (Neutral) switch until the N indicator is red.

To shift out of N (Neutral):

1. Bring the vehicle to a complete stop.
2. Shift into the desired gear.

**Maintaining N (Neutral) with Engine Off**

This vehicle includes a method of keeping the vehicle in N (Neutral) while the engine is off.

This method is not to be used for vehicle towing. If the vehicle needs to be towed, see *Transporting a Disabled Vehicle* ⇨ 119.

**Driver Remains in Vehicle:** To place the vehicle in N (Neutral) with the engine off and the vehicle occupied:

1. Ensure the vehicle is on level ground, the engine is running and the vehicle is in P (Park).
2. Apply the brake pedal.
3. Shift to N (Neutral).
4. Turn off the engine and release the brake pedal.
5. The indicator should continue to show N. If it does not, start the engine and repeat Steps 2–4.
6. The vehicle will now remain in N (Neutral).

**Driver Leaves Vehicle:** To place the vehicle in N (Neutral) with the engine off and the vehicle unoccupied:

1. Ensure the vehicle is on level ground, the engine is running and the vehicle is in P (Park).
2. Apply the brake pedal.
3. Open the door.
4. Shift to N (Neutral).
5. Turn off the engine and release the brake pedal.
6. The indicator should continue to show N. If it does not, start the engine and repeat Steps 2–5.
7. Exit the vehicle and close the door.
8. The vehicle may automatically shift to P (Park) upon re-entry.

**D:** This position is for normal driving. If more power is needed for passing, press the accelerator pedal.

**Caution**

A transmission hot message may display if the transmission fluid is too hot. Driving under this condition can damage the vehicle. Stop and idle the engine to cool the transmission fluid. This message clears when the transmission fluid has cooled sufficiently.

**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.

If the vehicle is shifted into D (Drive) while the speed is too high, the transmission will get ready to engage D (Drive). Reduce the vehicle speed, then the transmission will engage D (Drive).

To shift into D (Drive):

1. Bring the vehicle to a complete stop.

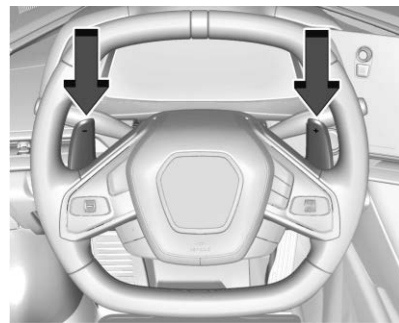
2. Pull the D (Drive) switch on the center console.

To shift out of D (Drive):

1. Bring the vehicle to a complete stop.
2. Shift to the desired gear.

Downshifting the transmission in slippery road conditions could result in skidding. See “Skidding” in your owner’s manual.

The transmission can be shifted like a manual transmission using the paddle shift controls while in D (Drive). See *Manual Mode* ⇨ 64.

**Manual Mode****Manual Paddle Shift**

With the transmission in D (Drive), press the M (Manual Mode) switch on the center console to enter Manual Mode. Use the paddles on the steering wheel to manually upshift or downshift the transmission. The right + (plus) paddle upshifts, and the left – (minus) paddle downshifts.

When using the Manual Paddle Shift system, the current gear will be displayed in the instrument cluster or the Head-Up Display (HUD), if equipped. See your owner’s manual.

When accelerating the vehicle from a stop in snowy and icy conditions, shifting to 2 (Second) gear, when available, will allow the vehicle to gain more traction.

The Manual Paddle Shift system can be deactivated by pulling the D (Drive) switch on the center console.

With the transmission in D (Drive), pull the right + paddle or the left – paddle to place the transmission in Temporary Manual Paddle Shift mode.

To exit Temporary Manual Paddle Shift mode do one of the following:

- Hold the + paddle for more than one second.
- Drive at a steady speed without manual shifts or aggressive cornering for several seconds.
- Lower vehicle speed to 6 km/h (4 mph) or less.

While the Manual Paddle Shift system is active, the transmission will automatically downshift through the gears as the vehicle slows. The

transmission will select 1 (First) gear as the vehicle stops. From a stop, the vehicle will start from and hold 1 (First) gear unless Manual Paddle Shifts are used to shift into a different gear, or D (Drive) is selected.

To cause the transmission to downshift to the lowest gear possible for the vehicle speed, in Manual Paddle Shift or Temporary Manual Paddle Shift mode:

- Pull and briefly hold the – paddle. If the paddle continues to be held as the vehicle slows, downshifts will continue as vehicle speed allows.

The Manual Paddle Shift system will not upshift or downshift if vehicle speed is too fast or too slow, and will not start from any gear other than 1 (First) gear.

If upshifting does not occur when necessary in Manual Paddle Shift mode, vehicle speed is limited to protect the engine. When in Temporary Manual Paddle Shift mode, the

transmission will automatically upshift if the accelerator pedal is pressed all the way to the floor.

Manual Paddle Shift can be used with cruise control. See your owner's manual.

At maximum engine speed (rpm), auto-shifts will occur after a specified time period to protect the engine.

The vehicle speeds required for Manual Paddle Shift upshifts depend on several vehicle inputs, which will vary the allowed upshift speed by a few km/h (mph).

To prevent damage to the powertrain, Manual Paddle downshifts cannot be performed above certain speeds.

The vehicle speeds for allowed Manual Paddle shifts can vary by vehicle model or optional equipment; such as the Stingray Z51 with Electronic Limited-Slip Differential (eLSD) differs from non-Z51 with Mechanical Limited-Slip Differential (mLSD).

| Stingray (LT2) with an Electronic Limited-Slip Differential (Z51) and E-Ray |                  |     |
|-----------------------------------------------------------------------------|------------------|-----|
| Upshift Allowed (into gear)                                                 | At Approximately |     |
|                                                                             | km/h             | mph |
| 2nd                                                                         | 15               | 9   |
| 3rd                                                                         | 25               | 16  |
| 4th                                                                         | 36               | 22  |
| 5th                                                                         | 47               | 29  |
| 6th                                                                         | 60               | 37  |
| 7th                                                                         | 76               | 47  |
| 8th                                                                         | 92               | 57  |
| Maximum Downshift Inhibit Speed (into gear)                                 | At Approximately |     |
|                                                                             | km/h             | mph |
| 1st                                                                         | 30               | 19  |
| 2nd                                                                         | 63               | 39  |
| 3rd                                                                         | 104              | 65  |
| 4th                                                                         | 164              | 102 |

|     |              |              |
|-----|--------------|--------------|
| 5th | 232          | 144          |
| 6th | Aero Limited | Aero Limited |
| 7th | Aero Limited | Aero Limited |

| <b>Stingray (LT2) with a Mechanical Limited-Slip Differential (Without Z51)</b> |                  |     |
|---------------------------------------------------------------------------------|------------------|-----|
| Upshift Allowed (into gear)                                                     | At Approximately |     |
|                                                                                 | km/h             | mph |
| 2nd                                                                             | 16               | 10  |
| 3rd                                                                             | 26               | 16  |
| 4th                                                                             | 37               | 23  |
| 5th                                                                             | 49               | 30  |
| 6th                                                                             | 63               | 39  |
| 7th                                                                             | 80               | 50  |
| 8th                                                                             | 97               | 60  |

| Stingray (LT2) with a Mechanical Limited-Slip Differential (Without Z51) |                  |     |
|--------------------------------------------------------------------------|------------------|-----|
| Maximum Downshift Inhibit Speed (into gear)                              | At Approximately |     |
|                                                                          | km/h             | mph |
| 1st                                                                      | 30               | 19  |
| 2nd                                                                      | 63               | 39  |
| 3rd                                                                      | 113              | 70  |
| 4th                                                                      | 174              | 108 |

|     |              |              |
|-----|--------------|--------------|
| 5th | 245          | 152          |
| 6th | Aero Limited | Aero Limited |
| 7th | Aero Limited | Aero Limited |

| Z06 (LT6)                   |                  |     |
|-----------------------------|------------------|-----|
| Upshift Allowed (into gear) | At Approximately |     |
|                             | km/h             | mph |
| 2nd                         | 14               | 9   |
| 3rd                         | 24               | 15  |
| 4th                         | 39               | 24  |
| 5th                         | 52               | 32  |
| 6th                         | 60               | 37  |
| 7th                         | 77               | 48  |
| 8th                         | 93               | 58  |

| Z06 (LT6)                                   |                  |     |
|---------------------------------------------|------------------|-----|
| Maximum Downshift Inhibit Speed (into gear) | At Approximately |     |
|                                             | km/h             | mph |
| 1st                                         | 66               | 41  |
| 2nd                                         | 113              | 69  |
| 3rd                                         | 162              | 101 |
| 4th                                         | 225              | 140 |

|     |              |              |
|-----|--------------|--------------|
| 5th | 303          | 188          |
| 6th | Aero Limited | Aero Limited |
| 7th | Aero Limited | Aero Limited |

| ZR1 (LT7)                   |                  |     |
|-----------------------------|------------------|-----|
| Upshift Allowed (into gear) | At Approximately |     |
|                             | km/h             | mph |
| 2nd                         | 13               | 8   |
| 3rd                         | 24               | 15  |
| 4th                         | 33               | 21  |
| 5th                         | 45               | 28  |
| 6th                         | 58               | 36  |
| 7th                         | 77               | 48  |
| 8th                         | 96               | 60  |

| ZR1 (LT7)                                   |                  |     |
|---------------------------------------------|------------------|-----|
| Maximum Downshift Inhibit Speed (into gear) | At Approximately |     |
|                                             | km/h             | mph |
| 1st                                         | 64               | 40  |
| 2nd                                         | 105              | 65  |
| 3rd                                         | 152              | 94  |
| 4th                                         | 211              | 131 |

|     |              |              |
|-----|--------------|--------------|
| 5th | 283          | 176          |
| 6th | Aero Limited | Aero Limited |
| 7th | Aero Limited | Aero Limited |

### Double Paddle Declutch

Use of Double Paddle Declutch on public roads could result in exhaust noise in excess of local laws.

Double Paddle Declutch allows the vehicle to temporarily disconnect the engine from the wheels, similar to N (Neutral). This feature is activated by pulling and holding both the + paddle and – paddle at the same time while the vehicle is in R (Reverse), D (Drive), or M (Manual Mode). The vehicle will remain in this condition until both the + paddle and – paddle are released. The R, D, or M indicator on the center shift console will flash red to indicate that the vehicle is in Double Paddle Declutch. In addition, the current gear state indicator in the Driver Information Center (DIC) will change to flashing blue to indicate that the vehicle is in Double Paddle Declutch. To exit Double Paddle Declutch, release both the + paddle

and – paddle. The engine will reconnect to the wheels and the shift indicator will stop flashing. There are two Double Paddle Declutch exit styles:

**Standard Exit:** Engine power is reapplied to the wheels gently to support normal vehicle operation on public roads. This occurs when paddles are released under any of these conditions:

- Accelerator pedal is fully released
- Vehicle speed is above 10 km/h (6 mph)
- Vehicle is in R (Reverse)
- Paddles are released separately

If the vehicle was in Temporary Manual Paddle Shift mode before entering Double Paddle Declutch, the vehicle will return to D (Drive) with automatic shifting upon exiting Double Paddle Declutch.

**Rapid Exit:** This is intended for use at a closed course race track and not on public roads. Engine power is reapplied to the wheels quickly to support spirited driving. The rate of launch is dependent on how much the accelerator pedal is pressed when the paddles are released. The further the accelerator pedal is pressed, the greater the rate of launch. Tire spin may occur if the Traction Control System (TCS) is turned off while performing a Rapid Exit. Rapid Exit launch occurs when all of the following conditions are met:

- Vehicle speed is below 10 km/h (6 mph)
- Vehicle is in D (Drive) or M (Manual Mode)
- Both paddles are released at the same time

With the accelerator fully pressed and the engine at the rev limiter, peak performance only occurs if the paddles are released within a short period of time after reaching the rev limit (i.e., a few seconds).

**Manual Launch :** While the vehicle is in Double Paddle Declutch, Manual Launch can be activated to gain more precise control over the engine speed to prepare for a Standard or Rapid Exit. To activate this feature, first enter Double Paddle Declutch, then release and repull either the + paddle or – paddle while keeping

the opposite paddle held. The Performance Transmission Active Light will illuminate in the gauge cluster to indicate that Manual Launch has been activated. See your owner's manual. When Manual Launch is active, the engine will respond differently when the accelerator pedal is pressed compared to normal Double Paddle Declutch. The accelerator pedal must be pressed further to increase the engine rpm and a lower engine rpm limit will be applied. This feature also provides faster engine response during a Rapid Exit if any of the Performance Traction Management (PTM) modes or StabiliTrak/Electronic Stability Control (ESC) Off has been selected. To exit Manual Launch, release both the + paddle and - paddle. The vehicle will also exit Double Paddle Declutch and the engine will reconnect to the wheels. A Standard Exit or Rapid Exit will be performed based on the same conditions listed previously.

**Warning**

When exiting Double Paddle Declutch, the vehicle may move rapidly. You could lose control and cause a crash with nearby

(Continued)

**Warning (Continued)**

people or objects. Be ready to release the accelerator pedal or apply the brakes immediately if the vehicle moves too quickly. Do not use the Double Paddle Declutch when people or objects are near.

**Drive Systems****All-Wheel Drive**

If equipped with E-Ray, advanced electric All-Wheel Drive (eAWD) delivers power to all four wheels and adjusts automatically to the driving conditions. The eAWD system continuously varies the drive power to the front and rear wheels to maximize driving efficiency and improve driving dynamics. Your vehicle has exceptional driving capability, but care must always be taken to adjust driving style to the traffic and road conditions.

The vehicle eAWD settings may be customized for the driver mode selected. See your owner's manual for more information.

**Brakes****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 your owner's manual. 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. Press 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, then the EPB is only partially applied or there is a problem with the EPB. A DIC message will display. Release the EPB and try to apply it again. If the light does not come on, or keeps flashing, have the vehicle serviced. Do not drive the vehicle if the red parking brake status light is flashing. See your dealer.

If the amber service parking brake warning light is on, press 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 pressed. If the switch is pressed until the vehicle comes to a stop, the EPB will remain applied.

The vehicle may automatically apply the EPB in some situations when the vehicle is not moving. This is normal, and is done to periodically check the correct operation of the EPB system, 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 accessory mode.
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.

### 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.

## Ride Control Systems

### Traction Control/Electronic Stability Control

The vehicle has a Traction Control System and a StabiliTrak/Electronic Stability Control system. These systems help limit wheel spin and assist the driver in maintaining control,

especially on slippery road conditions. Both systems come on automatically when the vehicle is started and begins to move.

The Traction Control System activates if it senses that the rear wheels are spinning too much or are beginning to lose traction. When this happens, the traction system applies the brakes to the spinning wheel and reduces engine power (by closing the throttle and managing engine spark) to limit wheel spin.

The StabiliTrak/Electronic Stability Control system activates when the vehicle senses a difference between the intended path and the direction the vehicle is actually traveling. The stability control system 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 when the traction system begins to limit wheel spin, the cruise control will automatically disengage. Cruise control may be reengaged when road conditions allow. See your owner's manual.

If the driver disables the Traction Control System, cruise control will disengage. Cruise control will also be disabled if Performance

Traction Management is selected, or if the StabiliTrak/Electronic Stability Control system is turned off.

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 the Traction Control System off if the vehicle gets stuck in sand, mud, ice, or snow. See your owner's manual 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 the Traction Control System is limiting wheel spin
- Flash when the StabiliTrak/Electronic Stability Control system is activated
- Flash when the Antilock Brake System (ABS) is active

- 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, 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.
4. 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 the Traction Control System is off. The vehicle driveline could be damaged.



The Traction Control System/StabiliTrak/Electronic Stability Control button is on the center console.

To turn off only the Traction Control System, press and release . The Traction Off light  illuminates in the instrument cluster. To turn the system on again, press and release . The Traction Off light  displayed in the instrument cluster will turn off.

If the traction system is limiting wheel spin when  is pressed, the system will not turn off until the wheels stop spinning.

To turn off both the Traction Control System and StabiliTrak/Electronic Stability Control system, press and hold  until the Traction Off light  and StabiliTrak/Electronic Stability Control Off light  illuminate and stay on in the instrument cluster.

To turn the systems on again, press and release . The Traction Off light  and StabiliTrak/Electronic Stability Control Off light  in the instrument cluster will turn off.

If the Tire Pressure Monitor System is malfunctioning and the Driver Information Center displays SERVICE TIRE MONITOR SYSTEM, the stability control system will be affected as follows:

- The StabiliTrak/Electronic Stability Control system cannot be turned off by the driver.
- If the StabiliTrak/Electronic Stability Control system is off, it will be turned on automatically.
- Competitive Driving mode or Performance Traction Management is unavailable.
- The StabiliTrak/Electronic Stability Control system will feel different in aiding and maintaining directional control.

Adding accessories can affect the vehicle performance. See your owner's manual.

### For E-Ray, Z06, and ZR1 Models Only

The StabiliTrak/Electronic Stability Control system will automatically enable when the vehicle reaches 160 km/h (100 mph) and the convertible top is down or the removable hard top has been removed while the vehicle is in Competitive mode or Performance Traction Management mode.

## Advanced Driver Assistance Systems

If equipped, this vehicle may have features that work together to help avoid crashes or reduce crash damage while driving, backing, and parking. Read the owner's manual for more important feature limitations and information 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

(Continued)

**Warning (Continued)**

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 your owner's manual.

Under many conditions, these systems will not:

- Detect children, pedestrians, bicyclists, or animals.
- 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.

(Continued)

**Warning (Continued)**

- 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.

Your vehicle may be equipped with the following driver assistance systems, depending on vehicle production:

**Audible or Safety Alert Seat**

Some driver assistance features alert the driver of obstacles by beeping. To change the volume of the warning chime, see "Comfort and Convenience" under "Vehicle Personalization" in the Owner's Manual.

With the Safety Alert Seat, the driver seat cushion may provide a vibrating pulse alert instead of beeping. To change this, see "Collision/Detection Systems" under "Vehicle Personalization" in the Owner's Manual.

**Rear Vision Camera (RVC)**

Rear Vision Camera shows you an image of the area directly behind your vehicle when you're in Reverse at low speeds. This may help you park and avoid nearby objects.

**Surround Vision System**

Surround Vision uses multiple cameras to display an overhead image of the area around your vehicle along with Rear Vision Camera or front views. It works at low speeds and may help you park and avoid nearby objects.

**Front and Rear Park Assist**

 Front and Rear Park Assist can provide distance alerts to nearby detected objects in front of or behind your vehicle to help you park and avoid collisions at low speeds.

**Automatic Parking Assist (APA)**

Automatic Parking Assist can search for and steer your vehicle into a parallel or perpendicular parking space. While the feature steers, you'll brake, accelerate and follow directions to shift gears.

### Reverse Automatic Braking (RAB)

Reverse Automatic Braking can help avoid or reduce the severity of backing collisions with certain objects it detects directly behind you when you're in Reverse. It provides alerts and can even automatically provide hard emergency braking if you have not already begun hard braking.

### Rear Pedestrian Alert

Rear Pedestrian Alert can help alert you to detected pedestrians directly behind your vehicle so you can quickly take action. The system works when you're in Reverse during the daytime. It has limited nighttime and low visibility performance.

### Rear Cross Traffic Alert (RCTA) System

 : Rear Cross Traffic Alert can warn you of detected left or right cross traffic behind your vehicle when you're in Reverse.

### Forward Collision Alert (FCA) System

 : Forward Collision Alert can warn you if it detects a potential front-end collision with a vehicle you're following so you can quickly take action. It can also provide a tailgating alert if you're following a vehicle much too closely.

### Automatic Emergency Braking (AEB)

Automatic Emergency Braking works with Forward Collision Alert to help you avoid or reduce the severity of a front-end collision with a detected vehicle you're following. This feature works at speeds above 4 km/h (2 mph). Camera technology is used to automatically provide hard emergency braking or enhance the driver's hard braking.

### Front Pedestrian Braking (FPB) System

 : Front Pedestrian Braking can help you avoid or reduce the severity of a front-end collision with a pedestrian it detects directly ahead of you. It provides pedestrian alerts and can even automatically provide hard emergency braking or enhance the driver's hard braking. The system works at speeds below 50 mph during the daytime. It has limited nighttime and low visibility performance.

### Side Blind Zone Alert (SBZA)

 : Side Blind Zone Alert can provide side-mirror visual alerts when a moving vehicle is detected in a side blind zone. It can help you avoid lane change collisions.

### Lane Change Alert (LCA)

 : Lane Change Alert with Side Blind Zone Alert can provide side-mirror visual alerts when a detected moving vehicle is quickly approaching or is in your side blind zone. It can help you avoid lane change collisions.

### Lane Keep Assist (LKA)

 : Lane Keep Assist with Lane Departure Warning uses a brief, gentle steering wheel turn to alert you when you may be unintentionally drifting out of detected lane lines, so you can steer to stay safely in your lane. If needed, you may receive additional Lane Departure Warning alerts. System alerts do not occur if you're using your turn signal or it detects you may be intentionally leaving your lane.

### 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* ⇨ 127.

## Fuel

### Filling the Tank

An arrow on the fuel gauge indicates which side of the vehicle the fuel door is on. See your owner's manual.



### 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:

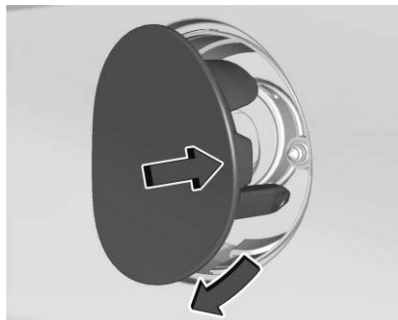
- Read and follow all the instructions on the fuel pump island.
- Turn off the engine when refueling.
- Keep sparks, flames, and smoking materials away from fuel.
- Do not leave the fuel pump unattended.
- Avoid using electronic devices while refueling.
- Do not re-enter the vehicle while pumping fuel.
- 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.

(Continued)

**Warning (Continued)**

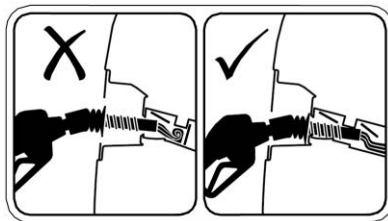
- Fuel can spray out if the fill nozzle is inserted too quickly. This spray can happen if the tank is nearly full, and is more likely in hot weather. Insert the fill nozzle slowly and wait for any hiss noise to stop before beginning to flow fuel.

The fuel door unlocks when the vehicle doors are unlocked. See your owner's manual.



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.



The capless system has two internal flapper doors. To prevent fuel spray, insert the nozzle fully to ensure both doors are open before refueling.

**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

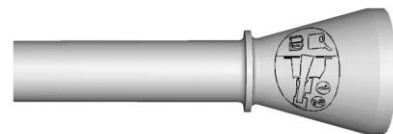
painted surfaces as soon as possible. See your owner's manual. Push the fuel door closed until it latches.

**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.
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.

## Vehicle Care

### General Information

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### Vehicle Checks

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## 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](http://www.dtsc.ca.gov/hazardouswaste/perchlorate).

## 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

(Continued)

**Warning (Continued)**

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 your owner’s manual.

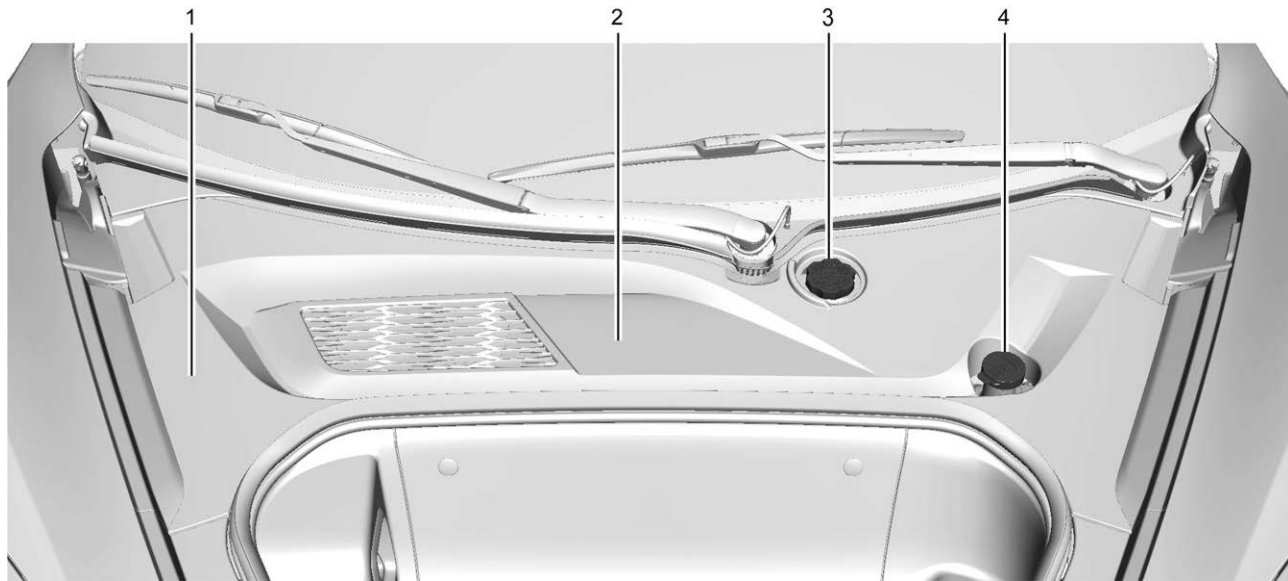
This vehicle has an airbag system. Before attempting to do your own service work, see *Servicing the Airbag-Equipped Vehicle* ⇨ 36.

If equipped with remote start, open the hatch/trunk before performing any service work to prevent remote starting the vehicle accidentally. See your owner’s manual.

Keep a record with all parts receipts and list the mileage and the date of any service work performed. See your owner’s manual.

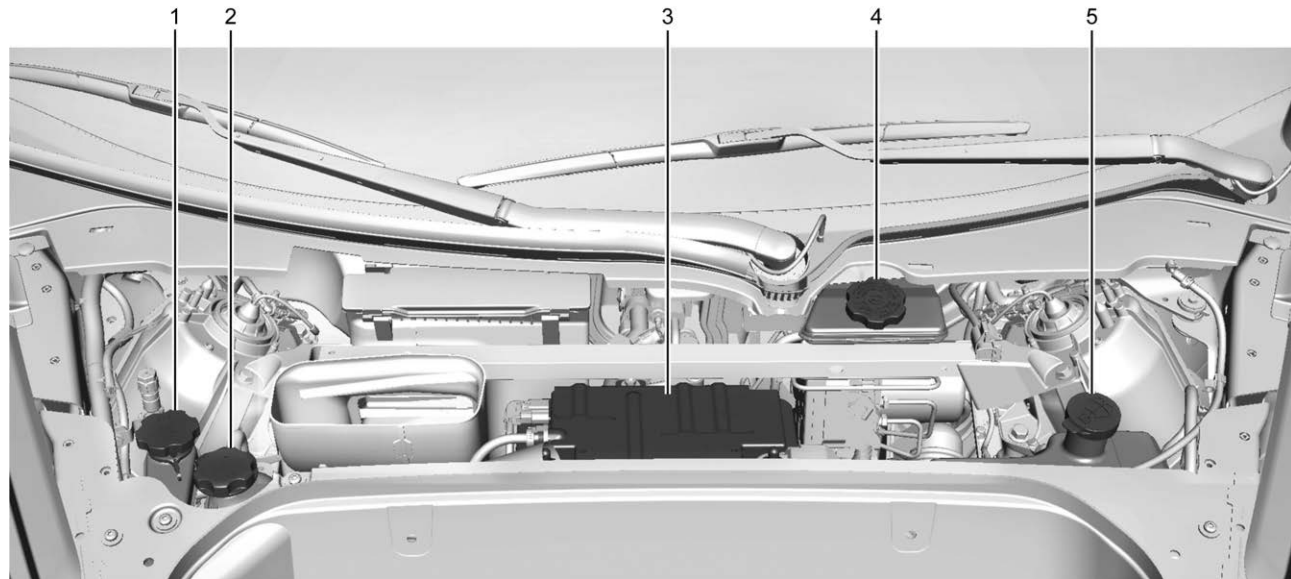
## Underhood Compartment Overview

Several items you should check periodically are located under the front hood. For instructions on opening the hood, see *Hood* ⇨ 9.



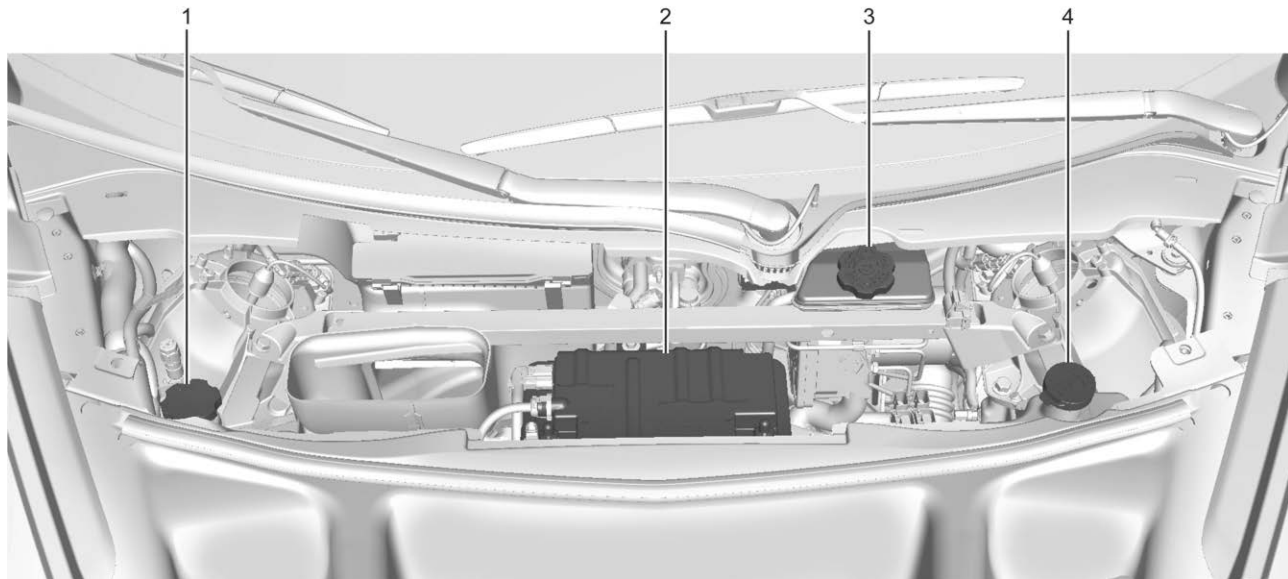
**Stingray Coupe and Z06 Coupe (Convertibles Similar)**

1. Front Lift System Reservoir (under cover, if equipped). See your owner's manual.
2. Battery (under cover). See *Battery - North America* ⇨ 99.
3. Brake Fluid Reservoir. See your owner's manual.
4. Windshield Washer Fluid Reservoir. See your owner's manual.



E-Ray Coupe (Convertible Similar)

1. Front Lift System Reservoir (under cover, if equipped). See your owner's manual.
2. Power Electronic Cooling Loop Reservoir. See your dealer for maintenance.
3. Battery (under cover). See *Battery - North America* ➞ 99.
4. Brake Fluid Reservoir. See your owner's manual.
5. Windshield Washer Fluid Reservoir. See your owner's manual.



ZR1 Coupe (Convertible Similar)

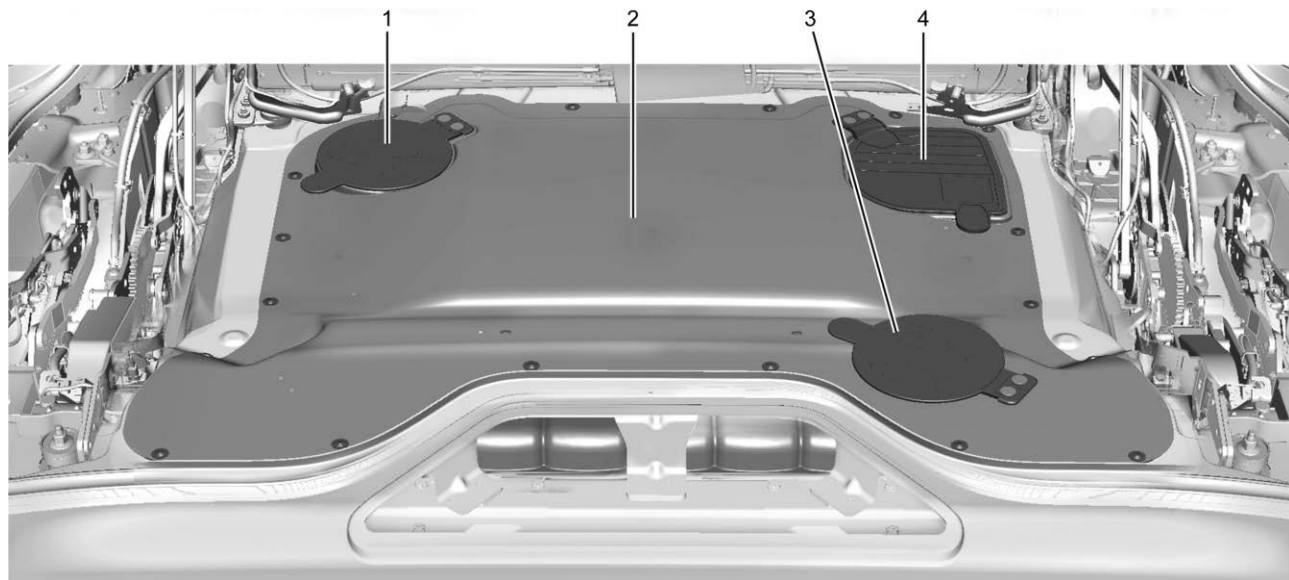
1. Front Lift System Reservoir (under cover, if equipped). See your owner's manual.
2. Battery (under cover). See *Battery - North America* ⇨ 99.
3. Brake Fluid Reservoir. See your owner's manual.

4. Windshield Washer Fluid Reservoir. See your owner's manual.

### Engine Compartment Overview

On coupe models, open the rear hatch/trunk to access the engine compartment. See your owner's manual.

On convertible models, open the rear tonneau cover to access the engine compartment. The rear hatch/trunk and the convertible top must be closed and the vehicle must be in P (Park). See your owner's manual.



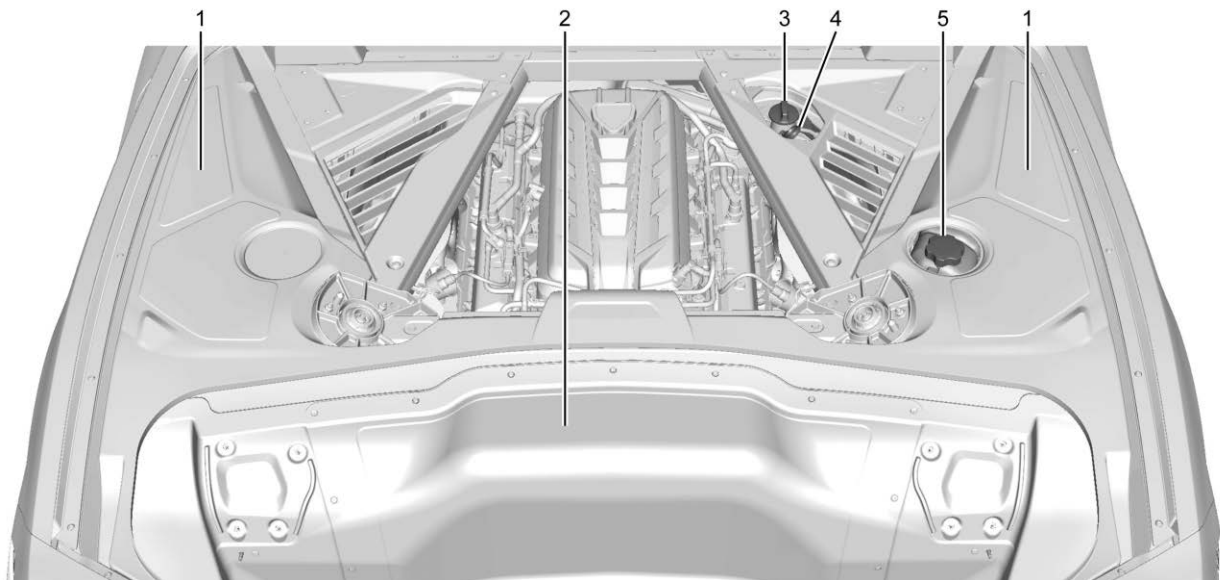
### Engine Cover (Convertible Only)

- |                                                                                                                                                                                            |                                                                                                                                                                |                                                                                                                                                          |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ol style="list-style-type: none"><li>1. High Voltage Battery System Coolant Reservoir (E-Ray). Turbo Intercooler Coolant Loop Reservoir (ZR1). See your dealer for maintenance.</li></ol> | <ol style="list-style-type: none"><li>2. Engine Cover.</li><li>3. Engine Coolant Surge Tank and Pressure Cap (Under Cover). See your owner's manual.</li></ol> | <ol style="list-style-type: none"><li>4. Engine Oil Dipstick and Dry Sump Engine Oil Tank and Fill Cap (Under Cover). See your owner's manual.</li></ol> |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|

If equipped, the engine cover protects the folding convertible top system from underhood heat and contamination. The engine cover includes access holes for common maintenance items as shown below. You should not need to remove the entire engine cover for regular maintenance.

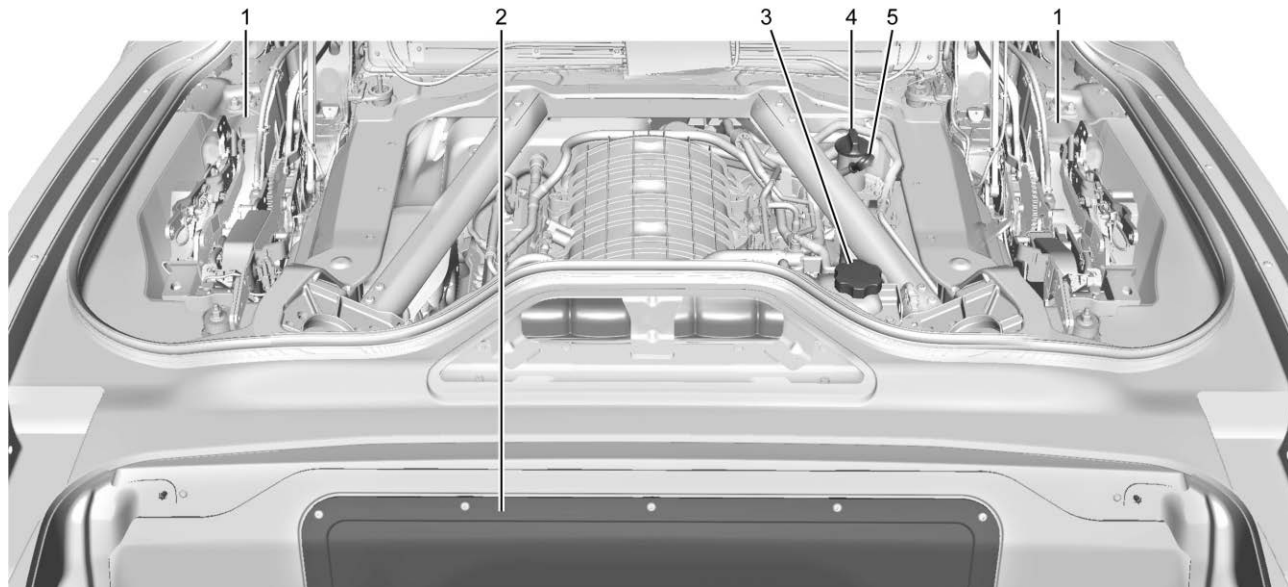
For access to maintenance items, pull up on the tab on the access hole plug, and fold the plug out of the way. The hinges retain the plugs so they will not be misplaced. To close the plug, snap it back into place.

Before closing the rear tonneau cover, confirm that the access hole plugs on the engine cover are closed securely.



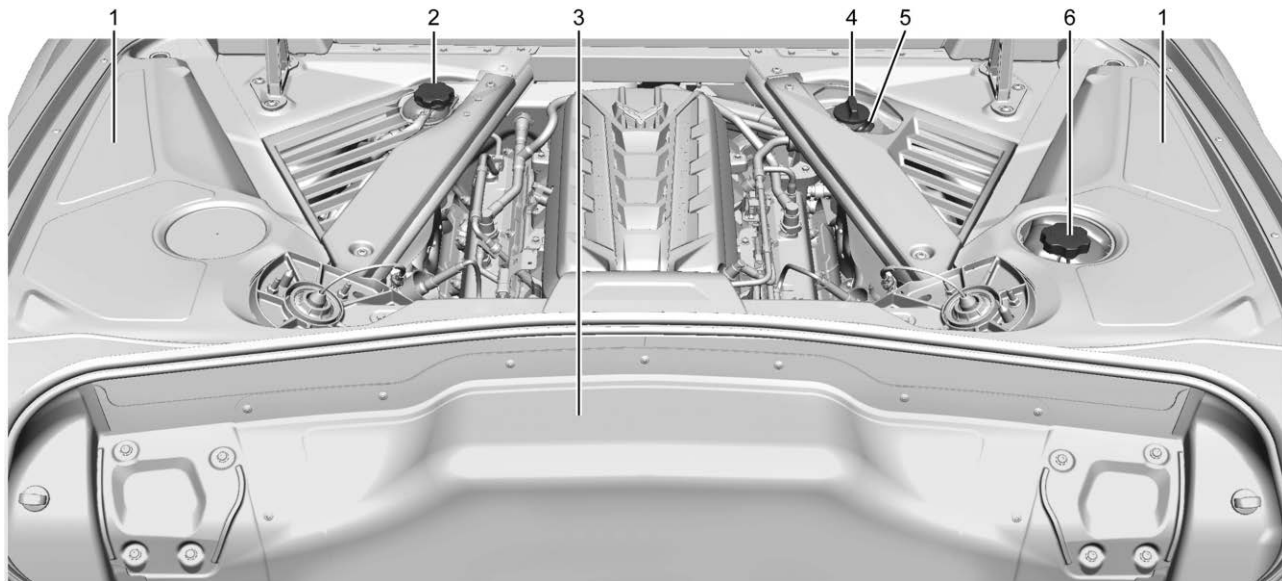
### Stingray Coupe — 6.2L V8 Engine (LT2)

- |                                                                             |                                                                    |                                                                         |
|-----------------------------------------------------------------------------|--------------------------------------------------------------------|-------------------------------------------------------------------------|
| 1. Engine Cooling Fan (Out of View). See your owner's manual.               | 3. Dry Sump Engine Oil Tank and Fill Cap. See your owner's manual. | 5. Engine Coolant Surge Tank and Pressure Cap. See your owner's manual. |
| 2. Engine Air Cleaner Filter (Under Access Panel). See your owner's manual. | 4. Engine Oil Dipstick. See your owner's manual.                   |                                                                         |



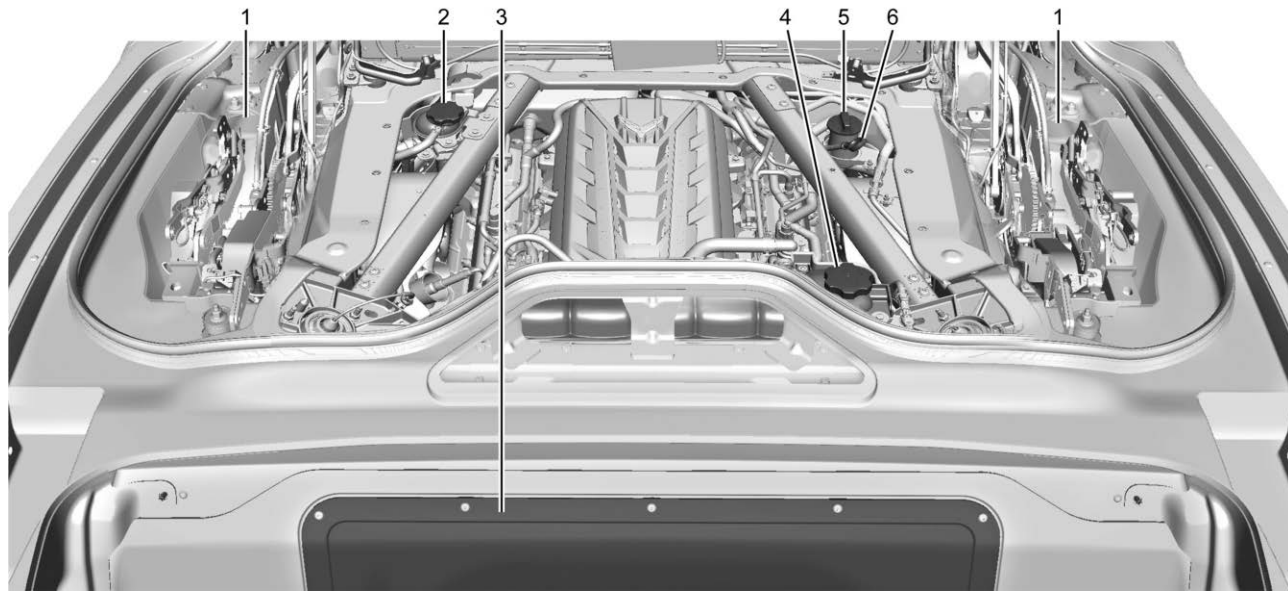
### Stingray Convertible — 6.2L V8 Engine (LT2)

- |                                                                                                                                                                                                   |                                                                                                                                                                                                    |                                                                                                  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|
| <ol style="list-style-type: none"><li>1. Engine Cooling Fan (Out of View). See your owner's manual.</li><li>2. Engine Air Cleaner Filter (Under Access Panel). See your owner's manual.</li></ol> | <ol style="list-style-type: none"><li>3. Engine Coolant Surge Tank and Pressure Cap. See your owner's manual.</li><li>4. Dry Sump Engine Oil Tank and Fill Cap. See your owner's manual.</li></ol> | <ol style="list-style-type: none"><li>5. Engine Oil Dipstick. See your owner's manual.</li></ol> |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|



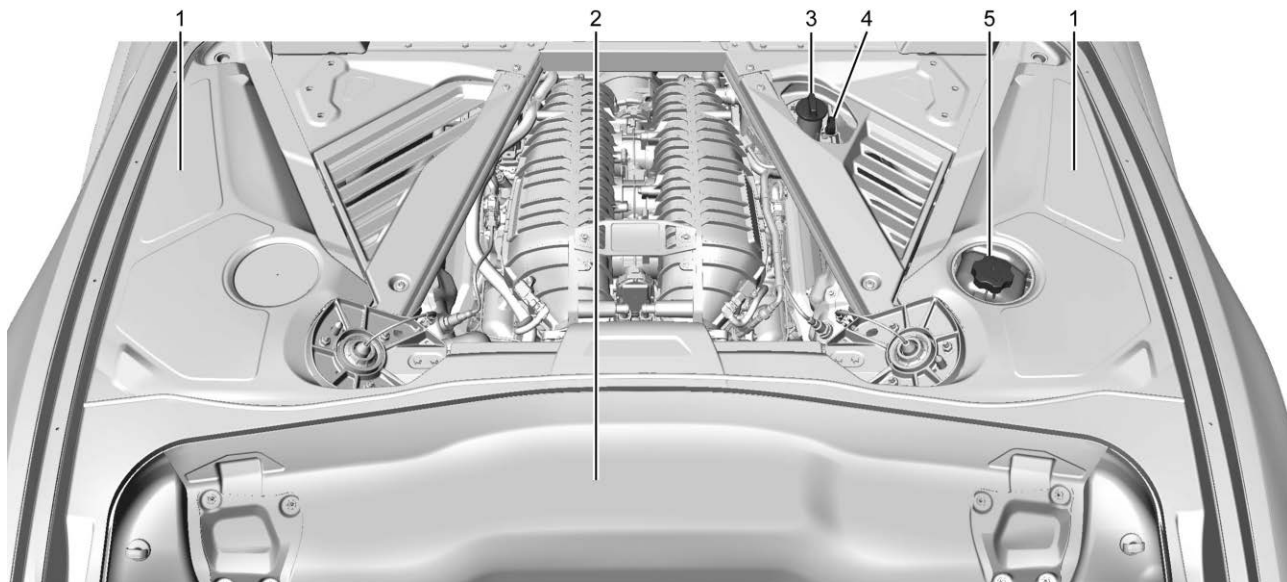
### **E-Ray Coupe — 6.2L V8 Engine (LT2)**

- |                                                                                                                                        |                                                                                                                                                              |                                                                                                                                        |
|----------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| <p>1. Engine Cooling Fans (Out of View).</p> <p>2. High Voltage Battery System Coolant Reservoir. See your dealer for maintenance.</p> | <p>3. Engine Air Cleaner Filter (Under Access Panel). See your owner's manual.</p> <p>4. Dry Sump Engine Oil Tank and Fill Cap. See your owner's manual.</p> | <p>5. Engine Oil Dipstick. See your owner's manual.</p> <p>6. Engine Coolant Surge Tank and Pressure Cap. See your owner's manual.</p> |
|----------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|

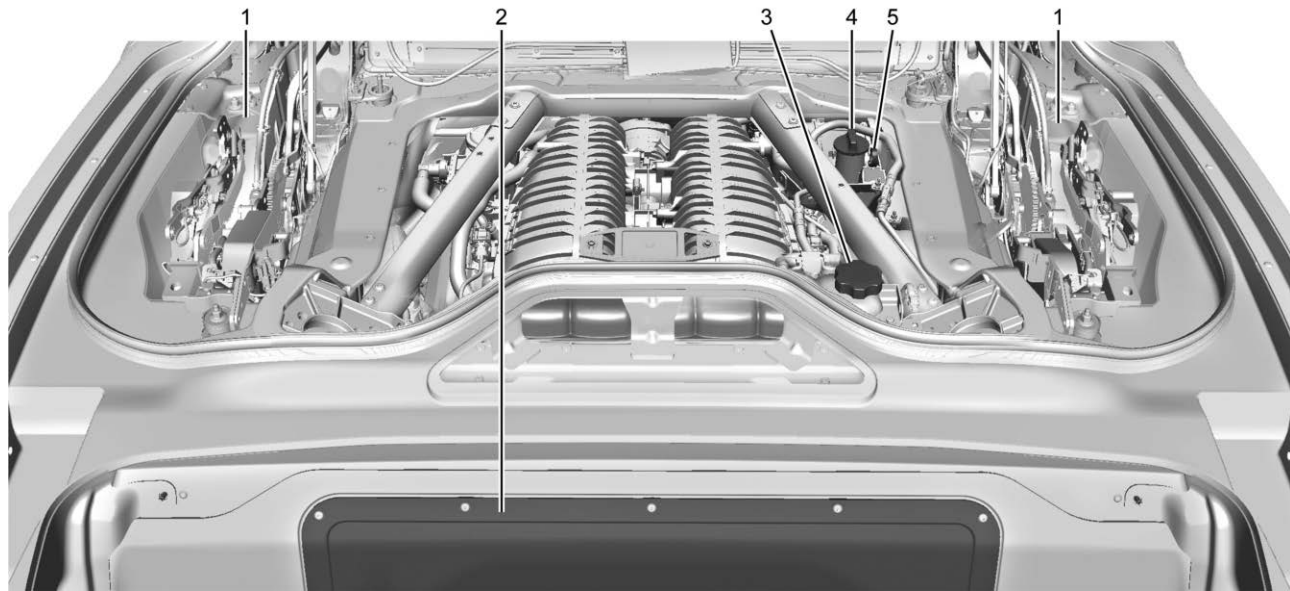


### **E-Ray Convertible — 6.2L V8 Engine (LT2)**

- |                                                                                                                                                                                  |                                                                                                                                                                                                             |                                                                                                                                                                             |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"><li>1. Engine Cooling Fans (Out of View).</li><li>2. High Voltage Battery System Coolant Reservoir. See your dealer for maintenance.</li></ul> | <ul style="list-style-type: none"><li>3. Engine Air Cleaner Filter (Under Access Panel). See your owner's manual.</li><li>4. Engine Coolant Surge Tank and Pressure Cap. See your owner's manual.</li></ul> | <ul style="list-style-type: none"><li>5. Dry Sump Engine Oil Tank and Fill Cap. See your owner's manual.</li><li>6. Engine Oil Dipstick. See your owner's manual.</li></ul> |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

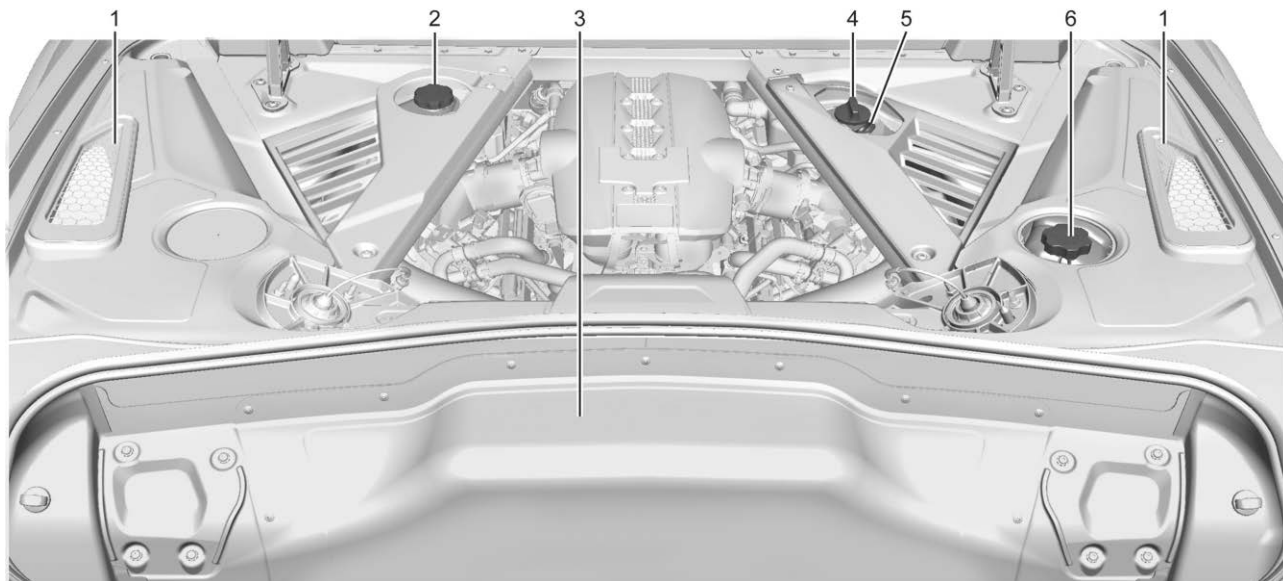
**Z06 Coupe — 5.5L V8 Engine (LT6)**

- |                                                                             |                                                                    |                                                                         |
|-----------------------------------------------------------------------------|--------------------------------------------------------------------|-------------------------------------------------------------------------|
| 1. Engine Cooling Fan (Out of View). See your owner's manual.               | 3. Dry Sump Engine Oil Tank and Fill Cap. See your owner's manual. | 5. Engine Coolant Surge Tank and Pressure Cap. See your owner's manual. |
| 2. Engine Air Cleaner Filter (Under Access Panel). See your owner's manual. | 4. Engine Oil Dipstick. See your owner's manual.                   |                                                                         |

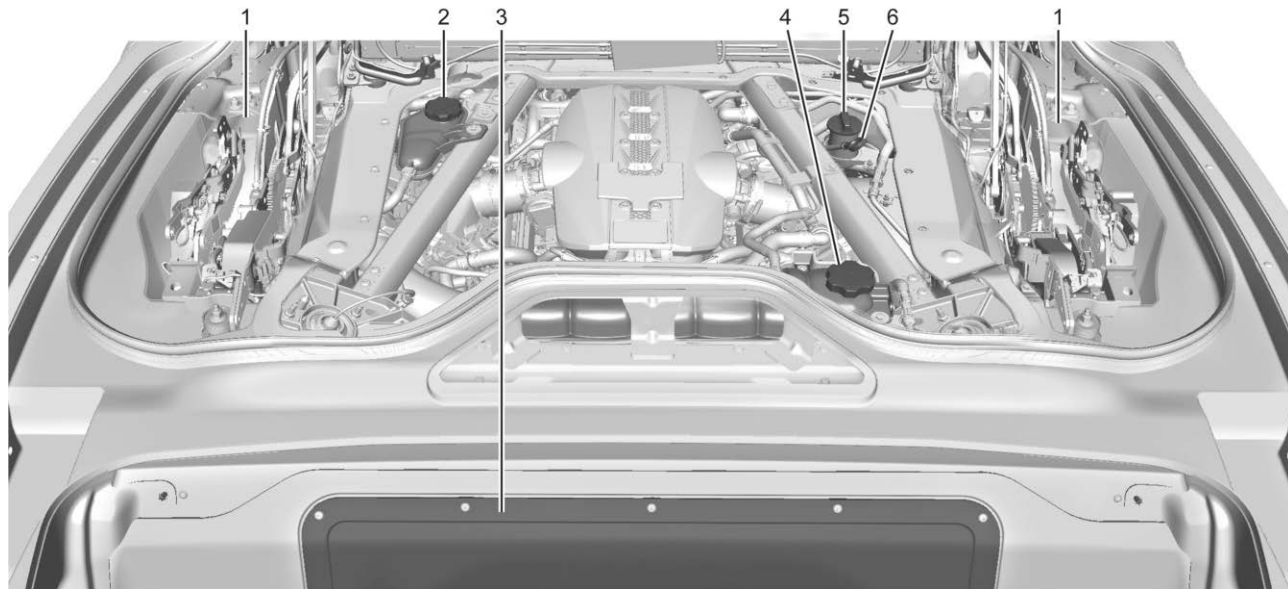


### **Z06 Convertible— 5.5L V8 Engine (LT6)**

- |                                                                                                                                                                                                   |                                                                                                                                                                                                    |                                                                                                  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"><li>1. Engine Cooling Fan (Out of View). See your owner's manual.</li><li>2. Engine Air Cleaner Filter (Under Access Panel). See your owner's manual.</li></ul> | <ul style="list-style-type: none"><li>3. Engine Coolant Surge Tank and Pressure Cap. See your owner's manual.</li><li>4. Dry Sump Engine Oil Tank and Fill Cap. See your owner's manual.</li></ul> | <ul style="list-style-type: none"><li>5. Engine Oil Dipstick. See your owner's manual.</li></ul> |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|

**ZR1 Coupe — 5.5L V8 Engine (LT7)**

- |                                                                               |                                                                             |                                                                         |
|-------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-------------------------------------------------------------------------|
| 1. Engine Cooling Fan (Out of View). See your owner's manual.                 | 3. Engine Air Cleaner Filter (Under Access Panel). See your owner's manual. | 5. Engine Oil Dipstick. See your owner's manual.                        |
| 2. Turbo Intercooler Coolant Loop Reservoir. See your dealer for maintenance. | 4. Dry Sump Engine Oil Tank and Fill Cap. See your owner's manual.          | 6. Engine Coolant Surge Tank and Pressure Cap. See your owner's manual. |



### **ZR1 Convertible — 5.5L V8 Engine (LT7)**

- |                                                                                                                                                                             |                                                                                                                                                                                                             |                                                                                                                                                                             |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"><li>1. Engine Cooling Fans (Out of View).</li><li>2. Turbo Intercooler Coolant Loop Reservoir. See your dealer for maintenance.</li></ul> | <ul style="list-style-type: none"><li>3. Engine Air Cleaner Filter (Under Access Panel). See your owner's manual.</li><li>4. Engine Coolant Surge Tank and Pressure Cap. See your owner's manual.</li></ul> | <ul style="list-style-type: none"><li>5. Dry Sump Engine Oil Tank and Fill Cap. See your owner's manual.</li><li>6. Engine Oil Dipstick. See your owner's manual.</li></ul> |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## Battery - North America

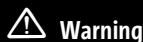
Your vehicle may be equipped with a standard 12-volt lead acid battery, 12-volt lithium-ion battery, and/or a high voltage battery.

See your dealer if the 12-volt lead acid battery, 12-volt lithium-ion battery, or high voltage battery need service.

### 12-Volt Lead Acid Battery

The original equipment battery is maintenance free. Do not remove the cap and do not add fluid.

Do not disconnect the 12-volt lead acid battery during storage.



#### 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](http://www.P65Warnings.ca.gov).

See *California Proposition 65 Warning* ⇨ 1.

### 12-Volt Lithium-Ion Battery (E-Ray)



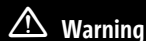
#### Warning

**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](http://www.P65Warnings.ca.gov).

See *California Proposition 65 Warning* ⇨ 1.

### Charging the 12-Volt Lithium-Ion Battery

The 12-volt lithium-ion battery can be charged using a GM approved charger designed for lithium-ion batteries. Follow the instructions that come with the GM approved charger.



#### Warning

Use only GM approved jump start boxes and charging tools. Use of unapproved jump start boxes, charging tools, a loose battery, or battery charger may cause personal

(Continued)

### Warning (Continued)

injury, death, or damage to the vehicle. For GM approved jump start boxes or charging tools, see <https://gmadesolutions.com>.

Use the Battery Voltage info tile to determine if your battery is low and needs to be charged. See your owner's manual under the "Info Tiles" section for more information.

GM recommends charging your 12-volt lithium-ion battery when storing your vehicle for long periods of time. See "Vehicle Storage" later on in this section.

If the vehicle is not starting and the 12-volt lithium-ion battery has run down, charging the 12-volt lithium-ion battery may solve the issue. See *Jump Starting - North America* ⇨ 115.

### High Voltage Battery (E-Ray)

Only a trained service technician should inspect, test, or replace the high voltage battery. The dealer has information on how to recycle the high voltage battery. There is also information available at <https://www.recyclemybattery.com>.

 **Warning**

Damage to the high voltage battery or high voltage system can create a risk of electric shock, overheating, or fire.

If the vehicle is damaged from a moderate to severe crash, flood, fire, or other event, the vehicle should be inspected as soon as possible. Until the vehicle has been inspected, store it outside at least 15 m (50 ft) from any structure or anything that can burn. Ventilate the vehicle by opening a window or a door.

Contact Customer Assistance as soon as possible to determine whether an inspection is needed. See your owner's manual.

If the vehicle is in a crash, the sensing system may shut down the high voltage system. When this occurs, the high voltage battery is disconnected and the vehicle will not start. The SERVICE VEHICLE SOON message in the Driver Information Center (DIC) will display. Before the vehicle can operate again, it must be serviced at your dealer. If a crash occurs or an airbag(s) inflates, see “If a Crash

Occurs” in your owner's manual and *What Will You See After an Airbag Inflates?* ⇨ 32 for additional information.

Propulsion power may be reduced in extremely cold temperatures, or if the high voltage battery is too cold.

See *Radio Frequency Statement* ⇨ 127.

**Federal Communications Commission (FCC) Radiation Exposure Statement**

This equipment has been evaluated to be installed and operated at a minimum distance of 5.7 cm (2.2 in) between the device and your body. The vehicle design ensures this distance is maintained during normal use. Changes or modifications to any of these systems by other than an authorized service facility could void authorization to use this equipment.

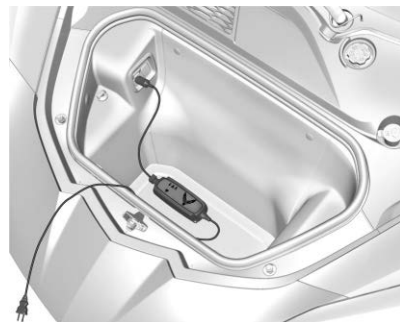
**Innovation, Science, and Economic Development (ISED) Radiation Exposure Statement**

This equipment complies with RSS-102 radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 5.7 cm (2.2 in) between the radiator and any part of your body.

The vehicle design ensures this distance is maintained during normal use. Changes or modifications to any of these systems by other than an authorized service facility could void authorization to use this equipment.

**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* ⇨ 115 for tips on working around a battery without getting hurt.



Some vehicles have a battery maintainer package. Follow the instructions provided with the battery maintainer package to keep the battery charged when the vehicle is not in use. Plug the battery maintainer into the underhood accessory power outlet only. For ZR1 models, use clips to connect to the battery directly.

For vehicles without a battery maintainer, see the following information:

**Infrequent Usage:** Remove the black, negative (-) cable from the battery to keep the battery from running down.

See “Window Indexing” in your owner’s manual.

**Extended Storage:** It is recommended that the battery maintainer package be used. However, if not, remove the black, negative (-) cable from the battery. All vehicle memory settings will need to be reset when battery power is restored.

### 12-Volt Lithium-Ion Battery (E-Ray)

A battery maintainer package can be used to keep the battery charged when the vehicle is not in use.



#### Warning

Lithium-ion battery cells contain chemicals that can burn you and gas that can explode under extreme conditions. Explosive gases can cause blindness and/or injury. You can be badly hurt if you are not careful. Always wear eye protection. See *Jump Starting - North America* ⇨ 115 for tips on working around a lithium-ion battery without getting hurt.



#### Warning

Use only GM approved jump start boxes and charging tools. Use of unapproved jump start boxes, charging tools, a loose battery, or battery charger may cause personal injury, death, or damage to the vehicle. For GM approved jump start boxes or charging tools, see <https://gmadesolutions.com>.

When storing the vehicle on a long-term basis:

- Attach a compatible battery tender or trickle charger to the 12-volt lithium-ion battery.

- Keep the remote key more than 3 m (10 ft) away from the vehicle.

## 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.

## 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* ⇨ 56.
- Underinflated tires pose the same danger as overloaded tires. The resulting crash could cause serious injury. Check all tires frequently 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.

(Continued)

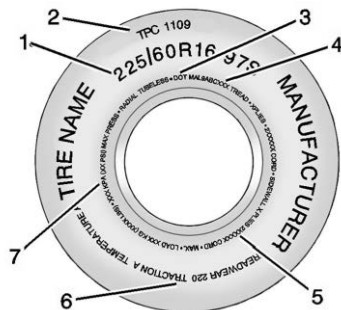
### Warning (Continued)

- 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.
- 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.

See your owner's manual for inflation pressure adjustment for high-speed driving.

### Tire Sidewall Labeling

Useful information about a tire is molded into its sidewall. The example shows a typical passenger 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 later 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 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: treadwear, traction, and temperature resistance. For more information, see *Uniform Tire Quality Grading* ⇨ 113.

**(7) Maximum Cold Inflation Load Limit :** Maximum load that can be carried and the maximum pressure needed to support that load.

## Tire Designations

### Tire Size

The example shows a typical passenger vehicle tire size.

P245/75R16 109S

1 2 3 4 5 6

### 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* ⇨ 105.

**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* ⇨ 56.

**GAWR FRT :** Gross Axle Weight Rating for the front axle. See *Vehicle Load Limits* ⇨ 56.

**GAWR RR :** Gross Axle Weight Rating for the rear axle. See *Vehicle Load Limits* ⇨ 56.

**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* ⇨ 105 and *Vehicle Load Limits* ⇨ 56.

**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* ⇨ 111.

**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* ⇨ 113.

**Vehicle Capacity Weight** : The number of designated seating positions multiplied by 68 kg (150 lbs) plus the rated cargo load. See *Vehicle Load Limits* ⇨ 56.

**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* ⇨ 56.

## 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

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* ⇨ 56.

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.

**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 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* ⇨ 107.

See *Radio Frequency Statement* ⇨ 127.

## 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* ⇨ 56.

A message to check the pressure in a specific tire displays in the Driver Information Center (DIC). The low tire pressure warning light and the DIC warning message come on at each ignition cycle until the tires are inflated to the correct inflation pressure. If the vehicle has DIC buttons, tire pressure levels can be viewed. For additional information and details about the DIC operation and displays, see your owner's manual.

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* ⇨ 56, for an example of the Tire and Loading Information label and its location. Also see *Tire Pressure* ⇨ 105.

The TPMS can warn about a low tire pressure condition but it does not replace normal tire maintenance. See *Tire Inspection* ⇨ 110, *Tire Rotation* ⇨ 110, and *Tires* ⇨ 101.

| 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. 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 flashes for about one minute and then stays on for the remainder of the ignition cycle. A DIC warning message also displays. The malfunction light and DIC warning message come on at each ignition cycle until the problem is corrected. Some of the conditions that can cause these to come on are:

- One of the road tires has been replaced with the spare tire. The spare tire does not have a TPMS sensor. The malfunction light and the DIC message 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 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 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* ⇨ 112.

- 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 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.

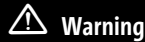
When the low tire pressure warning light comes on:

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. If the tire being inflated is a front tire, then the front turn signal lamp closest to the tire being

inflated will stop flashing and briefly turn solid. If the tire being inflated is a rear tire, then the rear turn signal lamp closest to the tire being inflated will stop flashing.

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* ⇨ 102 and *Vehicle Load Limits* ⇨ 56.

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 — Auto Learn Function

Each TPMS sensor has a unique identification code. The identification code needs to be matched to a new tire/wheel position after rotating the tires or replacing one or more of

the TPMS sensors. When a tire is installed, the vehicle must be stationary for about 20 minutes before the system recalculates. The following relearn process takes up to 10 minutes, driving at a minimum speed of 20 km/h (12 mph). A dash (-) or pressure value will display in the DIC. See your owner's manual. A warning message displays in the DIC if a problem occurs during the relearn process.

## 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.

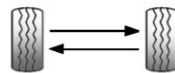
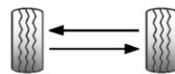
## Tire Rotation

Tires should be rotated according to the interval listed in the maintenance schedule. See your owner's manual.

Tires are rotated to achieve 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* ⇨ 111 and your owner's manual.

Different tire sizes should not be rotated front to rear.



Use this rotation pattern if the vehicle has different size tires on the front and rear.

### Caution

Wheels will become scratched if not handled properly. When laying a tire and wheel assembly flat on the ground, place it face up with a towel underneath it. Move the assembly by rolling it on the tires. Do not drag it.

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* ⇨ 105 and *Vehicle Load Limits* ⇨ 56.

Reset the Tire Pressure Monitor System. See *Tire Pressure Monitor Operation* ⇨ 107. Check that all wheel nuts are properly tightened. See “Wheel Nut Torque” in your owner's manual.

### 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.

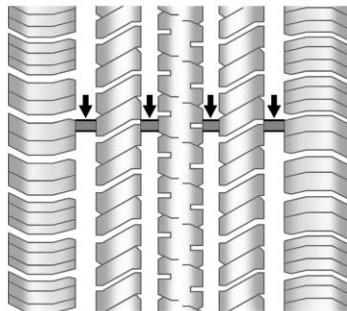
Lightly coat the inner diameter of the wheel hub opening with wheel bearing grease after a wheel change or tire rotation to prevent corrosion or rust buildup.

### 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* ⇨ 110 and *Tire Rotation* ⇨ 110.

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* ⇨ 110.

### 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

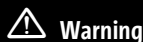
Using bias-ply tires on the vehicle may cause the wheel rim flanges to develop cracks after many miles of driving. A tire and/or wheel could fail suddenly and cause a crash. Use only radial-ply tires with the wheels on the vehicle.

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* ⇨ 56.

## 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, the performance of these systems can also be affected.

See *Buying New Tires* ⇨ 112 and your owner's manual.

## 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.

### 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* ⇨ 101.

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.

The vehicle has no spare tire, no tire changing equipment, and no place to store a tire.

If the vehicle has run-flat tires, there is no need to stop on the side of the road to change a flat tire. See your owner's manual.

 **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**

Special tools and procedures are required to service a run-flat tire. If these special tools and procedures are not used, injury or vehicle damage may occur. Always be sure the proper tools and procedures, as described in the service manual, are used.

## Jump Starting

### Jump Starting - North America

For more information about the vehicle battery, see *Battery - North America* ⇨ 99.

If the battery has run down, use another vehicle and some jumper cables to start the 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](http://www.P65Warnings.ca.gov).

See *California Proposition 65 Warning* ⇨ 1.

 **Warning**

Batteries can hurt you. They can be dangerous because:

(Continued)

### Warning (Continued)

- They contain acid that can burn you.
- They contain gas that can explode or ignite.
- They contain enough electricity to burn you.

Use eye protection when handling the battery. If you do not follow these steps exactly, some or all of these things can hurt you.

The battery is under a battery cover and side extensions/shields in the underhood compartment.

To access the battery under the hood, the right hand and left hand sight shields need to be removed to be able to remove the second cover assembly to access the battery. The positive battery terminal is on the driver side and the negative terminal is on the passenger side.

Before you connect the cables, here are some basic things you should know. Positive (+) will go to the positive (+) terminal. Negative (-) will go to the remote jump starting negative (-) post.

**E-Ray Only**

The vehicle is equipped with a lithium-ion battery. The 12-volt lithium-ion battery requires a higher voltage than lead acid batteries for jump starting. Jumper cables will only work with some vehicles and under some circumstances. Follow the steps below to safely jump start the discharged lithium-ion batteries.

 **Warning**

Use only GM approved jump start boxes and charging tools. Use of unapproved jump start boxes, charging tools, a loose battery, or battery charger may cause personal injury, death, or damage to the vehicle. For GM approved jump start boxes or charging tools, see <https://gmDESolutions.com>.

 **Warning**

**WARNING:** Lithium-ion batteries contain chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. **WASH HANDS AFTER HANDLING.**

See *California Proposition 65 Warning* ⇨ 1.

**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.

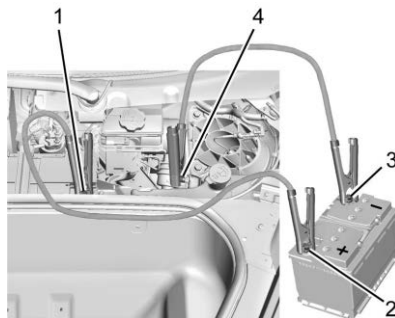
**Caution**

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

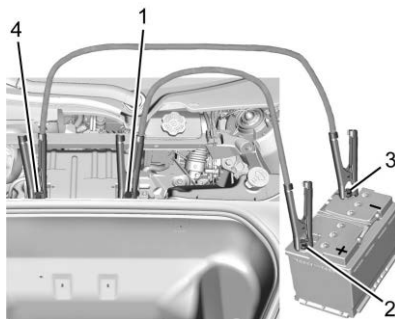
(Continued)

**Caution (Continued)**

and remove the jumper cables in the correct order, making sure that the cables do not touch each other or other metal.



**All Models Shown, Except E-Ray**

**E-Ray****Connection Points and Sequence**

1. Discharged Battery Positive (+) Terminal
2. Good Battery Positive (+) Terminal
3. Good Battery Negative (-) Terminal
4. Remote Jump Starting Negative (-) Post

**Jump Starting Procedure (All Models)**

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. Get the vehicles close enough so the jumper cables can reach, but be sure the vehicles are not touching each other. If they are, it could cause a ground connection you do not want. You would not be able to start the vehicle, and the bad grounding could damage the electrical systems.

To avoid the possibility of the vehicles rolling, set the parking brake firmly on both vehicles involved in the jump start procedure. Put an automatic transmission in P (Park) or a manual transmission in N (Neutral) before setting the parking brakes.

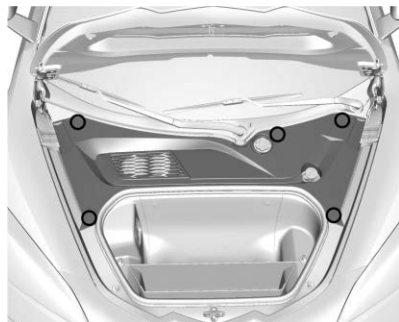
**Caution**

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.

3. Turn off the ignition on both vehicles. Unplug unnecessary accessories plugged into the accessory power outlet. Turn off the radio and all lamps that are not needed. This will avoid sparks and help save both batteries and the radio.
4. Open the hood. See *Hood* ⇨ 9.



5. Release the four clips for the left and right outer covers.



6. Release the five clips and remove the outer cover to access the battery.
7. Locate the battery positive (+) terminal and remote jump starting negative (-) post.

### **Warning**

Always inspect jumper cables prior to use. Jumper cables with loose or missing insulation could shock you or cause vehicle damage. Do not use jumper cables that appear damaged.

8. Check that the jumper cables do not have loose or missing insulation.
9. Open the discharged battery positive (+) terminal trim cover and connect one end of the positive (+) cable.
10. Do not let the other end of the positive (+) cable to touch metal. Connect it to the good battery positive (+) terminal.
11. Connect one end of the negative (-) cable to the good battery negative (-) terminal.

Do not let the other end touch anything until the next step.

12. Connect the other end of the negative (-) cable to the remote jump starting negative (-) post.
13. Start the vehicle with the good battery and run the engine for at least four minutes.
14. Try to start the vehicle that had the discharged battery. If it will not start after a few tries, it probably needs service.

### **Jumper Cable Removal**

To remove the jumper cables, reverse Steps 9–12 in exact order.

After starting the disabled vehicle and removing the jumper cables, allow it to idle for several minutes.

The power windows may need to be initialized. See “Window Indexing” in your owner’s manual.

### **Jump Start Box Procedure (E-Ray Only)**

If equipped with a lithium-ion battery, another option is to use a jump start box and/or pack to revive the battery.

**Caution**

Electrical shorting may occur and damage the vehicle if either of the following is done:

- The jump start box is set to ON before beginning the jump starting procedure
- The jump start box is connected or removed in the wrong order

The repairs would not be covered by the vehicle warranty. Always set the jump start box to OFF before starting the jump starting procedure, and connect and remove the jump start box in the correct order, making sure that the cables do not touch each other or other metal.

1. Set the jump start box to OFF.
2. Connect the red (+) cable to the discharged lithium-ion battery positive (+) tab.
3. Connect the black (–) cable to the discharged lithium-ion battery negative (–) post.

4. Once the jump start box has been connected, set the jump start box to ON. After the jump start box is powered on, ensure the instrument cluster lights up before starting the vehicle.
5. After the instrument cluster lights up, use a GM approved battery charger to fully charge the battery.

**Jumper Cable Removal**

1. Set the jump start box to OFF.
2. Disconnect the black (–) cable to the negative post (–) on the discharged lithium-ion battery.
3. Disconnect the red (+) cable to the discharged lithium-ion battery positive (+) tab.

**Charging The 12-Volt Lithium-Ion Battery**

The 12-volt lithium-ion battery can be charged using a GM approved charger designed for lithium-ion batteries. Follow the instructions listed in the charger operating manual.

See *Battery - North America* ⇨ 99 for more information.

## 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 rear 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 an electronic 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/

(Continued)

**Caution (Continued)**

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 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.

Do not use the tow eye to pull the vehicle from 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 equipped, the Front Lift System can be raised with the engine off. With the vehicle in accessory mode and the doors closed, press and hold the Front Lift System button for 10 seconds. See your owner's manual. After the vehicle is loaded, the front can be lowered by pressing the Front Lift System button again with the doors closed.

- Place the vehicle in N (Neutral) and see “Maintaining N (Neutral) with Engine Off” under *Dual Clutch Transmission* ⇨ 61.
- If the 12-volt battery is dead and/or the engine will not start, the vehicle will not move. Try to jump start the vehicle. See *Jump Starting - North America* ⇨ 115. If the jump start is successful, retry the “Maintaining N (Neutral) with Engine Off” procedure.

- If jump starting is unsuccessful, the vehicle will not move. Tire skates or dollies must be used under the non-rolling tires to prevent vehicle damage.

**Front Tow Eye**

Carefully open the cover by using the small notch that conceals the front 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.

### Rear Tow Eye



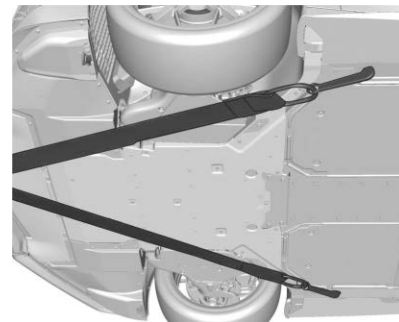
Carefully open the cover by using the small notch that conceals the rear tow eye socket.



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.

### Front Attachment Points



The vehicle is equipped with specific attachment points to be used by the towing provider. These holes may be used to pull the vehicle from a flat road surface onto the flatbed tow truck.

## Service and Maintenance

### General Information

General Information ..... 122

### Additional Maintenance and Care

Additional Maintenance and Care ..... 123

## 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, 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:

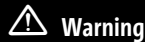
- Carry passengers and cargo within recommended limits on the Tire and Loading Information label. See *Vehicle Load Limits* ⇨ 56.
- Are driven on reasonable road surfaces within legal driving limits.
- Use the recommended fuel. See your owner's manual.

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.
- 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.



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* ⇨ 84.

## Additional Maintenance and Care

### Windshield

For safety, appearance, and the best viewing, keep the windshield clean and clear.

- Signs of damage include scratches, cracks, and chips.
- Trained dealer technicians can inspect the windshield and recommend proper replacement if needed.

Clean the outside of the windshield with glass cleaner.

### Wiper Blades

Wiper blades need to be cleaned and kept in good condition to provide a clear view.

- Signs of wear include streaking, skipping across the windshield, and worn or split rubber.
- Trained dealer technicians can check the wiper blades and replace them when needed.

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.

**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.

|                                                                                                                                                       |
|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Caution</b>                                                                                                                                        |
| 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.

## Customer Information

### Customer Information

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## Online Account and Customer Support

### Create a Chevrolet Account (U.S.) at [chevrolet.com](http://chevrolet.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 preferred dealer and view locations, maps, phone numbers, and hours.

 : Track your vehicle's warranty information.

 : View active recalls by Vehicle Identification Number (VIN). See your owner's manual.

 : Manage your profile and payment information. View your GM Rewards Card earnings and My Chevrolet Rewards points.

 : Chat with online help representatives. Visit [chevrolet.com](http://chevrolet.com) and create an account today.

### Chevrolet Account (Canada)

Visit your Chevrolet Account at [chevrolet.ca/en](http://chevrolet.ca/en) (English) or [chevrolet.ca/fr](http://chevrolet.ca/fr) (French) to access similar benefits.

## Roadside Assistance Program

For U.S.-purchased vehicles, call 1-800-243-8872. Text Telephone (TTY) Users (U.S. Only): Contact 711 relay service and provide 1-800-243-8872.

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, if available
- 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 Chevrolet reserve the

right to make any changes or discontinue the Roadside Assistance program at any time without notification.

General Motors North America and Chevrolet 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 too frequently.

## 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 Chevrolet dealer for warranty service, or if the vehicle was in a crash and cannot be driven.
- **Flat Tire Change:** If the tire has been separated from the wheel, has damaged sidewalls, or has a large puncture, the tire is too severely damaged for the run-flat tire

to be effective and the vehicle will have to be towed. 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. Assistance is not given when the vehicle is stuck in the sand, mud, or snow.

### Services Specific to Canadian-Purchased Vehicles

- **Fuel Delivery:** Reimbursement is up to 7 liters. 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.

### 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](http://www.tc.gc.ca/recalls) (English)

[www.tc.gc.ca/rappels](http://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 1-800-222-1020, or write:

Chevrolet Motor Division  
Chevrolet Customer Assistance Center  
P.O. Box 33170  
Detroit, MI 48232-5170

In Canada, call 1-800-263-3777 (English) or 1-800-263-7854 (French), or write:

Customer Care Centre  
General Motors of Canada Company  
500 Wentworth Street W  
Oshawa, ON L1J 0C5

In Mexico, call 800-466-0811 or 800-508-0000.

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.

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## Scan to Access

### United States



- Owner's Manuals
- Warranty Information
- Connected Services
- My Chevrolet Rewards
- myChevrolet Mobile App
- How-To Videos
- Vehicle Diagnostics
- Scheduled Maintenance
- Vehicle Features
- Many Additional Resources

### Canada



### United States

Customer Assistance

1-800-222-1020

Roadside Assistance

1-800-243-8872

### United States and Canada

Connected Services

1-888-4-ONSTAR

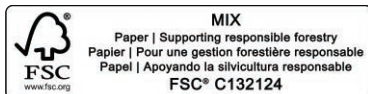
### Canada

Customer Assistance

1-800-263-3777

Roadside Assistance

1-800-268-6800



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