# 2014 Chevrolet Impala Owner Manual


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This manual describes features that may or may not be on your specific vehicle either because they are options that you did not purchase or due to changes subsequent to the printing of this owner manual. Please refer to the purchase documentation relating to your specific vehicle to confirm each of the features found on your vehicle. For vehicles first sold in Canada, substitute the name "General Motors of Canada Limited" for Chevrolet Motor Division wherever it appears in this manual.

Keep this manual in the vehicle for quick reference.

## Canadian Vehicle Owners

### Propriétaires Canadiens

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

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

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

## 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.

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## Danger, Warnings, and Cautions

**⚠ Danger**

Text marked ⚠ Danger provides information on risk of fatal injury. Disregarding this information may endanger life.

**⚠ Warning**

Text marked ⚠ Warning provides information on risk of accident or injury. Disregarding this information may lead to injury.

**⚠ Caution**

Text marked ⚠ Caution provides information that may indicate a hazard that could result in injury or death. It could also result in possible damage to the vehicle.

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

## Symbols

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

**:** This symbol is shown when you need to see your owner manual for additional instructions or information.

**:** This symbol is shown when you need to see a service manual for additional instructions or information.

**Vehicle Symbol Chart**

Here are some additional symbols that may be found on the vehicle and what they mean. For more information on the symbol, refer to the Index.

**:** Airbag Readiness Light

**:** Air Conditioning Refrigerant Oil

**:** Antilock Brake System (ABS)

**:** Audio Steering Wheel Controls or OnStar®

**:** Brake System Warning Light

: Charging System

: Cruise Control

: Engine Coolant Temperature

: Exterior Lamps

: First Responder

: Fuel Gauge

: Fuses

: Headlamp High/Low-Beam Changer

: Heated Steering Wheel

: LATCH System Child Restraints

: Malfunction Indicator Lamp

: Oil Pressure

: Power

: Remote Vehicle Start

: Safety Belt Reminders

: Tire Pressure Monitor

: Traction Control/StabiliTrak®

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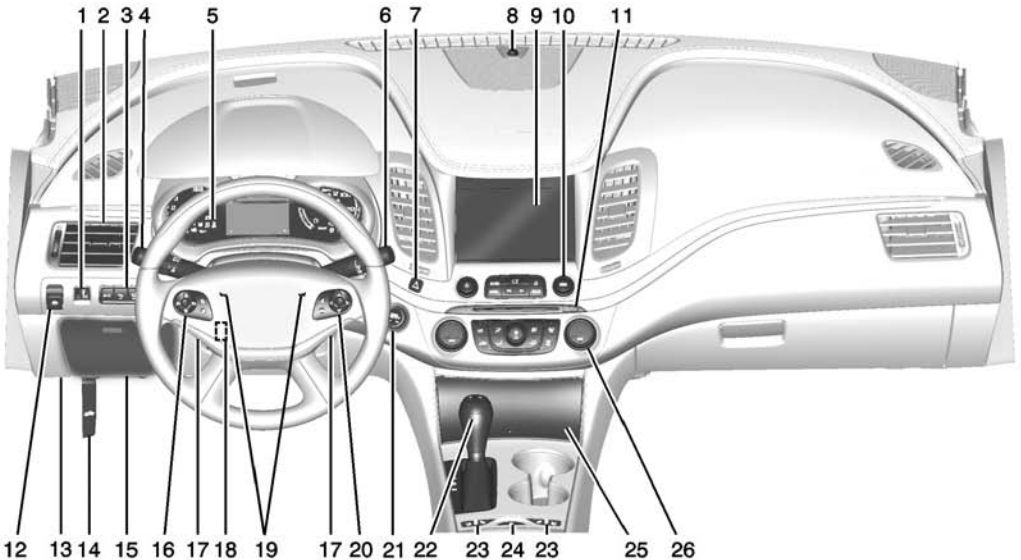
# Instrument Panel



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# Initial Drive Information

This section provides a brief overview about some of the important features that may or may not be on your specific vehicle.

For more detailed information, refer to each of the features which can be found later in this owner manual.

## Remote Keyless Entry (RKE) System

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

The RKE transmitter can have one of these two symbols for the remote trunk release.

**With Remote Start Shown**

Press the button to extend the key. The key can be used for all locks. This key is also used for the ignition, if the vehicle does not have pushbutton start.

**:** Press to unlock the driver door or all doors.

**:** Press to lock all doors.

Lock and unlock feedback can be personalized.

**or HOLD :** Press and hold to release the trunk.

**:** Press and release one time to initiate vehicle locator. Press and hold for at least three seconds to sound the panic alarm. Press again to cancel the panic alarm.

See *Keys on page 2-1* and *Remote Keyless Entry (RKE) System Operation on page 2-3*.

## Remote Vehicle Start

If equipped, the engine can be started from outside of the vehicle.

### Starting the Vehicle

1. Aim the RKE transmitter at the vehicle.
2. Press and release .
3. Immediately, press and hold  for at least four seconds or until the turn signal lamps flash.

When the vehicle starts, the parking lamps will turn on and remain on as long as the engine is running. The doors will be locked and the climate control system may come on.

The engine will continue to run for 10 minutes. Repeat the steps for a 10-minute time extension. Remote start can be extended only once.

### Canceling a Remote Start

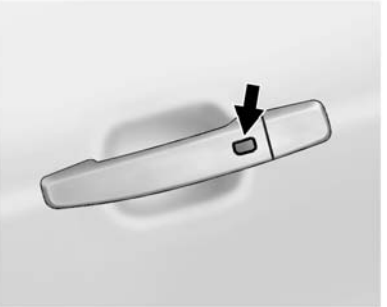
To cancel a remote start, do one of the following:

- Aim the RKE transmitter at the vehicle and press and hold ⟲ until the parking lamps turn off.
- Turn on the hazard warning flashers.
- Turn the vehicle on and then back off.

See *Remote Vehicle Start on page 2-9*.

## Door Locks

### Keyless Access



If equipped, use the Keyless Access system to lock and unlock the door. When the doors are locked and the Remote Keyless Entry (RKE) transmitter is within 1 m (3 ft) of the driver door handle, press the lock/unlock button. When unlocking from the driver door, the first press unlocks that door; press again within five seconds to unlock all passenger doors. See *Remote Keyless Entry (RKE) System Operation on page 2-3*.

This feature may be configured. See *Vehicle Personalization on page 5-40*.

### Key Cylinder Access

Use the key in the driver door. The key cylinder is covered by a cap. See *Door Locks on page 2-10*.

### Inside the Vehicle

Push down on the door lock knob to lock that door. Pull once on the door handle to unlock the door and again to open the door. Press the power door lock switch to lock or unlock all doors. See *Door Locks on page 2-10* and *Power Door Locks on page 2-12*.

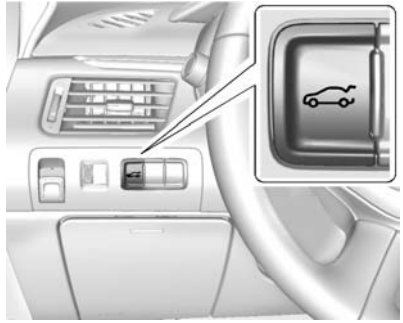
**Power Door Locks**

: Press to unlock.

: Press to lock.

See *Power Door Locks on page 2-12*.

## Trunk



To open the trunk:

- Press on the driver door.
- Press and hold or HOLD on the RKE transmitter.
- If equipped, press the touch pad on the underside of the trunk lid after unlocking all doors.

If equipped with Keyless Access, the RKE transmitter must be within 1 m (3 ft) of the trunk. Press the touch pad on the underside of the trunk and lift to open. See *Remote Keyless Entry (RKE) System Operation on page 2-3*.

When closing the trunk, use the pull cup.

See *Trunk on page 2-14*.

## Windows

The power windows only operate with the ignition in ACC/ACCESSORY or ON/RUN/START, or when Retained Accessory Power

(RAP) is active. See *Retained Accessory Power (RAP) on page 9-24*.

The power window switches on the driver door control all the windows. Each passenger door has a switch that controls only that window.

Press the switch to lower the window. Pull the switch up to raise it.

See *Power Windows on page 2-21*.

# Seat Adjustment

## Manual Front Seats

To adjust a manual seat:

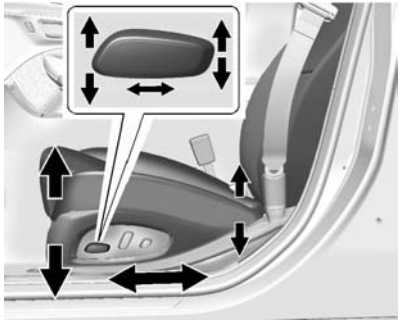
1. Pull the handle at the front of the seat.
2. Slide the seat to the desired position and release the handle.
3. Try to move the seat back and forth to be sure it is locked in place.

### Seat Height Adjuster

Press and hold the top or bottom of the switch to raise or lower the seat. Release the switch when the desired height is reached.

See *Seat Adjustment on page 3-4*.

## Power Seats



To adjust the seat:

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

See *Power Seat Adjustment on page 3-5*.

## Lumbar Adjustment

To adjust the lumbar support:

- Press and hold the control forward to increase or rearward to decrease lumbar support.
- Press and hold the control upward to raise or downward to lower the height of the lumbar support.

See *Lumbar Adjustment on page 3-6*.

## Reclining Seatbacks

### Manual Reclining Seatbacks

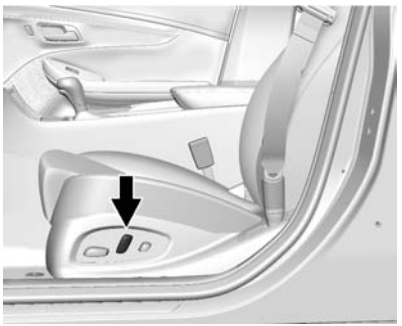
To recline a manual seatback:

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

To return the seatback to the upright position:

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

**Power Reclining Seatbacks**

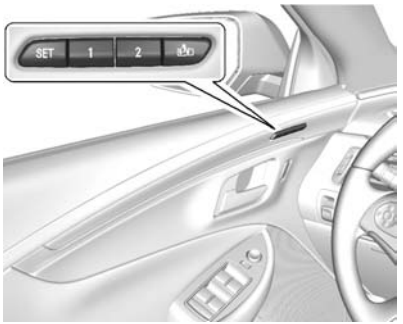


To adjust a power seatback:

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

See *Reclining Seatbacks on page 3-6*.

## Memory Features




If equipped, the "1," "2," SET, and (Exit) buttons on the driver door are used to manually save and recall memory settings for the driver seat, outside mirrors, and power tilt and telescoping steering column (if equipped).

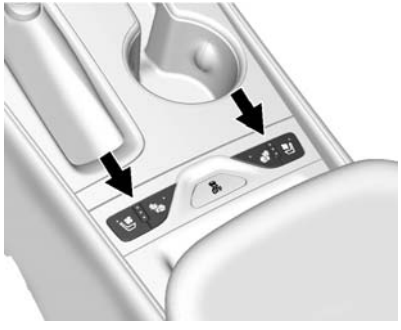
See *Memory Seats on page 3-7* and *Vehicle Personalization on page 5-40*.

## Second Row Seats

The rear seatbacks can be folded down to increase cargo space.

See *Rear Seats on page 3-11*.

## Heated and Ventilated Seats



**Heated and Ventilated Seat Buttons Shown, Heated Seat Buttons Similar**

If available, the buttons are on the center console. To operate, the ignition must be on.

: If available, press to heat the driver or passenger seatback only.

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

: If available, press to ventilate the driver or passenger seat.
A ventilated seat has a fan that pulls or pushes air through the seat. The air is not cooled.

An indicator light on the button turns on when the heated or ventilated seat is on.

See *Heated and Ventilated Front Seats on page 3-10*.

## Head Restraint Adjustment

Do not drive until the head restraints for all occupants are installed and adjusted properly.

To achieve a comfortable seating position, change the seatback recline angle as little as necessary while keeping the seat and the head restraint height in the proper position.

See *Head Restraints on page 3-2* and *Seat Adjustment on page 3-4*.

## Safety Belts

Refer to the following sections for important information on how to use safety belts properly:


- *Safety Belts on page 3-13*.
- *How to Wear Safety Belts Properly on page 3-14*.
- *Lap-Shoulder Belt on page 3-15*.
- *Lower Anchors and Tethers for Children (LATCH System) on page 3-41*.

## Passenger Sensing System

**United States**

**Canada**

The passenger sensing system will turn off the front outboard passenger frontal airbag and knee airbag under certain conditions. No other airbag is affected by the passenger sensing system. See *Passenger Sensing System on page 3-27*.

The passenger airbag status indicator lights on the overhead console when the vehicle is started. See *Passenger Airbag Status Indicator on page 5-16*.

## Mirror Adjustment

### Exterior Mirrors

1. Move the selector switch to L (Left) or R (Right) to choose the driver or passenger mirror.
2. Press one of the four arrows to move the mirror.
3. Move the selector switch to ● to deselect the mirror.

The vehicle has manual folding mirrors. See *Folding Mirrors on page 2-20*.

### Interior Mirrors

#### Adjustment

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

#### Manual Rearview Mirror

For vehicles with a manual rearview mirror, push the tab forward for daytime use and pull it for nighttime use to avoid glare from the headlamps from behind. See *Manual Rearview Mirror on page 2-20*.

#### Automatic Dimming Rearview Mirror

For vehicles with an automatic dimming rearview mirror, the mirror will automatically reduce the glare from the headlamps from behind. The dimming feature comes on

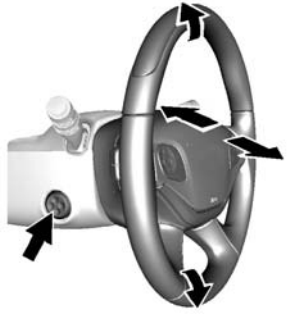
when the vehicle is started. See *Automatic Dimming Rearview Mirror on page 2-20*.

## Steering Wheel Adjustment

To adjust the steering wheel:

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

**Power Tilt Wheel**



If equipped with this feature, press the control to move the steering wheel up and down or forward and rearward.

Do not adjust the steering wheel while driving.

## Interior Lighting

**Dome Lamps**

The interior lamps control in the overhead console controls both the front and rear interior lamps.

To change the dome lamp settings, press the following:

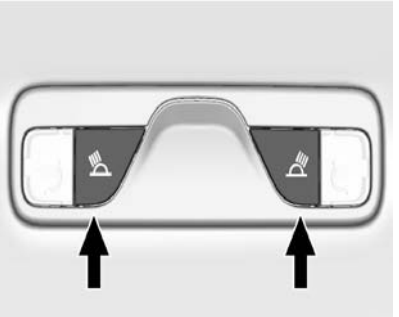
**OFF:** Turns the lamp off, even when a door is open.

**DOOR:** The lamp comes on automatically when a door is opened.

**ON:** Turns the lamp on.

**Reading Lamps**

**Front Reading Lamps**

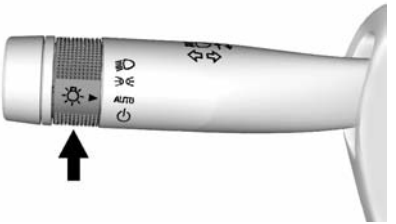


**Rear Reading Lamps**

There are front and rear reading lamps in the overhead console and the headliner.

**or :** Press the button near each lamp to turn it on or off.

## Exterior Lighting




The exterior lamp control is on the turn signal lever.

There are four positions.

**:** Turns off the exterior lamps. The knob returns to the AUTO position after it is released. Turn to again to reactivate the AUTO mode.

**AUTO:** Automatically turns the exterior lamps on and off, depending on outside lighting.

**:** Turns on the parking lamps including all lamps, except the headlamps.

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

See:

- *Exterior Lamp Controls on page 6-1*

## Windshield Wiper/Washer

With the ignition in ACC/ACCESSORY or ON/RUN/START, move the 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 INT band up for more frequent wipes or down for less frequent wipes.

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

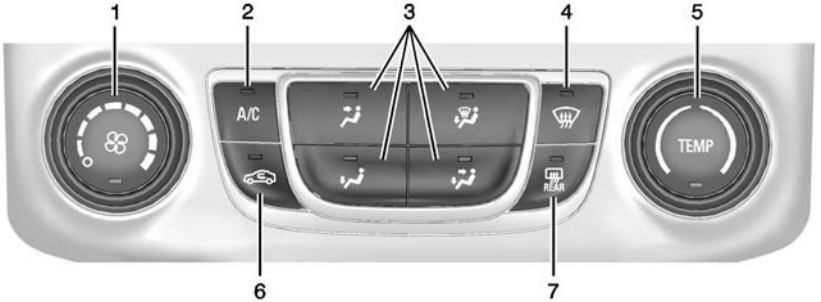
: For a single wipe, briefly move the lever down. For several wipes, hold the lever down.

: Pull the lever toward you to spray windshield washer fluid and activate the wipers.

See *Windshield Wiper/Washer on page 5-4*.

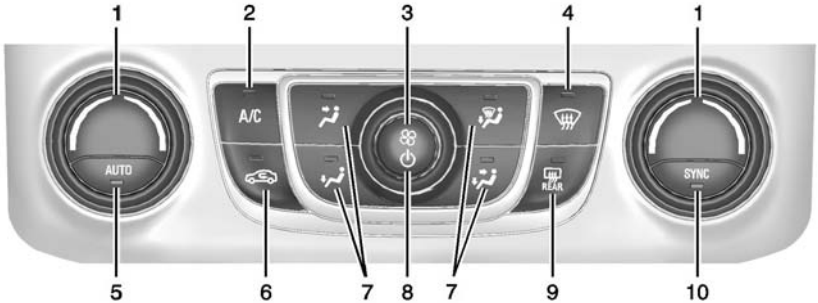
## Climate Controls

The heating, cooling, and ventilation for the vehicle can be controlled with these systems.




**Climate Control System**

1. Fan Control
2. Air Conditioning
3. Air Delivery Modes
4. Defrost
5. Temperature Control
6. Recirculation
7. Rear Window Defogger




**Dual Automatic Climate Control System**

1. Driver and Passenger Temperature Controls
2. Air Conditioning or Comfort/Eco Air Conditioning (eAssist Only)
3. Fan Control
4. Defrost
5. AUTO (Automatic Operation)
6. Recirculation
7. Air Delivery Modes
8. On/Off (Fan)
9. Rear Window Defogger
10. SYNC

See *Climate Control Systems on page 8-1* or *Dual Automatic Climate Control System on page 8-3* (if equipped).

# Transmission

## Driver Shift Control (DSC)

This feature allows for changing gears similar to a manual transmission. To use this feature:

1. Move the shift lever from D (Drive) rearward to M (Manual Mode).
2. Using the button on the top of the shift lever, press the + (plus) end of the button to upshift, or press the − (minus) end of the button to downshift.

See *Manual Mode on page 9-29*.

# Vehicle Features

## Radio(s)

⏻ **:** Press to turn the system on. Press and hold to turn it off. When on, press to mute; press again to unmute. Turn to increase or decrease the volume.

**RADIO:** Press to choose between FM, AM, and SiriusXM®, if equipped.

**MEDIA:** Press to change the audio source between CD, USB, SD card, and AUX.

⌂ **:** Press to go to the Home Page.

**MENU:** Press to select a menu.

⏮ **:** Press to seek the previous station or track.

⏭ **:** Press to seek the next station or track.

See *Overview on page 7-3* about these and other radio features.

### Storing Radio Station Presets

Up to 25 preset stations from all bands can be stored in the favorite lists in any order. Up to five stations can be stored in each favorite page and the number of favorite pages can be set.

To store the station to a position in the list, while on the active source main page, such as AM, FM, or SiriusXM (if equipped), press and hold a Favorites/Soft Key button on the faceplate.

See “Storing Radio Station Presets” under *AM-FM Radio on page 7-7*.

### Setting the Clock

See *Clock (Base Radio) on page 5-5* or *Clock (Uplevel Radio) on page 5-5*.

## Satellite Radio

Vehicles with a SiriusXM® satellite radio tuner and a valid SiriusXM satellite radio subscription can receive SiriusXM programming.

### SiriusXM Satellite Radio Service

SiriusXM is a satellite radio service based in the 48 contiguous United States and 10 Canadian provinces. SiriusXM satellite radio has a wide variety of programming and commercial-free music, coast to coast, and in digital-quality sound. A fee is required to receive the SiriusXM service.

For more information refer to:

- www.siriusxm.com or call 1-866-635-2349 (U.S.).
- www.xmradio.ca or call 1-877-209-0079 (Canada).

See *Satellite Radio on page 7-9*.

## Portable Audio Devices

This vehicle has a 3.5 mm (1/8 in) auxiliary input jack and USB port in the center console. If equipped with storage behind the radio, there is a USB port inside. See *Instrument Panel Storage on page 4-1*. External devices such as iPods®,

laptop computers, MP3 players, CD changers, and USB storage devices may be connected, depending on the audio system.

See *USB Port on page 7-14* and *Auxiliary Jack on page 7-17*.

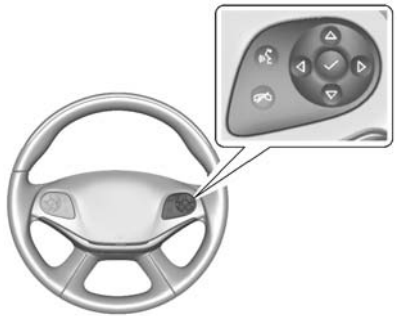
## Bluetooth®

The Bluetooth® system allows users with a Bluetooth-enabled cell phone to make and receive hands-free calls using the vehicle audio system and controls.

The Bluetooth-enabled cell phone must be paired with the in-vehicle Bluetooth system before it can be used in the vehicle. Not all phones will support all functions.

See *Bluetooth (Infotainment Controls) on page 7-20* or *Bluetooth (Voice Recognition) on page 7-24* or *Bluetooth (Overview) on page 7-18*.

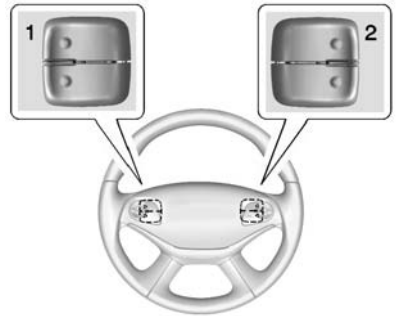
## Steering Wheel Controls



Some audio controls can be adjusted at the steering wheel.

: For vehicles with OnStar® or a Bluetooth® system, press to interact with those systems. See *OnStar Overview on page 14-1* or "Bluetooth (Overview)" in the infotainment manual.

: Press to reject an incoming call, or end a current call. Press to mute or unmute the infotainment system when not on a call.




The favorite and volume switches are on the back of the steering wheel.

1. Favorites: Press to select the next or previous favorite.
2. Volume: Press to increase or decrease the volume.

See *Steering Wheel Controls on page 5-3*.

## Cruise Control

**:** Press to turn cruise control on or off. A white indicator comes on in the instrument cluster.

**+RES:** Press briefly to make the vehicle resume to a previously set speed, or press and hold to accelerate. If cruise control is already active, use to increase vehicle speed.

**SET–:** Press briefly to set the speed and activate cruise control. If cruise control is already active, use to decrease vehicle speed.

**:** Press to disengage cruise control without erasing the set speed from memory.

See *Cruise Control on page 9-35* or *Adaptive Cruise Control on page 9-37* (if equipped).

## Infotainment System

The base radio information is included in this manual, if equipped. See the infotainment manual for information on the uplevel radios, audio players, phone, navigation system, and voice or speech recognition. There is also information on settings and downloadable applications (if equipped).

## Driver Information Center (DIC)

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

**△ or ▽ :** Press to move up or down in a list, or on the main view press to cycle through the different Info app pages.

**◁ or ▷ :** Press ◁ to open application menus on the left. Press ▷ to open interaction menus on the right.

✓ **:** Press to select a menu item. Press and hold to reset values on certain screens, or on the main view reset info pages to the original setting.

See *Instrument Cluster on page 5-9* and *Driver Information Center (DIC) on page 5-27*.

## Forward Collision Alert (FCA) System

If equipped, FCA is intended to help avoid or reduce the harm caused by front-end crashes. FCA provides a green indicator when a vehicle is detected directly ahead. It provides a flashing visual alert and beeps when approaching a vehicle directly ahead too quickly. FCA also provides a visual alert if following another vehicle much too closely.

See *Forward Collision Alert (FCA) System on page 9-48*.

## Lane Departure Warning (LDW)

If equipped, LDW is intended to help avoid unintentional lane departures at speeds of 56 km/h (35 mph) or greater. LDW uses a camera sensor to detect the lane markings. The LDW indicator, , appears green if a lane marking is detected. If the vehicle departs the lane, the indicator will change to amber and flash. In addition, beeps will sound.

See *Lane Departure Warning (LDW) on page 9-54*.

## Side Blind Zone Alert (SBZA)

If equipped, SBZA will detect vehicles in the next lane over in the vehicle's side blind zone area. When this happens, the SBZA display will light up in the corresponding outside side mirror and will flash if the turn signal is on.

See *Side Blind Zone Alert (SBZA) on page 9-52*.

## Rear Vision Camera (RVC)

If equipped, RVC displays a view of the area behind the vehicle, on the center stack display, when the vehicle is shifted into R (Reverse).

See *Assistance Systems for Parking or Backing on page 9-46*.

## Ultrasonic Parking Assist

If equipped, Ultrasonic Rear Parking Assist (URPA) uses sensors on the rear bumper to assist with parking and avoiding objects while in R (Reverse). It operates at speeds less than 8 km/h (5 mph). URPA may display a warning triangle on the Rear Vision Camera screen and a graphic on the instrument cluster to provide the object distance. In addition, multiple beeps or pulses may occur if very close to an object.

See *Driver Assistance Systems on page 9-45*.

## Power Outlets

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

The vehicle has three accessory power outlets:

- Inside the front storage area below the climate control system.
- Inside the center console.
- On the rear of the center console.

Lift the cover to access the accessory power outlet.

See *Power Outlets on page 5-6*.

## Universal Remote System

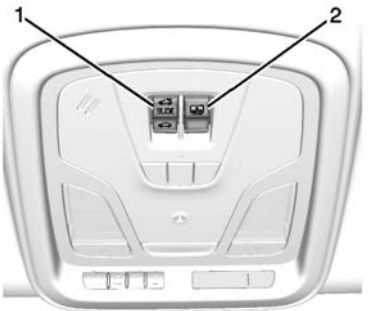
This system provides a way to replace up to three remote control transmitters used to activate devices such as garage door openers, security systems, and home automation devices.

Read the instructions completely before attempting to program the Universal Remote system. Because of the steps involved, it may be helpful to have another person available to assist with programming the Universal Remote system.

See *Universal Remote System on page 5-46*.

## Sunroof

If equipped, the ignition must be in ON/RUN or ACC/ACCESSORY, or in Retained Accessory Power (RAP) to operate the sunroof and power sunshade. See *Retained Accessory Power (RAP) on page 9-24*.




1. Sunroof Switch
2. Sunshade Switch

**Sunroof Switch**

**Open/Close:** Press and hold the front or rear of to open or close the sunroof. Release at the desired position to stop movement.

**Vent Feature:** Press the front or rear of to the first detent to open and close the vent feature. The sunshade partially opens and closes automatically during the vent operation.

**Express Open/Express Close:** Fully press and release the front or rear of . The sunroof opens and closes automatically.

**Sunshade Switch**

**Open/Close:** Press and hold the front or rear of to open or close the sunshade to the desired position.

**Express Open/Express Close:** Fully press and release the front or rear of to express open or express close the sunshade. If the sunroof is open, the sunshade will express close just short of the open sunroof.

See *Sunroof on page 2-23*.

# eAssist Features

## eAssist® Overview

If the vehicle has eAssist, there are several additional features that contribute to increased efficiency.

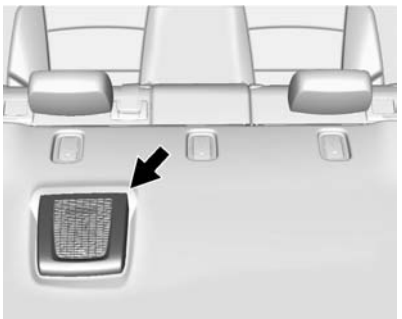
Vehicles with eAssist have an automatic engine start/stop feature. This feature saves fuel by shutting the engine off when the vehicle is stopped. When the engine shuts off automatically, all the accessories will continue to operate normally. In very hot or cold conditions, the engine will only shut off automatically part of the time. See *Starting the Engine on page 9-19*.

There are two air conditioning settings available. The comfort setting maximizes cabin comfort. The eco setting maximizes efficiency allowing more frequent, and longer engine stops than the comfort setting. See *Dual Automatic Climate Control System on page 8-3*.

eAssist vehicles have a Hill Start Assist (HSA) feature, which may be useful when the vehicle is stopped on a grade. See *Hill Start Assist (HSA) on page 9-33*.

Vehicles with eAssist have a slightly different instrument cluster, which includes an AUTO STOP indicator on the tachometer. See *Instrument Cluster on page 5-9*.

The eAssist system uses a high voltage battery, which is cooled with air drawn from the vehicle interior.



The cold air intake for the battery is behind the rear seat, on the filler panel. Do not cover the intake. See *Battery on page 10-27*.

## High Voltage Safety Information

Vehicles with eAssist have a standard 12-volt battery and a high voltage battery. Only a trained service technician with the proper knowledge and tools should inspect, test, or replace the high voltage battery. See your dealer if the high voltage battery needs service.

In emergency situations, first responders can cut the two clearly labeled cut points in the engine compartment to disable the high voltage battery and air bag systems — do not cut the high voltage cable.

## Automatic Engine Start/ Stop Feature

Vehicles with eAssist have an automatic engine start/stop feature. After the engine is started and has reached operating temperature, the auto stop feature may cause the engine to turn off when the brake pedal is applied and the vehicle comes to a complete stop. When the brake pedal is released, or the accelerator pedal is applied, the engine will restart. The engine will continue to run until the next auto stop.

To restart the engine during the auto stop, release the brake pedal or press the accelerator pedal. The engine starts immediately. The vehicle continues to run until the next stop.

AUTO STOP on the tachometer signifies that the engine is in auto stop mode. See *Tachometer on page 5-13* for more information. A chime will sound when the driver door is opened while in auto stop

mode. Remember to shift to P (Park) and turn the ignition to LOCK/OFF before exiting the vehicle.

See *Starting the Engine on page 9-19*.

## Regenerative Braking

Regenerative braking takes some of the energy from the moving vehicle and turns it into electrical energy. This energy is then stored in the vehicle's high voltage battery system, contributing to increased fuel efficiency.

The system works whenever the accelerator pedal is released, and increases the energy captured as more brake pedal is applied.

## Battery

This vehicle has a standard 12-volt battery. Refer to the replacement number on the original battery label when a new standard 12-volt battery is needed.

Vehicles with eAssist also have a high voltage battery. Only a trained service technician with the proper knowledge and tools should inspect, test, or replace the high voltage battery. See your dealer if the high voltage battery needs service. See *Battery on page 10-27*.

## Service

Never try to do your own service on eAssist components. You can be injured and the vehicle can be damaged if you try to do your own service work. Service and repair of these high voltage components should only be performed by a trained service technician with the proper knowledge and tools. See *Doing Your Own Service Work on page 10-3*.

# Performance and Maintenance

## Traction Control/ Electronic Stability Control

The Traction Control System (TCS) limits wheel spin. The system turns on automatically every time the vehicle is started.

The StabiliTrak system assists with directional control of the vehicle in difficult driving conditions. The system also turns on automatically every time the vehicle is started.

- To turn off traction control, press and release the OFF button on the center console. The Traction Off Light illuminates.
- To turn off both traction control and StabiliTrak, press and hold the OFF button, until the Traction Off Light and the StabiliTrak Off Light illuminate.

- Press and release the OFF button again to turn on both systems.

See *Traction Control/Electronic Stability Control on page 9-33*.

## Tire Pressure Monitor

This vehicle may have a Tire Pressure Monitor System (TPMS).

The low tire pressure warning light alerts to a significant loss in pressure of one of the vehicle's tires. 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 on page 9-10*. The warning light will remain on until the tire pressure is corrected.

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 may be an early indicator that the tire pressures are getting low and the tires need to be inflated to the proper pressure.

The TPMS does not replace normal monthly tire maintenance. Maintain the correct tire pressures.

See *Tire Pressure Monitor System on page 10-51*.

## Engine Oil Life System

The engine oil life system calculates engine oil life based on vehicle use and displays the CHANGE ENGINE OIL SOON message when it is time to change the engine oil and filter. The oil life system should be reset to 100% only following an oil change.

**Resetting the Oil Life System**

1. Using the DIC controls on the right side of the steering wheel, display REMAINING OIL LIFE on the DIC. See *Driver Information Center (DIC) on page 5-27*. When remaining oil life is low, the CHANGE ENGINE OIL SOON message will appear on the display. See *Engine Oil Messages on page 5-33*.
2. Press ✓ on the DIC controls and hold down for a few seconds to clear the CHANGE ENGINE OIL SOON message and reset the oil life at 100%.

   Be careful not to reset the oil life display accidentally at any time other than after the oil is changed. It cannot be reset accurately until the next oil change.

The oil life system can also be reset as follows:

1. Turn the ignition on with the engine off.
2. Fully press and release the accelerator pedal three times within five seconds.

   If the CHANGE ENGINE OIL SOON message is not on, the system is reset.

See *Engine Oil Life System on page 10-14*.

## E85 or FlexFuel

Vehicles with a yellow fuel cap can use either unleaded gasoline or ethanol fuel containing up to 85% ethanol (E85). See *E85 or FlexFuel on page 9-58*. For all other vehicles, use only the unleaded gasoline described under *Recommended Fuel on page 9-56*.

## Driving for Better Fuel Economy

Driving habits can affect fuel mileage. Here are some driving tips to get the best fuel economy possible.

- Avoid fast starts and accelerate smoothly.
- Brake gradually and avoid abrupt stops.
- Avoid idling the engine for long periods of time.
- When road and weather conditions are appropriate, use cruise control.
- Always follow posted speed limits or drive more slowly when conditions require.
- Keep vehicle tires properly inflated.
- Combine several trips into a single trip.
- Replace the vehicle's tires with the same TPC Spec number molded into the tire's sidewall near the size.
- Follow recommended scheduled maintenance.

## Roadside Assistance Program

U.S.: 1-800-243-8872

TTY Users (U.S. Only): 1-888-889-2438

Canada: 1-800-268-6800

As the owner of a new Chevrolet, you are automatically enrolled in the Roadside Assistance program.

See *Roadside Assistance Program on page 13-5*.

## OnStar®

If equipped, this vehicle has a comprehensive, in-vehicle system that can connect to a live Advisor for Emergency, Security, Navigation, Connection, and Diagnostic Services. See *OnStar Overview on page 14-1*.

# Keys, Doors, and Windows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# Keys and Locks

## Keys

**⚠ Warning**

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

The key that is part of the Remote Keyless Entry (RKE) transmitter can be used for the ignition and all locks if the vehicle is a Key Access vehicle. If the vehicle has the keyless ignition, the key can be used for the locks.

**RKE With Remote Start Shown, Without Similar**

Press the button on the RKE transmitter to extend the key. Press the button and the key blade to retract the key.

If the vehicle has an ignition and it becomes difficult to turn the key, inspect the key blade for debris. Periodically clean with a brush or pick.

See your dealer if a new key is needed.

With an active OnStar subscription, an OnStar Advisor may remotely unlock the vehicle. See *OnStar Overview on page 14-1*.

## Remote Keyless Entry (RKE) System

See *Radio Frequency Statement on page 13-15*.

If there is a decrease in the RKE operating range:

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

## Remote Keyless Entry (RKE) System Operation

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

Keep in mind that other conditions, such as those previously stated, can impact the performance of the transmitter.

The RKE transmitter can have one of the two symbols for the remote trunk release.

**With Remote Start Shown**

**(Lock):** Press to lock all doors.

The turn signal indicators may flash and/or the horn may sound to indicate locking. See “Remote Lock, Unlock, Start” under *Vehicle Personalization on page 5-40*.

If Unlocked Door Anti Lock Out is enabled through Vehicle Personalization and the driver door is open when is pressed, all doors lock and the driver door will immediately unlock. See “Remote Lock, Unlock, Start” under *Vehicle Personalization on page 5-40*.

If the passenger door is open when is pressed, all doors lock.

Pressing may also arm the theft-deterrent system. See *Vehicle Alarm System on page 2-16*.

**(Unlock):** Press to unlock the driver door or all doors. See “Power Door Locks” under *Vehicle Personalization on page 5-40*.

The turn signal indicators may flash to indicate unlocking. See “Remote Unlock Light Feedback” under *Vehicle Personalization on page 5-40*.

Pressing will disarm the theft-deterrent system. See *Vehicle Alarm System on page 2-16*.

Memory seat positions may be recalled when unlocking the vehicle. See *Memory Seats on page 3-7* and “Auto Memory Recall” under *Vehicle Personalization on page 5-40*.

**or HOLD (Remote Trunk Release):** Press and hold to release the trunk.

**(Vehicle Locator/Panic Alarm):** Press and release one time to initiate vehicle locator. The exterior lamps flash and the horn chirps three times.

Press and hold for at least three seconds to sound the panic alarm. The horn sounds and the turn signals flash for about 30 seconds until is pressed again or the vehicle is started.

**(Remote Vehicle Start):** If equipped, press and release and then immediately press and hold for four seconds to start the engine from outside the vehicle using the RKE transmitter. See *Remote Vehicle Start on page 2-9*.

If equipped with a keyed ignition, the buttons on the keys are disabled when there is a key in the ignition.

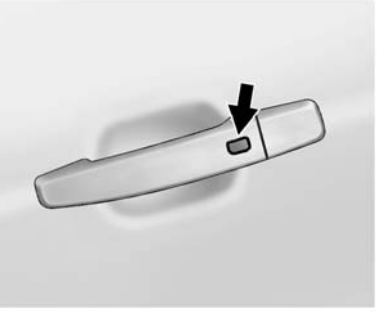
## Keyless Access Operation

Some vehicles have the Keyless Access system that lets you lock and unlock the doors and access the trunk without removing the RKE transmitter from your pocket, purse, briefcase, etc. The RKE transmitter must be within 1 m (3 ft) of the door being unlocked. If the vehicle has this feature, there will be a button on the outside door handles.

The Keyless Access can be programmed to unlock all doors on the first unlock/lock button press from the driver door. See *Vehicle Personalization on page 5-40*.

### Keyless Unlocking/Locking from the Driver Door

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



**Driver Side Shown, Passenger Similar**

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

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

**Keyless Unlocking/Locking from Passenger Doors**

When the doors are locked and the RKE transmitter is within 1 m (3 ft) of the door handle, pressing the lock/unlock button on that door handle will unlock all doors.

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

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

## Passive Locking

If the vehicle has the Keyless Access system, this feature allows you to select whether the doors automatically lock during normal vehicle exit. When the vehicle is turned off and all doors are closed, the vehicle will determine how many RKE transmitters remain inside the vehicle. If at least one RKE transmitter has been removed from the vehicle, or none remain in the vehicle interior, the doors will lock after several seconds.

Temporarily disable the locking feature by pressing and holding 🔓 on the door for several seconds with a door open. Passive locking will then remain disabled until 🔒 is pressed, or until the vehicle is turned on.

To customize whether the doors automatically lock when you exit the vehicle, see “Remote Lock, Unlock, Start” under *Vehicle Personalization on page 5-40*.

## Keyless Trunk Opening

Press the touch pad on the trunk lid to open the trunk if the RKE transmitter is within 1 m (3 ft) of the trunk.

## Programming Transmitters to the Vehicle

Only RKE transmitters programmed to the vehicle will work. If a transmitter is lost or stolen, a replacement can be purchased and programmed through your dealer. The vehicle can be reprogrammed so that lost or stolen transmitters no longer work. Any remaining transmitters will need to be reprogrammed. Each vehicle can have up to eight transmitters matched to it.

**Programming with a Recognized Transmitter (Key Vehicles Only)**

To program a new key:

1. Insert the original, already programmed key in the ignition and turn to the key to the ON/RUN position.
2. Turn the key to LOCK/OFF, and remove the key.
3. Insert the new key to be programmed and turn it to the ON/RUN position within five seconds.

   The security light will turn off once the key has been programmed.

4. Repeat Steps 1–3 if additional keys are to be programmed.

If a key is lost or damaged, see your dealer to have a new key made.

**Programming without a Recognized Transmitter (Key Vehicles Only)**

Program a new key to the vehicle when a recognized key is not available. Canadian regulations require that owners see their dealer.

If there are no currently recognized keys available, follow this procedure to program the 1st key.

This procedure will take approximately 30 minutes to complete for the first key. The vehicle must be off and all of the keys you wish to program must be with you.

1. Insert the new vehicle key into the ignition.
2. Turn to ON/RUN. The security light will come on.
3. Wait 10 minutes until the security light turns off.
4. Turn the ignition to LOCK/OFF.
5. Repeat Steps 2–4 two more times. After the third time, turn to ON/RUN; the key is learned and all previously known keys will no longer work with the vehicle.

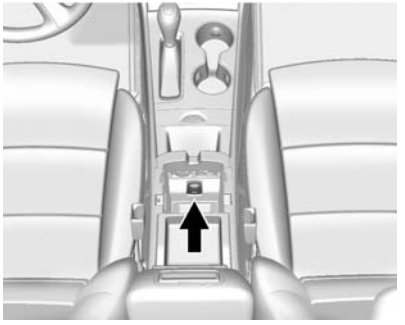
Remaining keys can be learned by following the procedure in “Programming with a Recognized Key.”

**Programming with a Recognized Transmitter (Keyless Access Vehicles Only)**

A new transmitter can be programmed to the vehicle when there is one recognized transmitter. To program, the vehicle must be off and at least one currently recognized transmitter and all new transmitters, must be with you.

1. Place the recognized transmitter(s) in the cupholder.
2. Remove the key lock cylinder cap. See *Door Locks on page 2-10*. Then insert the vehicle key into the key lock cylinder on the driver door handle and turn the key, counterclockwise, to the unlock position five times within 10 seconds.

   The Driver Information Center (DIC) displays READY FOR REMOTE #2, 3, 4 or 5.



3. Place the new transmitter into the transmitter pocket. The transmitter pocket is located inside the center console storage area.
4. Press the ENGINE START/STOP button. When the transmitter is learned, the DIC will show that it is ready to program the next transmitter.
5. Remove the transmitter from the transmitter pocket and press 🔓.

   To program additional transmitters, repeat Steps 3–5.

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

**Programming without a Recognized Transmitter (Keyless Access Vehicles Only)**

If there are no currently recognized transmitters available, follow this procedure to program up to eight transmitters. This feature is not available in Canada. This procedure will take approximately 30 minutes to complete. The vehicle must be off and all of the transmitters you wish to program must be with you.

1. Remove the key lock cylinder cap. See *Door Locks on page 2-10*. Then insert the vehicle key into the key lock cylinder on the driver door handle and turn the key, counterclockwise, to the unlock position five times within 10 seconds.

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

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

   The DIC display should now show READY FOR REMOTE # 1.
4. Place the new transmitter into the transmitter pocket. The transmitter pocket is inside the center console storage area.
5. Press the ENGINE START/STOP button. When the transmitter is learned the DIC will show that it is ready to program the next transmitter.

6. Remove the transmitter from the transmitter pocket and press 🔓.

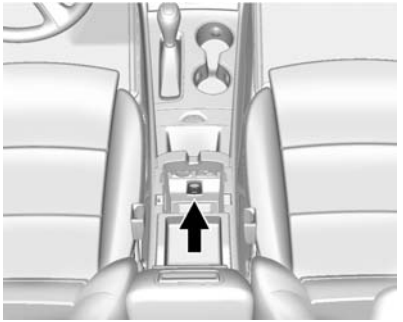
   To program additional transmitters, repeat Steps 4–6.

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

### Starting the Vehicle with a Low Transmitter Battery or Wireless Interference

If the transmitter battery is weak or there is wireless interference, the DIC may display NO REMOTE DETECTED or PLACE TRANSMITTER IN POCKET TO START when you try to start the vehicle. The REPLACE BATTERY IN REMOTE KEY message may also be displayed at this time.

To start the vehicle:



1. Open the center console and place the transmitter in the transmitter pocket with the buttons facing the front of the vehicle.
2. With the vehicle in P (Park) or N (Neutral), press the brake pedal and press the ENGINE START/STOP button. See *Starting the Engine on page 9-19*.

   Replace the transmitter battery as soon as possible.

### Battery Replacement

Replace the battery if the DIC indicates that battery replacement is necessary. See *Key and Lock Messages on page 5-34*.

**⚠ Caution**

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

The battery is not rechargeable. To replace the battery:

1. Press the button on the transmitter to extend the key blade.

2. Remove the battery cover by prying it with a finger.
3. Remove the battery by pushing on the battery and sliding it toward the key blade.
4. Insert the new battery, positive side facing up. Push the battery down until it is held in place. Replace with a CR2032 or equivalent battery.
5. Snap the battery cover back on to the transmitter.

## Remote Vehicle Start

The vehicle may have this feature that allows the engine to be started from outside the vehicle.

**(Remote Vehicle Start):** This button will be on the RKE transmitter if the vehicle has remote start.

The climate control system will use the previous settings during a remote start. The rear window defogger may come on during a remote start based on cold ambient conditions. The rear defog indicator light does not come on during a remote start.

If the vehicle has heated and/or ventilated seats, they may come on during a remote start. See *Heated and Ventilated Front Seats on page 3-10*.

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

Other conditions can affect the performance of the transmitter. See *Remote Keyless Entry (RKE) System on page 2-2*.

### Starting the Vehicle

To start the engine using the remote start feature:

1. Aim the RKE transmitter at the vehicle.
2. Press and release .
3. Immediately after completing Step 2, press and hold  for at least four seconds or until the turn signal lamps flash. The turn signal lamps flashing confirms the request to remote start the vehicle has been received.

When the engine starts, the parking lamps will turn on and remain on as long as the engine is running. The doors will be locked and the climate control system may come on.

The engine will continue to run for 10 minutes. Repeat the steps for a 10-minute time extension. Remote start can be extended only once.

To drive the vehicle, turn the ignition to ON/RUN for Key Access vehicles, or press the brake pedal and the ENGINE START/STOP button for Keyless Access vehicles.

**Extending Engine Run Time**

For a 10-minute extension, repeat Steps 1–3 while the engine is still running. The remote start can be extended once.

When the remote start is extended, the second 10 minutes will start immediately.

For example, if the engine has been running for five minutes, and 10 minutes are added, the engine will run for a total of 15 minutes.

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

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

**Canceling a Remote Start**

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

- Aim the RKE transmitter at the vehicle and press and hold until the parking lamps turn off.
- Turn on the hazard warning flashers.
- Turn the vehicle on and then off.

**Conditions in Which Remote Start Will Not Work**

The remote vehicle start feature will not operate if:

- The key is in the ignition (Key Access) or if the key is in the vehicle (Keyless Access).
- The hood is not closed.
- The hazard warning flashers are on.
- The malfunction indicator lamp is on.
- The engine coolant temperature is too high.
- The oil pressure is low.
- Two remote vehicle starts, or a single remote start with an extension, have already been used.
- The vehicle is not in P (Park).

## Door Locks

**⚠ Warning**

Unlocked doors can be dangerous.

- Passengers, especially children, can easily open the doors and fall out of a moving vehicle. The chance of being thrown out of the vehicle in a crash is increased if the doors are not locked. So, all passengers should wear

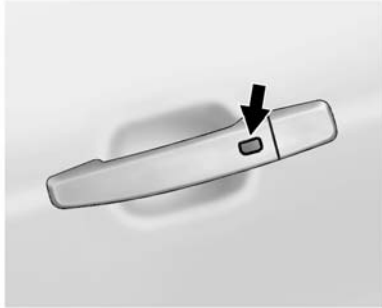
(Continued)

**Warning (Continued)**

safety belts properly and the doors should be locked whenever the vehicle is driven.

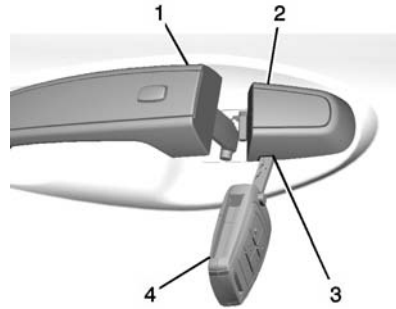
- Young children who get into unlocked vehicles may be unable to get out. A child can be overcome by extreme heat and can suffer permanent injuries or even death from heat stroke. Always lock the vehicle whenever leaving it.
- Outsiders can easily enter through an unlocked door when slowing or stopping the vehicle. Lock the doors to help prevent this from happening.

### Keyless Access



If equipped, use the Keyless Access system to lock and unlock the door. When the doors are locked and the Remote Keyless Entry (RKE) transmitter is within 1 m (3 ft) of the driver door handle, press the lock/unlock button. When unlocking from the driver door, the first press unlocks that door; press again within five seconds to unlock all passenger doors. See *Remote Keyless Entry (RKE) System Operation on page 2-3*.

### Key Cylinder Access

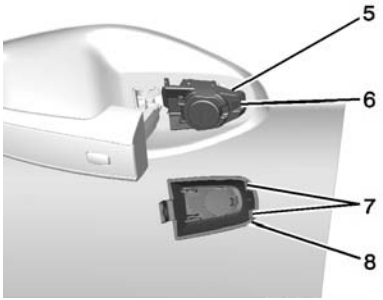


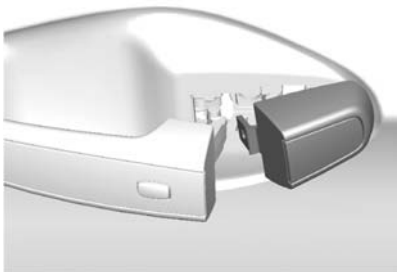

To access the key cylinder:

1. Pull the door handle (1) to the open position.
2. Insert the key (4) into the slot (3) on the bottom of the cap (2) and pry outward.
3. Move the cap (2) rearward and remove.
4. Use the key (4) in the cylinder.

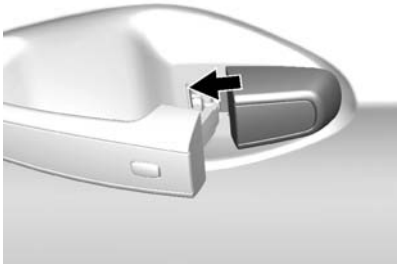
To replace the cap:

1. Pull the door handle to the open position.



2. Insert the two tabs (7) at the back of the cap (8) between the seal (5) and the metal base (6).



3. Move the cap forward and press to snap the cap in place.
4. Release the door handle.

**Inside the Vehicle**

Push down on the door lock knob to lock the door manually. Pull once on the door handle to unlock the door and again to open the door.

Press the power door lock switch to lock or unlock all doors automatically. See *Power Door Locks on page 2-12*.

## Power Door Locks

**(Lock):** Press to lock the doors.

**(Unlock):** Press to unlock the doors.

## Delayed Locking

This feature is activated through Vehicle Personalization. See *Vehicle Personalization on page 5-40*.

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

When all the doors are closed, the doors will lock automatically after five seconds. If a door is reopened before five seconds have elapsed, the five-second timer will reset once all the doors are closed again.

Press on the door lock switch again or press on the RKE transmitter to override this feature and lock the doors immediately.

## Automatic Door Locks

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

To unlock the doors:

- Press on a door.
- Shift the transmission into P (Park).

The power door locks can be programmed through the Driver Information Center (DIC). See *Vehicle Personalization on page 5-40*.

## Lockout Protection

### Key Access

If the key is in the ignition and the power door lock switch is pressed with the driver door open, all doors will lock and only the driver door will unlock.

### Keyless Access

If equipped with keyless access, when the vehicle is in ACC/ACCESSORY or ON/RUN/START and the power door lock switch is pressed with the driver door open, all doors will lock and only the driver door will unlock.

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

### Lockout Protection Override

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

### Unlocked Door Anti Lock Out

When this feature is on and door locking is requested with the driver door open, all doors will lock and only the driver door will unlock. The driver door must be closed before locking is requested for all doors to remain locked. When this feature is off, the Delayed Door Lock menu will be available.

This feature can also be programmed. See *Vehicle Personalization on page 5-40*.

## Safety Locks

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

Press to activate the safety locks on the rear doors. The indicator light in the switch will illuminate when activated.

The rear door power windows are also disabled. See *Power Windows on page 2-21*.

Press again to deactivate the safety locks.

If a rear door handle is being pulled at the same time the safety lock is deactivated, that door will remain locked and the indicator light may flash. Release the handle, then press the safety lock twice to deactivate the safety locks.

# Doors

## Trunk

**⚠ Warning**

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

If the vehicle must be driven with the liftgate or trunk/hatch open:

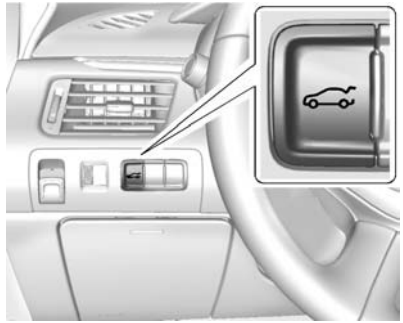
- Close all of the windows.
- Fully open the air outlets on or under the instrument panel.

(Continued)

**Warning (Continued)**

- Adjust the climate control system to a setting that brings in only outside air and set the fan speed to the highest setting. See “Climate Control Systems” in the Index.
- If the vehicle is equipped with a power liftgate, disable the power liftgate function.

For more information about carbon monoxide, see *Engine Exhaust on page 9-26*.



To open the trunk:

- Press on the driver door with the transmission in P (Park).
- Press and hold or HOLD on the RKE transmitter.
- If equipped, press the touch pad on the underside of the trunk lid after unlocking all doors.

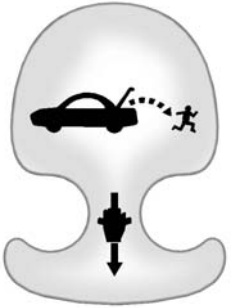
If equipped with Keyless Access, the RKE transmitter must be within 1 m (3 ft) of the trunk. Press the touch pad on the underside of the trunk and lift to open. See *Remote Keyless Entry (RKE) System Operation on page 2-3*.

When closing the trunk, use the pull cup.

## Emergency Trunk Release Handle

**⚠ Caution**

Do not use the emergency trunk release handle as a tie-down or anchor point when securing items in the trunk as it could damage the handle.



There is a glow-in-the-dark emergency trunk release handle on the trunk lid. This handle will glow following exposure to light. Pull the release handle to open the trunk from the inside.

# Vehicle Security

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

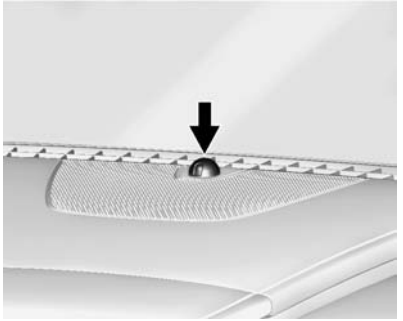
## Vehicle Alarm System

This vehicle has an anti-theft alarm system.

### Arming the System

To arm the system, press 🔒 on the RKE transmitter.

The alarm automatically arms after about 30 seconds.



The security indicator light on the instrument panel flashes.

Press and hold 🚗 or HOLD on the RKE transmitter to open the trunk without setting off the alarm. The system rearms when the trunk is closed.

### Disarming the System

To disarm the system, do one of the following:

- Press 🔓 on the RKE transmitter.

- If the vehicle has Keyless Access, unlock the vehicle using the door handle lock/unlock button with the RKE transmitter within 1 m (3 ft) of the vehicle.
- Start the engine.

The alarm automatically disarms.

### How to Detect a Tamper Condition

If 🔓 is pressed and the horn sounds, an attempted break-in occurred while the system was armed.

If the alarm has been activated, a message will appear on the DIC. See *Security Messages on page 5-37*.

## Immobilizer

See *Radio Frequency Statement on page 13-15*.

## Immobilizer Operation (Key Access)

This vehicle has a passive theft-deterrent system.

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

The vehicle is automatically immobilized when the key is removed from the ignition.

The system is automatically disarmed when the vehicle is started with the correct key. The key uses a transponder that matches an immobilizer control unit in the vehicle and automatically disarms the system. Only the correct key starts the vehicle. The vehicle may not start if the key is damaged.

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

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

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

If the engine still does not start, and the key appears to be undamaged or the light continues to stay on, try another ignition key.

If the engine still does not start with the other key, the vehicle needs service. If the vehicle does start, the first key may be damaged. See your dealer who can service the theft-deterrent system and have a new key made.

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

## Immobilizer Operation (Keyless Access)

This vehicle has a passive theft-deterrent system.

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

The vehicle is automatically immobilized when the transmitter leaves the vehicle.

The immobilization system is disarmed when the ignition button is pushed in and a valid transmitter is found in the vehicle.

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

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

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

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

If the RKE transmitter appears to be undamaged, try another transmitter. Or, you may try placing the transmitter in the transmitter pocket in the center console. See “Starting the Vehicle with a Low Transmitter Battery or Wireless Interference” under *Remote Keyless Entry (RKE) System Operation on page 2-3*.

If the engine does not start with the other transmitter or when the transmitter is in the pocket in the center console, your vehicle needs service. See your dealer who can service the theft-deterrent system and have a new transmitter programmed to the vehicle.

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

# Exterior Mirrors

## Convex Mirrors

**⚠ Caution**

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

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

## Power Mirrors

1. Move the selector switch to L (Left) or R (Right) to choose the driver or passenger mirror.
2. Press one of the four arrows to move the mirror.
3. Move the selector switch to ● to deselect the mirror.

### Exterior Automatic Dimming Mirror

The vehicle may have a driver exterior automatic dimming mirror that will automatically adjust for the glare of headlamps behind.

### Memory Mirrors

The vehicle may have memory mirrors. See *Memory Seats on page 3-7*.

### Side Blind Zone Alert (SBZA)

The vehicle may have SBZA. See *Side Blind Zone Alert (SBZA) on page 9-52*.

### Turn Signal Indicator

The vehicle has a turn signal indicator on the mirror housings. The indicator will flash when a turn signal or the hazard warning flashers are used.

### Puddle Light

The vehicle has a puddle light on the mirror housings. The light will illuminate the ground when the door is opened.

## Folding Mirrors

### Manual Folding Mirrors

The vehicle has manual folding mirrors. These mirrors can be folded inward to prevent damage when going through an automatic car wash. To fold, pull the mirror toward the vehicle. Push the mirror outward to return it to the original position.

## Heated Mirrors

**(Rear Window Defogger):** If equipped, press to heat the mirrors.

See *Dual Automatic Climate Control System on page 8-3*.

## Reverse Tilt Mirrors

If equipped with the memory package, the passenger and/or driver mirror tilts to a preselected position when the vehicle is in R (Reverse). This feature allows the driver to view the curb when parallel parking. The mirror(s) return to the original position when the vehicle is shifted out of R (Reverse), the ignition is turned off or to OFF/LOCK, or if the vehicle is driven in reverse above a predetermined speed.

Turn this feature on or off through vehicle personalization. See *Vehicle Personalization on page 5-40*.

# Interior Mirrors

## Interior Rearview Mirrors

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

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

## Manual Rearview Mirror

If equipped with a manual rearview mirror, push the tab forward for daytime use and pull it for nighttime use to avoid glare from the headlamps from behind.

## Automatic Dimming Rearview Mirror

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

# Windows

**⚠ Warning**

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

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

## Power Windows

**⚠ Warning**

Children could be seriously injured or killed if caught in the path of a closing window. Never leave the Remote Keyless Entry (RKE) transmitter in a vehicle with children. When there are children in the rear seat, use the window lockout switch to prevent operation of the windows. See *Keys on page 2-1*.

The power windows only operate with the ignition in ACC/ACCESSORY or ON/RUN/START, or when Retained Accessory Power (RAP) is active. See *Retained Accessory Power (RAP) on page 9-24*.

The power window switches on the driver door control all the windows. Each passenger door has a switch that controls only that window.

Press the switch to lower the window. Pull the switch up to raise it.

## Express-Down/Up Windows

If equipped, this feature allows the windows to be raised and lowered all the way without holding the switch.

Press or pull the switch fully and release it to activate the express feature.

The express mode can be canceled by briefly pressing or pulling the switch.

## Express Window Anti-Pinch Feature

If any object is in the path of the window when the express-up is active, the window will stop at the obstruction and auto-reverse to a preset factory position. Weather conditions such as severe icing may also cause the window to auto-reverse. The window will return to normal operation after the obstruction or condition is removed.

## Express Window Anti-Pinch Override

**⚠ Warning**

If express override is activated, the window will not reverse automatically. You or others could be injured and the window could be damaged. Before you use express override, make sure that all people and obstructions are clear of the window path.

The anti-pinch feature can be overridden. Hold the window switch all the way up to the second position. The window will rise for as long as the switch is held. Once the switch is released, the express mode is reactivated.

In this mode, the window can close on an object in its path. Use care when using the override mode.

## Programming the Power Windows

If the vehicle battery has been recharged or disconnected, or is not working, the front power windows will need to be reprogrammed for the express-up feature to work. Before reprogramming, replace or recharge the vehicle's battery.

To program:

1. With the ignition in ON/RUN or ACC/ACCESSORY, or when RAP is active, close all doors.
2. Press and hold the power window switch until the window is fully open.
3. Pull the power window switch up until the window is fully closed.
4. Continue holding the switch up for approximately two seconds after the window is completely closed.

The window is now reprogrammed. Repeat the process for the other windows.

### Window Lockout

This feature prevents the rear passenger windows from operating, except from the driver position.

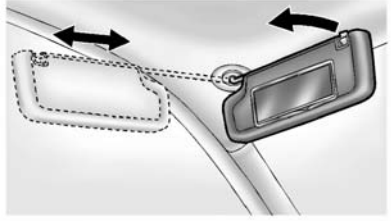
Press to activate the window lockout. The indicator light in the switch will illuminate when activated.

The rear door locks are also disabled. See *Safety Locks on page 2-14*.

Press again to deactivate the lockout switch.

If the indicator light flashes, the feature may not be working properly.

## Sun Visors

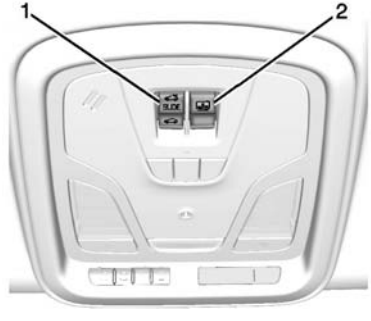


Pull the sun visor down to block glare. Detach the sun visor from the center mount to pivot to the side window, or to extend along the rod.

# Roof

## Sunroof

For vehicles equipped with a sunroof, the ignition must be in ON/RUN or ACC/ACCESSORY, or in Retained Accessory Power (RAP) to operate the sunroof and power sunshade. See *Retained Accessory Power (RAP) on page 9-24*.




1. Sunroof Switch
2. Sunshade Switch

**Sunroof Switch**

**Open/Close:** Press and hold the front or rear of to open or close the sunroof. Release at the desired position to stop movement.

**Vent Feature:** Press the front or rear of to the first detent to open and close the vent feature. The sunshade partially opens and closes automatically during the vent operation.

**Express Open/Express Close:** Fully press and release the front or rear of . The sunroof opens and closes automatically.

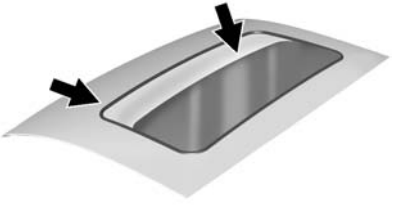
**Sunshade Switch**

**Open/Close:** Press and hold the front or rear of to open or close the sunshade to the desired position.

**Express Open/Express Close:** Fully press and release the front or rear of to express open or express close the sunshade. If the sunroof is open, the sunshade will express close just short of the open sunroof.

## Anti-Pinch Feature

If an object is in the path of the sunroof/sunshade when it is closing, the anti-pinch feature will detect the object and stop the sunroof/ sunshade from closing at the point of the obstruction. The sunroof/ sunshade will then return to the full-open position. To close the sunroof/sunshade, see “Express Open/Express Close” earlier in this section.



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

If water is seen dripping into the water drainage system, this is normal.

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# Head Restraints

**⚠ Warning**

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

If your vehicle has rear head restraints that fold down, always return them to the full upright position whenever an occupant is seated in the seat.

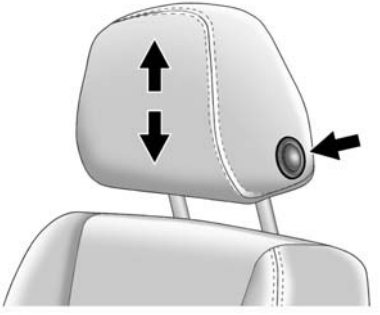
Adjust the head restraint so that the top of the restraint is at the same height as the top of the occupant's head. This position reduces the chance of a neck injury in a crash.

## Front Seats

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

### Two-Way Head Restraints

The height of the head restraint can be adjusted.

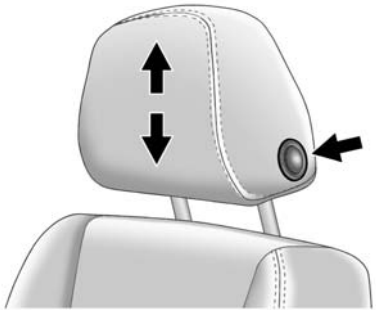


To raise or lower the head restraint, press the button located on the side of the head restraint, and pull up or push the head restraint down. Pull and push on the head restraint after the button is released to make sure it is locked in place.

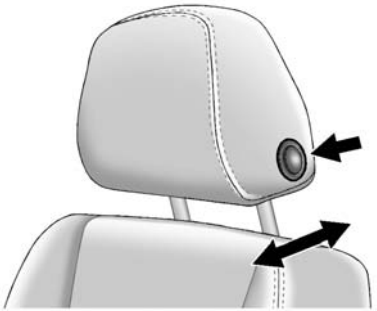
The front seat outboard head restraints are not designed to be removed.

### Four-Way Head Restraints

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



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



The head restraints can be adjusted forward or rearward. To adjust the head restraint forward, grasp the head restraint and pull it forward to the desired locking position. To adjust the head restraint rearward, press the button located on the side of the head restraint and move the head restraint rearward until the desired locking position is reached. Try to move the head restraint after the button is released to make sure that it is locked in place.

The front seat outboard head restraints are not designed to be removed.

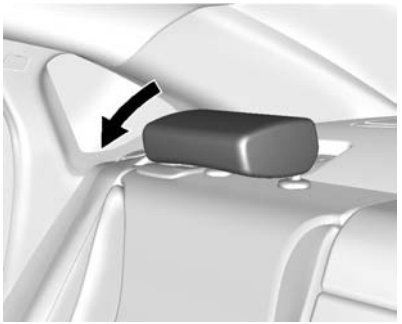
### Rear Seats

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

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

To lower the head restraint, press the button, located on the top of the seatback, and push the head restraint down. Try to move the

head restraint after the button is released to make sure that it is locked in place.



On some models, the rear head restraints can be folded forward to allow for better visibility when the rear seat is unoccupied. To fold the head restraint, grasp the top of the head restraint and pull the head restraint forward and down until it locks in place.

When an occupant or child restraint is in the seat, always return the head restraint to the full upright position. Push down on the head restraint to release the locking mechanism. Then, pull the head restraint up and push it rearward until it is in the full upright position.

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

Rear outboard head restraints are not designed to be removed.

# Front Seats

## Seat Adjustment

**⚠ Warning**

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

To adjust a manual seat:

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

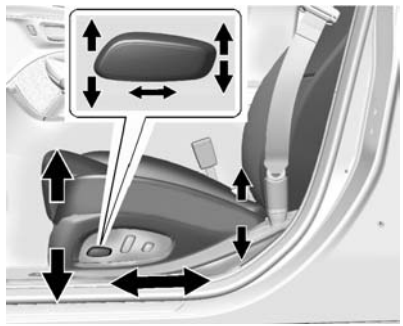
### Seat Height Adjuster

Press and hold the top or bottom of the switch to raise or lower the seat. Release the switch when the desired height is reached.

## Power Seat Adjustment

**⚠ Warning**

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



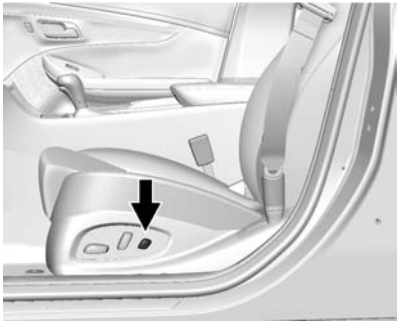
To adjust the seat:

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

To adjust the seatback, see *Reclining Seatbacks on page 3-6*.

To adjust the lumbar support, see *Lumbar Adjustment on page 3-6*.

## Lumbar Adjustment



To adjust the lumbar support:

- Press and hold the control forward to increase or rearward to decrease lumbar support.
- Press and hold the control upward to raise or downward to lower the height of the lumbar support.

## Reclining Seatbacks

**⚠ Warning**

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

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

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

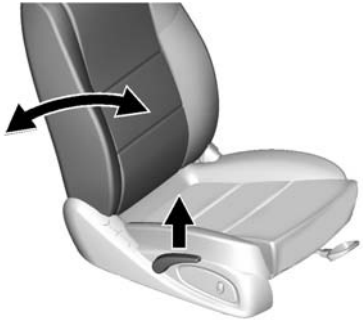
For proper protection when the vehicle is in motion, have the seatback upright. Then sit well back in the seat and wear the safety belt properly.

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

### Manual Reclining Seatbacks

**⚠ Warning**

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



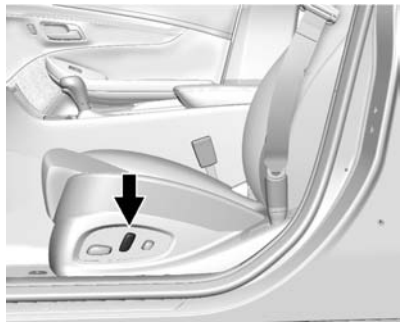
To recline a manual seatback:

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

To return the seatback to the upright position:

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

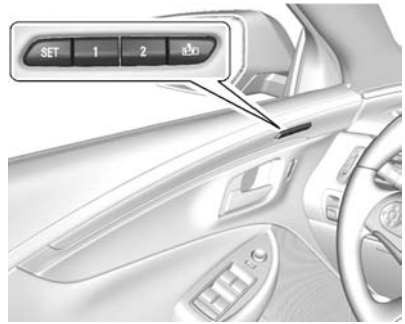
### Power Reclining Seatbacks



To adjust a power seatback:

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

## Memory Seats




If equipped, the "1," "2," SET, and (Exit) buttons on the driver door are used to manually save and recall memory settings for the driver seat, outside mirrors, and power tilt and telescoping steering column (if equipped).

### Storing Memory Positions

To save positions to the “1” and “2” buttons:

1. Adjust the driver seat, outside mirrors, and the power tilt and telescoping steering column (if equipped) to the desired driving positions.
2. Press and holdSET and “1” at the same time until a beep sounds.
3. Repeat Steps 1 and 2 for a second driver using “2.”

To save positions to the (Exit) button and easy exit features:

1. Adjust the driver seat, power tilt and telescoping steering column (if equipped), and the outside mirrors on some vehicles to the desired positions for getting out of the vehicle.
2. Press and hold SET and at the same time until a beep sounds.

### Manually Recalling Memory Positions

If the vehicle is off, or in ON/RUN/START but not in P (Park), press and hold "1," "2," or to manually recall the previously stored memory positions. Releasing "1,” "2," or before the stored positions are reached stops the recall.

If the vehicle is in ON/RUN/START and in P (Park), press and release “1,” “2,” or to manually recall the previously stored memory positions. Placing the ignition in OFF before the stored positions are reached stops the recall.

If something has blocked the driver seat and/or power tilt and telescoping steering column (if equipped) while recalling a memory position, the recall may stop. Remove the obstruction; then press and hold the appropriate manual control for the memory item that is not recalling for two seconds. Try recalling the memory position again by pressing the appropriate memory button. If the memory position is still not recalling, see your dealer for service.

### Automatically Recalling Memory Positions (Auto Memory Recall)

The Auto (Automatic) Memory Recall feature automatically recalls the current driver’s previously stored “1” or “2” position when entering the vehicle.

Depending upon the Auto Memory Recall feature enabled in the vehicle personalization menu, memory “1” or “2” positions are recalled in the following ways:

To activate the recall when On - Driver Door Open is selected in the personalization menu, do one of the following:

- On vehicles with RKE, press on the RKE transmitter and open the driver door.
- On vehicles with Keyless Access, press the lock/unlock button on the outside driver door

handle and open the driver door. The RKE transmitter must be present for the recall to activate.

- If the driver door is already open, press 🔓 on the RKE transmitter to activate the recall.

To activate the recall when On - At Ignition On is selected in the vehicle personalization menu:

- Place the ignition in ON/RUN/START.

See *Vehicle Personalization on page 5-40*.

To stop recall movement, press one of the memory, power mirror or power seat controls; or press the power tilt and telescoping steering column control (if equipped). If On - At Ignition On is selected in the vehicle personalization menu, placing the ignition in OFF/LOCK also stops the recall.

If something has blocked the driver seat and/or the power tilt and telescoping steering column (if equipped) while recalling a memory position, the recall may stop. Remove the obstruction; then press and hold the appropriate manual control for the memory item that is not recalling for two seconds. Try recalling the memory position again by opening the driver door and pressing 🔓 on the RKE transmitter. If the memory position is still not recalling, see your dealer for service.

### Easy Exit Recall

If programmed on in the vehicle personalization menu, the easy exit feature automatically moves the driver seat, power tilt and telescoping steering column (if equipped), and outside mirrors on some vehicles to the memory positions saved to the (Exit) button. See “Storing Memory Positions” listed previously. See also *Vehicle Personalization on page 5-40*.

Easy exit recall automatically activates when one of the following occurs:

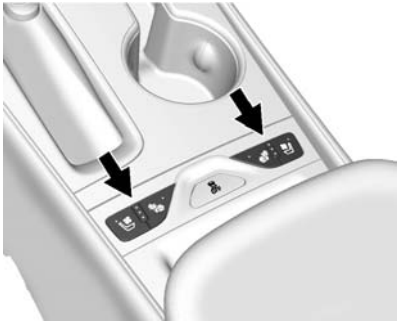
- The vehicle is turned off and the driver door is opened within a short time.
- The vehicle is turned off with the driver door open.

If something has blocked the driver seat and/or power tilt and telescoping steering column (if equipped) while recalling the exit position, the recall may stop. Remove the obstruction; then press and hold the appropriate manual control for the exit feature not recalling for two seconds. Try recalling the exit position again. If the exit position is still not recalling, see your dealer for service.

## Heated and Ventilated Front Seats

**⚠ Warning**

If you cannot feel temperature change or pain to the skin, the seat heater may cause burns. To reduce the risk of burns, people with such a condition should 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.



**Heated and Ventilated Seat Buttons Shown, Heated Seat Buttons Similar**

If available, the buttons are on the center console. To operate, the ignition must be on.

**(Heated Seatback):** If available, press to heat the driver or passenger seatback only.

**(Heated Seat and Seatback):** Press to heat the driver or passenger seat cushion and seatback.

**(Ventilated Seat):** If available, press to ventilate the driver or passenger seat. A ventilated seat has a fan that pulls or pushes air through the seat. The air is not cooled.

An indicator light on the button turns on when the heated or ventilated seat is on.

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 lights near the button indicate 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.

### Remote Start Auto Heated and Ventilated Seats

During a remote start, the heated or ventilated seats (if available) 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 or ventilated seats are canceled when the ignition is turned on. Press the button to use the heated or ventilated seats after the vehicle is started.

The heated or ventilated seat indicator lights on the button do not turn on during a remote start.

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

The heated or ventilated seats will not turn on during a remote start unless they are enabled in the vehicle personalization menu. See *Remote Vehicle Start on page 2-9* and *Vehicle Personalization on page 5-40*.

# Rear Seats

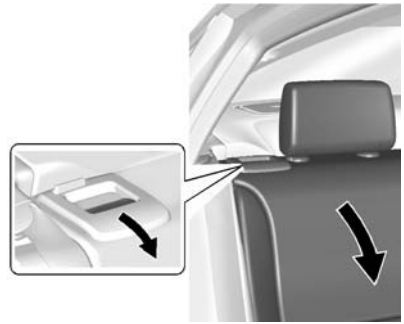
## Folding the Seatback

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

**⚠ Caution**

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

To fold the seatback:



**Rear Seat with Folding Head Restraints Shown, Non-Folding Head Restraints Similar**

1. Lift the lever on top of the seatback to unlock it.

   A tab near the seatback lever raises when the seatback is unlocked.

2. Fold the seatback forward.

   Repeat the steps to fold the other seatback, if desired.

### Raising the Seatback

**⚠ Warning**

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

**⚠ Warning**

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

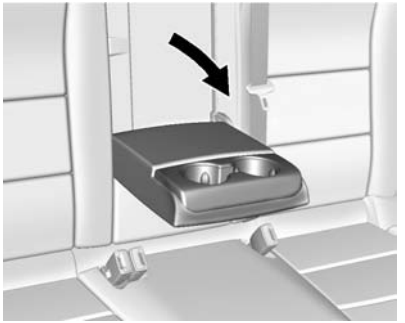
To raise a seatback:

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

   A tab near the seatback lever retracts when the seatback is locked in place.
2. Push and pull the top of the seatback to be sure it is locked into position.
3. Repeat the steps to raise the other seatback, if necessary.

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

## Rear Seat Armrest



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

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

# Safety Belts

This section of the manual describes how to use safety belts properly. It also describes some things not to do with safety belts.

**⚠ Warning**

Do not let anyone ride where a safety belt cannot be worn properly. In a crash, if you or your passenger(s) are not wearing safety belts, injuries can be much worse than if you are wearing safety 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

(Continued)

**Warning (Continued)**

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 safety belts.

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

This vehicle has indicators as a reminder to buckle the safety belts. See *Safety Belt Reminders on page 5-15*.

## Why Safety 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 safety belts!

When you wear a safety 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

safety belts. That is why wearing safety belts makes such good sense.

### Questions and Answers About Safety Belts

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

**A:** You *could* be — whether you are wearing a safety 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 safety belts?**

**A:** Airbags are supplemental systems only; so they work *with* safety 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 safety belts.

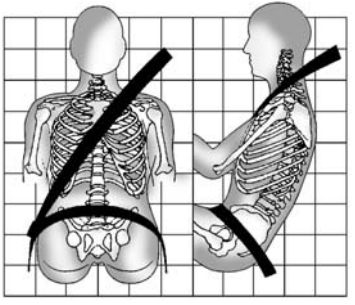
## How to Wear Safety Belts Properly

This section is only for people of adult size.

There are special things to know about safety belts and children. And there are different rules for smaller children and infants. If a child will be riding in the vehicle, see *Older Children on page 3-34* or *Infants and Young Children on page 3-36*. Follow those rules for everyone's protection.

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 safety belts.

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



- Sit up straight and always keep your feet on the floor in front of you.
- Always use the correct buckle for your seating position.
- Wear the lap part of the belt low and snug on the hips, just touching the thighs. In a crash, this applies force to the strong pelvic bones and you would be less likely to slide under the lap belt. If you slid under it, the belt would apply force on your abdomen. This could cause serious or even fatal injuries.

- Wear the shoulder belt over the shoulder and across the chest. These parts of the body are best able to take belt restraining forces. The shoulder belt locks if there is a sudden stop or crash.

**⚠ Warning**

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

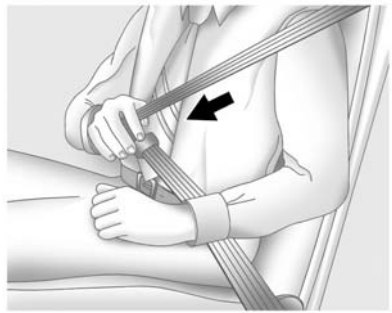
- Never allow the lap or shoulder belt to become loose or twisted.
- Never wear the shoulder belt under both arms or behind your back.
- Never route the lap or shoulder belt over an armrest.

## Lap-Shoulder Belt

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

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

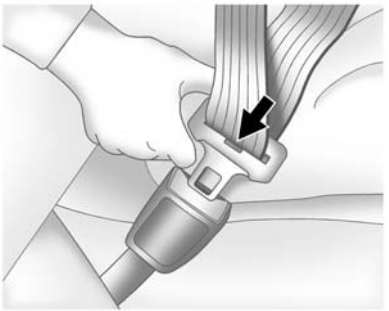
1. Adjust the seat, if the seat is adjustable, so you can sit up straight. To see how, see “Seats” in the Index.



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

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

   If the shoulder portion of a passenger belt is pulled out all the way, the child restraint locking feature may be engaged. If this happens, let the belt go back all the way and start again.

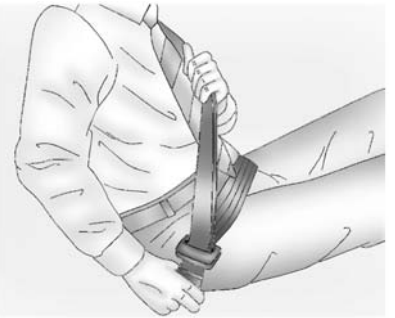


3. Push the latch plate into the buckle until it clicks.

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

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

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



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

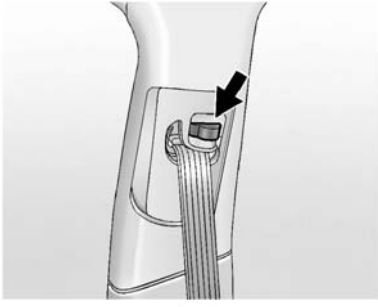
To unlatch the belt, push the button on the buckle. The belt should return to its stowed position.

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

## Shoulder Belt Height Adjuster

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

Adjust the height so the shoulder portion of the belt is on the shoulder and not falling off of it. The belt should be close to, but not contacting, the neck. Improper shoulder belt height adjustment could reduce the effectiveness of the safety belt in a crash. See *How to Wear Safety Belts Properly on page 3-14*.



Press the release button and move the height adjuster to the desired position. The adjuster can be moved up by pushing the slide/trim up. After the adjuster is set to the desired position, try to move it down without pushing the release button to make sure it has locked into position.

## Safety Belt Pretensioners

This vehicle has safety belt pretensioners for front outboard occupants. Although the safety belt pretensioners cannot be seen, they are part of the safety belt assembly. They can help tighten the safety 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.

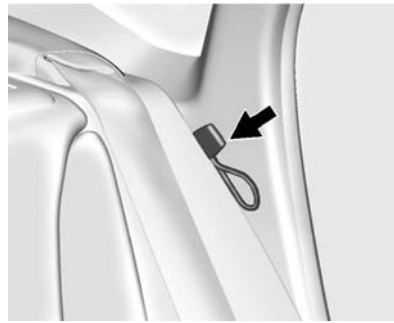
And, if the vehicle has side impact airbags and roof-rail airbags, safety belt pretensioners can help tighten the safety belts in a side crash or rollover event.

Pretensioners work only once. If the pretensioners activate in a crash, the pretensioners and probably other parts of the vehicle's safety belt system will need to be replaced. See *Replacing Safety Belt System Parts after a Crash on page 3-20*.

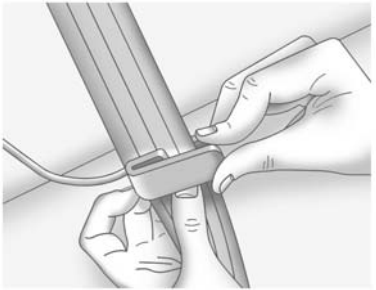
## Rear Safety Belt Comfort Guides

This vehicle may have rear shoulder belt comfort guides. If not, they are available through your dealer. The guides may provide added safety belt comfort for older children who have outgrown booster seats and for some adults. When installed and properly adjusted, the comfort guide positions the belt away from the neck and head.

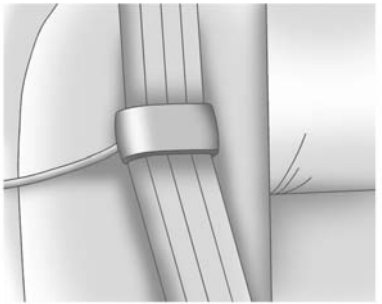
There is one guide for each outside passenger position in the rear seat. Here is how to install a comfort guide to the safety belt:



1. Remove the guide from its storage pocket on the side of the seat.



2. Place the guide over the belt, and insert the two edges of the belt into the slots of the guide.



3. Be sure that the belt is not twisted and it lies flat. The elastic cord must be under the belt and the guide on top.

**⚠ Warning**

A safety belt that is not properly worn may not provide the protection needed in a crash. The person wearing the belt could be seriously injured. The shoulder belt should go over the shoulder

(Continued)

**Warning (Continued)**

and across the chest. These parts of the body are best able to take belt restraining forces.

4. Buckle, position, and release the safety belt as described previously in this section. Make sure the shoulder portion of the belt is on the shoulder and not falling off of it. The belt should be close to, but not contacting, the neck.

## Safety Belt Use During Pregnancy

Safety belts work for everyone, including pregnant women. Like all occupants, they are more likely to be seriously injured if they do not wear safety 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 safety 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 safety belts effective is wearing them properly.

## Safety Belt Extender

If the vehicle's safety belt will fasten around you, you should use it.

But if a safety belt is not long enough, your dealer will order you an extender. 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 seats. To wear it, attach it to the regular safety belt. See the instruction sheet that comes with the extender.

## Safety System Check

Now and then, check that the safety belt reminder light, safety belts, buckles, latch plates, retractors, and anchorages are all working properly. Look for any other loose or damaged safety belt system parts that might keep a safety belt system from doing its job. See your dealer to have it repaired. Torn or frayed safety belts may not protect you in a crash. They can rip apart under impact forces. If a belt is torn or frayed, get a new one right away.

Make sure the safety belt reminder light is working. See *Safety Belt Reminders on page 5-15*.

Keep safety belts clean and dry. See *Safety Belt Care on page 3-19*.

## Safety Belt Care

Keep belts clean and dry.

**⚠ Warning**

Do not bleach or dye safety belts. It may severely weaken them. In a crash, they might not be able to provide adequate protection. Clean safety belts only with mild soap and lukewarm water.

## Replacing Safety Belt System Parts after a Crash

**⚠ Warning**

A crash can damage the safety belt system in the vehicle. A damaged safety 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 safety belt systems are working properly after a crash, have them

(Continued)

**Warning (Continued)**

inspected and any necessary replacements made as soon as possible.

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

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

Have the safety 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 on page 5-15*.

# Airbag System

The vehicle has the following airbags:

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

- A roof-rail airbag for the front outboard passenger and the passenger seated directly behind the front outboard passenger.

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

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

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

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

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

Airbags are designed to supplement the protection provided by safety 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 safety belt, even with airbags. Airbags are designed to work with safety belts, not replace them. Also, airbags are not designed to inflate in every crash. In some crashes safety belts are the only restraint. See *When Should an Airbag Inflate? on page 3-24*.

Wearing your safety belt during a crash helps reduce the chance of hitting things inside the vehicle or being ejected from it. Airbags are “supplemental restraints” to the safety belts. Everyone in the

(Continued)

**Warning (Continued)**

vehicle should wear a safety 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. Safety belts help keep you in position before and during a crash. Always wear a safety belt, even with airbags. The driver should sit as far back as possible while still maintaining control of the vehicle.

(Continued)

**Warning (Continued)**

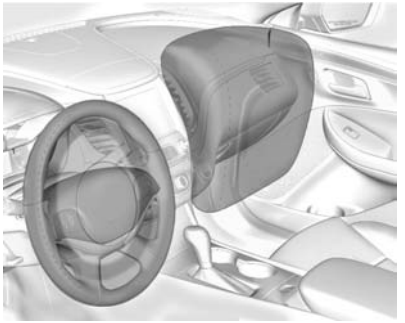
Occupants should not lean on or sleep against the door or side windows in seating positions with seat-mounted side impact airbags and/or roof-rail airbags.

**⚠ Warning**

Children who are up against, or very close to, any airbag when it inflates can be seriously injured or killed. Always secure children properly in the vehicle. To read how, see *Older Children on page 3-34* or *Infants and Young Children on page 3-36*.

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 on page 5-15* for more information.

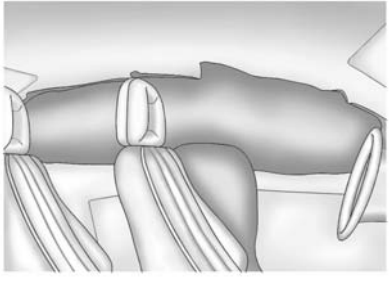
## Where Are the Airbags?



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

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

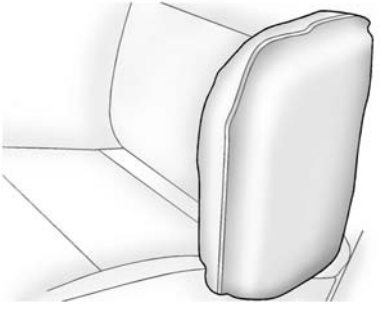
The driver knee airbag is below the steering column. The front outboard passenger knee airbag is below the glove box.



**Driver Side Shown, Passenger Side Similar**

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

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



**Rear Seat Driver Side Shown, Passenger Side Similar**

The second row seat-mounted side impact airbags are in the sides of the rear seatback 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

(Continued)

**Warning (Continued)**

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.

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

## When Should an Airbag Inflate?

This vehicle is equipped with airbags. See *Airbag System on page 3-20*. Airbags are designed to inflate if the impact exceeds the specific airbag system's deployment threshold. Deployment thresholds are used to predict how severe a crash is likely to be in time for the airbags to inflate and help restrain the occupants. The vehicle has electronic sensors that help the airbag system determine the severity of the impact. Deployment thresholds can vary with specific vehicle design.

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

Whether the frontal airbags will or should inflate is not based primarily on how fast the vehicle is 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.

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

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

Roof-rail airbags are designed to inflate in moderate to severe side crashes depending on the location of the impact. In addition, these roof-rail airbags are designed to inflate during a rollover or in a severe frontal impact. Roof-rail airbags are not designed to inflate in rear impacts. Both roof-rail airbags will inflate when either side of the vehicle is struck, if the sensing system predicts that the vehicle is about to roll over on its side, or in a severe frontal impact.

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

## What Makes an Airbag Inflate?

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

For airbag locations, see *Where Are the Airbags? on page 3-22*.

## How Does an Airbag Restrain?

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

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

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

But airbags would not help in many types of collisions, primarily because the occupant's motion is not toward those airbags. See *When Should an Airbag Inflate? on page 3-24*.

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

## What Will You See after an Airbag Inflates?

After the frontal airbags and seat-mounted side impact airbags inflate, they quickly deflate, so quickly that some people may not even realize an airbag inflated. Roof-rail airbags may still be at least partially inflated for some time after they inflate. Some components of the airbag module may be hot for several minutes. For location of the airbags, see *Where Are the Airbags? on page 3-22*.

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

**⚠ Warning**

When an airbag inflates, there may be dust in the air. This dust could cause breathing problems for people with a history of asthma or other breathing trouble. To avoid this, everyone 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, turn on the hazard warning flashers, and shut off the fuel system after the airbags inflate. You can lock the doors, turn off the interior lamps, and turn off the hazard warning flashers by using the controls for those features.

**⚠ Warning**

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

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

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

- Airbags are designed to inflate only once. After an airbag inflates, you will need some new parts for the airbag system. If you do not get them, the airbag system will not be there to help protect you in another crash. A new system will include airbag modules and possibly other parts. The service manual for the vehicle covers the need to replace other parts.
- The vehicle has a crash sensing and diagnostic module which records information after a crash. See *Vehicle Data Recording and Privacy on page 13-13* and *Event Data Recorders on page 13-14*.
- Let only qualified technicians work on the airbag systems. Improper service can mean that an airbag system will not work properly. See your dealer for service.

## Passenger Sensing System

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

**United States**

**Canada**

The words ON and OFF or the symbol for on and off will be visible during the system check. See *Passenger Airbag Status Indicator on page 5-16*.

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

The passenger sensing system works with sensors that are part of the front outboard passenger seat. The sensors are designed to detect the presence of a properly seated occupant and determine if the front outboard passenger frontal airbag and knee airbag should be allowed to inflate or not.

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

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

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

**⚠ Warning**

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

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

(Continued)

**Warning (Continued)**

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

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

- The front outboard passenger seat is unoccupied.
- The system determines that an infant is present in a child restraint.
- A front outboard passenger takes his/her weight off of the seat for a period of time.

- There is a critical problem with the airbag system or the passenger sensing system.

When the passenger sensing system has turned off the front outboard passenger frontal airbag and knee airbag, the off indicator will light and stay lit to remind you that the airbags are off. See *Passenger Airbag Status Indicator on page 5-16*.

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

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

For some children, including children in child restraints, and for very small adults, the passenger sensing system may or may not turn off the front outboard passenger frontal airbag and knee airbag, depending upon the person's seating posture and body build. Everyone in the vehicle who has outgrown child restraints should wear a safety 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 on page 5-15* for more information, including important safety information.

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

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

1. Turn the vehicle off.
2. Remove the child restraint from the vehicle.
3. Remove any additional items from the seat such as blankets, cushions, seat covers, seat heaters, or seat massagers.
4. Reinstall the child restraint following the directions provided by the child restraint manufacturer and refer to *Securing Child Restraints (Front Passenger Seat) on page 3-48* or *Securing Child Restraints (Rear Seat) on page 3-51*.

5. If, after reinstalling the child restraint and restarting the vehicle, the on indicator is still lit, turn the vehicle off. Then slightly recline the vehicle seatback and adjust the seat cushion, if adjustable, to make sure that the vehicle seatback is not pushing the child restraint into the seat cushion.

   Also make sure the child restraint is not trapped under the vehicle head restraint. If this happens, adjust the head restraint. See *Head Restraints on page 3-2*.

6. Restart the vehicle.

   The passenger sensing system may or may not turn off the airbags for a child in a child restraint depending upon the child's size. It is better to secure a child restraint in a rear seat.

## If the Off Indicator Is Lit for an Adult-Size 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. Use the following steps to allow the system to detect that person and enable the front outboard passenger frontal airbag and knee airbag:

1. Turn the vehicle off.
2. Remove any additional material from the seat, such as blankets, cushions, seat covers, seat heaters, or seat massagers. Also remove laptops, or other electronic devices.
3. Place the seatback in the fully upright position.
4. Have the person sit upright in the seat, centered on the seat cushion, with legs comfortably extended.
5. 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

(Continued)

**Warning (Continued)**

serious injury or even death. An adult-sized occupant should not ride in the front outboard passenger seat, if the passenger airbag off indicator is lit.

### Additional Factors Affecting System Operation

Safety 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 “Safety 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 on page 3-32* for more information about modifications that can affect how the system operates.

A wet seat can affect the performance of the passenger sensing system. Here is how:

- The passenger sensing system may turn off the passenger frontal airbag and passenger knee airbag when liquid is soaked into the seat. If this happens, the off indicator will be lit, and the airbag readiness light on the instrument panel will also be lit.
- Liquid pooled on the seat that has not soaked in may make it more likely that the passenger sensing system will turn on the passenger frontal airbag and passenger knee airbag while a child restraint or child occupant is on the seat. If the passenger frontal airbag and passenger knee airbag are turned on, the on indicator will be lit.

If the front passenger seat gets wet, dry the seat immediately. If the airbag readiness light is lit, do not install a child restraint or allow anyone to occupy the seat. See *Airbag Readiness Light on page 5-15* for important safety information.

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 of 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 *Service Publications Ordering Information on page 13-11*.

**⚠ 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 or moving any parts of the front seats, safety belts, the airbag sensing and diagnostic module, steering wheel, instrument panel, roof-rail airbag modules, ceiling headliner or pillar garnish trim, overhead console, front sensors, side impact sensors, or airbag wiring.

Your dealer and the service manual have information about the location of the airbag sensors, sensing and diagnostic module, and airbag wiring.

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 on page 3-27*.

If the vehicle has rollover roof-rail airbags, see *Different Size Tires and Wheels on page 10-59* for additional important information.

If you have to modify your vehicle because you have a disability and you have questions about whether the modifications will affect the vehicle's airbag system, or if you have questions about whether the airbag system will be affected if the vehicle is modified for any other reason, call Customer Assistance. See *Customer Assistance Offices on page 13-3*.

## 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 on page 5-15*.

**⚠ Caution**

If an airbag covering is damaged, opened, or broken, the airbag may not work properly. Do not open or break the airbag coverings. If there are any opened or broken airbag coverings, have the airbag covering and/or airbag module replaced. For the location of the airbags, see *Where Are the Airbags? on page 3-22*. 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 work properly and may not 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.

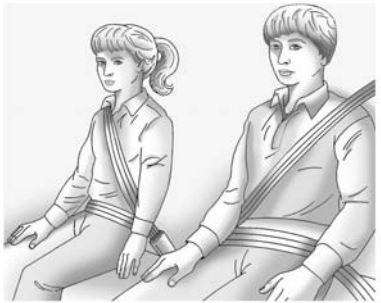
If the airbag readiness light stays on after the vehicle is started or comes on when you are driving, the airbag system may not work properly. Have

the vehicle serviced right away. See *Airbag Readiness Light on page 5-15* for more information.

Vehicles with eAssist have a high voltage battery and a standard 12-volt battery. If an airbag inflates or the vehicle has been in a crash, the vehicle's sensing system may shut down the high voltage system. When this occurs, the high voltage battery is disconnected and the vehicle is not charging the 12-volt battery or the electrical system. The vehicle may start but it shuts down once the 12-volt battery is depleted. When the 12-volt battery is depleted, the vehicle will not start and the on-board jump start feature is disabled. The airbag readiness light and/or the 12-volt battery warning light are displayed. Before the vehicle can be operated again, it must be serviced at your dealer.

# Child Restraints

## Older Children



Older children who have outgrown booster seats should wear the vehicle safety belts.

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

- Sit all the way back on the seat. Do the knees bend at the seat edge? If yes, continue. If no, return to the booster seat.
- Buckle the lap-shoulder belt. Does the shoulder belt rest on the shoulder? If yes, continue. If no, try using the rear safety belt comfort guide. See “Rear Safety Belt Comfort Guides” under *Lap-Shoulder Belt on page 3-15*. If the shoulder belt still does not rest on the shoulder, then return to the booster seat.
- Does the lap belt fit low and snug on the hips, touching the thighs? If yes, continue. If no, return to the booster seat.

- Can proper safety 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 safety belts?**

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

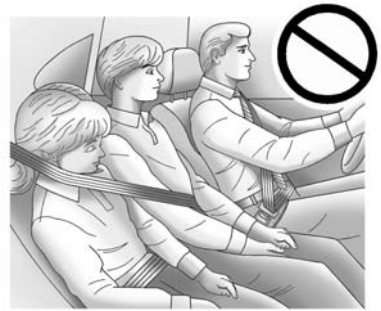
Also see “Rear Safety Belt Comfort Guides” under *Lap-Shoulder Belt on page 3-15*.

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 safety belts properly.

**⚠ Warning**

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



**⚠ Warning**

Never allow a child to wear the safety belt with the shoulder belt behind their back. A child can be seriously injured by not wearing the lap-shoulder belt properly. In a crash, the child would not be restrained by the shoulder belt. The child could move too far forward increasing the chance of head and neck injury. The child might also slide under the lap

(Continued)

**Warning (Continued)**

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.

## 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 strangled if a shoulder belt is wrapped around their neck and the safety belt continues to tighten. Never leave children unattended in a vehicle and never allow children to play with the safety belts.

Every time infants and young children ride in vehicles, they should have the protection provided by appropriate child restraints. Neither the vehicle's safety 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 should be secured in an appropriate 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 right front 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 right front

(Continued)

**Warning (Continued)**

seat, always move the front passenger seat as far back as it will go.

**Q: What are the different types of add-on child restraints?**

**A:** Add-on child restraints, which are purchased by the vehicle owner, are available in four basic types. Selection of a particular restraint should take into consideration not only the child's weight, height, and age but also whether or not the restraint will be compatible with the motor vehicle in which it will be used.

For most basic types of child restraints, there are many different models available. When purchasing a child restraint, be sure it is designed to be used in a motor vehicle. If it is, the restraint will have a label saying that it meets federal motor vehicle safety standards.

The restraint manufacturer instructions that come with the restraint state the weight and height limitations for a particular child restraint. In addition, there are many kinds of restraints available for children with special needs.

**⚠ Warning**

To reduce the risk of neck and head injury during a crash, infants need complete support. In a crash, if an infant is in a rear-facing child restraint, the crash forces can be distributed across the strongest part of an infant's body, the back and shoulders. Infants should always be secured in rear-facing child restraints.

**⚠ Warning**

A young child's hip bones are still so small that the vehicle's regular safety 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 appropriate child restraints.

## Child Restraint Systems

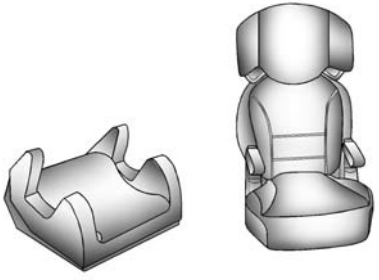
**Rear-Facing Infant Seat**

A rear-facing infant seat 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 Seat**

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



**Booster Seats**

A booster seat is a child restraint designed to improve the fit of the vehicle's safety belt system.
A booster seat can also help a child to see out the window.

## 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 safety belt or LATCH system, following the instructions that came with that child restraint and the instructions in this manual.

To help reduce the chance of injury, the child restraint must be secured in the vehicle. Child restraint systems must be secured in vehicle seats by lap belts or the lap belt portion of a lap-shoulder belt, or by the LATCH system. See *Lower Anchors and Tethers for Children (LATCH System) on page 3-41*.

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, refer to the instructions that come with the restraint which may be on the restraint itself or in a booklet, or both, and to this 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., refer to the National Highway Traffic Safety Administration (NHTSA) website to locate the nearest child safety seat inspection station. For CPST availability in Canada, check with Transport Canada or the Provincial Ministry of Transportation office.

### Securing the Child Within the Child Restraint

**⚠ Warning**

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

## Where to Put the Restraint

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

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

Never put a rear-facing child 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 passenger airbag inflates. This is because the back of the rear-facing child restraint would be very close to the inflating airbag. A child in a forward-facing child restraint can be seriously injured or killed if the front passenger airbag inflates and the passenger seat is in a forward position.

Even if the passenger sensing system has turned off the front passenger frontal airbag, no

(Continued)

**Warning (Continued)**

system is fail-safe. No one can guarantee that an airbag will not deploy under some unusual circumstance, even though it is turned off.

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

See *Passenger Sensing System on page 3-27* for additional information.

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

Child restraints and booster seats vary considerably in size, and some may fit in certain seating positions better than others. Always make sure the child restraint is properly secured.

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

Wherever a child restraint is installed, be sure to secure the child restraint properly.

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

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

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

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

Booster seats use the vehicle's safety belts to secure the child in the booster seat. If the manufacturer

recommends that the booster seat be secured with the LATCH system, this can be done as long as the booster seat can be positioned properly and there is no interference with the proper positioning of the lap-shoulder belt on the child.

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

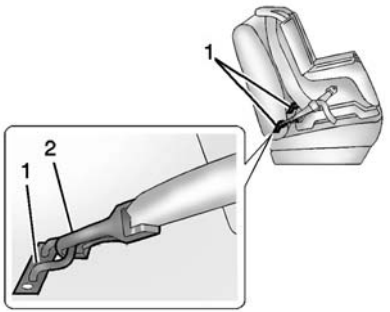
When installing a child restraint with a top tether, you must also use either the lower anchors or the safety belts to properly secure the child restraint. A child restraint must never be installed using only the top tether and anchor.

The LATCH anchorage system can be used until the combined weight of the child plus the child restraint is 29.5 kg (65 lbs). Use the safety belt alone instead of the LATCH anchorage system once the combined weight is more than 29.5 kg (65 lbs).

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

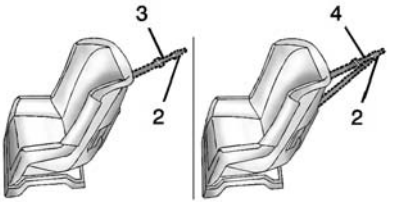
Not all vehicle seating positions or child restraints have lower anchors and attachments or top tether anchors and attachments.

## Lower Anchors




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

## Top Tether Anchor

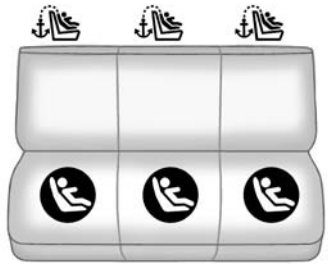



A top tether (3, 4) anchors the top of the child restraint to the vehicle. A top tether anchor is built into the vehicle. The top tether attachment (2) on the child restraint connects to the top tether anchor in the vehicle in order to reduce the forward movement and rotation of the child restraint during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

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

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

## Lower Anchor and Top Tether Anchor Locations



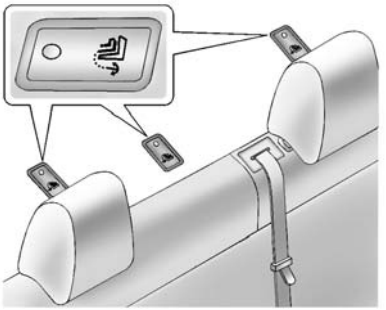
**Rear Seat**

**(Top Tether Anchor):** Seating positions with top tether anchors.

**(Lower Anchor):** Seating positions with two lower anchors.

To assist in locating the lower anchors, each rear anchor position has a label, near the crease between the seatback and the seat cushion.

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



The top tether anchors are under the covers, behind the rear seat, on the filler panel. Be sure to use an anchor on the same side of the vehicle as the seating position where the child restraint will be placed.

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

According to accident statistics, children and infants are safer when properly restrained in a child restraint system or infant restraint system secured in a rear seating position. See *Where to Put the Restraint on page 3-40* for additional information.

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

**⚠ Warning**

If a LATCH-type child restraint is not attached to anchors, the child restraint will not be able to protect the child correctly. In a crash, the child could be seriously injured or killed. Install a LATCH-type child restraint properly using the anchors, or use the vehicle safety belts to secure the restraint, following the instructions that came with the child restraint and the instructions in this manual.

**⚠ Warning**

Do not attach more than one child restraint to a single anchor. Attaching more than one child restraint to a single anchor could cause the anchor or attachment to come loose or even break during a crash. A child or others could be injured. To reduce the risk of serious or fatal injuries during a crash, attach only one child restraint per anchor.

**⚠ Warning**

Children can be seriously injured or strangled if a shoulder belt is wrapped around their neck and the safety belt continues to tighten. Buckle any unused safety belts behind the child restraint so children cannot reach them. Pull the shoulder belt all the way out

(Continued)

**Warning (Continued)**

of the retractor to set the lock, if the vehicle has one, after the child restraint has been installed.

**⚠ Caution**

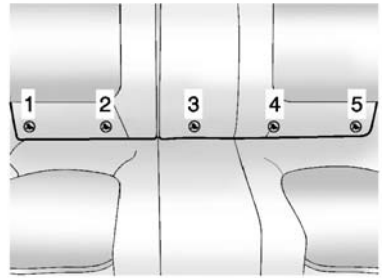
Do not let the LATCH attachments rub against the vehicle's safety belts. This may damage these parts. If necessary, move buckled safety belts to avoid rubbing the LATCH attachments.

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

If you need to secure more than one child restraint in the rear seat, see *Where to Put the Restraint on page 3-40*.

You cannot secure three child restraints using the LATCH anchors in the rear seat at the same time, but you can install two of them. If you want to do this, install one LATCH child restraint in the right rear seating position, and install the other one either in the left rear seating position or in the center seating position. If you need to install child restraints in both the center and left rear seating positions, the one in the center seating position will need to be secured using the vehicle safety belts instead of the LATCH anchors.

Refer to the following illustration to learn which anchors to use.




There are five lower LATCH anchors in the rear seat.

- Use anchors 1 and 2 when installing a child restraint using LATCH in the right rear seating position.
- Use anchors 3 and 4 when installing a child restraint using LATCH in the center rear seating position.
- Use anchors 4 and 5 when installing a child restraint using LATCH in left rear seating position.

Installing child restraints using LATCH in the center and left rear seating positions at the same time is prohibited.

Make sure to attach the child restraint at the proper anchor location.

This system is designed to make installation of child restraints easier. When using lower anchors, do not use the vehicle's safety belts. Instead use the vehicle's anchors and child restraint attachments to secure the restraints. Some restraints also use another vehicle anchor to secure a top tether.

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

   1.1. Find the lower anchors for the desired seating position.

   1.2. For outboard rear seating positions, put the head restraint in the upright position. See *Head Restraints on page 3-2*.

   1.3. Put the child restraint on the seat.

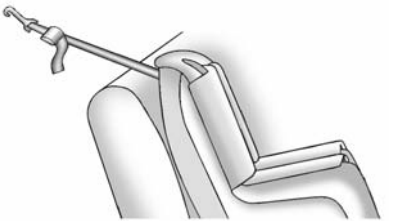
   1.4. Attach and tighten the lower attachments on the child restraint to the lower anchors.

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

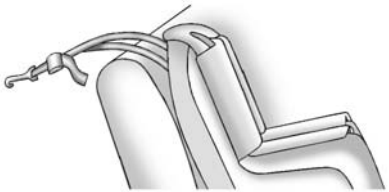
   2.1. Find the top tether anchor.

   Open the cover to expose the anchor.

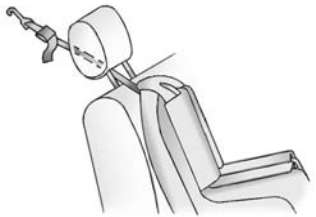
   2.2. Route, attach, and tighten the top tether according to the child restraint instructions and the following instructions:



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



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



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

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

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

## Replacing LATCH System Parts After a Crash

**⚠ Warning**

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

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

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

## Securing Child Restraints (Front Passenger Seat)

This vehicle has airbags. A rear seat is a safer place to secure a forward-facing child restraint. See *Where to Put the Restraint on page 3-40*.

In addition, the vehicle has a passenger sensing system which is designed to turn off the front outboard passenger frontal airbag and knee airbag under certain conditions. See *Passenger Sensing System on page 3-27* and *Passenger Airbag Status Indicator on page 5-16* for more information, including important safety information.

A label on the sun visor says, “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 right front passenger airbag inflates. This is because the back of the rear-facing child restraint would be very close to the inflating airbag. A child in a forward-facing child restraint can be seriously injured or killed if the right front passenger airbag inflates and the passenger seat is in a forward position.

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

(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 right front seat, always move the front passenger seat as far back as it will go. It is better to secure the child restraint in a rear seat.

See *Passenger Sensing System on page 3-27* for additional information.

If the child restraint has the LATCH system, see *Lower Anchors and Tethers for Children (LATCH System) on page 3-41* for how and where to install the child restraint using LATCH. If a child restraint is secured using a safety belt and it uses a top tether, see *Lower Anchors and Tethers for Children (LATCH System) on page 3-41* for top tether anchor locations.

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

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

You will be using the lap-shoulder belt to secure the child restraint in this position. Follow the instructions that came with the child restraint.

1. Move the seat as far back as it will go before securing the forward-facing child restraint.

   When the passenger sensing system has turned off the front outboard passenger frontal airbag and knee airbag, the off indicator on the passenger airbag status indicator should light and stay lit when you start the vehicle. See *Passenger Airbag Status Indicator on page 5-16*.

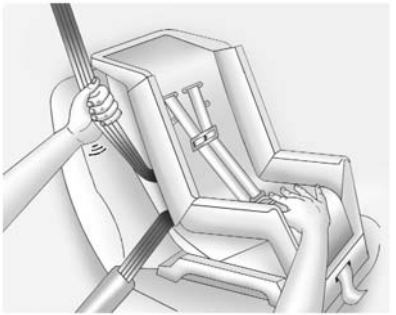
2. Put the child restraint on the seat.

3. Pick up the latch plate, and run the lap and shoulder portions of the vehicle's safety belt through or around the restraint. The child restraint instructions will show you how.

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

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

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



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

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

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

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

If a child restraint has been installed and the on indicator is lit, see “If the On Indicator Is Lit for a Child Restraint” under *Passenger Sensing System on page 3-27*.

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

## Securing Child Restraints (Rear Seat)

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

If the child restraint has the LATCH system, see *Lower Anchors and Tethers for Children (LATCH System) on page 3-41* for how and where to install the child restraint using LATCH. If a child restraint is secured in the vehicle using a safety belt and it uses a top tether, see *Lower Anchors and Tethers for Children (LATCH System) on page 3-41* for top tether anchor locations.

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

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

If the child restraint does not have the LATCH system, you will be using the safety belt to secure the child restraint in this position. Be sure to follow the instructions that came with the child restraint. Secure the child in the child restraint when and as the instructions say.

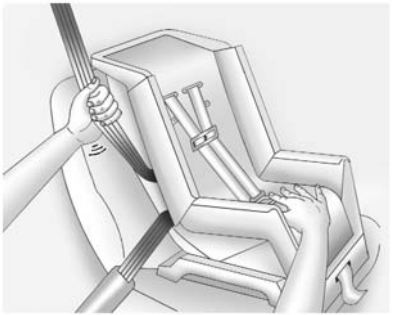
If more than one child restraint needs to be installed in the rear seat, be sure to read *Where to Put the Restraint on page 3-40*.

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

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

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

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



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

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

6. If the child restraint has a top tether, follow the child restraint manufacturer's instructions regarding the use of the top tether. See *Lower Anchors and Tethers for Children (LATCH System) on page 3-41* for more information.

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

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

# Storage

**Storage Compartments**
Storage Compartments . . . . . 4-1
Instrument Panel Storage . . . . . 4-1
Glove Box . . . . . 4-2
Cupholders . . . . . 4-2
Center Console Storage . . . . . 4-2
Umbrella Storage . . . . . 4-3

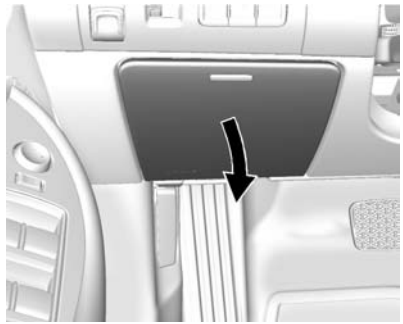
**Additional Storage Features**
Cargo Management System . . . . . 4-3
Convenience Net . . . . . 4-4

## Storage Compartments

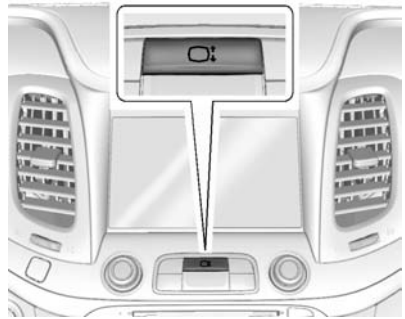
**⚠ Warning**

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

## Instrument Panel Storage



If equipped with storage behind the fuse box, push on the cover and release to open.



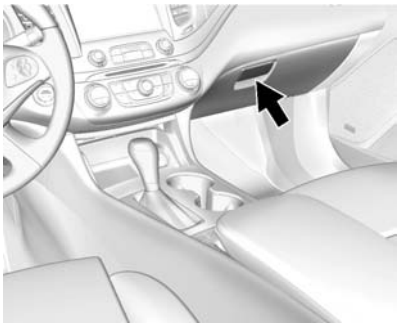
If equipped with storage behind the radio, press ▢↕ and hold to open. There is a USB port inside. See the infotainment manual.

Press ▢↕ and hold again to close.

Keep the storage area closed when not in use.

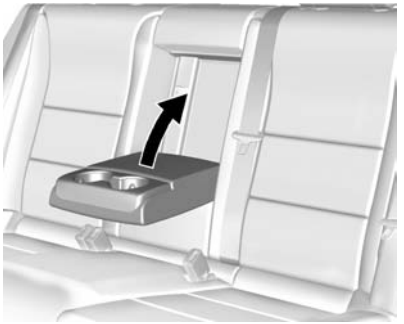
The storage area cannot be operated with ▢↕ when valet mode is enabled. See “Valet Mode” in *Vehicle Personalization on page 5-40*.

## Glove Box



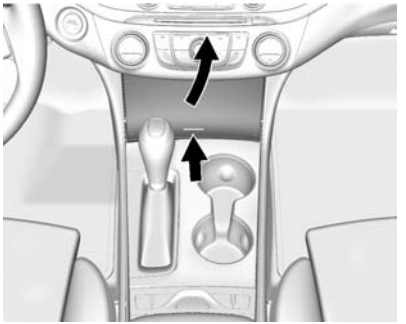
Pull the handle up to open.

## Cupholders



Pull the rear seat armrest down to access.

## Center Console Storage



Push the cover down and release to access. To close, push the cover again and release. There is an accessory power outlet inside.

Press the button and lift to access. There is a removable tray on the top of the console. There is an auxiliary input jack, USB port, and accessory power outlet inside.

If equipped, there may be an additional USB port and an SD card reader inside.

The rear of the center console has a storage area and an accessory power outlet.

See *Power Outlets on page 5-6*, *Auxiliary Jack on page 7-17*, and *USB Port on page 7-14*. If equipped with uplevel auxiliary players, see the infotainment manual.

## Umbrella Storage

Slide an umbrella into the opening on the driver or passenger door.

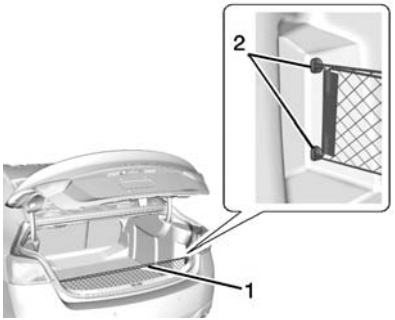
# Additional Storage Features

## Cargo Management System

There is storage under the load floor for small items. Pull the load floor handle to access.

Secure the load floor handle to seal the access to the spare tire.

## Convenience Net




The vehicle may have a convenience net in the trunk. The net (1) attaches to the convenience net hooks (2). Put small loads behind the net. Do not use the net for heavy loads.

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# Controls

## Steering Wheel Adjustment

To adjust the steering wheel:

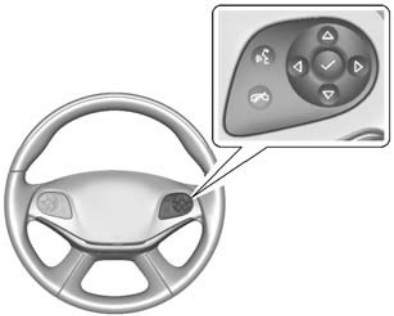
1. Pull the lever down.
2. Move the steering wheel up or down.
3. Pull or push the steering wheel closer or away from you.
4. Pull the lever up to lock the steering wheel in place.

**Power Tilt Wheel**

If equipped with this feature, press the control to move the steering wheel up and down or forward and rearward.

Do not adjust the steering wheel while driving.

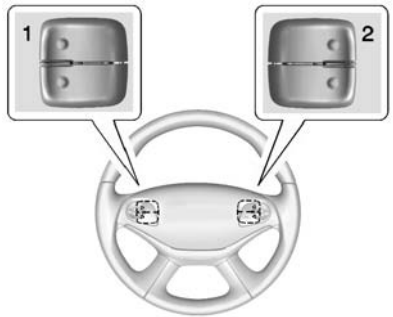
## Steering Wheel Controls



Some audio controls can be adjusted at the steering wheel.

**(Talk):** For vehicles with OnStar® or a Bluetooth® system, press to interact with those systems. See *OnStar Overview on page 14-1* or "Bluetooth (Overview)" in the infotainment manual.

**(Phone/Mute):** Press to reject an incoming call, or end a current call. Press to mute or unmute the infotainment system when not on a call.




The favorite and volume switches are on the back of the steering wheel.

1. Favorites: Press to select the next or previous favorite when listening to AM, FM, or SiriusXM® (if equipped), or the next or previous track when listening to a media source.
2. Volume: Press to increase or decrease the volume.

## Heated Steering Wheel

**(Heated Steering Wheel):** For vehicles with a heated steering wheel, press to turn on or off. A light on the button displays when the feature is turned on.

The steering wheel takes about three minutes to start heating.

## Horn

Press on the steering wheel pad to sound the horn.

## Windshield Wiper/Washer

With the ignition in ACC/ ACCESSORY or ON/RUN/START, move the windshield wiper lever to select the wiper speed.

**HI:** Use for fast wipes.

**LO:** Use for slow wipes.

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

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

**(Mist):** For a single wipe, briefly move the wiper lever down. For several wipes, hold the wiper lever down.

Clear snow and ice from the wiper blades and windshield before using them. If frozen to the windshield, carefully loosen or thaw them. Damaged blades should be replaced. See *Wiper Blade Replacement on page 10-29*.

Heavy snow or ice can overload the wiper motor.

### Wiper Parking

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

**(Windshield Washer):** 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 *Washer Fluid on page 10-24* for information on filling the windshield washer fluid reservoir.

**⚠ 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.

## Compass

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

The compass system is designed to operate for a certain number of miles or degrees of turn before needing a signal from the GPS satellites. When the compass display shows CAL, drive the vehicle for a short distance in an open area where it can receive a GPS signal. The compass system will automatically determine when a GPS signal is restored and provide a heading again. See *Compass Messages on page 5-31* for the messages that may be displayed for the compass.

## Clock (Base Radio)

### Setting the Time and Date

To set the time or date:

1. Select SETTINGS from the Home Page, then select Time and Date Settings.
2. Select the desired function.
3. Turn the MENU knob to increase or decrease the value.
4. Press the MENU knob to go to the next value. After the last value is selected the system will update and return to the SETTINGS menu. Press ◀ BACK to go to the last menu and save the changes.

If auto timing is set, the time displayed on the clock may not update immediately when driving into a new time zone.

To set the clock display:

1. Select Settings from the Home Page, then select Time and Date Settings.
2. Select Clock Display.
3. Turn the MENU knob to Off or On.
4. Press the MENU knob to select.

Press ◀ BACK to go to the last menu and save the changes.

## Clock (Uplevel Radio)

### Setting the Time and Date

To set the time or date:

1. Select Settings from the Home Page, then select Time and Date Settings.
2. Select the desired function.

To set the time or date, press ∧ or ∨ to change the hour, minutes, AM, or PM.

To change the 12-24Hr setting, press the 12-24Hr button.

To turn Auto Set on and off, press the Auto Set button.

If auto timing is set, the time displayed on the clock may not update immediately when driving into a new time zone.

Press ◀ BACK to go to the last menu and save the changes or ⌂ to return to the Home Page.

## Power Outlets

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

There are three accessory power outlets:

- Inside the front storage area below the climate control system.
- Inside the center console.
- On the rear of the center console.

The outlet is powered when the ignition is in ON/RUN or ACC/ACCESSORY, or until the driver door is opened within 10 minutes of turning off the vehicle. See *Retained Accessory Power (RAP) on page 9-24*.

Open the protective cover to use the accessory power outlet.

Certain electrical accessories may not be compatible with the accessory power outlets and could overload vehicle or adapter fuses. If there is a problem, see your dealer.

When adding electrical equipment, be sure to follow the installation instructions included with the equipment. See *Add-On Electrical Equipment on page 9-66*.

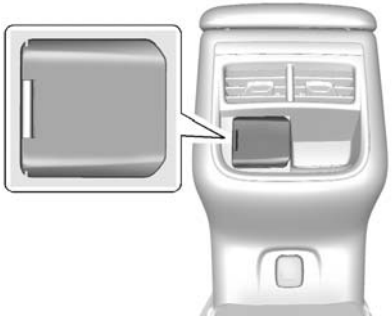
**⚠ Caution**

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

Always unplug electrical equipment when not in use and do not plug in equipment that exceeds the maximum 20 amps rating.

### Power Outlet 120 Volt Alternating Current

The vehicle may have a power outlet that can be used to plug in electrical equipment that uses a maximum limit of 150 watts.



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

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

The indicator light does not come on if the ignition is in LOCK/OFF; if no equipment is plugged into the outlet; or if the equipment is plugged in, but not fully seated in the outlet.

If equipment is connected using more than 150 watts or a system fault is detected, the equipment may operate briefly then turn off. A protection circuit shuts off the power supply and the indicator light turns off. To reset the circuit, unplug the item and plug it back in or turn the Retained Accessory Power (RAP) off and then back on. See *Retained Accessory Power (RAP) on page 9-24*. The power restarts when equipment using 150 watts or less is plugged into the outlet and a system fault is not detected.

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

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

# Warning Lights, Gauges, and Indicators

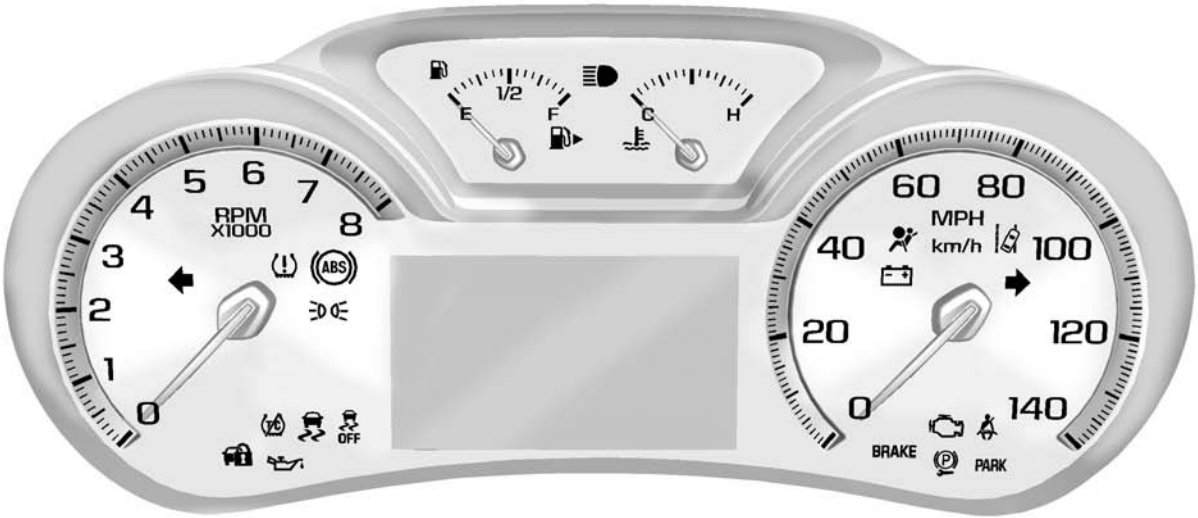
Warning lights and gauges can signal that something is wrong before it becomes serious enough to cause an expensive repair or replacement. Paying attention to the warning lights and gauges could prevent injury.

Warning lights come on when there could be a problem with a vehicle function. Some warning lights come on briefly when the engine is started to indicate they are working.

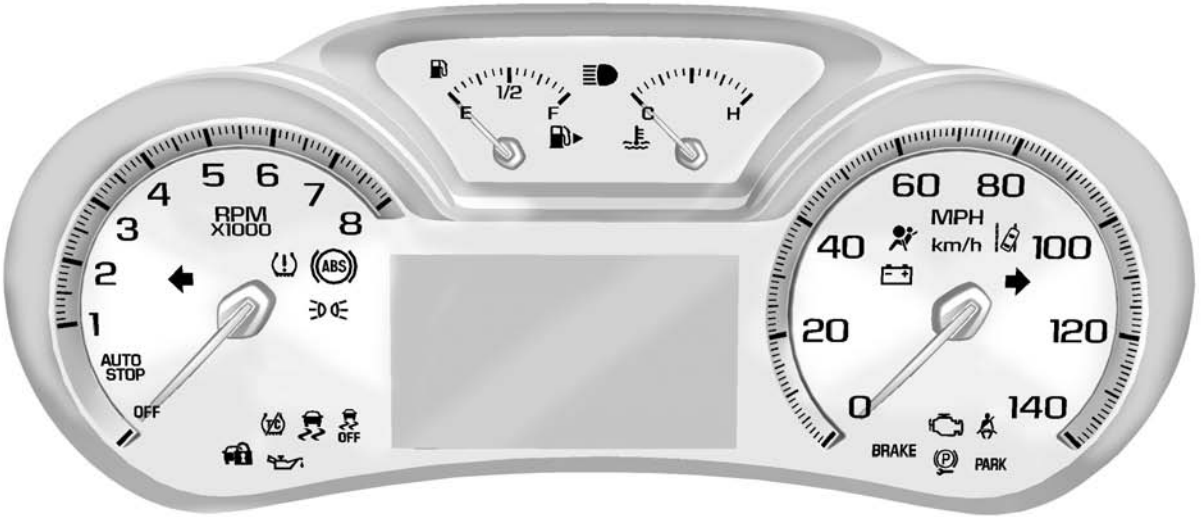
Gauges can indicate when there could be a problem with a vehicle function. Often gauges and warning lights work together to indicate a problem with the vehicle.

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. Follow this manual's advice. Waiting to do repairs can be costly and even dangerous.

## Instrument Cluster



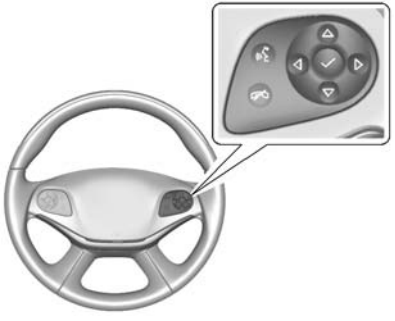

English Shown, Metric Similar




**English eAssist Shown, Metric eAssist Similar**

## Cluster Menu

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



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

Press ◁ to access the cluster applications. Use △ or ▽ to scroll through the list of available applications. Not all applications will be available on all vehicles.

- Info app. This is where you can view the selected Driver Information Center (DIC) displays. See *Driver Information Center (DIC) on page 5-27*.
- Audio
- Phone
- Navigation
- Settings

### Audio

In the main view of the Audio app, press △ or ▽ to scroll through radio stations or move to the next/previous track of a CD/USB/Bluetooth device that is connected to the vehicle. Press ✓ to select the Audio app, then press ▷ to enter the Audio menu. In the Audio menu browse for music, select from the favorites, or change the audio source.

### Phone

Press ✓ to select the Phone app, then press ▷ to enter the Phone menu. In the Phone menu, if there is no active phone call, view recent calls, scroll through contacts, or select from the favorites. If there is an active call, mute or unmute the phone or switch to handset or handsfree operation.

### Navigation

Press ✓ to select the Navigation app, then press ▷ to enter the Navigation menu. If there is no active route, you can resume the last route and turn the voice prompts on/off. If there is an active route, press ✓ to cancel route guidance or turn the voice prompts on/off.

### Settings

Press ✓ to select the Settings app. Use △ or ▽ to scroll through the items in the Settings menu.

**Units:** Press ▷ while Units is displayed to enter the Units menu. Choose English or metric units by pressing ✓ while the desired item is highlighted.

**Info Pages:** Press ▷ while Info Pages is displayed to enter the Info Pages menu and select the items to be displayed in the Info App. See *Driver Information Center (DIC) on page 5-27*.

**Speed Warning:** The Speed Warning display allows the driver to set a speed that they do not want to exceed. To set the Speed Warning, press ▷ when Speed Warning is displayed. Press △ or ▽ to adjust the value. Press ✓ to set the speed. Once the speed is set, this feature can be turned off by pressing ✓ while viewing this page. If the selected speed limit is exceeded, a pop-up warning is displayed with a chime.

**Compass:** In certain vehicles the compass setting will allow for manually setting the compass. The user can set the zone and calibrate the compass. This setting page is only available on vehicles that are equipped with Remote Compass Module.

**Jump Start:** The Jump Start display is used to perform an on-board jump start for eAssist vehicles. See “Jump Starting (On-board with eAssist Only)” in the Index.

## Speedometer

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

## Odometer

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

This vehicle has a tamper-resistant odometer. If the vehicle needs a new cluster installed, the new odometer is set to the mileage of the old odometer. If this is not possible, it is set at zero and a label is put on the driver door to show the old mileage reading.

## Trip Odometer

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

The trip odometer is accessed and reset through the Driver Information Center (DIC). See *Driver Information Center (DIC) on page 5-27*.

## Tachometer

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

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

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

A slight bump may be felt when the transmission is determining the most fuel efficient operating range.

## Fuel Gauge

**Metric**

**English**

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

An arrow on the fuel gauge indicates the side of the vehicle the fuel door is on.

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

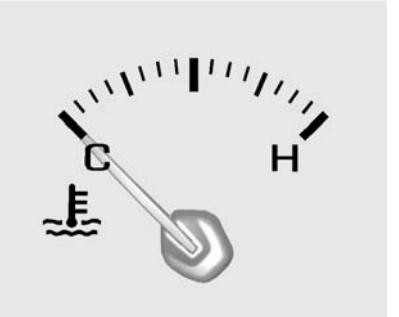
Here are four things that some owners ask about. None of these show a problem with the fuel gauge:

- At the service station, the fuel pump shuts off before the gauge reads full.
- It takes a little more or less fuel to fill up than the gauge indicated. For example, the gauge indicated the tank was half full, but it actually took a little more or less than half the tank's capacity to fill the tank.

- The gauge moves a little while turning a corner or speeding up.
- The gauge takes a few seconds to stabilize after the ignition is turned on, and goes back to empty when the ignition is turned off.

## Engine Coolant Temperature Gauge

**Metric**




**English**

This gauge shows the engine coolant temperature.

If the gauge pointer moves toward the shaded area, the engine is too hot.

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

soon as possible. See *Engine Overheating on page 10-22* for more information.

## Safety Belt Reminders

### Driver Safety Belt Reminder Light

There is a driver safety 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 safety 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 safety belt is buckled, neither the light nor the chime comes on.

### Passenger Safety Belt Reminder Light

There is a passenger safety belt reminder light near the passenger airbag status indicator. See *Passenger Sensing System on page 3-27*.

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

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

The front passenger safety belt warning light and chime may turn 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 warning light and/or chime, remove the object from the seat or buckle the safety belt.

## Airbag Readiness Light

This light shows if there is an electrical problem with the airbag system. The system check includes the airbag sensor(s), 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 on page 3-20*.

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

**⚠ Warning**

If the airbag readiness light stays on after the vehicle is started or comes on while driving, it means the airbag system might not be working properly. The airbags in the vehicle might not inflate in a crash, or they could even inflate without a crash. To help avoid injury, have the vehicle serviced right away.

If there is a problem with the airbag system, a Driver Information Center (DIC) message may also come on. See *Airbag System Messages on page 5-37*.

## Passenger Airbag Status Indicator

The vehicle has a passenger sensing system. See *Passenger Sensing System on page 3-27* for important safety information. The passenger airbag status indicator is in the overhead console.

**United States**

**Canada**

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

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

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

If, after several seconds, both status indicator lights remain on, or if there are no lights at all, there may be a problem with the lights or the passenger sensing system. See your dealer for service.

**⚠ Warning**

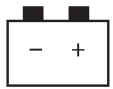
If the airbag readiness light ever comes on and stays on, it means that something may be wrong with the airbag system. To help avoid injury to yourself or others,

(Continued)

**Warning (Continued)**

have the vehicle serviced right away. See *Airbag Readiness Light on page 5-15* for more information, including important safety information.

## Charging System Light




The charging system light comes on briefly when the ignition is turned on, but the engine is not running, as a check to show the light is working. It should go out when the engine is started.

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

When this light comes on, the Driver Information Center (DIC) also displays a message.

See *Battery Voltage and Charging Messages on page 5-30*.

If a short distance must be driven with the light on, be sure to turn off all accessories, such as the radio and air conditioner.

## Malfunction Indicator Lamp

A computer system called OBD II (On-Board Diagnostics-Second Generation) monitors the operation of the vehicle to ensure emissions are at acceptable levels, helping to maintain a clean environment. The malfunction indicator lamp comes on when the vehicle is placed in ON/RUN for Key Access or Service Only Mode for Keyless Access, as a check to show it is working. If it

does not, have the vehicle serviced by your dealer. See *Ignition Positions (Keyless Access) on page 9-15* or *Ignition Positions (Key Access) on page 9-17* for more information.

If the malfunction indicator lamp comes on while the engine is running, this indicates that the OBD II system has detected a problem and diagnosis and service might be required.

Malfunctions often are indicated by the system before any problem is apparent. Being aware of the light can prevent more serious damage to the vehicle. This system also assists the dealer technician in correctly diagnosing any malfunction.

**⚠ Caution**

If the vehicle is continually driven with this light on, the emission controls might not work as well, the vehicle fuel economy might not be as good, and the engine might not run as smoothly. This could lead to costly repairs that might not be covered by the vehicle warranty.

**⚠ Caution**

Modifications made to the engine, transmission, exhaust, intake, or fuel system of the vehicle or the replacement of the original tires with other than those of the same Tire Performance Criteria (TPC) can affect the vehicle's emission controls and can cause this light to come on. Modifications to these systems

(Continued)

**Caution (Continued)**

could lead to costly repairs not covered by the vehicle warranty. This could also result in a failure to pass a required Emission Inspection/Maintenance test. See *Accessories and Modifications on page 10-3*.

This light comes on during a malfunction in one of two ways:

**Light Flashing:** A misfire condition has been detected. A misfire increases vehicle emissions and could damage the emission control system on the vehicle. Diagnosis and service might be required.

To prevent more serious damage to the vehicle:

- Reduce vehicle speed.
- Avoid hard accelerations.
- Avoid steep uphill grades.

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

**Light On Steady:** An emission control system malfunction has been detected on the vehicle. Diagnosis and service might be required.

The following may correct an emission control system malfunction:

- Check that the fuel cap is fully installed. See *Filling the Tank on page 9-59*. The diagnostic system can determine if the fuel cap has been left off or improperly installed. A loose or missing fuel cap allows fuel to evaporate into the atmosphere. A few driving trips with the cap properly installed should turn the light off.
- Check that good quality fuel is used. Poor fuel quality causes the engine not to run as efficiently as designed and may cause stalling after start-up, stalling when the vehicle is changed into gear, misfiring, hesitation on acceleration, or stumbling on acceleration. These conditions might go away once the engine is warmed up.

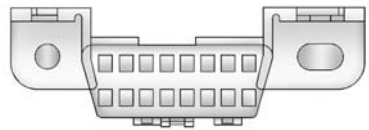
If one or more of these conditions occurs, change the fuel brand used. It may require at least one full tank of the proper fuel to turn the light off.

See *Recommended Fuel on page 9-56*.

If none of the above have made the light turn off, your dealer can check the vehicle. The dealer has the proper test equipment and diagnostic tools to fix any mechanical or electrical problems that might have developed.

## Emissions Inspection and Maintenance Programs

Depending on where you live, your vehicle may be required to participate in an emission control system inspection and maintenance program. For the inspection, the emission system test equipment will likely connect to the vehicle's Data Link Connector (DLC).



The DLC is under the instrument panel next to the steering wheel. See your dealer if assistance is needed.

The vehicle may not pass inspection if:

- The malfunction indicator lamp is on while the engine is running, or the malfunction indicator lamp is not on while the vehicle is in ON/RUN or Service Only Mode. See your dealer for assistance in verifying proper operation of the malfunction indicator lamp.
- The OBD II (On-Board Diagnostics) system determines that critical emission control systems have not been completely diagnosed by the system. If this were to occur, the vehicle would be considered not ready for inspection. This can happen if the 12-volt battery has recently been replaced or run down.

  The diagnostic system is designed to evaluate critical emission control systems during normal driving. This can take several days of driving. If this has been done and the vehicle still does not pass the inspection for lack of OBD II system readiness, your dealer can prepare the vehicle for inspection.

## Brake System Warning Light

The vehicle brake system consists of two hydraulic circuits. If one circuit is not working, the remaining circuit can still work to stop the vehicle. For normal braking performance, both circuits need to be working.

If the warning light comes on, there is a brake problem. Have the brake system inspected right away.

**Metric**

BRAKE

**English**

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

If the light comes on and stays on, there is a base brake problem.

**⚠ 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.

## Electric Parking Brake Light

PARK

**Metric** **English**

This light comes on when the parking brake is applied. If the light continues flashing after the parking brake is released, or while driving, there is a problem with the Electric Parking Brake system or another system. A message may also display in the Driver Information Center (DIC). See *Brake System Messages on page 5-31*.

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

## Service Electric Parking Brake Light

This light should come on briefly when the vehicle is in ON/RUN. If it does not come on, have it fixed so it will be ready to warn if there is a problem.

If this light stays on, there is a problem with the Electric Parking Brake system or another system on the vehicle that is causing the parking brake system to work at a reduced level. The vehicle can still be driven, but should be taken to a dealer as soon as possible. See the information for the Electric Parking Brake under *Parking Brake on page 9-31*. If a message displays in the Driver Information Center (DIC), see *Brake System Messages on page 5-31*.

## Antilock Brake System (ABS) Warning Light

This light comes on briefly when the engine is started.

If the light does not come on, have it fixed so it will be ready to warn if there is a problem.

If the ABS light stays on, turn the ignition off.

If the light comes on while driving, stop as soon as it is safely possible and turn off the vehicle. Then start the engine again to reset the system. If the ABS light stays on, or comes on again while driving, the

vehicle needs service. A chime may also sound when the light comes on steady.

If the ABS light is the only light on, the vehicle has regular brakes, but the antilock brakes are not functioning.

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

See *Brake System Warning Light on page 5-20* and *Brake System Messages on page 5-31*.

## Lane Departure Warning (LDW) Light

If equipped, this light briefly comes on while starting the vehicle.

If it does not, have the vehicle serviced by your dealer. If the system is working normally, the indicator light then turns off.

This light comes on green when the system is on and ready to operate. When the system determines that the vehicle is leaving its lane without using the turn signal, this light will change to amber and flash.

See *Lane Departure Warning (LDW) on page 9-54*.

## Vehicle Ahead Indicator

If equipped, this light in the Driver Information Center (DIC) displays green when a vehicle is detected ahead.

This light will display amber when you are following a vehicle ahead much too closely.

See *Forward Collision Alert (FCA) System on page 9-48*.

## Traction Off Light

This light comes on briefly while starting the engine. If it does not, have the vehicle serviced by your dealer. If the system is working normally, the indicator light then turns off.

The traction off light comes on when the Traction Control System (TCS) has been turned off by pressing and releasing the TCS/StabiliTrak button.

This light and the StabiliTrak OFF light come on when StabiliTrak is turned off.

If the TCS is off, wheel spin is not limited. Adjust driving accordingly.

See *Traction Control/Electronic Stability Control on page 9-33*.

## StabiliTrak® OFF Light

This light comes on briefly while starting the engine. If it does not, have the vehicle serviced by your dealer.

This light comes on when the StabiliTrak system is turned off. If StabiliTrak is off, the Traction Control System (TCS) is also off.

If the StabiliTrak and TCS are off, the system does not assist in controlling the vehicle. Turn on the TCS and the StabiliTrak systems and the warning light turns off.

See *Traction Control/Electronic Stability Control on page 9-33*.

## Traction Control System (TCS)/StabiliTrak® Light

This light comes on briefly when the engine is started.

If the light does not come on, have the vehicle serviced by your dealer. If the system is working normally, the indicator light turns off.

If the light is on and not flashing, the TCS, and potentially the StabiliTrak system have been disabled. A DIC message may display. Check the DIC messages to determine which feature(s) is no longer functioning and whether the vehicle requires service.

If the indicator/warning light is on and flashing, the TCS and/or the StabiliTrak system is actively working.

See *Traction Control/Electronic Stability Control on page 9-33*.

## Tire Pressure Light

For vehicles with the Tire Pressure Monitor System (TPMS), this light comes on briefly when the engine 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. See *Tire Messages on page 5-38*. Stop as soon as possible, and inflate the tires to the pressure value shown on the Tire and Loading Information label. See *Tire Pressure on page 10-50*.

**When the Light Flashes First and Then Is On Steady**

If the light flashes for about a minute and then stays on, there may be a problem with the TPMS. If the problem is not corrected, the light will come on at every ignition cycle. See *Tire Pressure Monitor Operation on page 10-52*.

## Engine Oil Pressure Light

**⚠ Caution**

Lack of proper engine oil maintenance can damage the engine. Driving with the engine oil low can also damage the engine. The repairs would not be covered by the vehicle warranty. Check the oil level as soon as possible. Add oil if required, but if the oil level is within the operating range and the oil pressure is still low, have the vehicle serviced. Always follow the maintenance schedule for changing engine oil.

This light should come on briefly as the engine is started. If it does not come on, have the vehicle serviced by your dealer.

If the light comes on and stays on, it means that oil is not flowing through the engine properly. The vehicle could be low on oil and might have some other system problem. See your dealer.

## Low Fuel Warning Light

This light is near the fuel gauge and comes on briefly when the ignition is turned on as a check to show it is working.

It also comes on when the fuel tank is low on fuel. The light turns off when fuel is added. If it does not, have the vehicle serviced.

## Security Light

The security light should come on briefly as the engine is started. If it does not come on, have the vehicle serviced by your dealer. If the system is working normally, the indicator light turns off.

If the light stays on and the engine does not start, there could be a problem with the theft-deterrent system. See *Immobilizer Operation (Key Access) on page 2-17* or *Immobilizer Operation (Keyless Access) on page 2-18*.

## High-Beam On Light

This light comes on when the high-beam headlamps are in use.

See *Headlamp High/Low-Beam Changer on page 6-1*.

## Lamps On Reminder

This light comes on when the exterior lamps are in use. See *Exterior Lamp Controls on page 6-1*.

## Cruise Control Light

This light in the Driver Information Center (DIC) is white when the cruise control is on and ready, and turns green when the cruise control is set and active.

See *Cruise Control on page 9-35*.

### Adaptive Cruise Control Light

This light in the Driver Information Center (DIC) is white when the Adaptive Cruise Control (ACC) (if equipped) is on and ready, and

turns green when the ACC is set and active. See *Adaptive Cruise Control on page 9-37*.

## Door Ajar Light

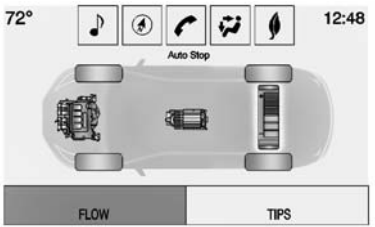
This light comes on in the Driver Information Center (DIC) when a door is open or not securely latched.

Before driving, check that all doors are properly closed.

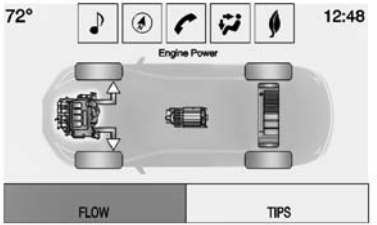
# Information Displays

## Power Flows (eAssist Only)

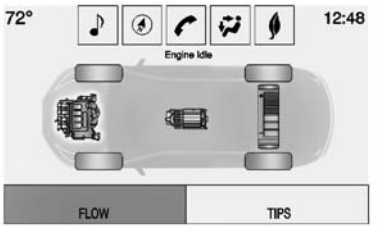
To view the Power Flow screens in the center stack display, press the button on the Home screen or on the Application Tray on the top of the infotainment system touch screen. Then press the Flow button at the bottom of the touch screen. These screens indicate the current operating condition and the energy flow between the engine, generator, and high voltage battery.



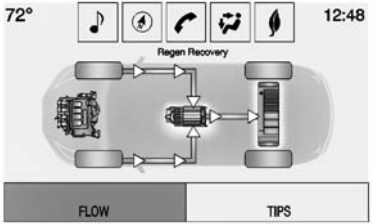

Auto Stop – Vehicle is stationary with battery active and no power is flowing to the wheels.



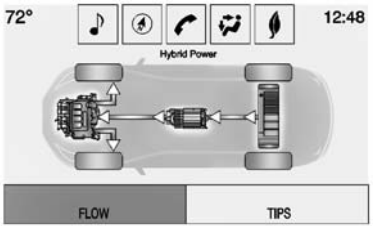

Engine Power – Engine is active with energy flowing to the wheels.



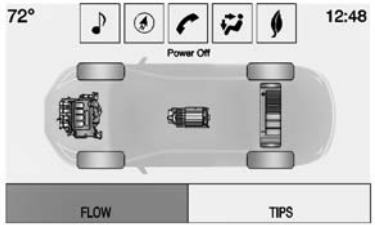

Engine Idle – Vehicle is stationary with engine active and no power is flowing to the wheels.




Regen Recovery – Power from the wheels returns to the battery during regenerative braking or coasting.




Hybrid Power – Both the engine and battery are active with energy flowing to the wheels.




Power Off – No power is flowing to the wheels.

## Energy Information (eAssist Only)

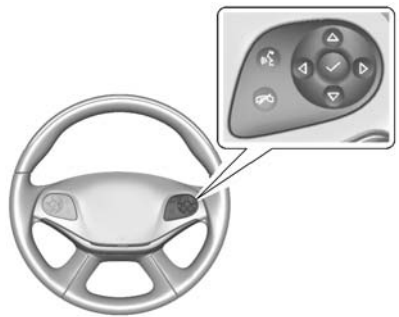
To view the Efficiency Tips screen on the center stack display, press the button on the Home screen or on the Application Tray on the top of the infotainment system touch screen. Then press the Tips button at the bottom of the touch screen.

### Efficiency Tips

The Efficiency Tips screen provides a guide on how to improve energy usage to increase fuel economy.

## Driver Information Center (DIC)

The DIC displays are shown in the center of the instrument cluster in the Info app. See *Instrument Cluster on page 5-9*. The Info app is only available when the vehicle is in ON/RUN. The displays show the status of many vehicle systems. The controls for the DIC are on the right steering wheel control.



△ **or** ▽ **:** Press to move up or down in a list, or on the main view press to cycle through the different Info app pages.

◁ **or** ▷ **:** Press ◁ to open application menus on the left. Press ▷ to open interaction menus on the right.

✓ **:** Press to select a menu item. Press and hold to reset values on certain screens, or on the main view reset info pages to the original setting.

## DIC Info Page Options

The info pages on the DIC can be turned on or off through the Settings app.

1. Press ◁ to access the cluster applications.
2. Press △ or ▽ to scroll to the Settings application.
3. Press ✓ to select the Settings app.
4. Scroll to Info Pages and press ▷.
5. Select Edit List.
6. Press △ or ▽ to move through the list of possible information displays.
7. Press ✓ while an item is highlighted to select or deselect that item. When an item is selected, a checkmark will appear next to it.

## DIC Info Pages

The following is the list of all possible DIC info page displays. Some may not be available for your particular vehicle. Some items may not be turned on by default but can be turned on through the Settings app. See “DIC Info Page Options” earlier in this section.

**Current Speed:** Displays the vehicle speed in either kilometers per hour (km/h) or miles per hour (mph).

**Trip A and Average Fuel Economy or Trip B and Average Fuel Economy:** The Trip display shows the current distance traveled, in either kilometers (km) or miles (mi), since the trip odometer was last reset.

The Average Fuel Economy display shows the approximate average liters per 100 kilometers (L/100 km) or miles per gallon (mpg). This number is calculated based on the number of L/100 km (mpg) recorded since the last time this menu item was reset.

The Average Fuel Economy and trip odometer can be reset together by pressing and holding ✓ while this display is active.

**Fuel Range:** Displays the approximate distance the vehicle can be driven without refueling. LOW will be displayed when the vehicle is low on fuel. The fuel range estimate is based on an average of the vehicle's fuel

economy over recent driving history and the amount of fuel remaining in the fuel tank.

**Instantaneous Fuel Economy:** Displays the current fuel economy in either liters per 100 kilometers (L/100 km) or miles per gallon (mpg). This number reflects only the fuel economy that the vehicle has right now and changes frequently as driving conditions change.

**Average Speed:** Displays the average speed of the vehicle in kilometers per hour (km/h) or miles per hour (mph). This average is calculated based on the various vehicle speeds recorded since the last reset of this value. The average speed can be reset by pressing and holding ✓ while this display is active.

**Timer:** To start the timer, press ✓ while this display is active. The display will show the amount of time that has passed since the timer was last reset. To stop the timer, press ✓ briefly while this display is active and the timer is running. To reset the timer to zero, press and hold ✓ while this display is active.

**Oil Life:** Displays an estimate of the oil's remaining useful life. If REMAINING OIL LIFE 99% is displayed, that means 99% of the current oil life remains.

When the remaining oil life is low, the CHANGE ENGINE OIL SOON message will appear on the display. See *Engine Oil Messages on page 5-33*. The oil should be changed as soon as possible. See *Engine Oil on page 10-11*. In addition to the engine oil life system monitoring the oil life, additional maintenance is recommended in the Maintenance Schedule. See *Maintenance Schedule on page 11-2*.

The Oil Life display must be reset after each oil change. It will not reset itself. Do not reset the Oil Life display accidentally at any time other than when the oil has just been changed. It cannot be reset accurately until the next oil change. To reset the engine oil life system, press and hold ✓ for several seconds while the Oil Life display is active. See *Engine Oil Life System on page 10-14*.

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

**Tire Pressure:** Displays the approximate pressures of all four tires. Tire pressure is displayed in either kilopascal (kPa) or in pounds per square inch (psi). If the pressure is low, the value for that tire is shown in amber. See *Tire Pressure Monitor System on page 10-51* and *Tire Pressure Monitor Operation on page 10-52*.

**Battery Voltage:** Displays the current battery voltage. The battery voltage can fluctuate while viewing this information on the DIC. This is normal.

**Speed Signs:** Displays sign information, which comes from a roadway database in the onboard navigation.

**Driver Efficiency Gauge (eAssist Only):** Assists in driving efficiently and will vary based on driver input. To maximize efficiency, keep the leaf in the solid green zone in the center of the gauge. The gauge moves to the left when braking and to the right when accelerating. When either is done aggressively, the vehicle is being driven less efficiently and the gauge will move further from the center.

# Vehicle Messages

Messages displayed on the DIC indicate the status of the vehicle or some action that may be needed to correct a condition. Multiple messages may appear one after another.

The messages that do not require immediate action can be acknowledged and cleared by pressing ✓ (Set/Reset).

The messages that require immediate action cannot be cleared until that action is performed.

All messages should be taken seriously; clearing the message does not correct the problem.

The following are the possible messages and some information about them.

## Battery Voltage and Charging Messages

### BATTERY SAVER ACTIVE

This message displays when the vehicle has detected that the battery voltage is dropping beyond a reasonable point. The battery saver system starts reducing features of the vehicle that may be noticed. At the point that features are disabled, this message displays. Turn off unnecessary accessories to allow the battery to recharge.

### LOW BATTERY

This message is displayed when the battery voltage is low. See *Battery on page 10-27*.

### SERVICE BATTERY CHARGING SYSTEM

This message is displayed when there is a fault in the battery charging system. Take the vehicle to your dealer for service.

## Brake System Messages

### BRAKE FLUID LOW

This message is displayed when the brake fluid level is low. See *Brake Fluid on page 10-26*.

### PARK BRAKE RELEASED

This message is displayed when the parking brake is released.

### PARK BRAKE SET

This message is displayed when the parking brake is set.

### RELEASE PARKING BRAKE

This message is displayed if the Electric Parking Brake is on while the vehicle is in motion. See *Parking Brake on page 9-31*.

### SERVICE BRAKE ASSIST

This message may be displayed when there is a problem with the brake boost assist system. When this message is displayed, the brake boost assist motor might be heard operating and you might notice pulsation in the brake pedal. This is normal under these conditions. Take the vehicle to your dealer for service.

### SERVICE PARKING BRAKE

This message is displayed when there is a problem with the parking brake. Take the vehicle to your dealer for service.

### STEP ON BRAKE TO RELEASE PARK BRAKE

This message is displayed if you attempt to release the Electric Parking Brake without the brake pedal applied. See *Parking Brake on page 9-31*.

## Compass Messages

Dashes may be displayed if the vehicle temporarily loses communication with the Global Positioning System (GPS).

## Cruise Control Messages

### ADAPTIVE CRUISE SET TO XXX

This message displays when the Adaptive Cruise Control (ACC) speed is set. See *Adaptive Cruise Control on page 9-37*.

### ADAPTIVE CRUISE TEMPORARILY UNAVAILABLE

This message displays when attempting to activate Adaptive Cruise Control (ACC) when it is temporarily unavailable. The ACC system does not need service.

This can most commonly occur under the following conditions, but may also display for other reasons:

- The radar is not clean. Keep the radar sensors free of mud, dirt, snow, ice, and slush. Clean the entire front and/or rear of the vehicle. For cleaning instructions, see *Exterior Care on page 10-77*.

- Heavy rain or snow is interfering with the radar object detection performance.

### CRUISE RADAR CAN'T SEE — SEE OWNERS MANUAL

If the ACC does not activate or may soon disengage due to a temporary condition, this message may display. This can occur under the following conditions:

- The radar is not clean. Keep the radar sensors free of mud, dirt, snow, ice, and slush. For cleaning instructions, see *Exterior Care on page 10-77*.
- Heavy rain or snow is interfering with the radar object detection performance.
- The vehicle is passing through an open area, such as the desert, where there is insufficient data for operation

### CRUISE SET TO XXX

This message displays when the cruise control speed is set. See *Cruise Control on page 9-35*.

### NO CRUISE BRAKING — GAS PEDAL APPLIED

This message displays when Adaptive Cruise Control (ACC) is active and the driver is pressing the gas pedal. When this occurs, ACC will not brake. See *Adaptive Cruise Control on page 9-37*.

### SERVICE ADAPTIVE CRUISE CONTROL

This message displays when the Adaptive Cruise Control (ACC) needs service. Take the vehicle to your dealer.

## Door Ajar Messages

### DOOR OPEN

A door open symbol will display on the DIC showing which door is open. If the vehicle has been shifted out of P (Park), a DOOR OPEN message will also be displayed. If the shift lever is in M (Manual Mode), the DOOR OPEN message will display if the vehicle starts to move. Close the door completely.

### HOOD OPEN

This message will display along with a hood open symbol when the hood is open. Close the hood completely.

### TRUNK OPEN

This message will display along with a symbol when the trunk is open. Close the trunk completely.

## Engine Cooling System Messages

### A/C OFF DUE TO HIGH ENGINE TEMP

This message displays when the engine coolant becomes hotter than the normal operating temperature. To avoid added strain on a hot engine, the air conditioning compressor automatically turns off. When the coolant temperature returns to normal, the air conditioning compressor turns back on. The vehicle can continue to be driven.

If this message continues to appear, have the system repaired by your dealer as soon as possible to avoid damage to the engine.

### ENGINE OVERHEATED — IDLE ENGINE

This message displays when the engine coolant temperature is too hot. Stop and allow the vehicle to idle until it cools down.

### ENGINE OVERHEATED — STOP ENGINE

This message displays and a continuous chime sounds if the engine cooling system reaches unsafe temperatures for operation. Stop and turn off the vehicle as soon as it is safe to do so to avoid severe damage. This message clears when the engine has cooled to a safe operating temperature.

## Engine Oil Messages

### CHANGE ENGINE OIL SOON

This message displays when the engine oil needs to be changed. When you change the engine oil, be sure to reset the oil life system. See *Engine Oil Life System on page 10-14*, *Driver Information Center (DIC) on page 5-27*, *Engine Oil on page 10-11*, and *Maintenance Schedule on page 11-2*.

### ENGINE OIL HOT, IDLE ENGINE

This message displays when the engine oil temperature is too hot. Stop and allow the vehicle to idle until it cools down.

### ENGINE OIL LOW — ADD OIL

On some vehicles, this message displays when the engine oil level may be too low. Check the oil level before filling to the recommended level. If the oil is not low and this message remains on, take the vehicle to your dealer for service. See *Engine Oil on page 10-11*.

### OIL PRESSURE LOW — STOP ENGINE

This message displays if low oil pressure levels occur. Stop the vehicle as soon as safely possible and do not operate it until the cause of the low oil pressure has been corrected. Check the oil as soon as possible and have the vehicle serviced by your dealer.

## Engine Power Messages

### ENGINE POWER IS REDUCED

This message displays when the vehicle's engine power is reduced. Reduced engine power can affect the vehicle's ability to accelerate. If this message is on, but there is no reduction in performance, proceed to your destination. The performance may be reduced the next time the vehicle is driven. The vehicle may be driven at a reduced speed while this message is on, but maximum acceleration and speed may be reduced. Anytime this message stays on, the vehicle should be taken to your dealer for service as soon as possible.

## Fuel System Messages

### FUEL LEVEL LOW

This message displays when the vehicle is low on fuel. Refuel as soon as possible

### TIGHTEN GAS CAP

This message displays when the fuel cap is not on tight. Tighten the fuel cap.

## Key and Lock Messages

### NO REMOTE DETECTED

This message displays when trying to start the vehicle if an RKE transmitter is not detected. The transmitter battery may be weak. See “Starting the Vehicle with a Low Transmitter Battery or Wireless Interference” under *Remote Keyless Entry (RKE) System Operation on page 2-3*.

### NO REMOTE PRESS BRAKE TO RESTART

This message is displayed if the remote is no longer detected in the vehicle. Press the brake pedal to restart the vehicle.

### NUMBER OF KEYS PROGRAMMED

This message displays when programming new keys to the vehicle.

### REMOTE LEFT IN VEHICLE

This message displays when leaving the vehicle with the RKE transmitter still inside.

### REPLACE BATTERY IN REMOTE KEY

This message displays when the battery in the RKE transmitter needs to be replaced.

### USE TRANSMITTER POCKET TO START

This message displays when the transmitter needs to be placed in the transmitter pocket to start the vehicle. See “Starting the Vehicle with a Low Transmitter Battery or Wireless Interference” under *Remote Keyless Entry (RKE) System Operation on page 2-3*.

## Lamp Messages

### AUTOMATIC LIGHT CONTROL ON/OFF

This message is displayed when the automatic light control has been turned on or off. See *Automatic Headlamp System on page 6-2*.

### XX TURN INDICATOR FAILURE

When one of the turn signals is out, this message displays to show which bulb needs to be replaced. See *Bulb Replacement on page 10-31* and *Replacement Bulbs on page 10-35*.

### TURN SIGNAL ON

This message is displayed if the turn signal has been left on. Turn off the turn signal.

## Object Detection System Messages

### AUTOMATIC COLLISION PREP OFF

This message displays when the Active Emergency Braking System has been turned off. See *Active Emergency Braking System on page 9-51*.

### AUTOMATIC COLLISION PREP REDUCED

This message displays when the Active Emergency Braking System has been set to the Alert setting. This setting disables most Active Emergency Braking functions. Some last-second automatic braking capability is still provided with the Alert setting, but braking is less likely to occur. See *Active Emergency Braking System on page 9-51*.

### AUTOMATIC COLLISION PREP UNAVAILABLE

This message displays when the Active Emergency Braking System has been unavailable for some time. The Active Emergency Braking System does not need service. This can occur under the following conditions:

- The radar is not clean. Keep the radar sensors free of mud, dirt, snow, ice, and slush. Clean the entire front and/or rear of the vehicle. For cleaning instructions, see *Exterior Care on page 10-77*.
- Heavy rain or snow is interfering with the radar object detection or camera performance.

This message may also be displayed if there is a problem with the StabiliTrak system.

### FORWARD COLLISION ALERT OFF

This message displays when the Forward Collision Alert has been turned off.

### FRONT CAMERA BLOCKED CLEAN WINDSHIELD

This message displays when the camera is blocked. Cleaning the outside of the windshield behind the rearview mirror may correct the issue. The Lane Departure Warning system will not operate. Forward Collision Alert (FCA) may not work or may not work as well.

### LANE DEPARTURE WARNING UNAVAILABLE

This message displays when attempting to activate the Lane Departure Warning (LDW) system when it is temporarily unavailable. The LDW system does not need service.

This message could be due to the camera being blocked. Cleaning the outside of the windshield behind the rearview mirror may correct the issue.

### PARK ASSIST OFF

This message displays when the Parking Assist system has been turned off or when there is a temporary condition causing the system to be disabled.

### REAR CROSS TRAFFIC ALERT OFF

This message displays when the Rear Cross Traffic Alert has been turned off.

### SERVICE AUTOMATIC COLLISION PREP

If this message displays, take the vehicle to your dealer to repair the system. Adaptive Cruise Control (ACC), Forward Collision Alert (FCA), and/or the Active Emergency Braking System may not work. Do not use these systems until the vehicle has been repaired.

### SERVICE FRONT CAMERA

If this message remains on after continued driving, the vehicle needs service. Do not use the Lane Departure Warning (LDW) and Forward Collision Alert (FCA) features. Take the vehicle to your dealer.

### SERVICE PARKING ASSIST

This message displays if there is a problem with the Parking Assist system. Do not use this system to help you park. See your dealer for service.

### SERVICE SIDE DETECTION SYSTEM

If this message remains on after continued driving, the vehicle needs service. Side Blind Zone Alert (SBZA) and Rear Cross Traffic Alert (RCTA) features will not work. Take the vehicle to your dealer.

### SHIFT TO PARK BEFORE EXITING

This message may display if Adaptive Cruise Control (ACC) is engaged holding the vehicle at a stop, and the driver attempts to exit the vehicle. Put the vehicle in P (Park) before exiting.

### SIDE BLIND ZONE ALERT OFF

This message indicates that the driver has turned the Side Blind Zone Alert (SBZA) system off.

### SIDE DETECTION SYSTEM UNAVAILABLE

This message indicates that Side Blind Zone Alert (SBZA) and Rear Cross Traffic Alert (RCTA) are disabled either because the sensor is blocked and cannot detect vehicles in the blind zone, or the vehicle is passing through an open area, such as the desert, where there is insufficient data for operation. This message may also activate during heavy rain or due to road spray. The vehicle does not need service. For cleaning, see "Washing the Vehicle" under *Exterior Care on page 10-77*.

## Ride Control System Messages

### SERVICE STABILITRAK

This message displays if there is a problem with the StabiliTrak system. If this message appears, try to reset the system. Stop; turn off the engine for at least 15 seconds; then start the engine again. If this message still comes on, it means there is a problem. See your dealer for service. The vehicle is safe to drive; however, you do not have the benefit of StabiliTrak, so reduce your speed and drive accordingly.

## Airbag System Messages

### SERVICE AIRBAG

This message displays if there is a problem with the airbag system. Take the vehicle to your dealer for service.

## Security Messages

### THEFT ATTEMPTED

This message displays if the vehicle detects a tamper condition.

## Service Vehicle Messages

### SERVICE POWER STEERING

This message is displayed if there is a problem with the power steering system and a chime may sound. Take the vehicle to your dealer for service.

### SERVICE VEHICLE SOON

This message is displayed if there is a problem with the vehicle. Take the vehicle to your dealer for service.

## Starting the Vehicle Messages

### JUMP START ACTIVE WAIT TO START

This message displays while performing an on-board jump start of the vehicle. See “Jump Starting (On-board with eAssist Only).”

### JUMP START COMPLETE ATTEMPT START

This message displays while performing an on-board jump start of the vehicle. See “Jump Starting (On-board with eAssist Only).”

### JUMP START DISABLED SEE OWNERS MANUAL

This message displays if there is a problem with the on-board jump start system, or the 12 volt battery is too low to perform an on-board jump start. Try using jumper cables and performing a normal jump start. See “Jump Starting (On-board with eAssist Only).” Take the vehicle to your dealer for service if this message continues to be displayed.

### PRESS BRAKE TO START VEHICLE

This message is displayed when attempting to start the vehicle without first pressing the brake pedal.

### SERVICE KEYLESS START SYSTEM

This message is displayed if there is a problem with the pushbutton start system. Take the vehicle to your dealer for service.

## Tire Messages

### SERVICE TIRE MONITOR SYSTEM

This message displays if there is a problem with the Tire Pressure Monitor System (TPMS). See *Tire Pressure Monitor Operation on page 10-52*.

### TIRE LEARNING ACTIVE

This message displays when the system is learning new tires. See *Tire Pressure Monitor Operation on page 10-52*.

### TIRE PRESSURE LOW ADD AIR TO TIRE

On vehicles with the Tire Pressure Monitor System (TPMS), this message displays when the pressure in one or more of the vehicle's tires is low.

The low tire pressure warning light will also come on. See *Tire Pressure Light on page 5-23*.

If a tire pressure message displays, inflate the tires until the tire pressure is equal to the values shown on the Tire and Loading Information label. See *Tires on page 10-42*, *Vehicle Load Limits on page 9-10*, and *Tire Pressure on page 10-50*.

More than one tire pressure message can be received at a time. The DIC also shows the tire pressure values. See *Driver Information Center (DIC) on page 5-27*.

## Transmission Messages

### SERVICE TRANSMISSION

This message displays if there is a problem with the transmission. See your dealer.

### SHIFT DENIED

This message displays when using the Driver Shift Control (DSC) and attempting to shift to a gear not appropriate for the vehicle speed and engine revolutions per minute (rpm). See *Manual Mode on page 9-29*.

### SHIFT TO PARK

This message displays when the transmission needs to be shifted to P (Park). This may appear when attempting to remove the key from the vehicle if the vehicle is not in P (Park).

### TRANSMISSION HOT — IDLE ENGINE

This message displays and a chime sounds if the transmission fluid in the vehicle gets hot. Driving with the transmission fluid temperature high can cause damage to the vehicle. Stop the vehicle and let it idle to allow the transmission to cool. This message clears when the fluid temperature reaches a safe level.

## Vehicle Reminder Messages

### ICE POSSIBLE DRIVE WITH CARE

This message is displayed when ice conditions are possible.

### TURN WIPER CONTROL TO INTERMITTENT FIRST

This message is displayed when attempting to adjust the intermittent wiper speed without intermittent selected on the wiper control. See *Windshield Wiper/Washer on page 5-4*.

## Vehicle Speed Messages

### SPEED LIMIT EXCEEDED

This message is displayed when the vehicle speed is greater than the speed warning speed. See "Speed Warning" under *Instrument Cluster on page 5-9*.

### SPEED LIMIT SET TO XXX

This message is displayed when the speed warning is set. See "Speed Warning" under *Instrument Cluster on page 5-9*.

## Washer Fluid Messages

### WASHER FLUID LOW ADD FLUID

This message may display when the washer fluid level is low. See *Washer Fluid on page 10-24*.

## Window Messages

### OPEN, THEN CLOSE DRIVER/ PASSENGER WINDOW

This message is displayed when the window needs to be reprogrammed. If the vehicle's battery has been recharged or disconnected, you will need to index each front window for the express-up feature to work. See *Power Windows on page 2-21*.

# Vehicle Personalization

The audio system controls are used to access the personalization menus for customizing vehicle features.

**Base Radio Audio System Controls**

To access the personalization menus:

1. On the Home page, turn the MENU knob to highlight Settings and press the MENU knob.
2. Turn the MENU knob to highlight the desired feature and press the MENU knob to display a list of available options.
3. Turn the MENU knob to scroll through and highlight the desired option, then press the MENU knob.
4. Turn the MENU knob to highlight the desired option setting and press the MENU knob.
5. Press ◀ BACK to return to the previous menu.

**Uplevel Radio Audio System Controls**

To access the personalization menus:

1. Press SETTINGS on the Home page on the infotainment system display.
2. Press the desired feature to display a list of available options.
3. Press the desired option.
4. Press to select the desired option setting.
5. Press ◀ BACK to return to the previous menu.

## Personalization Menus

The following list of features may be available:

- Time and Date
- Language [Language]

- Valet Mode
- Radio
- Vehicle
- Bluetooth
- Voice
- Display
- Rear Camera
- Return to Factory Settings
- Software Information

Each menu is detailed in the following information.

## Time and Date

Manually set the time and date. See *Clock (Base Radio) on page 5-5* or *Clock (Uplevel Radio) on page 5-5*.

## Language [Language]

Select and the following may be displayed:

- English US
- Francais Canadian
- Espanol Latino

Select the language.

## Valet Mode

To turn valet mode on and off, see “Valet Mode” under “Setting Radio Preferences” in *Home Page on page 7-4*.

## Radio

To manage the radio features, see “Radio Setup” under “Setting Radio Preferences” in *Home Page on page 7-4*.

## Vehicle

Select and the following may be displayed:

- Climate and Air Quality
- Collision/Detection Systems
- Comfort and Convenience
- Lighting
- Power Door Locks
- Remote Lock, Unlock, Start

### Climate and Air Quality

Select and the following may be displayed:

- Auto Fan Max Speed
- Auto Defog
- Auto Rear Defog

### Auto Fan Max Speed

This feature will set the maximum auto fan speed.

Select Low, Medium, or High.

### Auto Defog

When set to On, the front defog will automatically react to temperature and humidity conditions that may cause fogging. Only vehicles with the dual automatic climate control will have this option.

Select Off or On.

**Auto Rear Defog**

If equipped, this allows the Auto Rear Defog to be turned on or off. This feature will automatically turn on the rear window defogger when it is cold outside.

Select Off or On.

**Collision/Detection Systems**

Select and the following may be displayed:

- Auto Collision Preparation
- Go Notifier
- Side Blind Zone Alert
- Rear Cross Traffic Alert

**Auto Collision Preparation**

This feature will turn on or off the Forward Collision Alert feature as well as the Automatic Braking capability of the Auto Collision Preparation feature. With the Alert and Brake setting, both Forward Collision Alert as well as the Automatic Braking capability of the Auto Collision Preparation feature are available. The Alert setting disables most automatic braking functions of the Auto Collision Preparation feature. Some last-second automatic braking capability is still provided with the Alert setting, but it is much less likely to be triggered by most driving conditions. Off disables all Forward Collision Alert and Automatic Braking capabilities of the Auto Collision Preparation feature.

Select Off, Alert and Brake, or Alert.

See *Driver Assistance Systems on page 9-45*.

**Go Notifier**

This feature will give a reminder that Adaptive Cruise Control provides when it has brought the vehicle to a complete stop behind another stopping vehicle, and then that vehicle drives on.

Select Off or On.

See *Active Emergency Braking System on page 9-51*.

**Side Blind Zone Alert**

This allows the feature to be turned on or off.

Select Off or On.

See *Side Blind Zone Alert (SBZA) on page 9-52*.

**Rear Cross Traffic Alert**

This allows the feature to be turned on or off.

Select Off or On.

See *Driver Assistance Systems on page 9-45*.

**Comfort and Convenience**

Select and the following may be displayed:

- Auto Memory Recall
- Easy Exit Options
- Chime Volume

**Auto Memory Recall**

This allows the feature to be turned on or off.

Select Off, On - Driver Door, or On - At Ignition On. See *Memory Seats on page 3-7*.

**Easy Exit Options**

This allows the feature to be turned on or off.

Select Off or On.

**Chime Volume**

This allows the selection of the chime volume level.

Press + or − to adjust the volume.

**Lighting**

Select and the following may be displayed:

- Vehicle Locator Lights
- Exit Lighting
- Daytime Tail Lights

**Vehicle Locator Lights**

This feature will flash the exterior lamps when 🔓 on the Remote Keyless Entry (RKE) transmitter is pressed to locate the vehicle.

Select Off or On.

**Exit Lighting**

This allows the selection of how long the exterior lamps stay on when leaving the vehicle when it is dark outside.

Select Off, 30 Seconds, 60 Seconds, or 120 Seconds.

**Daytime Tail Lights**

This feature allows the taillamps to be on during the day.

Select Off or On.

**Power Door Locks**

Select and the following may be displayed:

- Unlocked Door Anti Lock Out
- Auto Door Unlock
- Delayed Door Lock

**Unlocked Door Anti Lock Out**

When on, this feature will keep the driver door from locking when the door is open. If Off is selected, the Delayed Door Lock menu will be available.

Select Off or On.

**Auto Door Unlock**

This allows selection of which of the doors will automatically unlock when the vehicle is shifted into P (Park).

Select Off, All Doors, or Driver Door.

**Delayed Door Lock**

When on, this feature will delay the locking of the doors. To override the delay, press the power door lock switch on the door.

Select Off or On.

**Remote Lock, Unlock, Start**

Select and the following may be displayed:

- Remote Unlock Light Feedback
- Remote Lock Feedback
- Remote Door Unlock
- Remote Start Auto Cool Seats
- Remote Start Auto Heat Seats
- Passive Door Unlock
- Passive Door Lock
- Remote Left in Vehicle Reminder

**Remote Unlock Light Feedback**

When on, the exterior lamps will flash when unlocking the vehicle with the RKE transmitter.

Select Off or Flash Lights.

**Remote Lock Feedback**

This allows selection of what type of feedback is given when locking the vehicle with the RKE transmitter.

Select Off, Lights and Horn, Lights Only, or Horn Only.

**Remote Door Unlock**

This allows selection of which doors will unlock when pressing 🔓 on the RKE transmitter.

Select All Doors or Driver Door Only.

**Remote Start Auto Cool Seats**

If equipped and turned on, this feature will turn the vented seats on when using remote start on warm days.

Select Off or On.

**Remote Start Auto Heat Seats**

If equipped and turned on, this feature will turn the heated seats on when using remote start on cold days.

Select Off or On.

**Passive Door Unlock**

This allows the selection of what doors will unlock when using the button on the driver door to unlock the vehicle.

Select All Doors or Driver Door Only.

**Passive Door Lock**

This feature can be turned on or off, or can be used to select feedback when using the button on the driver door to lock the vehicle. See *Remote Keyless Entry (RKE) System Operation on page 2-3*.

Select On, On with Horn Chirp, or Off.

**Remote Left in Vehicle Reminder**

This feature sounds an alert when the RKE transmitter is left in the vehicle.

Select Off or On.

## Bluetooth

Select and the following may be displayed:

- Pair New Device
- Device Management
- Ringtones
- Voice Mail Numbers

**Pair New Device**

Select to pair a new device. See "Pairing" under *Bluetooth (Infotainment Controls) on page 7-20* or *Bluetooth (Voice Recognition) on page 7-24* or *Bluetooth (Overview) on page 7-18* or "Pairing" under "Bluetooth" in the infotainment manual.

**Device Management**

Select to connect to a different phone source, disconnect a phone, or delete a phone.

**Ringtones**

Press to change the ring tone for the specific phone. The phone does not need to be connected to change the ring.

**Voice Mail Numbers**

This feature displays the voice mail number for all connected phones. The voice mail number may be changed by selecting EDIT or pressing the EDIT button and typing in a new number, then select SAVE or press the SAVE button.

## Voice

Select and the following may be displayed:

- Prompt Length
- Audio Feedback Speed

**Prompt Length**

This feature adjusts the voice prompt length.

Select Short or Long.

**Audio Feedback Speed**

This feature adjusts the audio feedback speed.

Select Slow, Medium, or Fast.

## Display

Select and the following may be displayed:

- Theme
- Calibrate Touchscreen
- Turn Display Off

**Theme**

Select to change the color, font, and art of the display.

Select Contemporary, Mainstreet, Edge, or Velocity.

**Calibrate Touchscreen**

Select to calibrate the touchscreen, then follow the prompts.

**Turn Display Off**

Select to turn the display off. Press anywhere on the display area or any faceplate button to turn the display on.

## Rear Camera

Select and the following may be displayed:

- Guidance Lines
- Rear Cross Traffic Alert
- Rear Park Assist Symbols

**Guidance Lines**

Select to turn Off or On. See *Assistance Systems for Parking or Backing on page 9-46*.

**Rear Cross Traffic Alert**

Select to turn Off or On. See *Assistance Systems for Parking or Backing on page 9-46*.

**Rear Park Assist Symbols**

Select to turn Off or On. See *Assistance Systems for Parking or Backing on page 9-46*.

### Return to Factory Settings

Select and the following may be displayed:

- Restore Vehicle Settings
- Clear All Private Data
- Restore Radio Settings

**Restore Vehicle Settings**

This allows selection of restoring vehicle settings.

Select Cancel or Continue.

**Clear All Private Data**

This allows selection to clear all private information from the vehicle.

Select Cancel or Continue.

**Restore Radio Settings**

This allows selection to restore radio settings.

Select Cancel or Continue.

### Software Information

Select to view the infotainment system current software information.

# Universal Remote System

See *Radio Frequency Statement on page 13-15*.

## Universal Remote System Programming

If equipped, these buttons are in the overhead console.

This system can replace up to three remote control transmitters used to activate devices such as garage door openers, security systems, and

home automation devices. These instructions refer to a garage door opener, but can be used for other devices.

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

Read these instructions completely before programming the Universal Remote system. It may help to have another person assist with the programming process.

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

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

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

### Programming the Universal Remote System

For questions or help programming the Universal Remote system, call 1-800-355-3515 or see www.homelink.com.

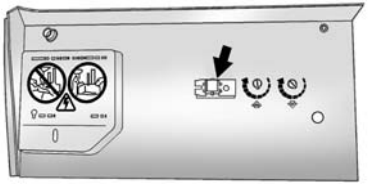
Programming involves time-sensitive actions, and may time out causing the procedure to be repeated.

To program up to three devices:

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

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

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



**Learn or Smart Button**

4. After completing Steps 1–3 , locate the Learn or Smart button inside garage on the garage door opener receiver. The name and color of the button may vary by manufacturer.
5. Press and release the Learn or Smart button. Step 6 must be completed within 30 seconds of pressing this button.
6. Inside the vehicle the vehicle, press and hold the newly programmed Universal Remote system button for two seconds and then release it. If the garage door does not move or the lamp on the garage door opener receiver does not flash, press and hold the same button a second time for two seconds, then release it. Again, if the door does not move or the garage door lamp does not flash, press and hold the same button a third time for two seconds, then release it.

The Universal Remote system should now activate the garage door.

Repeat the process for programming the two remaining buttons.

## Radio Signals for Canada and Some Gate Operators

For questions or programming help call 1-800-355-3515 or see www.homelink.com.

Canadian radio-frequency laws and some U.S. gate operators require transmitter signals to time out or quit

after several seconds of transmission. This may not be long enough for the Universal Remote system to pick up the signal during programming.

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

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

## Universal Remote System Operation

### Using the Universal Remote System

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

### Erasing Universal Remote System Buttons

Erase all programmed buttons when vehicle ownership is terminated.

To erase:

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

### Reprogramming a Single Universal Remote System Button

To reprogram any of the system buttons:

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

## ✍ NOTES

# Lighting

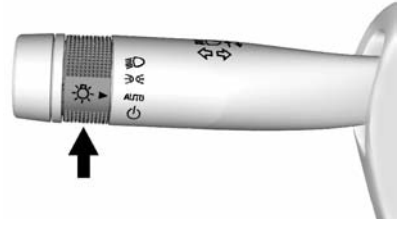

**Exterior Lighting**
Exterior Lamp Controls . . . . . 6-1
Exterior Lamps Off Reminder . . . . . 6-1
Headlamp High/Low-Beam Changer . . . . . 6-1
Flash-to-Pass . . . . . 6-2
Daytime Running Lamps (DRL) . . . . . 6-2
Automatic Headlamp System . . . . . 6-2
Hazard Warning Flashers . . . . . 6-3
Turn and Lane-Change Signals . . . . . 6-3

**Interior Lighting**
Instrument Panel Illumination Control . . . . . 6-4
Courtesy Lamps . . . . . 6-4
Dome Lamps . . . . . 6-4
Reading Lamps . . . . . 6-5

**Lighting Features**
Entry Lighting . . . . . 6-5
Exit Lighting . . . . . 6-6
Battery Load Management . . . . 6-6


# Exterior Lighting

## Exterior Lamp Controls




The exterior lamp control is on the turn signal lever.

Turn the control to the following positions:

⏻ **(Off):** Turns off the exterior lamps. The knob returns to the AUTO position after it is released.

Turn to ⏻ again to reactivate the AUTO mode.

In Canada, the headlamps and Daytime Running Lamps (DRL) will automatically reactivate when the vehicle is shifted out of P (Park).

**AUTO (Automatic):** Automatically turns the exterior lamps on and off, depending on outside lighting.

**(Parking Lamps):** Turns on the parking lamps including all lamps, except the headlamps.

**(Headlamps):** Turns on the headlamps together with the parking lamps and instrument panel lights.

## Exterior Lamps Off Reminder

A warning chime sounds if the driver door is opened while the ignition is off and the exterior lamps are on.

## Headlamp High/ Low-Beam Changer

**(Headlamp High/Low-Beam Changer):** Push the turn signal lever away from you and release, to turn the high beams on. To return to low beams, push the lever again or pull it toward you and release.

This indicator light turns on in the instrument cluster when the high-beam headlamps are on.

## Flash-to-Pass

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

## Daytime Running Lamps (DRL)

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

The DRL system turns on the low-beam headlamps at a reduced brightness. For vehicles with High Intensity Discharge (HID) headlamps, there is a dedicated DRL. The DRL will come on when all of the following conditions are met:

- The ignition is on.
- The exterior lamp control is in AUTO.
- The light sensor determines it is daytime.
- The vehicle is not in P (Park).

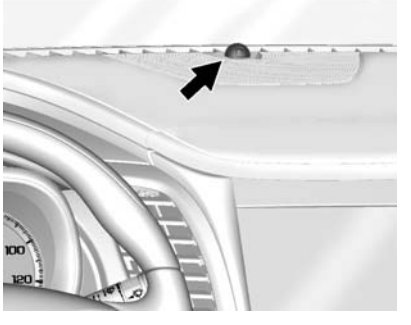
When the DRL are on, the taillamps, sidemarker lamps, instrument panel lights, and other lamps will not be on.

The DRL turn off when the headlamps are turned to ⏻ or the ignition is off.

This vehicle may have a DRL disabling function. When the DRL are on and a turn signal is activated, the DRL on that side will be off until the turn signal goes off.

## Automatic Headlamp System

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



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

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

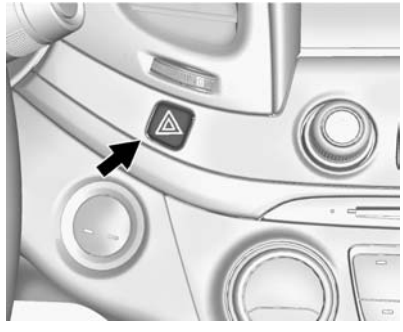
When it is bright enough outside, the headlamps will turn off or may change to Daytime Running Lamps (DRL).

The automatic headlamp system turns off when the exterior lamp control is turned to ⏻ or the ignition is off.

### Lights On with Wipers

If the windshield wipers are activated in daylight with the engine on, and the exterior lamp control is in AUTO, the headlamps, parking lamps, and other exterior lamps come on. The transition time for the lamps coming on varies based on wiper speed. When the wipers are not operating, these lamps turn off. Move the exterior lamp control to ⏻ or ≋ to disable this feature.

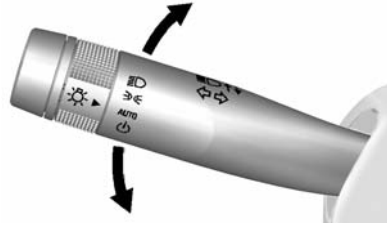
## Hazard Warning Flashers



⚠ **(Hazard Warning Flashers):** Press this button to make the front and rear turn signal lamps flash on and off. Press again to turn the flashers off.

The hazard warning flashers turn on automatically if the airbags deploy.

## Turn and Lane-Change Signals




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

An arrow on the instrument cluster flashes in the direction of the turn or lane change.

Raise or lower the lever until the arrow starts to flash to signal a lane change. Hold it there until the lane change is completed. If the lever is briefly pressed and released, the turn signal flashes three times.

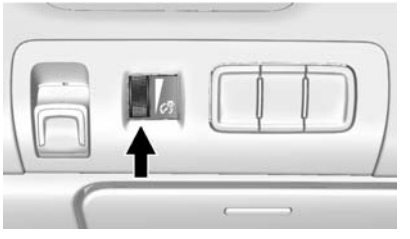
The turn and lane-change signal can be turned off manually by moving the lever back to its original position.

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

Have any burned out bulbs replaced. If a bulb is not burned out, check the fuse. See *Fuses on page 10-36*.

# Interior Lighting

## Instrument Panel Illumination Control



The brightness of the instrument panel lighting and steering wheel controls can be adjusted.

**(Instrument Panel Illumination):** Move the thumbwheel up or down to brighten or dim the lights.

## Courtesy Lamps

The courtesy lamps come on when any door is opened and the dome lamp is in the DOOR position.

## Dome Lamps

The interior lamps control in the overhead console controls both the front and rear interior lamps.

To change the dome lamp settings, press the following:

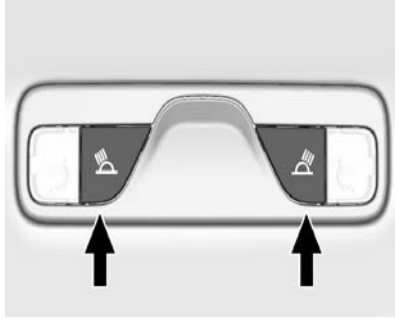
**OFF:** Turns the lamp off, even when a door is open.

**DOOR:** The lamp comes on automatically when a door is opened.

**ON:** Turns the lamp on.

## Reading Lamps

**Front Reading Lamps**



**Rear Reading Lamps**

There are front and rear reading lamps in the overhead console and the headliner.

**or (Reading Lamps):** Press the button near each lamp to turn it on or off.

# Lighting Features

## Entry Lighting

The headlamps, taillamps, license plate lamps, back-up lamps, dome lamps, and most of the interior lights turn on briefly when the Remote Keyless Entry (RKE) transmitter button is pressed. See *Ignition Positions (Keyless Access) on page 9-15* or *Ignition Positions (Key Access) on page 9-17*. After about 30 seconds the exterior lamps turn off, then the dome lamps and remaining interior lights dim to off. Entry lighting can be disabled manually by changing the ignition out of the OFF position, or by pressing the RKE transmitter button.

This feature can be changed. See *Vehicle Personalization on page 5-40*.

## Exit Lighting

The headlamps, taillamps, parking lamps, and license plate lamps come on at night, or in areas with limited lighting, when the key is removed from the ignition. The dome lamps also come on when the key is removed from the ignition. The exterior lamps and dome lamps remain on after the door is closed for a set amount of time, then automatically turn off.

If equipped with Keyless Access, the exterior lamps and dome lamps automatically turn on when the driver door is opened after the ignition is turned off. See *Ignition Positions (Keyless Access) on page 9-15* or *Ignition Positions (Key Access) on page 9-17*.

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

This feature can be changed. See *Vehicle Personalization on page 5-40*.

## Battery Load Management

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

When the battery's state of charge is low, the voltage is raised slightly to quickly bring the charge back up. When the state of charge is high, the voltage is lowered slightly to prevent overcharging. If the vehicle has a voltage display on the Driver Information Center (DIC), you may see the voltage move up or down. This is normal. If there is a problem, an alert will be displayed.

The battery can be discharged at idle if the electrical loads are very high. This is true for all vehicles. This is because the generator (alternator) may not be spinning fast enough at idle to produce all the power that is needed for very high electrical loads.

A high electrical load occurs when several of the following are on, such as: headlamps, high beams, fog lamps, rear window defogger, climate control fan at high speed, heated seats, engine cooling fans, trailer loads, and loads plugged into accessory power outlets.

EPM works to prevent excessive discharge of the battery. It does this by balancing the generator's output and the vehicle's electrical needs. It can increase engine idle speed to generate more power, whenever needed. It can temporarily reduce the power demands of some accessories.

Normally, these actions occur in steps or levels, without being noticeable. In rare cases at the highest levels of corrective action, this action may be noticeable to the driver. If so, a DIC message might be displayed and it is recommended that the driver reduce the electrical loads as much as possible. See *Battery Voltage and Charging Messages on page 5-30*.

# Infotainment System

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# Introduction

## Infotainment

Read the following pages to become familiar with the infotainment system featured in this owner manual.

**⚠ Warning**

**Taking your eyes off the road for too long or too often while using any infotainment features can cause a crash resulting in injury or death. Do not give extended attention to infotainment tasks while driving. Focus your attention on driving and limit glances to the instrument cluster or center stack screens. Use voice guidance whenever possible.**

The infotainment system has built-in features intended to help with this by disabling some functions when

driving. A grayed-out function is not available when the vehicle is moving.

All functions are available when the vehicle is parked. Before driving:

- Become familiar with the infotainment system operation and buttons on the faceplate.
- Set up the audio by presetting favorite stations, setting the tone, and adjusting the speakers.
- Set up phone numbers in advance so they can be called easily by pressing a single button or by using a single voice command for vehicles equipped with phone capability.

See *Defensive Driving on page 9-3*.

The vehicle has Retained Accessory Power (RAP). With RAP, the audio system can be played even after the ignition is turned off. See *Retained Accessory Power (RAP) on page 9-24*.

The base radio information is included in this manual, if equipped. See the infotainment manual for information on the uplevel radios, audio players, phone, navigation system, and voice or speech recognition. There is also information on settings.

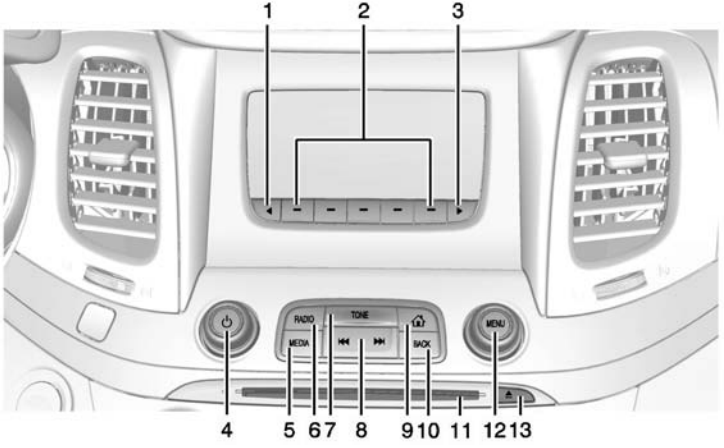
## Theft-Deterrent Feature

TheftLock® is designed to discourage theft of the vehicle's radio by learning a portion of the Vehicle Identification Number (VIN). The radio does not operate if it is stolen or moved to a different vehicle.

# Overview

## Infotainment System Overview

The infotainment system is controlled by using the buttons on the faceplate and steering wheel controls. See *Steering Wheel Controls on page 5-3*.




1. ◀ (Favorite Pages)
   - Press to scroll backward through the favorite pages.
2. Buttons 1–5
   - Press to select favorite stations.
   - Press and hold to save favorite stations.
   - Press to select options.
3. ▶ (Favorite Pages)
   - Press to scroll forward through the favorite pages.
4. ⏻ (Power/Volume)
   - Press to turn the audio on.
   - Press and hold to turn it off.
   - When on, press to mute the system. Press again to unmute.
   - Turn to increase or decrease the volume.

5. MEDIA
   - Press to change the audio source between CD, USB, SD Card, and AUX.
6. RADIO
   - Press to change the audio source between AM, FM, or SiriusXM, if equipped.
7. TONE
   - Press to open the Tone Settings menu.
8. ⏮ or ⏭ (Seek)
   - Press ⏮ to seek to the beginning of the current or previous track. If the track has been playing for less than five seconds, it seeks the previous track. If longer than five seconds, the current track starts from the beginning.
   - Press ⏮ and hold to quickly reverse through a track. Release the button to return to playing speed.
   - Press ⏭ to seek the next track.
   - Press ⏭ and hold to fast forward through a track. Release the button to return to playing speed. See *CD Player on page 7-12*.
   - For AM, FM, or SiriusXM (if equipped), press ⏭ to seek to the next strong station.
9. ⌂ (Home Page)
   - Press to go to the Home Page from anywhere in the system. See “Home Page”.
10. ◀ BACK
    - Press to return to the previous screen in a menu.
11. CD Slot
12. MENU
    - Press to access the menu for the current audio source.
    - Press to select the highlighted menu option.
    - Turn to scroll through a list.
    - Turn to manually select a station.
13. ⏏ (Eject)
    - Press to eject the CD.

## Home Page

### Home Page Features

The infotainment system displays a Home Page that makes it easy to access all of the applications. Turn the MENU knob to highlight application icons. Press the MENU knob to access the feature’s options.

Various functions are disabled when the vehicle is moving.

**AUDIO:** Select the AUDIO screen icon to display the active source page. The sources available are AM, FM, SiriusXM® (if equipped), CD, USB/iPod, AUX, and SD Card Reader. See *AM-FM Radio on page 7-7*, *Satellite Radio on page 7-9*, *CD Player on page 7-12*, and *Auxiliary Jack on page 7-17*.

**PHONE:** Select the PHONE screen icon to display the Phone main page. See *Bluetooth (Infotainment Controls) on page 7-20* or *Bluetooth (Voice Recognition) on page 7-24* or *Bluetooth (Overview) on page 7-18*.

**NAV:** Select the NAV screen icon to display the last Turn-by-Turn maneuver if a destination was downloaded. See *Navigation on page 14-2*.

**SETTINGS:** Select the SETTINGS screen icon to display the Settings main page. See “Setting Radio Preferences” following.

## Setting Radio Preferences

Select the SETTINGS screen icon to display the Settings menu and the following may display:

**Time:** See *Clock (Base Radio) on page 5-5* or *Clock (Uplevel Radio) on page 5-5*.

**Language [Language]:** This will set the display language in the radio, and Instrument cluster. Select to display a list of languages. Select ◀ BACK to go back to the previous menu.

**Valet Mode:**

Type a four-digit code on the circular numeric keypad by:

1. Turning the MENU knob to highlight a number.
2. Press the MENU knob to select it. Do this for each one of the four digits. Select Enter to go to the confirmation screen.
3. Re-enter the four-digit code. Select LOCK to lock the system. This will also lock out access to the storage behind the radio, if equipped. See *Instrument Panel Storage on page 4-1*.
4. Type the four-digit code to unlock the system. Select ◀ BACK to go back to the previous menu.

**Radio:** See “Radio Setup” later in this section.

**Vehicle:** See *Vehicle Personalization on page 5-40*.

**Display:** Press the MENU knob to turn the display on or off.

**Return to Factory Settings:** See “Return to Factory Settings” later in this section.

**Radio Setup**

From the RADIO/BAND screen icon, the following may be displayed:

**Manage Favorites:**

- Turn the MENU knob and press to select a favorite.
  - To delete a favorite, press the button just below the DELETE screen button.
  - To move a favorite, press the MOVE screen button. Turn the MENU knob to select a new location, then press the DROP screen button to select the new location.
- Select ◀ BACK to go back to the previous menu.

**Number of Favorites Shown:** To set the number of favorites for display, select Auto to automatically adjust the number of Favorites pages shown as Favorites are added and removed. Another way to adjust is to select a number from 5–25 to show that selection of favorites.

**Audible Touch Feedback:** Select Audible Touch Feedback to turn feedback off or on.

**Auto Volume (If Equipped):** This feature adjusts the volume based on vehicle speed. The options are Off, Low, Medium-Low, Medium, Medium-High, or High. Select the desired volume.

**DSP Modes (If Equipped):** This feature has four modes:

- Normal: Adjusts the audio to normal mode. This provides the best sound quality for all seating positions.
- Driver: Adjusts the audio to give the driver the best possible sound quality.
- Rear: Adjusts the audio to give the rear seat occupants the best possible sound quality.
- Centerpoint®: Turns on Bose Centerpoint® surround technology.

Centerpoint creates a surround sound from nearly any audio source: existing CD collection, satellite radio, and audio players.

**Maximum Startup Volume:** This feature sets the maximum startup volume. If the vehicle is started and the volume is greater than this level, the volume is adjusted to this level. To set the maximum startup volume, Turn the MENU knob to increase or decrease startup volume.

**Rear Camera (If Equipped)**

From the Rear Camera screen button, the following may be displayed:

**Park Assist Symbols:** This feature will display symbols where objects are detected by the Rear Parking Assist system. Select Park Assist Symbols, then select Off or On.

See *Assistance Systems for Parking or Backing on page 9-46*.

**Rear Cross Traffic Alert:** This feature will display an alert icon when cross traffic is detected. Select Rear Cross Traffic Alert, then select Off or On.

**Return to Factory Settings**

Select Return to Factory Settings and the following list may display:

**Restore Vehicle Settings:** This option will restore factory vehicle personalization settings. Select Restore Vehicle Settings. A screen displays stating all vehicle customization settings will be restored to the factory settings. Select Cancel or Continue.

**Clear All Private Data:** This option clears all private information from the vehicle. Select Clear All Private Data. Select Cancel or Continue.

**Restore Radio Settings:** This option will restore factory radio settings. Select Restore Radio Settings. A screen displays stating all personalized radio settings will be restored back to the factory settings. Select Cancel or Continue.

### English and Metric Unit Conversion

To change the display units between English and metric units, see “Units” under “Settings” in *Instrument Cluster on page 5-9*.

## Software Updates

See the website for more information.

In the U.S., see www.chevrolet.com

In Canada, see www.chevrolet.gm.ca

# Radio

## AM-FM Radio

### Playing the Radio

While on the audio main page, press the RADIO or MEDIA button repeatedly to display and scroll through the available sources: AM, FM, and SiriusXM® (if equipped), CD, USB, SD, and AUX.

The steering wheel controls can also be used to adjust the volume. See *Steering Wheel Controls on page 5-3*.

**AM, FM, SiriusXM (If Equipped)**

To select AM, FM, or SiriusXM (if equipped):

1. Press ⌂.
2. Turn the MENU knob to highlight the AUDIO screen icon.
3. Press the MENU knob to select.

4. Turn the MENU knob to highlight either AM, FM, or SiriusXM (if equipped) and press MENU to select.

Press the RADIO faceplate button to display and change the radio source. Press the MENU knob and the following radio settings may display:

**Tone Settings:**

- **Bass, Midrange, and Treble:** Turn the MENU knob to highlight. Press the MENU knob to select. Turn the MENU knob to adjust.
- **Balance:** Turn the MENU knob to highlight. Press the MENU knob to select. Turn the MENU knob left for more sound from the left speakers or right for more sound from the right speakers. The middle position balances the sound between the left and right speakers.
- **Fade:** Turn the MENU knob to highlight. Press the MENU knob to select. Turn the MENU knob to the left for more sound from the front speakers and to the right for more sound from the rear speakers. The middle position balances the sound between the front and rear speakers.
- **EQ (Equalizer)**: Turn the MENU knob to highlight. Turn the MENU knob to scroll through the options. Press the MENU knob to select. Press ◀ BACK button to go to the previous menu.

**Station List:** Select to display a list of AM or FM stations. Press ◀ BACK to go to the previous menu.

**Auto Volume:** If equipped, this feature adjusts the volume based on the vehicle speed. Select the level between off, low, medium-low, medium, medium-high, and high. Press ◀ BACK to go to the previous menu.

**EQ (Equalizer) Settings:**
If equipped with a Bose Sound System, the available choices are Manual and Talk.

**DSP Modes:** If equipped with a Bose Surround Sound System, it will have the following four DSP Modes:

- Normal: Adjusts the audio to normal mode. This provides the best sound quality for all seating positions.
- Driver: Adjusts the audio to give the driver the best possible sound quality.
- Rear: Adjusts the audio to give the rear seat occupants the best possible sound quality.
- Centerpoint®: Turns on Bose Centerpoint® surround technology.

Centerpoint creates a surround sound from nearly any audio source: existing CD collection, satellite radio, and audio players.

#### Options for SiriusXM Only

**XM View:** XM view allows the channel list to be viewed by channel name, artist playing on channel, or song playing on channel. Select to display Channel List in XM views. Turn the MENU knob to highlight and press the MENU knob to select.

Press ◀ BACK to go to the previous menu.

**Channel List:** Select to display a list of SiriusXM channels. Turn the MENU knob to highlight and press the MENU knob to select. Press ◀ BACK to go to the previous menu.

Also see the radio settings common for all sources earlier in this section.

### Finding a Station

#### Seeking a Station

Press ⏮ or ⏭ to search for the previous or next strongest station, or press and hold to quickly search through stations.

#### Tuning a Station

Turn the MENU knob to manually find a station.

### Storing Radio Station Presets

Up to 25 preset stations from all bands can be stored in the favorite lists in any order. Up to five stations can be stored in each favorite page and the number of favorites can be set.

**AM, FM, or SiriusXM (If Equipped):** While on the active source main page, such as AM, FM, and SiriusXM (if equipped), press and hold the corresponding key.

### Mixed-Audio Favorites

Favorites can be stored including radio stations.

To display the favorites page, press ◀ or ▶ on the radio faceplate.

From the Settings menu, press the MENU knob to select Manage Favorites. The Manage Favorites feature has the option of moving or deleting a favorite. See “Manage Favorites” under *Overview on page 7-3*.

## Satellite Radio

### SiriusXM® Satellite Radio Service

Vehicles with a SiriusXM satellite radio tuner and a SiriusXM satellite radio subscription can receive SiriusXM programming.

SiriusXM is a satellite radio service based in the 48 contiguous United States and 10 Canadian provinces. SiriusXM satellite radio has a wide variety of programming and commercial-free music, coast to coast, and in digital-quality sound. A service fee is required to receive the SiriusXM service. See www.siriusxmradio.com or call 1-866-635-2349 (U.S.); or see www.xmradio.ca or call 1-877-209-0079 (Canada).

When SiriusXM is active, the channel name and number, category name, song title, and artist display on the screen.

### Browsing SiriusXM Channels

To browse the SiriusXM channels:

1. Press the MENU knob.
2. Turn the MENU knob to highlight XM Channel List.
3. Turn the MENU knob to highlight the desired XM Channels.

### SiriusXM Messages

**XL (Explicit Language Channels):** These stations, or any others, can be blocked by request, by calling 1-866-635-2349 in the U.S., and 1-877-209-0079 in Canada.

**Loading XM:** The audio system is acquiring and processing audio and text data. No action is needed.

**Channel Off Air:** This station is not currently in service.

**Channel Not Authorized:** This station is blocked or cannot be received.

**Channel Not Available:** This previously assigned station is no longer assigned.

**No XM Signal/Reception May Be Blocked:** The vehicle may be in a location where the SiriusXM signal is being blocked. When the vehicle is moved into an open area, the signal should return.

**XM Radio ID:** When tuned to station 0, displays the SiriusXM eight-digit radio ID label. This label is needed to activate the service.

**Check XM Antenna:** If this message does not clear within a short period of time, the receiver or antenna could have a fault. Consult with your dealer.

## Radio Reception

Frequency interference and static can occur during normal radio reception if items such as phone chargers, vehicle convenience accessories, and external electronic devices are plugged into the accessory power outlet. If there is interference or static, unplug the item from the accessory power outlet.

### FM

FM signals only reach about 16 to 65 km (10 to 40 mi). Although the radio has a built-in electronic circuit that automatically works to reduce interference, some static can occur, especially around tall buildings or hills, causing the sound to fade in and out.

### AM

The range for most AM stations is greater than for FM, especially at night. The longer range can cause station frequencies to interfere with each other. Static can also occur

when things like storms and power lines interfere with radio reception. When this happens, try reducing the treble on the radio.

### SiriusXM Satellite Radio Service

SiriusXM Satellite Radio Service provides digital radio reception. Tall buildings or hills can interfere with satellite radio signals, causing the sound to fade in and out. In addition, traveling or standing under heavy foliage, bridges, garages, or tunnels may cause loss of the SiriusXM signal for a period of time.

### Cell Phone Usage

Cell phone usage, such as making or receiving phone calls, charging, or just having the phone on may cause static interference in the radio. Unplug the phone or turn it off if this happens.

## Backglass Antenna

The AM-FM antenna is integrated with the rear window defogger in the rear window. Do not scratch the inside surface or damage the lines in the glass. If the inside surface is damaged, it could interfere with radio reception. For proper radio reception, the antenna connector needs to be properly attached to the post on the glass.

If attaching a cell phone antenna to the glass, attach it between the grid lines.

**⚠ Caution**

Using a razor blade or sharp object to clear the inside rear window can damage the rear window antenna and/or the rear window defogger. Repairs would not be covered by the vehicle warranty. Do not clear the inside rear window with sharp objects.

**⚠ Caution**

Do not apply aftermarket glass tinting with metallic film. The metallic film in some tinting materials will interfere with or distort the incoming radio reception. Any damage caused to the backglass antenna due to metallic tinting materials will not be covered by the vehicle warranty.

## Multi-Band Antenna

The roof antenna is for OnStar®, SiriusXM® Satellite Radio, and GPS (Global Positioning System). Keep clear of obstructions for clear reception. If the vehicle has a sunroof, and it is open, reception can also be affected.

# Audio Players

## CD Player

The CD player can be used for CD and MP3 audio.

With the vehicle on, insert a disc into the slot, label side up. Press the MEDIA button to select CD as a source.

The system is capable of playing:

- Most audio CDs
- CD-R
- CD-RW
- MP3 or unprotected WMA formats

When playing any compatible recordable disc, the sound quality can be reduced due to disc quality, the method of recording, the quality of the music that has been recorded, or the way the disc has been handled.

There can be increased skipping, difficulty in finding tracks, and/or difficulty in loading and ejecting. If these problems occur, check the disc for damage or try a known good disc.

To avoid damage to the CD player:

- Do not use scratched or damaged discs.
- Do not apply labels to discs. The labels could get caught in the player.
- Insert only one disc at a time.
- Keep the loading slot free of foreign materials, liquids, and debris.
- Use a marking pen to label the top of the disc.

### Loading and Ejecting Discs

To load a disc:

1. Turn the vehicle on.
2. Insert a disc into the slot, label side up. The player pulls it in the rest of the way. If the disc is damaged or improperly loaded, there is an error and the disc ejects.

### Playing an Audio CD

Press the MEDIA button on the faceplate until CD is selected.

On the CD main page, a track number displays at the beginning of each track. Song, Artist, and Album information displays when available.

Use the following screen controls to play the disc:

**⏮ (Seek Previous/Fast Reverse):** While on the CD main page:

- Press to seek to the beginning of the current or previous track. If the track has been playing for less than five seconds, it seeks to the previous track. If longer than five seconds, the current track starts from the beginning.
- Press and hold to fast reverse through a track. Release the button to return to playing speed. Elapsed time displays.

**▶| (Seek Next/Fast Forward):** While on the CD main page:

- Press to seek to the next track.
- Press and hold to fast forward through a track. Release the button to return to playing speed. Elapsed time displays.

**II/▶ (Pause/Play):** While on the CD main page, press to pause. Press again to resume.

**⤮ (Shuffle):** Press ⤮ to play the songs in random order. Press again to turn off.

If a Blu-ray Disc® or DVD disc is loaded into the CD player and the CD screen button is selected, a disc error occurs and the disc is ejected.

**CD Menu**

While on the CD main page, press the MENU knob to display the CD menu and the following may display:

**Browse:** Select to display the files or songs on the CD. See "Browse CD Media" later in this section.

**Tone Settings:** Select to adjust Bass, Midrange, Treble, Balance, Fade, and EQ (Equalizer). See "Tone Settings" under *AM-FM Radio on page 7-7*.

**Auto Volume:** If equipped, this feature adjusts the volume based on the vehicle speed. Select the level between off, low, medium-low, medium, medium-high, and high.

Press ◀ BACK to go to the previous menu.

**EQ (Equalizer) Settings:** If equipped, this feature adjusts the DSP Modes. See "EQ (Equalizer) Settings" in *AM-FM Radio on page 7-7*.

**DSP Modes:** If equipped, this feature adjusts the DSP Modes. See "DSP Modes" in *AM-FM Radio on page 7-7*.

## Error Messages

If Disc Error displays and/or the disc comes out, it could be for one of the following reasons:

- The disc has an invalid or unknown format.
- The disc is very hot. Try the disc again when the temperature returns to normal.
- The road is very rough. Try the disc again when the road is smoother.
- The disc is dirty, scratched, wet, or upside down.
- The air is very humid. Try the disc again later.
- There was a problem while burning the disc.
- The label is caught in the CD player.

If Disc Player Error displays, it could be for one of the following reasons:

- The player temperature is too high.
- There are load or eject errors.

If the CD is not playing correctly, for any other reason, try a known good CD.

If any error continues, contact your dealer.

### Playing an MP3 CD

To play an MP3 CD, follow the same instructions as “Playing an Audio CD.”

The following guidelines must be met when creating an MP3 disc, otherwise the CD might not play:

- Sampling rate: 16 kHz, 22.05 kHz, 24 kHz, 32 kHz, 44.1 kHz, and 48 kHz.
- Bit rates supported: 8, 16, 24, 32, 40, 48, 56, 64, 80, 96, 112, 128, 144, 160, 192, 224, 256, and 320 kbps.
- Maximum number of folders: eight folders with 255 files per folder.
- Maximum of 1,000 files on a disc.
- Recorded on a CD-R or CD-RW.

#### Root Directory

The root directory is treated as a folder. All files contained directly under the root directory are accessed prior to any root directory folders.

#### Empty Folders

If a root directory or folder is empty or contains only folders, the player advances to the next folder in the file structure that contains a compressed audio file. The empty folder(s) are not displayed or numbered.

#### No Folder

When the CD only contains compressed audio files without any folders, all files are under the root folder.

## USB Port

### Playing from a USB

A USB mass storage device or Media Transfer Protocol (MTP) device can be connected to the USB port.

The USB port is in the center console and if equipped with storage behind the radio, there is a USB port inside.

#### USB MP3 Player and USB Drives

- The USB MP3 players and USB drives connected must comply with the USB Mass Storage Class specification (USB MSC).
- Hard disk drives are not supported.

To play a USB device:

- Connect the USB.
- Press the MEDIA button on the faceplate until the connected device is shown.

While the USB source is active, use the icons on the screen to operate USB function:

- ⏮ (Seek Previous/Fast Reverse)
- ⏭ (Seek Next/Fast Forward)
- ⏸/▶ (Play/Pause)
- ⤮ (Shuffle)

For information on how to use the screen icons, see “Playing an Audio CD” previously in this section.

**USB Menu**

Press the MENU knob to display the USB menu and the following may display:

**Browse:** Select to display the files and folders on the USB device.

**Tone Settings:** Select to adjust Bass, Midrange, Treble, Balance, Fade, and EQ (Equalizer). See “Tone Settings” under “Playing an Audio CD.”

**Auto Volume:** If equipped, see “Playing an Audio CD.”

**EQ (Equalizer) Settings:** If equipped, this feature adjusts the pre-defined EQ Modes. See “EQ (Equalizer) Settings” in *AM-FM Radio on page 7-7*.

**DSP Modes:** If equipped, this feature adjusts the DSP Modes. See “DSP Modes” in *AM-FM Radio on page 7-7*.

## Playing from an iPod®

This feature supports the following iPod models:

- iPod nano® (1st, 2nd, 3rd, and 4th generation)
- iPod with video (5.0 and 5.5 generation).
- iPod classic® (6th generation)
- iPod touch® (1st and 2nd generation)

There may be problems with operation and function in the following situations:

- When connecting an iPod on which a more recent version of the firmware is installed than is supported by the infotainment system.
- When connecting an iPod on which firmware from other providers is installed.

To connect and control an iPod:

1. Connect one end of the standard iPod USB cable to the iPod's dock connector.
2. Connect the other end to the USB port in the center console.
3. Press the MEDIA button to select the source.

iPod music information displays on the radio’s display and begins playing through the vehicle’s audio system.

The iPod battery recharges automatically while the vehicle is on. When the vehicle is off while an iPod is connected using the iPod USB cable, the iPod battery stops charging and the iPod automatically turns off.

If the iPod is an unsupported model, it can still be listened to in the vehicle by connecting to the auxiliary input jack using a standard 3.5 mm (1/8 in) stereo cable.

**iPod Menu**

Press the MENU knob to display the iPod Menu and the following may display:

**Browse:** Select to display the files or songs on the iPod. See “Browse iPod Media” later in this section.

**Tone Settings:** Select to adjust Bass, Midrange, Treble, Balance, Fade, and EQ (Equalizer). See “Tone Settings” under “Playing an Audio CD.”

**Auto Volume:** If equipped, see “Playing an Audio CD.”

**EQ (Equalizer) Settings:** If equipped, this feature adjusts the pre-defined EQ Modes. See “EQ (Equalizer) Settings” in *AM-FM Radio on page 7-7*.

**DSP Modes:** If equipped, this feature adjusts the DSP Modes. See “DSP Modes” in *AM-FM Radio on page 7-7*.

**Browse iPod Media**

Use the following to browse:

**Playlists:**

1. Turn the MENU knob to highlight and press to view the playlists stored on the iPod.
2. Turn the MENU knob to highlight and press to select a playlist name to view a list of all songs in the playlist.
3. Turn the MENU knob to highlight and press to select the song from the list to begin playback.

**Artists:**

1. Turn the MENU knob to highlight and press to view the artists stored on the iPod.
2. Turn the MENU knob to highlight and press to select an artist name to view a list of all albums by the artist.
3. Turn the MENU knob to highlight and press to select the album from the list.
4. To begin playback, select a song from the album.

**Albums:**

1. Turn the MENU knob to highlight and press to view the albums stored on the iPod.
2. Turn the MENU knob to highlight and press to select an album name to view a list of all songs on the album.
3. Turn the MENU knob to highlight and press to select the song from the list to begin playback.

**Genres:**

1. Turn the MENU knob to highlight and press to view the genres stored on the iPod.
2. Turn the MENU knob to highlight and press to select a genre name to view a list of artists of that genre.
3. Turn the MENU knob to highlight and press to select to view albums by that artist.
4. Turn the MENU knob to highlight and press to select an album to view songs.
5. Turn the MENU knob to highlight and press to select the song from the list to begin playback.

**Songs:**

1. Turn the MENU knob to highlight and press to view a list of all songs stored on the iPod.
2. Turn the MENU knob to highlight and press to select the song from the list to begin playback.

### Playing from an iPhone® or iPad®

This feature supports iPhone 3G, iPhone 3GS, iPhone 4, and iPad.

Follow the same instructions as stated earlier for using an iPod.

## Auxiliary Jack

The AUX jack is in the center console. See *Center Console Storage on page 4-2*.

Possible auxiliary audio sources include:

- Laptop computer
- Audio music player

This jack is not an audio output. Do not plug headphones into the auxiliary input jack. Auxiliary devices should be set up while the vehicle is in P (Park).

Connect a 3.5 mm (1/8 in) cable from the auxiliary device to the auxiliary input jack.

If an auxiliary device has already been connected, but a different source is currently active, press the MEDIA faceplate button repeatedly to scroll through all of the available audio source screens, until the AUX source screen is shown.

**Playing from the AUX Jack**

An auxiliary device is played through the audio system and controlled through the device itself.

**AUX Menu**

Press the MENU knob to display the AUX menu and the following may display:

**Tone Settings:** Select to adjust Bass, Midrange, Treble, Balance, Fade, and EQ (Equalizer). See “Tone Settings” under *AM-FM Radio on page 7-7*.

**Auto Volume:** If equipped, see "Playing an Audio CD."

**EQ (Equalizer) Settings:** If equipped, this feature adjusts the pre-defined equalizer settings. See "EQ (Equalizer) Settings" in *AM-FM Radio on page 7-7*.

# Phone

## Bluetooth (Overview)

Instructions for using the cell phone may differ between infotainment systems. For vehicles with an uplevel radio, see the infotainment manual.

Bluetooth-capable systems can interact with many cell phones, allowing:

- Placement and receipt of calls in a hands-free mode.
- Sharing of the cell phone's address book or contact list with the vehicle.

To minimize driver distraction, before driving, and with the vehicle parked:

- Become familiar with the features of the cell phone. Organize the phone book and contact lists clearly and delete duplicate or rarely used entries. If possible, program speed dial or other shortcuts.
- Review the controls and operation of the infotainment system.
- Pair cell phone(s) to the vehicle. The system may not work with all cell phones. See "Pairing" in this section.
- If the cell phone has voice dialing capability, learn to use that feature to access the address book or contact list. See "Voice Pass-Thru" in this section.
- See "Storing and Deleting Phone Numbers" in this section.

**⚠ Warning**

When using a cell phone, it can be distracting to look too long or too often at the screen of the phone or the infotainment system.

(Continued)

**Warning (Continued)**

Taking your eyes off the road too long or too often could cause a crash resulting in injury or death. Focus your attention on driving.

Vehicles with a Bluetooth system can use a Bluetooth-capable cell phone with a Hands-Free Profile to make and receive phone calls. The infotainment system and voice recognition are used to control the system. The system can be used while in ON/RUN or ACC/ACCESSORY. The range of the Bluetooth system can be up to 9.1 m (30 ft). Not all phones support all functions and not all phones work with the Bluetooth system. See www.gm.com/bluetooth for more information about compatible phones.

## Bluetooth Controls

Use the buttons on the Instrument Panel, faceplate, and the steering wheel to operate the Bluetooth system.

### Steering Wheel Controls

**(Push to Talk):** Press to answer incoming calls or start voice recognition.

**(End Call):** Press to end a call, reject a call, or cancel an operation. Press to mute or unmute the infotainment system.

### Infotainment System Controls

For information about how to navigate the menu system using the infotainment controls, see *Overview on page 7-3*.

**MENU:** Turn to scroll through a list. Press to select the highlighted list option.

**(Home Page):** Press to go to the Home Page. See *Home Page on page 7-4*.

**PHONE:** From the Home Page, select to enter the phone main menu. See *Bluetooth (Infotainment Controls) on page 7-20* or *Bluetooth (Voice Recognition) on page 7-24* or *Bluetooth (Overview) on page 7-18*.

## Voice Recognition

The voice recognition system uses commands to control the system and dial phone numbers.

**Noise:** The system may not recognize voice commands if there is too much background noise, such as noise from open windows or loud talking inside the vehicle.

**When to Speak:** A tone sounds to indicate that the system is ready for a voice command. Wait for the tone and then speak.

**How to Speak:** Speak clearly in a calm and natural voice.

### Audio System

When using the Bluetooth system, sound comes through the vehicle's front audio system speakers and overrides the audio system. Use the ⏻ knob during a call to change the volume level. The system maintains a minimum volume level.

### Bluetooth Audio Quality

Turn off the Echo and Noise cancellation feature on your phone, if supported, for the best hands-free performance.

See www.gm.com/bluetooth.

### Other Information

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## Bluetooth (Infotainment Controls)

For information about how to navigate the menu system using the infotainment controls, see *Overview on page 7-3*.

### Switching to Handset or Hands-Free Mode

To switch between handset mode and hands-free mode, use the OnStar command, “transfer call.”

### Pairing

A Bluetooth-enabled cell phone must be paired to the Bluetooth system and then connected to the vehicle before it can be used. See your cell phone manufacturer's user guide for Bluetooth functions before pairing the cell phone. If a Bluetooth phone is not connected, calls can be made using OnStar Hands-Free Calling, if available. See OnStar Overview.

#### Pairing Information

- Up to five cell phones can be paired to the Bluetooth system.
- The pairing process is disabled when the vehicle is moving.
- Pairing only needs to be completed once per phone, unless the pairing information on the cell phone changes or the cell phone is deleted from the system.
- Only one paired cell phone can be connected to the Bluetooth system at a time.
- If multiple paired cell phones are within range of the system, the system connects to the first available paired cell phone in the order that they were newly paired to the system. To connect to a different paired phone, see “Connecting to a Different Phone” later in this section.

### Pairing a Phone or Device

1. From the Home Page, turn the MENU knob to access the PHONE screen button, then press the MENU knob to select the PHONE screen button. If a device has been previously paired, the main Phone menu will be shown. If no devices have been paired, Step 2 can be skipped.
2. Turn the MENU knob and press to select Manage Phones.
3. Press the button just below the PAIR/screen button. A four-digit Personal Identification Number (PIN) appears on the display. The PIN may be used in Step 5.
4. Start the pairing process on the cell phone to be paired to the vehicle. See the cell phone manufacturer's user guide for information on this process.
5. Locate the device named “Your Vehicle” in the list on the cell phone. Follow the instructions on the cell phone to enter the PIN provided in Step 3.

   After the PIN is successfully entered, the system confirms the pairing process is complete.
6. If the phone prompts to accept connection or allow phone book download, select always accept and allow. The phone book may not be available if not accepted.
7. Repeat steps 1–6 to pair additional phones or devices.

### Listing All Paired and Connected Phones

1. To list all paired devices, from the Home Page turn the MENU knob, then press to select the PHONE screen button.
2. Turn the MENU knob and press to select Manage Phones.

### Deleting a Paired Phone

1. From the Home Page, turn the MENU knob, then press to select the PHONE screen button.
2. Turn the MENU knob and press to select Manage Phones.
3. Turn the MENU knob to highlight the phone to be deleted.
4. Press the button below the DELETE screen button to delete the highlighted device.
5. A confirmation screen is displayed. Press the button just below the DELETE screen button to confirm deletion.

### Connecting to a Different Phone

1. From the Home Page, turn the MENU knob, then press to select the PHONE screen button or press the PHONE button on the faceplate.
2. Turn the MENU knob and press to select Manage Phones.

3. Turn the MENU knob to highlight the phone to be connected.
4. Press the button just below the CONNECT screen button to connect to the highlighted device.

## Phone Menu

Once a phone is connected and selected, the following may display:

**Recent Calls:** Turn the MENU knob to highlight Recent Calls and press to select.

**Contacts:** Turn the MENU knob to highlight Contacts and press to select.

**Keypad:** Turn the MENU knob to highlight Keypad and press to select.

**Active Call:** Turn the MENU knob to highlight Active Call and press to select and display the active call screen.

**Manage Phones:** Turn the MENU knob to highlight Manage Phones and press to select.

## Making a Call Using Contacts and Recent Calls

For cell phones that support the Contacts and Recent Calls feature, the Bluetooth system can use the contacts stored on your cell phone to make calls. See your cell phone manufacturer's user guide or contact your wireless provider to find out if this feature is supported by your phone.

If the phone prompts to allow phone book download during the pairing process, select Always Accept and Allow. The phone book may not be available if not accepted.

When a cell phone supports the phone book feature, the Contacts and Recent Calls menus are automatically available.

The Contacts menu allows you to access the phone book stored in the cell phone to make a call.

The Recent Calls menu allows you to access the phone numbers from the Incoming Calls, Outgoing Calls, and Missed Calls menus on the cell phone to make a call.

To make a call using the Contacts menu:

1. From the Home Page, turn the MENU knob, then press to select the PHONE screen button.
2. Turn the MENU knob to highlight Contacts and press to select.
3. Turn the MENU knob to highlight the letter group and press to select.
4. Turn the MENU knob to highlight the contact and press to select.
5. Turn the MENU knob to highlight the desired number, then press the MENU knob to call the contact.

To make a call using the Recent Calls menu:

1. From the Home Page, turn the MENU knob, then press to select the PHONE screen button.
2. Turn the MENU knob to highlight Recent Calls and press to select.

   If necessary, select between Missed, Recent, and Sent calls by pressing the button below the appropriate screen button.
3. Turn the MENU knob to highlight the contact or the phone number.
4. Press the MENU knob to call the contact.

## Making a Call Using the Keypad

To make a call:

1. From the Home Page, turn the MENU knob, then press to select the PHONE screen button.
2. Turn the MENU knob and press to select Keypad.
3. Turn the MENU knob to highlight the first digit and press to select. Continue this process through the number. To call, press the button just below the CALL screen button.

## Accepting or Declining a Call

When an incoming call is received, the infotainment system mutes and a ring tone is heard in the vehicle.

### Accepting a Call

To accept a call, do one of the following:

- Press the button just below the ANSWER screen button.
- Press on the steering wheel controls.

### Declining a Call

To decline a call, do one of the following:

- Press the button just below the IGNORE screen button.
- Press on the steering wheel controls.
- Do nothing.

## Call Waiting

Call waiting must be supported on the Bluetooth phone and enabled by the wireless service carrier to work.

### Accepting a Call Waiting Call

To accept a call waiting call, do one of the following:

- Press the button just below the SWITCH screen button.
- Press on the steering wheel controls.

### Declining a Call Waiting Call

To decline a call waiting call, do one of the following:

- Press the button just below the IGNORE screen button.
- Press on the steering wheel controls.
- Do nothing.

### Ending a Call

To end a call, do one of the following:

- Press the button just below the END screen button.
- Press on the steering wheel controls.

### Dual Tone Multi-Frequency (DTMF) Tones

The in-vehicle Bluetooth system can send numbers during a call. This is used when calling a menu-driven phone system.

1. When a call is active, press the button just below the KEYPAD screen button.
2. Turn the MENU knob to highlight the first digit and press to select.

If not initially in the phone application, from the Home Page, turn the MENU knob, then press to select the PHONE screen button. From the PHONE main menu, turn the MENU knob to highlight Active Call and press to select.

## Bluetooth (Voice Recognition)

### Using Voice Recognition

To use voice recognition, press on the steering wheel. Use the commands below for the various voice features. For additional information, say “Help” while you are in a voice recognition menu.

### Pairing

#### Pairing a Phone

1. Press . The system responds “Ready,” followed by a tone.
2. Say “Bluetooth.”
3. Say “Pair.” The system responds with instructions and a four-digit Personal Identification Number (PIN). The PIN is used in Step 5.
4. Start the pairing process on the cell phone that you want to pair. For help with this process, see your cell phone manufacturer's user guide.
5. Locate the device named “Your Vehicle” in the list on the cell phone. Follow the instructions on the cell phone to enter the PIN provided in Step 3. After the PIN is successfully entered, the system prompts you to provide a name for the paired cell phone. This name will be used to indicate which phones are paired and connected to the

vehicle. The system responds with “<Phone name> has been successfully paired” after the pairing process is complete.

6. Repeat Steps 1−5 to pair additional phones.

### Listing All Paired and Connected Phones

The system can list all cell phones paired to it. If a paired cell phone is also connected to the vehicle, the system responds with “is connected” after that phone name.

1. Press . The system responds “Ready,” followed by a tone.
2. Say “Bluetooth.”
3. Say “List.”

### Deleting a Paired Phone

If the phone name to delete is unknown, see “Listing All Paired and Connected Phones.”

1. Press . The system responds “Ready,” followed by a tone.
2. Say “Bluetooth.”
3. Say “Delete.” The system asks for which phone to delete.
4. Say the name of the phone to delete.

### Connecting to a Different Phone

To connect to a different cell phone, the Bluetooth system looks for the next available cell phone in the order in which all available cell phones were paired. This may need to be repeated depending on how many cell phones have been connected.

1. Press . The system responds “Ready,” followed by a tone.
2. Say “Bluetooth.”
3. Say “Change phone.”
   - If another cell phone is found, the response will be “<Phone name> is now connected.”

     This can be repeated to connect any of the up to five paired phones.
   - If another cell phone is not found, the original phone remains connected.

## Storing and Deleting Phone Numbers

The following commands are used to delete and store phone numbers.

**Store:** This command will store a phone number, or a group of numbers as a name tag.

**Digit Store:** This command allows a phone number to be stored as a name tag by entering the digits one at a time.

**Delete:** This command is used to delete individual name tags.

**Delete All Name Tags:** This command deletes all stored name tags in the Hands-Free Calling Directory and the Destinations Directory.

**Using the "Store" Command**

1. Press . The system responds "Ready," followed by a tone.
2. Say "Store."
3. Say the entire phone number or a group of digits all at once with no pauses, then follow the directions given by the system to save a name tag for this number.

**Using the "Digit Store" Command**

If an unwanted number is recognized by the system, say "Correction" at any time to clear the last number.

To hear all of the digits recognized by the system, say "Verify" at any time.

1. Press . The system responds "Ready," followed by a tone.
2. Say "Digit Store."
3. Say each digit, one at a time. After each digit is entered, the system repeats back the digit it heard followed by a tone. After the last digit has been entered, say "Store," and then follow the directions given by the system to save a name tag for this number.

**Using the "Delete" Command**

1. Press . The system responds "Ready," followed by a tone.
2. Say "Delete."
3. Say the name tag you want to delete.

**Using the "Delete All Name Tags" Command**

This command deletes all stored name tags in the Hands-Free Calling Directory and the Destinations Directory.

To delete all name tags:

1. Press . The system responds "Ready," followed by a tone.
2. Say "Delete all name tags."

## Listing Stored Numbers

The list command will list all the stored numbers and name tags.

**Using the "List" Command**

1. Press . The system responds "Ready," followed by a tone.
2. Say "Directory."
3. Say "Hands-Free Calling."
4. Say "List."

## Making a Call

Calls can be made using the following commands.

**Dial or Call:** The dial or call command can be used interchangeably to dial a phone number or a stored name tag.

**Digit Dial:** This command allows a phone number to be dialed by entering the digits one at a time.

**Re-dial:** This command is used to dial the last number used on the cell phone.

**Using the “Dial” or “Call” Command**

1. Press . The system responds “Say a command or say help,” followed by a tone.
2. Say “Dial” or “Call.”
3. Say the entire number without pausing or say the name tag.

Once connected, the person called will be heard through the audio speakers.

**Calling 911 Emergency (U.S. and Canada)**

1. Press . The system responds “Say a command or say help,” followed by a tone.
2. Say “Dial” or “Call.”
3. Say “911.”
4. Say “Dial” or “Call.”

**Calling 066 Emergency (Mexico)**

1. Press . The system responds “Say a command or say help,” followed by a tone.
2. Say “Dial” or “Call.”
3. Say “066.”
4. Say “Dial” or “Call.”

**Using the “Digit Dial” Command**

The digit dial command allows a phone number to be dialed by entering the digits one at a time. After each digit is entered, the system repeats back the digit it heard followed by a tone.

If an unwanted number is recognized by the system, say “Correction” at any time to clear the last number.

To hear all of the numbers recognized by the system, say “Verify” at any time.

1. Press . The system responds “Say a command or say help,” followed by a tone.
2. Say “Digit Dial.”
3. Say each digit, one at a time. After each digit is entered, the system repeats back the digit it heard followed by a tone. After the last digit has been entered, say “Dial.”

Once connected, the person called will be heard through the audio speakers.

**Using the “Re-dial” Command**

1. Press . The system responds “Say a command or say help,” followed by a tone.
2. After the tone, say “Re-dial.” The system dials the last number called from the connected cell phone.

Once connected, the person called will be heard through the audio speakers.

## Receiving a Call

When an incoming call is received, the audio system mutes and a ring tone is heard in the vehicle.

- Press  to answer the call.
- Press  to ignore a call.

## Call Waiting

Call waiting must be supported on the cell phone and enabled by the wireless service carrier.

- Press to answer an incoming call when another call is active. The original call is placed on hold.
- Press again to return to the original call.
- To ignore the incoming call, no action is required.
- Press to disconnect the current call and switch to the call on hold.

## Three-Way Calling

Three-way calling must be supported on the cell phone and enabled by the wireless service carrier.

1. While on a call, press .
2. Say “Three-way call.”
3. Use the “Dial” or “Call” command to dial the number of the third party to be called.
4. Once the call is connected, press to link all callers together.

## Ending a Call

Press to end a call.

## Transferring a Call

Audio can be transferred between the Bluetooth system and the cell phone.

The cell phone must be paired and connected with the Bluetooth system before a call can be transferred. The connection process can take up to two minutes after the ignition is turned to ON/RUN.

**To Transfer Audio from the Bluetooth System to a Cell Phone**

During a call with the audio in the vehicle:

1. Press .
2. Say “Transfer Call.”

**To Transfer Audio to the Bluetooth System from a Cell Phone**

During a call with the audio on the cell phone, press . The audio transfers to the vehicle. If the audio does not transfer to the vehicle, use the audio transfer feature on the cell phone. See your cell phone manufacturer's user guide for more information.

## Voice Pass-Thru

Voice pass-thru allows access to the voice recognition commands on the cell phone. See your cell phone manufacturer's user guide to see if the cell phone supports this feature.

To access contacts stored in the cell phone:

1. Press . The system responds “Say a command or say help,” followed by a tone.
2. Say “Bluetooth.”

3. Say “Voice.” The system responds “OK, accessing <phone name>.”

The cell phone's normal prompt messages will go through their cycle according to the phone's operating instructions.

### Dual Tone Multi-Frequency (DTMF) Tones

The Bluetooth system can send numbers and the numbers stored as name tags during a call. You can use this feature when calling a menu-driven phone system. Account numbers can also be stored for use.

**Sending a Number or Name Tag During a Call**

1. Press . The system responds “Ready,” followed by a tone.
2. Say “Dial.”
3. Say the number or name tag to send.

### Clearing the System

Unless information is deleted out of the in-vehicle Bluetooth system, it will be retained indefinitely. This includes all phone pairing information. For information on how to delete this information, see “Deleting a Paired Phone.”

## Trademarks and License Agreements

**FCC Information**

See *Radio Frequency Statement on page 13-15*.

Made for iPod iPhone

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## Bluetooth

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# Climate Controls

**Climate Control Systems**
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**Air Vents**
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**Maintenance**
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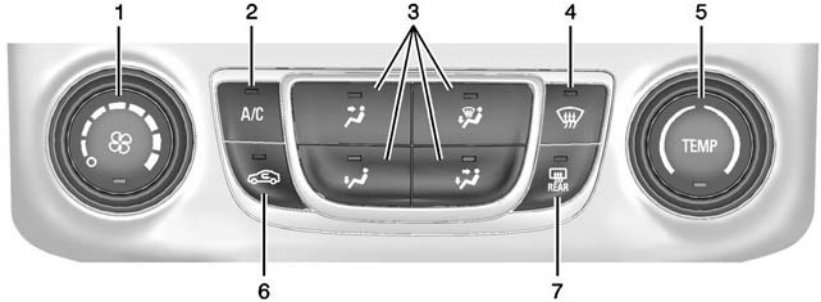
## Climate Control Systems

The heating, cooling, and ventilation for the vehicle can be controlled with this system.




1. Fan Control
2. A/C (Air Conditioning)
3. Air Delivery Modes
4. Defrost
5. TEMP (Temperature Control)
6. Recirculation
7. Rear Window Defogger

**Fan Control:** Turn the knob clockwise or counterclockwise to increase or decrease the fan speed.

**Temperature Control:** Turn the knob clockwise or counterclockwise to increase or decrease the temperature setting.

**Air Delivery Modes:** Press , , , or to change the direction of the airflow. An indicator light comes on in the selected mode button.

**(Vent):** Air is directed to the instrument panel outlets.

**(Bi-Level):** Air is directed to the instrument panel outlets and the floor outlets.

**(Floor):** Air is directed to the floor outlets.

**(Defog):** Air is directed to the windshield and floor outlets to clear the windows of fog or moisture.

**(Defrost):** Press to clear the windshield of fog or frost more quickly. Air is directed to the windshield and side window outlets.

For best results, clear all snow and ice from the windshield before defrosting.

**A/C (Air Conditioning):** Press to turn the air conditioning on or off. If the fan is turned off, the air conditioner will not run and the indicator light may turn off.

**(Recirculation):** Press to turn on recirculation. An indicator light comes on. Air is recirculated to quickly cool the inside of the vehicle or prevent outside air and odors from entering.

## Rear Window Defogger

**(Rear Window Defogger):** Press to turn the rear window defogger on or off.

The rear window defogger turns off automatically after about 10 minutes. If turned on again, it runs for about five minutes before turning off. At higher speeds, the rear window defogger may stay on continuously.

The upper region of gridlines on the rear window are antenna lines and are not intended to heat when the defogger is activated.

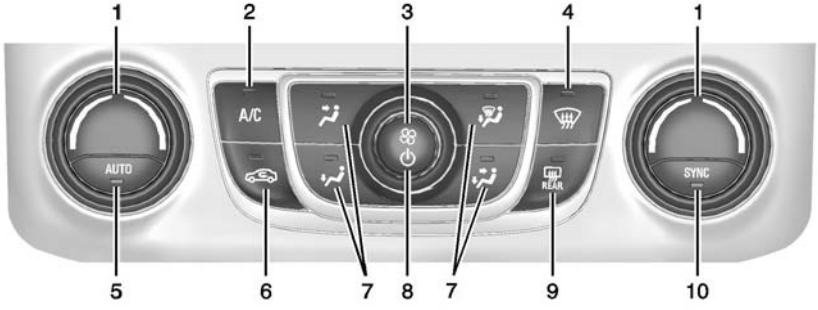
If equipped with heated outside rearview mirrors, they turn on with the rear window defogger and help to clear fog or frost from the surface of the mirror. See *Heated Mirrors on page 2-20*.

**⚠ Caution**

Using a razor blade or sharp object on the inside rear window can damage the antenna or defogger. Repairs would not be covered by the vehicle warranty. Do not stick anything to the rear window.

## Dual Automatic Climate Control System

The heating, cooling, and ventilation for the vehicle can be controlled with this system.




1. Driver and Passenger Temperature Controls
2. Air Conditioning or Comfort/Eco Air Conditioning (eAssist Only)
3. Fan Control
4. Defrost
5. AUTO (Automatic Operation)
6. Recirculation
7. Air Delivery Modes
8. On/Off
9. Rear Window Defogger
10. SYNC

### Climate Control Influence on eAssist Operation and Fuel Economy (If Equipped)

The climate control system is dependent upon other vehicle systems for heat and power input. Certain climate control settings can lead to higher fuel usage and/or fewer auto stops.

The following are climate control settings that use more fuel:

- Comfort air conditioning mode.
- Defrost mode.
- Extreme temperature settings, such as 15°C (60°F) or 32°C (90°F).
- High fan speed settings.

To help reduce fuel usage:

- Use the full automatic control as described under “Automatic Operation.”
- Use eco air conditioning, instead of the comfort air conditioning.

- Select a temperature setting that is higher in hot weather and lower in cold weather.
- Turn off the air conditioning when it is not needed.
- Only use defrost when needed to clear the windows.

**Automatic Operation**

The system automatically controls the fan speed, air delivery, air conditioning, and recirculation in order to heat or cool the vehicle to the desired temperature.

When the indicator light is on, the system is in full automatic operation. If the air delivery mode or fan setting is manually adjusted, the auto indicator turns off and displays will show the selected settings.

To place the system in automatic mode:

1. Press AUTO.
2. Set the temperature. Allow the system time to stabilize. Then adjust the temperature as needed for best comfort.

To improve fuel efficiency and to cool the vehicle faster, recirculation may be automatically selected in warm weather.

The recirculation light will not come on when automatically controlled.

Press to manually select recirculation; press it again to select outside air.

**Manual Operation**

**Driver and Passenger Temperature Control:** The temperature can be adjusted separately for the driver and passenger.

Turn the knob clockwise or counterclockwise to increase or decrease the driver or passenger temperature setting.

**SYNC:** Press to link all climate zone settings to the driver settings. The SYNC indicator light will turn on. When the passenger settings are adjusted, the SYNC indicator light is off.

**(On/Off):** Press the knob to turn the fan on or off.

**Fan Control:** Turn the knob clockwise or counterclockwise to increase or decrease the fan speed.

Press AUTO to return to automatic operation.

**Air Delivery Modes:** Press , , , or to change the direction of the airflow. An indicator light comes on in the selected mode button.

Changing the mode cancels the automatic operation and the system goes into manual mode. Press AUTO to return to automatic operation.

**(Vent):** Air is directed to the instrument panel outlets.

**(Bi-Level):** Air is directed to the instrument panel outlets and the floor outlets.

**(Floor):** Air is directed to the floor outlets.

**(Defog):** Air is directed to the windshield and floor outlets to clear the windows of fog or moisture.

**(Defrost):** Press to clear the windshield of fog or frost more quickly. Air is directed to the windshield and side window outlets.

For best results, clear all snow and ice from the windshield before defrosting.

**A/C (Air Conditioning) (For Non-eAssist Vehicles):** Press to turn the air conditioning on or off. If the fan is turned off, the air conditioner will not run and the indicator light may turn off.

Press AUTO to return to automatic operation and the air conditioner runs as needed. When the indicator light is on, the air conditioner runs automatically to cool the air inside the vehicle or to dry the air as needed to defog the windshield faster.

**A/C (Comfort/Eco Air Conditioning) (For eAssist Vehicles):** Press to cycle between the off, eco, and comfort air conditioning modes. The indicator will be lit in comfort and eco modes and turns off when there is no A/C function. If the fan is turned off, the air conditioner will not run and the indicator light may turn off.

For comfort a/c, press A/C. The indicator will turn amber.

Pressing this button again cancels automatic air conditioning and turns off the air conditioner. Press AUTO to return to automatic operation and the air conditioner runs automatically as needed. When the indicator light is on, the air conditioner runs automatically to cool the air inside the vehicle or to dry the air as needed to defog the windshield faster.

For eco a/c, press A/C again. The indicator will turn green. This setting balances fuel economy and air conditioning comfort. In warm weather conditions, auto stops may occur more frequently and the vehicle interior may be warmer as compared to the comfort air conditioning setting. This setting allows higher humidity inside the vehicle and window fogging before the engine restarts.

Pressing the button during an auto stop may restart the engine to prevent window fogging. To reach comfort levels quickly during an auto stop, the engine will restart if the air conditioner is off and AUTO or A/C is selected.

If temperature controls are adjusted cooler by more than 1°C (1°F) during an auto stop, the engine will restart to ensure that comfort is reached.

**(Recirculation):** Press to turn on recirculation. An indicator light comes on. Air is recirculated to quickly cool the inside of the vehicle or prevent outside air and odors from entering.

**Auto Defog:** The climate control system may have a sensor to automatically detect high humidity inside the vehicle. When high humidity is detected, the climate control system may adjust to outside air supply and turn on the air conditioner. The fan speed may slightly increase to help prevent fogging. If the climate control system does not detect possible window fogging, it returns to normal operation. To turn Auto Defog off or on, see “Climate and Air Quality” under *Vehicle Personalization on page 5-40*.

## Rear Window Defogger

**(Rear Window Defogger):** Press to turn the rear window defogger on or off.

The rear window defogger turns off automatically after about 10 minutes. If turned on again, it runs for about five minutes before turning off. At higher speeds, the rear window defogger may stay on continuously.

The upper region of gridlines on the rear window are antenna lines and are not intended to heat when the defogger is activated.

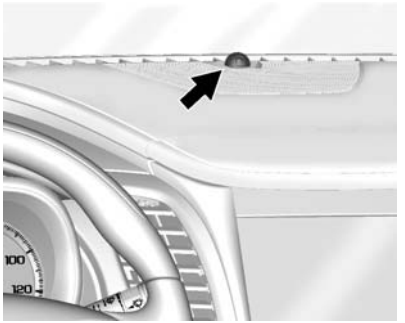
If equipped with heated outside rearview mirrors, they turn on with the rear window defogger and help to clear fog or frost from the surface of the mirror. See *Heated Mirrors on page 2-20*.

**⚠ Caution**

Using a razor blade or sharp object on the inside rear window can damage the antenna or defogger. Repairs would not be covered by the vehicle warranty. Do not stick anything to the rear window.

**Remote Start Climate Control Operation (If Equipped):** If equipped with remote start, the climate control system may run when the vehicle is started remotely. The system uses the driver’s previous settings to heat or cool the inside of the vehicle. The rear defog may come on during remote start based on cold ambient conditions. The rear defog indicator light may not come on during a remote start. The front heated seats may turn on if it is cold outside. The heated seat indicator lights may not come on during a remote start. See *Remote Vehicle Start on page 2-9* and *Heated and Ventilated Seats on page 1-11* (if equipped).

## Sensors



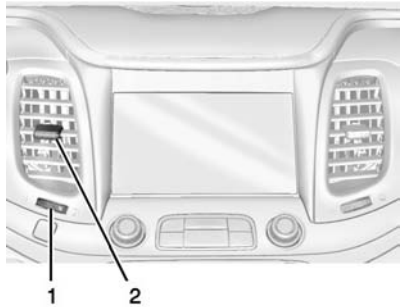
The solar sensor on top of the instrument panel near the windshield monitors the solar heat.

The climate control system uses the sensor information to adjust the temperature, fan speed, recirculation, and air delivery mode for best comfort.

If the sensor is covered, the automatic climate control system may not work properly.

# Air Vents

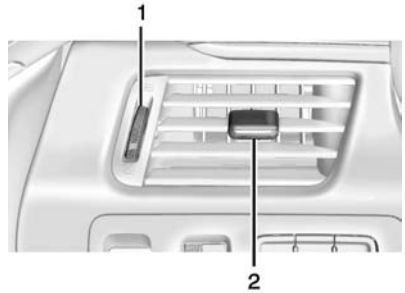
## Center Air Vents




Move the thumbwheels (1) left or right to open or close off the airflow.

Use the slider knobs (2) on the air vents to change the direction of the airflow.

## Side Air Vents




Move the thumbwheels (1) up or down to open or close off the airflow.

Use the slider knobs (2) to change the direction of the airflow.

### Operation Tips

- Keep all outlets open whenever possible for best system performance.

- Keep the paths under all seats clear of objects to help circulate the air inside the vehicle more effectively.
- Use of non-GM approved hood deflectors can adversely affect the performance of the system.
- Do not attach any devices to the air vent louvers. This restricts airflow and may cause damage to the air vents.

# Maintenance

## Passenger Compartment Air Filter

The passenger compartment air filter removes most of the pollen and dust from the air that enters the vehicle. The filter will need to be replaced periodically. See *Maintenance Schedule on page 11-2*.

Using the climate control system without an air filter installed is not recommended. Water or other debris could enter the system and result in leaks or noises. Always install a new filter when removing the old filter.

For more information on filter replacement, see your dealer.

# Driving and Operating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# Driving Information

## Distracted Driving

Distraction comes in many forms and can take your focus from the task of driving. Exercise good judgment and do not let other activities divert your attention away from the road. Many local governments have enacted laws regarding driver distraction. Become familiar with the local laws in your area.

To avoid distracted driving, always keep your eyes on the road, hands on the wheel, and mind on the drive.

- Do not use a phone in demanding driving situations. Use a hands-free method to place or receive necessary phone calls.
- Watch the road. Do not read, take notes, or look up information on phones or other electronic devices.
- Designate a front seat passenger to handle potential distractions.
- Become familiar with vehicle features before driving, such as programming favorite radio stations and adjusting climate control and seat settings. Program all trip information into any navigation device prior to driving.
- Wait until the vehicle is parked to retrieve items that have fallen to the floor.
- Stop or park the vehicle to tend to children.
- Keep pets in an appropriate carrier or restraint.
- Avoid stressful conversations while driving, whether with a passenger or on a cell phone.

**⚠ Warning**

Taking your eyes off the road too long or too often could cause a crash resulting in injury or death. Focus your attention on driving.

Refer to the Infotainment section for more information on using that system, including pairing and using a cell phone.

## Defensive Driving

Defensive driving means “always expect the unexpected.” The first step in driving defensively is to wear the safety belt. See *Safety Belts on page 3-13*.

- Assume that other road users (pedestrians, bicyclists, and other drivers) are going to be careless and make mistakes. Anticipate what they might do and be ready.
- Allow enough following distance between you and the driver in front of you.
- Focus on the task of driving.

## Drunk Driving

Death and injury associated with drinking and driving is a global tragedy.

**⚠ Warning**

Drinking and then driving is very dangerous. Your reflexes, perceptions, attentiveness, and judgment can be affected by even a small amount of alcohol. You can have a serious — or even fatal — collision if you drive after drinking.

Do not drink and drive or ride with a driver who has been drinking. Ride home in a cab; or if you are with a group, designate a driver who will not drink.

## Control of a Vehicle

Braking, steering, and accelerating are important factors in helping to control a vehicle while driving.

## Braking

Braking action involves perception time and reaction time. Deciding to push the brake pedal is perception time. Actually doing it is reaction time.

Average driver reaction time is about three-quarters of a second. In that time, a vehicle moving at 100 km/h (60 mph) travels 20 m (66 ft), which could be a lot of distance in an emergency.

Helpful braking tips to keep in mind include:

- Keep enough distance between you and the vehicle in front of you.
- Avoid needless heavy braking.
- Keep pace with traffic.

If the engine ever stops while the vehicle is being driven, brake normally but do not pump the brakes. Doing so could make the pedal harder to push down. If the engine stops, there will be some power brake assist but it will be used when the brake is applied. Once the power assist is used up, it can take longer to stop and the brake pedal will be harder to push.

## Steering

### Electric Power Steering

The vehicle has electric power steering. It does not have power steering fluid. Regular maintenance is not required.

If power steering assist is lost due to a system malfunction, the vehicle can be steered, but may require increased effort.

See your dealer if there is a problem.

If the steering wheel is turned until it reaches the end of its travel and is held against that position for an extended period of time, power steering assist may be reduced.

If the steering assist is used for an extended period of time, power assist may be reduced.

Normal use of the power steering assist should return when the system cools down.

See specific vehicle steering messages under *Service Vehicle Messages on page 5-37*. See your dealer if there is a problem.

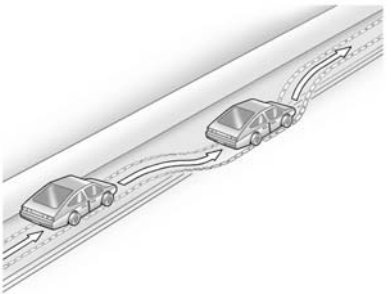
### Curve Tips

- Take curves at a reasonable speed.
- Reduce speed before entering a curve.
- Maintain a reasonable steady speed through the curve.
- Wait until the vehicle is out of the curve before accelerating gently into the straightaway.

### Steering in Emergencies

- There are some situations when steering around a problem may be more effective than braking.
- Holding both sides of the steering wheel allows you to turn 180 degrees without removing a hand.
- The Antilock Brake System (ABS) allows steering while braking.

## Off-Road Recovery



The vehicle's right wheels can drop off the edge of a road onto the shoulder while driving. Follow these tips:

1. Ease off the accelerator and then, if there is nothing in the way, steer the vehicle so that it straddles the edge of the pavement.
2. Turn the steering wheel about one-eighth of a turn, until the right front tire contacts the pavement edge.
3. Turn the steering wheel to go straight down the roadway.

## Loss of Control

### Skidding

There are three types of skids that correspond to the vehicle's three control systems:

- Braking Skid — wheels are not rolling.
- Steering or Cornering Skid — too much speed or steering in a curve causes tires to slip and lose cornering force.
- Acceleration Skid — too much throttle causes the driving wheels to spin.

Defensive drivers avoid most skids by taking reasonable care suited to existing conditions, and by not overdriving those conditions. But skids are always possible.

If the vehicle starts to slide, follow these suggestions:

- Ease your foot off the accelerator pedal and steer the way you want the vehicle to go. The vehicle may straighten out. Be ready for a second skid if it occurs.
- Slow down and adjust your driving according to weather conditions. Stopping distance can be longer and vehicle control can be affected when traction is reduced by water, snow, ice, gravel, or other material on the road. Learn to recognize warning clues — such as enough water, ice, or packed snow on the road to make a mirrored surface — and slow down when you have any doubt.
- Try to avoid sudden steering, acceleration, or braking, including reducing vehicle speed by shifting to a lower gear. Any sudden changes could cause the tires to slide.

Remember: Antilock brakes help avoid only the braking skid.

## Track Events and Competitive Driving

Racing, track testing, or competitive driving may affect the vehicle warranty. See the warranty manual before using the vehicle for racing or other competitive driving.

**⚠ Caution**

If the vehicle is used for track events and competitive driving, the engine may use more oil than it would with normal use. Low oil levels can damage the engine. Check the oil level often and at the proper level. See *Engine Oil on page 10-11*.

For the 2.5L L4 Engine: Add and keep the oil level at 1 L (1 qt) above the high mark when driving under these conditions. For information on how to check and add oil, see *Engine Oil on page 10-11*

For the 3.6L Engine Only: Add and keep the oil level at 0.5 L (0.5 qt) above the high mark when driving under these conditions. For information on how to check and add oil, see *Engine Oil on page 10-11*.

**⚠ Caution**

During a first time track or racing event, high rear axle temperatures can occur. Damage could be caused to the rear axle and would not be covered by the vehicle warranty.

Do not drive as long or as fast the first time the vehicle is driven on the track or raced.

## Driving on Wet Roads

Rain and wet roads can reduce vehicle traction and affect your ability to stop and accelerate. Always drive slower in these types of driving conditions and avoid driving through large puddles and deep-standing or flowing water.

**⚠ Warning**

Wet brakes can cause crashes. They might not work as well in a quick stop and could cause pulling to one side. You could lose control of the vehicle.

After driving through a large puddle of water or a car/vehicle wash, lightly apply the brake pedal until the brakes work normally.

Flowing or rushing water creates strong forces. Driving through flowing water could cause the vehicle to be carried away. If this happens, you and other vehicle occupants could drown. Do not ignore police warnings and be very cautious about trying to drive through flowing water.

### Hydroplaning

Hydroplaning is dangerous. Water can build up under the vehicle's tires so they actually ride on the water. This can happen if the road is wet enough and you are going fast enough. When the vehicle is hydroplaning, it has little or no contact with the road.

There is no hard and fast rule about hydroplaning. The best advice is to slow down when the road is wet.

### Other Rainy Weather Tips

Besides slowing down, other wet weather driving tips include:

- Allow extra following distance.
- Pass with caution.
- Keep windshield wiping equipment in good shape.
- Keep the windshield washer fluid reservoir filled.
- Have good tires with proper tread depth. See *Tires on page 10-42*.
- Turn off cruise control.

## Highway Hypnosis

Always be alert and pay attention to your surroundings while driving. If you become tired or sleepy, find a safe place to park the vehicle and rest.

Other driving tips include:

- Keep the vehicle well ventilated.
- Keep the interior temperature cool.
- Keep your eyes moving — scan the road ahead and to the sides.
- Check the rearview mirror and vehicle instruments often.

## Hill and Mountain Roads

Driving on steep hills or through mountains is different than driving on flat or rolling terrain. Tips for driving in these conditions include:

- Keep the vehicle serviced and in good shape.
- Check all fluid levels and brakes, tires, cooling system, and transmission.
- Shift to a lower gear when going down steep or long hills.

**⚠ Warning**

Using the brakes to slow the vehicle on a long downhill slope can cause brake overheating, can reduce brake performance, and could result in a loss of braking. Shift the transmission to a lower gear to let the engine assist the brakes on a steep downhill slope.

**⚠ Warning**

Coasting downhill in N (Neutral) or with the ignition off is dangerous. This can cause overheating of the brakes and loss of steering. Always have the engine running and the vehicle in gear.

- Stay in your own lane. Do not swing wide or cut across the center of the road. Drive at speeds that let you stay in your own lane.
- Be alert on top of hills; something could be in your lane (stalled car, accident).
- Pay attention to special road signs (falling rocks area, winding roads, long grades, passing or no-passing zones) and take appropriate action.

# Winter Driving

## Driving on Snow or Ice

Drive carefully when there is snow or ice between the tires and the road, creating less traction or grip. Wet ice can occur at about 0°C (32°F) when freezing rain begins to fall, resulting in even less traction. Avoid driving on wet ice or in freezing rain until roads can be treated with salt or sand.

Drive with caution, whatever the condition. Accelerate gently so traction is not lost. Accelerating too quickly causes the wheels to spin and makes the surface under the tires slick, so there is even less traction.

Try not to break the fragile traction. If you accelerate too fast, the drive wheels will spin and polish the surface under the tires even more.

The Antilock Brake System (ABS) improves vehicle stability during hard stops on slippery roads, but apply the brakes sooner than when on dry pavement. See *Antilock Brake System (ABS) on page 9-30*.

Allow greater following distance on any slippery road and watch for slippery spots. Icy patches can occur on otherwise clear roads in shaded areas. The surface of a curve or an overpass can remain icy when the surrounding roads are clear. Avoid sudden steering maneuvers and braking while on ice.

Turn off cruise control on slippery surfaces.

## Blizzard Conditions

Being stuck in snow can be a serious situation. Stay with the vehicle unless there is help nearby. If possible, use Roadside Assistance. See *Roadside Assistance Program on page 13-5*. To get help and keep everyone in the vehicle safe:

- Turn on the hazard warning flashers.

- Tie a red cloth to an outside mirror.

**⚠ Warning**

Snow can trap engine exhaust under the vehicle. This may cause exhaust gases to get inside. Engine exhaust contains carbon monoxide (CO) which cannot be seen or smelled. It can cause unconsciousness and even death.

If the vehicle is stuck in the snow:

- Clear away snow from around the base of your vehicle, especially any that is blocking the exhaust pipe.
- Check again from time to time to be sure snow does not collect there.
- Open a window about 5 cm (2 in) on the side of the vehicle that is away from the wind to bring in fresh air.

(Continued)

**Warning (Continued)**

- Fully open the air outlets on or under the instrument panel.
- Adjust the climate control system to a setting that circulates the air inside the vehicle and set the fan speed to the highest setting. See “Climate Control Systems” in the Index.

For more information about carbon monoxide, see *Engine Exhaust on page 9-26*.

To save fuel, run the engine for only short periods as needed to warm the vehicle and then shut the engine off and close the window most of the way to save heat. Repeat this until help arrives but only when you feel really uncomfortable from the cold. Moving about to keep warm also helps.

If it takes some time for help to arrive, now and then when you run the engine, push the accelerator pedal slightly so the engine runs faster than the idle speed. This keeps the battery charged to restart the vehicle and to signal for help with the headlamps. Do this as little as possible to save fuel.

## If the Vehicle Is Stuck

Slowly and cautiously spin the wheels to free the vehicle when stuck in sand, mud, ice, or snow.

If stuck too severely for the traction system to free the vehicle, turn the traction system off and use the rocking method. See *Traction Control/Electronic Stability Control on page 9-33*.

**⚠ Warning**

If the vehicle's tires spin at high speed, they can explode, and you or others could be injured. The vehicle can overheat, causing an engine compartment fire or other damage. Spin the wheels as little as possible and avoid going above 56 km/h (35 mph).

### Rocking the Vehicle to Get it Out

Turn the steering wheel left and right to clear the area around the front wheels. Turn off any traction system. Shift back and forth between R (Reverse) and a low forward gear, spinning the wheels as little as possible. To prevent transmission wear, wait until the wheels stop spinning before shifting gears. Release the accelerator pedal while shifting, and press lightly on the accelerator pedal when the transmission is in gear.

Slowly spinning the wheels in the forward and reverse directions causes a rocking motion that could free the vehicle. If that does not get the vehicle out after a few tries, it might need to be towed out. If the vehicle does need to be towed out, see *Towing the Vehicle on page 10-75*.

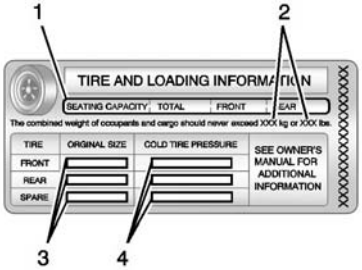
## Vehicle Load Limits

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 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 shorten the life of the vehicle.

## Tire and Loading Information Label




**Label Example**

1. Number of Occupant Seating Positions
2. Maximum Vehicle Capacity Weight
3. Size of the Original Equipment Tires
4. Recommended Cold Tire Inflation Pressure

A vehicle-specific Tire and Loading Information label is attached to the vehicle's center pillar (B-pillar). The Tire and Loading Information label shows the number of occupant seating positions (1), and the maximum vehicle capacity weight (2) in kilograms and pounds.

The Tire and Loading Information label also shows the tire size of the original equipment tires (3) and the recommended cold tire inflation pressures (4). For more information on tires and inflation see *Tires on page 10-42* and *Tire Pressure on page 10-50*.

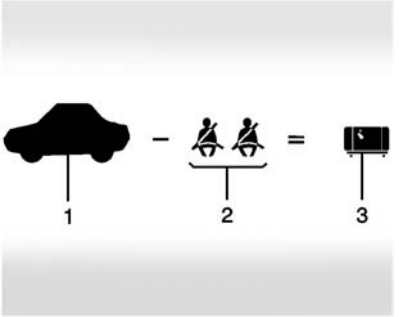
There is also important loading information on the Certification label. It tells you the Gross Vehicle Weight Rating (GVWR) and the Gross Axle Weight Rating (GAWR) for the front and rear axle. See “Certification Label” later in this section.

**“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.

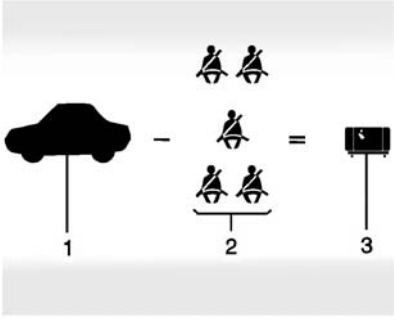
4. The resulting figure equals the available amount of cargo and luggage load capacity. For example, if the "XXX" amount equals 1400 lbs. and there will be five 150 lb passengers in your vehicle, the amount of available cargo and luggage load capacity is 650 lbs. (1400-750 (5 x 150) = 650 lbs.)
5. Determine 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.”

See *Trailer Towing (eAssist) on page 9-64* or *Trailer Towing (All except eAssist) on page 9-64* for important information on towing a trailer, towing safety rules, and trailering tips.



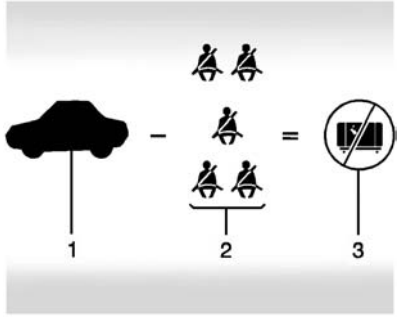

**Example 1**

1. Vehicle Capacity Weight for Example 1 = 453 kg (1,000 lbs).
2. Subtract Occupant Weight @ 68 kg (150 lbs) × 2 = 136 kg (300 lbs).
3. Available Occupant and Cargo Weight = 317 kg (700 lbs).




**Example 2**

1. Vehicle Capacity Weight for Example 2 = 453 kg (1,000 lbs).
2. Subtract Occupant Weight @ 68 kg (150 lbs) × 5 = 340 kg (750 lbs).
3. Available Cargo Weight = 113 kg (250 lbs).

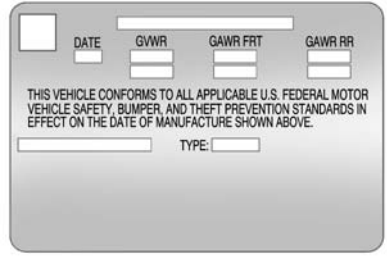



**Example 3**

1. Vehicle Capacity Weight for Example 3 = 453 kg (1,000 lbs).
2. Subtract Occupant Weight @ 91 kg (200 lbs) × 5 = 453 kg (1,000 lbs).
3. Available Cargo Weight = 0 kg (0 lbs).

Refer to 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




**Label Example**

A vehicle-specific Certification label is attached to the vehicle's center pillar (B-pillar). The label tells 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. Never exceed the GVWR for the vehicle, or the Gross Axle Weight Rating (GAWR) for either the front or rear axle.

And, if there is a heavy load, it should be spread out. See “Steps for Determining Correct Load Limit” earlier in this section.

**⚠ 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 shorten the life of the vehicle.

If you put things inside the vehicle — like suitcases, tools, packages, or anything else — they will go as fast as the vehicle goes. If you have to stop or turn quickly, or if there is a crash, they will keep going.

**⚠ Warning**

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

- Put things in the cargo area of the vehicle. In the cargo area, put them as far forward as possible. Try to spread the weight evenly.

(Continued)

**Warning (Continued)**

- Never stack heavier things, like suitcases, inside the vehicle so that some of them are above the tops of the seats.
- Do not leave an unsecured child restraint in the vehicle.
- Secure loose items in the vehicle.
- Do not leave a seat folded down unless needed.

# Starting and Operating

## New Vehicle Break-In

**⚠ Caution**

The vehicle does not need an elaborate break-in. But it will perform better in the long run if you follow these guidelines:

- Do not drive at any one constant speed, fast or slow, for the first 805 km (500 mi). Do not make full-throttle starts. Avoid downshifting to brake or slow the vehicle.
- Avoid making hard stops for the first 322 km (200 mi) or so. During this time the new brake linings are not yet broken in. Hard stops with new linings can mean premature wear and earlier replacement. Follow this

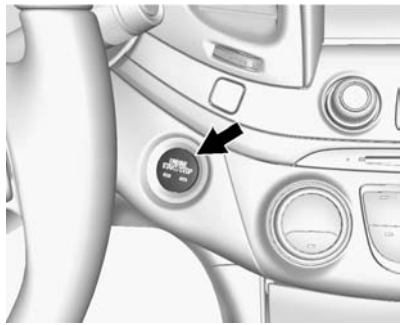
(Continued)

**Caution (Continued)**

breaking-in guideline every time you get new brake linings.

Following break-in, engine speed and load can be gradually increased.

## Ignition Positions (Keyless Access)




The vehicle may have an electronic keyless ignition with pushbutton start.

Pressing the button cycles it through three modes: ACC/ACCESSORY, ON/RUN/START, and Stopping the Engine/OFF.

The transmitter must be in the vehicle for the system to operate. If the pushbutton start is not working, the vehicle may be near a strong radio antenna signal causing interference to the Keyless Access system. See *Remote Keyless Entry (RKE) System Operation on page 2-3*.

To shift out of P (Park), the vehicle must be in ACC/ACCESSORY or ON/RUN and the brake pedal must be applied.

**Stopping the Engine/LOCK/OFF (No Indicator Lights):** When the vehicle is stopped, press the ENGINE START/STOP button once to turn the engine off.

If the vehicle is in P (Park), the ignition will turn off, and Retained Accessory Power (RAP) will remain active. See *Retained Accessory Power (RAP) on page 9-24*.

If the vehicle is not in P (Park), the ignition will return to ACC/ACCESSORY and display the message SHIFT TO PARK in the Driver Information Center (DIC). See *Transmission Messages on page 5-39*. When the vehicle is shifted into P (Park), the ignition system will switch to OFF.

Do not turn the engine off when the vehicle is moving. This will cause a loss of power assist in the brake and steering systems and disable the airbags.

If the vehicle must be shut off in an emergency:

1. Brake using a firm and steady pressure. Do not pump the brakes repeatedly. This may deplete power assist, requiring increased brake pedal force.
2. Shift the vehicle to N (Neutral). This can be done while the vehicle is moving. After shifting to N (Neutral), firmly apply the brakes and steer the vehicle to a safe location.
3. Come to a complete stop, shift to P (Park), and turn the ignition to OFF. On vehicles with an automatic transmission, the shift lever must be in P (Park) to turn the ignition switch to the OFF position.
4. Set the parking brake. See *Parking Brake on page 9-31*.

**⚠ Warning**

Turning off the vehicle while moving may cause loss of power assist in the brake and steering systems and disable the airbags. While driving, only shut the vehicle off in an emergency.

If the vehicle cannot be pulled over, and must be shut off while driving, press and hold the ENGINE START/STOP button for longer than two seconds, or press twice in five seconds.

**ACC/ACCESSORY (Amber Indicator Light):** This mode allows some electrical accessories to be used when the engine is off.

With the ignition off, pressing the button one time without the brake pedal applied will place the ignition system in ACC/ACCESSORY.

The ignition will switch from ACC/ACCESSORY to OFF after five minutes to prevent battery rundown.

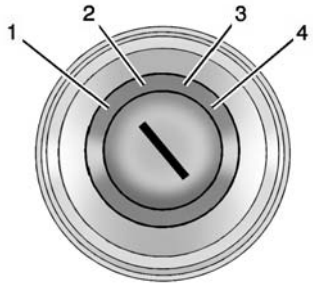
**ON/RUN/START (Green Indicator Light):** This mode is for driving and starting. With the ignition off, and the brake pedal applied, pressing the button once will place the ignition system in ON/RUN/START. Once engine cranking begins, release the button. Engine cranking will continue until the engine starts.

See *Starting the Engine on page 9-19*. The ignition will then remain in ON/RUN.

**Service Only Mode**

This power mode is available for service and diagnostics, and to verify the proper operation of the malfunction indicator lamp as may be required for emission inspection purposes. With the vehicle off, and the brake pedal not applied, pressing and holding the button for more than five seconds will place the vehicle in Service Only Mode. The instruments and audio systems will operate as they do in ON/RUN, but the vehicle will not be able to be driven. The engine will not start in Service Only Mode. Press the button again to turn the vehicle off.

## Ignition Positions (Key Access)




The ignition switch has four different positions.

**⚠ Caution**

Using a tool to force the key to turn in the ignition could cause damage to the switch or break the key. Use the correct key, make sure it is all the way in, and turn it

(Continued)

**Caution (Continued)**

only with your hand. If the key cannot be turned by hand, see your dealer.

The key must be fully extended to start the vehicle.

To shift out of P (Park), turn the ignition to ON/RUN and apply the brake pedal.

**1 (STOPPING THE ENGINE/LOCK/OFF):** When the vehicle is stopped, turn the ignition switch to LOCK/OFF to turn the engine off. Retained Accessory Power (RAP) will remain active. See *Retained Accessory Power (RAP) on page 9-24*.

This is the only position from which the key can be removed. This locks the ignition and automatic transmission.

Do not turn the engine off when the vehicle is moving. This will cause a loss of power assist in the brake and steering systems, and disable the airbags.

If the vehicle must be shut off in an emergency:

1. Brake using a firm and steady pressure. Do not pump the brakes repeatedly. This may deplete power assist, requiring increased brake pedal force.
2. Shift the vehicle to N (Neutral). This can be done while the vehicle is moving. After shifting to N (Neutral), firmly apply the brakes and steer the vehicle to a safe location.
3. Come to a complete stop, shift to P (Park), and turn the ignition to LOCK/OFF. On vehicles with an automatic transmission, the shift lever must be in P (Park) to turn the ignition switch to the LOCK/OFF position.
4. Set the parking brake. See *Parking Brake on page 9-31*.

**⚠ Warning**

Turning off the vehicle while moving may cause loss of power assist in the brake and steering systems and disable the airbags. While driving, only shut the vehicle off in an emergency.

If the vehicle cannot be pulled over, and must be shut off while driving, turn the ignition to ACC/ACCESSORY.

**2 (ACC/ACCESSORY):** This position provides power to some of the electrical accessories. It unlocks the ignition. To move the key from ACC/ACCESSORY to LOCK/OFF, the shift lever must be in P (Park).

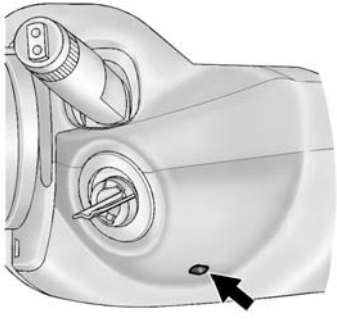
**3 (ON/RUN):** The ignition switch stays in this position when the engine is running. This position can be used to operate the electrical accessories, including the ventilation fan and 12-volt power outlets, as well as to display some warning and indicator lights. This position can also be used for service and diagnostics, and to verify the proper operation of the malfunction indicator lamp as may be required for emission inspection purposes. The transmission is also unlocked in this position.

The battery could be drained if the key is left in the ACC/ACCESSORY or ON/RUN position with the engine off. The vehicle might not restart if the battery is allowed to drain for an extended period of time.

**4 (START):** This position starts the engine. When the engine starts, release the key. The ignition switch will return to ON/RUN for normal driving.

A warning tone sounds when the driver door is opened when the ignition is still in ACC/ACCESSORY and the key is in the ignition. If the ignition becomes difficult to turn, see *Keys on page 2-1*.

### Key Lock Release



The vehicle is equipped with an electronic key lock release system. This system is to prevent ignition key removal unless the shift lever is in P (Park).

The key lock release will not work if the battery is charged less than 9 volts, or uncharged. Try charging or jump starting the battery. See *Jump Starting (with or without eAssist) on page 10-72* or *Jump Starting (On-board with eAssist Only) on page 10-71*.

If charging or jump starting the battery does not work, there is a manual key lock release. Locate the hole below the ignition lock. Insert a tool or key into the opening. Locate the lever, and press it toward the driver while removing the key from the ignition.

## Starting the Engine

Move the shift lever to P (Park) or N (Neutral). The engine will not start in any other position. To restart the engine when the vehicle is already moving, use N (Neutral) only.

**⚠ Caution**

Do not try to shift to P (Park) if the vehicle is moving. If you do, you could damage the transmission. Shift to P (Park) only when the vehicle is stopped.

**⚠ Caution**

If you add electrical parts or accessories, you could change the way the engine operates. Any resulting damage would not be covered by the vehicle warranty. See *Add-On Electrical Equipment on page 9-66*.

#### Starting Procedure (Key Access)

1. With your foot off the accelerator pedal, turn the ignition key to START. When the engine starts, let go of the key. The idle speed will go down as the engine warms. Do not race the engine immediately after starting it. Allow the oil to warm up and lubricate all moving parts.

   The vehicle has a Computer-Controlled Cranking System. This feature assists in starting the engine and protects components. If the ignition key is turned to the START position,

and then released when the engine begins cranking, the engine will continue cranking for a few seconds or until the vehicle starts. If the engine does not start and the key is held in START for many seconds, cranking stops after 15 seconds to prevent cranking motor damage. To prevent gear damage, this system also prevents cranking if the engine is already running. Engine cranking can be stopped by turning the ignition switch to ACC/ACCESSORY or LOCK/OFF.

**⚠ Caution**

Cranking the engine for long periods of time, by returning the ignition to the START position immediately after cranking has ended, can overheat and damage the cranking motor, and drain the

(Continued)

**Caution (Continued)**

battery. Wait at least 15 seconds between each try, to let the cranking motor cool down.

2. If the engine does not start after five to 10 seconds, especially in very cold weather (below 0°F or −18°C), it could be flooded with too much gasoline. Push the accelerator pedal all the way to the floor and hold it there as you hold the key in START for a maximum of 15 seconds. Wait at least 15 seconds between each try, to allow the cranking motor to cool. When the engine starts, let go of the key and accelerator. If the vehicle starts briefly but then stops again, repeat the procedure. This clears the extra gasoline from the engine. Do not race the engine immediately after starting it. Operate the engine and transmission gently until the oil warms up and lubricates all moving parts.

**Starting Procedure (Keyless Access)**

1. If the vehicle has the Keyless Access system, the Remote Keyless Entry (RKE) transmitter must be in the vehicle. Put your foot on the brake pedal and push the ENGINE START/STOP button. When the engine begins cranking, let go of the button.

   The idle speed will go down as the engine gets warm. Do not race the engine immediately after starting it. Operate the engine and transmission gently to allow the oil to warm up and lubricate all moving parts.

If the transmitter is not in the vehicle or something is interfering with the transmitter, the Driver Information Center (DIC) will display NO REMOTE DETECTED. See *Driver Information Center (DIC) on page 5-27*.

If the battery in the RKE transmitter needs replacing, the DIC displays REPLACE BATTERY IN REMOTE KEY. The vehicle can still be driven. See “Starting the Vehicle with a Low Transmitter Battery or Wireless Interference” in *Remote Keyless Entry (RKE) System Operation on page 2-3*.

The vehicle has a Computer-Controlled Cranking System. This feature assists in starting the engine and protects components. If the ENGINE START/STOP button is pressed, and then released when the engine begins cranking, the engine will continue cranking for a few seconds or until the vehicle starts. If the engine does not start and the button is pressed for many seconds, cranking will be stopped after 15 seconds to prevent cranking motor damage. To prevent gear damage, this system also prevents cranking if the engine is already running. Engine cranking can be stopped by pressing the ENGINE START/STOP button a second time.

**⚠ Caution**

Cranking the engine for long periods of time, by returning the ignition to the START position immediately after cranking has ended, can overheat and damage the cranking motor, and drain the battery. Wait at least 15 seconds between each try, to let the cranking motor cool down.

2. If the engine does not start after five to 10 seconds, especially in very cold weather (below −18°C or 0°F), it could be flooded with too much gasoline. Try pushing the accelerator pedal all the way to the floor and holding it there as you press the ENGINE START/STOP button, for up to a maximum of 15 seconds. Wait at least 15 seconds between each try, to allow the cranking motor to cool down. When the engine starts, let go of the key or button, and the accelerator. If the vehicle starts briefly but then stops again, do the same thing. This clears the extra gasoline from the engine. Do not race the engine immediately after starting it. Operate the engine and transmission gently until the oil warms up and lubricates all moving parts.

## eAssist Automatic Engine Start/Stop

**⚠ Warning**

Exiting the vehicle without first shifting into P (Park) may cause the vehicle to move. You or others may be injured. Because the vehicle has the automatic engine start/stop feature, the vehicle's engine might seem to be shut off; however, once the brake pedal is released, the engine will start up again.

Shift to P (Park) and turn the ignition to LOCK/OFF, before exiting the vehicle.

eAssist vehicles have an automatic engine start/stop feature. After the engine is started and has reached operating temperature, the auto stop feature may cause the engine to turn off when the brakes are applied and the vehicle comes to a complete stop. The vehicle may remain in auto stop for up to two minutes. When the brake is released or the accelerator pedal applied, the engine will restart. The engine will continue to run until the next auto stop.

AUTO STOP on the tachometer signifies that the engine is in auto stop mode. See *Tachometer on page 5-13*. When the vehicle is turned off, the tachometer will move to OFF. If the driver door is opened while in auto stop mode, a chime will sound.

There are several conditions that may prevent an auto stop or cause an auto start.

**The Engine Will Remain Running When:**

- The engine, transmission, or high voltage battery is not warmed up yet.
- The outside temperature is less than −20°C (−4°F).
- The air conditioning or defrost system need the compressor to maintain vehicle comfort. See *Dual Automatic Climate Control System on page 8-3*. The warmer it is outside, the shorter the time before the engine is restarted to provide cabin cooling. To maximize fuel economy, use the eco air conditioning mode.
- The shift lever is in P (Park), N (Neutral), R (Reverse), or M (Manual Mode).
- The high voltage battery pack charge is low.
- The hood is not fully closed.
- Brake pedal pressure is low.
- The malfunction indicator lamp is on; auto stop may be prevented.
- High humidity is detected.

**The Engine Will Restart When:**

- The brake pedal is released.
- The accelerator pedal is applied.

- Shifting out of D (Drive) to any other gear.
- The air conditioning or defrost system need the compressor to maintain vehicle comfort. See *Dual Automatic Climate Control System on page 8-3* The warmer it is outside, the shorter the time before the engine is restarted to provide cabin cooling. To maximize fuel economy, use the eco air conditioning mode.
- The climate control system is turned from off to normal air conditioning or defrost. See *Dual Automatic Climate Control System on page 8-3*.
- The engine is required to run for either heater or climate control performance. See *Dual Automatic Climate Control System on page 8-3*.
- The high voltage battery pack charge is low and requires recharging.
- Auto stop time is greater than two minutes.
- The hood is opened.

## Engine Heater

The engine coolant heater, if equipped, can help in cold weather conditions at or below −18°C (0°F) for easier starting and better fuel economy during engine warm-up. Plug in the coolant heater at least four hours before starting the vehicle. An internal thermostat in the plug end of the cord will prevent engine coolant heater operation at temperatures above −18°C (0°F).

### To Use the Engine Coolant Heater

1. Turn off the engine.
2. Open the hood and unwrap the electrical cord. The electrical cord is on the driver side of the engine compartment, between the fender and the engine compartment fuse block.
3. Plug it into a normal, grounded 110-volt AC outlet.

**⚠ Warning**

Plugging the cord into an ungrounded outlet could cause an electrical shock. Also, the wrong kind of extension cord could overheat and cause a fire. You could be seriously injured. Plug the cord into a properly grounded three-prong 110-volt AC outlet. If the cord will not reach, use a heavy-duty three-prong extension cord rated for at least 15 amps.

4. Before starting the engine, be sure to unplug and store the cord as it was before to keep it away from moving engine parts.

The length of time the heater should remain plugged in depends on several factors. Ask a dealer in the area where you will be parking the vehicle for the best advice on this.

## Retained Accessory Power (RAP)

These vehicle accessories can be used for up to 10 minutes after the engine is turned off:

- Audio System
- Power Windows
- Sunroof (if equipped)

These features continue to work up to 10 minutes after the ignition is turned to LOCK/OFF.

The power windows and sunroof will work until any door is opened.

The radio continues to work until the driver door is opened.

All these features operate when the key is in ON/RUN or ACC/ACCESSORY.

## Shifting Into Park

1. Hold the brake pedal down and set the parking brake. See *Parking Brake on page 9-31*.
2. Move the shift lever into P (Park) by holding in the button on the shift lever and pushing the shift lever all the way toward the front of the vehicle.
3. Turn the ignition key to LOCK/OFF.
4. If equipped, remove the key and take it with you. If you can leave the vehicle with the ignition key in your hand, the vehicle is in P (Park).

### Leaving the Vehicle with the Engine Running

**⚠ Warning**

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

It is dangerous to get out of the vehicle if the shift lever is not fully in P (Park) with the parking brake firmly set. The vehicle can roll.

(Continued)

**Warning (Continued)**

Do not leave the vehicle when the engine is running. If you have left the engine running, the vehicle can move suddenly. You or others could be injured. To be sure the vehicle will not move, even when you are on fairly level ground, always set the parking brake and move the shift lever to P (Park). See *Shifting Into Park on page 9-24*.

If you have to leave the vehicle with the engine running, be sure the vehicle is in P (Park) and the parking brake is firmly set before you leave it. After you have moved the shift lever into P (Park), hold the regular brake pedal down. Then, see if you can move the shift lever away from P (Park) without first pushing the button.

If you can, it means that the shift lever was not fully locked in P (Park).

### Torque Lock

Torque lock is when the weight of the vehicle puts too much force on the parking pawl in the transmission. This happens when parking on a hill and shifting the transmission into P (Park) is not done properly, then it is difficult to shift out of P (Park). To prevent torque lock, set the parking brake and then shift into P (Park). To find out how, see “Shifting Into Park” listed previously.

If torque lock does occur, your vehicle may need to be pushed uphill by another vehicle to relieve the parking pawl pressure, so you can shift out of P (Park).

If you are towing a trailer and parking on a hill, see *Driving Characteristics and Towing Tips on page 9-61*.

## Shifting out of Park

This vehicle is equipped with an electronic shift lock release system. The shift lock release is designed to:

- Prevent ignition key removal (if equipped) unless the shift lever is in P (Park) with the shift lever button fully released.
- Prevent movement of the shift lever out of P (Park), unless the ignition is in ON/RUN and the brake pedal is applied.

The shift lock release is always functional except in the case of an uncharged or low voltage (less than 9-volt) battery.

If the vehicle has an uncharged battery or a battery with low voltage, try charging or jump starting the battery. See *Jump Starting (with or without eAssist) on page 10-72* or *Jump Starting (On-board with eAssist Only) on page 10-71*.

To shift out of P (Park):

1. Apply the brake pedal.
2. Place the ignition in ON/RUN.
3. Press the shift lever button.
4. Move the shift lever to the desired position.

If still unable to shift out of P (Park):

1. Fully release the shift lever button.
2. Hold the brake pedal down and press the shift lever button again.
3. Move the shift lever to the desired position.

If you are still having a problem shifting, see your dealer.

## 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.

# 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.

(Continued)

**Warning (Continued)**

- There are holes or openings in the vehicle body from damage or aftermarket modifications that are not completely sealed.

If unusual fumes are detected or if it is suspected that exhaust is coming into the vehicle:

- Drive it only with the windows completely down.
- Have the vehicle repaired immediately.

Never park the vehicle with the engine running in an enclosed area such as a garage or a building that has no fresh air ventilation.

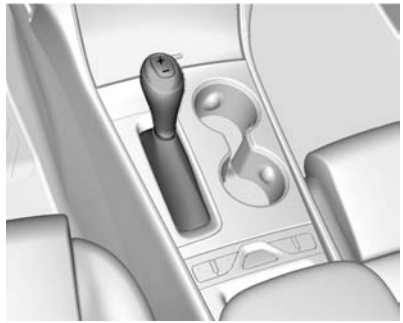
## Running the Vehicle While Parked

It is better not to park with the engine running.

If the vehicle is left with the engine running, follow the proper steps to be sure the vehicle will not move. See *Shifting Into Park on page 9-24* and *Engine Exhaust on page 9-26*.

If parking on a hill and pulling a trailer, see *Driving Characteristics and Towing Tips on page 9-61*.

# Automatic Transmission



**P (Park):** This position locks the front wheels. It is the best position to use when you start the engine because the vehicle cannot move easily.

**⚠ Warning**

It is dangerous to get out of the vehicle if the shift lever is not fully in P (Park) with the parking brake firmly set. The vehicle can roll.

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 move the shift lever to P (Park). See *Shifting Into Park on page 9-24*.

Make sure the shift lever is fully in P (Park) before starting the engine. The vehicle has an automatic transmission shift lock control system. You must fully apply the brake pedal then press the shift lever button before you can shift from P (Park) while the ignition key

is in ON/RUN. If you cannot shift out of P (Park), ease pressure on the shift lever and push the shift lever all the way into P (Park) as you maintain brake application. Then move the shift lever into another gear. See *Shifting out of Park on page 9-25*.

**R (Reverse):** Use this gear to back up.

**⚠ Caution**

Shifting to R (Reverse) while the vehicle is moving forward could damage the transmission. The repairs would not be covered by the vehicle warranty. Shift to R (Reverse) only after the vehicle is stopped.

To rock the vehicle back and forth to get out of snow, ice, or sand without damaging the transmission, see *If the Vehicle Is Stuck on page 9-9*.

**N (Neutral):** 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

(Continued)

**Caution (Continued)**

the vehicle warranty. Be sure the engine is not running at high speed when shifting the vehicle.

**D (Drive):** This position is for normal driving. It provides the best fuel economy. If you need more power for passing, and you are:

- Accelerating slowly or maintaining a constant speed, push the accelerator pedal about halfway down.
- Accelerating quickly or passing, push the accelerator all the way down.

**M (Manual Mode):** This position allows you to change gears similar to a manual transmission. If the vehicle has this feature, see *Manual Mode on page 9-29*.

## Manual Mode

### Driver Shift Control (DSC)

To use this feature (if equipped):

1. Move the shift lever from D (Drive) rearward to M (Manual Mode).

   While driving in Manual Mode, the transmission will remain in the driver selected gear. When coming to a stop in the manual position, the vehicle will automatically shift into 1 (First) gear.

2. Using the button on the shift lever, press the + (plus) end of the button to upshift, or press the − (minus) end of the button to downshift.

The Driver Information Center (DIC) in the instrument cluster will change from the currently displayed message to the letter “M,” for Manual position, and a number indicating the requested gear.

While using the DSC feature the transmission will have firmer shifting and sportier performance. You can use this for sport driving or when climbing hills to stay in gear longer or to downshift for more power or engine braking.

The transmission will only allow you to shift into gears appropriate for the vehicle speed and engine revolutions per minute (rpm):

- The transmission will not allow shifting to the next higher gear if the vehicle speed or engine rpm is too low.
- The transmission will not allow shifting to the next lower gear if the vehicle speed or engine rpm is too high.

#### Second Gear Start Feature

When accelerating the vehicle from a stop in snowy and icy conditions, you may want to shift into 2 (Second) gear. A higher gear allows you to gain more traction on slippery surfaces.

With the DSC feature, the vehicle can be set to pull away in 2 (Second) gear.

1. Move the shift lever from D (Drive) to M (Manual Mode).
2. With the vehicle stopped, press the + (plus) end of the button to select 2 (Second) gear. The vehicle will start from a stop position in 2 (Second) gear.
3. Once moving, select the desired drive gear.

# Brakes

## Antilock Brake System (ABS)

This vehicle has ABS, an advanced electronic braking system that helps prevent a braking skid.

When the vehicle begins to drive away, ABS checks itself.
A momentary motor or clicking noise might be heard while this test is going on, and it might even be noticed that the brake pedal moves a little. This is normal.

If there is a problem with ABS, this warning light stays on. See *Antilock Brake System (ABS) Warning Light on page 5-21*.

If driving safely on a wet road and it becomes necessary to slam on the brakes and continue braking to avoid a sudden obstacle, a computer senses that the wheels are slowing down. If one of the wheels is about to stop rolling, the computer will separately work the brakes at each wheel.

ABS can change the brake pressure to each wheel, as required, faster than any driver could. This can help you steer around the obstacle while braking hard.

As the brakes are applied, the computer keeps receiving updates on wheel speed and controls braking pressure accordingly.

Remember: ABS does not change the time needed to get a foot up to the brake pedal or always decrease stopping distance. If you get too close to the vehicle in front of you, there will not be enough time to apply the brakes if that vehicle suddenly slows or stops. Always leave enough room up ahead to stop, even with ABS.

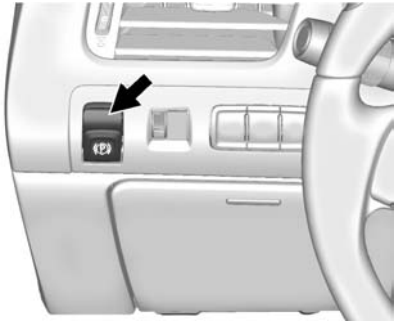
### Using ABS

Do not pump the brakes. Just hold the brake pedal down firmly and let ABS work. You might hear the ABS pump or motor operating and feel the brake pedal pulsate, but this is normal.

### Braking in Emergencies

ABS allows you to steer and brake at the same time. In many emergencies, steering can help more than even the very best braking.

## Parking Brake



If equipped with an Electric Parking Brake (EPB), the switch is on the left side of the instrument panel. The EPB can always be activated, even if the ignition is off. To prevent draining the battery, avoid repeated cycles of the EPB when the engine is not running.

The system has a red parking brake status light and an amber parking brake warning light. See *Electric Parking Brake Light on page 5-21* and *Service Electric Parking Brake Light on page 5-21*. There are also parking brake-related Driver Information Center (DIC) messages. See *Brake System Messages on page 5-31*. In case of insufficient electrical power, the EPB cannot be applied or released.

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. Lift up 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. See *Electric Parking Brake Light on page 5-21*.

If the amber parking brake warning light is on, lift up on the EPB switch and hold it up. Continue to hold the switch until the red parking brake status light remains on. If the amber parking brake warning light remains on, see your dealer.

If the EPB is applied while the vehicle is moving, the vehicle will decelerate as long as the switch is held up. If the switch is held up until the vehicle comes to a stop, the EPB will remain applied.

The vehicle may automatically apply the EPB in some situations when the vehicle is not moving. This is

normal, and is done to periodically check the correct operation of the EPB system.

If the EPB fails to apply, the rear wheels should be blocked to prevent vehicle movement.

### EPB Release

To release the EPB:

1. Place the ignition in the ACC/ACCESSORY or ON/RUN position.
2. Apply and hold the brake pedal.
3. Push down momentarily on the EPB switch.

The EPB is released when the red parking brake status light is off.

If the amber parking brake warning light is on, release the EPB by pushing down on the EPB switch and holding it down. 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.

If parking on a hill, or if the vehicle is pulling a trailer, see *Driving Characteristics and Towing Tips on page 9-61*.

## Brake Assist

This vehicle has a brake assist feature designed to assist the driver in stopping or decreasing vehicle speed in emergency driving conditions. This feature automatically uses the stability system hydraulic brake control module to supplement the power brake system under conditions where the driver has quickly and forcefully applied the brake pedal in an attempt to quickly stop or slow down the vehicle. The stability system hydraulic brake control module increases brake pressure at each corner of the vehicle until the ABS activates. Minor brake pedal pulsation or pedal movement during this time is normal and the driver should continue to apply the brake pedal as the driving situation dictates. The brake assist feature will automatically disengage when the brake pedal is released or brake pedal pressure is quickly decreased.

## Hill Start Assist (HSA)

Some vehicles have a Hill Start Assist (HSA) feature, which may be useful when the vehicle is stopped on a grade. This feature is designed to temporarily prevent the vehicle from rolling, either forward or rearward, during vehicle drive off. After the driver completely stops and holds the vehicle in a complete standstill on a grade, HSA will be automatically activated. During the transition period between when the driver releases the brake pedal and starts to accelerate to drive off on a grade, HSA holds the braking pressure to ensure that there is no rolling. The brakes will automatically release within a two-second window of releasing the brake pedal, and the vehicle may begin to roll. It will not activate if the vehicle is in a drive gear and facing downhill or if the vehicle is facing uphill and in R (Reverse).

HSA will activate on eAssist vehicles while in gear and facing down hill to assist in allowing a smooth auto start.

# Ride Control Systems

## Traction Control/ Electronic Stability Control

### System Operation

The vehicle has a Traction Control System (TCS) and StabiliTrak®, an electronic stability control system. These systems help limit wheel slip and assist the driver in maintaining control, especially on slippery road conditions.

TCS activates if it senses that any of the drive wheels are spinning or beginning to lose traction. When this happens, TCS applies the brakes to the spinning wheels and reduces engine power to limit wheel spin.

StabiliTrak activates when the vehicle senses a difference between the intended path and the direction the vehicle is actually traveling. StabiliTrak selectively applies braking pressure to any one of the

vehicle wheel brakes to assist the driver in keeping the vehicle on the intended path.

If cruise control is being used and traction control or StabiliTrak begins to limit wheel spin, cruise control will disengage. Cruise control may be turned back on when road conditions allow.

Both systems come on automatically when the vehicle is started and begins to move. The systems may be heard or felt while they are operating or while performing diagnostic checks. This is normal and does not mean there is a problem with the vehicle.

It is recommended to leave both systems on for normal driving conditions, but it may be necessary to turn TCS off if the vehicle gets stuck in sand, mud, ice, or snow. See *If the Vehicle Is Stuck on page 9-9* and “Turning the Systems Off and On” later in this section.

The indicator light for both systems is in the instrument cluster. This light will:

- Flash when TCS is limiting wheel spin.
- Flash when StabiliTrak is activated.
- Turn on and stay on when either system is not working.

If either system fails to turn on or to activate, a message displays in the Driver Information Center (DIC), and comes on and stays on to indicate that the system is inactive and is not assisting the driver in maintaining control. The vehicle is safe to drive, but driving should be adjusted accordingly.

If comes on and stays on:

1. Stop the vehicle.
2. Turn the engine off and wait 15 seconds.
3. Start the engine.

Drive the vehicle. If comes on and stays on, the vehicle may need more time to diagnose the problem. If the condition persists, see your dealer.

## Turning the Systems Off and On

The button for TCS and StabiliTrak is on the center console, behind the shift lever.

**⚠ Caution**

Do not repeatedly brake or accelerate heavily when TCS is off. The vehicle driveline could be damaged.

To turn off only TCS, press and release the OFF button. The Traction Off Light displays in the instrument cluster. To turn TCS on again, press and release the OFF button. The Traction Off Light displayed in the instrument cluster will turn off.

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

To turn off both TCS and StabiliTrak, press and hold the OFF button until the Traction Off Light and StabiliTrak Off Light OFF come on and stay on in the instrument cluster. To turn TCS and StabiliTrak on again, press and release the OFF button. The Traction Off Light and StabiliTrak Off Light OFF in the instrument cluster turn off.

Adding accessories can affect the vehicle performance. See *Accessories and Modifications on page 10-3*.

# Cruise Control

With cruise control, you can maintain a speed of about 40 km/h (25 mph) or more without keeping your foot on the accelerator. Cruise control does not work at speeds below about 40 km/h (25 mph).

**⚠ Warning**

Cruise control can be dangerous where you cannot drive safely at a steady speed. Do not use the cruise control on winding roads or in heavy traffic.

Cruise control can be dangerous on slippery roads. On such roads, fast changes in tire traction can cause excessive wheel slip, and you could lose control. Do not use cruise control on slippery roads.

If equipped with the Traction Control System (TCS), the system may begin to limit wheel spin while you are using cruise control. If this

happens, the cruise control will automatically disengage. See *Traction Control/Electronic Stability Control on page 9-33*. If a collision alert occurs when cruise control is activated, cruise control is disengaged. See *Forward Collision Alert (FCA) System on page 9-48*. When road conditions allow you to safely use it again, the cruise control can be turned back on.

If the brakes are applied, the cruise control disengages.

**(On/Off):** Press to turn cruise control on or off. A white indicator comes on in the instrument cluster.

**+RES (Resume/Accelerate):** Press briefly to make the vehicle resume to a previously set speed, or press and hold to accelerate. If cruise control is already active, use to increase vehicle speed.

**SET–:** Press briefly to set the speed and activate cruise control. If cruise control is already active, use to decrease vehicle speed.

**(Cancel):** Press to disengage cruise control without erasing the selected set speed.

### Setting Cruise Control

The cruise control indicator on the instrument cluster turns green after the cruise control has been set to the desired speed. See *Instrument Cluster on page 5-9*.

If the cruise button is on when not in use, it could get bumped and go into cruise when not desired. Keep the cruise control switch off when cruise is not being used.

1. Press the button to turn the cruise system on.
2. Get up to the desired speed.
3. Press and release the SET– button on the steering wheel.
4. Remove foot from the accelerator.

### Resuming a Set Speed

If cruise control is set at a desired speed and then the brakes are applied, the cruise control is disengaged without erasing the set speed from memory.

Once the vehicle speed is 40 km/h (25 mph) or greater, press the +RES button on the steering wheel. The vehicle returns to the previous set speed.

### Increasing Speed While Using Cruise Control

If the cruise control system is already activated:

- Press and hold the +RES button until the desired speed is reached, then release it.
- To increase vehicle speed in small increments, briefly press the +RES button. For each press, the vehicle goes about 1.6 km/h (1 mph) faster.

### Reducing Speed While Using Cruise Control

If the cruise control system is already activated:

- Press and hold the SET– button until the desired lower speed is reached, then release it.
- To decrease the vehicle speed in smaller increments, briefly press the SET− button. For each press, the vehicle goes about 1.6 km/h (1 mph) slower.

### Passing Another Vehicle While Using Cruise Control

Use the accelerator pedal to increase vehicle speed. When you take your foot off the pedal, the vehicle will slow down to the cruise speed you set earlier. While pressing the accelerator pedal or shortly following the release to override cruise control, briefly applying the SET− button will result in cruise set to the current vehicle speed.

### Using Cruise Control on Hills

How well the cruise control will work on hills depends upon the vehicle speed, load, and the steepness of the hills. When going up steep hills, you might have to step on the accelerator pedal to maintain your speed. When going downhill, you might have to brake or shift to a lower gear to keep your speed down. If the brakes are applied the cruise control will turn off.

### Ending Cruise Control

There are three ways to end cruise control:

- To disengage cruise control, step lightly on the brake pedal.
- Press the button on the steering wheel.
- To turn off the cruise control, press the button on the steering wheel.

### Erasing Speed Memory

The cruise control set speed is erased from memory by pressing or if the ignition is turned off.

## Adaptive Cruise Control

If equipped, Adaptive Cruise Control (ACC) allows the driver to select the cruise control set speed and following gap. Read this entire section before using this system. The following gap is the following time between your vehicle and a vehicle detected directly ahead in

your path moving in the same direction. If no vehicle is detected in your path, ACC works like regular cruise control. ACC uses a radar sensor. See *Radio Frequency Statement on page 13-15*.

If a vehicle is detected in your path, ACC can apply acceleration or limited, moderate braking to maintain the selected following gap. To disengage ACC, apply the brake. If ACC is controlling your vehicle speed when the Traction Control System (TCS) or StabiliTrak® System activates, the ACC may automatically disengage. When road conditions allow ACC to be safely used, the ACC can be turned back on. If TCS or StabiliTrak have been disabled, the ACC will not engage. See *Traction Control/Electronic Stability Control on page 9-33*.

**⚠ Warning**

ACC has limited braking ability and may not have time to slow the vehicle down enough to avoid a collision with another vehicle you are following. This can occur when vehicles suddenly slow or stop ahead, or enter your lane. Also see “Alerting the Driver” in this section. Complete attention is always required while driving and you should be ready to take action and apply the brakes. See *Defensive Driving on page 9-3*.

**⚠ Warning**

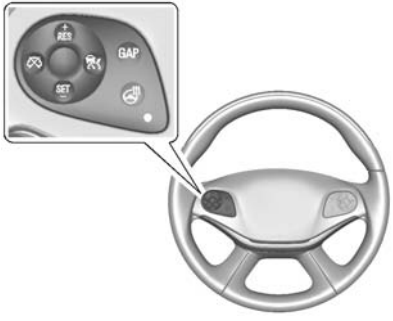
Adaptive Cruise Control will not detect or brake for children, pedestrians, animals, or other objects.

(Continued)

**Warning (Continued)**

Do not use Adaptive Cruise Control when:

- On winding and hilly roads or when the sensors are blocked by snow, ice, or dirt. The system may not detect a vehicle ahead. Keep the entire front of the vehicle clean.
- Visibility is low, such as in fog, rain, or snow conditions. Adaptive Cruise Control performance is limited under these conditions.
- On slippery roads where fast changes in tire traction can cause excessive wheel slip.




**(On/Off):** Press to turn the system on or off. A white Adaptive Cruise Control indicator comes on.

**+RES (Resume/Accelerate):** Press briefly to resume the previous set speed or hold to accelerate. If ACC is already active, use to increase vehicle speed.

**SET– (Set/Coast):** Press briefly to set the speed and activate ACC. If ACC is already active, use to decrease vehicle speed.

**(Cancel):** Press to disengage ACC without erasing the selected set speed.

**GAP (Follow Distance Gap):** Press to select a following gap time (or distance) setting for ACC of Far, Medium, or Near.

**Setting Adaptive Cruise Control**

If the cruise system is on but not in use, it could get set and go into cruise when not desired. Keep the cruise control button off when cruise is not being used.

Select the set speed desired for cruise. This is the vehicle speed when no vehicle is detected in its path.

ACC will not set or resume at a speed less than 25 km/h (16 mph).

To set ACC:

1. Press .
2. Get up to the desired speed.
3. Press and release the SET– control on the steering wheel.
4. Remove foot from the accelerator.

After ACC is set, it may immediately apply the brakes if a vehicle ahead is closer than the selected following gap.

The ACC indicator displays on the instrument cluster. When ACC is active, the indicator turns green.

Be mindful of speed limits, surrounding traffic speeds, and weather conditions when selecting the set speed.

**Resuming a Set Speed**

If the ACC is set at a desired speed and then the brakes are applied, ACC is disengaged without erasing the set speed from memory.

To begin using ACC again, press the +RES button on the steering wheel. The vehicle returns to the previous set speed.

**Increasing Speed While ACC is at a Set Speed**

If ACC is already activated, do one of the following:

- Use the accelerator to get to the higher speed. Press the SET– button. Release the control and the accelerator pedal. The vehicle will now cruise at the higher speed.

  When the accelerator pedal is pressed, ACC will not brake because it is overridden. A warning message will appear on the Driver Information Center (DIC). See *Cruise Control Messages on page 5-31*.

- Press and hold the +RES button until the desired set speed appears on the display, then release it.

- To increase vehicle speed in small increments, briefly press +RES. For each press the vehicle goes 5 km/h (1 mph) faster.

When it is determined that there is no vehicle ahead or the vehicle is beyond the selected following gap, then the vehicle speed will increase to the set speed.

The speedometer reading can be displayed in either English or metric units. See *Instrument Cluster on page 5-9*. The increment value used depends on the units displayed.

**Reducing Speed While ACC is at a Set Speed**

If ACC is already activated, do one of the following:

- Use the brake to get to the desired lower speed. Press the SET– button and release the accelerator pedal. The vehicle will now cruise at the lower speed.

- Press and hold the SET– button until the desired lower speed is reached, then release it.

- To decrease the vehicle speed in smaller increments, briefly press SET–. For each press, the vehicle goes about 5 km/h (1 mph) slower.

The speedometer reading can be displayed in either English or metric units. See *Instrument Cluster on page 5-9*. The increment value used depends on the units displayed.

**Selecting the Follow Distance Gap**

When a slower moving vehicle is detected ahead within the selected following gap, ACC will adjust the vehicle's speed and attempt to maintain the follow distance gap selected.

Press GAP on the steering wheel to adjust the following gap. When pressed, the current gap setting displays briefly on the instrument cluster.

Subsequent presses cycle the gap button through three settings: Far, Medium, or Near. The gap setting will be maintained until it is changed.

Since each gap setting corresponds to a following time (Far, Medium, or Near), the following distance will vary based on vehicle speed. The faster the vehicle speed, the further back your vehicle will follow a vehicle detected ahead. Consider traffic and weather conditions when selecting the following gap. The range of selectable gaps may not be appropriate for all drivers and driving conditions.

Changing the gap setting automatically changes the alert timing sensitivity (Far, Medium, or Near) for the Forward Collision Alert (FCA) feature. See *Forward Collision Alert (FCA) System on page 9-48*.

**Alerting the Driver**

If ACC is engaged, driver action may be required when ACC cannot apply sufficient braking because of approaching a vehicle too rapidly.

When this condition occurs, six red lights will flash on the windshield and eight beeps will sound from the front.

See *Defensive Driving on page 9-3*.

**Approaching and Following a Vehicle**

The vehicle ahead symbol is in the DIC.

The vehicle ahead symbol only displays when a vehicle is detected in your vehicle's path moving in the same direction.

If this symbol is not displaying, ACC will not respond to or brake to vehicles ahead.

ACC automatically slows the vehicle down and adjusts vehicle speed to follow the vehicle in front at the selected follow gap. The vehicle speed increases or decreases to follow the vehicle in front of you, but will not exceed the set speed. It may apply limited braking, if necessary. When braking is active, the brake lights will come on. The automatic braking may feel or sound different than if the brakes were applied manually. This is normal.

### Stationary or Very Slow-Moving Objects

**⚠ Warning**

Adaptive Cruise Control (ACC) may not detect and react to stopped or slow-moving vehicles ahead of you. For example, the system may not brake for a vehicle that it has never detected moving. This can occur in stop-and-go traffic or when a vehicle suddenly appears due to a vehicle ahead changing lanes. Your vehicle may not stop and could cause a crash. Use caution when using ACC. Your complete attention is always required while driving and you should be ready to take action and apply the brakes.

### ACC Automatically Disengages

ACC may automatically disengage and the driver will need to manually apply the brakes to slow the vehicle when:

- The sensors are blocked.
- The Traction Control System (TCS) or electronic stability control system has activated or been disabled.
- There is no traffic or other objects to detect.
- There is a fault in the system.

A message indicating that the cruise is disengaging will appear on the DIC and the ACC active symbol will not be displayed when ACC is no longer active.

### Notification to Resume ACC

ACC will maintain a following gap behind a detected vehicle and slow your vehicle to a stop behind that vehicle.

If the stopped vehicle ahead has driven away and ACC has not been resumed, the vehicle ahead symbol will flash as a reminder to check traffic ahead before proceeding. In addition, three beeps will sound. See “Go Notifier” under Collision/ Detection systems in *Vehicle Personalization on page 5-40*.

When the vehicle ahead drives away, press RES+ or the accelerator pedal to resume cruise control. If stopped for more than two minutes or if the driver door is opened, the ACC automatically applies the Electric Parking Brake to hold the vehicle. The Electric Parking Brake status light will turn on. See *Parking Brake on page 9-31*. To resume ACC and release the Electric Parking Brake, press the accelerator pedal. ACC can be resumed when the vehicle is travelling greater than 25 km/h (16 mph).

A DIC warning message may display indicating to shift to P (Park) before exiting the vehicle. See *Vehicle Messages on page 5-30*.

**⚠ Warning**

If ACC has stopped the vehicle, and if ACC is disengaged, turned off, or canceled, the vehicle will no longer be held at a stop. The vehicle can move. When ACC is holding the vehicle at a stop, always be prepared to manually apply the brakes.

**⚠ Warning**

Leaving the vehicle without placing it in P (Park) can be dangerous. Do not leave the vehicle while it is being held at a stop by ACC. Always place the vehicle in P (Park) and turn off the ignition before leaving the vehicle.

**ACC Override**

If using the accelerator pedal while ACC is active, a DIC warning message will indicate that automatic braking will not occur. See *Vehicle Messages on page 5-30*. ACC will resume operation when the accelerator pedal is not being pressed.

**⚠ Warning**

The ACC will not automatically apply the brakes if your foot is resting on the accelerator pedal. You could crash into a vehicle ahead of you.

**Curves in the Road**

**⚠ Warning**

On curves, ACC may not detect a vehicle ahead in your lane. You could be startled if the vehicle

(Continued)

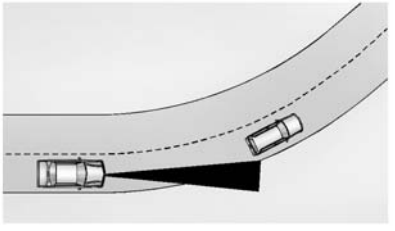
**Warning (Continued)**

accelerates up to the set speed, especially when following a vehicle exiting or entering exit ramps. You could lose control of the vehicle or crash. Do not use ACC while driving on an entrance or exit ramp. Always be ready to use the brakes if necessary.

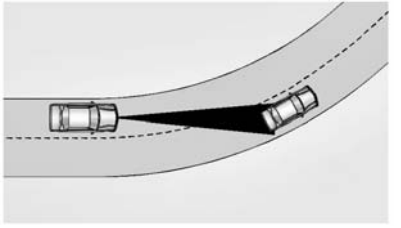
**⚠ Warning**

On curves, ACC may respond to a vehicle in another lane, or may not have time to react to a vehicle in your lane. You could crash into a vehicle ahead of you, or lose control of your vehicle. Give extra attention in curves and be ready to use the brakes if necessary. Select an appropriate speed while driving in curves.

ACC may operate differently in a sharp curve. It may reduce the vehicle speed if the curve is too sharp.



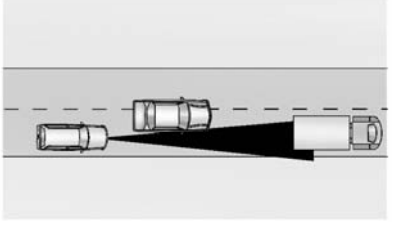
When following a vehicle and entering a curve, ACC may not detect the vehicle ahead and accelerate to the set speed. When this happens, the vehicle ahead symbol will not appear.



ACC may detect a vehicle that is not in your lane and apply the brakes.

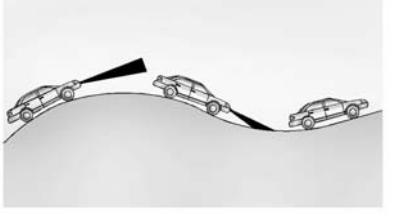
ACC may occasionally provide an alert and/or braking that is considered unnecessary. It could respond to vehicles in different lanes, signs, guardrails, and other stationary objects when entering or exiting a curve. This is normal operation. The vehicle does not need service.

**Other Vehicle Lane Changes**



ACC will not detect a vehicle ahead until it is completely in the lane. The brakes may need to be manually applied.

**Do Not Use ACC on Hills and When Towing a Trailer**



Do not use ACC when driving on steep hills or when towing a trailer. ACC will not detect a vehicle in the lane while driving on steep hills. The driver will often need to take over acceleration and braking on steep hills, especially when towing a trailer. If the brakes are applied, the ACC disengages.

### Disengaging ACC

There are three ways to disengage ACC:

- Step lightly on the brake pedal.
- Press .
- Press .

### Erasing Speed Memory

The cruise control set speed is erased from memory if  is pressed or if the ignition is turned off.

### Cleaning the Sensing System

The radar sensor on the front of the vehicle can become blocked by snow, ice, dirt, or mud. These areas need to be cleaned for ACC to operate properly.

For cleaning instructions, see “Washing the Vehicle” under *Exterior Care on page 10-77*.

System operation may also be limited under snow, heavy rain or road spray conditions.

## Driver Assistance Systems

This vehicle may have features that work together to help avoid crashes or reduce crash damage while driving, backing, and parking. Read this entire section before using these systems.

**⚠ Warning**

Do not rely on the Driver Assistance Systems. These systems do not replace the need for paying attention and driving safely. You may not hear or see alerts or warnings provided by these systems. Failure to use proper care when driving may result in injury, death, or vehicle damage. See *Defensive Driving on page 9-3*.

(Continued)

**Warning (Continued)**

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.

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.

## Assistance Systems for Parking or Backing

When the vehicle is in R (Reverse), the Rear Vision Camera (RVC), Rear Parking Assist, and Rear Cross Traffic Alert (RCTA), if equipped, may help the driver to avoid a crash or to reduce crash damage.

When the vehicle is shifted into R (Reverse), the RVC displays an image of the area behind the vehicle in the center stack display.

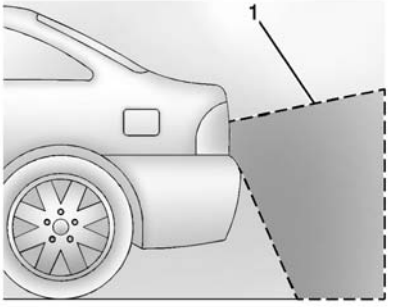
**⚠ Warning**

The RVC system does not display children, pedestrians, bicyclists, animals, or any other object located outside the camera's field of view, below the bumper, or under the vehicle. Perceived distances may be different from actual distances. Do not back the vehicle using only the RVC

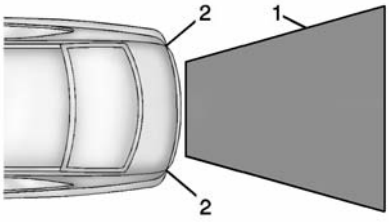
(Continued)

**Warning (Continued)**

screen, during longer, higher speed backing maneuvers, or where there could be cross traffic. Failure to use proper care before backing may result in injury, death, or vehicle damage. Always check behind and around the vehicle before backing.




1. View Displayed by the Camera




1. View Displayed by the Camera
2. Corners of the Rear Bumper

Displayed images may be farther or closer than they appear. The area displayed is limited and objects that are close to either corner of the bumper or under the bumper do not display.

A warning triangle may display on the RVC screen to show where the Ultrasonic Rear Parking Assist (URPA) has detected an object. This triangle changes from amber to red and increases in size the closer the object.

On vehicles with the Rear Cross Traffic Alert (RCTA), a red warning triangle with an arrow may also display on the RVC screen to warn of traffic coming from either direction. This system detects objects coming from up to 20 m (65 ft) from the left or right side of the vehicle. When an object is detected, either three beeps sound from the left or right side, depending on the direction of the detected vehicle.

With URPA, as the vehicle backs up at speeds of less than 8 km/h (5 mph), the system detects objects up to 2.5 m (8 ft) behind the vehicle that are within a zone 25 cm (10 in) high off the ground and below bumper level.

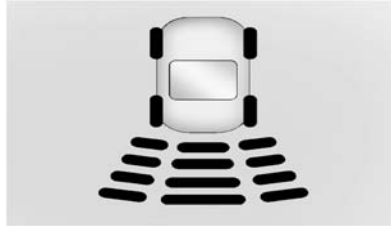
**⚠ Warning**

The parking assist system does not detect children, pedestrians, bicyclists, animals, or objects located below the bumper or that are too close or too far from the vehicle. It is not available at

(Continued)

**Warning (Continued)**

speeds greater than 8 km/h (5 mph). To prevent injury, death, or vehicle damage, even with parking assist, always check the area around the vehicle and check all mirrors before moving forward or backing.



The vehicle may have an instrument cluster parking assist display with bars that show “distance to object” and object location information for URPA. As the object gets closer, more bars light up.

When an object is first detected in the rear, one beep will be heard from the rear. When an object is very close (<0.6 m (2 ft) in the vehicle rear), five beeps will sound from the rear.

### Turning the Features On or Off

The button on the instrument panel to the left of the steering wheel is used to turn on or off the Rear Parking Assist. The indicator light next to the button comes on when the features are on and turns off when the features have been disabled.

Turn off URPA when towing a trailer.

The RVC, the RCTA system, parking assist symbols, and guidance lines can be turned on or off through the infotainment system:

1. On the infotainment system, press the Settings screen button, or turn the MENU knob to highlight Settings and press MENU.
2. Select Rear Camera.
3. Press Rear Camera Display (if equipped), Rear Cross Traffic Alert, Park Assist Symbols, or Guidance Lines and then select OFF or ON.

## Assistance Systems for Driving

If equipped, when driving the vehicle forward, Forward Collision Alert (FCA), Lane Departure Warning (LDW), Side Blind Zone Alert (SBZA), and/or the Active Emergency Braking System can help to avoid a crash or reduce crash damage.

## Forward Collision Alert (FCA) System

If equipped, the FCA system may help to avoid or reduce the harm caused by front-end crashes. FCA provides a red flashing alert on the windshield, and beeps when approaching a vehicle directly ahead too quickly. FCA also provides a visual alert if following another vehicle much too closely.

FCA detects vehicles within a distance of approximately 60 m (197 ft) and operates at speeds above 40 km/h (25 mph). If the vehicle has Adaptive Cruise Control (ACC), it can detect vehicles to distances of approximately 110 m (360 ft) and operates at all speeds. See *Adaptive Cruise Control on page 9-37*.

**⚠ Warning**

FCA is a warning system and does not apply the brakes. When approaching a slower-moving or stopped vehicle ahead too rapidly, or when following a vehicle too closely, FCA may not provide a warning with enough time to help avoid a crash. FCA does not warn of pedestrians, animals, signs, guardrails, bridges, construction barrels, or other objects. Be ready to take action and apply the brakes. For more information, see *Defensive Driving on page 9-3*.

FCA can be disabled through vehicle personalization. See the "Auto Collision Preparation" portion of "Collision/Detection Systems" under *Vehicle Personalization on page 5-40*.

### Detecting the Vehicle Ahead

FCA warnings will not occur unless the FCA system detects a vehicle ahead. The vehicle ahead indicator will display green when a vehicle is detected in front. Vehicles may not be detected on curves, highway exit ramps, or hills; or due to poor visibility. FCA will not detect another vehicle ahead until it is completely in the driving lane.

**⚠ Warning**

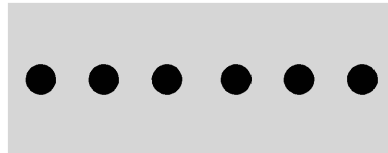
FCA does not provide a warning to help avoid a crash, unless it detects a vehicle. FCA may not detect a vehicle ahead if the FCA sensor is blocked by dirt, snow,

(Continued)

**Warning (Continued)**

or ice, or if the windshield is damaged. It may also not detect a vehicle on winding or hilly roads, or in conditions that can limit visibility such as fog, rain, or snow, or if the headlamps or windshield are not cleaned or in proper condition. Keep the windshield, headlamps, and FCA sensors clean and in good repair.

### Collision Alert



When your vehicle approaches another vehicle too rapidly, the red lights will flash on the windshield and eight beeps will sound from the front.

**Tailgating Alert**

The vehicle ahead indicator will display amber when you are following a vehicle ahead much too closely.

## Selecting the Alert Timing

**With Adaptive Cruise Control**

**Without Adaptive Cruise Control**

Press the collision alert/following gap button on the steering wheel to set the FCA timing to Far, Medium, Near, or on some vehicles, Off. The first button press shows the current setting on the DIC. Additional button presses will change this setting. The chosen setting will remain until it is changed and will affect the timing of both the Collision Alert and the Tailgating Alert features. The timing of both alerts will vary based on vehicle speed. The faster the vehicle speed, the farther away the alert will occur. Consider traffic and weather conditions when selecting the alert timing. The range of selectable alert timing may not be appropriate for all drivers and driving conditions.

Changing the FCA timing setting automatically changes the following gap setting (Far, Medium, or Near) for the Adaptive Cruise Control (ACC) feature.

### Unnecessary Alerts

FCA may provide unnecessary alerts for turning vehicles, vehicles in other lanes, objects that are not vehicles, or shadows. These alerts are normal operation and the vehicle does not need service.

### Cleaning the System

If the FCA system does not seem to operate properly, cleaning the outside of the windshield in front of the camera sensor and the front of the vehicle may correct the issue.

## Active Emergency Braking System

If the vehicle has Adaptive Cruise Control (ACC) it also has the Active Emergency Braking System, which includes the Automatic Collision Preparation (ACP) System.

### Automatic Collision Preparation (ACP) System

ACP may help reduce crash damage by applying the vehicle's brake system and has a detection range of approximately 60 m (197 ft). Braking can only occur if a vehicle is detected ahead. This is shown by the FCA vehicle-ahead indicator being lit. See *Forward Collision Alert (FCA) System on page 9-48*.

**⚠ Warning**

ACP is an emergency crash preparation feature and is not designed to avoid crashes. Do not rely on ACP to brake the vehicle.

ACP may not:

- Respond to stopped vehicles, pedestrians, or animals.
- Detect a vehicle ahead on winding or hilly roads.

(Continued)

**Warning (Continued)**

- Detect a stopped or slow-moving vehicle or other object ahead.
- Detect a vehicle when weather limits visibility, such as in fog, rain, or snow. In these situations, ACP sensor performance is limited.

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.

#### Brake Preparation

When quickly approaching a vehicle ahead, Brake Preparation reduces brake response time by having the brake system prepared for driver braking to occur more rapidly.

**Automatic Braking**

In some imminent front-end crash situations, if the driver has not applied the brakes, Automatic Braking applies the brakes to help reduce crash damage. It may even help avoid some very low speed crashes.

Automatic Braking may slow the vehicle to a complete stop to try to avoid a potential crash. The vehicle will only hold at a stop briefly. A firm press of the accelerator pedal will also release Automatic Braking.

**⚠ Warning**

Automatic Braking may automatically brake the vehicle in situations where it may be unnecessary. It could respond to a turning vehicle ahead, guardrails, signs, and other non-moving objects. This could be uncomfortable and startling. To

(Continued)

**Warning (Continued)**

override Automatic Braking, firmly press the accelerator pedal, if it is safe to do so.

Automatic Braking can be disabled or reduced through vehicle personalization. See the “Auto Collision Preparation” portion of “Collision/Detection Systems” under *Vehicle Personalization on page 5-40*.

**⚠ Warning**

Using the Automatic Collision Preparation System while towing a trailer could cause you to lose control of the vehicle and crash. Turn the system off when towing a trailer.

## Side Blind Zone Alert (SBZA)

If equipped, the Side Blind Zone Alert system is a lane-changing aid that assists drivers with avoiding crashes that occur with vehicles in the side blind zone (or spot) areas. The SBZA warning display will light up in the corresponding outside side mirror and will flash if the turn signal is on.

**⚠ Warning**

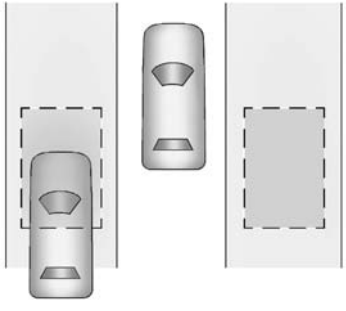
SBZA does not alert the driver to vehicles rapidly approaching outside of the side blind zones, pedestrians, bicyclists, or animals. It may not provide alerts when changing lanes under all driving conditions. Failure to use proper care when changing lanes may result in injury, death, or vehicle damage. Before making a lane change, always

(Continued)

**Warning (Continued)**

check mirrors, glance over your shoulder, and use the turn signals.

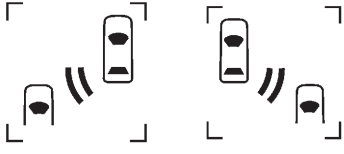
**SBZA Detection Zones**



The SBZA sensor covers a zone of approximately one lane over from both sides of the vehicle, or 3.5 m (11 ft). The height of the zone is approximately between 0.5 m (1.5 ft) and 2 m (6 ft) off the ground. This zone starts at approximately the middle of the vehicle and goes back 5 m (16 ft).

## How the System Works

The SBZA symbol lights up in the side mirrors when the system detects a vehicle in the next lane over that is in the side blind zone. This indicates it may be unsafe to change lanes. Before making a lane change, check the SBZA display, check mirrors, glance over your shoulder, and use the turn signals.



**Left Side Mirror Display** **Right Side Mirror Display**

When the vehicle is started, both outside mirror SBZA displays will briefly come on to indicate the system is operating. When the vehicle is moving forward, the left- or right-side mirror display will light up if a vehicle is detected in that blind zone. If the turn signal is activated in the same direction of a detected vehicle, this display will flash as an extra warning not to change lanes.

SBZA can be disabled through vehicle personalization. See “Collision/Detection Systems” under *Vehicle Personalization on page 5-40*. If SBZA is disabled by the driver, the SBZA mirror displays will not light up.

## When the System Does Not Seem to Work Properly

SBZA displays may not come on when passing a vehicle quickly or when towing a trailer. The SBZA detection zones that extend back from the side of the vehicle do not move further back when a trailer is towed. Use caution while changing lanes when towing a trailer. SBZA may alert to objects attached to the vehicle, such as a trailer, bicycle, or object extending out to either side

of the vehicle. This is normal system operation; the vehicle does not need service.

SBZA may not always alert the driver to vehicles in the side blind zone, especially in wet conditions. The system does not need to be serviced. The system may light up due to guardrails, signs, trees, shrubs, and other non-moving objects. This is normal system operation; the vehicle does not need service.

SBZA may not operate when the SBZA sensors in the left or right corners of the rear bumper are covered with mud, dirt, snow, ice, or slush, or in heavy rainstorms. For cleaning instructions, see "Washing the Vehicle" under *Exterior Care on page 10-77*. If the DIC still displays the system unavailable message after cleaning both sides of the vehicle toward the rear corners of the vehicle, see your dealer.

If the SBZA displays do not light up when vehicles are in the blind zone and the system is clean, the system may need service. Take the vehicle to your dealer.

When SBZA is disabled for any reason other than the driver turning it off, the Side Blind Zone Alert On option will not be available on the personalization menu.

### FCC Information

See *Radio Frequency Statement on page 13-15*.

## Lane Departure Warning (LDW)

If equipped, LDW may help avoid crashes due to unintentional lane departures. It may provide a warning if the vehicle is crossing a detected lane without using a turn signal. LDW uses a camera sensor to detect the lane markings. It only operates at speeds of 56 km/h (35 mph) or greater.

When the vehicle crosses a detected lane marking, the LDW indicator will flash and three beeps will be sounded from the left or right side, depending on the lane departure direction. LDW will not warn if the turn signal is on in the departure direction, or if a sharp maneuver is made.

**⚠ Warning**

The LDW system is an aid to help the vehicle stay in the driving lane. It does not steer the vehicle. The LDW system may not:

- Provide enough time to avoid a crash.
- Detect lane markings under bad weather conditions or if the windshield is dirty.
- Detect lane markings and will not detect road edges.

(Continued)

**Warning (Continued)**

- Warn that the vehicle is crossing a lane marking if the system does not detect the lane marking.

If LDW only detects lane markings on one side of the road, it will only warn you when departing the lane on the side where it has detected a lane marker. Even with LDW, always keep your attention on the road and maintain proper vehicle position within the lane, or vehicle damage, injury, or death could occur. Always keep the windshield clean and do not use LDW in bad weather conditions.

## How the System Works

The LDW camera sensor is on the windshield ahead of the rearview mirror.

To turn LDW on and off, press on the instrument panel to the left of the steering wheel. The control indicator will light when LDW is on.

When the vehicle is started, the LDW indicator on the instrument cluster will come on briefly.

If LDW is on, the LDW indicator will appear green if the system detects a left or right lane marking while the vehicle is traveling at 56 km/h (35 mph) or greater. If the vehicle crosses a detected lane marking without using the turn signal, this indicator will change to amber and flash. In addition, three beeps will be sounded from the left or right side, depending on the lane departure direction.

## When the System Does Not Seem to Work Properly

If the LDW symbol does not appear when the system is on and the vehicle is traveling at least 56 km/h (35 mph):

- The lane markings on the road may not be seen.
- The camera sensor may be blocked by dirt, snow, or ice.
- The windshield may be damaged.
- The weather may be limiting visibility.

This is normal operation; the vehicle does not need service. Clean the windshield.

Lane markings may not be detected on curves, highway exit ramps, or hills; or due to poor visibility.

If the LDW camera system does not seem to operate properly, cleaning the outside of the windshield in front of the camera sensor may correct the issue.

**⚠ Warning**

LDW does not provide a warning to help avoid a crash, unless it detects the lane markings. LDW may not detect the lane markings if the camera sensor is blocked by dirt, snow, or ice, or if the windshield is damaged. It may also not detect a lane on winding or hilly roads, or in conditions that can limit visibility such as fog, rain, or snow, or if the headlamps or windshield are not cleaned or in proper condition. Keep the windshield, headlamps, and camera sensors clean and in good repair.

LDW warnings may occur due to tar marks, shadows, cracks in the road, or other road imperfections. This is normal system operation; the vehicle does not need service.

# Fuel

Use of the recommended fuel is an important part of the proper maintenance of this vehicle. To help keep the engine clean and maintain optimum vehicle performance, we recommend using TOP TIER Detergent Gasolines. See www.toptiergas.com for a list of TOP TIER Detergent Gasolines.

TOP TIER™ Detergent Gasoline

CATEGORIE SUPERIÉURE™ Essences Détergentes

If the vehicle has a yellow fuel cap, E85 or FlexFuel can be used in the vehicle. See *E85 or FlexFuel on page 9-58*.

## Recommended Fuel

Use regular unleaded gasoline with a posted octane rating of 87 or higher. If the octane rating is less than 87, an audible knocking noise may be heard. If this occurs, use a gasoline rated at 87 octane or higher as soon as possible. If heavy knocking is heard when using gasoline with a higher octane rating, the engine needs service.

### Use of Seasonal Fuels

Use summer and winter fuels in the appropriate season. Driving or starting could be affected if the incorrect fuel is used. Drive the vehicle with the engine running until the fuel is a half tank or less, then refuel with the current seasonal fuel.

### Prohibited Fuels

Gasolines containing oxygenates, such as ethers and ethanol, as well as reformulated gasolines are available in some cities. If these gasolines comply with the previously described specification,

then they are acceptable to use. However, E85 and other fuels containing more than 15% ethanol must be used only in FlexFuel vehicles.

**⚠ Caution**

Do not use fuel containing methanol. It can corrode metal parts in the fuel system and also damage plastic and rubber parts. That damage would not be covered under the vehicle warranty.

Some gasolines that are not reformulated for low emissions can contain an octane-enhancing additive called methylcyclopentadienyl manganese tricarbonyl (MMT). Do not use gasolines with MMT as they can reduce spark plug life and affect emission control system performance. The malfunction indicator lamp may turn on. If this occurs, see your dealer for service.

## Gasoline Specifications

At a minimum, gasoline should meet ASTM specification D 4814. Some gasolines contain an octane-enhancing additive called methylcyclopentadienyl manganese tricarbonyl (MMT). We recommend against the use of gasolines containing MMT. See “Prohibited Fuels" in *Recommended Fuel on page 9-56*.

## California Fuel Requirements

If the vehicle is certified to meet California Emissions Standards, it is designed to operate on fuels that meet California specifications. See the underhood emission control label. If this fuel is not available in states adopting California Emissions Standards, the vehicle will operate satisfactorily on fuels meeting federal specifications, but emission control system performance might be affected. The malfunction indicator lamp could turn on and the vehicle may not pass a smog-check test. See *Malfunction Indicator Lamp on page 5-17*. If this occurs, return to your authorized dealer for diagnosis. If it is determined that the condition is caused by the type of fuel used, repairs may not be covered by the vehicle warranty.

## Fuels in Foreign Countries

If planning to drive in countries outside the U.S. or Canada, the proper fuel might be hard to find. Check regional auto club or fuel retail brand websites for availability in the country where driving. Never use leaded gasoline, fuel containing methanol, or any other fuel not recommended. Costly repairs caused by use of improper fuel would not be covered by the vehicle warranty.

## Fuel Additives

To keep fuel systems clean, TOP TIER Detergent Gasoline is recommended. See *Fuel on page 9-56*.

If TOP TIER Detergent Gasoline is not available, one bottle of Fuel System Treatment PLUS, part number 88861013, added to the fuel tank at every engine oil change, can help. Fuel System Treatment PLUS is the only gasoline additive recommended by General Motors. It is available at your dealer.

Do not use additives with E85 or FlexFuel.

## E85 or FlexFuel

Vehicles with a yellow fuel cap can use either unleaded gasoline or fuel containing up to 85% ethanol (E85). All other vehicles should use only the unleaded gasoline as described in *Recommended Fuel on page 9-56*.

The use of E85 or FlexFuel is encouraged when the vehicle is designed to use it. E85 or FlexFuel is made from renewable sources.

To help locate fuel stations that carry E85 or FlexFuel, the U.S. Department of Energy has an alternative fuel website. See www.afdc.energy.gov/afdc/locator/stations.

E85 or FlexFuel should meet ASTM Specification D 5798 or CAN/CGSB–3.512 in Canada. Do not use the fuel if the ethanol content is greater than 85%. Fuel mixtures that do not meet ASTM or CGSB specifications can affect driveability and could cause the malfunction indicator lamp to come on.

The starting characteristics of E85 or FlexFuel make it unsuitable for use when temperatures fall below −18°C (0°F). Use gasoline or add gasoline to the E85 or FlexFuel.

Because E85 or FlexFuel has less energy per liter (gallon) than gasoline, the vehicle will need to be refilled more often. See *Filling the Tank on page 9-59*.

**⚠ Caution**

Some additives are not compatible with E85 or FlexFuel and can harm the vehicle's fuel system. Do not add anything to E85 or FlexFuel. Damage caused by additives would not be covered by the vehicle warranty.

**⚠ Caution**

Do not use fuel containing methanol. It can corrode metal parts in the fuel system and also damage plastic and rubber parts. That damage would not be covered under the vehicle warranty.

## Filling the Tank

**⚠ Warning**

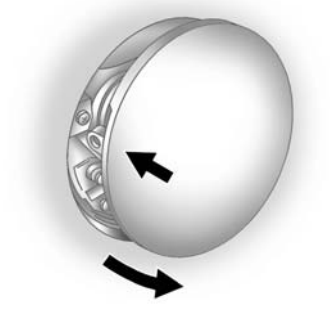
Fuel vapors and fuel fires burn violently and can cause injury or death.

- 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.
- Do not reenter the vehicle while pumping fuel.
- Keep children away from the fuel pump and never let children pump fuel.

(Continued)

**Warning (Continued)**

- Fuel can spray out if the fuel cap is opened too quickly. This spray can happen if the tank is nearly full, and is more likely in hot weather. Open the fuel cap slowly and wait for any hiss noise to stop then unscrew the cap all the way



The fuel cap is behind the fuel door on the vehicle's passenger side. To open the fuel door, push the rearward center edge in and release and it will open.

Turn the tethered fuel cap counterclockwise to remove. If the vehicle has E85 fuel capability, the fuel cap will be yellow and state that E85 or gasoline can be used. See *E85 or FlexFuel on page 9-58*. While refueling, hang the tethered fuel cap from the hook on the fuel door. Reinstall the cap by turning it clockwise until it clicks.

If the cap is not properly installed, the malfunction indicator lamp will come on. See *Malfunction Indicator Lamp on page 5-17*.

Do not top off or overfill the tank and wait a few seconds before removing the nozzle. Clean fuel from painted surfaces as soon as possible. See *Exterior Care on page 10-77*.

**⚠ Warning**

If a fire starts while you are refueling, do not remove the nozzle. Shut off the flow of fuel by shutting off the pump or by notifying the station attendant. Leave the area immediately.

**⚠ Caution**

If a new fuel cap is needed, be sure to get the right type of cap from your dealer. The wrong type of fuel cap might not fit properly, might cause the malfunction indicator lamp to light, and could damage the fuel tank and emissions system. See *Malfunction Indicator Lamp on page 5-17*.

## Filling a Portable Fuel Container

**⚠ Warning**

Filling a portable fuel container while it is in the vehicle can cause fuel vapors that can ignite either by static electricity or other means. You or others could be badly burned and the vehicle could be damaged. Always:

- Use approved fuel containers.
- Remove the container from the vehicle, trunk, or pickup bed before filling.
- Place the container on the ground.
- Place the nozzle inside the fill opening of the container before dispensing fuel, and

(Continued)

**Warning (Continued)**

keep it in contact with the fill opening until filling is complete.

- Fill the container no more than 95% full to allow for expansion.
- Do not smoke, light matches, or use lighters while pumping fuel.
- Avoid using cell phones or other electronic devices.

# Towing

## General Towing Information

Only use towing equipment that has been designed for the vehicle. Contact your dealer or trailering dealer for assistance with preparing the vehicle for towing a trailer. Read the entire section before towing a trailer.

For towing a disabled vehicle, see *Towing the Vehicle on page 10-75*. For towing the vehicle behind another vehicle such as a motor home, see *Recreational Vehicle Towing on page 10-76*.

## Driving Characteristics and Towing Tips

### Driving with a Trailer

When towing a trailer:

- Become familiar with the state and local laws that apply to trailer towing.
- Do not tow a trailer during the first 800 km (500 mi) to prevent damage to the engine, axle, or other parts.
- Then during the first 800 km (500 mi) of trailer towing, do not drive over 80 km/h (50 mph) and do not make starts at full throttle.
- Vehicles can tow in D (Drive). Shift the transmission to a lower gear if the transmission shifts too often under heavy loads and/or hilly conditions.
- Do not use Adaptive Cruise Control when towing.
- The Automatic Collision Preparation System should be set to Off when towing. See *Active Emergency Braking System on page 9-51*.
- Turn off Park Assist when towing.

**⚠ Warning**

When towing a trailer, exhaust gases may collect at the rear of the vehicle and enter if the liftgate, trunk/hatch, or rear-most window is open.

When towing a trailer:

- Do not drive with the liftgate, trunk/hatch, or rear-most window open.
- Fully open the air outlets on or under the instrument panel.
- Also adjust the climate control system to a setting that brings in only outside air. See “Climate Control System” in the Index.

For more information about Carbon Monoxide, see *Engine Exhaust on page 9-26*.

Towing a trailer requires a certain amount of experience. The combination you are driving is longer and not as responsive as the vehicle itself. Get acquainted with the handling and braking of the rig before setting out for the open road.

Before starting, check all trailer hitch parts and attachments, safety chains, electrical connectors, lamps, tires, and mirrors. If the trailer has electric brakes, start the combination moving and then apply the trailer brake controller by hand to be sure the brakes work.

During the trip, check occasionally to be sure that the load is secure and the lamps and any trailer brakes still work.

### Following Distance

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

### Passing

More passing distance is needed when towing a trailer. The combination will not accelerate as quickly and is longer so it is necessary to go much farther beyond the passed vehicle before returning to the lane.

### Backing Up

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

### Making Turns

**⚠ Caution**

Making very sharp turns while trailering could cause the trailer to come in contact with the vehicle.

(Continued)

**Caution (Continued)**

The vehicle could be damaged. Avoid making very sharp turns while trailering.

When turning with a trailer, make wider turns than normal. Do this so the trailer will not strike soft shoulders, curbs, road signs, trees, or other objects. Avoid jerky or sudden maneuvers. Signal well in advance.

If the trailer turn signal bulbs burn out, the arrows on the instrument cluster will still flash for turns. It is important to check occasionally to be sure the trailer bulbs are still working.

### Driving on Grades

Reduce speed and shift to a lower gear *before* starting down a long or steep downgrade. If the transmission is not shifted down, the brakes might get hot and no longer work well.

Vehicles can tow in D (Drive). Shift the transmission to a lower gear if the transmission shifts too often under heavy loads and/or hilly conditions.

When towing at high altitude on steep uphill grades, consider the following: Engine coolant will boil at a lower temperature than at normal altitudes. If the engine is turned off immediately after towing at high altitude on steep uphill grades, the vehicle may show signs similar to engine overheating. To avoid this, let the engine run while parked, preferably on level ground, with the automatic transmission in P (Park) for a few minutes before turning the engine off. If the overheat warning comes on, see *Engine Overheating on page 10-22*.

## Parking on Hills

**⚠ Warning**

Parking the vehicle on a hill with the trailer attached can be dangerous. If something goes wrong, the rig could start to move. People can be injured, and both the vehicle and the trailer can be damaged. When possible, always park the rig on a flat surface.

If parking the rig on a hill:

1. Press the brake pedal, but do not shift into P (Park) yet. Turn the wheels into the curb if facing downhill or into traffic if facing uphill.
2. Have someone place chocks under the trailer wheels.
3. When the wheel chocks are in place, release the regular brakes until the chocks absorb the load.
4. Reapply the brake pedal. Then apply the parking brake and shift into P (Park).
5. Release the brake pedal.

## Leaving After Parking on a Hill

1. Apply and hold the brake pedal.
2. Start the engine.
3. Shift into a gear.
4. Release the parking brake.
5. Let up on the brake pedal.
6. Drive slowly until the trailer is clear of the chocks.
7. Stop and have someone pick up and store the chocks.

## Maintenance when Trailer Towing

The vehicle needs service more often when pulling a trailer. See *Maintenance Schedule on page 11-2*. Things that are especially important in trailer operation are automatic transmission fluid, engine oil, axle

lubricant, belts, cooling system, and brake system. It is a good idea to inspect these before and during the trip.

Check periodically to see that all hitch nuts and bolts are tight.

## Trailer Towing (eAssist)

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

## Trailer Towing (All except eAssist)

Before pulling a trailer, three important considerations have to do with weight:

- Weight of the trailer.
- Weight of the trailer tongue.
- Total weight on your vehicle's tires.

### Weight of the Trailer

How heavy can a trailer safely be?

It should never weigh more than 454 kg (1,000 lb). But even that can be too heavy.

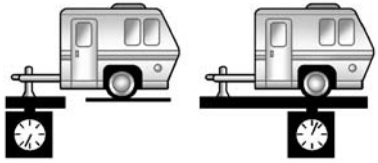
It depends on how the rig is used. For example, speed, altitude, road grades, outside temperature, and how much the vehicle is used to pull a trailer are all important. It can depend on any special equipment on the vehicle, and the amount of tongue weight the vehicle can carry. See “Weight of the Trailer Tongue” later in this section.

Maximum trailer weight is calculated assuming only the driver is in the tow vehicle and it has all the required trailering equipment. The weight of additional optional equipment, passengers, and cargo in the tow vehicle must be subtracted from the maximum trailer weight.

Ask your dealer for trailering information or advice, or write us at our Customer Assistance Offices. See *Customer Assistance Offices on page 13-3*.

### Weight of the Trailer Tongue

The tongue load (1) of any trailer is an important weight to measure because it affects the total gross weight of the vehicle. The Gross Vehicle Weight (GVW) includes the curb weight of the vehicle, any cargo carried in it, and the people who will be riding in the vehicle. If there are a lot of options, equipment, passengers, or cargo in the vehicle, it will reduce the tongue weight the vehicle can carry, which will also reduce the trailer weight the vehicle can tow. If towing a trailer, the tongue load must be added to the GVW because the vehicle will be carrying that weight, too. See *Vehicle Load Limits on page 9-10*.




The trailer tongue (1) should weigh 10 percent of the total loaded trailer weight (2).

After loading the trailer, weigh the trailer and then the tongue, separately, to see if the weights are proper. If they are not, adjustments might be made by moving some items around in the trailer.

### Total Weight on Your Vehicle's Tires

Be sure the vehicle's tires are inflated to the upper limit for cold tires. These numbers can be found on the Tire and Loading Information label. See *Vehicle Load Limits on page 9-10*. Make sure not to go over the GVW limit for the vehicle, including the weight of the trailer tongue.

## Towing Equipment

### Hitches

Use the correct hitch equipment. See your dealer or a hitch dealer for assistance.

- The rear bumper on the vehicle is not intended for hitches. Do not attach rental hitches or other bumper-type hitches to it. Use only a frame-mounted hitch that does not attach to the bumper.
- Will any holes be made in the body of the vehicle when the trailer hitch is installed? If so, seal the holes when the hitch is removed. If the holes are not sealed, dirt, water, and deadly carbon monoxide (CO) from the exhaust can get into the vehicle. See *Engine Exhaust on page 9-26*.

### Safety Chains

Always attach chains between the vehicle and the trailer. Cross the safety chains under the tongue of the trailer to help prevent the tongue from contacting the road if it becomes separated from the hitch. Leave enough slack so the rig can turn. Never allow safety chains to drag on the ground.

### Trailer Brakes

Does the trailer have its own brakes? Be sure to read and follow the instructions for the trailer brakes so they are installed, adjusted, and maintained properly.

Because the vehicle has antilock brakes, do not tap into the vehicle's brake system. If this is done, both brake systems will not work well, or at all.

# Conversions and Add-Ons

## Add-On Electrical Equipment

**⚠ Caution**

Some electrical equipment can damage the vehicle or cause components to not work and would not be covered by the warranty. Always check with your dealer before adding electrical equipment.

Add-on equipment can drain the vehicle's 12-volt battery, even if the vehicle is not operating.

The vehicle has an airbag system. Before attempting to add anything electrical to the vehicle, see *Servicing the Airbag-Equipped Vehicle on page 3-32* and *Adding Equipment to the Airbag-Equipped Vehicle on page 3-32*.

# Vehicle Care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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 Proposition 65 Warning

Most motor vehicles, including this one, contain and/or emit chemicals known to the State of California to

cause cancer and birth defects or other reproductive harm. Engine exhaust, many parts and systems, many fluids, and some component wear by-products contain and/or emit these chemicals.

## California Perchlorate Materials Requirements

Certain types of automotive applications, such as airbag initiators, safety belt pretensioners, and lithium batteries contained in Remote Keyless Entry transmitters, may contain perchlorate materials. Special handling may be necessary. For additional information, see www.dtsc.ca.gov/hazardouswaste/perchlorate.

## Accessories and Modifications

Adding non-dealer accessories or making modifications to the vehicle can affect vehicle performance and safety, including such things as airbags, braking, stability, ride and handling, emissions systems, aerodynamics, durability, and electronic systems like antilock brakes, traction control, and stability control. These accessories or modifications could even cause malfunction or damage not covered by the vehicle warranty.

Damage to vehicle components resulting from modifications or the installation or use of non-GM certified parts, including control module or software modifications, is not covered under the terms of the vehicle warranty and may affect remaining warranty coverage for affected parts.

GM Accessories are designed to complement and function with other systems on the vehicle. See your dealer to accessorize the vehicle using genuine GM Accessories installed by a dealer technician.

Also, see *Adding Equipment to the Airbag-Equipped Vehicle on page 3-32*.

# Vehicle Checks

## Doing Your Own Service Work

### eAssist Vehicles Only

**⚠ Warning**

Never try to do your own service on eAssist components. You can be injured and the vehicle can be damaged if you try to do your own service work. Service and repair of these eAssist components should only be performed by a trained service technician with the proper knowledge and tools.

**All Vehicles**

**⚠ Warning**

It can be dangerous to work on your vehicle if you do not have the proper knowledge, service manual, tools, or parts. Always follow owner manual procedures and consult the service manual for your vehicle before doing any service work.

If doing some of your own service work, use the proper service manual. It tells you much more about how to service the vehicle than this manual can. To order the proper service manual, see *Service Publications Ordering Information on page 13-11*.

This vehicle has an airbag system. Before attempting to do your own service work, see *Airbag System Check on page 3-33*.

Keep a record with all parts receipts and list the mileage and the date of any service work performed. See *Maintenance Records on page 11-15*.

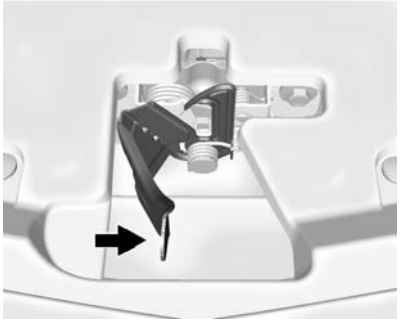
**⚠ Caution**

Even small amounts of contamination can cause damage to vehicle systems. Do not allow contaminants to contact the fluids, reservoir caps, or dipsticks.

## Hood

To open the hood:

1. Pull the hood release lever with this symbol on it. It is inside the vehicle on the lower side of the instrument panel.

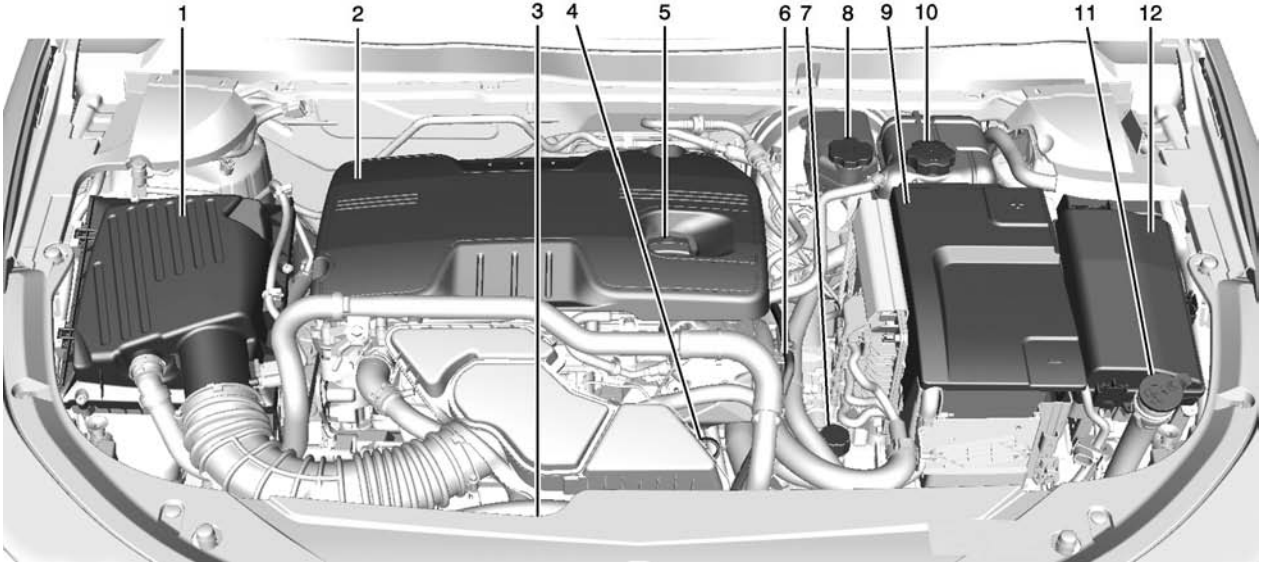


2. Go to the front of the vehicle to find the secondary hood release handle. The handle is under the front edge of the hood near the center. Push the handle to the right and at the same time raise the hood.

To close the hood:

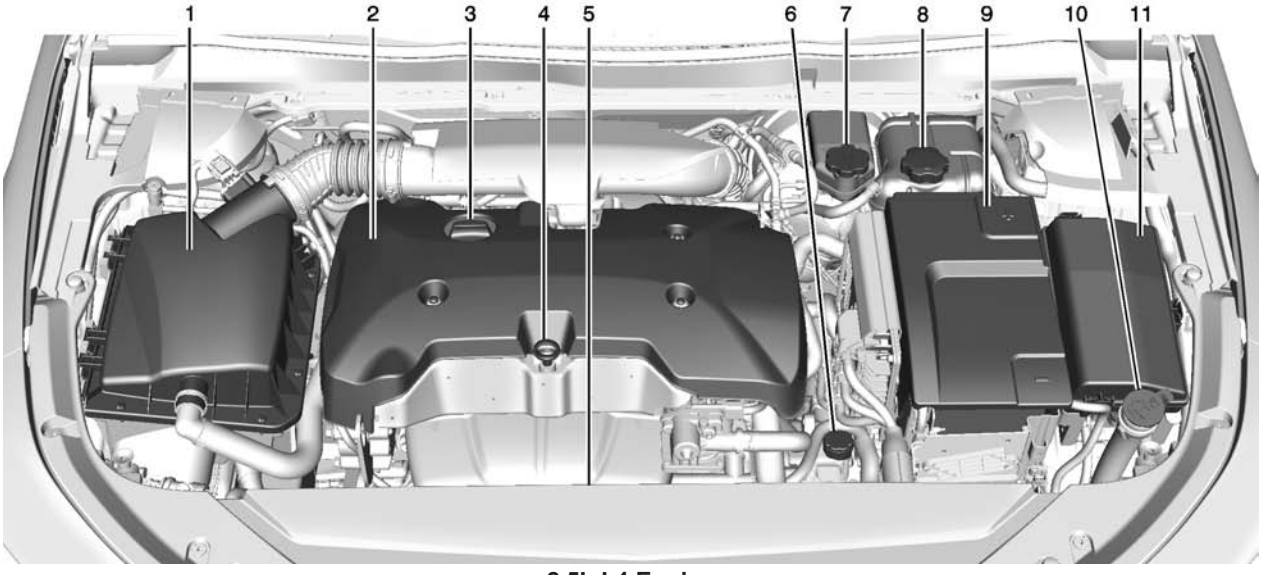
1. Before closing the hood, be sure all the filler caps are properly installed.
2. Lower the hood 20 cm (8 in) above the vehicle and release it so it fully latches. Check to make sure the hood is firmly closed. Repeat the process if necessary.

## Engine Compartment Overview



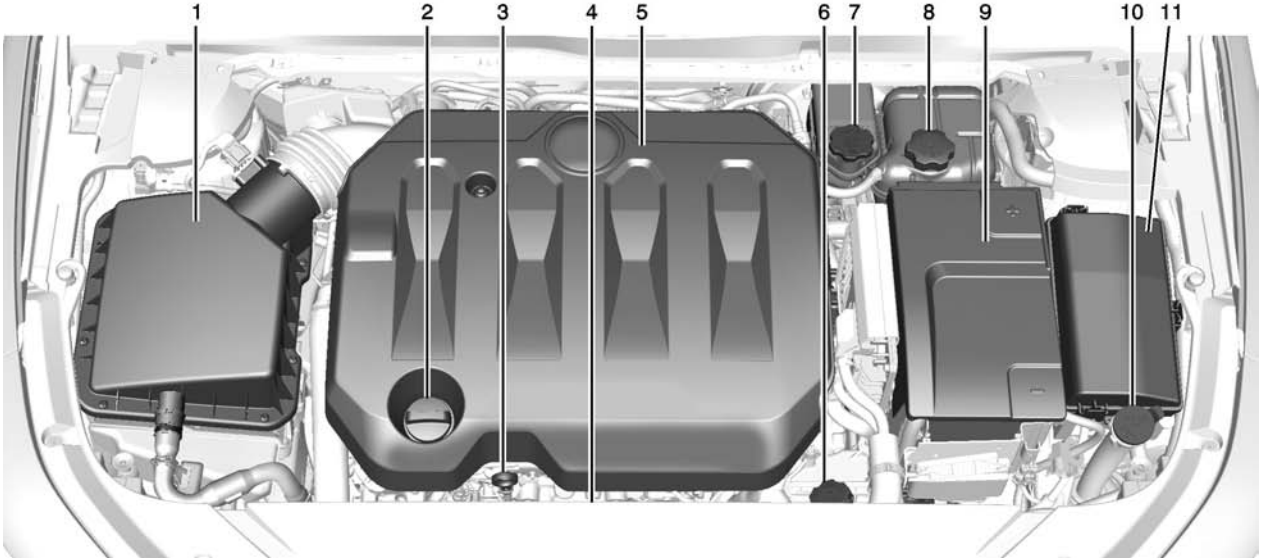

**2.4L L4 Engine**

1. *Engine Air Cleaner/Filter on page 10-15*.
2. Engine Cover.
3. Engine Cooling Fans (Out of View). See *Cooling System on page 10-18*.
4. Engine Oil Dipstick. See *Engine Oil on page 10-11*.
5. Engine Oil Fill Cap. See *Engine Oil on page 10-11*.
6. High Voltage Cable (Orange Color).
7. Transmission Fluid Cap. See *Automatic Transmission Fluid on page 10-15*.
8. Brake Fluid Reservoir. See *Brakes on page 10-25*.
9. Battery (Under Cover). See *Battery on page 10-27*.
10. Coolant Surge Tank and Pressure Cap. See *Engine Coolant on page 10-19*.
11. Windshield Washer Fluid Reservoir. See *Washer Fluid on page 10-24*.
12. *Engine Compartment Fuse Block on page 10-36*.




2.5L L4 Engine

1. *Engine Air Cleaner/Filter on page 10-15*.
2. Engine Cover.
3. Engine Oil Fill Cap. See *Engine Oil on page 10-11*.
4. Engine Oil Dipstick. See *Engine Oil on page 10-11*.
5. Engine Cooling Fans (Out of View). See *Cooling System on page 10-18*.
6. Transmission Fluid Cap. See *Automatic Transmission Fluid on page 10-15*.
7. Brake Fluid Reservoir. See *Brakes on page 10-25*.
8. Coolant Surge Tank and Pressure Cap. See *Engine Coolant on page 10-19*.
9. Battery (Under Cover). See *Battery on page 10-27*.
10. Windshield Washer Fluid Reservoir. See *Washer Fluid on page 10-24*.
11. *Engine Compartment Fuse Block on page 10-36*.




3.6L V6 Engine

1. *Engine Air Cleaner/Filter on page 10-15*.
2. Engine Oil Fill Cap. See *Engine Oil on page 10-11*.
3. Engine Oil Dipstick. See *Engine Oil on page 10-11*.
4. Engine Cooling Fans (Out of View). See *Cooling System on page 10-18*.
5. Engine Cover.
6. Transmission Fluid Cap and Dipstick (Out of View). See *Automatic Transmission Fluid on page 10-15*.
7. Brake Fluid Reservoir. See *Brakes on page 10-25*.
8. Coolant Surge Tank and Pressure Cap. See *Engine Coolant on page 10-19*.
9. Battery (Under Cover). See *Battery on page 10-27*.
10. Windshield Washer Fluid Reservoir. See *Washer Fluid on page 10-24*.
11. *Engine Compartment Fuse Block on page 10-36*.

## Engine Oil

To ensure proper engine performance and long life, careful attention must be paid to engine oil. Following these simple, but important steps will help protect your investment:

- Always use engine oil approved to the proper specification and of the proper viscosity grade. See “Selecting the Right Engine Oil” in this section.
- Check the engine oil level regularly and maintain the proper oil level. See “Checking Engine Oil” and “When to Add Engine Oil” in this section.
- Change the engine oil at the appropriate time. See *Engine Oil Life System on page 10-14*.
- Always dispose of engine oil properly. See “What to Do with Used Oil” in this section.

### Checking Engine Oil

It is a good idea to check the engine oil level at each fuel fill. In order to get an accurate reading, the vehicle must be on level ground. The engine oil dipstick handle is a loop. See *Engine Compartment Overview on page 10-6* for the location of the engine oil dipstick.

Obtaining an accurate oil level reading is essential:

1. If the engine has been running recently, turn off the engine and allow several minutes for the oil to drain back into the oil pan. Checking the oil level too soon after engine shutoff will not provide an accurate oil level reading.

**⚠ Warning**

The engine oil dipstick handle may be hot; it could burn you. Use a towel or glove to touch the dipstick handle.

2. Pull out the dipstick and clean it with a paper towel or cloth, then push it back in all the way. Remove it again, keeping the tip down, and check the level.

## When to Add Engine Oil

**2.5L L4 Shown, 3.6L V6 Similar**

**2.4L L4**

If the oil is below the cross-hatched area at the tip of the dipstick, add 1 L (1 qt) of the recommended oil and then recheck the level. See "Selecting the Right Engine Oil" in this section for an explanation of what kind of oil to use. For engine oil crankcase capacity, see *Capacities and Specifications on page 12-2*.

> **⚠ Caution**
>
> Do not add too much oil. Oil levels above or below the acceptable operating range shown on the dipstick are harmful to the engine. If you find that you have an oil level above the operating range, i.e., the engine has so much oil that the oil level gets above the upper mark that shows the proper operating range, the engine could be damaged. You should drain out the excess oil or limit driving of the vehicle and seek a service professional to remove the excess amount of oil.

See *Engine Compartment Overview on page 10-6* for the location of the engine oil fill cap.

Add enough oil to put the level somewhere in the proper operating range. Push the dipstick all the way back in when through.

## Selecting the Right Engine Oil

Selecting the right engine oil depends on both the proper oil specification and viscosity grade. See *Recommended Fluids and Lubricants on page 11-12*.

### Specification

Use and ask for licensed engine oils with the dexos1® approved certification mark. Engine oils meeting the requirements for the vehicle should have the dexos1 approved certification mark. This certification mark indicates that the oil has been approved to the dexos1 specification.

**⚠ Caution**

Failure to use the recommended engine oil can result in engine damage not covered by the vehicle warranty. Check with your dealer or service provider on whether the oil is approved to the dexos1 specification.

### Viscosity Grade

SAE 5W-30 is the best viscosity grade for the 2.4L L4 engine and the 3.6L V6 engine. SAE 5W-20 is the best viscosity grade for the 2.5L L4 engine. SAE 0W-20 may be used as an alternative. Do not use other viscosity grade oils such as SAE 10W-30, 10W-40, or 20W-50.

Cold Temperature Operation: In an area of extreme cold, where the temperature falls below −29°C (−20°F), an SAE 0W-30 oil may be used. An oil of this viscosity grade will provide easier cold starting for the engine at extremely low temperatures. When selecting an oil of the appropriate viscosity grade, always select an oil of the correct specification. See “Specification” earlier in this section for more information.

## Engine Oil Additives/Engine Oil Flushes

Do not add anything to the oil. The recommended oils with the dexos specification and displaying the dexos certification mark are all that is needed for good performance and engine protection.

Engine oil system flushes are not recommended and could cause engine damage not covered by the vehicle warranty.

## What to Do with Used Oil

Used engine oil contains certain elements that can be unhealthy for your skin and could even cause cancer. Do not let used oil stay on your skin for very long. Clean your skin and nails with soap and water, or a good hand cleaner. Wash or properly dispose of clothing or rags containing used engine oil. See the manufacturer's warnings about the use and disposal of oil products.

Used oil can be a threat to the environment. If you change your own oil, be sure to drain all the oil from the filter before disposal. Never dispose of oil by putting it in the trash or pouring it on the ground, into sewers, or into streams or bodies of water. Recycle it by taking it to a place that collects used oil.

# Engine Oil Life System

## When to Change Engine Oil

This vehicle has a computer system that indicates when to change the engine oil and filter. This is based on a combination of factors which include engine revolutions, engine temperature, and miles driven. Based on driving conditions, the mileage at which an oil change is indicated can vary considerably. For the oil life system to work properly, the system must be reset every time the oil is changed.

When the system has calculated that oil life has been diminished, it indicates that an oil change is necessary. A CHANGE ENGINE OIL SOON message comes on. See *Engine Oil Messages on page 5-33*. Change the oil as soon as possible within the next 1 000 km (600 mi). It is possible that, if driving under the best conditions, the oil life system might indicate that an oil change is not necessary for up to a year. The engine oil and filter must be changed at least once a year and at this time the system must be reset. Your dealer has trained service people who will perform this work and reset the system. It is also important to check the oil regularly over the course of an oil drain interval and keep it at the proper level.

If the system is ever reset accidentally, the oil must be changed at 5 000 km (3,000 mi) since the last oil change. Remember to reset the oil life system whenever the oil is changed.

## How to Reset the Engine Oil Life System

Reset the system whenever the engine oil is changed so that the system can calculate the next engine oil change. To reset the system:

1. Using the DIC controls on the right side of the steering wheel, display REMAINING OIL LIFE on the DIC. See *Driver Information Center (DIC) on page 5-27*. When remaining oil life is low, the CHANGE ENGINE OIL SOON message will appear on the display. See *Engine Oil Messages on page 5-33*.
2. Press ✓ on the DIC controls and hold down for a few seconds to clear the CHANGE ENGINE OIL SOON message and reset the oil life at 100%.

   Be careful not to reset the oil life display accidentally at any time other than after the oil is changed. It cannot be reset accurately until the next oil change.

The oil life system can also be reset as follows:

1. Turn the ignition on with the engine off.

2. Fully press and release the accelerator pedal three times within five seconds.

   If the CHANGE ENGINE OIL SOON message is not on, the system is reset.

The system is reset when the CHANGE ENGINE OIL SOON message is off.

If the CHANGE ENGINE OIL SOON message comes back on when the vehicle is started, the engine oil life system has not been reset. Repeat the procedure.

## Automatic Transmission Fluid

### How to Check Automatic Transmission Fluid

It is not necessary to check the transmission fluid level.
A transmission fluid leak is the only reason for fluid loss. If a leak occurs, take the vehicle to your dealer service department and have it repaired as soon as possible.

There is a special procedure for checking and changing the transmission fluid. Because this procedure is difficult, you should have this done at your dealer service department. Contact your dealer for additional information or the procedure can be found in the service manual. To purchase a service manual, see *Service Publications Ordering Information on page 13-11*.

Change the fluid and filter at the intervals listed in *Maintenance Schedule on page 11-2*, and be sure to use the fluid listed in *Recommended Fluids and Lubricants on page 11-12*.

## Engine Air Cleaner/Filter

The engine air cleaner/filter is in the engine compartment on the passenger side of the vehicle. See *Engine Compartment Overview on page 10-6* for more information on location.

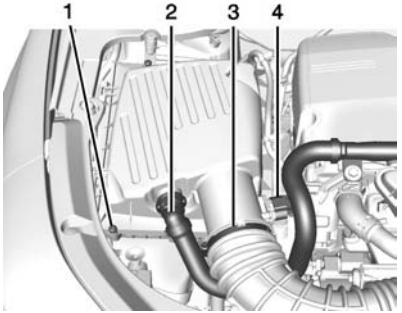
### When to Inspect the Engine Air Cleaner/Filter

Inspect the air cleaner/filter at the scheduled maintenance intervals and replace it at the first oil change after each 90 000 km (60,000 mi) interval. See *Maintenance Schedule on page 11-2*. If you are driving in dusty/dirty conditions, inspect the filter at each engine oil change.

### How to Inspect the Engine Air Cleaner/Filter

To inspect the air cleaner/filter, remove the filter from the vehicle and lightly shake the filter to release loose dust and dirt. If the filter remains covered with dirt, a new filter is required.

**2.4L L4 Engine**

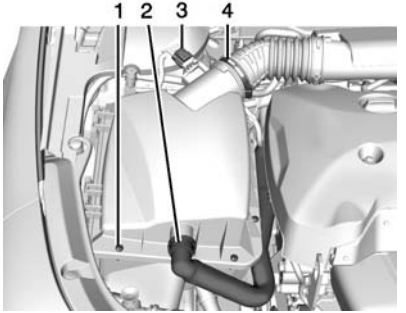



1. Screws
2. Secondary Air Hose (If Equipped)
3. Air Duct Clamp
4. Electrical Connector

To inspect or replace the engine air cleaner/filter:

1. Open the hood. See *Hood on page 10-4*.
2. Remove the screws (1) on top of the engine air cleaner/filter housing.
3. Disconnect the secondary air hose (2) (if equipped).
4. Disconnect the outlet duct by loosening the air duct clamp (3).
5. Disconnect the electrical connector (4).
6. Lift the filter cover housing away from the engine air cleaner/filter housing.
7. Pull out the filter.
8. Inspect or replace the engine air cleaner/filter.
9. Reverse Steps 2–5 to reinstall the filter cover housing.

**2.5L L4 Engine**



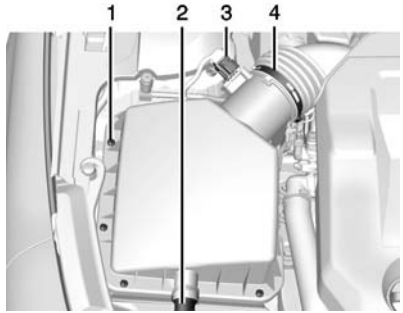

1. Screws
2. Secondary Air Hose (If Equipped)
3. Electrical Connector
4. Air Duct Clamp

To inspect or replace the engine air cleaner/filter:

1. Open the hood. See *Hood on page 10-4*.
2. Remove the screws (1) on top of the engine air cleaner/filter housing.

3. Disconnect the secondary air hose (2) (if equipped).
4. Disconnect the electrical connector (3).
5. Disconnect the outlet duct by loosening the air duct clamp (4).
6. Lift the filter cover housing away from the engine air cleaner/filter housing.
7. Pull out the filter.
8. Inspect or replace the engine air cleaner/filter.
9. Reverse Steps 2–5 to reinstall the filter cover housing.

**3.6L V6 Engine**




1. Screws
2. Secondary Air Hose (If Equipped)
3. Electrical Connector
4. Air Duct Clamp

To inspect or replace the engine air cleaner/filter:

1. Open the hood. See *Hood on page 10-4*.
2. Remove the screws (1) on top of the engine air cleaner/filter housing.
3. Disconnect the secondary air hose (2) (if equipped).
4. Disconnect the electrical connector (3).
5. Disconnect the outlet duct by loosening the air duct clamp (4).
6. Lift the filter cover housing away from the engine air cleaner/filter housing.
7. Pull out the filter.
8. Inspect or replace the engine air cleaner/filter.
9. Reverse Steps 2–5 to reinstall the filter cover housing.

**⚠ Warning**

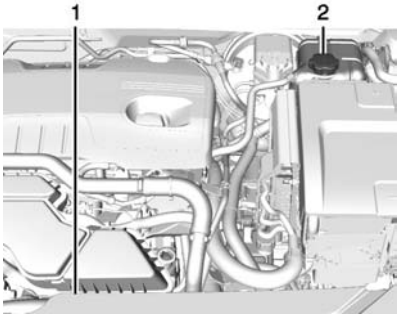
Operating the engine with the air cleaner/filter off can cause you or others to be burned. The air cleaner not only cleans the air; it helps to stop flames if the engine backfires. Use caution when working on the engine and do not drive with the air cleaner/filter off.

**⚠ Caution**

If the air cleaner/filter is off, dirt can easily get into the engine, which could damage it. Always have the air cleaner/filter in place when you are driving.

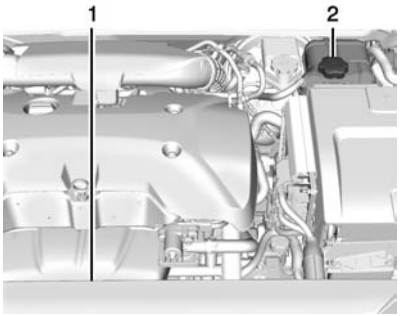
## Cooling System

The cooling system allows the engine to maintain the correct working temperature.



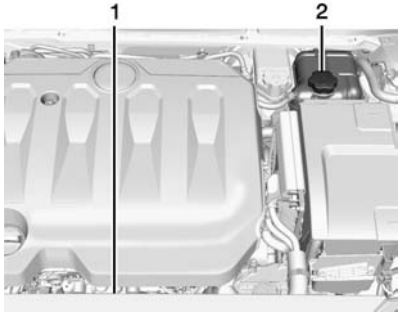

**2.4L L4 Engine**

1. Engine Cooling Fans (Out of View)
2. Coolant Surge Tank and Pressure Cap




**2.5L L4 Engine**

1. Engine Cooling Fans (Out of View)
2. Coolant Surge Tank and Pressure Cap




**3.6L V6 Engine**

1. Engine Cooling Fans (Out of View)
2. Coolant Surge Tank and Pressure Cap

**⚠ Warning**

An electric engine cooling fan under the hood can start up even when the engine is not running and can cause injury. Keep hands, clothing, and tools away from any underhood electric fan.

**⚠ Warning**

Heater and radiator hoses, and other engine parts, can be very hot. Do not touch them. If you do, you can be burned.

Do not run the engine if there is a leak. If you run the engine, it could lose all coolant. That could cause an engine fire, and you could be burned. Get any leak fixed before you drive the vehicle.

**⚠ Caution**

Using coolant other than DEX-COOL® can cause premature engine, heater core, or radiator corrosion. In addition, the engine coolant could require changing sooner. Any repairs would not be covered by the

(Continued)

**Caution (Continued)**

vehicle warranty. Always use DEX-COOL (silicate-free) coolant in the vehicle.

## Engine Coolant

The cooling system in the vehicle is filled with DEX-COOL® engine coolant. This coolant is designed to remain in the vehicle for 5 years or 240 000 km (150,000 mi), whichever occurs first.

The following explains the cooling system and how to check and add coolant when it is low. If there is a problem with engine overheating, see *Engine Overheating on page 10-22*.

### What to Use

**⚠ Warning**

Adding only plain water or some other liquid to the cooling system can be dangerous. Plain water and other liquids, can boil before the proper coolant mixture will. The coolant warning system is set for the proper coolant mixture. With plain water or the wrong mixture, the engine could get too hot but you would not get the overheat warning. The engine could catch fire and you or others could be burned. Use a 50/50 mixture of clean, drinkable water and DEX-COOL coolant.

Use a 50/50 mixture of clean, drinkable water and DEX-COOL coolant. If using this mixture, nothing else needs to be added.

This mixture:

- Gives freezing protection down to −37°C (−34°F), outside temperature.
- Gives boiling protection up to 129°C (265°F), engine temperature.
- Protects against rust and corrosion.
- Will not damage aluminum parts.
- Help keep the proper engine temperature.

**⚠ Caution**

If improper coolant mixture, inhibitors, or additives are used in the vehicle cooling system, the engine could overheat and be damaged. Too much water in the mixture can freeze and crack engine cooling parts. The repairs would not be covered by the vehicle warranty. Use only the

(Continued)

**Caution (Continued)**

proper mixture of engine coolant for the cooling system. See *Recommended Fluids and Lubricants on page 11-12*.

Never dispose of engine coolant by putting it in the trash, pouring it on the ground, or into sewers, streams, or bodies of water. Have the coolant changed by an authorized service center, familiar with legal requirements regarding used coolant disposal. This will help protect the environment and your health.

### Checking Coolant

The vehicle must be on a level surface when checking the coolant level.

Check to see if coolant is visible in the coolant surge tank. If the coolant inside the coolant surge tank is boiling, do not do anything else until it cools down.

If coolant is visible but the coolant level is not at or above the mark pointed to, add a 50/50 mixture of clean drinkable water and DEX-COOL coolant.

Be sure the cooling system is cool before this is done.

If no coolant is visible in the coolant surge tank, add coolant as follows:

### How to Add Coolant to the Coolant Surge Tank

**⚠ Caution**

This vehicle has a specific coolant fill procedure. Failure to follow this procedure could cause the engine to overheat and be severely damaged.

If no problem is found, check to see if coolant is visible in the coolant surge tank. If coolant is visible but the coolant level is not at the indicated level mark, add a 50/50 mixture of clean, drinkable water and DEX-COOL coolant at the coolant surge tank, but be sure the cooling system, including the coolant surge tank pressure cap, is cool before you do it.

**⚠ Warning**

Steam and scalding liquids from a hot cooling system can blow out and burn you badly. Never turn the cap when the cooling system, including the surge tank pressure cap, is hot. Wait for the cooling system and surge tank pressure cap to cool.

**⚠ Caution**

In cold weather, water can freeze and crack the engine, radiator, heater core, and other parts. Use the recommended coolant and the proper coolant mixture.

**⚠ Warning**

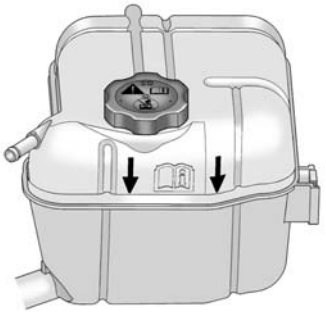
You can be burned if you spill coolant on hot engine parts. Coolant contains ethylene glycol and it will burn if the engine parts are hot enough. Do not spill coolant on a hot engine.

1. Remove the coolant surge tank pressure cap when the cooling system, including the coolant surge tank pressure cap and upper radiator hose, is no longer hot.

   Turn the pressure cap slowly counterclockwise about one-quarter of a turn. If you hear a hiss, wait for that to stop. This

will allow any pressure still left to be vented out the discharge hose.

2. Keep turning the pressure cap slowly and remove it.



3. Fill the coolant surge tank with the proper DEX-COOL coolant mixture to the indicated level mark.

4. With the coolant surge tank pressure cap off, start the engine and let it run until you can feel the upper radiator hose getting hot. Watch out for the engine cooling fans.

   By this time, the coolant level inside the coolant surge tank may be lower. If the level is lower, add more of the proper DEX-COOL coolant mixture to the coolant surge tank until the level reaches the indicated level mark.

5. Replace the pressure cap tightly.

Check the level in the coolant surge tank when the cooling system has cooled down. If the coolant is not at the proper level, repeat Steps 1–3 and reinstall the pressure cap. If the coolant still is not at the proper level when the system cools down again, see your dealer.

## Engine Overheating

There is a coolant temperature gauge on the instrument cluster that indicates an overheated engine condition. See *Engine Coolant Temperature Gauge on page 5-14*.

If the decision is made not to lift the hood when this warning appears, get service help right away. See *Roadside Assistance Program on page 13-5*.

If the decision is made to lift the hood, make sure the vehicle is parked on a level surface.

Then check to see if the engine cooling fans are running. If the engine is overheating, the fans should be running. If not, do not continue to run the engine and have the vehicle serviced.

**⚠ Caution**

Running the engine without coolant may cause damage or a fire. Vehicle damage would not be covered by the vehicle warranty. See *Overheated Engine Protection Operating Mode on page 10-24* for information on driving to a safe place in an emergency.

### If Steam Is Coming from the Engine Compartment

See *Overheated Engine Protection Operating Mode on page 10-24* for information on driving to a safe place in an emergency.

### If No Steam Is Coming from the Engine Compartment

If an engine overheat warning is displayed but no steam can be seen or heard, the problem might not be too serious. Sometimes the engine can get a little too hot when the vehicle:

- Climbs a long hill on a hot day.
- Stops after high-speed driving.
- Idles for long periods in traffic.
- Tows a trailer.

If the overheat warning displays with no sign of steam:

1. Turn the air conditioning off.
2. Turn the heater on to the highest temperature and to the highest fan speed. Open the windows as necessary.
3. When it is safe to do so, pull off the road, shift to P (Park) or N (Neutral), and let the engine idle.

If the coolant temperature gauge is no longer in the overheat zone, the vehicle can be driven. Continue to drive the vehicle slowly for about 10 minutes. Keep a safe vehicle distance from the vehicle in front. If the warning does not come back on, continue to drive normally and have the cooling system checked for proper fill and function.

If the warning continues, pull over, stop, and park the vehicle right away.

If there is no sign of steam, idle the engine for three minutes while parked. If the warning is still displayed, turn off the engine until it cools down. Also, see *Overheated Engine Protection Operating Mode on page 10-24*.

## Overheated Engine Protection Operating Mode

This emergency operating mode allows the vehicle to be driven to a safe place in an emergency situation. If an overheated engine condition exists, an overheat protection mode which alternates firing groups of cylinders helps prevent engine damage. In this mode, there is significant loss in power and engine performance.

The engine coolant temperature gauge indicates if an overheat condition exists. Driving extended distances and/or towing a trailer in the overheat protection mode should be avoided.

## Washer Fluid

### What to Use

When windshield washer fluid is needed, be sure to read the manufacturer's instructions before use. If operating the vehicle in an area where the temperature may fall below freezing, use a fluid that has sufficient protection against freezing.

### Adding Washer Fluid

Open the cap with the washer symbol on it. Add washer fluid until the tank is full. See *Engine Compartment Overview on page 10-6* for reservoir location.

**⚠ Caution**

- Do not use engine coolant (antifreeze) in the windshield washer. It can damage the windshield washer system and paint.
- Do not mix water with ready-to-use washer fluid. Water can cause the solution to freeze and damage the washer fluid tank and other parts of the washer system.
- When using concentrated washer fluid, follow the manufacturer instructions for adding water.
- Fill the washer fluid tank only three-quarters full when it is very cold. This allows for fluid expansion if freezing occurs, which could damage the tank if it is completely full.

## Brakes

This vehicle has disc brakes. Disc brake pads have built-in wear indicators that make a high-pitched warning sound when the brake pads are worn and new pads are needed. The sound can come and go or be heard all the time when the vehicle is moving, except when applying the brake pedal firmly.

**⚠ Warning**

The brake wear warning sound means that soon the brakes will not work well. That could lead to a crash. When the brake wear warning sound is heard, have the vehicle serviced.

**⚠ Caution**

Continuing to drive with worn-out brake pads could result in costly brake repair.

Some driving conditions or climates can cause a brake squeal when the brakes are first applied or lightly applied. This does not mean something is wrong with the brakes.

Properly torqued wheel nuts are necessary to help prevent brake pulsation. When tires are rotated, inspect brake pads for wear and evenly tighten wheel nuts in the proper sequence to torque specifications. See *Capacities and Specifications on page 12-2*.

Brake linings should always be replaced as complete axle sets.

### Brake Pedal Travel

See your dealer if the brake pedal does not return to normal height, or if there is a rapid increase in pedal travel. This could be a sign that brake service might be required.

### Brake Adjustment

Every time the brakes are applied, with or without the vehicle moving, the brakes adjust for wear.

### Replacing Brake System Parts

The braking system on a vehicle is complex. Its many parts have to be of top quality and work well together if the vehicle is to have really good braking. The vehicle was designed and tested with top-quality brake parts. When parts of the braking system are replaced, be sure to get new, approved replacement parts. If this is not done, the brakes might not work properly. For example, installing disc brake pads that are wrong for the vehicle, can change the balance between the front and rear brakes — for the worse. The braking performance expected can change in many other ways if the wrong replacement brake parts are installed.

## Brake Fluid

The brake master cylinder reservoir is filled with DOT 3 brake fluid as indicated on the reservoir cap. See *Engine Compartment Overview on page 10-6* for the location of the reservoir.

There are only two reasons why the brake fluid level in the reservoir might go down:

- The brake fluid level goes down because of normal brake lining wear. When new linings are installed, the fluid level goes back up.
- A fluid leak in the brake hydraulic system can also cause a low fluid level. Have the brake hydraulic system fixed, since a leak means that sooner or later the brakes will not work well.

Do not top off the brake fluid. Adding fluid does not correct a leak. If fluid is added when the linings are worn, there will be too much fluid when new brake linings are installed. Add or remove brake fluid, as necessary, only when work is done on the brake hydraulic system.

**⚠ Warning**

If too much brake fluid is added, it can spill on the engine and burn, if the engine is hot enough. You or others could be burned, and the vehicle could be damaged. Add brake fluid only when work is done on the brake hydraulic system.

When the brake fluid falls to a low level, the brake warning light comes on. See *Brake System Warning Light on page 5-20*.

### What to Add

Use only new DOT 3 brake fluid from a sealed container. See *Recommended Fluids and Lubricants on page 11-12*.

Always clean the brake fluid reservoir cap and the area around the cap before removing it. This helps keep dirt from entering the reservoir.

**⚠ Warning**

With the wrong kind of fluid in the brake hydraulic system, the brakes might not work well. This could cause a crash. Always use the proper brake fluid.

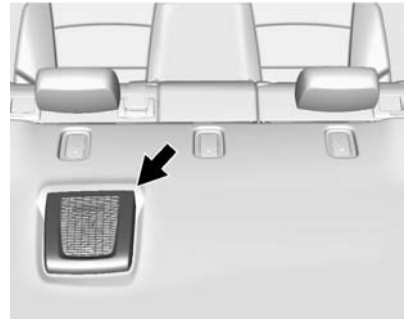
**⚠ Caution**

- Using the wrong fluid can badly damage brake hydraulic system parts. For example, just a few drops of mineral-based oil, such as engine oil, in the brake hydraulic system can damage brake hydraulic system parts so badly that they will have to be replaced. Do not let someone put in the wrong kind of fluid.
- If brake fluid is spilled on the vehicle's painted surfaces, the paint finish can be damaged. Be careful not to spill brake fluid on the vehicle. If you do, wash it off immediately.

## Battery

This vehicle has a standard 12-volt battery. Refer to the replacement number on the original battery label when a new standard 12-volt battery is needed.

eAssist vehicles also have a high voltage battery. Only a trained service technician with the proper knowledge and tools should inspect, test, or replace the high voltage battery. See your dealer if the high voltage battery needs service. The dealer has information on how to recycle the high voltage battery. There is also information available at http://www.recyclemybattery.com.



The eAssist system high voltage battery is cooled with air drawn from the vehicle interior. The cold air intake for the battery is behind the rear seat, on the filler panel. Do not cover the intake.

**⚠ Warning**

Battery posts, terminals, and related accessories contain lead and lead compounds, chemicals known to the State of California to cause cancer and reproductive harm. Wash hands after handling.

### 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. See *Jump Starting (with or without eAssist) on page 10-72* or *Jump Starting (On-board with eAssist Only) on page 10-71* for tips on working around a battery without getting hurt.

Infrequent Usage: Remove the 12-volt battery black, negative (−) cable from the battery to keep the battery from running down.

Extended Storage: Remove the 12-volt battery black, negative (−) cable from the battery or use a battery trickle charger.

Remember to reconnect the battery when ready to drive the vehicle.

## Starter Switch Check

**⚠ Warning**

When you are doing this inspection, the vehicle could move suddenly. If the vehicle moves, you or others could be injured.

1. Before starting this check, be sure there is enough room around the vehicle.
2. Firmly apply both the parking brake and the regular brake.

   Do not use the accelerator pedal, and be ready to turn off the engine immediately if it starts.
3. Try to start the engine in each gear. The vehicle should start only in P (Park) or N (Neutral). If the vehicle starts in any other position, contact your dealer for service.

## Automatic Transmission Shift Lock Control Function Check

**⚠ Warning**

When you are doing this inspection, the vehicle could move suddenly. If the vehicle moves, you or others could be injured.

1. Before starting this check, be sure there is enough room around the vehicle. It should be parked on a level surface.
2. Firmly apply the parking brake. Be ready to apply the regular brake immediately if the vehicle begins to move.
3. With the engine off, turn the ignition on, but do not start the engine. Without applying the regular brake, try to move the shift lever out of P (Park) with

normal effort. If the shift lever moves out of P (Park), contact your dealer for service.

## Ignition Transmission Lock Check

If equipped with a key type ignition, while parked and with the parking brake set, try to turn the ignition to LOCK/OFF in each shift lever position.

- The ignition should turn to LOCK/OFF only when the shift lever is in P (Park).
- The ignition key should come out only in LOCK/OFF.

Contact your dealer if service is required.

## Park Brake and P (Park) Mechanism Check

**⚠ Warning**

When you are doing this check, the vehicle could begin to move. You or others could be injured and property could be damaged. Make sure there is room in front of the vehicle in case it begins to roll. Be ready to apply the regular brake at once should the vehicle begin to move.

Park on a fairly steep hill, with the vehicle facing downhill. Keeping your foot on the regular brake, set the parking brake.

- To check the parking brake's holding ability: With the engine running and the transmission in N (Neutral), slowly remove foot pressure from the regular brake pedal. Do this until the vehicle is held by the parking brake only.
- To check the P (Park) mechanism's holding ability: With the engine running, shift to P (Park). Then release the parking brake followed by the regular brake.

Contact your dealer if service is required.

## Wiper Blade Replacement

Windshield wiper blades should be inspected for wear or cracking. See *Maintenance Schedule on page 11-2*.

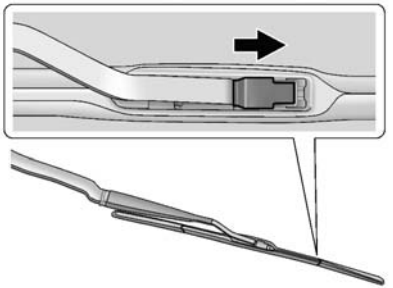
It is a good idea to clean the wiper blade assembly on a regular basis. When worn, or when cleaning is ineffective, replace the wiper blade. For proper windshield wiper blade length and type, see *Maintenance Replacement Parts on page 11-13*.

**⚠ Caution**

Allowing the wiper arm to touch the windshield when no wiper blade is installed could damage the windshield. Any damage that occurs would not be covered by your warranty. Do not allow the wiper arm to touch the windshield.

To replace the wiper blade:

1. Pull the wiper assembly away from the windshield.



2. Lift up on the latch in the middle of the wiper blade where the wiper arm attaches.
3. With the latch open, pull the wiper blade down toward the windshield far enough to release it from the J-hooked end of the wiper arm.
4. Remove the wiper blade.
5. Reverse Steps 1–3 for wiper blade replacement.

# Headlamp Aiming

Headlamp aim has been preset and should need no further adjustment.

If the vehicle is damaged in a crash, the headlamp aim may be affected. If adjustment to the headlamps is necessary, see your dealer.

# Bulb Replacement

For the proper type of replacement bulbs, see *Replacement Bulbs on page 10-35*.

For any bulb-changing procedure not listed in this section, contact your dealer.

## Halogen Bulbs

**⚠ Warning**

Halogen bulbs have pressurized gas inside and can burst if you drop or scratch the bulb. You or others could be injured. Be sure to read and follow the instructions on the bulb package.

## High Intensity Discharge (HID) Lighting

**⚠ Warning**

The high intensity discharge lighting system operates at a very high voltage. If you try to service any of the system components, you could be seriously injured. Have your dealer or a qualified technician service them.

The vehicle may have HID headlamps. After an HID headlamp bulb has been replaced, you may notice that the beam is a slightly different shade than it was originally. This is normal.

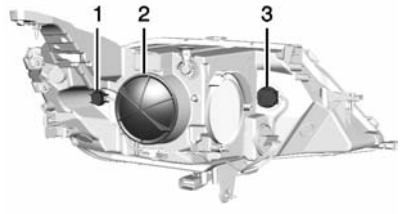
## LED Lighting

This vehicle has several LED lamps. For replacement of any LED lighting assembly, contact your dealer.

## Headlamps, Front Turn Signal, Sidemarker, and Parking Lamps

### Base Headlamp Assembly

The base model vehicle has halogen high/low-beam headlamps, a parking/turn signal lamp, and a sidemarker lamp on the headlamp assembly.

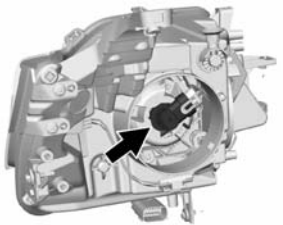



**Driver Side Shown, Passenger Side Similar**

1. Sidemarker Lamp
2. High/Low-Beam Headlamp
3. Parking/Turn Signal Lamp

To replace one of the headlamp bulbs:

1. Open the hood. See *Hood on page 10-4*.
2. For the driver side bulb, remove the windshield washer bottle filler neck by firmly pulling it straight up and out of the bottle.
3. Remove the cap from the back of the headlamp assembly by turning it counterclockwise.

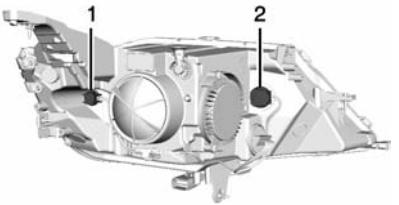


4. Disconnect the electrical connector.
5. Remove the bulb from the lamp assembly by turning counterclockwise.
6. Install a new bulb in the lamp assembly.
7. Connect the electrical connector.
8. Replace the cap on the back of the headlamp assembly by turning it clockwise.
9. For the driver side, reinstall the windshield washer bottle filler neck by firmly pushing it straight into the bottle. Ensure that the filler neck clip engages into the underhood electrical center retainer.

## Uplevel Headlamp Assembly

The uplevel model vehicle has a high intensity discharge (HID) high/low beam headlamp, a parking/turn signal lamp, and a sidemarker lamp on the headlamp assembly.

For replacement of the headlamp on an HID assembly, contact your dealer. See *High Intensity Discharge (HID) Lighting on page 10-31*.




**Driver Side Shown, Passenger Side Similar**

1. Sidemarker Lamp
2. Parking/Turn Signal Lamp

## Front Turn Signal, Parking, and Sidemarker Lamps

To replace one of these lamps on a base, or uplevel assembly:

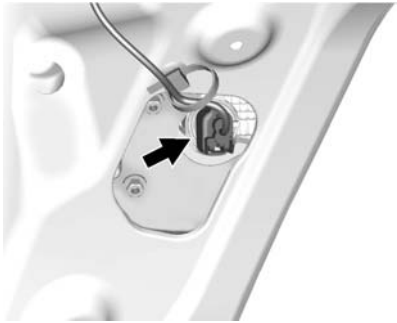
1. For the driver side bulb, remove the windshield washer bottle filler neck by firmly pulling it straight up and out of the bottle.
2. Remove the bulb socket from the headlamp assembly by turning it counterclockwise.

3. Remove the bulb from the socket.
4. Replace the bulb in the bulb socket.
5. Install the bulb socket in the headlamp assembly by turning it clockwise.
6. For the driver side, reinstall the windshield washer bottle filler neck by firmly pushing it straight into the bottle. Ensure that the filler neck clip engages into the underhood electrical center retainer.

## Taillamps, Turn Signal, Stoplamps, and Back-Up Lamps

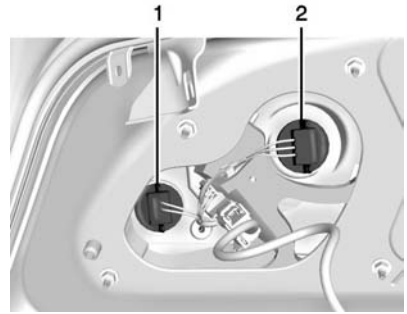
### Trunk Deck Inboard Taillamp

1. Open the trunk. See *Trunk on page 2-14*.
2. Remove the push pins and pull back the trunk deck trim.



3. Remove the bulb socket by turning counterclockwise and pulling straight out.
4. Remove the bulb from the socket by pulling it straight out.
5. Install the new bulb in the bulb socket.
6. Install the bulb socket by turning clockwise.
7. Install the trunk deck trim.

### Stoplamp/Taillamp/Turn Signal Lamp and Back-Up Lamp




**Driver Side Shown, Passenger Side Similar**

1. Back-Up Lamp
2. Stoplamp/Taillamp/Turn Signal Lamp

**⚠ Caution**

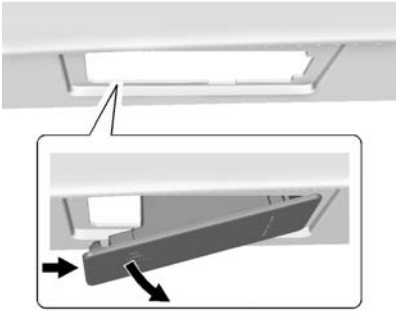
Improper lamp assembly removal and installation can cause leaks and water intrusion which may cause damage to the taillamp. Do not remove the taillamp assembly to replace a bulb. Use the trunk opening to access the bulb.

To replace one of these bulbs:

1. Open the trunk. See *Trunk on page 2-14*.
2. Remove the push pins and pull the trunk trim away from the taillamp assembly.
3. Remove the bulb socket from the taillamp assembly by turning it counterclockwise.
4. Remove the bulb from the socket by turning the bulb counterclockwise one-quarter turn and pulling it straight out.
5. Install a new bulb into the socket.
6. Install the bulb socket into the taillamp assembly by turning it clockwise.
7. Install the trunk trim and push pins.

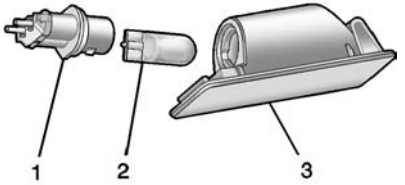
## License Plate Lamp

To replace one of these bulbs:



**Passenger Side Shown, Driver Side Similar**

1. Push the lamp assembly toward the right.
2. Pull the lamp assembly down to remove.




3. Turn the bulb socket (1) counterclockwise to remove it from the lamp assembly (3).
4. Pull the bulb (2) straight out of the bulb socket.
5. Push the replacement bulb straight into the bulb socket and turn the bulb socket clockwise to install it into the lamp assembly.
6. Push the lamp assembly back into position until the release tab locks into place.

## Replacement Bulbs

| Exterior Lamp | Bulb Number |
|---|---|
| Back-Up Lamp | 7440 |
| Deck Lid Taillamp | 194 |
| Front Parking/Turn Signal Lamp | 7444 NA PLATINUM |
| Front Sidemarker Lamp | 194 |
| High/Low-Beam Headlamp (Base) | HIR–2 (9012) |
| License Plate Lamp | W5W LL |
| Stoplamp/Taillamp/Turn Signal Lamp | 7443 LL |

For replacement bulbs not listed here, contact your dealer.

# Electrical System

## High Voltage Devices and Wiring

**⚠ Warning**

Exposure to high voltage can cause shock, burns, and even death. The high voltage components in the vehicle can only be serviced by technicians with special training.

High voltage components are identified by labels. Do not remove, open, take apart, or modify these components. High voltage cable or wiring has orange covering. Do not probe, tamper with, cut, or modify high voltage cable or wiring.

## Electrical System Overload

The vehicle has fuses and circuit breakers to protect against an electrical system overload.

When the current electrical load is too heavy, the circuit breaker opens and closes, protecting the circuit until the current load returns to normal or the problem is fixed. This greatly reduces the chance of circuit overload and fire caused by electrical problems.

Fuses and circuit breakers protect power devices in the vehicle.

Replace a bad fuse with a new one of the identical size and rating.

If there is a problem on the road and a fuse needs to be replaced, the same amperage fuse can be borrowed. Choose some feature of the vehicle that is not needed to use and replace it as soon as possible.

### Headlamp Wiring

An electrical overload may cause the lamps to go on and off, or in some cases to remain off. Have the headlamp wiring checked right away if the lamps go on and off or remain off.

### Windshield Wipers

If the wiper motor overheats due to heavy snow or ice, the windshield wipers will stop until the motor cools and will then restart.

Although the circuit is protected from electrical overload, overload due to heavy snow or ice may cause wiper linkage damage. Always clear ice and heavy snow from the windshield before using the windshield wipers.

If the overload is caused by an electrical problem and not snow or ice, be sure to get it fixed.

## Fuses

The wiring circuits in the vehicle are protected from short circuits by fuses. This greatly reduces the chance of damage caused by electrical problems.

To check a fuse, look at the silver-colored band inside the fuse. If the band is broken or melted, replace the fuse. Be sure to replace a bad fuse with a new one of the identical size and rating.

Fuses of the same amperage can be temporarily borrowed from another fuse location, if a fuse goes out. Replace the fuse as soon as possible.

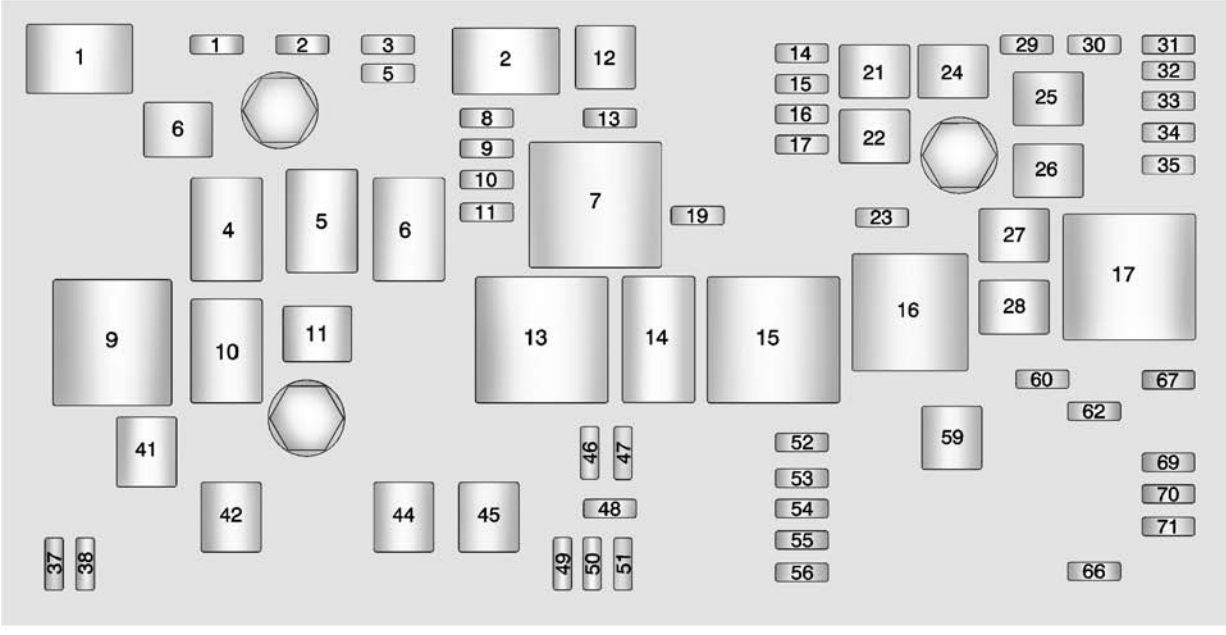
To identify and check fuses, circuit breakers, and relays, see *Engine Compartment Fuse Block on page 10-36* and *Instrument Panel Fuse Block on page 10-40*.

## Engine Compartment Fuse Block

The engine compartment fuse block is on the driver side of the engine compartment, near the battery.

**⚠ Caution**

Spilling liquid on any electrical component on the vehicle may damage it. Always keep the covers on any electrical component.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The vehicle may not be equipped with all of the fuses, relays, and features shown.

| Mini Fuses | Usage |
|---|---|
| 1 | Transmission Control Module Battery |
| 2 | Engine Control Module Battery |
| 3 | Air Conditioning Compressor Clutch |
| 5 | Engine Control Module Ignition |
| 8 | Ignition Coils – Even |
| 9 | Ignition Coils – Odd |
| 10 | Engine Control Module |
| 11 | Emissions |
| 13 | Transmission Control Module/Chassis Control Module Ignition |
| 14 | SAIR Solenoid |

| Mini Fuses | Usage |
|---|---|
| 15 | MGU Coolant Pump (eAssist) |
| 16 | Aero Shutter/eAssist Ignition |
| 17 | Seat Cooling Fans/ Heated Steering Wheel |
| 19 | Aero Shutter |
| 23 | Adaptive Cruise Control/Power Pack (eAssist) |
| 29 | Passive Entry/Passive Start Battery |
| 30 | Canister Vent Solenoid/BPIM Battery (eAssist) |
| 31 | Left Front Heated Seat |
| 32 | Right Rear Stop. Turn Tail Lamp, RAP Relay, Ambient |

| Mini Fuses | Usage |
|---|---|
| | Lighting Control, Interior Switch Backlighting |
| 33 | Right Front Heated Seat |
| 34 | Antilock Brake System Valve |
| 35 | Amplifier |
| 37 | Right High Beam |
| 38 | Left High Beam |
| 46 | Cooling Fan |
| 47 | Emissions |
| 48 | SAIR Valve (eAssist) |
| 49 | Right HID Lighting |
| 50 | Left HID Lighting |
| 51 | Horn/Dual Horn |
| 52 | Cluster Ignition |
| 53 | Inside Rearview Mirror/Rear Camera |

| Mini Fuses | Usage |
|---|---|
| 54 | Reflected LED Display, Console LED Display, Heating, Ventilation and Air Conditioning Module |
| 55 | Outside Rearview Mirror |
| 56 | Windshield Washer |
| 60 | Heated Mirror |
| 62 | Rear Camera/Park Assist/Side Blind Zone Alert |
| 66 | Trunk Release |
| 67 | Chassis Control Module |
| 69 | Battery Voltage Sensor |
| 70 | Canister Vent Solenoid (eAssist) |
| 71 | Memory Seat |

| J-Case Fuses | Usage |
|---|---|
| 6 | Front Wiper |
| 12 | Starter |
| 21 | Rear Power Window |
| 22 | Sunroof |
| 24 | Front Power Window |
| 25 | Accessory Relay |
| 26 | Antilock Brake System Pump |
| 27 | Electric Parking Brake |
| 28 | Rear Defogger |
| 41 | Vacuum Pump |
| 42 | Cooling Fan K2 |
| 44 | Transmission Auxiliary Pump (eAssist) |
| 45 | Cooling Fan K1 |
| 59 | Air Pump Emissions |

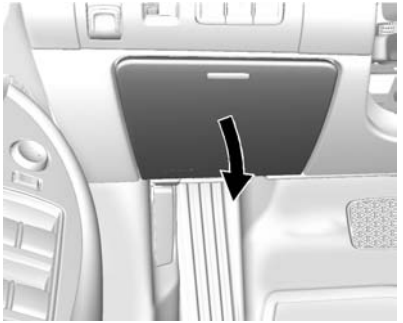
| Mini Relays | Usage |
|---|---|
| 7 | Powertrain |
| 9 | Cooling Fan K2 |
| 13 | Cooling Fan K1 |
| 15 | Run/Crank |
| 16 | Air Pump Emissions |
| 17 | Window/Mirror Defogger |

| Micro Relays | Usage |
|---|---|
| 1 | Air Conditioning Compressor Clutch |
| 2 | Starter Solenoid |
| 4 | Front Wiper Speed |
| 5 | Front Wiper Control |
| 6 | Air Pump Solenoid Emissions/Cabin Pump (eAssist) |
| 10 | Cooling Fan K3 |

| Micro Relays | Usage |
|---|---|
| 11 | Transmission Oil Pump (eAssist) |
| 14 | Low Beam HID |
| 22 | Air Pump Solenoid Emissions (eAssist) |

## Instrument Panel Fuse Block

The instrument panel fuse block is in the instrument panel, on the driver side of the vehicle.

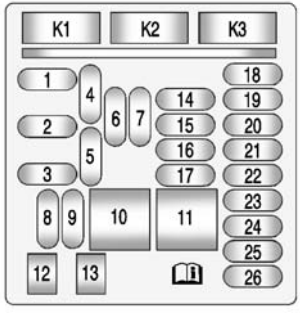


To access the fuses on vehicles equipped with a storage bin:

1. Push forward on the top edge of the bin to unlatch it.
2. Press in on the sides of the bin to release it from the instrument panel.
3. Pivot the door downward, allowing it to hang from the instrument panel.
4. To close the bin, swing it upward and push in until closed.

To access the fuses on vehicles not equipped with a storage bin:

1. Pull the lower edge of the cover rearward. The clips on the lower edge will release, and the upper edge will fall away from the instrument panel.
2. To replace the cover, hook the upper edge of the cover on the instrument panel, and swing the lower edge of the cover into place.
3. Press the lower edge of the cover until the clips engage.




**Instrument Panel Fuse Block**

The vehicle may not be equipped with all of the fuses, relays, and features shown.

| Mini Fuses | Usage |
|---|---|
| 1 | Telematics |
| 2 | Rear Turn Stoplamp, Courtesy Lamps, Back-up Lamps, Shift Lock Solenoid, Puddle Lamps |
| 3 | LED Indicator Light |
| 4 | Radio |
| 5 | Display |
| 6 | Power Outlet – Console Bin |
| 7 | Power Outlet – Forward/ Console Rear |
| 8 | Trunk Release, Brake Pedal Apply, Keyless Start Indicators, Hazard Switch Illumination, CHMSL/Brake Relay, Sidemarker Lamps, Washer Relay, Run/Crank Relay |
| 9 | Trunk Lamp, Right Low Beam/DRL, Right Front Turn Lamp, Right Rear Park/Stoplamp |
| 14 | Diagnostic Link Connector |
| 15 | Airbag/SDM |
| 16 | Not Used |
| 17 | Heater, Ventilation and Air Conditioning Controller |
| 18 | Logistics |
| 19 | Not Used |
| 20 | Ignition Switch |
| 21 | Not Used |
| 22 | Steering Wheel Controls |
| 23 | Left Low Beam/DRL, Left Front Turn Lamp, Left Rear Park/Stoplamp, Child Lock Relay |
| 24 | Theft Deterrent LED, Key Capture Solenoid, Run Relay |
| 25 | Tilt/Telescope Steering Column |
| 26 | 110V AC |

| J–Case Fuses | Usage |
|---|---|
| 10 | Door Unlock |
| 11 | Front Heater, Ventilation, and Air Conditioning Blower |

| Circuit Breakers | Usage |
|---|---|
| 12 | Power Seat–Passenger |
| 13 | Power Seat–Driver |

| Relays | Usage |
|---|---|
| K1 | Not Used |
| K2 | Logistic |
| K3 | Power Outlet Relay |

# 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

(Continued)

**Warning (Continued)**

and a serious crash. See *Vehicle Load Limits on page 9-10*.

- 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 the 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 *Tire Pressure for High-Speed Operation on page 10-51* for inflation pressure adjustment for high-speed driving.

## All-Season Tires

This vehicle may come with all-season tires. These tires are designed to provide good overall performance on most road surfaces and weather conditions. Original equipment tires designed to GM's specific tire performance criteria have a TPC specification code molded onto the sidewall. Original equipment all-season tires can be identified by the last two characters of this TPC code, which will be “MS.”

Consider installing winter tires on the vehicle if frequent driving on snow or ice-covered roads is expected. All-season tires provide adequate performance for most winter driving conditions, but they may not offer the same level of traction or performance as winter tires on snow or ice-covered roads. See *Winter Tires on page 10-43*.

## Winter Tires

This vehicle was not originally equipped with winter tires. Winter tires are designed for increased traction on snow and ice-covered roads. Consider installing winter tires on the vehicle if frequent driving on snow or ice-covered roads is expected. See your dealer for details regarding winter tire availability and proper tire selection. Also, see *Buying New Tires on page 10-58*.

With winter tires, there may be decreased dry road traction, increased road noise, and shorter tread life. After changing to winter tires, be alert for changes in vehicle handling and braking.

If using winter tires:

- Use tires of the same brand and tread type on all four wheel positions.

- Use only radial ply tires of the same size, load range, and speed rating as the original equipment tires.

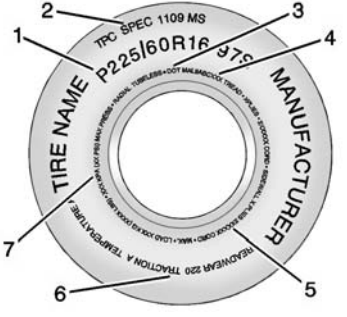
Winter tires with the same speed rating as the original equipment tires may not be available for H, V, W, Y, and ZR speed rated tires. If winter tires with a lower speed rating are chosen, never exceed the tire's maximum speed capability.

## Summer Tires

This vehicle may come with high performance summer tires. These tires have a special tread and compound that are optimized for maximum dry and wet road performance. This special tread and compound will decrease performance in cold climates, and on ice and snow. We recommend installing winter tires on the vehicle if frequent driving in cold temperatures or on snow or ice covered roads is expected. See *Winter Tires on page 10-43*.

## Tire Sidewall Labeling

Useful information about a tire is molded into its sidewall. The examples show a typical passenger vehicle tire and a compact spare tire sidewall.




**Passenger (P-Metric) 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

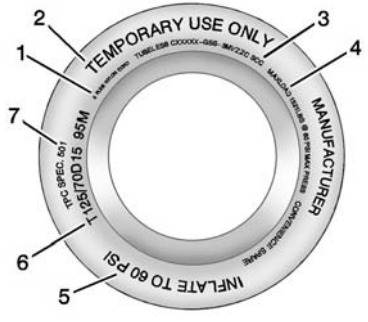
digits represent the week (01–52) and the last two digits, the year. For example, the third week of the year 2010 would have a four-digit DOT date of 0310.

**(4) Tire Identification Number (TIN):** The letters and numbers following the DOT (Department of Transportation) code are the Tire Identification Number (TIN). The TIN shows the manufacturer and plant code, tire size, and date the tire was manufactured. The TIN is molded onto both sides of the tire, although only one side may have the date of manufacture.

**(5) Tire Ply Material:** The type of cord and number of plies in the sidewall and under the tread.

**(6) Uniform Tire Quality Grading (UTQG):** Tire manufacturers are required to grade tires based on three performance factors: treadwear, traction, and temperature resistance. For more information see *Uniform Tire Quality Grading on page 10-60*.

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




**Compact Spare Tire Example**

**(1) Tire Ply Material:** The type of cord and number of plies in the sidewall and under the tread.

**(2) Temporary Use Only:** The compact spare tire or temporary use tire should not be driven at speeds over 80 km/h (50 mph). The compact spare tire is for emergency use when a regular road tire has lost air and gone flat. If the vehicle has a compact spare tire, see *Compact Spare Tire on page 10-70* and *If a Tire Goes Flat on page 10-63*.

**(3) Tire Identification Number (TIN):** The letters and numbers following the DOT (Department of Transportation) code are the Tire Identification Number (TIN). The TIN shows the manufacturer and plant code, tire size, and date the tire was manufactured. The TIN is molded onto both sides of the tire, although only one side may have the date of manufacture.

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

**(5) Tire Inflation:** The temporary use tire or compact spare tire should be inflated to 420 kPa (60 psi). For more information on tire pressure and inflation see *Tire Pressure on page 10-50*.

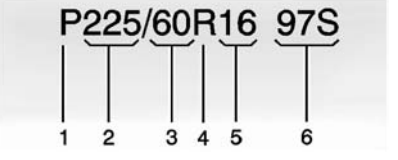
**(6) Tire Size:** A combination of letters and numbers define a tire's width, height, aspect ratio, construction type, and service description. The letter T as the first character in the tire size means the tire is for temporary use only.

**(7) TPC Spec (Tire Performance Criteria Specification):** Original equipment tires designed to GM's specific tire performance criteria have a TPC specification code molded onto the sidewall. GM's TPC specifications meet or exceed all federal safety guidelines.

## Tire Designations

### Tire Size

The following is an example of a typical passenger vehicle tire size.




**(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 three-digit number indicates the tire section width in millimeters from sidewall to sidewall.

**(3) Aspect Ratio:** A two-digit number that indicates the tire height-to-width measurements. For example, if the tire size aspect ratio is 60, as shown in item 3 of the illustration, it would mean that the tire's sidewall is 60 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; and the letter B means belted-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).

**Accessory Weight:** The combined weight of optional accessories. Some examples of optional accessories are automatic transmission, power windows, power seats, and air conditioning.

**Aspect Ratio:** The relationship of a tire's height to its width.

**Belt:** A rubber coated layer of cords 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 on page 10-50*.

**Curb Weight:** The weight of a motor vehicle with standard and optional equipment including the maximum capacity of fuel, oil, and coolant, but without passengers and cargo.

**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 on page 9-10*.

**GAWR FRT:** Gross Axle Weight Rating for the front axle. See *Vehicle Load Limits on page 9-10*.

**GAWR RR:** Gross Axle Weight Rating for the rear axle. See *Vehicle Load Limits on page 9-10*.

**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.

**Maximum Loaded Vehicle Weight:** The sum of curb weight, accessory weight, vehicle capacity weight, and production options weight.

**Normal Occupant Weight:** The number of occupants a vehicle is designed to seat multiplied by 68 kg (150 lb). See *Vehicle Load Limits on page 9-10*.

**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 on page 10-50* and *Vehicle Load Limits on page 9-10*.

**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 on page 10-57*.

**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 on page 10-60*.

**Vehicle Capacity Weight:** The number of designated seating positions multiplied by 68 kg (150 lb) plus the rated cargo load. See *Vehicle Load Limits on page 9-10*.

**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 capacity weight and the original equipment tire size and recommended inflation pressure. See “Tire and Loading Information Label” under *Vehicle Load Limits on page 9-10*.

## Tire Pressure

Tires need the correct amount of air pressure to operate effectively.

**⚠ Caution**

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.

(Continued)

**Caution (Continued)**

Overinflated tires, or tires that have too much air, can result in:

- Unusual wear.
- Poor handling.
- Rough ride.
- Needless damage from road hazards.

The Tire and Loading Information label on the vehicle indicates the original equipment tires and the correct cold tire inflation pressures. The recommended pressure is the minimum air pressure needed to support the vehicle's maximum load carrying capacity. See *Vehicle Load Limits on page 9-10*.

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 tires once a month or more. Do not forget the compact spare, if the vehicle has one. The cold compact spare tire pressure should be at 420 kPa (60 psi). See *Compact Spare Tire on page 10-70*.

### 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.

Return the valve caps on the valve stems to prevent leaks and keep out dirt and moisture.

## Tire Pressure for High-Speed Operation

**⚠ Warning**

Driving at high speeds, 160 km/h (100 mph) or higher, puts an additional strain on tires. Sustained high-speed driving causes excessive heat buildup and can cause sudden tire failure. You could have a crash and you or others could be killed. Some high-speed rated tires require inflation pressure adjustment for high-speed operation. When speed limits and road conditions are such that a vehicle can be driven at high speeds, make sure the tires are rated for high-speed operation, in excellent condition, and set to the correct cold tire inflation pressure for the vehicle load.

Vehicles with P245/45R19 and P245/40R20 size tires require inflation pressure adjustment when driving the vehicle at speeds of 160 km/h (100 mph) or higher. Set the cold inflation pressure to 270 kPa (39 psi).

Return the tires to the recommended cold tire inflation pressure when high-speed driving has ended. See *Vehicle Load Limits on page 9-10* and *Tire Pressure on page 10-50*.

## 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 fuel 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 on page 10-52*.

See *Radio Frequency Statement on page 13-15*.

## 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 transmits 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 on page 9-10*.

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. Using the DIC, tire pressure levels can be viewed. For additional information and details about the DIC operation and displays see *Driver Information Center (DIC) on page 5-27*.

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, attached to your vehicle, shows the size of the original equipment tires and the correct inflation pressure for the tires when they are cold. See *Vehicle Load Limits on page 9-10*, for an example of the Tire and Loading Information label and its location. Also see *Tire Pressure on page 10-50*.

The TPMS can warn about a low tire pressure condition but it does not replace normal tire maintenance. See *Tire Inspection on page 10-56*, *Tire Rotation on page 10-56* and *Tires on page 10-42*.

**⚠ 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 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 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 on page 10-58*.
- 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 condition. See your dealer for service if the TPMS malfunction light and DIC message comes on and stays on.

### TPMS Sensor Matching Process

Each TPMS sensor has a unique identification code. The identification code needs to be matched to a new tire/wheel position after rotating the vehicle’s tires or replacing one or more of the TPMS sensors. The TPMS sensor matching process should also be performed after replacing a spare tire with a road tire containing the TPMS sensor. The malfunction light and the DIC message should go off at the next ignition cycle. The sensors are matched to the tire/wheel positions,

using a TPMS relearn tool, in the following order: driver side front tire, passenger side front tire, passenger side rear tire, and driver side rear. See your dealer for service or to purchase a relearn tool.

There are two minutes to match the first tire/wheel position, and five minutes overall to match all four tire/wheel positions. If it takes longer, the matching process stops and must be restarted.

The TPMS sensor matching process is:

1. Set the parking brake.
2. Turn the ignition to ON/RUN with the engine off or place the vehicle power mode in ON/RUN/START. See *Ignition Positions (Keyless Access) on page 9-15* or *Ignition Positions (Key Access) on page 9-17*.
3. Make sure the Tire Pressure info page option is turned on. The info pages on the DIC can be turned on and off through the Settings menu. See *Driver Information Center (DIC) on page 5-27*.
4. Use the DIC controls on the right side of the steering wheel to scroll to the Tire Pressure screen under the DIC info page.
5. Press and hold the ✓ (Set/Reset) button located in the center of the DIC controls.

   The horn sounds twice to signal the receiver is in relearn mode and the TIRE LEARNING ACTIVE message displays on the DIC screen.
6. Start with the driver side front tire.
7. Place the relearn tool against the tire sidewall, near the valve stem. Then press the button to activate the TPMS sensor. A horn chirp confirms that the sensor identification code has been matched to this tire and wheel position.
8. Proceed to the passenger side front tire, and repeat the procedure in Step 7.
9. Proceed to the passenger side rear tire, and repeat the procedure in Step 7.
10. Proceed to the driver side rear tire, and repeat the procedure in Step 7. The horn sounds two times to indicate the sensor identification code has been matched to the driver side rear tire, and the TPMS sensor matching process is no longer active. The TIRE LEARNING ACTIVE message on the DIC display screen goes off.
11. Turn the ignition to LOCK/OFF or press STOP to turn the ignition off.
12. Set all four tires to the recommended air pressure level as indicated on the Tire and Loading Information label.

## Tire Inspection

We recommend that the tires, including the spare tire, if the vehicle has one, be inspected for signs of wear or damage at least once a month.

Replace the tire if:

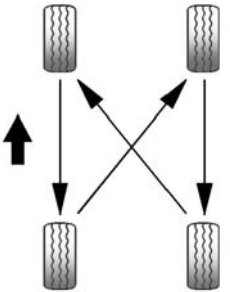
- The indicators at three or more places around the tire can be seen.
- There is cord or fabric showing through the tire's rubber.
- The tread or sidewall is cracked, cut, or snagged deep enough to show cord or fabric.
- The tire has a bump, bulge, or split.
- The tire has a puncture, cut, or other damage that cannot be repaired well because of the size or location of the damage.

## Tire Rotation

Tires should be rotated every 12 000 km (7,500 mi). See *Maintenance Schedule on page 11-2*.

Tires are rotated to achieve a 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 on page 10-57* and *Wheel Replacement on page 10-62*.



Use this rotation pattern when rotating the tires.

Do not include the compact spare tire in the tire rotation.

Adjust the front and rear tires to the recommended inflation pressure on the Tire and Loading Information label after the tires have been rotated.

See *Tire Pressure on page 10-50* and *Vehicle Load Limits on page 9-10*.

Reset the Tire Pressure Monitor System. See *Tire Pressure Monitor Operation on page 10-52*.

Check that all wheel nuts are properly tightened. See “Wheel Nut Torque” under *Capacities and Specifications on page 12-2*.

**⚠ Warning**

Rust or dirt on a wheel, or on the parts to which it is fastened, can make wheel nuts become loose after time. The wheel could come off and cause an accident. When changing a wheel, remove any rust or dirt from places where the wheel attaches to the vehicle. In an emergency, a cloth or a paper

(Continued)

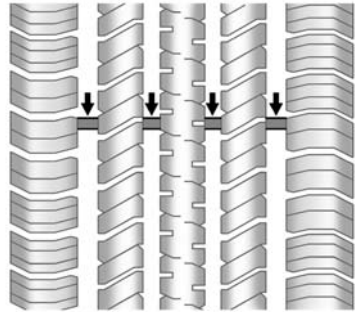
**Warning (Continued)**

towel can be used; however, use a scraper or wire brush later to remove all rust or dirt.

Lightly coat the center of the wheel hub with wheel bearing grease after a wheel change or tire rotation to prevent corrosion or rust build-up. Do not get grease on the flat wheel mounting surface or on the wheel nuts or bolts.

## 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 on page 10-56* and *Tire Rotation on page 10-56*.

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. The tire manufacturer date is the last four digits of the DOT Tire Identification Number (TIN) which is molded into one side of the tire sidewall. The first two digits represent the week (01–52) and the last two digits, the year. For example, the third week of the year 2010 would have a four-digit DOT date of 0310.

### Vehicle Storage

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. If the tires have an all-season tread design, the TPC Spec number will be followed by MS for mud and snow. See *Tire Sidewall Labeling on page 10-44*.

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. See *Tire Rotation on page 10-56*. However, if it is necessary to replace only one axle set of worn tires, place the new tires on the rear axle.

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.

**⚠ Warning**

Tires could explode during improper service. Attempting to mount or dismount a tire could cause injury or death. Only your dealer or authorized tire service center should mount or dismount the tires.

**⚠ Warning**

Mixing tires of different sizes, brands, or types may cause loss of control of the vehicle, resulting in a crash or other vehicle damage. Use the correct size, brand, and type of tires 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.

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.

Vehicles that have a tire pressure monitoring system could give an inaccurate low-pressure warning if non-TPC Spec rated tires are installed. See *Tire Pressure Monitor System on page 10-51*.

The Tire and Loading Information label indicates the original equipment tires on the vehicle. See *Vehicle Load Limits on page 9-10*.

## Different Size Tires and Wheels

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.

**⚠ 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 systems developed for the vehicle, and have them properly installed by a GM certified technician.

See *Buying New Tires on page 10-58* and *Accessories and Modifications on page 10-3*.

## Uniform Tire Quality Grading

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**

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.

All Passenger Car Tires Must Conform to Federal Safety Requirements In Addition To These Grades.

**Treadwear**

The treadwear grade is a comparative rating based on the wear rate of the tire when tested under controlled conditions on a specified government test course. For example, a tire

graded 150 would wear one and one-half (1½) times as well on the government course as a tire graded 100. The relative performance of tires depends upon the actual conditions of their use, however, and may depart significantly from the norm due to variations in driving habits, service practices and differences in road characteristics and climate.

### Traction

The traction grades, from highest to lowest, are AA, A, B, and C. Those grades represent the tire's ability to stop on wet pavement as measured under controlled conditions on specified government test surfaces of asphalt and concrete. A tire marked C may have poor traction performance. Warning: The traction grade assigned to this tire is based on straight-ahead braking traction tests, and does not include acceleration, cornering, hydroplaning, or peak traction characteristics.

### Temperature

The temperature grades are A (the highest), B, and C, representing the tire's resistance to the generation of heat and its ability to dissipate heat when tested under controlled conditions on a specified indoor laboratory test wheel. Sustained high temperature can cause the material of the tire to degenerate and reduce tire life, and excessive temperature can lead to sudden tire failure. The grade C corresponds to a level of performance which all passenger car tires must meet under the Federal Motor Safety Standard No. 109. Grades B and A represent higher levels of performance on the laboratory test wheel than the minimum required by law. Warning: The temperature grade for this tire is established for a tire that is properly inflated and not overloaded. Excessive speed, underinflation, or excessive loading, either separately or in combination, can cause heat buildup and possible tire failure.

## Wheel Alignment and Tire Balance

The tires and wheels were aligned and balanced at the factory to provide the longest tire life and best overall performance. Adjustments to wheel alignment and tire balancing are not necessary on a regular basis. Consider an alignment check if there is unusual tire wear or the vehicle is significantly pulling to one side or the other. Some slight pull to the left or right, depending on the crown of the road and/or other road

surface variations such as troughs or ruts, is normal. If the vehicle is vibrating when driving on a smooth road, the tires and wheels may need to be rebalanced. See your dealer for proper diagnosis.

## Wheel Replacement

Replace any wheel that is bent, cracked, or badly rusted or corroded. If wheel nuts keep coming loose, the wheel, wheel bolts, and wheel nuts should be replaced. If the wheel leaks air, replace it. Some aluminum wheels can be repaired. See your dealer if any of these conditions exist.

Your dealer will know the kind of wheel that is needed.

Each new wheel should have the same load-carrying capacity, diameter, width, offset, and be mounted the same way as the one it replaces.

Replace wheels, wheel bolts, wheel nuts, or Tire Pressure Monitor System (TPMS) sensors with new GM original equipment parts.

**⚠ Warning**

Using the wrong replacement wheels, wheel bolts, or wheel nuts can be dangerous. It could affect the braking and handling of the vehicle. Tires can lose air, and cause loss of control, causing a crash. Always use the correct wheel, wheel bolts, and wheel nuts for replacement.

**⚠ Caution**

The wrong wheel can also cause problems with bearing life, brake cooling, speedometer or odometer calibration, headlamp aim, bumper height, vehicle

(Continued)

**Caution (Continued)**

ground clearance, and tire or tire chain clearance to the body and chassis.

### Used Replacement Wheels

**⚠ Warning**

Replacing a wheel with a used one is dangerous. How it has been used or how far it has been driven may be unknown. It could fail suddenly and cause a crash. When replacing wheels, use a new GM original equipment wheel.

## Tire Chains

**⚠ Warning**

Do not use tire chains. There is not enough clearance. Tire chains used on a vehicle without the proper amount of clearance can cause damage to the brakes, suspension, or other vehicle parts. The area damaged by the tire chains could cause loss of control and a crash.

Use another type of traction device only if its manufacturer recommends it for the vehicle's tire size combination and road conditions. Follow that manufacturer's instructions. To avoid vehicle damage, drive slow and readjust or remove the traction device if it contacts the vehicle. Do not spin the wheels. If traction devices are used, install them on the front tires.

## If a Tire Goes Flat

It is unusual for a tire to blow out while driving, especially if the tires are maintained properly. See *Tires on page 10-42*. If air goes out of a tire, it is much more likely to leak out slowly. But if there ever is a blowout, here are a few tips about what to expect and what to do:

If a front tire fails, the flat tire creates a drag that pulls the vehicle toward that side. Take your foot off the accelerator pedal and grip the steering wheel firmly. Steer to maintain lane position, and then gently brake to a stop, well off the road, if possible.

A rear blowout, particularly on a curve, acts much like a skid and may require the same correction as used in a skid. Stop pressing the accelerator pedal and steer to straighten the vehicle. It may be very bumpy and noisy. Gently brake to a stop, well off the road, if possible.

**⚠ Warning**

Driving on a flat tire will cause permanent damage to the tire. Re-inflating a tire after it has been driven on while severely underinflated or flat may cause a blowout and a serious crash. Never attempt to re-inflate a tire that has been driven on while severely underinflated or flat. Have your dealer or an authorized tire service center repair or replace the flat tire as soon as possible.

**⚠ Warning**

Lifting a vehicle and getting under it to do maintenance or repairs is dangerous without the appropriate safety equipment and training. If a jack is provided with the vehicle, it is designed only for

(Continued)

**Warning (Continued)**

changing a flat tire. If it is used for anything else, you or others could be badly injured or killed if the vehicle slips off the jack. If a jack is provided with the vehicle, only use it for changing a flat tire.

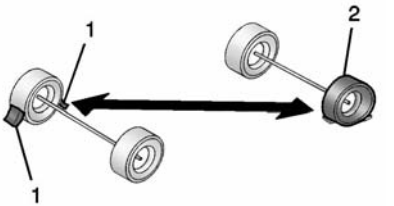
If a tire goes flat, avoid further tire and wheel damage by driving slowly to a level place, well off the road, if possible. Turn on the hazard warning flashers. See *Hazard Warning Flashers on page 6-3*.

**⚠ Warning**

Changing a tire can be dangerous. The vehicle can slip off the jack and roll over or fall causing injury or death. Find a level place to change the tire. To help prevent the vehicle from moving:

1. Set the parking brake firmly.
2. Put an automatic transmission in P (Park) or a manual transmission in 1 (First) or R (Reverse).
3. Turn off the engine and do not restart while the vehicle is raised.
4. Do not allow passengers to remain in the vehicle.
5. Place wheel blocks on both sides of the tire at the opposite corner of the tire being changed.

When the vehicle has a flat tire (2), use the following example as a guide to assist in the placement of the wheel blocks (1).

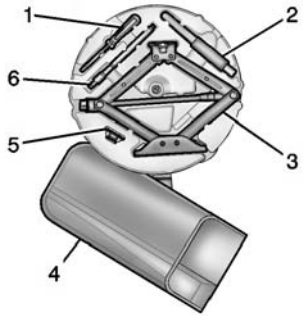



1. Wheel Block
2. Flat Tire

The following information explains how to repair or change a tire.

# Tire Changing

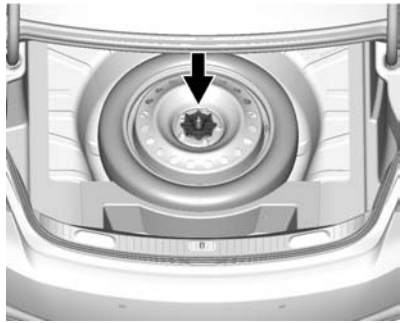
## Removing the Spare Tire and Tools




1. Screwdriver
2. Tow Hook (If Equipped)
3. Jack
4. Wrench (In Bag)
5. Trim Removal (If Equipped)
6. Fastener (If Equipped)

To access the spare tire and tools:

1. Open the trunk.
2. Remove the spare tire cover.



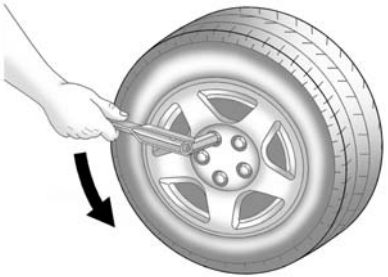
3. Turn the retainer nut counterclockwise and remove the spare tire. Place the spare tire next to the tire being changed.
4. The jack and tools are stored below the spare tire. Remove them from their container and place them near the tire being changed.

   To make removal easier for eAssist models, tilt the spare tire up and remove the jack and tools from under it. Then remove the spare tire on an angle to clear the mounting stud and battery.

## Removing the Flat Tire and Installing the Spare Tire

1. Do a safety check before proceeding. See *If a Tire Goes Flat on page 10-63*.
2. Turn the wheel wrench counterclockwise to loosen and remove the wheel nut caps.

   Do not try to remove plastic caps from the cover or center cap.
3. Pull the cover or center cap away from the wheel. Store the wheel cover in the cargo area until you have the flat tire repaired or replaced.



4. Turn the wheel wrench counterclockwise to loosen all the wheel nuts, but do not remove them yet.
5. Place the jack near the flat tire.
6. Put the compact spare tire near you.

**⚠ Warning**

Getting under a vehicle when it is lifted on a jack is dangerous. If the vehicle slips off the jack,

(Continued)

**Warning (Continued)**

you could be badly injured or killed. Never get under a vehicle when it is supported only by a jack.

**⚠ Warning**

Raising the vehicle with the jack improperly positioned can damage the vehicle and even make the vehicle fall. To help avoid personal injury and vehicle damage, be sure to fit the jack lift head into the proper location before raising the vehicle.

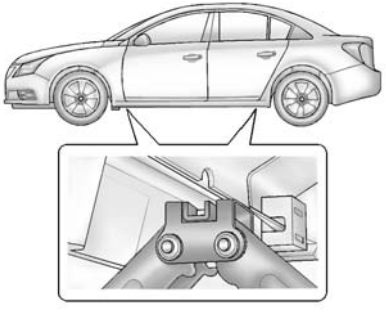
**⚠ Warning**

Lifting a vehicle and getting under it to do maintenance or repairs is dangerous without the appropriate safety equipment and training. If a jack is provided with the vehicle, it is designed only for changing a flat tire. If it is used for anything else, you or others could be badly injured or killed if the vehicle slips off the jack. If a jack is provided with the vehicle, only use it for changing a flat tire.

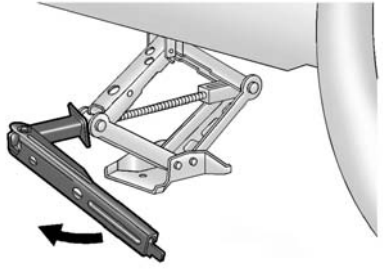
7. Attach the jack lift assist tool to the jack by fitting both ends of the jack and tool over one another.
8. Place the jack under the vehicle.

**⚠ Caution**

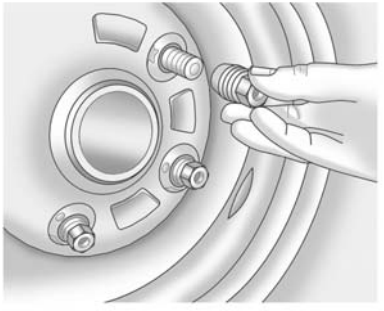
Make sure that the jack lift head is in the correct position or you may damage your vehicle. The repairs would not be covered by your warranty.



9. Position the jack lift head at the jack location nearest the flat tire. The location is indicated by a notch on the bottom edge of the body side. The jack must not be used in any other position.



10. Raise the vehicle by turning the jack handle clockwise. Raise the vehicle far enough off the ground so there is enough room for the road tire to clear the ground.



11. Remove all of the wheel nuts.
12. Remove the flat tire.

**⚠ Warning**

Rust or dirt on a wheel, or on the parts to which it is fastened, can make wheel nuts become loose after time. The wheel could come off and cause an accident. When changing a wheel, remove any rust or dirt from places where the wheel attaches to the vehicle. In

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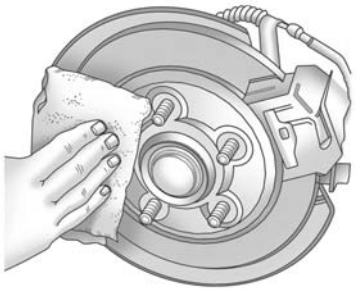
**Warning (Continued)**

an emergency, a cloth or a paper towel can be used; however, use a scraper or wire brush later to remove all rust or dirt.



13. Remove any rust or dirt from the wheel bolts, mounting surfaces, and spare wheel.
14. Place the compact spare tire on the wheel-mounting surface.

**⚠ Warning**

Never use oil or grease on bolts or nuts because the nuts might come loose. The vehicle's wheel could fall off, causing a crash.

15. Reinstall the wheel nuts. Tighten each nut by hand until the wheel is held against the hub.
16. Lower the vehicle by turning the jack handle counterclockwise.

**⚠ Warning**

Wheel nuts that are improperly or incorrectly tightened can cause the wheels to become loose or come off. The wheel nuts should be tightened with a torque wrench to the proper torque specification after replacing. Follow the torque specification supplied by the

(Continued)

**Warning (Continued)**

aftermarket manufacturer when using accessory locking wheel nuts. See *Capacities and Specifications on page 12-2* for original equipment wheel nut torque specifications.

**⚠ Caution**

Improperly tightened wheel nuts can lead to brake pulsation and rotor damage. To avoid expensive brake repairs, evenly tighten the wheel nuts in the proper sequence and to the proper torque specification. See Capacities and Specifications for the wheel nut torque specification.

17. Tighten the wheel nuts firmly in a crisscross sequence, as shown.
18. Lower the jack all the way and remove the jack from under the vehicle.
19. Tighten the wheel nuts firmly with the wheel wrench.

When reinstalling the wheel cover or center cap on the full-size tire, tighten all five plastic caps hand snug with the aid of the wheel wrench and tighten them with the wheel wrench an additional one-quarter of a turn.

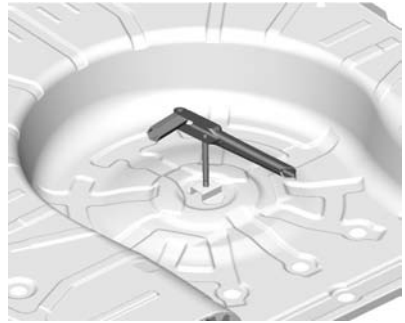
**⚠ Caution**

Wheel covers will not fit on the vehicle's compact spare. If you try to put a wheel cover on the compact spare, the cover or the spare could be damaged.

## Storing a Flat or Spare Tire and Tools

**⚠ Warning**

Storing a jack, a tire, or other equipment in the passenger compartment of the vehicle could cause injury. In a sudden stop or collision, loose equipment could strike someone. Store all these in the proper place.



1. Turn the wrench counterclockwise to remove the fastener.
2. Replace the fastener with the one provided in the foam.
3. Turn the wrench clockwise to tighten the fastener.
4. Replace the foam, jack and tools, and the tire.
5. Turn the retainer nut clockwise to secure the tire.
6. Place the floor cover on the wheel.

To store the compact spare tire, use the shorter mounting bolt.

The compact spare is for temporary use only. Replace the compact spare tire with a full-size tire as soon as you can.

## Compact Spare Tire

**⚠ Warning**

Driving with more than one compact spare tire at a time could result in loss of braking and handling. This could lead to a crash and you or others could be injured. Use only one compact spare tire at a time.

If this vehicle has a compact spare tire, it was fully inflated when new; however, it can lose air over time. Check the inflation pressure regularly. It should be 420 kPa (60 psi).

Stop as soon as possible and check that the spare tire is correctly inflated after being installed on the vehicle. The compact spare tire is designed for temporary use only. The vehicle will perform differently with the spare tire installed and it is recommended that the vehicle speed be limited to 80 km/h (50 mph). To conserve the tread of the spare tire, have the standard tire repaired or replaced as soon as convenient and return the spare tire to the storage area.

When using a compact spare tire, the ABS and Traction Control systems may engage until the spare tire is recognized by the vehicle, especially on slippery roads. Adjust driving to reduce possible wheel slip.

**⚠ Caution**

When the compact spare is installed, do not take the vehicle through an automatic car wash with guide rails. The compact spare can get caught on the rails which can damage the tire, wheel, and other parts of the vehicle.

Do not use the compact spare on other vehicles.

Do not mix the compact spare tire or wheel with other wheels or tires. They will not fit. Keep the spare tire and its wheel together.

**⚠ Caution**

Tire chains will not fit the compact spare. Using them can damage the vehicle and the chains. Do not use tire chains on the compact spare.

# Jump Starting

## Jump Starting (On-board with eAssist Only)

If the vehicle fails to crank, it may be jump started by using the eAssist battery to charge the 12-volt battery. Use the following procedure to activate the on-board jump start using the DIC controls.

**DIC Buttons**

The vehicle may be equipped with an ignition key or an electronic keyless ignition with pushbutton start.

**Key Access**

Place the ignition key in the ON/RUN position and proceed as follows:

1. Press ◁ then scroll △ or ▽ until the Settings menu displays.
2. Press ✓ to enter the Settings menu.
3. Press ▷ then scroll △ or ▽ until Jump Start displays.
4. Press ✓ to activate the jump start.
5. The system will then ask for confirmation. If Yes is selected, the jump start will begin and the display will show WAIT TO START.
6. When the jump start is complete, the display will show ATTEMPT START or JUMP START DISABLED.

**Keyless Access**

With the brake pedal not applied, press and hold the ENGINE START/STOP button for more than five seconds. This will place the vehicle in the Service Only Mode. Proceed as follows:

1. Press ◁ then scroll △ or ▽ until the Settings menu displays.
2. Press ✓ to enter the Settings menu.

3. Press ▷ then scroll △ or ▽ until Jump Start displays.
4. Press ✓ to activate the jump start.
5. The system will then ask for confirmation. If Yes is selected, the jump start will begin and the display will show WAIT TO START.
6. When the jump start is complete, the display will show ATTEMPT START or JUMP START DISABLED.

If the vehicle is started, the on-board jump start function will be automatically disabled. If the vehicle cranks but does not start, the procedure may be repeated again. If the vehicle start is still unsuccessful, the jump start can be attempted using the following jump starting procedure under "Jump Starting (with or without eAssist)." On-board jump starting may be unavailable due to the 12-volt battery charge level, the eAssist battery charge level, power capability, or an issue with the eAssist system. In these cases, the display will not be available because of the power issue, or the DIC will display JUMP START DISABLED SEE OWNERS MANUAL.

## Jump Starting (with or without eAssist)

For more information about the vehicle battery, see *Battery on page 10-27*.

If the battery has run down, try to use another vehicle and some jumper cables to start your vehicle. Be sure to use the following steps to do it safely.

**⚠ Warning**

Batteries can hurt you. They can be dangerous because:

- They contain acid that can burn you.

(Continued)

**Warning (Continued)**

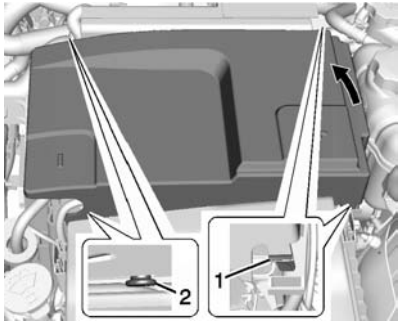
- They contain gas that can explode or ignite.
- They contain enough electricity to burn you.

If you do not follow these steps exactly, some or all of these things can hurt you.

**⚠ Caution**

Ignoring these steps could result in costly damage to the vehicle that would not be covered by the vehicle warranty. Trying to start the vehicle by pushing or pulling it will not work, and it could damage the vehicle.

The vehicle has a battery cover which must be removed to gain access to the battery for jump starting.




1. Clips
2. Pivot Points

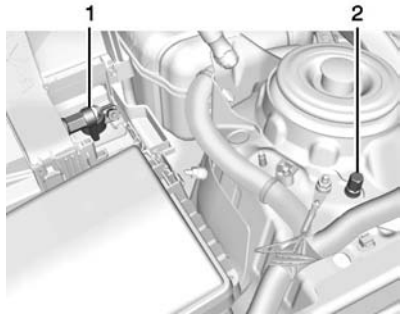
To remove the battery cover:

1. Release the two rear clips (1).
2. Lift the battery cover up towards the front of the vehicle to release it from the pivot points (2) and remove.
3. Reverse Steps 1–2 to reinstall the battery cover.

The jump start positive (+) terminal is under a trim cover. It is in under the battery cover on the driver side of the vehicle. You should always use this remote positive (+) terminal.

The jump start negative (-) ground post is on the driver side shock tower.

These locations are used instead of a direct connection to the battery.




1. Jump Start Positive (+) Terminal
2. Jump Start Negative (-) Grounding Post

1. Check the other vehicle. It must have a 12-volt battery with a negative ground system.

**⚠ Caution**

If the other vehicle does not have a 12-volt system with a negative ground, both vehicles can be damaged. Only use a vehicle that has a 12-volt system with a negative ground for jump starting.

2. Position the two vehicles so that they are not touching.
3. 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 Neutral before setting the parking brake.

**⚠ Caution**

If any accessories are left on or plugged in during the jump starting procedure, they could be damaged. The repairs would not be covered by the vehicle warranty. Whenever possible, turn off or unplug all accessories on either vehicle when jump starting.

4. Turn the ignition to LOCK/OFF and switch off all lights and accessories in both vehicles, except the hazard warning flashers if needed.

**⚠ Warning**

An electric fan can start up even when the engine is not running and can injure you. Keep hands, clothing and tools away from any underhood electric fan.

**⚠ Warning**

Using a match near a battery can cause battery gas to explode. People have been hurt doing this, and some have been blinded. Use a flashlight if you need more light.

Be sure the battery has enough water. You do not need to add water to the battery installed in your new vehicle. But if a battery has filler caps, be sure the right amount of fluid is there. If it is low, add water to take care of that first. If you do not, explosive gas could be present.

Battery fluid contains acid that can burn you. Do not get it on you. If you accidentally get it in your eyes or on your skin, flush the place with water and get medical help immediately.

**⚠ Warning**

Fans or other moving engine parts can injure you badly. Keep your hands away from moving parts once the engine is running.

5. Connect one end of the red positive (+) cable to the jump start positive (+) terminal (1). Use a remote positive (+) terminal if the vehicle has one.
6. Do not let the other end of the red positive (+) cable touch metal. Connect it to the positive (+) terminal of the good battery. Use a remote positive (+) terminal if the vehicle has one.

7. Connect one end of the black negative (–) cable to the negative (–) terminal of the good battery. Use a remote negative (−) terminal if the vehicle has one.

   Do not let the other end touch anything until the next step. The other end of the negative (–) cable does not go to the dead battery. It goes to a remote negative (–) post on the driver side shock tower.

8. Connect the other end of the black negative (–) cable to the jump start negative (-) grounding post (2).
9. Start the engine in the vehicle with the good battery and run the engine at idle speed for at least four minutes.
10. Try to start the vehicle that had the dead battery. If it will not start after a few tries, it probably needs service.

**⚠ Caution**

If the jumper cables are connected or removed in the wrong order, electrical shorting may occur and damage the vehicle. The repairs would not be covered by the vehicle warranty. Always connect and remove the jumper cables in the correct order, making sure that the cables do not touch each other or other metal.

### Jumper Cable Removal

Reverse the sequence exactly when removing the jumper cables.

## Towing the Vehicle

**⚠ Caution**

Incorrectly towing a disabled vehicle may cause damage. The damage would not be covered by the vehicle warranty. Do not lash or hook to the chassis components — including the front and rear subframes, suspension control arms, and links — during towing and recovery of a disabled vehicle, or when securing the vehicle to a flatbed car carrier. Use the proper nylon strap harnesses around the tires to secure them to the flatbed car carrier.

Have the vehicle towed on a wheel lift tow truck. A flatbed car carrier could damage the vehicle. The wheel lift tow truck must raise the rear of the vehicle and wheel dollies must be used to lift the front wheels off the ground.

Consult your dealer or a professional towing service if the disabled vehicle must be towed.

To tow the vehicle behind another vehicle for recreational purposes, such as behind a motor home, see “Recreational Vehicle Towing” following.

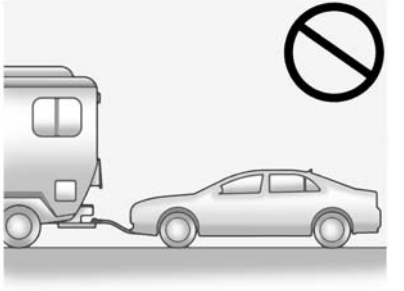
## Recreational Vehicle Towing

Recreational vehicle towing means towing the vehicle behind another vehicle – such as behind a motor home. The two most common types of recreational vehicle towing are known as dinghy towing and dolly towing. Dinghy towing is towing the vehicle with all four wheels on the ground. Dolly towing is towing the vehicle with two wheels on the ground and two wheels up on a device known as a dolly.

Here are some important things to consider before recreational vehicle towing:

- What is the towing capacity of the towing vehicle? Be sure to read the tow vehicle manufacturer's recommendations.
- How far will the vehicle be towed? Some vehicles have restrictions on how far and how long they can tow.
- Does the vehicle have the proper towing equipment? See your dealer or trailering professional for additional advice and equipment recommendations.
- Is the vehicle ready to be towed? Just as preparing the vehicle for a long trip, make sure the vehicle is prepared to be towed.

### Dinghy Towing

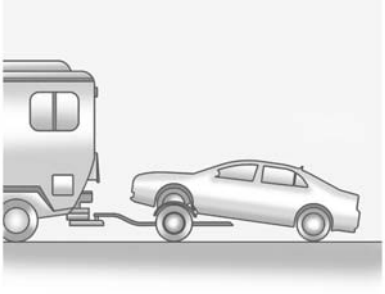


**⚠ Caution**

If the vehicle is towed with all four wheels on the ground, the drivetrain components could be damaged. The repairs would not be covered by the vehicle warranty. Do not tow the vehicle with all four wheels on the ground.

The vehicle was not designed to be towed with all four wheels on the ground. If the vehicle must be towed, a dolly should be used. See “Dolly Towing” following.

### Dolly Towing



Tow the vehicle with the two rear wheels on the ground and the front wheels on a dolly.

To tow the vehicle with two wheels on the ground and a dolly:

1. Put the front wheels on a dolly.
2. Put the shift lever in P (Park).
3. Secure the vehicle to the dolly.

**⚠ Caution**

Towing the vehicle from the rear could damage it. Also, repairs would not be covered by the vehicle warranty. Never have the vehicle towed from the rear.

# Appearance Care

## Exterior Care

### Locks

Locks are lubricated at the factory. Use a de-icing agent only when absolutely necessary, and have the locks greased after using. See *Recommended Fluids and Lubricants on page 11-12*.

### Washing the Vehicle

To preserve the vehicle's finish, wash it often and out of direct sunlight.

**⚠ Caution**

Do not use petroleum-based, acidic, or abrasive cleaning agents as they can damage the vehicle's paint, metal, or plastic parts. If damage occurs, it would not be covered by the vehicle warranty. Approved cleaning

(Continued)

**Caution (Continued)**

products can be obtained from your dealer. Follow all manufacturer directions regarding correct product usage, necessary safety precautions, and appropriate disposal of any vehicle care product.

**⚠ Caution**

Avoid using high-pressure washes closer than 30 cm (12 in) to the surface of the vehicle. Use of power washers exceeding 8,274 kPa (1,200 psi) can result in damage or removal of paint and decals.

This symbol is on any underhood compartment electrical center that should not be power washed. This could cause damage that would not be covered by the vehicle warranty.

If using an automatic car wash, comply with the car wash instructions. The windshield wiper and rear window wiper, if equipped, must be off. Remove any accessories that may be damaged or interfere with the car wash equipment.

Rinse the vehicle well, before washing and after, to remove all cleaning agents completely. If they are allowed to dry on the surface, they could stain.

Dry the finish with a soft, clean chamois or an all-cotton towel to avoid surface scratches and water spotting.

## Finish Care

Application of aftermarket clearcoat sealant/wax materials is not recommended. If painted surfaces are damaged, see your dealer to have the damage assessed and repaired. Foreign materials such as calcium chloride and other salts, ice melting agents, road oil and tar, tree sap, bird droppings, chemicals from industrial chimneys, etc., can damage the vehicle's finish if they remain on painted surfaces. Wash the vehicle as soon as possible. If necessary, use non-abrasive cleaners that are marked safe for painted surfaces to remove foreign matter.

Occasional hand waxing or mild polishing should be done to remove residue from the paint finish. See your dealer for approved cleaning products.

Do not apply waxes or polishes to uncoated plastic, vinyl, rubber, decals, simulated wood, or flat paint as damage can occur.

**⚠ Caution**

Machine compounding or aggressive polishing on a basecoat/clearcoat paint finish may damage it. Use only non-abrasive waxes and polishes that are made for a basecoat/clearcoat paint finish on the vehicle.

To keep the paint finish looking new, keep the vehicle garaged or covered whenever possible.

**Protecting Exterior Bright Metal Moldings**

**⚠ Caution**

Failure to clean and protect the bright metal moldings can result in a hazy white finish or pitting. This damage would not be covered by the vehicle warranty.

The bright metal moldings on the vehicle are aluminum. To prevent damage always follow these cleaning instructions:

- Be sure the molding is cool to the touch before applying any cleaning solution.
- Use a cleaning solution approved for aluminum. Some cleaners are highly acidic or contain alkaline substances and can damage the moldings.
- Always dilute a concentrated cleaner according to the manufacturer's instructions.
- Do not use chrome cleaners.
- Do not use cleaners that are not intended for automotive use.
- Use a nonabrasive wax on the vehicle after washing to protect and extend the molding finish.

## Cleaning Exterior Lamps/ Lenses and Emblems

Use only lukewarm or cold water, a soft cloth, and a car washing soap to clean exterior lamps, lenses and emblems. Follow instructions under "Washing the Vehicle" previously in this section.

Lamp covers are made of plastic, and some have a UV protective coating.

Use only lukewarm water, a soft cloth, and mild car washing soap to clean exterior lamps and lenses. Do not clean or wipe them while they are dry.

Do not use any of the following on lamp covers:

- Abrasive or caustic agents.
- Washer fluids and other cleaning agents in higher concentrations than suggested by the manufacturer.
- Solvents, alcohols, fuels, or other harsh cleaners.

- Ice scrapers or other hard items.
- Aftermarket appearance caps or covers while the lamps are illuminated, due to excessive heat generated.

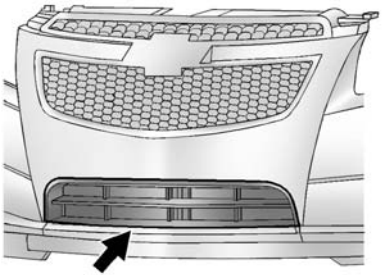
**⚠ Caution**

Failure to clean lamps properly can cause damage to the lamp cover that would not be covered by the vehicle warranty.

### Air Intakes

Clear debris from the air intakes, between the hood and windshield, when washing the vehicle.

### Shutter System



The vehicle may have a shutter system designed to help increase fuel economy. Keep the shutter system clean for proper operation.

### Windshield and Wiper Blades

Clean the outside of the windshield with glass cleaner.

Clean rubber blades using 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.

Clear ice and snow from the wiper blades before using them. If frozen to the windshield, carefully loosen them or thaw them. Damaged wiper blades should be replaced. See *Wiper Blade Replacement on page 10-29* for more information.

Heavy snow or ice can overload the wipers. If the wiper motor overheats, the windshield wipers will stop until the motor cools and the wiper control is turned off. See *Electrical System Overload on page 10-35* for more information.

### Weatherstrips

Apply Dielectric silicone grease on weatherstrips to make them last longer, seal better, and not stick or squeak. Lubricate weatherstrips at least once a year. Hot. dry climates may require more frequent application. Black marks from rubber material on painted surfaces can be removed by rubbing with a clean cloth. See *Recommended Fluids and Lubricants on page 11-12*.

### Tires

Use a stiff brush with tire cleaner to clean the tires.

**⚠ Caution**

Using petroleum-based tire dressing products on the vehicle may damage the paint finish and/or tires. When applying a tire dressing, always wipe off any overspray from all painted surfaces on the vehicle.

### Wheels and Trim — Aluminum or Chrome

Use a soft, clean cloth with mild soap and water to clean the wheels. After rinsing thoroughly with clean water, dry with a soft, clean towel. A wax may then be applied.

**⚠ Caution**

Chrome wheels and other chrome trim may be damaged if the vehicle is not washed after driving on roads that have been sprayed with magnesium, calcium, or sodium chloride. These chlorides are used on roads for conditions such as ice and dust. Always wash the chrome with soap and water after exposure.

**⚠ Caution**

To avoid surface damage, do not use strong soaps, chemicals, abrasive polishes, cleaners, brushes, or cleaners that contain acid on aluminum or chrome-plated wheels. Use only approved cleaners. Also, never drive a vehicle with aluminum or chrome-plated wheels through an automatic car wash that uses silicone carbide tire cleaning brushes. Damage could occur and the repairs would not be covered by the vehicle warranty.

### Steering, Suspension, and Chassis Components

Visually inspect front and rear suspension and steering system for damaged, loose, or missing parts or signs of wear. Inspect the hydraulic power steering for proper hook-up, binding, leaks, cracks, chafing, etc.

Visually check constant velocity joints, rubber boots, and axle seals for leaks.

### Body Component Lubrication

Lubricate all key lock cylinders, hood hinges, liftgate hinges, and steel fuel door hinge unless the components are plastic. Applying silicone grease on weatherstrips with a clean cloth will make them last longer, seal better, and not stick or squeak.

### Underbody Maintenance

At least twice a year, spring and fall, use plain water to flush dirt and debris from the vehicle's underbody. Your dealer or an underbody car washing system can do this. If not removed, rust and corrosion can develop.

### Sheet Metal Damage

If the vehicle is damaged and requires sheet metal repair or replacement, make sure the body repair shop applies anti-corrosion material to parts repaired or replaced to restore corrosion protection.

Original manufacturer replacement parts will provide the corrosion protection while maintaining the vehicle warranty.

### Finish Damage

Quickly repair minor chips and scratches with touch-up materials available from your dealer to avoid corrosion. Larger areas of finish damage can be corrected in your dealer's body and paint shop.

### Chemical Paint Spotting

Airborne pollutants can fall upon and attack painted vehicle surfaces causing blotchy, ring-shaped discolorations, and small, irregular dark spots etched into the paint surface. See “Finish Care” previously in this section.

## Interior Care

To prevent dirt particle abrasions, regularly clean the vehicle's interior. Immediately remove any soils. Note that newspapers or dark garments that can transfer color to home furnishings can also permanently transfer color to the vehicle's interior.

Use a soft bristle brush to remove dust from knobs and crevices on the instrument cluster. Using a mild soap solution, immediately remove hand lotions, sunscreen, and insect repellent from all interior surfaces or permanent damage may result.

Your dealer may have products for cleaning the interior. Use cleaners specifically designed for the surfaces being cleaned to prevent permanent damage. Apply all cleaners directly to the cleaning cloth. Do not spray cleaners directly on any switches or controls. Cleaners should be removed quickly. Never allow cleaners to

remain on the surface being cleaned for extended periods of time.

Cleaners may contain solvents that can become concentrated in the interior. Before using cleaners, read and adhere to all safety instructions on the label. While cleaning the interior, maintain adequate ventilation by opening the doors and windows.

To prevent damage, do not clean the interior using the following cleaners or techniques:

- Never use a razor or any other sharp object to remove a soil from any interior surface.
- Never use a brush with stiff bristles.
- Never rub any surface aggressively or with excessive pressure.
- Do not use laundry detergents or dishwashing soaps with degreasers. For liquid cleaners, use approximately 20 drops per 3.8 L (1 gal) of water. A concentrated soap solution will leave a residue that creates streaks and attracts dirt. Do not use solutions that contain strong or caustic soap.
- Do not heavily saturate the upholstery when cleaning.
- Do not use solvents or cleaners containing solvents.

### Interior Glass

To clean, use a terry cloth fabric dampened with water. Wipe droplets left behind with a clean dry cloth. Commercial glass cleaners may be used, if necessary, after cleaning the interior glass with plain water.

**⚠ Caution**

To prevent scratching, never use abrasive cleaners on automotive glass. Abrasive cleaners or aggressive cleaning may damage the rear window defogger.

Cleaning the windshield with water during the first three to six months of ownership will reduce tendency to fog.

### Speaker Covers

Vacuum around a speaker cover gently, so that the speaker will not be damaged. Clean spots with just water and mild soap.

### Coated Moldings

Coated moldings should be cleaned.

- When lightly soiled, wipe with a sponge or soft lint-free cloth dampened with water.
- When heavily soiled, use warm soapy water.

### Fabric/Carpet/Suede

Start by vacuuming the surface using a soft brush attachment. If a rotating brush attachment is being used during vacuuming, only use it on the floor carpet. Before cleaning, gently remove as much of the soil as possible using one of the following techniques:

- Gently blot liquids with a paper towel. Continue blotting until no more soil can be removed.
- For solid soils, remove as much as possible prior to vacuuming.

To clean:

1. Saturate a clean lint-free colorfast cloth with water. Microfiber cloth is recommended to prevent lint transfer to the fabric or carpet.
2. Remove excess moisture by gently wringing until water does not drip from the cleaning cloth.
3. Start on the outside edge of the soil and gently rub toward the center. Fold the cleaning cloth to a clean area frequently to prevent forcing the soil in to the fabric.
4. Continue gently rubbing the soiled area until there is no longer any color transfer from the soil to the cleaning cloth.
5. If the soil is not completely removed, use a mild soap solution followed only by plain water.

If the soil is not completely removed, it may be necessary to use a commercial upholstery cleaner or spot lifter. Test a small hidden area for colorfastness before using a commercial upholstery cleaner or spot lifter. If ring formation occurs, clean the entire fabric or carpet.

Following the cleaning process, a paper towel can be used to blot excess moisture.

### Cleaning High Gloss Surfaces and Vehicle Information and Radio Displays

For vehicles with high gloss surfaces or vehicle displays, use a microfiber cloth to wipe surfaces. Before wiping the surface with the microfiber cloth, use a soft bristle brush to remove dirt that could scratch the surface. Then use the microfiber cloth by gently rubbing to clean. Never use window cleaners or solvents. Periodically hand wash the microfiber cloth separately, using mild soap. Do not use bleach or fabric softener. Rinse thoroughly and air dry before next use.

**⚠ Caution**

Do not attach a device with a suction cup to the display. This may cause damage and would not be covered by the warranty.

### Instrument Panel, Leather, Vinyl, Other Plastic Surfaces, Low Gloss Paint Surfaces and Natural Open Pore Wood Surfaces

Use a soft microfiber cloth dampened with water to remove dust and loose dirt. For a more thorough cleaning, use a soft microfiber cloth dampened with a mild soap solution.

**⚠ Caution**

Soaking or saturating leather, especially perforated leather, as well as other interior surfaces, may cause permanent damage. Wipe excess moisture from these surfaces after cleaning and allow them to dry naturally. Never use heat, steam, spot lifters, or spot removers. Do not use cleaners that contain silicone or wax-based products. Cleaners containing

(Continued)

**Caution (Continued)**

these solvents can permanently change the appearance and feel of leather or soft trim and are not recommended.

Do not use cleaners that increase gloss, especially on the instrument panel. Reflected glare can decrease visibility through the windshield under certain conditions.

**⚠ Caution**

Use of air fresheners may cause permanent damage to plastics and painted surfaces. If an air freshener comes in contact with any plastic or painted surface in the vehicle, blot immediately and clean with a soft cloth dampened with a mild soap solution. Damage caused by air fresheners would not be covered by the vehicle warranty.

### Cargo Cover and Convenience Net

Wash with warm water and mild detergent. Do not use chlorine bleach. Rinse with cold water, and then dry completely.

### Care of Safety Belts

Keep belts clean and dry.

**⚠ Warning**

Do not bleach or dye safety belts. It may severely weaken them. In a crash, they might not be able to provide adequate protection. Clean safety belts only with mild soap and lukewarm water.

## Floor Mats

**⚠ Warning**

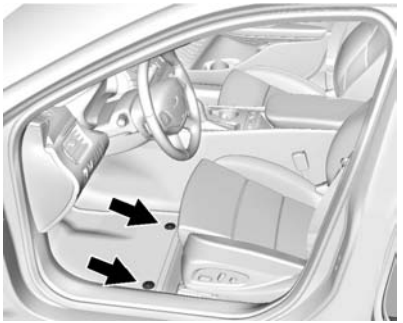
If a floor mat is the wrong size or is not properly installed, it can interfere with the pedals. Interference with the pedals can cause unintended acceleration and/or increased stopping distance which can cause a crash and injury. Make sure the floor mat does not interfere with the pedals.

Use the following guidelines for proper floor mat usage:

- The original equipment floor mats were designed for your vehicle. If the floor mats need replacing, it is recommended that GM certified floor mats be purchased. Non-GM floor mats may not fit properly and may interfere with the pedals. Always check that the floor mats do not interfere with the pedals.
- Use the floor mat with the correct side up. Do not turn it over.
- Do not place anything on top of the driver side floor mat.
- Use only a single floor mat on the driver side.
- Do not place one floor mat on top of another.

### Removing and Replacing the Floor Mats

Pull up on the rear of the floor mat to unlock each retainer and remove.



Reinstall by lining up the floor mat retainer openings over the carpet retainers and snapping into position.

Make sure the floor mat is properly secured in place.

Verify the floor mat does not interfere with the pedals.

# Service and Maintenance

**General Information**
General Information . . . . . 11-1

**Maintenance Schedule**
Maintenance Schedule . . . . . 11-2

**Special Application Services**
Special Application Services . . . . . 11-8

**Additional Maintenance and Care**
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**Recommended Fluids, Lubricants, and Parts**
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Maintenance Records . . . . . 11-15

## General Information

Your vehicle is an important investment. This section describes the required maintenance for the vehicle. Follow this schedule to help protect against major repair expenses resulting from neglect or inadequate maintenance. It may also help to maintain the value of the vehicle if it is sold. It is the responsibility of the owner to have all required maintenance performed.

Your dealer has trained technicians who can perform required maintenance using genuine replacement parts. They have up-to-date tools and equipment for fast and accurate diagnostics. Many dealers have extended evening and Saturday hours, courtesy transportation, and online scheduling to assist with service needs.

Your dealer recognizes the importance of providing competitively priced maintenance and repair services. With trained technicians, the dealer is the place for routine maintenance such as oil changes and tire rotations and additional maintenance items like tires, brakes, batteries, and wiper blades.

**⚠ Caution**

Damage caused by improper maintenance can lead to costly repairs and may not be covered by the vehicle warranty. Maintenance intervals, checks, inspections, recommended fluids, and lubricants are important to keep the vehicle in good working condition.

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 on page 9-10*.
- Are driven on reasonable road surfaces within legal driving limits.
- Use the recommended fuel. See *Recommended Fuel on page 9-56*.

Refer to the information in the Maintenance Schedule Additional Required Services - Normal chart.

The Additional Required Services - Severe are for vehicles that are:

- Mainly driven in heavy city traffic in hot weather.
- Mainly driven in hilly or mountainous terrain.
- Frequently towing a trailer.
- Used for high speed or competitive driving.
- Used for taxi, police, or delivery service.

Refer to the information in the Maintenance Schedule Additional Required Services - Severe chart.

**⚠ Warning**

Performing maintenance work can be dangerous and can cause serious injury. Perform maintenance work only if the required information, proper tools, and equipment are available.
If they are not, see your dealer to have a trained technician do the work. See *Doing Your Own Service Work on page 10-3*.

# Maintenance Schedule

## Owner Checks and Services

### At Each Fuel Stop

- Check the engine oil level. See *Engine Oil on page 10-11*.

### Once a Month

- Check the tire inflation pressures. See *Tire Pressure on page 10-50*.
- Inspect the tires for wear. See *Tire Inspection on page 10-56*.
- Check the windshield washer fluid level. See *Washer Fluid on page 10-24*.

## Engine Oil Change

When the CHANGE ENGINE OIL SOON message displays, have the engine oil and filter changed within the next 1 000 km/600 mi. If driven under the best conditions, the engine oil life system might not indicate the need for vehicle service

for more than a year. The engine oil and filter must be changed at least once a year and the oil life system must be reset. Your trained dealer technician can perform this work. If the engine oil life system is reset accidentally, service the vehicle within 5 000 km/3,000 mi since the last service. Reset the oil life system when the oil is changed. See *Engine Oil Life System on page 10-14*.

### Tire Rotation and Required Services Every 12 000 km/ 7,500 mi

Rotate the tires, if recommended for the vehicle, and perform the following services. See *Tire Rotation on page 10-56*.

- Check engine oil level and oil life percentage. If needed, change engine oil and filter, and reset oil life system. See *Engine Oil on page 10-11* and *Engine Oil Life System on page 10-14*.
- Check engine coolant level. See *Engine Coolant on page 10-19*.
- Check windshield washer fluid level. See *Washer Fluid on page 10-24*.
- Visually inspect windshield wiper blades for wear, cracking, or contamination. See *Exterior Care on page 10-77*. Replace worn or damaged wiper blades. See *Wiper Blade Replacement on page 10-29*.
- Check tire inflation pressures. See *Tire Pressure on page 10-50*.
- Inspect tire wear. See *Tire Inspection on page 10-56*.
- Visually check for fluid leaks.
- Inspect engine air cleaner filter. See *Engine Air Cleaner/Filter on page 10-15*.
- Inspect brake system.
- Visually inspect steering, suspension, and chassis components for damaged, loose, or missing parts or signs of wear. See *Exterior Care on page 10-77*.
- Check restraint system components. See *Safety System Check on page 3-19*.
- Visually inspect fuel system for damage or leaks.
- Visually inspect exhaust system and nearby heat shields for loose or damaged parts.
- Lubricate body components. See *Exterior Care on page 10-77*.
- Check starter switch. See *Starter Switch Check on page 10-28*.
- Check automatic transmission shift lock control function. See *Automatic Transmission Shift Lock Control Function Check on page 10-28*.

- Check ignition transmission lock. See *Ignition Transmission Lock Check on page 10-29*.
- Check parking brake and automatic transmission park mechanism. See *Park Brake and P (Park) Mechanism Check on page 10-29*.
- Check accelerator pedal for damage, high effort, or binding. Replace if needed.
- Visually inspect gas strut for signs of wear, cracks, or other damage. Check the hold open ability of the strut. See your dealer if service is required.
- Inspect sunroof track and seal, if equipped. See *Sunroof on page 2-23*.

| Maintenance Schedule Additional Required Services - Normal | 12000km/7,500mi | 24000km/15,000mi | 36000km/22,500mi | 48000km/30,000mi | 60000km/37,500mi | 72000km/45,000mi | 84000km/52,500mi | 96000km/60,000mi | 108000km/67,500mi | 120000km/75,000mi | 132000km/82,500mi | 144000km/90,000mi | 156000km/97,500mi | 168000km/105,000mi | 180000km/112,500mi | 192000km/120,000mi | 204000km/127,500mi | 216000km/135,000mi | 228000km/142,500mi | 240000km/150,000mi |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Rotate tires and perform Required Services. Check engine oil level and oil life percentage. Change engine oil and filter, if needed. | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Replace passenger compartment air filter. (1) | | | ✓ | | | ✓ | | | ✓ | | | ✓ | | | ✓ | | | ✓ | | |
| Inspect evaporative control system. (2) | | | | | | ✓ | | | | | | ✓ | | | | | | ✓ | | |
| Replace engine air cleaner filter. (3) | | | | | | | | | | | | | | | | ✓ | | | | |
| Replace spark plugs. Inspect spark plug wires. | | | | | | | | | | | | | ✓ | | | | | | | |
| Change automatic transmission fluid. Change filter if serviceable. | | | | | | | | | | | | | ✓ | | | | | | | |
| Drain and fill engine cooling system. (4) | | | | | | | | | | | | | | | | | | | | ✓ |
| Except eAssist: Visually inspect accessory drive belts. (5) | | | | | | | | | | | | | | | | | | | | ✓ |
| eAssist Only: Visually inspect accessory drive belts. (5) | | | | | | | | | | | | | ✓ | | | | | | | |
| Replace brake fluid. (6) | | | | | | | | | | | | | | | | | | | | ✓ |

**Footnotes — Maintenance Schedule Additional Required Services - Normal**

**(1)** Or every two years, whichever comes first. More frequent replacement may be needed if the vehicle is driven in areas with heavy traffic, areas with poor air quality, or areas with high dust levels. Replacement may also be needed if there is a reduction in air flow, excessive window fogging, or odors.

**(2)** Check all fuel and vapor lines and hoses for proper hook-up, routing, and condition.

**(3)** Or every four years, whichever comes first.

If driving in dusty conditions, inspect the air filter at each engine oil change.

**(4)** Or every five years, whichever comes first. See *Cooling System on page 10-18*.

**(5)** Or every 10 years, whichever comes first. Inspect for fraying, excessive cracking, or damage; replace, if needed.

**(6)** Or every 10 years, whichever comes first.

| Maintenance Schedule Additional Required Services - Severe | 12000km/7,500mi | 24000km/15,000mi | 36000km/22,500mi | 48000km/30,000mi | 60000km/37,500mi | 72000km/45,000mi | 84000km/52,500mi | 96000km/60,000mi | 108000km/67,500mi | 120000km/75,000mi | 132000km/82,500mi | 144000km/90,000mi | 156000km/97,500mi | 168000km/105,000mi | 180000km/112,500mi | 192000km/120,000mi | 204000km/127,500mi | 216000km/135,000mi | 228000km/142,500mi | 240000km/150,000mi |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Rotate tires and perform Required Services. Check engine oil level and oil life percentage. Change engine oil and filter, if needed. | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Replace passenger compartment air filter. (1) | | | ✓ | | | ✓ | | | ✓ | | | ✓ | | | ✓ | | | ✓ | | |
| Inspect evaporative control system. (2) | | | | | | ✓ | | | | | | ✓ | | | | | | ✓ | | |
| Replace engine air cleaner filter. (3) | | | | | | | | | | | | | | | | ✓ | | | | |
| Replace spark plugs. Inspect spark plug wires. | | | | | | | | | | | | | ✓ | | | | | | | |
| Change automatic transmission fluid. Change filter if serviceable. | | | | | | ✓ | | | | | | ✓ | | | | | | ✓ | | |
| Drain and fill engine cooling system. (4) | | | | | | | | | | | | | | | | | | | | ✓ |
| Except eAssist: Visually inspect accessory drive belts. (5) | | | | | | | | | | | | | | | | | | | | ✓ |
| eAssist Only: Visually inspect accessory drive belts. (5) | | | | | | | | | | | | | ✓ | | | | | | | |
| Replace brake fluid. (6) | | | | | | | | | | | | | | | | | | | | ✓ |

**Footnotes — Maintenance Schedule Additional Required Services - Severe**

**(1)** Or every two years, whichever comes first. More frequent replacement may be needed if the vehicle is driven in areas with heavy traffic, areas with poor air quality, or areas with high dust levels. Replacement may also be needed if there is a reduction in air flow, excessive window fogging, or odors.

**(2)** Check all fuel and vapor lines and hoses for proper hook-up, routing, and condition.

**(3)** Or every four years, whichever comes first.

If driving in dusty conditions, inspect the air filter at each engine oil change.

**(4)** Or every five years, whichever comes first. See *Cooling System on page 10-18*.

**(5)** Or every 10 years, whichever comes first. Inspect for fraying, excessive cracking, or damage; replace, if needed.

**(6)** Or every 10 years, whichever comes first.

# Special Application Services

- Severe Commercial Use Vehicles Only: Lubricate chassis components every 5 000 km/ 3,000 mi.
- Have underbody flushing service performed. See "Underbody Maintenance" in *Exterior Care on page 10-77*.

# Additional Maintenance and Care

Your vehicle is an important investment and caring for it properly may help to avoid future costly repairs. To maintain vehicle performance, additional maintenance services may be required.

It is recommended that your dealer perform these services — their trained dealer technicians know your vehicle best. Your dealer can also perform a thorough assessment with a multi-point inspection to recommend when your vehicle may need attention.

The following list is intended to explain the services and conditions to look for that may indicate services are required.

**Battery**

The battery supplies power to start the engine and operate any additional electrical accessories.

- To avoid break-down or failure to start the vehicle, maintain a battery with full cranking power.
- Trained dealer technicians have the diagnostic equipment to test the battery and ensure that the connections and cables are corrosion-free.

**Belts**

- Belts may need replacing if they squeak or show signs of cracking or splitting.
- Trained dealer technicians have access to tools and equipment to inspect the belts and recommend adjustment or replacement when necessary.

**Brakes**

Brakes stop the vehicle and are crucial to safe driving.

- Signs of brake wear may include chirping, grinding, or squealing noises, or difficulty stopping.
- Trained dealer technicians have access to tools and equipment to inspect the brakes and recommend quality parts engineered for the vehicle.

**Fluids**

Proper fluid levels and approved fluids protect the vehicle's systems and components. See *Recommended Fluids and Lubricants on page 11-12* for GM approved fluids.

- Engine oil and windshield washer fluid levels should be checked at every fuel fill.
- Instrument cluster lights may come on to indicate that fluids may be low and need to be filled.

### Hoses

Hoses transport fluids and should be regularly inspected to ensure that there are no cracks or leaks. With a multi-point inspection, your dealer can inspect the hoses and advise if replacement is needed.

### Lamps

Properly working headlamps, taillamps, and brake lamps are important to see and be seen on the road.

- Signs that the headlamps need attention include dimming, failure to light, cracking, or damage. The brake lamps need to be checked periodically to ensure that they light when braking.
- With a multi-point inspection, your dealer can check the lamps and note any concerns.

### Shocks and Struts

Shocks and struts help aid in control for a smoother ride.

- Signs of wear may include steering wheel vibration, bounce/sway while braking, longer stopping distance, or uneven tire wear.
- As part of the multi-point inspection, trained dealer technicians can visually inspect the shocks and struts for signs of leaking, blown seals, or damage, and can advise when service is needed.

### Tires

Tires need to be properly inflated, rotated, and balanced. Maintaining the tires can save money and fuel, and can reduce the risk of tire failure.

- Signs that the tires need to be replaced include three or more visible treadwear indicators; cord or fabric showing through the rubber; cracks or cuts in the tread or sidewall; or a bulge or split in the tire.
- Trained dealer technicians can inspect and recommend the right tires. Your dealer can also provide tire/wheel balancing services to ensure smooth vehicle operation at all speeds. Your dealer sells and services name brand tires.

### Vehicle Care

To help keep the vehicle looking like new, vehicle care products are available from your dealer. For information on how to clean and protect the vehicle's interior and exterior, see *Interior Care on page 10-82* and *Exterior Care on page 10-77*.

### Wheel Alignment

Wheel alignment is critical for ensuring that the tires deliver optimal wear and performance.

- Signs that the alignment may need to be adjusted include pulling, improper vehicle handling, or unusual tire wear.
- Your dealer has the required equipment to ensure proper wheel alignment.

### 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.

### 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.

# Recommended Fluids, Lubricants, and Parts

## Recommended Fluids and Lubricants

| Usage | Fluid/Lubricant |
|---|---|
| Engine Oil | Use only engine oil licensed to the dexos1 specification of the proper SAE viscosity grade. ACDelco dexos1 Synthetic Blend is recommended. See *Engine Oil on page 10-11*. |
| Engine Coolant | 50/50 mixture of clean, drinkable water and use only DEX-COOL Coolant. See *Engine Coolant on page 10-19*. |
| Hydraulic Brake System | DOT 3 Hydraulic Brake Fluid (GM Part No. 19299818, in Canada 19299819). |
| Windshield Washer | Automotive windshield washer fluid that meets regional freeze protection requirements. |
| Automatic Transmission | DEXRON®-VI Automatic Transmission Fluid. |
| Key Lock Cylinders | Multi-Purpose Lubricant, Superlube (GM Part No. 12346241, in Canada 10953474). |
| Hood Latch Assembly, Secondary Latch, Pivots, Spring Anchor, and Release Pawl | Lubriplate Lubricant Aerosol (GM Part No. 89021668, in Canada 89021674) or lubricant meeting requirements of NLGI #2 Category LB or GC-LB. |
| Hood and Door Hinges | Multi-Purpose Lubricant, Superlube (GM Part No. 12346241, in Canada 10953474). |
| Weatherstrip Conditioning | Weatherstrip Lubricant (GM Part No. 3634770, in Canada 10953518) or Dielectric Silicone Grease (GM Part No. 12345579, in Canada 10953481). |

## Maintenance Replacement Parts

Replacement parts identified below by name, part number, or specification can be obtained from your dealer.

| Part | GM Part Number | ACDelco Part Number |
|---|---|---|
| Engine Air Cleaner/Filter | | |
| 2.4L L4 Engine | 55560894 | A3128C |
| 2.5L L4 Engine | 20972654 | A3174C |
| 3.6L V6 Engine | 22753242 | A3176C |
| Engine Oil Filter | | |
| 2.4L L4 Engine | 12605566 | PF457G |
| 2.5L L4 Engine | 12640445 | PF64 |
| 3.6L V6 Engine | 89017525 | PF63 |
| Passenger Compartment Air Filter | | |
| CJ2 | 13356914 | CF184 |
| C67 | 13356916 | CF185 |
| Spark Plugs | | |
| 2.4L L4 Engine | 12620540 | 41-108 |
| 2.5L L4 Engine | 12627160 | 41-115 |
| 3.6L V6 Engine | 12622561 | 41-109 |

| Part | GM Part Number | ACDelco Part Number |
|---|---|---|
| Wiper Blades | | |
| Driver Side – 60 cm (23.6 in) | 92231676 | — |
| Passenger Side – 47.5 cm (18.7 in) | 22846938 | — |

## Maintenance Records

After the scheduled services are performed, record the date, odometer reading, who performed the service, and the type of services performed in the boxes provided. Retain all maintenance receipts.

| Date | Odometer Reading | Serviced By | Services Performed |
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# Technical Data

**Vehicle Identification**
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**Vehicle Data**
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# Vehicle Identification

## Vehicle Identification Number (VIN)

This legal identifier is in the front corner of the instrument panel, on the left side of the vehicle. It can be seen through the windshield from outside. The VIN also appears on the Vehicle Certification and Service Parts labels and certificates of title and registration.

### Engine Identification

The eighth character in the VIN is the engine code. This code identifies the vehicle's engine, specifications, and replacement parts. See “Engine Specifications” under *Capacities and Specifications on page 12-2* for the vehicle's engine code.

## Service Parts Identification Label

This label, in either the glove box or the trunk area, has the following information:

- Vehicle Identification Number (VIN).
- Model designation.
- Paint information.
- Production options and special equipment.

Do not remove this label from the vehicle.

# Vehicle Data

## Capacities and Specifications

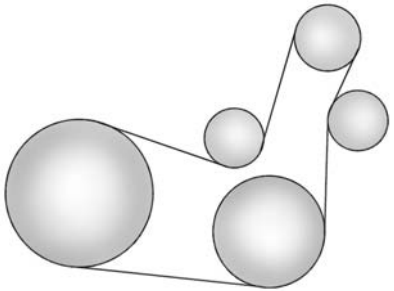
| Application | Capacities | |
|---|---|---|
| | Metric | English |
| Air Conditioning Refrigerant | For the air conditioning system refrigerant type and charge amount, see the refrigerant label under the hood. See your dealer for more information. | |
| Engine Cooling System | | |
| 2.4L L4 Engine | 9.6 L | 10.1 qt |
| 2.5L L4 Engine | 7.4 L | 7.8 qt |
| 3.6L V6 Engine | 9.4 L | 9.9 qt |
| Engine Oil with Filter | | |
| 2.4L L4 Engine | 4.7 L | 5.0 qt |
| 2.5L L4 Engine | 4.7 L | 5.0 qt |
| 3.6L V6 Engine | 5.7 L | 6.0 qt |

| Application | Capacities | |
|---|---|---|
| | Metric | English |
| Fuel Tank | | |
| 2.4L L4 Engine | 60.0 L | 15.8 gal |
| 2.5L L4 Engine | 70.0 L | 18.5 gal |
| 3.6L V6 Engine | 70.0 L | 18.5 gal |
| Wheel Nut Torque | 150 N•m | 110 lb ft |
| All capacities are approximate. When adding, be sure to fill to the approximate level, as recommended in this manual. Recheck fluid level after filling. | | |

## Engine Specifications

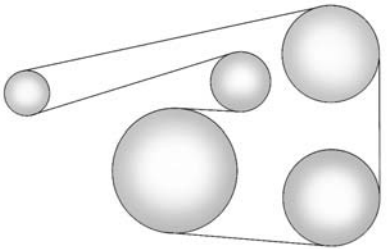
| Engine | VIN Code | Transmission | Spark Plug Gap |
|---|---|---|---|
| 2.4L L4 Engine | R | Automatic | 0.75–0.90 mm (0.030–0.035 in) |
| 2.5L L4 Engine | L | Automatic | 0.09–1.10 mm (0.037–0.043 in) |
| 3.6L V6 Engine | 3 | Automatic | 0.09–1.10 mm (0.037–0.043 in) |

## Engine Drive Belt Routing

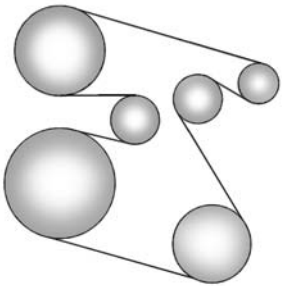


**2.4L L4 Engine**

Belt removal and installation requires special tools. See your dealer for service.



**2.5L L4 Engine**



**3.6L V6 Engine**

# Customer Information

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# Customer Information

## Customer Satisfaction Procedure

Your satisfaction and goodwill are important to your dealer and to Chevrolet. Normally, any concerns with the sales transaction or the operation of the vehicle will be resolved by your dealer's sales or service departments. Sometimes, however, despite the best intentions of all concerned, misunderstandings can occur. If your concern has not been resolved to your satisfaction, the following steps should be taken:

**STEP ONE:** Discuss your concern with a member of dealership management. Normally, concerns can be quickly resolved at that level. If the matter has already been reviewed with the sales, service, or parts manager, contact the owner of your dealership or the general manager.

**STEP TWO:** If after contacting a member of dealership management, it appears your concern cannot be resolved by your dealership without further help, in the U.S., call the Chevrolet Customer Assistance Center at 1-800–222–1020. In Canada, call General Motors of Canada Customer Care Centre at 1-800-263-3777 (English), or 1-800-263-7854 (French).

We encourage you to call the toll-free number in order to give your inquiry prompt attention. Have the following information available to give the Customer Assistance representative:

- Vehicle Identification Number (VIN). This is available from the vehicle registration or title, or the plate at the top left of the instrument panel and visible through the windshield.
- Dealership name and location.
- Vehicle delivery date and present mileage.

When contacting Chevrolet, remember that your concern will likely be resolved at a dealer's facility. That is why we suggest following Step One first.

**STEP THREE — U.S. Owners:** Both General Motors and your dealer are committed to making sure you are completely satisfied with the new vehicle. However, if you continue to remain unsatisfied after following the procedure outlined in Steps One and Two, you can file with the Better Business Bureau (BBB) Auto Line® Program to enforce your rights.

The BBB Auto Line Program is an out-of-court program administered by the Council of Better Business Bureaus to settle automotive disputes regarding vehicle repairs or the interpretation of the New Vehicle Limited Warranty. Although you may be required to resort to this informal dispute resolution program prior to filing a court action, use of the program is free of charge and your case will generally be heard within 40 days. If you do not agree with the decision given in your case, you may reject it and proceed with any other venue for relief available to you.

You may contact the BBB Auto Line Program using the toll-free telephone number or write them at the following address:

BBB Auto Line Program
Council of Better Business Bureaus, Inc.
4200 Wilson Boulevard
Suite 800
Arlington, VA 22203-1838

Telephone: 1-800-955-5100
www.dr.bbb.org/goauto

This program is available in all 50 states and the District of Columbia. Eligibility is limited by vehicle age, mileage, and other factors. General Motors reserves the right to change eligibility limitations and/or discontinue its participation in this program.

**STEP THREE — Canadian Owners:** In the event that you do not feel your concerns have been addressed after following the procedure outlined in Steps One and Two, General Motors of Canada Limited wants you to be aware of its participation in a no-charge Mediation/Arbitration Program. General Motors of Canada Limited has committed to binding arbitration of owner disputes involving factory-related vehicle service claims. The program provides for the review of the facts involved by an impartial third party arbiter, and may include an informal hearing before the arbiter. The program is designed so that the entire dispute settlement process, from the time you file your complaint to the final decision, should be completed in about 70 days. We believe our impartial program offers advantages over courts in most jurisdictions because it is informal, quick, and free of charge.

For further information concerning eligibility in the Canadian Motor Vehicle Arbitration Plan (CAMVAP), call toll-free 1-800-207-0685, or call the General Motors Customer Care Centre, 1-800-263-3777 (English), 1-800-263-7854 (French), or write to:

The Mediation/Arbitration Program
c/o Customer Care Centre
General Motors of Canada Limited
Mail Code: CA1-163-005
1908 Colonel Sam Drive
Oshawa, Ontario L1H 8P7

The inquiry should be accompanied by the Vehicle Identification Number (VIN).

## Customer Assistance Offices

Chevrolet encourages customers to call the toll-free number for assistance. However, if a customer wishes to write or e-mail Chevrolet, the letter should be addressed to:

### United States and Puerto Rico

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

1-800-222-1020
1-800-833-2438 (For Text Telephone Devices (TTYs))
Roadside Assistance:
1-800-243-8872

From U.S. Virgin Islands:

1-800-496-9994

### Canada

General Motors of Canada Limited
Customer Care Centre, Mail Code: CA1-163-005
1908 Colonel Sam Drive
Oshawa, Ontario L1H 8P7
www.gm.ca

1-800-263-3777 (English)
1-800-263-7854 (French)
1-800-263-3830 (For Text Telephone devices (TTYs))
Roadside Assistance:
1-800-268-6800

### Overseas

Please contact the local General Motors Business Unit.

## Customer Assistance for Text Telephone (TTY) Users

To assist customers who are deaf, hard of hearing, or speech-impaired and who use Text Telephones (TTYs), Chevrolet has TTY equipment available at its Customer Assistance Center. Any TTY user in the U.S. can communicate with Chevrolet by dialing: 1-800-833-2438. TTY users in Canada can dial 1-800-263-3830.

## Online Owner Center

### Online Owner Experience (U.S.) my.chevrolet.com

The Chevrolet online owner experience is a one-stop resource that allows interaction with Chevrolet and keeps important vehicle-specific information in one place.

#### Membership Benefits

**(Vehicle Information):** Download owner manuals and view vehicle-specific how-to videos.

**(Maintenance Information):** View maintenance schedules, required alerts, OnStar onboard vehicle diagnostic information, and schedule service appointments.

**(Service History):** View printable dealer-recorded service records and self-recorded service records.

**(Preferred Dealer Information):** Select a preferred dealer and view dealer location, maps, phone numbers, and hours.

**(Warranty Tracking Information):** Track the vehicle's warranty information.

**(Recall Information):** View active recalls or search by Vehicle Identification Number (VIN). See *Vehicle Identification Number (VIN) on page 12-1*.

**(Other Account Information):** View GM Card, SiriusXM Satellite radio, and OnStar account information.

**(Live Chat Support):** Chat live with online help representatives.

Visit my.chevrolet.com to register your vehicle.

### Chevrolet Owner Centre (Canada) chevroletowner.ca

Take a trip to the Chevrolet Owner Centre:

- Chat live with online help representatives.
- Use the Vehicle Tools section.
- Access third party enthusiast sites and social media networks.
- Locate owner resources such as lease-end, financing, and warranty information.
- Retrieve your favorite articles, quizzes, tips, and multimedia galleries organized into the Features and Auto Care Sections.
- Download the owner manual for your vehicle, quickly and easily.
- Find the Chevrolet-recommended maintenance services for your vehicle.

## GM Mobility Reimbursement Program

This program is available to qualified applicants for cost reimbursement of eligible aftermarket adaptive equipment required for the vehicle, such as hand controls or a wheelchair/scooter lift for the vehicle.

For more information on the limited offer, visit www.gmmobility.com or call the GM Mobility Assistance Center at 1-800-323-9935. Text Telephone (TTY) users, call 1-800-833-9935.

General Motors of Canada also has a Mobility Program. Visit www.gm.ca or call 1-800-GM-DRIVE (463-7483) for details. TTY users call 1-800-263-3830.

## Roadside Assistance Program

For U.S.-purchased vehicles, call 1-800-243-8872; (Text Telephone (TTY): 1-888-889-2438).

For Canadian-purchased vehicles, call 1-800-268-6800.

Service is available 24 hours a day, 365 days a year.

### Calling for Assistance

When calling Roadside Assistance, have the following information ready:

- Your name, home address, and home telephone number.
- Telephone number of your location.
- Location of the vehicle.

- Model, year, color, and license plate number of the vehicle.
- Odometer reading, Vehicle Identification Number (VIN), and delivery date of the vehicle.
- Description of the problem.

## Coverage

Services are provided up to 5 years/ 160 000 km (100,000 mi), whichever comes first.

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. Chevrolet and General Motors of Canada Limited reserve the right to make any changes or discontinue the Roadside Assistance program at any time without notification.

Chevrolet and General Motors of Canada Limited reserve the right to limit services or payment to an owner or driver if they decide the claims are made too often, or the same type of claim is made many times.

## Services Provided

- **Emergency Fuel Delivery:** Delivery of enough fuel for the vehicle to get to the nearest service station.
- **Lock-Out Service:** Service to unlock the vehicle if you are locked out. A remote unlock may be available if you have OnStar. For security reasons, the driver must present identification before this service is given.
- **Emergency Tow from a Public Road or Highway:** Tow to the nearest Chevrolet dealer for warranty service, or if the vehicle was in a crash and cannot be driven. Assistance is also given when the vehicle is stuck in the sand, mud, or snow.
- **Flat Tire Change:** Service to change a flat tire with the spare tire. The spare tire, if equipped, must be in good condition and properly inflated. It is the owner's responsibility for the repair or replacement of the tire if it is not covered by the warranty.
- **Battery Jump Start:** Service to jump start a dead battery.

## Services Not Included in Roadside Assistance

- Impound towing caused by violation of any laws.
- Legal fines.
- Mounting, dismounting, or changing of snow tires, chains, or other traction devices.
- Towing or services for vehicles driven on a non-public road or highway.

### Services Specific to Canadian-Purchased Vehicles

- **Fuel Delivery:** Reimbursement is approximately $5 Canadian. Diesel fuel delivery may be restricted. Propane and other fuels are not provided through this service.
- **Lock-Out Service:** Vehicle registration is required.
- **Trip Interruption Benefits and Assistance:** Must be over 250 kilometers from where your trip was started to qualify. General Motors of Canada Limited requires pre-authorization, original detailed receipts, and a copy of the repair orders. 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 responsibility.

## Scheduling Service Appointments

When the vehicle requires warranty service, contact your dealer and request an appointment. By scheduling a service appointment and advising the service consultant of your transportation needs, your dealer can help minimize your inconvenience.

If the vehicle cannot be scheduled into the service department immediately, keep driving it until it can be scheduled for service, unless, of course, the problem is safety related. If it is, please call your dealership, let them know this, and ask for instructions.

If your dealer requests you to bring the vehicle for service, you are urged to do so as early in the work day as possible to allow for same-day repair.

## Courtesy Transportation Program

To enhance your ownership experience, we and our participating dealers are proud to offer Courtesy Transportation, a customer support program for vehicles with the Bumper-to-Bumper (Base Warranty Coverage period in Canada), extended powertrain, and/or hybrid-specific warranties in both the U.S. and Canada.

Several Courtesy Transportation options are available to assist in reducing inconvenience when warranty repairs are required.

Courtesy Transportation is not a part of the New Vehicle Limited Warranty. A separate booklet entitled “Limited Warranty and Owner Assistance Information” furnished with each new vehicle provides detailed warranty coverage information.

## Transportation Options

Warranty service can generally be completed while you wait. However, if you are unable to wait, GM helps to minimize inconvenience by providing several transportation options. Depending on the circumstances, your dealer can offer one of the following:

### Shuttle Service

Shuttle service is the preferred means of offering Courtesy Transportation. Dealers may provide shuttle service to get you to your destination with minimal interruption of your daily schedule. This includes one-way or round-trip shuttle service within reasonable time and distance parameters of your dealer's area.

### Public Transportation or Fuel Reimbursement

If the vehicle requires overnight warranty repairs, and public transportation is used instead of your dealer's shuttle service, the expense must be supported by original receipts and can only be up to the maximum amount allowed by GM for shuttle service. In addition, for U.S. customers, should you arrange transportation through a friend or relative, limited reimbursement for reasonable fuel expenses may be available. Claim amounts should reflect actual costs and be supported by original receipts. See your dealer for information regarding the allowance amounts for reimbursement of fuel or other transportation costs.

### Courtesy Rental Vehicle

Your dealer may arrange to provide you with a courtesy rental vehicle or reimburse you for a rental vehicle that you obtain if the vehicle is kept for an overnight warranty repair. Rental reimbursement will be limited and must be supported by original receipts. This requires that you sign and complete a rental agreement and meet state/provincial, local, and rental vehicle provider requirements. Requirements vary and may include minimum age requirements, insurance coverage, credit card, etc. You are responsible for fuel usage charges and may also be responsible for taxes, levies, usage fees, excessive mileage, or rental usage beyond the completion of the repair.

It may not be possible to provide a like vehicle as a courtesy rental.

### Additional Program Information

All program options, such as shuttle service, may not be available at every dealer. Please contact your dealer for specific information about availability. All Courtesy Transportation arrangements will be administered by appropriate dealer personnel.

*General Motors reserves the right to unilaterally modify, change, or discontinue Courtesy Transportation at any time and to resolve all questions of claim eligibility pursuant to the terms and conditions described herein at its sole discretion.*

## Collision Damage Repair

If the vehicle is involved in a collision and it is damaged, have the damage repaired by a qualified technician using the proper equipment and quality replacement parts. Poorly performed collision repairs diminish the vehicle resale value, and safety performance can be compromised in subsequent collisions.

### Collision Parts

Genuine GM Collision parts are new parts made with the same materials and construction methods as the parts with which the vehicle was originally built. Genuine GM Collision parts are the best choice to ensure that the vehicle's designed appearance, durability, and safety are preserved. The use of Genuine GM parts can help maintain the GM New Vehicle Limited Warranty.

Recycled original equipment parts may also be used for repair. These parts are typically removed from vehicles that were total losses in prior crashes. In most cases, the parts being recycled are from undamaged sections of the vehicle. A recycled original equipment GM part may be an acceptable choice to maintain the vehicle's originally designed appearance and safety performance; however, the history of these parts is not known. Such parts are not covered by the GM New Vehicle Limited Warranty, and any related failures are not covered by that warranty.

Aftermarket collision parts are also available. These are made by companies other than GM and may not have been tested for the vehicle. As a result, these parts may fit poorly, exhibit premature durability/corrosion problems, and may not perform properly in subsequent collisions. Aftermarket parts are not covered by the GM New Vehicle Limited Warranty, and any vehicle failure related to such parts is not covered by that warranty.

### Repair Facility

GM also recommends that you choose a collision repair facility that meets your needs before you ever need collision repairs. Your dealer may have a collision repair center with GM-trained technicians and state-of-the-art equipment, or be able to recommend a collision repair

center that has GM-trained technicians and comparable equipment.

## Insuring the Vehicle

Protect your investment in the GM vehicle with comprehensive and collision insurance coverage. There are significant differences in the quality of coverage afforded by various insurance policy terms. Many insurance policies provide reduced protection to the GM vehicle by limiting compensation for damage repairs by using aftermarket collision parts. Some insurance companies will not specify aftermarket collision parts. When purchasing insurance, we recommend that you ensure that the vehicle will be repaired with GM original equipment collision parts. If such insurance coverage is not available from your current insurance carrier, consider switching to another insurance carrier.

If the vehicle is leased, the leasing company may require you to have insurance that ensures repairs with Genuine GM Original Equipment Manufacturer (OEM) parts or Genuine Manufacturer replacement parts. Read the lease carefully, as you may be charged at the end of the lease for poor quality repairs.

## If a Crash Occurs

If there has been an injury, call emergency services for help. Do not leave the scene of a crash until all matters have been taken care of. Move the vehicle only if its position puts you in danger, or you are instructed to move it by a police officer.

Give only the necessary information to police and other parties involved in the crash.

For emergency towing see *Roadside Assistance Program on page 13-5*.

Gather the following information:

- Driver name, address, and telephone number.
- Driver license number.
- Owner name, address, and telephone number.
- Vehicle license plate number.
- Vehicle make, model, and model year.
- Vehicle Identification Number (VIN).
- Insurance company and policy number.
- General description of the damage to the other vehicle.

Choose a reputable repair facility that uses quality replacement parts. See “Collision Parts” earlier in this section.

If the airbag has inflated, see *What Will You See after an Airbag Inflates? on page 3-26*.

### Managing the Vehicle Damage Repair Process

In the event that the vehicle requires damage repairs, GM recommends that you take an active role in its repair. If you have a pre-determined repair facility of choice, take the vehicle there, or have it towed there. Specify to the facility that any required replacement collision parts be original equipment parts, either new Genuine GM parts or recycled original GM parts. Remember, recycled parts will not be covered by the GM vehicle warranty.

Insurance pays the bill for the repair, but you must live with the repair. Depending on your policy limits, your insurance company may initially value the repair using aftermarket parts. Discuss this with the repair professional, and insist on Genuine GM parts. Remember, if the vehicle is leased, you may be obligated to have the vehicle repaired with Genuine GM parts, even if your insurance coverage does not pay the full cost.

If another party's insurance company is paying for the repairs, you are not obligated to accept a repair valuation based on that insurance company's collision policy repair limits, as you have no contractual limits with that company. In such cases, you can have control of the repair and parts choices as long as the cost stays within reasonable limits.

## Service Publications Ordering Information

### Service Manuals

Service Manuals have the diagnosis and repair information on the engines, transmission, axle, suspension, brakes, electrical, steering, body, etc.

### Service Bulletins

Service Bulletins give additional technical service information needed to knowledgeably service General Motors cars and trucks.

Each bulletin contains instructions to assist in the diagnosis and service of the vehicle.

### Owner Information

Owner publications are written specifically for owners and intended to provide basic operational information about the vehicle. The Owner Manual includes the Maintenance Schedule for all models.

In-Portfolio: Includes a Portfolio, Owner Manual, and Warranty Manual.

RETAIL SELL PRICE:
$35.00 (U.S.) plus handling and shipping fees.

Without Portfolio: Owner Manual only.

RETAIL SELL PRICE:
$25.00 (U.S.) plus handling and shipping fees.

### Current and Past Models

Technical Service Bulletins and Manuals are available for current and past model GM vehicles.

ORDER TOLL FREE:
1-800-551-4123 Monday – Friday
8:00 AM – 6:00 PM Eastern Time

For Credit Card Orders Only (VISA-MasterCard-Discover), see Helm, Inc. at: www.helminc.com.

Or write to:

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

Prices are subject to change without notice and without incurring obligation. Allow ample time for delivery.

All listed prices are quoted in U.S. funds. Make checks payable in U.S. funds.

# 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: 1-800-424-9153); go to *http://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 *http://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 Limited. Call Transport Canada at 1-800-333-0510 or write to:

Transport Canada
Road Safety Branch
80 rue Noel
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.

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:

General Motors of Canada Limited
Customer Care Centre, Mail Code: CA1-163-005
1908 Colonel Sam Drive
Oshawa, Ontario L1H 8P7

# 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. 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. 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.

## 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 this 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 required by law. Data that GM collects or receives may also be used for GM research needs or may be made available to others for research purposes, where a need is shown and the data is not tied to a specific vehicle or vehicle owner.

## OnStar®

If the vehicle is equipped with OnStar® and has an active subscription, additional data may be collected through the OnStar system. This includes information about the vehicle's operation; about collisions involving the vehicle; the use of the vehicle and its features; and, in certain situations, the location and approximate GPS

speed of the vehicle. Refer to the OnStar Terms and Conditions and Privacy Statement on the OnStar website.

## Infotainment System

If the vehicle is equipped with a navigation system as part of the infotainment system, use of the system may result in the storage of destinations, addresses, telephone numbers, and other trip information. See the infotainment manual for information on stored data and for deletion instructions.

## Radio Frequency Identification (RFID)

RFID technology is used in some vehicles for functions such as tire pressure monitoring and ignition system security, as well as in connection with conveniences such as Remote Keyless Entry (RKE) transmitters for remote door locking/unlocking and starting, and in-vehicle transmitters for garage door openers. RFID technology in GM vehicles does not use or record personal information or link with any other GM system containing personal information.

## Radio Frequency Statement

This vehicle has systems that operate on a radio frequency that comply with Part 15 of the Federal Communications Commission (FCC) rules and with Industry Canada Standards RSS-GEN/210/220/310.

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.

## ✍ NOTES

# OnStar

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**OnStar Additional Information**
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## OnStar Overview

If equipped, this vehicle has a comprehensive, in-vehicle system that can connect to a live Advisor for Emergency, Security, Navigation, Connection, and Diagnostic Services.

The OnStar system status light is next to the OnStar buttons. If the status light is:

- Solid Green: System is ready.
- Flashing Green: On a call.
- Red: Indicates a problem.

Press On or call 1-888-4-ONSTAR (1-888-466-7827) to speak to an Advisor.

Press to:

- Make a call, end a call, or answer an incoming call.
- Give OnStar Hands-Free Calling voice commands.
- Give OnStar Turn-by-Turn Navigation voice commands. Requires the available Directions and Connections service plan.

Press On to connect to a live Advisor to:

- Verify account information or update contact information.
- Get driving directions. Requires the available Directions and Connections service plan.
- Receive On-Demand Diagnostics for a check of the vehicle's key operating systems.
- Receive Roadside Assistance.

Press the OnStar Emergency button SOS to get a priority connection to an Emergency Advisor available 24/7 to:

- Get help for an emergency.
- Be a Good Samaritan or respond to an AMBER Alert.
- Get assistance in severe weather or other crisis and evacuation routes.

# OnStar Services

## Emergency

With Automatic Crash Response, the built-in system can automatically connect to help in most crashes, even if help cannot be requested.

Press SOS to connect to an Emergency Advisor. GPS technology is used to identify the vehicle location and can provide critical information to emergency personnel. The Advisor is also trained to offer critical assistance in emergency situations.

## Security

OnStar provides services like Stolen Vehicle Assistance, Remote Ignition Block, and Roadside Assistance, if equipped. OnStar can unlock the vehicle doors remotely, if equipped with automatic door locks, and can help police locate the vehicle if it is stolen.

## Navigation

OnStar navigation requires the Directions and Connections service plan.

Press On to receive directions or have them sent to the vehicle navigation screen, if equipped. Destinations can also be forwarded to the vehicle from MapQuest.com. The OnStar mapping database is continuously updated. For coverage maps, see www.onstar.com (U.S.) or www.onstar.ca (Canada).

### Turn-by-Turn Navigation

1. Press On to connect to a live Advisor.
2. Request directions.
3. Directions are downloaded to the vehicle.
4. Follow the voice-guided commands.

### Using Voice Commands During a Planned Route

#### Cancel Route

1. Press . System responds: “OnStar ready,” then a tone. Say “Cancel route.” System responds: “Do you want to cancel directions?”
2. Say “Yes.” System responds: “OK, request completed, thank you, goodbye.”

#### Route Preview

1. Press . System responds: “OnStar ready,” then a tone.
2. Say “Route preview.” System responds with the next three maneuvers.

#### Repeat

1. Press . System responds: “OnStar ready,” then a tone.
2. Say “Repeat.” System responds with the last direction given, then responds with “OnStar ready,” then a tone.

#### Get My Destination

1. Press . System responds: “OnStar ready,” then a tone.
2. Say “Get my destination.” System responds with address and the distance to the destination, then responds with “OnStar ready,” then a tone.

### Other Navigation Services Available from OnStar

**OnStar eNav:** Allows subscribers to send destinations from MapQuest.com to their Turn-by-Turn Navigation or screen-based navigation system. When ready, the directions will be downloaded to the vehicle.

**Destination Download:** Press , then request the Advisor to download directions to the navigation system in the vehicle.

After the call ends, press the “Go” button on the navigation screen to begin driving directions.

If directions are downloaded to the navigation system, the route can only be canceled through the navigation system.

Destinations can also be downloaded on the go. For information about eNav, Destination Download, and coverage maps see www.onstar.com (U.S.) or www.onstar.ca (Canada).

## Connections

OnStar Hands-Free Calling allows calls to be made and received from the vehicle. The vehicle can also be controlled through the OnStar RemoteLink® mobile app. For coverage maps, see www.onstar.com (U.S.) or www.onstar.ca (Canada).

### OnStar Mobile App

Download the OnStar RemoteLink mobile app to select Apple®, Android™, and BlackBerry® devices to check vehicle fuel level, oil life, or tire pressure; to start the vehicle (if equipped) or unlock it; or to connect to an OnStar Advisor. For OnStar RemoteLink information and compatibility, see www.onstar.com (U.S.) or www.onstar.ca (Canada).

## Hands-Free Calling

1. Press . System responds: “OnStar ready.”
2. Say “Call.” System responds: “Please say the name or number to call.”
3. Say the entire number without pausing, including a “1” and the area code. System responds: “OK calling.”

## Calling 911 Emergency

1. Press . System responds: “OnStar Ready,” followed by a tone.
2. Say “Call.” System responds: “Please say the name or number to call.”
3. Say “911” without pausing. System responds: “911.”
4. Say “Call.” System responds: “OK, dialing 911.”

## Retrieve My Number

1. Press . System responds: “OnStar ready.”
2. Say “My number.” System responds: “Your OnStar Hands-Free Calling number is,” then says the number.

## End a Call

Press . System responds: “Call ended.”

## Store a Name Tag for Speed Dialing

1. Press . System responds: “OnStar ready.”
2. Say “Store.” System responds: “Please say the number you would like to store.”
3. Say the entire number without pausing. System responds: “Please say the name tag.”
4. Pick a name tag. System responds: “About to store <name tag>. Does that sound OK?”
5. Say “Yes” or say “No” to try again. System responds: “OK, storing <name tag>.”

## Place a Call Using a Stored Number

1. Press . System responds: “OnStar ready.”
2. Say “Call <name tag>.” System responds: “OK, calling <name tag>.”

### Verify Minutes and Expiration

Press and say “Minutes” then “Verify” to check how many minutes remain and their expiration date.

## Diagnostics

OnStar Vehicle Diagnostics will perform a vehicle check every month. It will check the engine, transmission, antilock brakes, and major vehicle systems. It also checks the tire pressures, if the vehicle is equipped with the Tire Pressure Monitoring System. If an On-Demand Diagnostics check is needed between e-mails, press , and an Advisor can run a check.

# OnStar Additional Information

### Transferring Service

Press to request account transfer eligibility information. The Advisor can assist in canceling or removing account information. If OnStar receives information that vehicle ownership has changed, OnStar may send a voice message to the vehicle, requesting updated account information.

### Reactivation for Subsequent Owners

Press and follow the prompts to speak to an Advisor as soon as possible after acquiring the vehicle. The Advisor will update vehicle records and will explain the OnStar service offers and options available.

### How OnStar Service Works

Automatic Crash Response, Emergency Services, Crisis Assist, Stolen Vehicle Assistance, Vehicle Diagnostics, Remote Door Unlock, Roadside Assistance, Turn-by-Turn Navigation, and Hands-Free Calling are available on most vehicles. Not all OnStar services are available everywhere or on all vehicles. For more information, a full description of OnStar services, system limitations, and OnStar terms and conditions:

- Call 888-4-ONSTAR (888-466-7827).
- See www.onstar.com (U.S.).
- See www.onstar.ca (Canada).
- Call TTY 1-877-248-2080.
- Press to speak with an Advisor.

OnStar services require a vehicle electrical system, wireless service, and GPS satellite technologies to be available and operating for features

to function properly. These systems may not operate if the battery is discharged or disconnected.

OnStar service cannot work unless your vehicle is in a place where OnStar has an agreement with a wireless service provider for service in that area, and the wireless service provider has coverage, network capacity, reception, and technology compatible with OnStar service. Service involving location information about the vehicle cannot work unless GPS signals are available, unobstructed, and compatible with the OnStar hardware. OnStar service may not work if the OnStar equipment is not properly installed or it has not been properly maintained. If equipment or software is added, connected, or modified, OnStar service may not work. Other problems beyond the control of OnStar may prevent service such as hills, tall buildings, tunnels, weather, electrical system design and architecture of the vehicle, damage to the vehicle in a crash, or wireless phone network congestion or jamming.

See *Radio Frequency Statement on page 13-15*.

## Services for People with Disabilities

Advisors provide services to help subscribers with physical disabilities and medical conditions.

Press On for help with:

- Locating a gas station with an attendant to pump gas.
- Finding a hotel, restaurant, etc., that meets accessibility needs.
- Providing directions to the closest hospital or pharmacy in urgent situations.

## TTY Users

OnStar has the ability to communicate to the deaf, hard-of-hearing, or speech-impaired customers while in the vehicle. The available dealer-installed TTY system can provide in-vehicle access to all of the OnStar services, except Virtual Advisor and OnStar Turn-by-Turn Navigation.

## OnStar.com (U.S.) or OnStar.ca (Canada)

The website provides access to account information, allows management of the OnStar subscription, and viewing of videos of each service. Get subscription plan pricing and sign up for OnStar Vehicle Diagnostics. Click on the “My Account” tab on the home page. The website navigation and services provided may vary by country.

## OnStar Personal Identification Number (PIN)

A PIN is needed to access some of the OnStar services, like Remote Door Unlock and Stolen Vehicle Assistance. You will be prompted to change the PIN the first time when speaking with an Advisor. To

change the OnStar PIN, call OnStar and provide the Advisor with the current number.

### Warranty

OnStar equipment may be warranted as part of the New Vehicle Limited Warranty. The manufacturer of the vehicle furnishes detailed warranty information.

### Languages

The vehicle can be programmed to respond in multiple languages. Press and ask an Advisor. Advisors are available in English, Spanish and French. Available languages may vary by country.

### Potential Issues

OnStar cannot perform Remote Door Unlock or Stolen Vehicle Assistance after the vehicle has been off continuously for five days. After five days, OnStar can contact Roadside Assistance and a locksmith to help gain access to the vehicle.

### Global Positioning System (GPS)

- Obstruction of the GPS can occur in a large city with tall buildings; in parking garages; around airports; in tunnels, underpasses, or parking garages; or in an area with very dense trees. If GPS signals are not available, the OnStar system should still operate to call OnStar. However, OnStar could have difficulty identifying the exact location.
- In emergency situations, OnStar can use the last stored GPS location to send to emergency responders.
- A temporary loss of GPS can cause loss of the ability to send a Turn-by-Turn Navigation route. The Advisor may give a verbal route or may ask for a call back after the vehicle is driven into an open area.

### Cellular and GPS Antennas

Avoid placing items over or near the antenna to prevent blocking cellular and GPS signal reception. Cellular reception is required for OnStar to send remote signals to the vehicle.

### Unable to Connect to OnStar Message

If there is limited cellular coverage or the cellular network has reached maximum capacity, this message may come on. Press to try the call again or try again after driving a few miles into another cellular area.

### Vehicle and Power Issues

OnStar services require a vehicle electrical system, wireless service, and GPS satellite technologies to be available and operating for features to function properly. These systems may not operate if the battery is discharged or disconnected.

## Add-on Electrical Equipment

The OnStar system is integrated into the electrical architecture of the vehicle. Do not add any electrical equipment. See *Add-On Electrical Equipment on page 9-66*. Added electrical equipment may interfere with the operation of the OnStar system and cause it to not operate.

## Privacy

The complete OnStar Privacy Statement may be found at www.onstar.com (U.S.), or www.onstar.ca (Canada). Privacy-sensitive users of wireless communications are cautioned that the privacy of any information sent via wireless cellular communications cannot be assured. Third parties may unlawfully intercept or access transmissions and private communications without consent.

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