

2011 Saab 9-4X Owner Manual

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Saab Automobile, Saab Cars North America, SAAB, Saab 9-4X, and the Saab Emblem are registered trademarks of Saab Automobile, AB.

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.

Keep this manual in the vehicle for quick reference.

Canadian Vehicle Owners

Propriétaires Canadiens

A French language copy of this manual can be obtained from your dealer or Saab.

On peut obtenir un exemplaire de ce guide en français auprès du concessionnaire.

Using this Manual

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

Danger, Warnings, and Cautions

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

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

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

WARNING

These mean there is something that could hurt you or other people.


Notice: This means there is something that could result in property or vehicle damage. This would not be covered by the vehicle's warranty.




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

 : Antilock Brake System (ABS)

 : Audio Steering Wheel Controls or OnStar®

 : Brake System Warning Light

 : Charging System

 : Cruise Control


 : Engine Coolant Temperature


 : Exterior Lamps

 : Fog Lamps

 : Fuel Gauge


 : Fuses

 : Headlamp High/Low-Beam Changer

 : LATCH System Child Restraints

 : Malfunction Indicator Lamp

 : Oil Pressure


 : Outside Power Foldaway Mirrors

 : Power

 : Remote Vehicle Start

 : Safety Belt Reminders

 : Tire Pressure Monitor

 : Traction Control/Electronic Stability Program (ESP)®

 : Windshield Washer Fluid

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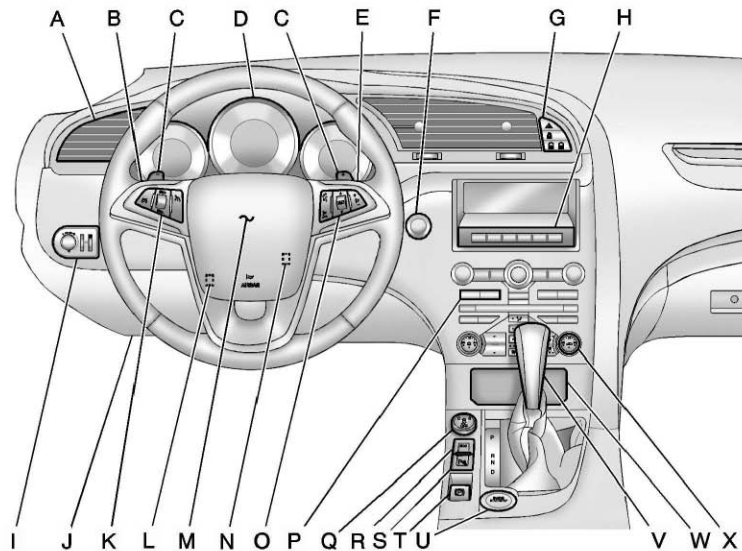
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- A. *Air Vents on page 8-6.*
- B. *Turn and Lane-Change Lever (Out of View). See Turn and Lane-Change Signals on page 6-5.*
Driver Information Center (DIC) Controls (Out of View). See Driver Information Center (DIC) on page 5-29.
- C. *Tap Shift Controls (If Equipped). See Manual Mode on page 9-28.*
- D. *Instrument Cluster on page 5-10.*
- E. *Windshield Wiper/Washer on page 5-3 (Out of View).*
Rear Window Wiper/Washer on page 5-5 (Out of View).
- F. *Night Panel Button. See Instrument Panel Illumination Control on page 6-6.*
- G. *Hazard Warning Flashers on page 6-5.*
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Power Door Locks on page 2-11.
- H. *Infotainment Display.*
- I. *Exterior Lamp Controls on page 6-1.*
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- J. *Data Link Connector (DLC) (Out of View). See Malfunction Indicator Lamp on page 5-18.*
- K. *Cruise Control on page 9-39.*
- L. *Steering Wheel Adjustment on page 5-2.*
- M. *Horn on page 5-3.*
- N. *Adjustable Pedal Control (If Equipped) (Out of View). See Adjustable Throttle and Brake Pedal on page 9-18.*
- O. *Steering Wheel Controls on page 5-2.*
- P. *Infotainment on page 7-1.*
- Q. *Traction Control System (TCS)/Electronic Stability Program (ESP) Button (If Equipped). See Traction Control System (TCS) on page 9-34 or Electronic Stability Program (ESP) on page 9-36.*
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- R. ECO Button (If Equipped). See *Fuel Economy Mode on page 9-29*.
- S. Park Assist Button (If Equipped). See *Ultrasonic Parking Assist on page 9-41*.
- T. *Parking Brake on page 9-31*.
- U. START/STOP Button. See *Ignition Positions on page 9-18*.
- V. Shift Lever. See *Shifting Into Park on page 9-23*.
- W. *Power Outlets on page 5-8*.
- X. *Dual Automatic Climate Control System on page 8-1*.
Heated and Ventilated Front Seats on page 3-10 (If Equipped).

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 Remote Keyless Entry (RKE) transmitter is used to lock and unlock the doors from up to 60 m (195 ft) away from the vehicle.





Press the key release button near the bottom of the transmitter to remove the key. The key can be used for the driver door and the glove box.


 : Press to unlock the driver door or all doors depending on the vehicle personalization settings.


 : Press to lock all doors.

Lock and unlock feedback can be personalized. See *Vehicle Personalization on page 5-42*.

 : Press until the liftgate begins to move to open or close the power liftgate.

 : Press and release one time to locate the vehicle.

Press and hold  for three seconds to sound the panic alarm.



Press  again or start the vehicle to cancel the panic alarm.

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

Remote Vehicle Start

With this feature the engine can be started from outside of the vehicle.

Starting the Vehicle


1. Press  on the RKE transmitter.
2. Within two seconds, press and hold  until the turn signal lamps flash, or for at least two seconds if the vehicle is not in view.

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 any of the following:

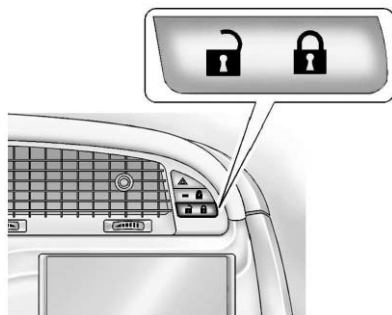
- Press and hold  until the parking lamps turn off.
- Turn on the hazard warning flashers.
- Turn the vehicle on and then off.

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

Door Locks

To lock or unlock a door, use the Remote Keyless Entry (RKE) transmitter from the outside.

From inside the vehicle with the doors locked, pull once on the door handle to unlock it, and a second time to open it or use the power door lock switch.



The power door lock switch is on the instrument panel.

 : Press to unlock the doors.

 : Press to lock the doors.

See *Power Door Locks* on page 2-11.

Liftgate

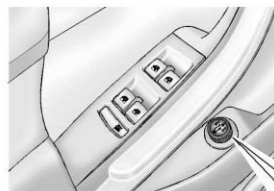
Manual Liftgate Operation

For vehicles without keyless access, unlock the vehicle before opening the liftgate.

Press the touch pad located in the handle of the liftgate, above the license plate, and lift up to open.

Do not press the touch pad while closing the liftgate. This will cause the liftgate to be unlatched.

Power Liftgate Operation



On vehicles with a power liftgate the switch is located on the driver door. The vehicle must be in P (Park) to use the power feature. The taillamps flash when the power liftgate moves.

Choose the power liftgate mode by turning the dial on the switch until the indicator lines up with the desired position. Press the center of the switch.

See *Liftgate* on page 2-12 for more information.

Windows



Driver Side Shown

The power window controls are on each of the side doors.

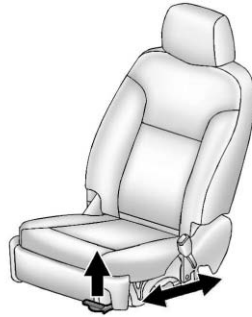
The driver door also has switches that control the passenger and rear windows.

Operate the switch for the window by pressing to open and pulling to close.

Pushing or pulling the switch part of the way will open or close the window as long as the switch is operated. See *Power Windows* on page 2-22 for more information.

Seat Adjustment

Manual Seats



To adjust a manual seat:

1. Pull the handle at the front of the seat cushion.
2. Move the seat forward or rearward to adjust the seat position.

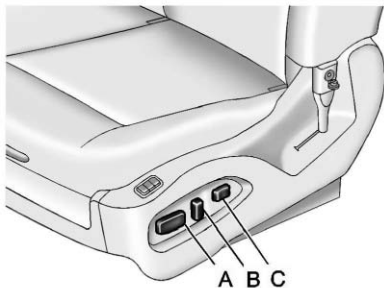
3. Release the handle to stop the seat from moving.
4. Try to move the seat back and forth to be sure it is locked in place.

To raise or recline the seatback, use the lever on the outboard side of the seat.

See *Seat Adjustment* on page 3-4 and *Reclining Seatbacks* on page 3-8 for more information.

1-8 In Brief

Power Seats

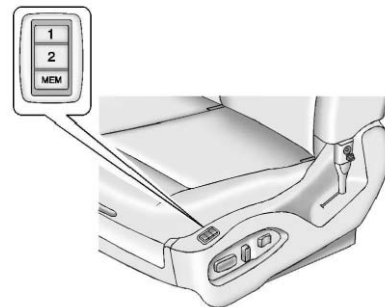


- A. Seat Position Control
- B. Seatback Adjustment Control
- C. Lumbar Adjustment Control

To adjust a power seat, if equipped:

- Slide control (A) forward or rearward, and up or down to adjust the power seat.
See Power Seat Adjustment on page 3-4.
- Raise or recline the seatback by tilting the top of the control (B) forward or rearward.
See Reclining Seatbacks on page 3-8.
- Increase or decrease the lumbar support by pressing and holding the front or rear of control (C).
See Lumbar Adjustment on page 3-7.

Memory Features



On vehicles with the memory feature, the “1” and “2” buttons on the outboard side of the driver seat are used to manually save and recall features. These features include the driver seat and adjustable throttle and brake pedal positions, if equipped. It also may include the outside mirror positions, if programmed. These manually stored positions are referred to as Button Memory positions.

Not all vehicles with the memory feature will have programmable outside mirrors.


The vehicle will also automatically save driver seat, adjustable throttle and brake pedal positions, and the outside mirror positions to the current driver Remote Keyless Entry (RKE) transmitter when the ignition is turned off. These automatically stored positions are referred to as RKE Memory positions.

Storing Button Memory Positions

To save positions into Button Memory:

1. Adjust the driver seat, seatback recliner, adjustable pedals, and both outside mirrors to the desired driving positions.
2. Press and release the MEM (Memory) button.
3. Press “1” until a beep sounds.
4. Repeat Steps 1 through 3 for a second driver using “2.”

To recall the manually saved Button Memory positions, press and hold “1” or “2.” The driver seat, adjustable pedals, and outside mirrors move to the positions stored to those buttons when pressed. Releasing “1” or “2” before the stored positions are reached stops the recall.

To automatically recall RKE Memory positions, unlock the driver door with the RKE transmitter, and open the driver door. On vehicles with keyless access, opening the driver door when an RKE transmitter is present will activate the RKE Memory recall. If the driver door is already open, pressing the RKE transmitter  button will also activate the RKE Memory recall. The driver seat, outside mirrors, and pedals will move to the previously saved RKE Memory positions.

See “Memory Seats” under *Power Seat Adjustment* on page 3-4 for more information.

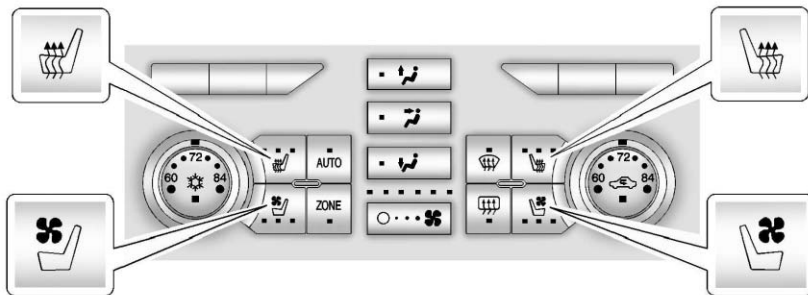
Easy Exit Driver Seat

This feature moves the seat rearward allowing the driver more room to exit the vehicle.

To activate, place the ignition in OFF or ACCESSORY and open the driver door. If the driver door is already open, placing the ignition in OFF or ACCESSORY will activate the easy exit driver seat.

This feature is turned on or off using the vehicle personalization menu. See “Easy Exit Driver Seat” under *Vehicle Personalization* on page 5-42 for more information.

Heated and Ventilated Seats



If available, the buttons are on the climate control panel. To operate, the ignition must be on.

Press or to heat the seat.

Press or to ventilate the seat.

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

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

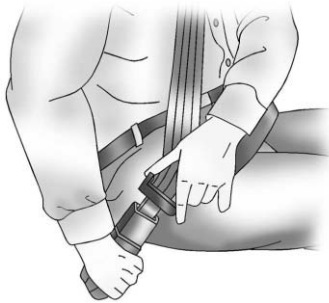
Head Restraint Adjustment

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.

For more information 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 3-14.*
- *How to Wear Safety Belts Properly on page 3-18.*
- *Lap-Shoulder Belt on page 3-23.*
- *Lower Anchors and Tethers for Children (LATCH System) on page 3-53.*

Sensing System for Passenger Airbag



United States



Canada

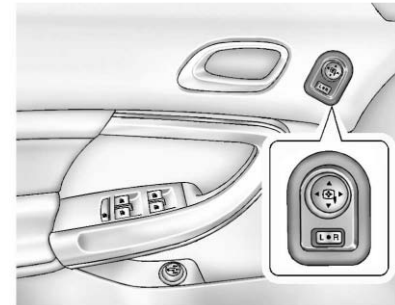
The passenger sensing system will turn off the right front passenger frontal airbag and seat-mounted side impact airbag under certain conditions. The driver airbags and roof-rail airbags are not affected by the passenger sensing system.

The passenger airbag status indicator will be visible on the overhead console when the vehicle

is started. See *Passenger Sensing System on page 3-38* for more information.

Mirror Adjustment

Exterior



Controls for the outside power mirrors are located on the driver door.

To adjust the mirror:

1. Move the selector switch to L (left) or R (right) to choose the driver or passenger mirror.

1-12 In Brief

2. Press the arrows on the control pad to move each mirror in the desired direction.
3. Adjust each outside mirror so that a little of the vehicle and the area behind it can be seen.
4. Return the selector switch to the center position.

See *Power Mirrors on page 2-19*.

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

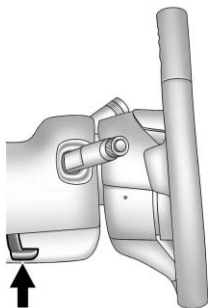
See *Automatic Dimming Rearview Mirror on page 2-21*.

Interior

Adjust the inside rearview mirror manually, by moving it up and down or side to side for a clearer view behind the vehicle.

The vehicle may have an automatic dimming inside rearview mirror. Automatic dimming reduces the glare from the headlamps of the vehicle behind you.

Steering Wheel Adjustment



The adjustment lever is located on the left side of the steering column.

To adjust the steering wheel:

1. Pull the lever down.
2. Move the steering wheel up or down and in or out to a comfortable position.
3. Pull the lever up to lock the steering wheel in place.


Do not adjust the steering wheel while driving.


Interior Lighting

Dome Lamp

The dome lamp is on the overhead console.

To change the dome lamp settings, press the following:

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



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

 : Turns the dome lamp on.

Reading Lamps

There are reading lamps on the overhead console and over the rear passenger doors. These lamps come on automatically when any door is opened.

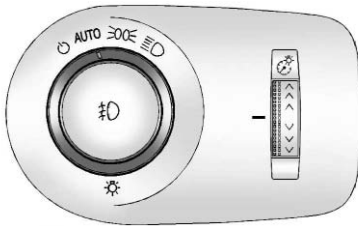
To manually turn the reading lamps on or off:

- Press  or  next to each overhead console reading lamp.
- Press the lamp lens on the rear passenger reading lamps.


For more information on interior lighting, see:

- *Instrument Panel Illumination Control on page 6-6.*
- *Courtesy Lamps on page 6-7.*


Exterior Lighting




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

 : Briefly turn to this position to turn the automatic light control off or on again.

AUTO : Automatically turns on the headlamps, parking lamps, taillamps, instrument panel lights, and license plate lamps.

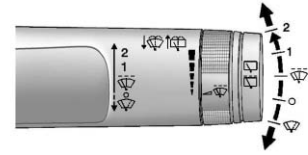
 : Turns on the parking lamps, taillamps, instrument panel lights, and taillamps.

 : Turns on the headlamps, parking lamps, taillamps, instrument panel lights and license plate lamps. A warning chime sounds if the driver's door is opened when the ignition is off and the headlamps are on.

For more information, see:

- *Exterior Lamp Controls on page 6-1.*
- *Daytime Running Lamps (DRL) on page 6-3.*
- *Automatic Headlamp System on page 6-3.*




Windshield Wiper/Washer

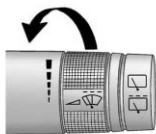


The windshield wiper/washer lever is located on the right side of the steering column. With the ignition in ACC/ACCESSORY or ON/RUN/START, move the windshield wiper lever to select the wiper speed.

2: Use for fast wipes.

1: Use for slow wipes.

 : Move the lever up to  for adjustable interval wipes, then turn the  band up for more frequent wipes or down for less frequent wipes. If the vehicle has Rainsense™, see the following Rainsense information.



○ : Use to turn the wipers off.

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

Windshield Washer

Pull the lever toward you to spray washer fluid on the windshield.

See *Windshield Wiper/Washer on page 5-3* and *Rear Window Wiper/Washer on page 5-5*, if equipped.

Rainsense™

For vehicles with Rainsense:

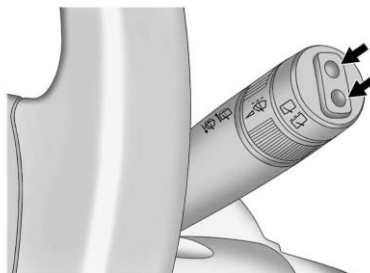
☒ : Move the windshield wiper lever to ☒. Turn the ☒ band on the wiper lever to adjust the sensitivity.

- Turn the band up for more sensitivity to moisture.

- Turn the band down for less sensitivity to moisture.
- Move the windshield wiper lever out of the ☒ position to deactivate Rainsense.

Rear Window Wiper/Washer

The rear wiper controls are on the end of the windshield wiper lever.



Press the upper or lower portion of the button to control the rear wiper and rear wiper delay.

The system turns off when the button is returned to the middle position.

☒ : Use for continuous rear window wipes.

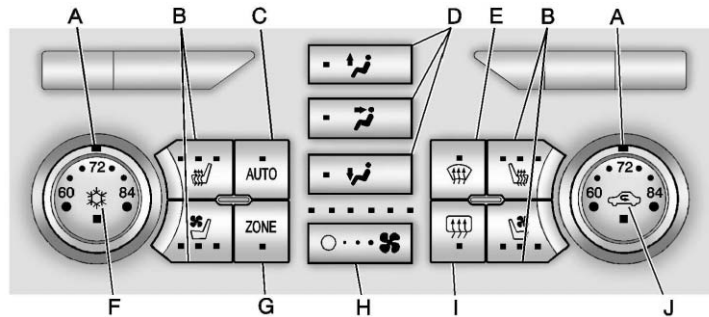
☒ : Use to set a delay between wipes.

☒ : Push the windshield wiper lever forward to spray washer fluid on the rear window.

See *Windshield Wiper/Washer on page 5-3* and *Rear Window Wiper/Washer on page 5-5*.

Climate Controls

The heating, cooling, and ventilation for the vehicle can be controlled with this system.



- A. Driver and Passenger Temperature Control
- B. Driver and Passenger Heated and Ventilated Seats
- C. AUTO (Automatic Operation)
- D. Air Delivery Mode Controls
- E. Defrost
- F. Air Conditioning

- G. ZONE
- H. Fan Control
- I. Rear Window Defogger
- J. Recirculation

See *Dual Automatic Climate Control System* on page 8-1 and *Rear Climate Control System* on page 8-5 (If Equipped).

Vehicle Features

Radio(s)

VOL/ : Press to turn the system on and off. Turn to increase or decrease the volume.

RADIO/BAND: Press to choose between FM, AM, or XM™, if equipped.

TUNE : Turn to select radio stations.

Press to show play or pause track.

SEEK : Press to seek the previous station or track.

SEEK : Press to seek the next station or track.

◀ BACK: Press to exit or move backward in a menu.

Buttons 1 - 6: Press to save and select favorite stations

For more information about these and other radio features, see the separate infotainment system manual.

Storing a Favorite Station

Stations from all bands can be stored in the favorite lists in any order. Up to six stations can be stored in each favorite page and the number of available favorite pages can be set.

To store the station to a position in the list, press the corresponding numeric button 1-6 until the station can be heard again.

Setting the Clock

For detailed instructions on setting the clock, see *Clock (Digital Clock)* on page 5-7.

Setting the Time and Date

1. Press the CONFIG button.
2. Select Time and Date Settings.
3. Select Set Time or Set Date.

4. Turn the MENU/SELECT knob to adjust the highlighted value.
5. Press the MENU/SELECT knob to select the next value.
6. To save the time or date and return to the Time and Date Settings menu, press the ◀ BACK button at any time or press the MENU/SELECT knob after adjusting the minutes or year.

Setting the 12/24 Hour Format

1. Press the CONFIG button.
2. Select Time and Date Settings.
3. Highlight 12/24 Hour Format.
4. Press the MENU/SELECT knob to select the 12 hour or 24 hour display format.

Setting the Month & Day Format

1. Press the CONFIG button.
2. Select Time and Date Settings.
3. Highlight Month & Day Format.

4. Press the MENU/SELECT knob to select MM/DD (month/day) or DD/MM (day/month).

Setting the Auto Time Adjust

1. Press the CONFIG button.
2. Select Time and Date Settings.
3. Highlight Auto Time Adjust.
4. Press the MENU/SELECT knob to turn Auto Time Adjust on or off.

Satellite Radio

Vehicles with an XM™ Satellite Radio tuner and a valid XM Satellite Radio subscription can receive XM programming.

XM Satellite Radio Service

XM is a satellite radio service based in the 48 contiguous United States and 10 Canadian provinces. XM 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 XM service.

For more information refer to:

- www.xmradio.com or call 1-800-929-2100 (U.S.).
- www.xmradio.ca or call 1-877-438-9677 (Canada).

For more information, see the separate infotainment system manual.

Portable Audio Devices

Some vehicles have a 3.5 mm (1/8 in) auxiliary input and a USB port located in the center console. External devices such as iPods®, laptop computers, MP3 players, CD changers, and USB storage devices may be connected, depending on the audio system.

For more information, see the separate infotainment system manual.

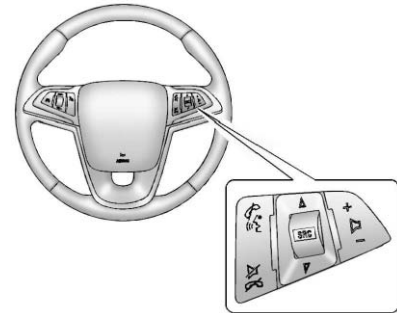
Bluetooth®

The Bluetooth® system allows users with a Bluetooth-enabled cell phone to make and receive hands-free calls using the vehicle audio system, microphone, 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 the separate infotainment system manual for more information.

Steering Wheel Controls



For vehicles with audio steering wheel controls, some audio controls can be adjusted at the steering wheel.

 : Press to interact with the available Bluetooth, OnStar, or navigation system.

 : Press to silence the vehicle speakers only. Press again to turn the sound on. For vehicles with OnStar or Bluetooth systems, press to reject an incoming call, or to end a current call.

△ SRC ▽ : Turn △ or ▽ to select a radio band or audio source.

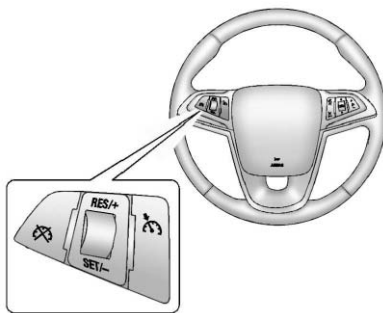
Turn △ or ▽ to select the next or previous favorite radio station, CD, DVD track/chapter (with navigation), or MP3 track.

Press SRC to change between radio and CD or DVD.


+ ▢ - : Press + to increase or - to decrease the volume.


For more information, see *Steering Wheel Controls* on page 5-2.

Cruise Control



The cruise control buttons are on the steering wheel.

 : Press to turn the cruise control system on and off.

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

RES/+ : Move the thumbwheel up to make the vehicle resume to a previously set speed or to accelerate.

SET/- : Move the thumbwheel down to set a speed and activate cruise control, or to make the vehicle decelerate.

See *Cruise Control* on page 9-39.

Navigation System

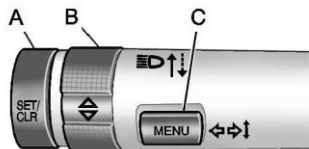
If the vehicle has a navigation system, there is a separate Infotainment System Manual that includes information on the radio, audio players, and navigation system.

The navigation system provides detailed maps of most major freeways and roads. After a destination has been set, the system provides turn-by-turn instructions for reaching the destination. In addition, the system can help locate a variety of points of interest (POIs), such as banks, airports, restaurants, and more.

See the infotainment system manual for more information.

Driver Information Center (DIC)

The DIC display is located in the center of the instrument panel cluster. It shows the status of many vehicle systems. The controls for the DIC are located on the turn signal lever.



- A. **SET/CLR:** Press to set or clear the menu item when it is displayed.
- B. **△ ▽:** Use the thumbwheel to scroll through the items in each menu.
- C. **MENU:** Press to get to the Trip/Fuel Menu and the Vehicle Information Menu. This button is also used to return to or exit the last screen displayed on the DIC.

For more information, see *Driver Information Center (DIC)* on page 5-29.

Rear Vision Camera (RVC)

If available, the rear vision camera displays a view of the area behind the vehicle when the vehicle is shifted into R (Reverse). The display will appear on either the inside rearview mirror or navigation screen, if equipped.

To clean the camera lens, located above the license plate, rinse it with water and wipe it with a soft cloth.

See *Rear Vision Camera (RVC)* on page 9-43.

Ultrasonic Parking Assist

If available, Ultrasonic Front and Rear Parking Assist (UFRPA) uses sensors on the front and rear bumpers to detect objects while parking the vehicle. It operates at speeds less than 8 km/h (5 mph). UFRPA uses audio beeps to provide distance and system information.

Keep the sensors on the vehicle's front and rear bumpers clean to ensure proper operation.

See *Ultrasonic Parking Assist* on page 9-41 for more information.

Storage Compartments

The glove box is air conditioned and can be used to store items at a lower temperature. Move the slide control to open or close the opening to adjust the air flow. See *Glove Box* on page 4-1 for more information.

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 four accessory power outlets. The power outlets located below the climate control system, inside the center floor console, and on the rear of the center floor console are powered while the vehicle is in ON/RUN/START or ACC/ACCESSORY mode, or until the driver door is opened within 10 minutes of turning off the vehicle.

The power outlet located in the rear cargo area is powered at all times.

Open the protective cover to use the accessory power outlet.

See *Power Outlets* on page 5-8.

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 you with programming the Universal Remote System.

See *Universal Remote System* on page 5-48.

Performance and Maintenance

Traction Control System (TCS)

The traction control system limits wheel spin. The system turns on automatically every time the vehicle is started.

To turn off traction control, press and release the TCS/ESP button located near the shift lever.

For more information, see *Traction Control System (TCS)* on page 9-34.

Electronic Stability Program (ESP)

The Electronic Stability Program (ESP) system assists with directional control of the vehicle in difficult driving conditions. The system turns on automatically every time the vehicle is started.

To turn off both traction control and ESP, press and hold the TCS/ESP button located near the shift lever.

For more information, see *Electronic Stability Program (ESP)* on page 9-36.

Tire Pressure Monitor

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



The TPMS warning light alerts you 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 9-12. The warning light will remain on until the tire pressure is corrected.

During cooler conditions, the low tire pressure warning light may appear when the vehicle is first started and then turn off. 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. It is the driver's responsibility to maintain correct tire pressures.

See *Tire Pressure Monitor System* on page 10-61.

Tire Sealant and Compressor Kit

This vehicle may come with a jack and spare tire or a tire sealant and compressor kit. The kit can be used to temporarily seal small punctures in the tread area of the tire.

See *Tire Sealant and Compressor Kit* on page 10-77 for complete operating information.

If the vehicle came with a jack and spare tire, see *If a Tire Goes Flat* on page 10-75.

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 MENU button and thumbwheel on the turn signal lever, display OIL LIFE REMAINING on the DIC. See *Driver Information Center (DIC) on page 5-29 and Engine Oil Messages on page 5-37.*
2. Press the SET/CLR button to 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.*

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.: **1-800-852-9001.**


TTY Users (U.S.): **1-866-612-0380.**

Canada: **1-800-567-4555.**

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

See *Roadside Assistance Program on page 13-4* for more information.

Roadside Service and OnStar

If you have an active OnStar subscription, press the  button and the current GPS location will be sent to an OnStar Advisor who will assess your problem, contact Roadside Assistance, and relay your exact location to get the help you need.

OnStar®





For vehicles with an active OnStar subscription, OnStar uses several innovative technologies and live Advisors to provide a wide range of safety, security, navigation, diagnostics, and calling services.


Automatic Crash Response

In a crash, built-in sensors can automatically alert an OnStar Advisor who is immediately connected to the vehicle to see if you need help.

How OnStar Service Works

 : Push this blue button to connect to a specially trained OnStar Advisor to verify your account information and to answer questions.

 : Push this red emergency button to get priority help from specially trained OnStar Emergency Advisors.

 : Push this button for hands-free, voice-activated calling and to give voice commands for Hands-Free Calling and Turn-by-Turn Navigation.

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 on all vehicles. For more information, see the OnStar Owner's Guide; visit www.onstar.com (U.S.) or www.onstar.ca (Canada); contact OnStar at 1-888-4-ONSTAR (1-888-466-7827) or TTY 1-877-248-2080; or push the  button to speak with an OnStar Advisor 24 hours a day, 7 days a week.

For a full description of OnStar services and system limitations, see the OnStar Owner's Guide in the glove box.

OnStar service is subject to the OnStar Terms and Conditions included in the OnStar Glove Box Kit.

OnStar service requires wireless communication networks and the Global Positioning System (GPS) satellite network. Not all OnStar services are available everywhere or on all vehicles at all times.

OnStar service can't work unless the 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 can't work unless GPS signals are available, unobstructed, and compatible with the OnStar hardware. The vehicle has to have a working electrical system and adequate battery power for the OnStar equipment to operate. OnStar service may not work if the OnStar equipment isn't properly installed or you haven't maintained it and the vehicle is in good working order and in compliance with all government regulations. If you try to add, connect, or modify any equipment or software in the vehicle, OnStar service may not work. Other problems OnStar can't control may prevent service to you,

such as hills, tall buildings, tunnels, weather, electrical system design and architecture of the vehicle, damage to important parts of the vehicle in a crash, or wireless phone network congestion or jamming.

See *Radio Frequency Statement on page 13-12* for information regarding Part 15 of the Federal Communications Commission (FCC) rules and Industry Canada Standards RSS-210/220/310.



OnStar Steering Wheel Controls

This vehicle may have a Talk/Mute button that can be used to interact with OnStar Hands-Free calling. See *Steering Wheel Controls on page 5-2* for more information.

On some vehicles, the Talk button can be used to dial numbers into voice mail systems, or to dial phone extensions. See the OnStar Owner's Guide for more information.

Your Responsibility

Increase the volume of the radio if the OnStar Advisor cannot be heard.

If the light next to the OnStar buttons is red, the system may not be functioning properly. Push the  button and request a vehicle diagnostic check. If the light appears clear (no light appears), your OnStar subscription has expired and all services have been deactivated. Push the  button to confirm that the OnStar equipment is active.

Keys, Doors and Windows

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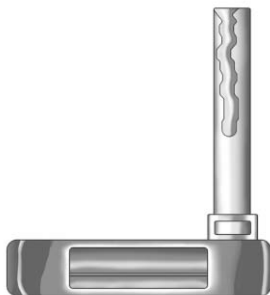
2-2 Keys, Doors and Windows

Keys and Locks

Keys

WARNING

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



This key, located inside the Remote Keyless Entry (RKE) transmitter, is used for the driver door and glove box.



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

See your dealer if a new key is needed.

Notice: If the keys get locked in the vehicle, it may have to be damaged to get them out. Always carry a spare key.

Contact Roadside Assistance if you are locked out of the vehicle. See *Roadside Assistance Program* on page 13-4.

Remote Keyless Entry (RKE) System

See *Radio Frequency Statement* on page 13-12 for information regarding Part 15 of the Federal Communications Commission (FCC) rules and Industry Canada Standards RSS-210/220/310.

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 RKE transmitter functions will work up to 60 m (195 ft) away from the vehicle.

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





With Remote Start and Power Liftgate Shown, Without Similar

Lock (Lock): Press to lock all doors. The turn signal indicators may flash and/or the horn may sound to indicate locking. See "Locking Feedback" under *Vehicle Personalization* on page 5-42.


If the driver door is open when  is pressed, all doors lock except the driver door, if enabled through the vehicle personalization. If the passenger door is open when  is pressed, all doors lock.




2-4 Keys, Doors and Windows




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


 **(Unlock):** Press to unlock the driver door or all doors. See “Door Unlock Options” under *Vehicle Personalization on page 5-42*. When remotely unlocking the vehicle at night the fog lamps and back-up lamps will come on for about 20 seconds to light your approach to the vehicle. The turn signal indicators may flash and/or the horn may sound to indicate unlocking. See “Unlock Feedback” under *Vehicle Personalization on page 5-42*.

Memory seat positions may be recalled when unlocking the vehicle. See “Memory Remote Recall” under *Vehicle Personalization on page 5-42* for more information.

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

 **(Remote Start):** For vehicles with this feature, press  and then press and hold  within two seconds to start the engine from outside the vehicle using the RKE transmitter. See *Remote Vehicle Start on page 2-9* for additional information.

 **(Vehicle Locator/Panic Alarm):** Press and release one time to locate the vehicle. The exterior lamps flash and the horn chirps. Press and hold  for three seconds to sound the panic alarm. The horn sounds and the turn signal lamps flash for 30 seconds, or until  is pressed again or the vehicle is started.

 **(Remote Liftgate Release):** Press until the liftgate begins to move to open or close the power liftgate.

Keyless Access Operation

Some vehicles have the keyless access system that lets you lock and unlock the doors and access the liftgate 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 opened. If the vehicle has this feature, there will be a body colored touch pad on the outside front door handles.

Keyless Unlocking

With the transmitter within 1 m (3 ft), approach the front door and pull the handle. If the transmitter is recognized, the door will unlock and open.

Entering any door other than the driver door will always cause all of the doors to unlock. This is not customizable.

To customize which doors unlock when the driver door is opened, see “Passive Unlock” under *Vehicle Personalization on page 5-42*.

Keyless 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 become closed, the vehicle will determine how many RKE transmitters remain in the vehicle interior. If at least one transmitter has been removed from the interior of the vehicle, the doors will lock after eight seconds.

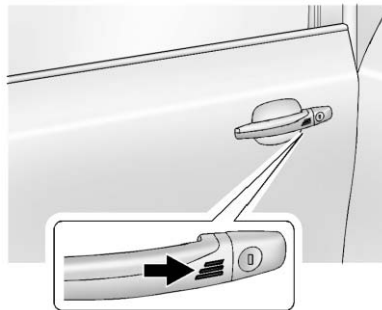
If there are two transmitters in the vehicle and one is removed, the other will be locked in. A person approaching the outside of the locked vehicle without an authorized RKE transmitter will not be able to open the door, even with the transmitter in the vehicle.

You may temporarily disable the keyless locking feature by pressing and holding the power door unlock button on the instrument panel for several seconds with a door open.

Keyless locking will then remain disabled until the door lock switch is pressed, or until the vehicle is turned on.

To customize whether the doors automatically lock when you exit the vehicle, see “Passive Locking” under *Vehicle Personalization* on page 5-42.

Lock Sensor



When all doors are closed and the ignition is off, the vehicle can be locked by pressing this area on the

door handle. This feature will be available for several minutes after the vehicle has been turned off.

Keyless Liftgate Opening

Press the touch pad on the liftgate handle to open the liftgate if the RKE transmitter is within range.

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. Each vehicle can have up to eight transmitters matched to it.

Programming with a Recognized Transmitter (Keyless Access Vehicles Only)

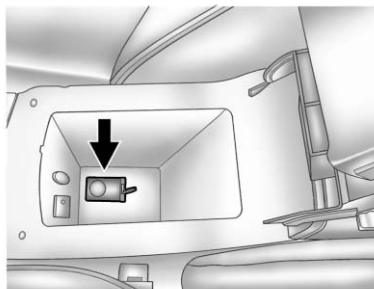
A new transmitter can be programmed to the vehicle when there is one recognized transmitter.

2-6 Keys, Doors and Windows


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

1. Place the recognized transmitter(s) in the cupholder.
2. Insert the vehicle key of the new transmitter into the key lock cylinder located on the outside of the driver door and turn the key to the unlock position five times within 10 seconds.

The Driver Information Center (DIC) displays READY TO LEARN ELECTRONIC KEY #2, 3, 4, ETC.



3. Place the new transmitter into the transmitter pocket. The transmitter pocket is inside the center console storage area located between the driver and front passenger seats. The storage area will need to be opened and the storage tray lifted up to access the transmitter pocket.

4. Press the START button. When the transmitter is learned the DIC display will show that it is ready to program the next transmitter.
5. Remove the transmitter from the transmitter pocket and press  on the transmitter.

To program additional transmitters, repeat Steps 3 through 5.

When all additional transmitters are programmed, press and hold the START button for 10 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 transmitters must be with you.

1. Insert the vehicle key of the transmitter into the key lock cylinder located on the outside of the driver door and turn the key to the unlock position five times within 10 seconds.

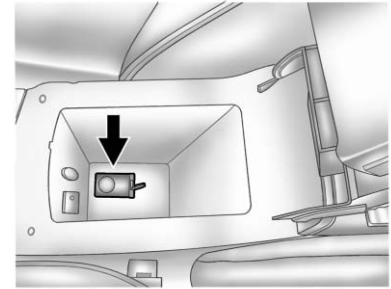
The Driver Information Center (DIC) displays REMOTE LEARN PENDING, PLEASE WAIT.

2. Wait for 10 minutes until the DIC displays PRESS ENGINE START BUTTON TO LEARN and then press the START button.

The DIC display will again show REMOTE LEARN PENDING, PLEASE WAIT.


3. Repeat Step 2 two additional times. After the third time all previously known 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 located between the driver and front passenger seats. The storage area will need to be opened and the storage tray lifted up to access the transmitter pocket.
5. Press the START button. When the transmitter is learned the DIC display will show that it is ready to program the next transmitter.

2-8 Keys, Doors and Windows

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

To program additional transmitters, repeat Steps 4 through 6.

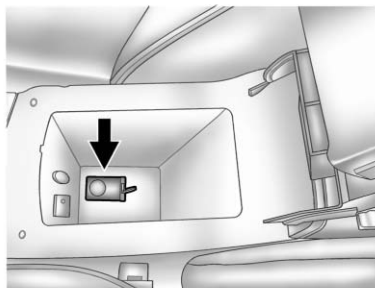
When all additional transmitters are programmed, press and hold the START button for 10 seconds to exit programming mode.

Starting the Vehicle with a Low Transmitter Battery

If the transmitter battery is weak, the DIC may display NO REMOTE DETECTED when you try to start the vehicle. The REPLACE BATTERY IN REMOTE KEY message may also display.

To start the vehicle:

1. Open the center console storage area and the storage tray.



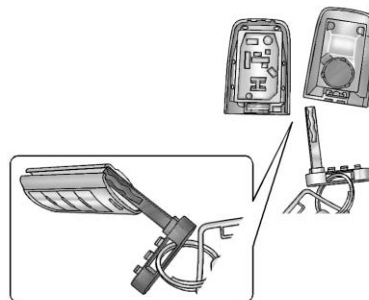
2. Place the transmitter in the transmitter pocket.
3. With the vehicle in P (Park) or N (Neutral), press the brake pedal and the START button.
Replace the transmitter battery as soon as possible.

Battery Replacement

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

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

1. Press the button near the bottom of the transmitter and pull the key out.




2. Use the key blade to separate the two halves of the transmitter.

3. Remove the old battery. Do not use a metal object.
4. Insert the new battery, positive side facing down. Replace with a CR2032 or equivalent battery.
5. Snap the transmitter back together.

Remote Vehicle Start

If available, this feature allows you to start the engine from outside the vehicle.




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

Vehicles with an automatic climate control system will automatically change to a heating or cooling mode depending on the outside temperature during a remote start. When the ON/RUN/START ignition mode is selected, the climate control system will return to its setting from when the vehicle was last turned off.

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

There are other conditions which can affect the performance of the transmitter. See *Remote Keyless Entry (RKE) System on page 2-3* for additional information.

Starting the Engine Using Remote Start

1. Press  on the RKE transmitter.
2. Within two seconds, press and hold  until the turn signal lamps flash. This confirms the request to remote start the vehicle has been received. If the vehicle's lamps are not visible, press and hold  for at least two seconds.

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

The engine will shut off after 10 minutes unless a time extension is done or the ignition is put in ON/RUN/START.

3. Press the brake pedal and select the ON/RUN/START ignition mode to drive the vehicle.

Extending Engine Run Time

For a 10-minute extension, repeat Steps 1 and 2 while the engine is still running. The remote start can only be extended once.

When the remote start is extended, the second 10-minute period will start immediately.

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


2-10 Keys, Doors and Windows

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

The vehicle's ignition must be changed to ON/RUN/START and then back to OFF before the remote start procedure can be used again.

Shutting the Engine Off After a Remote Start

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

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

Conditions in Which Remote Start Will Not Work

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

- The ignition is in any mode other than OFF.
- The transmitter is in the vehicle.

- The hood is not closed.
- The hazard warning flashers are on.
- There is an emission control system malfunction.
- The engine coolant temperature is too high.
- The oil pressure is low.
- Two remote vehicle starts 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

(Continued)

WARNING (Continued)

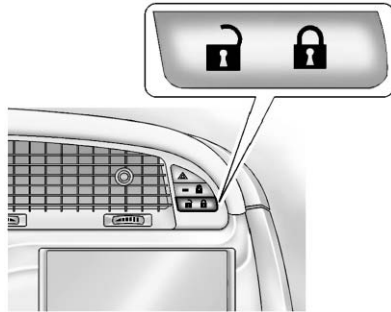
doors are not locked. So, all passengers should wear safety belts properly and the doors should be locked whenever the vehicle is driven.

- 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.

To lock or unlock a door, use the Remote Keyless Entry (RKE) transmitter from the outside.


From inside the vehicle with the doors locked, pull once on the door handle to unlock it, and a second time to open it.

Power Door Locks






The power door lock switch is on the instrument panel.

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

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

Lockout Deterrent



Lockout deterrent decreases the chances that the keys may be accidentally locked in the vehicle.

When door locking is requested by pressing  on the instrument panel or  on the RKE transmitter and the driver door is open, all doors will lock and the driver door will immediately unlock. The driver door must be closed when  is pressed for all doors to remain locked.

This feature can be programmed to provide the lockout deterrent feature only when the ignition mode is ACC/ACCESSORY, or ON/RUN/START. See “Power Door Locks” in *Vehicle Personalization on page 5-42*.

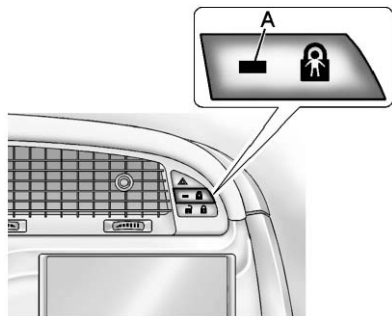
Delayed Locking

When this feature is enabled and the doors are locked with the power lock switch on the instrument panel, three chimes sound to signal that the delayed locking feature is in use. All doors lock five seconds after the last door is closed.

When the delayed locking feature is in use, pressing  on the instrument panel or  on the RKE transmitter will override the feature and lock all doors immediately.


This feature can be programmed by using the Driver Information Center (DIC). See “Delayed Door Lock” in *Vehicle Personalization on page 5-42*. The delayed locking feature is only available if “Unlocked Door Anti-Lockout” is disabled.

Safety Locks



The safety lock switch is on the instrument panel.

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

Press  to activate the safety locks. The LED (A) comes on when activated.

Pressing the button again deactivates the lockout switch.

Doors

Liftgate

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 9-24.

Notice: If you open the liftgate without checking for overhead obstructions such as a garage door, you could damage the liftgate or the liftgate glass. Always check to make sure the area above and behind the liftgate is clear before opening it.

Manual Liftgate

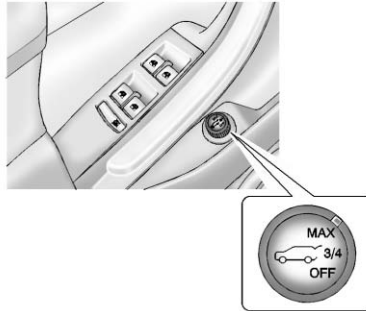
For vehicles without keyless access, unlock the vehicle before opening the liftgate.

Press the touch pad located in the handle of the liftgate, above the license plate, and lift up to open.

Do not press the touch pad while closing the liftgate. This will cause the liftgate to be unlatched.

Always close the liftgate before driving.

Power Liftgate



On vehicles with a power liftgate, the switch is on the driver door. The vehicle must be in P (Park) to use the power feature. The taillamps flash when the power liftgate moves.

WARNING

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

Choose the power liftgate mode by turning the dial on the switch until the indicator lines up with the desired position.

The three modes are:

MAX: The liftgate opens to the full open height.



3/4: The liftgate opens to a reduced height that can be set by the vehicle operator in a range of approximately three-quarters open to full open. Use this setting to prevent the liftgate from opening into overhead obstructions such as a garage door or roof mounted cargo during power operation. The liftgate can still be manually opened all the way.

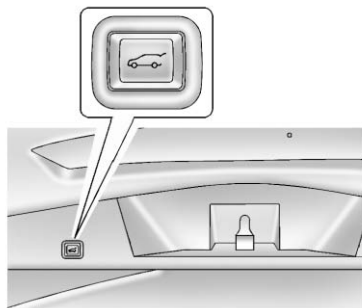
2-14 Keys, Doors and Windows


OFF: The liftgate only operates manually in this position.

Manual operation of a liftgate that also has power operation requires more effort than with a standard manual liftgate.

In either the MAX or the 3/4 mode, the liftgate can be power opened and closed by:

- Pressing  on the Remote Keyless Entry (RKE) transmitter until the liftgate starts moving. See *Remote Keyless Entry (RKE) System Operation* on page 2-3.
- Pressing  on the center of the mode switch on the driver door, with the driver door unlocked.
- Pressing the touch pad switch on the liftgate outside handle, with all doors unlocked, to open the liftgate.



Press and release  on the liftgate next to the latch to close the liftgate.

Pressing any liftgate button, or the touch pad switch while the liftgate is moving, stops it. Pressing the button or RKE switch again reverses the direction. There is a minimum distance that the power liftgate must already be open for the system to hold it open. If movement is stopped below that minimum, the liftgate closes.

Do not force the liftgate open or closed during a power cycle.

The power liftgate may be temporarily disabled under extreme temperatures or low battery conditions. If this occurs, the liftgate can still be operated manually.

If you shift the transmission out of P (Park) while the power function is in progress, the liftgate power function will continue to completion. If you shift the transmission out of P (Park) and accelerate before the power liftgate latch is closed, the liftgate may reverse to the open position. Cargo could fall out of the vehicle. Always make sure the power liftgate is closed and latched before you drive away.

If you power open the liftgate and the liftgate support struts have lost pressure, the turn signals flash and a chime sounds. The liftgate stays open temporarily, then slowly closes. See your dealer for service before using the liftgate.

Obstacle Detection Features

If the liftgate encounters an obstacle during a power open or close cycle, a warning chime will sound and the liftgate will automatically reverse direction to the full closed or open position. After removing the obstruction, the power liftgate operation can be used again.

If the liftgate encounters multiple obstacles on the same power cycle, the power function will deactivate.

The POWER LIFTGATE UNAVAILABLE warning message in the Driver Information Center (DIC) will display. After removing the obstructions, the liftgate will resume normal power operation.

The vehicle has pinch sensors located on the side edges of the liftgate. If an object is caught between the liftgate and the body and presses against this sensor, the liftgate will reverse direction and open fully. The liftgate will remain open until it is activated again or closed manually.

Setting the Power Liftgate 3/4 Mode

To change the liftgate stop position.

1. Turn the liftgate switch to either the MAX, or the 3/4 mode position and power open the liftgate.
2. Stop the liftgate movement at the desired height by pressing any liftgate switch. Manually adjust the liftgate position if required.
3. Press and hold the button on the liftgate next to the latch until the turn signals flash and a beep sounds to indicate that the new setting is recorded.

When power opened with the 3/4 mode selected, the liftgate stops at the new set position.

If you do not receive the audible and visual feedback when setting the intermediate stop position, you are attempting to set the height below the 3/4 open height minimum (approximately 1.52 m or 5 ft). The liftgate cannot be set below that minimum and the new setting will not be recorded.

Manual Operation of Power Liftgate

To change the liftgate to manual operation, turn the mode switch to the OFF position.

With the power liftgate disabled and all of the doors unlocked, the liftgate can be manually opened and closed. The effort required to operate a power liftgate is greater than the effort required to operate a non-power liftgate.

To open the liftgate, press the touch pad on the handle on the outside of the liftgate, and lift the gate open. To close the liftgate, use the pull cup to lower the liftgate and close. With the power liftgate disabled, the liftgate electric latch will still power latch once contact is made with the striker. Always close the liftgate before driving.

If the RKE button is pressed while power operation is disabled, the turn signals flash and the liftgate will not move.

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

Vehicle Security

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

Anti-theft Alarm System

This vehicle has an anti-theft alarm system.

The LED light, located on the instrument panel near the windshield, indicates the status of the system.

Arming the System

1. Close all doors, liftgate, and hood.
2. Lock the vehicle using the transmitter or the power door lock button. The LED on the instrument panel should come on and stay on for about 30 seconds.
3. After 30 seconds, the alarm system will arm, and the LED will begin to slowly flash indicating the alarm is operating.

If a door, the hood, or liftgate is opened without first unlocking with the transmitter, the turn signals will flash and the horn will sound for about 30 seconds. The alarm system will then re-arm to monitor for the next unauthorized event.

The theft-deterrent alarm system will not activate if the doors are locked with the key. You can start the vehicle with a recognized transmitter in the vehicle if the alarm has been set off.


Disarming the System

To disarm the system, either unlock the doors using the transmitter, or start the vehicle with a recognized transmitter in the vehicle.


To avoid setting off the alarm by accident:

- Lock the vehicle with the transmitter after all occupants have left the vehicle and all doors are closed.

- Always unlock a door with the transmitter. Unlocking a door any other way will not disarm the alarm.

If you set off the alarm by accident, turn off the alarm by pressing  on the transmitter. The alarm will not stop if you try to unlock a door any other way.

How to Detect a Tamper Condition

If  is pressed and the horn chirps three times, an attempted break-in has occurred while the system was armed.

If the alarm has been activated, the THEFT ATTEMPTED message will appear on the DIC. See *Key and Lock Messages on page 5-38* for additional information.

Immobilizer

See *Radio Frequency Statement on page 13-12* for information regarding Part 15 of the Federal Communications Commission (FCC) rules and Industry Canada Standards RSS-210/220/310.

Immobilizer Operation

This vehicle has a passive theft-deterrent system.

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

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

The immobilization system is disarmed when the pushbutton start is activated to enter the ACC/ACCESSORY mode or the ON/RUN/START mode and a valid transmitter is present in the vehicle.



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

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

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

2-18 Keys, Doors and Windows

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

If the vehicle will not change ignition modes (ACC/ACCESSORY, ON/RUN/START, OFF), and the RKE transmitter appears to be undamaged, try another transmitter. Or, you may try placing the transmitter in the transmitter pocket located in the center console. See “NO REMOTE DETECTED” under *Key and Lock Messages on page 5-38*.

If the ignition modes will not change with the other transmitter, your vehicle needs service. If the ignition does change modes, the first transmitter may be faulty.

See your dealer who can service the theft-deterrent system and have a new RKE transmitter programmed to the vehicle.

It is possible for the immobilizer system to learn new or replacement RKE transmitters. Up to eight transmitters can be programmed for the vehicle. To program additional transmitters, see “Programming Transmitters to the Vehicle” under *Remote Keyless Entry (RKE) System Operation on page 2-3*.

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

Exterior Mirrors

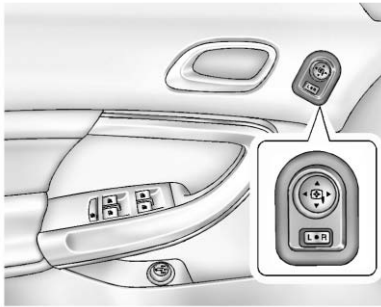
Convex Mirrors



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



Controls for the outside power mirrors are located on the driver door.

To adjust the mirror:

1. Move the selector switch to L (left) or R (right) to choose the driver or passenger mirror.

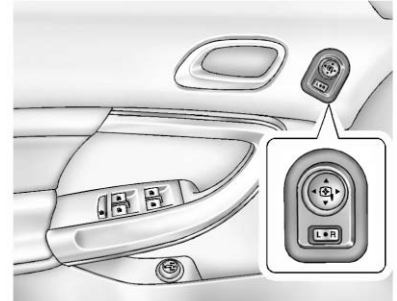
2. Press the arrows on the control pad to move each mirror in the desired direction.
3. Adjust each outside mirror so that a little of the vehicle and the area behind it can be seen.
4. Return the selector switch to the center position.

Folding Mirrors

Manual Foldaway Mirrors

Vehicles with manual fold mirrors are folded inward toward the vehicle to prevent damage when going through an automatic car wash. Push the mirror outward to return it to the original position.

Power Foldaway Mirrors



Vehicles with power folding mirrors have controls on the driver door.

To fold the mirrors:

1. With the selector switch in the ● position, press the down arrow on the control pad. Both mirrors will automatically fold.
2. Press the down arrow again to return the mirrors to their original position.


Resetting the Power Foldaway Mirrors

Reset the power foldaway mirrors if:

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

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

Heated Mirrors

 (Rear Window Defogger): Press to heat the mirrors.

See “Rear Window Defogger” under *Dual Automatic Climate Control System on page 8-1* for more information.

Automatic Dimming Mirror

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

Park Tilt Mirrors

If the vehicle has the memory package, the outside mirrors have a park tilt feature. This feature automatically tilts the outside mirrors to a preselected position when the vehicle is in R (Reverse). This allows the driver to view the curb for parallel parking.

The passenger and driver mirrors return to their original position when the vehicle is shifted out of R (Reverse), or the ignition is turned off or to OFF/LOCK.

This feature can be turned on or off through the Driver Information Center (DIC). See *Vehicle Personalization on page 5-42* for more information.

Interior Mirrors

Manual Rearview Mirror

Hold the inside rearview mirror in the center and move it for a clearer view behind the vehicle. Adjust the mirror to avoid glare from the headlamps behind you. Push the tab forward for daytime use and pull it for nighttime use.

Vehicles with OnStar have three control buttons at the bottom of the mirror. See your dealer for more information on the system and how to subscribe to OnStar. See the OnStar Owner's Guide for more information about the services OnStar provides.

Automatic Dimming Rearview Mirror

The vehicle may have an automatic dimming inside rearview mirror. Automatic dimming reduces the glare from the headlamps of the vehicle behind you.

Vehicles with OnStar have three control buttons at the bottom of the mirror. See your dealer for more information on the system and how to subscribe to OnStar. See the OnStar Owner's Guide for more information about the services OnStar provides.

Cleaning the Mirror

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

Windows

WARNING

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



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

Leaving children in a vehicle with the RKE transmitter is dangerous for many reasons; children or others could be badly injured or even killed. They could operate the power windows or other controls or even make the vehicle move. The windows will function with the RKE transmitter in the vehicle and they could be seriously injured or killed if caught in the path of a closing window. Do not leave the RKE transmitter in a vehicle with children.

When there are children in the rear seat, use the window lockout button to prevent unintentional operation of the windows.



Driver Side Shown

The power window controls are on each of the side doors.

The driver door also has switches that control the passenger and rear windows.

The power windows:

- Can be operated with the ignition in ACC/ACCESSORY or ON/RUN/START.

- Can be operated within 10 minutes of switching the ignition off. See *Retained Accessory Power (RAP)* on page 9-22.
- Will stop operation when any door is opened.

Operate the switch for the desired window by pressing to open and pulling to close.

Pushing or pulling the switch part of the way will open or close the window as long as the switch is operated.

Express-Down/Up Windows

Windows that have the express-down/up feature allow the windows to be lowered and raised fully without holding the window switch. Press the window switch fully and release it to activate the express-down feature. Pull the window switch fully up and release it to activate the express-up feature.

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

Programming the Power Windows

Programming the power windows may be necessary if the vehicle's battery has been disconnected or discharged.

If the window will not express up after power has been restored and a message is displayed in the Driver Information Center:

1. Close all doors.
2. Place the ignition in ACC/ACCESSORY or ON/RUN/START.
3. From any partial open position, close the window and continue to pull the switch briefly after the window has fully closed.

Obstacle Detection Feature

The Obstacle Detection Feature is part of the express-up feature and is active:

- In the middle and upper portions of the window opening.
- During window up movements.
- In ignition OFF during all window up movements and during express-up window movements in ignition ON/RUN/START.

If there is something blocking the window during automatic closing, the window will reverse direction for a short distance. Weather conditions such as extreme cold and/or ice may cause the window to auto-reverse. The window will return to normal operation once the object or condition is removed.

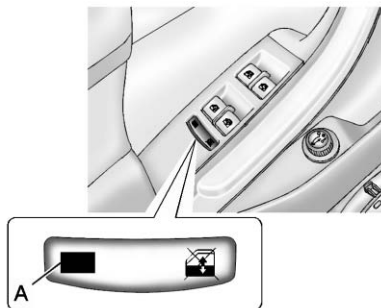
2-24 Keys, Doors and Windows


If conditions prevent the window from closing and the window continues to auto-reverse, it is possible to close the window with the ignition in ON/RUN/START by holding the window switch in the partially or fully pulled up position. Release of the switch from the partially pulled up position will cause the window to stop. Release of the switch from the fully pulled up position will activate the express-up and related obstacle detection features.


Overload

If the windows are repeatedly operated within a short time, the window operation is disabled for a short time.

Window Lockout

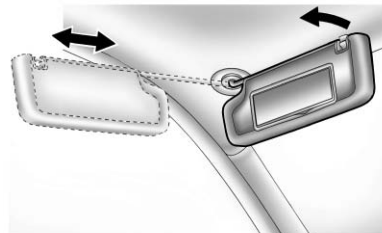


 **(Window Lockout):** The rear window lockout switch is on the driver door. This feature prevents the rear passenger windows from operating, except from the driver position.

Press  to activate the rear window lockout switch. The LED light (A) comes on when activated.

Press again to deactivate the lockout switch.

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, if available.

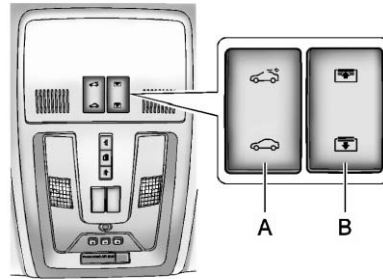
Roof

Sunroof

Dirt and debris may collect on the sunroof seal or in the tracks that 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.

On vehicles with a sunroof, the switches are located on the headliner above the rearview mirror. The ignition must be in ON/RUN/START, ACC/ACCESSORY, or in Retained Accessory Power (RAP) to operate the sunroof. See *Ignition Positions* on page 9-18 and *Retained Accessory Power (RAP)* on page 9-22.



- A. Sunroof Switch
- B. Sunshade Switch

Press the back of the sunroof switch (A) to open the sunroof. When the switch is pressed to the first stop, the sunroof will open to the vent position. Press the switch to the second stop to express open the sunroof to an automatically adjusted comfort position. Press the switch to the second stop again to open the glass further, up to the full open position. If more venting is needed when the sunroof is open,

adjust the sunroof to the comfort position or open one of the windows slightly.

Press the front of the switch to close the sunroof. The first stop will close the sunroof at a desired position at normal speed, and the second stop will express close the roof.

Do not keep the sunroof open for long periods of time while the vehicle is not in use. Excessive debris may collect in the tracks and plug the water draining system.

Press the back of the sunshade switch (B) to open the sunshade. Press the front of the switch to the first stop to close the sunshade to a desired position at a normal speed. Press the switch forward to the second stop to express close the sunshade.

Fully close the glass before fully closing the sunshade.

Express-open/Express-close

Press and release the front or rear of the sunroof switch (A) to express-open or express-close the sunroof.

Anti-Pinch Feature

If an object is in the path of the sunroof when it is closing, the anti-pinch feature detects the object and stops the sunroof from closing at the point of the obstruction. The sunroof then returns to the full-open position.

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3-2 Seats and Restraints

Head Restraints

Front Seats

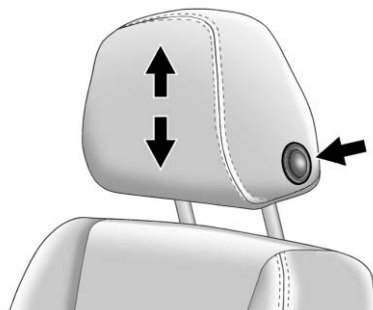
The vehicle's front seats have adjustable head restraints in all outboard seating positions.

⚠ 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.



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



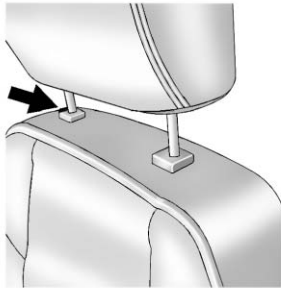
The height of the head restraint can be adjusted. To raise or lower the head restraint, press the button located on the side of the head restraint, and pull up or push the head restraint down, and release the button. Pull and push on the head restraint after the button is released to make sure that it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

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

Rear Seats

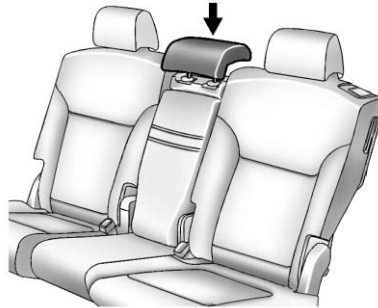
The rear seats have adjustable head restraints in the outboard seating positions.

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.



The center seating position has an integrated headrest that can be adjusted the same way as the outboard head restraints.

If you are installing a child restraint in the rear seat, see “Securing a Child Restraint Designed for the LATCH System” under *Lower Anchors and Tethers for Children (LATCH System)* on page 3-53.

Active Head Restraints

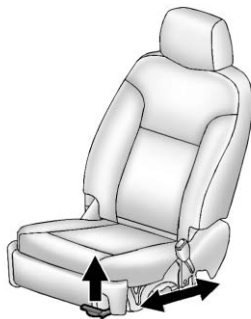
The vehicle has an active head restraint system in the front seating positions. These automatically tilt forward to reduce the risk of neck injury if the vehicle is hit from behind.

Front Seats

Seat Adjustment

WARNING

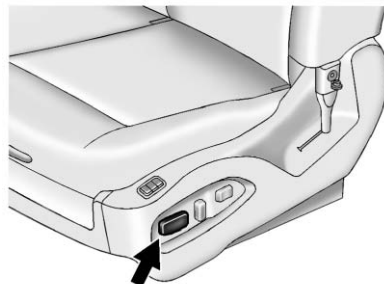
You can lose control of the vehicle if you try to adjust a manual driver seat while the vehicle is moving. The sudden movement could startle and confuse you, or make you push a pedal when you do not want to. Adjust the driver seat only when the vehicle is not moving.



To adjust a manual seat:

1. Pull the handle at the front of the seat cushion.
2. Move the seat forward or rearward to adjust the seat position.
3. Release the handle to stop the seat from moving.
4. Try to move the seat back and forth to be sure it is locked in place.

Power Seat Adjustment



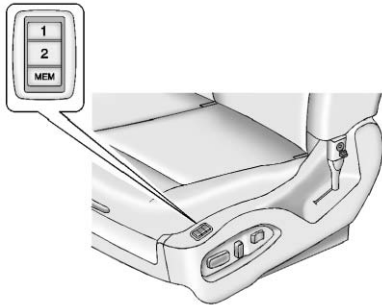
To adjust a power seat:

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

To adjust the seatback, see *Reclining Seatbacks on page 3-8*.

To adjust the lumbar support, see *Lumbar Adjustment on page 3-7*.

Memory Seats



On vehicles with the memory feature, the “1” and “2” buttons on the outboard side of the driver seat are used to manually save and recall features. These features include the driver seat and

adjustable throttle and brake pedal positions, if equipped. It also may include the outside mirror positions, if programmed. These manually stored positions are referred to as Button Memory positions.

Not all vehicles with the memory feature will have programmable outside mirrors.

The vehicle will also automatically save driver seat, adjustable throttle and brake pedal positions, and the outside mirror positions to the current driver Remote Keyless Entry (RKE) transmitter when the ignition is turned off. These automatically stored positions are referred to as RKE Memory positions. See *Remote Keyless Entry (RKE) System Operation on page 2-3* for more information on the RKE transmitter.

Storing Button Memory Positions

To save positions into Button Memory:

1. Adjust the driver seat, seatback recliner, adjustable pedals, and both outside mirrors to the desired driving positions.
2. Press and release the MEM (Memory) button.
3. Press “1” until a beep sounds.
4. Repeat Steps 1 through 3 for a second driver using “2.”

Recalling Button Memory Positions

To recall the manually saved Button Memory positions, press and hold “1” or “2.” The driver seat, adjustable pedals, and outside mirrors move to the positions stored to those buttons when pressed. Releasing “1” or “2” before the stored positions are reached stops the recall.


3-6 Seats and Restraints

If something has blocked the driver seat and/or the adjustable pedals 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.

Recalling RKE Memory Positions (Memory Remote Recall)


The Memory Remote Recall feature can recall the driver seat, adjustable pedals, and outside mirrors to previously stored RKE Memory positions when entering the vehicle.

Every time the ignition is placed in OFF or ACCESSORY, the positions of the driver seat, outside mirrors, and adjustable pedals are automatically stored to the RKE transmitter that was used to start the vehicle. These positions are

called RKE Memory positions and may be different than the previously mentioned Button Memory positions saved to the “1” or “2” buttons. To automatically recall RKE Memory positions, unlock the driver door with the RKE transmitter, and open the driver door. On vehicles with keyless access, opening the driver door when an RKE transmitter is present will activate the RKE Memory recall. If the driver door is already open, pressing the RKE transmitter  button will also activate the RKE Memory recall. The driver seat, outside mirrors, and pedals will move to the previously saved RKE Memory positions.

This feature is turned on or off using the vehicle personalization menu. See “Memory Remote Recall” under *Vehicle Personalization on page 5-42* for more information.

To stop recall movement, press one of the memory, power mirror, or power seat controls, or the adjustable pedal switch, if equipped.

If something has blocked the driver seat and/or the adjustable pedals, 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 the RKE transmitter  button. If the memory position is still not recalling, see your dealer for service.

Easy Exit Driver Seat

This feature moves the seat rearward allowing the driver more room to exit the vehicle.

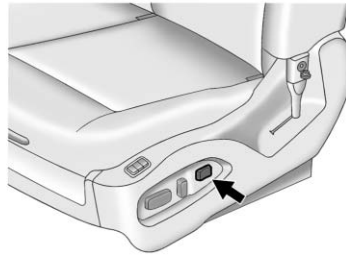
To activate, place the ignition in OFF or ACCESSORY and open the driver door. If the driver door is already open, placing the ignition in OFF or ACCESSORY will activate the easy exit driver seat.

This feature is turned on or off using the vehicle personalization menu. See “Easy Exit Driver Seat” under *Vehicle Personalization on page 5-42* for more information.

To stop recall movement, press one of the memory, power seat controls, or the adjustable pedal switch, if equipped.

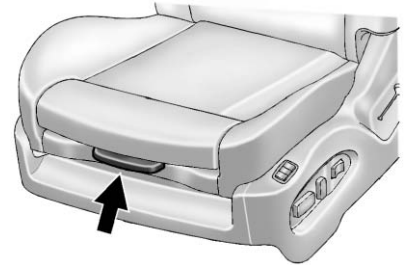
If something has blocked the driver seat while recalling the exit position, the recall may stop. Remove the obstruction; then press and hold the power seat control rearward for two seconds. Try recalling the exit position again. If the exit position is still not recalling, see your dealer for service.

Lumbar Adjustment Power Lumbar



Press and hold the front or rear of the control to increase or decrease lumbar support. Release the control when the seatback reaches the desired level of lumbar support.

Thigh Support Adjustment



If available, adjust the manual leg extension by pulling up on the lever, and then pulling or pushing on the support to lengthen or shorten it. Release the lever to lock it in place.

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 when reclined like this.

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

(Continued)

WARNING (Continued)

The lap belt cannot do its job either. In a crash, the 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.

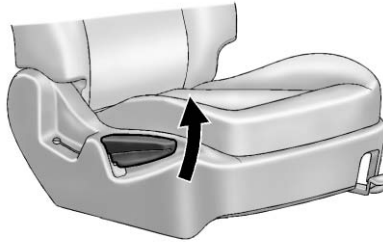
Manual Reclining Seatbacks

⚠ WARNING

You can lose control of the vehicle if you try to adjust a manual driver seat while the vehicle is moving. The sudden movement could startle and confuse you, or make you push a pedal when you do not want to. Adjust the driver seat only when the vehicle is not moving.

⚠ 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.



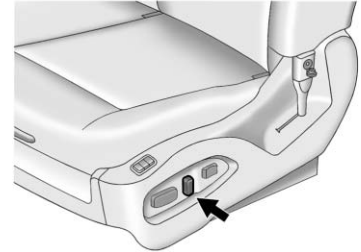
To recline a manual seatback:

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, if available:

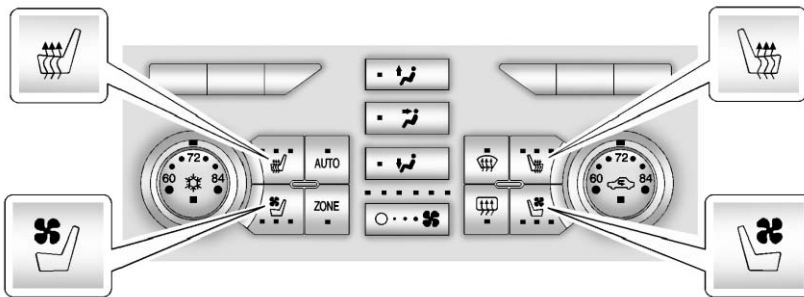
- Tilt the top of the control rearward to recline.
- Tilt the top of the control forward to raise.

3-10 Seats and Restraints

Heated and Ventilated Front Seats


WARNING

If you cannot feel temperature change or pain to the skin, the seat heater may cause burns even at low temperatures. 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 climate control panel. To operate, the ignition must be on.

Press  or  to heat the seat.

Press  or  to ventilate the seat.

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

The passenger seat may take longer to heat up.

Remote Start Heated and Ventilated Seats

During a remote start, the heated or ventilated seats can be turned on automatically. They 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 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 “Remote Start Auto Heated Seats” or “Remote Start Auto Seat Cool” under *Vehicle Personalization* on page 5-42 for more information.

Rear Seats

Split Folding Seatbacks

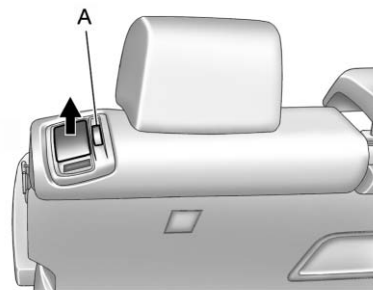
With this feature, either side of the rear seatback can be folded down for more cargo space.

Folding the Seatbacks

Notice: 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:

1. Unbuckle the rear safety belts and move the front seatbacks to the upright position. See *Reclining Seatbacks* on page 3-8 for more information.
2. Make sure that there is nothing under, in front of, or on the seat.



A. Seatback Lock Indicator

3. Lift the lever on the top of the seatback. The rear seatback lock indicator (A) extends when the seatback is unlocked.
4. Fold the seatback forward. The rear seatback lock indicator (A) retracts when the seatback is locked.

Keep the seatback in the upright, locked position when not in use.

3-12 Seats and Restraints

Raising the Seatbacks

 **WARNING**

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

 **WARNING**

A 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 the seatback:

1. Lift the lever on top of the seatback. Raise the seatback and release the lever. The rear seatback lock indicator (A) extends when the seatback is unlocked.
2. Push the seatback rearward until it locks in the upright position. The rear seatback lock indicator (A) retracts when the seatback is locked in place.
3. Make sure the rear safety belts are not twisted or caught between the seat cushion and the seatback.

Reclining the Seatbacks

To recline the seatback:

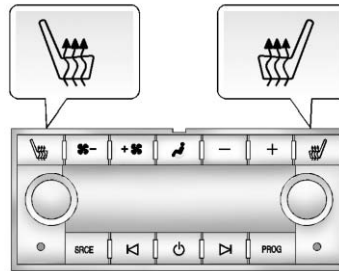
1. Lift and hold the lever on top of the seatback. The rear seatback lock indicator (A) extends when the seatback is unlocked.
2. Tilt the seatback rearward, and then release the lever when the seatback is in the desired position. The rear seatback lock indicator (A) retracts when the seatback is locked in place.



Heated Rear Seats

WARNING

If you cannot feel temperature change or pain to the skin, the seat heater may cause burns even at low temperatures. See the Warning under *Heated and Ventilated Front Seats* on page 3-10.

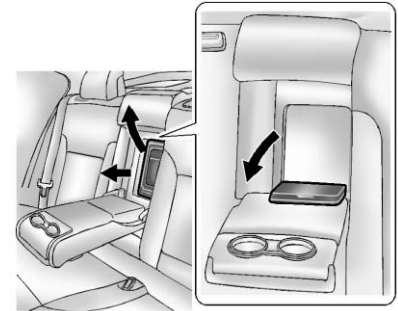
If available, the buttons are on the rear of the center console.



With the ignition on, press  or  to heat the left or right outboard seat cushion and seatback.

Press the button once for the highest setting. With each press of the button, the heated seat changes to the next lower setting, and then the off setting. Three lights indicate the highest setting, and one light indicates the lowest.

Rear Seat Pass-Through Door



The vehicle has a rear seat pass-through door in the center of the rear seatback. Fold down the center armrest and push down on the latch to open the door.

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, the injuries can be much worse. You can hit things inside the vehicle harder or be ejected from the vehicle. You and your passenger(s) can be seriously injured or killed. In the same crash, you might not be, if you are buckled up. Always fasten your safety belt, and check that your passenger(s) are restrained properly too.

WARNING

It is extremely dangerous to ride in a cargo area, inside or outside of a vehicle. In a collision, people riding in these areas are more likely to be seriously injured or killed. Do not allow people to ride in any area of your vehicle that is not equipped with seats and safety belts. Be sure everyone in the vehicle is in a seat and using a safety belt properly.

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

In most states and in all Canadian provinces, the law requires wearing safety belts. Here is why:

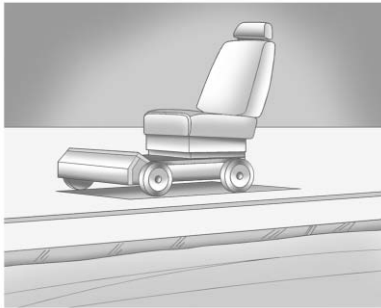
You never know if you will be in a crash. If you do have a crash, you do not know if it will be a serious one.

A few crashes are mild, and some crashes can be so serious that even buckled up, a person would not survive. But most crashes are in between. In many of them, people who buckle up can survive and sometimes walk away. Without safety belts they could have been badly hurt or killed.

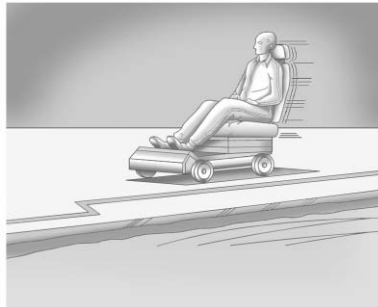
After more than 40 years of safety belts in vehicles, the facts are clear. In most crashes buckling up does matter ... a lot!

Why Safety Belts Work

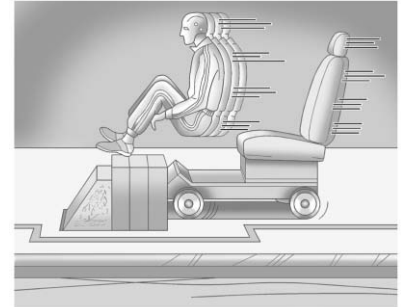
When you ride in or on anything, you go as fast as it goes.



Take the simplest vehicle. Suppose it is just a seat on wheels.

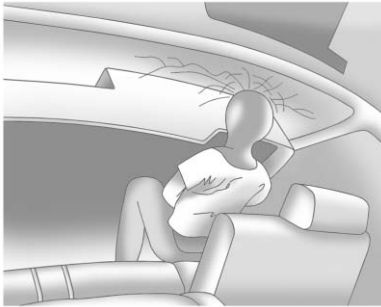


Put someone on it.

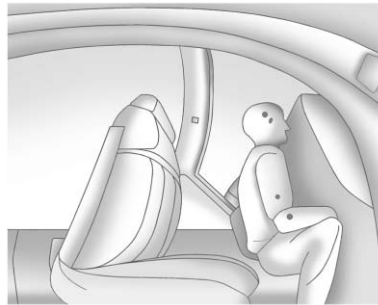


Get it up to speed. Then stop the vehicle. The rider does not stop.

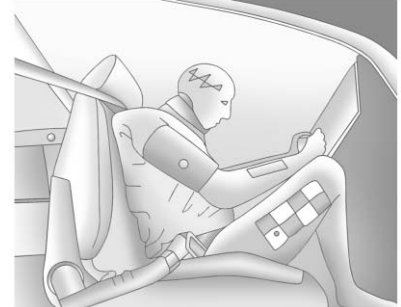
3-16 Seats and Restraints



The person keeps going until stopped by something. In a real vehicle, it could be the windshield...



or the instrument panel...



or the safety belts!

With safety belts, you slow down as the vehicle does. You get more time to stop. You stop over more distance, and your strongest bones take the forces. That is why safety belts make 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. But your chance of being conscious during and after an accident, so you *can* unbuckle and get out, is *much* greater if you are belted. And you can unbuckle a safety belt, even if you are upside down.

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. That is true not only in frontal collisions, but especially in side and other collisions.

Q: If I am a good driver, and I never drive far from home, why should I wear safety belts?

A: You may be an excellent driver, but if you are in a crash — even one that is not your fault — you and your passenger(s) can be hurt. Being a good driver does not protect you from things beyond your control, such as bad drivers.

Most accidents occur within 40 km (25 mi) of home.

And the greatest number of serious injuries and deaths occur at speeds of less than 65 km/h (40 mph).

Safety belts are for everyone.

How to Wear Safety Belts Properly

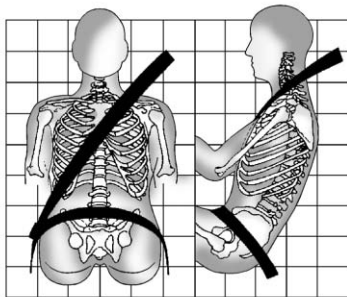
This section is only for people of adult size.

Be aware that 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 3-45* or *Infants and Young Children on page 3-47*. 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.

Occupants who are not buckled up can be thrown out of the vehicle in a crash. And they can strike others in the vehicle who are wearing safety belts.

First, before you or your passenger(s) wear a safety belt, there is important information you should know.

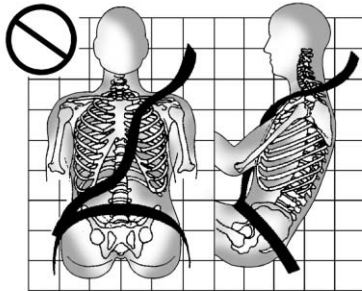


Sit up straight and always keep your feet on the floor in front of you. The lap part of the belt should be worn low and snug on the hips, just

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. The shoulder belt should go 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.

Q: What is wrong with this?

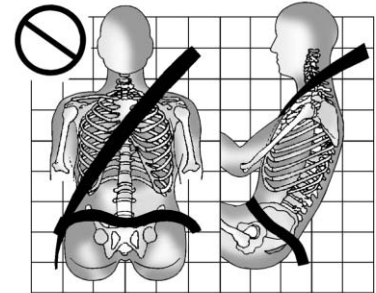


A: The shoulder belt is too loose. It will not give as much protection this way.

⚠ WARNING

You can be seriously hurt if the shoulder belt is too loose. In a crash, you would move forward too much, which could increase injury. The shoulder belt should fit snugly against your body.

Q: What is wrong with this?



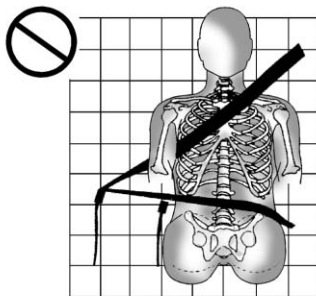
A: The lap belt is too loose. It will not give nearly as much protection this way.

3-20 Seats and Restraints

WARNING

You can be seriously hurt if the lap belt is too loose. In a crash, you could slide under the lap belt and apply force on your abdomen. This could cause serious or even fatal injuries. The lap belt should be worn low and snug on the hips, just touching the thighs.

Q: What is wrong with this?

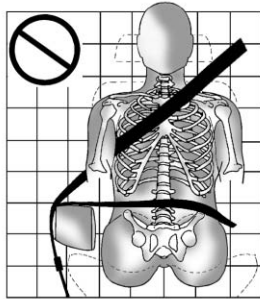


A: The belt is buckled in the wrong buckle.

WARNING

You can be seriously injured if the belt is buckled in the wrong place like this. In a crash, the belt would go up over your abdomen. The belt forces would be there, not on the pelvic bones. This could cause serious internal injuries. Always buckle the belt into the buckle nearest you.

Q: What is wrong with this?

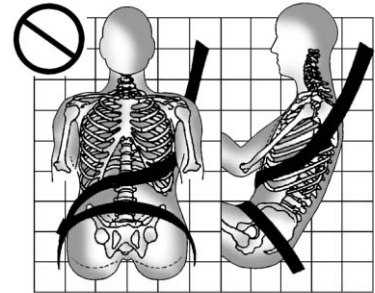


A: The belt is over an armrest.

⚠ WARNING

You can be seriously injured if the belt goes over an armrest like this. The belt would be much too high. In a crash, you can slide under the belt. The belt force would then be applied on the abdomen, not on the pelvic bones, and that could cause serious or fatal injuries. Be sure the belt goes under the armrests.

Q: What is wrong with this?



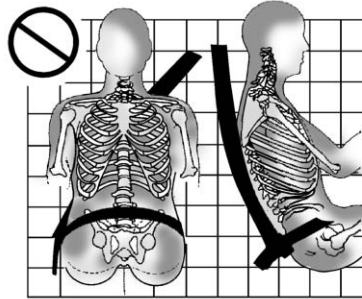
A: The shoulder belt is worn under the arm. It should be worn over the shoulder at all times.

3-22 Seats and Restraints

WARNING

You can be seriously injured if you wear the shoulder belt under your arm. In a crash, your body would move too far forward, which would increase the chance of head and neck injury. Also, the belt would apply too much force to the ribs, which are not as strong as shoulder bones. You could also severely injure internal organs like your liver or spleen. The shoulder belt should go over the shoulder and across the chest.

Q: What is wrong with this?

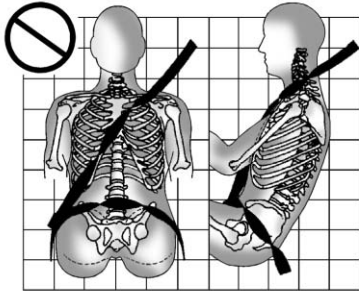


A: The belt is behind the body.

WARNING

You can be seriously injured by not wearing the lap-shoulder belt properly. In a crash, you would not be restrained by the shoulder belt. Your body could move too far forward increasing the chance of head and neck injury. You might also slide under the lap belt. The belt force would then be applied right on the abdomen. That could cause serious or fatal injuries. The shoulder belt should go over the shoulder and across the chest.

Q: What is wrong with this?



A: The belt is twisted across the body.

⚠ WARNING

You can be seriously injured by a twisted belt. In a crash, you would not have the full width of the belt to spread impact forces. If a belt is twisted, make it straight so it can work properly, or ask your dealer to fix it.

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.

3-24 Seats and Restraints

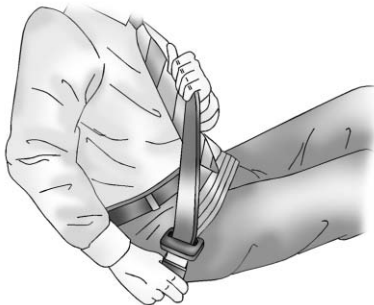


3. Push the latch plate into the buckle until it clicks.

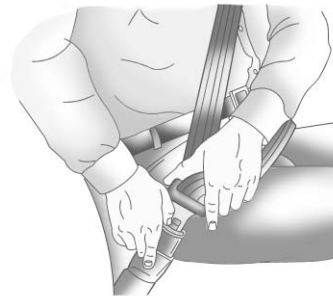
Pull up on the latch plate to make sure it is secure. If the belt is not long enough, see *Safety Belt Extender* on page 3-28.

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

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



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



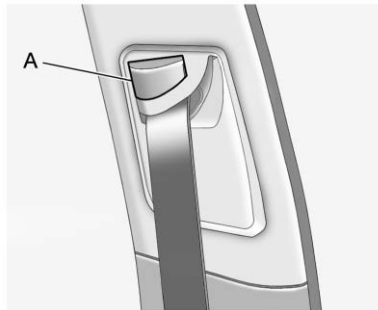
To unlatch the belt, push the button on the buckle.

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 3-18.



Move the height adjuster up to the desired position by pushing up on the height adjuster.

After the height adjuster is set to the desired position, try to move it up or down without pressing the release button (A) to make sure it has locked into position. Press the release button to lower the height adjuster.

Safety Belt Pretensioners

This vehicle has safety belt pretensioners for the front and rear 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 and near frontal crash and will deploy in side, rear, and rollover events if the threshold conditions for pretensioner activation are met.

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 3-29.

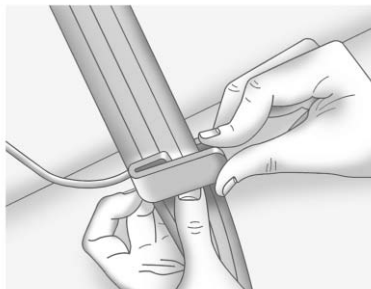
3-26 Seats and Restraints

Rear Safety Belt Comfort Guides

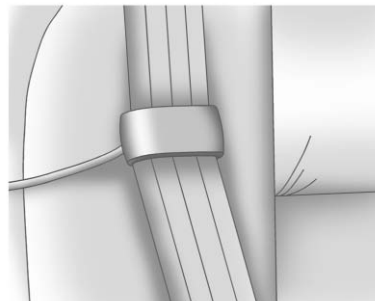
This vehicle may have rear shoulder belt comfort guides for the outboard passenger positions in the rear seat. If not, they are available through your dealer. The guides may provide added safety belt comfort for older children who have outgrown booster seats and for some adults. When installed on a shoulder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

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.



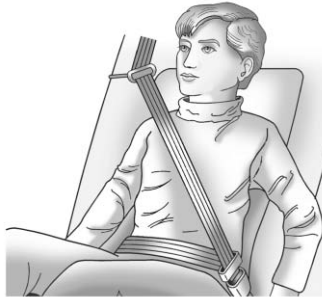
2. Place the guide over the belt, and insert the two edges of the belt into the slots of the guide.



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 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 that the shoulder portion of the belt is on the shoulder and not falling off of it. The belt should be close to, but not contacting, the neck.

To remove and store the comfort guide, squeeze the belt edges together so that the safety belt can be removed from the guide. Slide the guide back into its storage pocket located on the side of the seat.

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.

3-28 Seats and Restraints

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. For more information, 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 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* for more information.

Keep safety belts clean and dry. See *Safety Belt Care on page 3-28*.

Safety Belt Care

Keep belts clean and dry.



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 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 5-16.

Airbag System

The vehicle has the following airbags:

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

All of the airbags in the vehicle will have the word AIRBAG embossed in the trim or on an attached label near the deployment opening.

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For frontal airbags, the word AIRBAG will appear on the middle part of the steering wheel for the driver and on the instrument panel for the right front passenger.

With seat-mounted side impact airbags, the word AIRBAG will appear on the side of the seatback closest to the door.

With roof-rail airbags, the word AIRBAG will appear along the trim.

Even if you do not have a right front passenger seat in the vehicle there is still an active frontal airbag in the right side of the instrument panel. Do not place cargo in front of this airbag.

WARNING

Be sure that cargo is not near an airbag. In a crash, an inflating airbag might force that object toward a person. This could cause severe injury or even death. Secure objects away from the area in which an airbag would inflate. For more information, see *Where Are the Airbags?* on page 3-32 and *Vehicle Load Limits* on page 9-12.

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 a safety belt — even if the vehicle has airbags. Airbags are designed to work with safety belts, but do not replace them. Also, airbags are not designed to deploy in every crash. In some crashes safety belts are the only restraint. See *When Should an Airbag Inflate?* on page 3-33.

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

⚠ WARNING

Airbags inflate with great force, 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 you were 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.

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. Airbags plus lap-shoulder belts offer protection for adults and older children, but not for young children and infants. Neither the vehicle's safety belt system nor its airbag system is designed for them. Young children and infants need the protection that a child restraint system can provide. Always secure children properly in the vehicle. To read how, see *Older Children on page 3-45* or *Infants and Young Children on page 3-47*.



There is an airbag readiness light on the instrument panel 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 5-16* for more information.

Where Are the Airbags?



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



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



Driver Side Shown, Passenger Side Similar

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



Driver Side Shown, Passenger Side Similar

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

⚠ WARNING

If something is between an occupant and an airbag, the airbag might not inflate properly or it might force the object into

(Continued)

WARNING (Continued)

that person causing severe injury or even death. The path of an inflating airbag must be kept clear. Do not put anything between an occupant and an airbag, and do not attach or put anything on the steering wheel hub or on or near any other airbag covering.

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

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?

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 right front passenger's head and chest. However, they are only designed to inflate if the impact exceeds a predetermined 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.

Whether the frontal airbags will or should deploy is not based on how fast your vehicle is traveling. It depends largely on what you hit, the direction of the impact, and how quickly your vehicle slows down.

Frontal airbags may inflate at different crash speeds. For example:

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- If the vehicle hits a stationary object, the airbags could inflate at a different crash speed than if the vehicle hits a moving object.
- If the vehicle hits an object that deforms, the airbags could inflate at a different crash speed than if the vehicle hits an object that does not deform.
- If the vehicle hits a narrow object (like a pole), the airbags could inflate at a different crash speed than if the vehicle hits a wide object (like a wall).
- If the vehicle goes into an object at an angle, the airbags could inflate at a different crash speed than if the vehicle goes straight into the object.

Thresholds can also vary with specific vehicle design.

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

In addition, the vehicle has dual-stage frontal airbags. Dual-stage airbags adjust the restraint according to crash severity. The vehicle has electronic frontal sensors, which help the sensing system distinguish between a moderate frontal impact and a more severe frontal impact. For moderate frontal impacts, dual-stage airbags inflate at a level less than full deployment. For more severe frontal impacts, full deployment occurs.

The vehicle has seat-mounted side impact and roof-rail airbags. See *Airbag System on page 3-29*. Seat-mounted side impact and roof-rail airbags are intended to inflate in moderate to severe side

crashes. In addition, these roof-rail airbags are intended to inflate during a rollover. Seat-mounted side impact and roof-rail airbags will inflate if the crash severity is above the system's designed threshold level. The threshold level can vary with specific vehicle design.

Seat-mounted side impact airbags are not intended to inflate in frontal impacts, near-frontal impacts, rollovers, or rear impacts. Roof-rail airbags are not intended to inflate in rear impacts. A seat-mounted side impact airbag is intended to deploy on the side of the vehicle that is struck. Both roof-rail airbags will deploy when either side of the vehicle is struck, or if the sensing system predicts that the vehicle is about to roll over, or in a severe frontal impact.

In any particular crash, no one can say whether an airbag should have inflated simply because of the damage to a vehicle or because of what the repair costs were. For frontal airbags, inflation is determined by what the vehicle hits, the angle of the impact, and how quickly the vehicle slows down. For seat-mounted side impact and roof-rail airbags, deployment is determined by the location and severity of the side impact. In a rollover event, roof-rail airbag deployment is determined by the direction of the roll.

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 and deploy. The inflator, the airbag, and related hardware are all part of the airbag module.

Frontal airbag modules are located inside the steering wheel and instrument panel. For vehicles with seat-mounted side impact airbags, there are airbag modules in the side of the front seatbacks closest to the door. For vehicles with roof-rail airbags, there are airbag modules in the ceiling of the vehicle, near the side windows that have occupant seating positions.

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. Frontal airbags distribute the force of the impact more evenly over the occupant's upper body, stopping the occupant more gradually. Seat-mounted side impact and roof-rail airbags distribute the force of the impact more evenly over the occupant's upper body.

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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 3-33 for more information.

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 deploy. Some components of the airbag module may be hot for several minutes. For location of the airbag modules, see *What Makes an Airbag Inflate?* on page 3-35.

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 and hazard warning flashers, and shut off the fuel system after the airbags inflate.

You can lock the doors, turn off the interior lamps and 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 right front 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 your 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 13-11* and *Event Data Recorders on page 13-11*.
- 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 right front passenger position. The passenger airbag status indicator will be visible on the overhead console when the vehicle is started.



United States



Canada

The words ON and OFF, or the symbol for on and off, are visible during the system check. If you are using remote start, if equipped, to start the vehicle from a distance, you may not see the system check. When the system check is complete, either the word ON or OFF, or the symbol for on or off, will be visible. See *Passenger Airbag Status Indicator* on page 5-17.

The passenger sensing system turns off the right front passenger frontal airbag and seat-mounted side impact airbag under certain conditions. The driver airbags and the roof-rail airbags are not affected by the passenger sensing system.

The passenger sensing system works with sensors that are part of the right front passenger seat.

The sensors are designed to detect the presence of a properly seated occupant and determine if the right front passenger frontal airbag and seat-mounted side impact airbag should be enabled (may inflate) or not.

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

We recommend that children be secured in a rear seat, including: an infant or a child riding in a rear-facing child restraint; a child riding in a forward-facing child seat; an older child riding in a booster seat; and children, who are large enough, using safety belts.

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.

(Continued)

WARNING (Continued)

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

Secure rear-facing child restraints in a rear seat, even if the airbag(s) are off. If you secure a forward-facing child restraint in the 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.

The passenger sensing system is designed to turn off the right front passenger airbag and seat-mounted side impact airbag if:

- The right front passenger seat is unoccupied.
- The system determines that an infant is present in a rear-facing infant seat.
- The system determines that a small child is present in a child restraint.
- The system determines that a small child is present in a booster seat.
- A right front passenger takes his/her weight off of the seat for a period of time.
- The right front passenger seat is occupied by a smaller person, such as a child who has outgrown child restraints.
- Or, if there is a critical problem with the airbag system or the passenger sensing system.

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When the passenger sensing system has turned off the right front passenger frontal airbag and seat-mounted side impact airbag, the off indicator will light and stay lit to remind you that the airbags are off. See *Passenger Airbag Status Indicator on page 5-17*.

The passenger sensing system is designed to turn on (may inflate) the right front passenger frontal airbag and seat-mounted side impact airbag anytime the system senses that a person of adult size is sitting properly in the right front passenger seat.

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

For some children who have outgrown child restraints and for very small adults, the passenger

sensing system may or may not turn off the right front passenger frontal airbag and seat-mounted side impact 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 5-16* for more information, including important safety information.

If the On Indicator is Lit for 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 a Child Restraint in the Right Front Seat Position" under *Securing Child Restraints (Rear Seat) on page 3-62* or *Securing Child Restraints (Front Passenger Seat) on page 3-64*.

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.

If the on indicator is still lit, secure the child restraint in a rear seat position in the vehicle, and check with your dealer.

If the Off Indicator is Lit for an Adult-Size Occupant



If a person of adult-size is sitting in the right front passenger seat, but the off indicator is lit, it could be because that person is not sitting properly in the seat. If this happens,

use the following steps to allow the system to detect that person and enable the right front passenger frontal airbag and seat-mounted side impact airbag:

1. Turn the vehicle off.
2. Remove any additional material from the seat, such as blankets, cushions, seat covers, seat heaters, or seat massagers.
3. Place the seatback in the fully upright position.
4. Have the person sit upright in the seat, centered on the seat cushion, with legs comfortably extended.
5. Restart the vehicle and have the person remain in this position for two to three minutes after the on 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 Saab for your specific vehicle. See *Adding Equipment to the Airbag-Equipped Vehicle* on page 3-43 for more information about modifications that can affect how the system operates.

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.

WARNING

For up to 10 seconds after the ignition 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

Q: Is there anything I might add to or change about the vehicle that could keep the airbags from working properly?

A: Yes. If you add things that change the vehicle's frame, bumper system, height, front end or side sheet metal, they may keep the airbag system from working properly. 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, rollover sensor module, airbag wiring, or cargo restraint system and convenience net can affect the operation of the airbag system.

In addition, the vehicle has a passenger sensing system for the right front 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-Saab covers, upholstery or trim, or with Saab 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 3-38*.

If you have questions, call Customer Assistance. The phone numbers and addresses for Customer Assistance are in Step Two of the Customer Satisfaction Procedure in this manual. See *Customer Satisfaction Procedure on page 13-1*.

If the vehicle has rollover roof-rail airbags, see *Different Size Tires and Wheels on page 10-71* for additional important information.

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Q: Because I have a disability, I have to get my vehicle modified. How can I find out whether this will affect my airbag system?

A: If you have questions, call Customer Assistance. The phone numbers and addresses for Customer Assistance are in Step Two of the Customer Satisfaction Procedure in this manual. See *Customer Satisfaction Procedure on page 13-1*.

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

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 5-16* for more information.

Notice: 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 covers, have the airbag covering and/or airbag module replaced. For the location of the airbag modules, see *What Makes an Airbag Inflate?* on page 3-35. See your dealer for service.

Replacing Airbag System Parts after a Crash

 **WARNING**

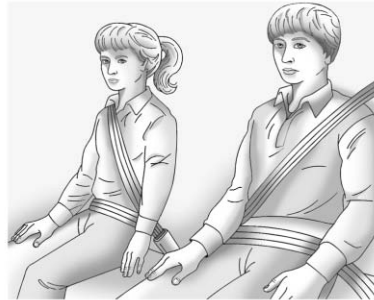
A crash can damage the airbag systems in the vehicle. A damaged airbag system may not work properly and may not protect you and your passenger(s) in a crash, resulting in serious injury or even death. To help make sure the airbag systems are working properly after a crash, have them inspected and any 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 5-16 for more information.

Child Restraints

Older Children



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

The manufacturer's 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 3-23 for more information. If the shoulder belt still does not rest on the shoulder, then return to the booster seat.

3-46 Seats and Restraints

- 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 3-23.

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.

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 do this.

Never allow two children to wear the same safety belt. The safety belt cannot properly spread the impact forces. In a crash, the two

(Continued)

WARNING (Continued)

children can be crushed together and seriously injured. A safety belt must be used by only one person at a time.



⚠ WARNING

Never do this.

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 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.

Airbags plus lap-shoulder belts offer protection for adults and older children, but not for young children and infants. Neither the vehicle's safety belt system nor its airbag system is designed for them. Every time infants and young children ride in vehicles, they should have the protection provided by appropriate child restraints.

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

WARNING

Never do this.

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

Never do this.

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

(Continued)

WARNING (Continued)

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 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's 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.

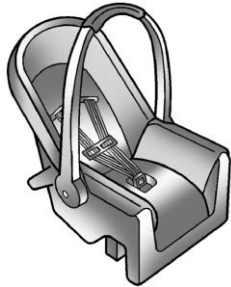
 **WARNING**

To reduce the risk of neck and head injury during a crash, infants need complete support. This is because an infant's neck is not fully developed and its head weighs so much compared with the rest of its body. In a crash, an infant in a rear-facing child restraint settles into the restraint, so 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



(A) Rear-Facing Infant Seat

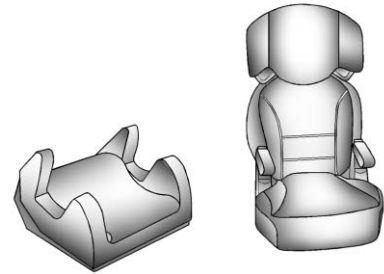
A rear-facing infant seat (A) provides restraint with the seating surface against the back of the infant.

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



(B) Forward-Facing Child Seat

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



(C) Booster Seats

A booster seat (C) 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 3-53 for more information. 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.

We recommend that children and child restraints be secured in a rear seat, including: an infant or a child riding in a rear-facing child restraint; a child riding in a forward-facing child seat; an older child riding in a booster seat; and children, who are large enough, using safety belts.

A label on your 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 3-38 for additional information.

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

If the vehicle does not have a rear seat that will accommodate a rear-facing child restraint, we recommend that rear-facing child restraints not be transported in the vehicle, even if the airbag is off.

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 you install a child restraint, 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 your vehicle — even when no child is in it.

Lower Anchors and Tethers for Children (LATCH System)

The LATCH system holds a child restraint during driving or in a crash. This system is designed to make installation of a child restraint easier. The LATCH system uses anchors in the vehicle and attachments on the child restraint that are made for use with the LATCH system.

Make sure that a LATCH-compatible child restraint is properly installed using the anchors, or use the vehicle's safety belts to secure the restraint, following the instructions that came with that restraint, and also the instructions in this manual.

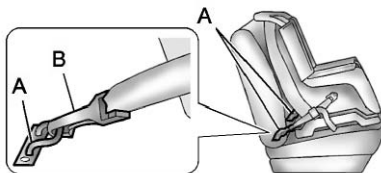
3-54 Seats and Restraints

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.

In order to use the LATCH system in your vehicle, you need a child restraint that has LATCH attachments. The child restraint manufacturer will provide you with instructions on how to use the child restraint and its attachments. The following explains how to attach a child restraint with these attachments in your vehicle.

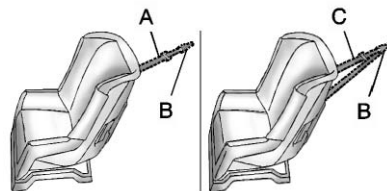
Not all vehicle seating positions or child restraints have lower anchors and attachments or top tether anchors and attachments.

Lower Anchors



Lower anchors (A) 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 (B).

Top Tether Anchor

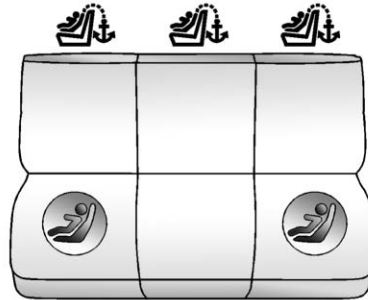


A top tether (A, C) anchors the top of the child restraint to the vehicle. A top tether anchor is built into the vehicle. The top tether attachment (B) on the child restraint connects to the top tether anchor in the vehicle in order to reduce the forward movement and rotation of the child restraint during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

Your child restraint may have a single tether (A) or a dual tether (C). Either will have a single attachment (B) 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 your 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.

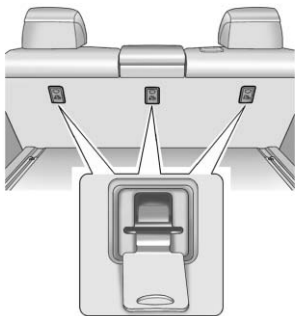


To assist you in locating the lower anchors, each seating position with lower anchors has two labels, near the crease between the seatback and the seat cushion.



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

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Top Tether Anchors

The top tether anchors for each rear seating position are located under the covers, on the back of the rear seatback. Be sure to use an anchor located 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 3-52 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
(Continued)

WARNING (Continued)

children cannot reach them. Pull the shoulder belt all the way out of the retractor to set the lock, if the vehicle has one, after the child restraint has been installed.

Notice: 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.

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 your child restraint manufacturer instructions and the instructions in this manual.
 - 1.1. Find the lower anchors for the desired seating position.

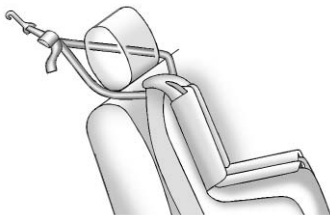
3-58 Seats and Restraints

- 1.2. Put the child restraint on the seat.

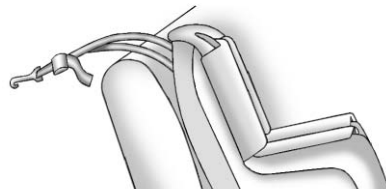
For the outboard rear seating positions, if the head restraint interferes with the proper installation of the child restraint, the head restraint may be removed. See “Head Restraint Removal and Reinstallation” at the end of this section.

- 1.3. Attach and tighten the lower attachments on the child restraint to the lower anchors.
2. If the child restraint manufacturer recommends that the top tether be attached, 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 and open its cover to expose the anchor.

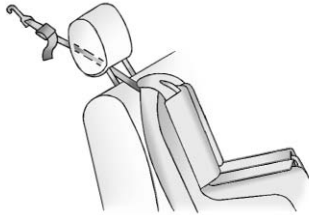
- 2.2. Route, attach, and tighten the top tether according to your child restraint instructions and the following instructions:



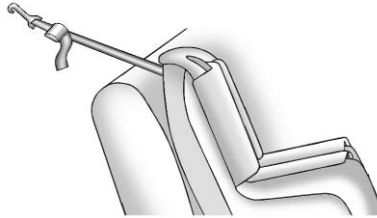
- If you are using a dual tether in the rear outboard seating position with an adjustable head restraint, route the dual tether around the head restraint.



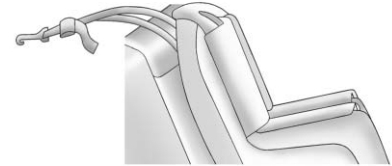
- If you are using a dual tether in the rear outboard seating position and the head restraint has been removed, route the dual tether over the seatback.



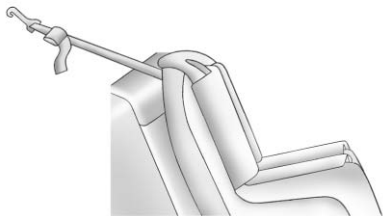
- If you are using a single tether in the rear outboard seating position with an adjustable head restraint, route the single tether under the head restraint and in between the head restraint posts.



- If you are using a single tether in the rear outboard seating position and the head restraint has been removed, route the single tether over the seatback.



- If you are using a dual tether in the rear center seating position, lower the adjustable headrest down to its stowed position and route the dual tether over the headrest.



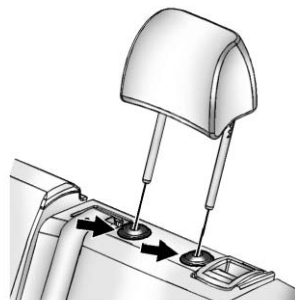
- If you are using a single tether in the rear center seating position, lower the adjustable headrest down to its stowed position and route the single tether over the headrest.
3. Before placing a child in the child restraint, make sure it is securely held in place. To check, grasp the child restraint 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.

Head Restraint Removal and Reinstallation

The rear outboard head restraints can be removed if they interfere with the proper installation of the child restraint. The headrest in the rear center seating position is not removable and should be lowered to the stowed position for child restraint installation.

To remove the head restraint:

1. Partially fold the seatback forward. See *Rear Seats* on page 3-11 for additional information.



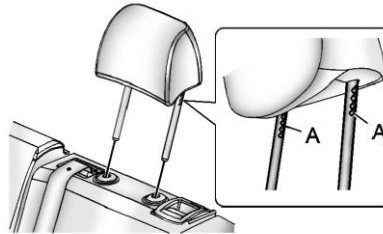
2. Press both buttons on the head restraint posts at the same time, and pull up on the head restraint.
3. Store the head restraint in the cargo area of the vehicle.

- When the child restraint is removed, reinstall the head restraint before the seating position is used.

⚠ WARNING

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

To reinstall the head restraint:



1. Insert the head restraint posts into the holes in the top of the seatback. The notches (A) on the posts must face the driver side of the vehicle.
2. Push the head restraint down.
If necessary, press the height adjustment release button to further lower the head restraint. See *Head Restraints* on page 3-2.
3. Try to move the head restraint to make sure that it is locked in place.

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 (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 3-53 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 3-53 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.

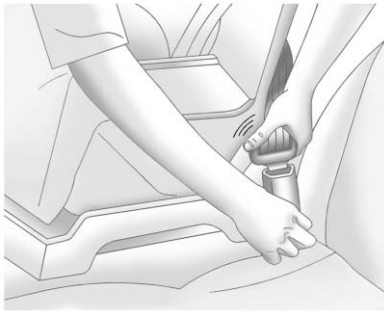
If the child restraint does not have the LATCH system, you will be using the safety belt to secure the child restraint in this position. Be sure to follow the instructions that came with the child restraint. Secure the child in the child restraint when and as the instructions say.

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 3-52.

1. Put the child restraint on the seat.

If the head restraint interferes with the proper installation of the child restraint, the head restraint may be removed. See “Head Restraint Removal and Reinstallation” under *Lower Anchors and Tethers for Children (LATCH System)* on page 3-53.

2. 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.

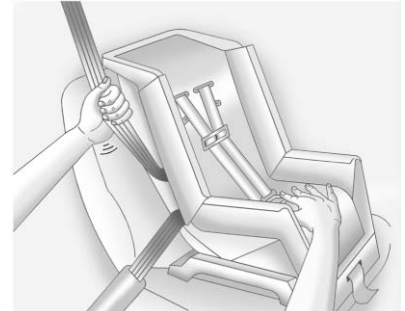


3. Push the latch plate into the buckle until it clicks.

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.

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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 3-53 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. If the head restraint was removed, reinstall it before the seating position is used. See "Head Restraint Removal and Reinstallation" under *Lower Anchors and Tethers for Children (LATCH System)* on page 3-53 for additional information on installing the head restraint properly.

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 3-52.

In addition, the vehicle has a passenger sensing system which is designed to turn off the right front passenger frontal airbag under certain conditions. See *Passenger Sensing System* on page 3-38 and *Passenger Airbag Status Indicator* on page 5-17 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.

(Continued)

WARNING (Continued)

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.

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 3-38* for additional information.

If the vehicle does not have a rear seat that will accommodate a rear-facing child restraint, a rear-facing child restraint should not be installed in the vehicle, even if the airbag is off.

If the child restraint has the LATCH system, see *Lower Anchors and Tethers for Children (LATCH System) on page 3-53* 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 3-53* 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.

3-66 Seats and Restraints

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

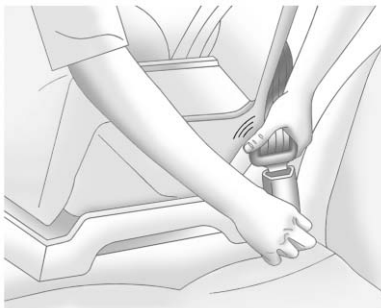
You will be using the lap-shoulder belt to secure the child restraint in this position. Follow the instructions that came with the child restraint.

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 right front passenger frontal airbag and seat-mounted side impact 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 5-17.

2. Put the child restraint on the seat.

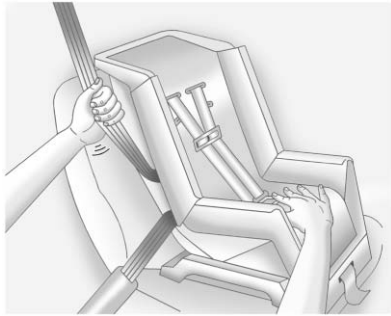
3. Pick up the latch plate, and run the lap and shoulder portions of the vehicle's safety belt through or around the restraint. The child restraint instructions will show you how.



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.

If the vehicle does not have a rear seat and 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 3-53 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.

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 3-38 for more information.

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

Storage

Storage Compartments

- Glove Box 4-1
- Cupholders 4-2
- Front Storage 4-2
- Armrest Storage 4-2
- Center Console Storage 4-2

Additional Storage Features

- Cargo Cover 4-3
- Cargo Tie-Downs 4-5
- Cargo Management System 4-5
- Cargo Net 4-9
- Convenience Net 4-11
- First Aid Kit 4-11

Roof Rack System

- Roof Rack System 4-12

Storage Compartments

Glove Box

Lift the glove box handle up to open it.

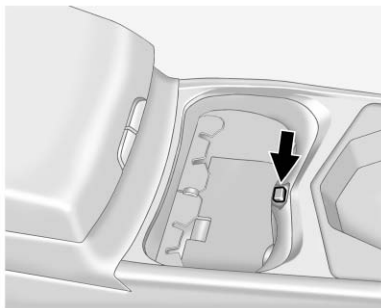
The glove box is air conditioned and can be used to store items at a lower temperature. The vehicle air conditioning must be turned on for the maximum cool air to enter the glove box.



Move the slide control to open or close the opening. Close the glove box to keep cold air from entering the vehicle.

4-2 Storage

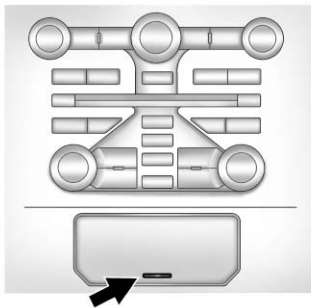
Cupholders



This vehicle has a cupholder equipped with a divider that can be adjusted to accommodate large containers or small containers.

For large containers, push the button to move aside the divider and make the cupholder deeper. For small containers, push down on the top edge of the divider to lock it back in place to make the cupholder shorter.

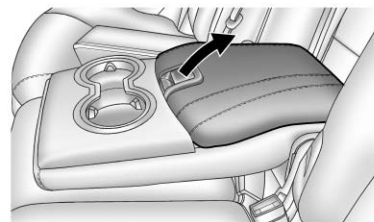
Front Storage



Push the button on the door to open the storage area in front of the shift lever.

Armrest Storage

Pull the rear seat armrest forward to access the cupholders.



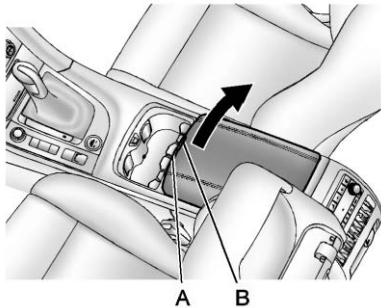
For vehicles with rear armrest storage, pull the lever to access the storage area.

Center Console Storage

The center console has an armrest and storage area.

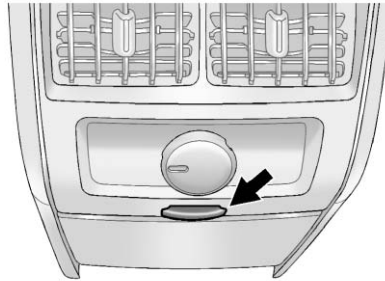
The armrest can be adjusted to a forward, middle, or rearward position.

Move the armrest to the full rearward position to access the buttons and open the storage area.



The storage area has an upper storage tray and a lower main storage. Push the button (A) to access the upper storage tray and the button (B) to access the lower main storage.

There is an Accessory Power Outlet (APO) and Input Jacks for auxiliary audio devices. For more information, see the separate infotainment system manual.

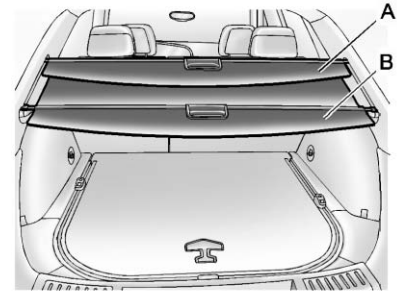


Push the button to open the storage area located at the rear of the center console.

Additional Storage Features

Cargo Cover

For vehicles with the dual position cargo cover, it can be used to cover items in the cargo area of the vehicle.



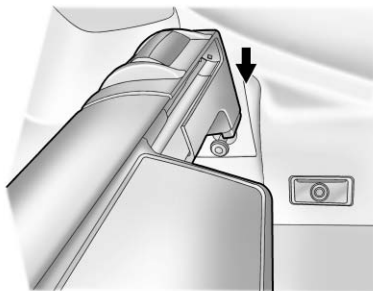
The shade can be set in two positions. It can be set in a halfway open (A) position for loading objects

4-4 Storage

into the rear compartment, or the lower (B) position to conceal objects in the rear compartment.

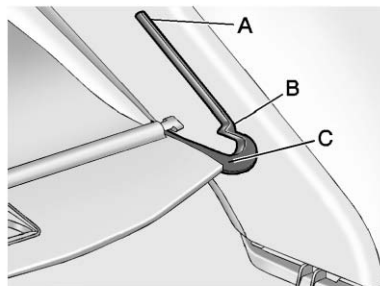
Install the Cargo Cover

1. Hold the cartridge so that the pull-out shade faces the rear of the vehicle.



2. Align the cartridge over the pins on the trim panels of the vehicle.
3. Push down on the cartridge to snap it into place.

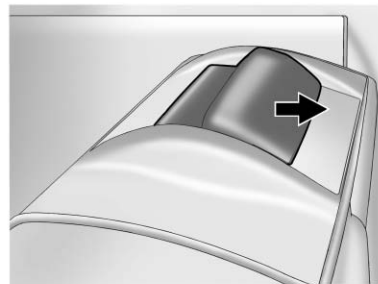
4. Unroll the shade toward the rear of the vehicle.



5. Insert the shade pins in the channels (C) on both sides.
6. Slide the shade to the lower (B) position, or the halfway open (A) position.

Remove the Cargo Cover

1. Remove the cover from the channels and carefully roll it back up.



2. Slide the button on the top to release the cartridge.
3. Pull up to remove the cartridge from the pins.

⚠ WARNING

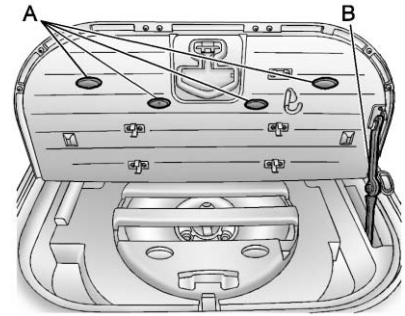
An improperly stored cargo cover could be thrown about the vehicle during a collision or sudden maneuver. Someone could be injured. If the cover is removed, always store it in the proper storage location. When it is replaced, always be sure that it is securely reattached.

Cargo Tie-Downs

For vehicles equipped with cargo tie-downs, the four tie-downs are located in the rear compartment of the vehicle. Use the tie-downs to secure small loads.

Cargo Management System

To open the cargo management system, pull the handle and lift up.

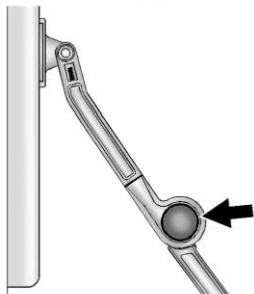


A prop rod (B) locks to hold the cover up when opened.

Four hooks (A) are located on the inside cover and can be used for storing items.

There may be additional storage compartments on each side of the cargo management system. Lift the panel up to open.

4-6 Storage



Press the red pushbutton on the prop rod to close the cover.

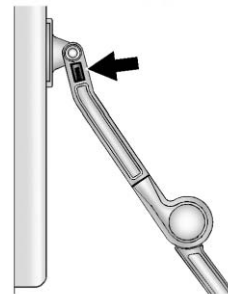
Rear Storage Area

WARNING

An improperly latched and closed cargo cover, or cargo cover left in the open position, could be thrown about the vehicle during a crash or sudden maneuver. Someone could be injured. Be sure to return the cover to the closed position and latch before driving. If the cover is removed, always store it outside of the vehicle. When it is replaced, always be sure that it is securely reattached.

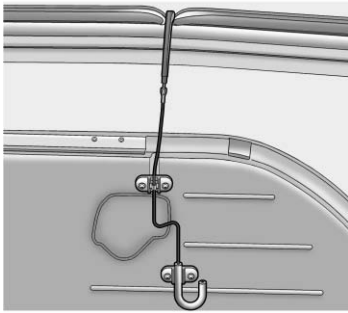
To access the rear storage area of the cargo management system, and the tire sealant and compressor kit:

1. Remove the cargo cover, if equipped.
2. Open the cargo management system cover.



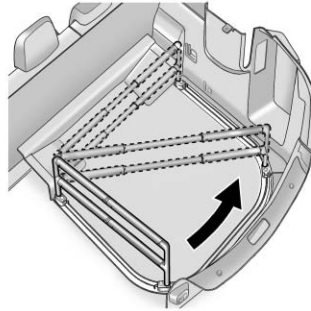
3. Release the prop rod from the inside cover by sliding the red clip down.

Unhook the prop rod from the pin on the inside cover. Store the unhooked prop rod by folding it into the cargo management compartment.

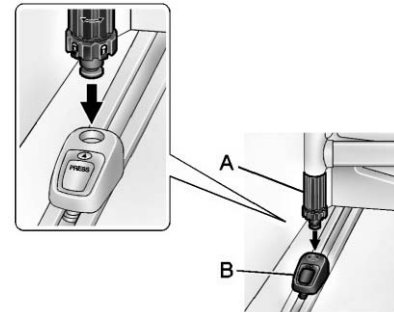


4. Store the cargo management system cover by hooking it onto the weatherstrip.

U-Rail




For vehicles with a u-rail system, the fence can be moved to different positions on the u-rail track to secure cargo.




Push both adapter buttons to move the adapters (B) on the straight part of the u-rail.

To move the fence around the u-rail, disconnect one side:

1. Unlock by turning the latch (A) to align  with the arrow on the adapter (B).
2. Push the adaptor button to move the adapters (B) to the desired position.

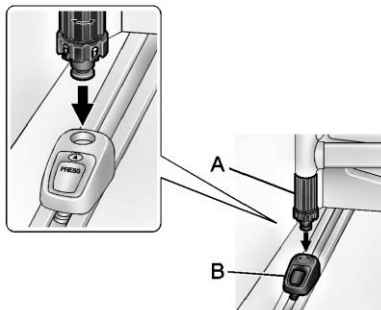
4-8 Storage


3. Reinstall the fence and lock both latches (A) by turning to align  with the arrow on the adapter (B).



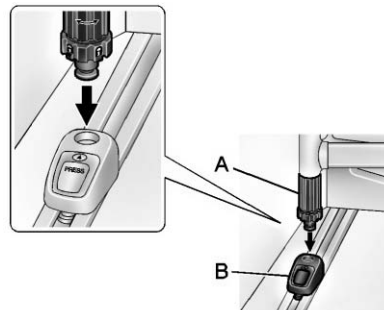
Use the fence to secure items in place.


Removing the Fence



Unlock by turning both latches (A) to align  with the arrow on the adapter (B). Lift and remove the fence.

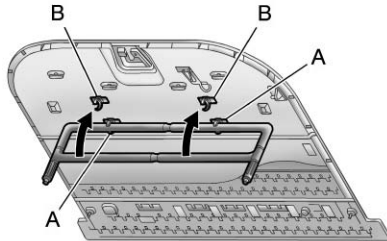
Installing the Fence



Insert the fence into the adapters and lock both latches (A) by turning to align  with the arrow on the adapter (B).

Storing the Fence

1. Lift the cargo management system cover.
2. Release the cover from the prop rod as described in previous steps.



3. Insert the top of the gate into the lower two clips (A).
4. Flip the bottom of the gate up and insert it into the upper two clips (B).

Cargo Net

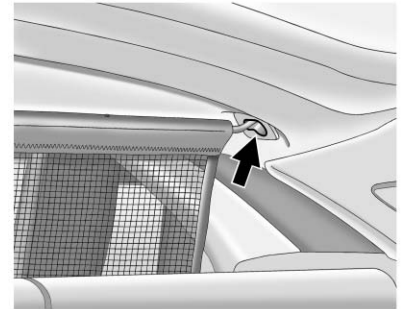
WARNING

Do not stack items higher than the upper end of the cargo net or hang anything from the net. Avoid items that have sharp edges or that apply excessive force to the net. If items are not properly stored, damage to the net could occur and items can be thrown about the vehicle. You or others could be injured. Always store items behind the net.

For vehicles equipped with a cargo net, it can be used to store light loads, keeping them from falling over or being thrown into the cabin during heavy braking.

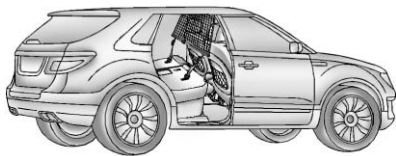
The net should not be overloaded or used to store heavy loads.

There are four openings in the headliner: two located behind the front seats and two behind the rear seats.

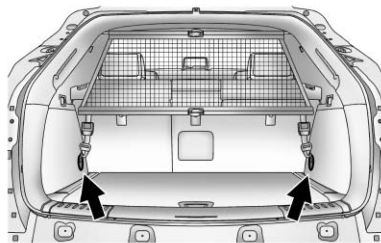


1. Insert the top corners of the cargo net into the large opening in the headliner and secure by sliding them into the small opening.
2. The rear seatbacks should be folded down when the net is installed in the headliner opening located behind the front seats.

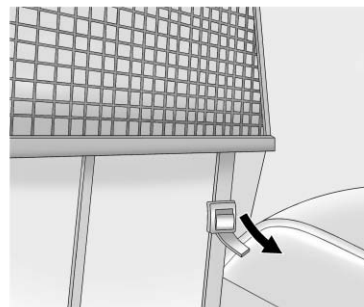
4-10 Storage



3. Mount the cargo net to the rear seat tethers located on the back of the folded down rear seats and pull on the straps to tighten the net.
4. When the net is installed in the headliner opening located behind the rear seats, the rear seatbacks should be upright.



5. Mount the cargo net to the cargo tie-downs located on the lower side panels.



6. Pull on the straps to tighten the net.

Cargo Net Storage

The cargo net can be removed from the vehicle and stored in the cargo management system.

1. Disconnect the net from the roof openings and the tethers.
2. Press the red button on the center of the net to fold it in half.
3. Roll up the cargo net, storing it into the attached vinyl bag.
4. Open the cargo management system cover.
5. For vehicles with an inflator kit, store the cargo net in the available space next to the kit.

Convenience Net

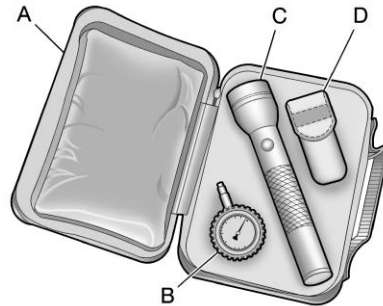
This vehicle may have a convenience net located in the rear of the vehicle. Attach it to the cargo tie-downs for storing small loads.

Do not use the net to store heavy loads.

First Aid Kit

If the vehicle has a first aid and tool kit, it is located in the storage bin behind the spare tire.

The kit includes:



- A. First Aid Kit
- B. Tire Pressure Gauge
- C. Flashlight
- D. Multi-Purpose Tool Set

The tire pressure gauge has a reset button in the gauge stem. After taking a pressure reading, press the button to reset the gauge to zero.

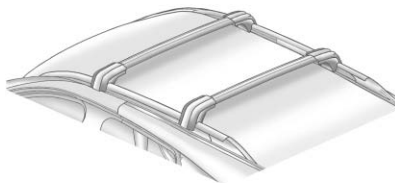
Roof Rack System

WARNING

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

For vehicles with a roof rack, the rack can be used to load items. For roof racks that do not have crossrails included, Saab certified crossrails can be purchased as an accessory. See your dealer for additional information.

Notice: Loading cargo on the roof rack that weighs more than 100 kg (220 lbs) or hangs over the rear or sides of the vehicle may damage the vehicle. Load cargo so that it rests evenly between the crossrails, making sure to fasten cargo securely.



To prevent damage or loss of cargo when driving, check to make sure crossrails and cargo are securely

fastened. Loading cargo on the roof rack will make the vehicle's center of gravity higher. Avoid high speeds, sudden starts, sharp turns, sudden braking, or abrupt maneuvers; otherwise it may result in loss of control. If driving for a long distance, on rough roads, or at high speeds, occasionally stop the vehicle to make sure the cargo remains in its place. Do not exceed the maximum vehicle capacity when loading the vehicle. For more information on vehicle capacity and loading, see *Vehicle Load Limits* on page 9-12.

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Vehicle Personalization

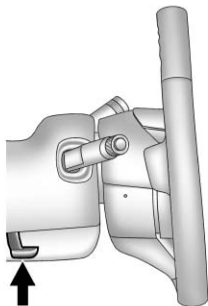
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Controls

Steering Wheel Adjustment



The adjustment lever is located on the left side of the steering column.

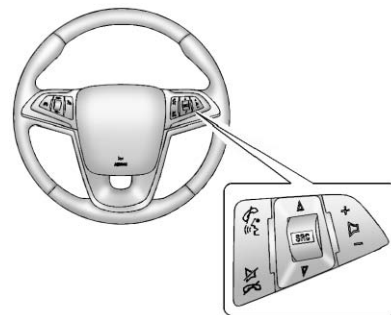
To adjust the steering wheel:

1. Pull the lever down.
2. Move the steering wheel up or down and in or out to a comfortable position.



3. Pull the lever up to lock the steering wheel in place.



Do not adjust the steering wheel while driving.

Steering Wheel Controls





For vehicles with audio steering wheel controls, some audio controls can be adjusted at the steering wheel.



 /  (Push to Talk): For vehicles with a Bluetooth®, OnStar®, or navigation system, press to interact with those systems. See the OnStar Owner's Guide or the separate infotainment system manual for more information.

 /  (Mute/End Call): Press to silence the vehicle speakers only. Press again to turn the sound on. For vehicles with Bluetooth, OnStar, or navigation systems, press to reject an incoming call, or end a current call.

 SRC  (Rotary Control): Turn to select an audio source.

Turn  or  to select the next or previous favorite radio station, CD, DVD track/chapter (with navigation), or MP3 track.

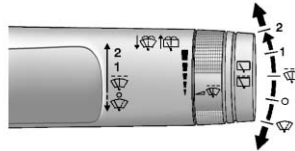
Press SRC to change between radio and CD or DVD.

  - (Volume): Press + to increase the volume. Press - to decrease the volume.

Horn

Press near the horn symbols or press on the steering wheel pad to sound the horn.



Windshield Wiper/Washer

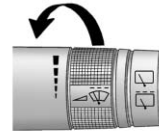




The windshield wiper/washer lever is located on the right side of the steering column. With the ignition in ACC/ACCESSORY or ON/RUN/START, move the windshield wiper lever to select the wiper speed.

- 2: Use for fast wipes.
- 1: Use for slow wipes.

(Adjustable Interval Wipes):

Move the lever up to  for adjustable interval wipes, then turn the  band up for more frequent wipes or down for less frequent wipes. If the vehicle has Rainsense™, see the following Rainsense information.




-  (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.

5-4 Instruments and Controls

Clear snow and ice from the wiper blades before using them. If frozen to the windshield, carefully loosen or thaw them. Damaged blades should be replaced. See *Wiper Blade Replacement on page 10-32*.

Heavy snow or ice can overload the wiper motor.

Wipe Parking

If the ignition is turned to LOCK/OFF while the wipers are on 1, 2, or , they will immediately stop.

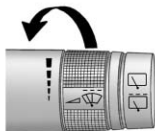
If the windshield wiper lever is then moved to off before the driver door is opened or within 10 minutes, the wipers will restart and move to the base of the windshield.




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

Rainsense™


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

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



 (**Rainsense Wipe Sensitivity Control**): Move the windshield wiper lever to . Turn the  band on the wiper lever to adjust the sensitivity.

- Turn the band up for more sensitivity to moisture.

- Turn the band down for less sensitivity to moisture.
- Move the windshield wiper lever out of the  position to deactivate Rainsense.

Wiper Arm Assembly Protection

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

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

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

Windshield Washer

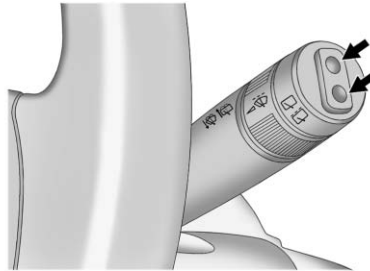
Pull the lever toward you to spray washer fluid on the windshield. The spray continues until the lever is released. The wipers will run a few times. See *Washer Fluid* on page 10-26 for information on filling the windshield washer fluid reservoir.

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.




Rear Window Wiper/Washer

The rear wiper controls are on the end of the windshield wiper lever.



Press the upper or lower portion of the button to control the rear wiper and rear wiper delay.

The system turns off when the button is returned to the middle position.

-  **(Rear Wiper):** Use for continuous rear window wipes.
-  **(Rear Wiper Delay):** Use to set a delay between wipes.
-  **(Rear Washer):** Push the windshield wiper lever forward to spray washer fluid on the rear window. The lever automatically returns to its original position when released.

5-6 Instruments and Controls

Reverse Gear Wipes

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

This feature can be changed. See *Vehicle Personalization on page 5-42*.

The windshield washer reservoir is used for the windshield and the rear window. Check the fluid level in the reservoir if either washer is not working. See *Washer Fluid on page 10-26*.

Headlamp Washer

For vehicles with headlamp washers, they are located to the side of the headlamps.

The headlamps must be on in order to use the headlamp washers. If the headlamps are not on, only the windshield will be washed.

Pull the wiper lever toward you and hold briefly to activate. The headlamp washers will spray once, pause, and spray again. The headlamp washer will spray again after five windshield wash cycles.

See *Washer Fluid on page 10-26* for information on filling the windshield washer fluid.

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, Electronic Stability Program (ESP), and vehicle speed information.

Avoid covering the GPS antenna for long periods of time with objects that may interfere with the antenna's ability to receive a satellite signal.

See the infotainment system manual for the location of the vehicle's antenna. 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 5-35* for more information on the messages that may be displayed for the compass.


Clock (Digital Clock)

The infotainment system controls are used to access the time and date settings through the menu system. See the separate infotainment system manual for information about how to use the menu system or how to operate the digital clock for the navigation system.

To turn the digital clock on or off:

1. Press the CONFIG button.
2. Select Time and Date Settings.
3. Select Clock Displayed.
4. Press MENU/SELECT to turn the clock on or off.

Setting the Time and Date

1. Press the CONFIG button.
2. Select Time and Date Settings.
3. Select Set Time or Set Date.
4. Turn the MENU/SELECT knob to adjust the highlighted value.
5. Press the MENU/SELECT knob to select the next value.
6. To save the time or date and return to the Time and Date Settings menu, press the  BACK button at any time or press the MENU/SELECT knob after adjusting the minutes or year.

5-8 Instruments and Controls

Setting the 12/24 Hour Format

1. Press the CONFIG button.
2. Select Time and Date Settings.
3. Highlight 12/24 Hour Format.
4. Press the MENU/SELECT knob to select the 12 hour or 24 hour display format.

Setting the Month & Day Format

1. Press the CONFIG button.
2. Select Time and Date Settings.
3. Highlight Month & Day Format.
4. Press the MENU/SELECT knob to select MM/DD (month/day) or DD/MM (day/month).

Setting the Auto Time Adjust

1. Press the CONFIG button.
2. Select Time and Date Settings.
3. Highlight Auto Time Adjust.
4. Press the MENU/SELECT knob to turn Auto Time Adjust on or off.

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 four accessory power outlets. The power outlets located below the climate control system, inside the center floor console, and on the rear of the center floor console are powered while the vehicle is in ON/RUN/START or ACC/ACCESSORY mode, or until the driver door is opened within 10 minutes of turning off the vehicle.

The power outlet located in the rear cargo area is powered at all times.

There is a small cap that must be removed to access the accessory power outlet. When not using the outlet be sure to cover it with the protective cap.

Notice: Leaving electrical equipment plugged in for an extended period of time while the vehicle is off will drain the

battery. Power is always supplied to the rear cargo outlet. **Always unplug electrical equipment when not in use and do not plug in equipment that exceeds the maximum 20 ampere rating.**

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

When adding electrical equipment, be sure to follow the proper installation instructions included with the equipment. See *Add-On Electrical Equipment* on page 9-61.

Notice: 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.**

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.

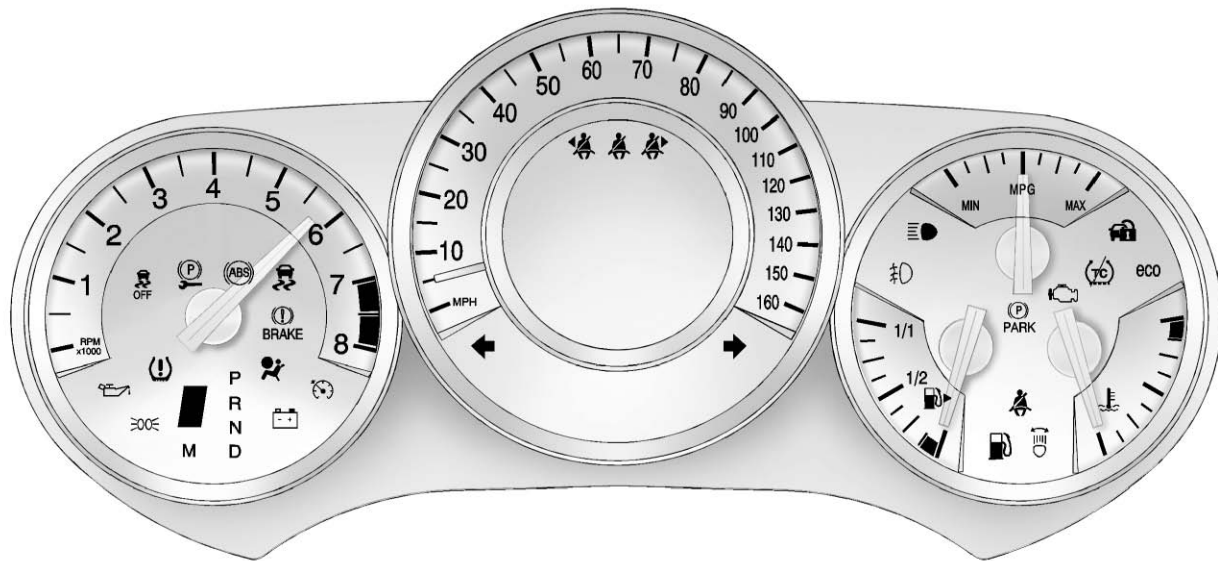
Warning lights come on when there could be a problem with a vehicle function. Some warning lights come on briefly when the engine is started to indicate they are working.

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.

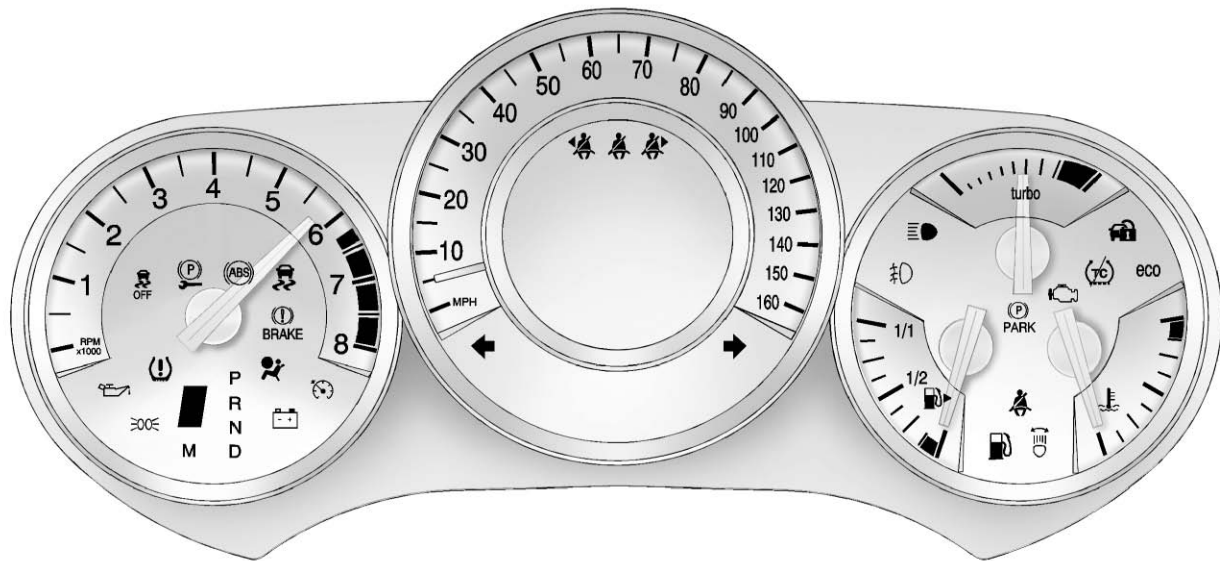
When one of the warning lights comes on and stays on while driving, or when one of the gauges shows there may be a problem, check the section that explains what to do. Follow this manual's advice. Waiting to do repairs can be costly and even dangerous.

5-10 Instruments and Controls

Instrument Cluster



English Shown, Metric Similar



English Turbo Shown, Metric Turbo Similar

5-12 Instruments and Controls

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 odometer installed, the new one 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.

Tachometer

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

Notice: If the engine is operated with the tachometer in the shaded warning area, the vehicle could be damaged, and the damages would not be covered by the vehicle warranty. Do not operate the engine with the tachometer in the shaded warning area.

Fuel Gauge



When the ignition is on, the fuel gauge tells you about how much fuel you have left in your tank.

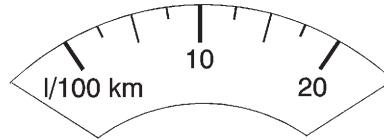
An arrow on the fuel gauge indicates the side of the vehicle the fuel door is on.

When the indicator nears empty, the low fuel light will come on. You still have a little fuel left, but you should get more soon.

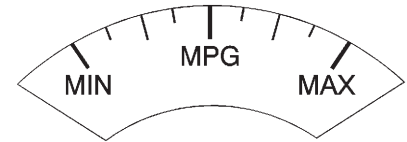
Here are four things that some owners ask about. None of these show a problem with your fuel gauge:

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

Fuel Economy Gauge



Metric



English

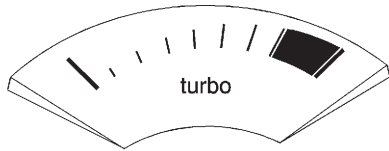
The gauge shows the fuel usage that the vehicle is currently achieving in MPG and in liters per 100 kilometers (l/100 km).

MIN/20: Is when the least efficient fuel economy usually occurs during acceleration or when idling.

MAX/l/100: Is when the best fuel economy is being achieved.

This gauge moves often as it is an instantaneous calculation based on current driving conditions.

Turbo Gauge



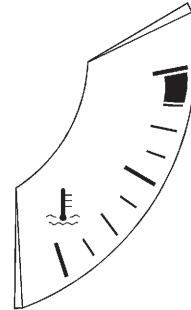
For vehicles with a turbo gauge, it indicates when the vehicle is using turbo power.

When the needle is at rest at the left of the gauge, turbo is not being used.

As the accelerator pedal is pressed, the needle may move to the right. This is normal and means that the vehicle is using turbo power. Under normal conditions the needle will not display a reading in the red.

Once the driver eases off the accelerator pedal or the transmission shifts, the needle moves back into the left area of the gauge.

Engine Coolant Temperature Gauge



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

If the indicator needle moves into the shaded area, the engine is too hot. A temperature indicator light will turn on.

If you have been operating your vehicle under normal driving conditions, and the temperature indicator light comes on, you should pull off the road, stop your vehicle and turn off the engine as soon as possible.

Safety Belt Reminders

Driver Safety Belt Reminder Light

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



When the vehicle is started this light flashes and a chime comes on to remind drivers 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 during driving while the vehicle is moving.

If the driver safety belt is already buckled, neither the light nor chime comes on.

Passenger Safety Belt Reminder Light



When the vehicle is started this light flashes and a chime may come on to remind the front passenger to fasten their safety belt. Then the light stays on solid until the belt is buckled.

This cycle may continue 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.

5-16 Instruments and Controls

The front passenger safety belt reminder 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 reminder light and/or chime, remove the object from the seat or buckle the safety belt.

Second Row Passenger Belt Reminder Light



When the engine is started and the Trip/Fuel display is chosen, three gray safety belt symbols come on and stay on for several seconds on the top of the Driver information Center (DIC) to remind passengers to fasten their safety belts.

If the Vehicle Information is selected, a full page screen displays at start-up the three safety belt symbols.

Once the passenger safety belt is buckled, the corresponding safety belt symbol in the DIC turns green. There are no seat position sensors in the seat, nor a safety belt reminder sensor pad. If a safety belt is not initially buckled, the cluster continues to show the gray safety belt icon.

While the vehicle is moving, if a second row passenger who was previously buckled becomes unbuckled, a full screen warning displays with the corresponding safety belt indicator flashing red. A chime may sound.

Acknowledge warning messages by pressing any of the DIC buttons.

Airbag Readiness Light

This light shows if there is an electrical problem. The system check includes the airbag sensor, 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 3-29.



The airbag readiness light comes on and stays on for several seconds when the vehicle is started. Then the light goes out.

⚠ 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.

Passenger Airbag Status Indicator

The vehicle has a passenger sensing system. See *Passenger Sensing System* on page 3-38 for important safety information. The overhead console has a passenger airbag status indicator.



United States



Canada

When the vehicle is started, the passenger airbag status indicator will light ON and OFF, or the symbol for on and off, for several seconds as a system check. If you are using remote start, if equipped, to start the vehicle from a distance you may not see the system check.

Then, after several more seconds, the status indicator will light either ON or OFF, or either the on or off symbol to let you know the status of the right front passenger frontal and seat-mounted side impact airbag.

If the word ON or the on symbol is lit on the passenger airbag status indicator, it means that the right front passenger frontal airbag and seat-mounted side impact airbag are enabled (may inflate).

If the word OFF or the off symbol is lit on the passenger airbag status indicator, it means that the passenger sensing system has turned off the right front passenger frontal and seat-mounted side impact airbag.

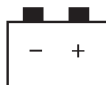
5-18 Instruments and Controls

If, after several seconds, both status indicator lights remain on, or if there are no lights at all, there may be a problem with the lights or the passenger sensing system. See your dealer for service.

WARNING

If the airbag readiness light ever comes on and stays on, it means that something may be wrong with the airbag system. To help avoid injury to yourself or others, have the vehicle serviced right away. See *Airbag Readiness Light* on page 5-16 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. The light turns off when the engine is started. If it does not, have the vehicle serviced by your dealer.

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 5-34.

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 operation of the fuel, ignition, and emission control systems. It ensures that emissions are at acceptable levels for the life of the vehicle, helping to produce a cleaner environment.



This light should come on when the ignition is on, but the engine is not running, as a check to show it is working. If it does not, have the vehicle serviced by your dealer.

If the malfunction indicator lamp comes on and stays on while the engine is running, this indicates that there is an OBD II problem and service is 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 assists the service technician in correctly diagnosing any malfunction.

Notice: 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.

Notice: 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 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.*

5-20 Instruments and Controls

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 towing a trailer, reduce the amount of cargo being hauled as soon as it is possible.

If the light continues to flash, when it is safe to do so, stop the vehicle. Find a safe place to 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 emissions system malfunction:

- Make sure the fuel cap is fully installed. See *Filling the Tank* on page 9-50. 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.

- Make sure the electrical system is not wet. The system could be wet if the vehicle was driven through a deep puddle of water. The condition is usually corrected when the electrical system dries out. A few driving trips should turn the light off.
- Make sure to fuel the vehicle with quality fuel. Poor fuel quality causes the engine not to run as efficiently as designed and can 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.

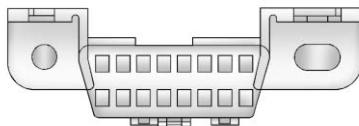
If one or more of these conditions occurs, change the fuel brand used. It will require at least one full tank of the proper fuel to turn the light off.

See *Recommended Fuel* on page 9-48.

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

Some state/provincial and local governments may have programs to inspect the on-vehicle emission control equipment. For the inspection, the emission system test equipment is connected to the vehicle's Data Link Connector (DLC).



The DLC is under the instrument panel to the left of the steering wheel. See your dealer if assistance is needed.

The vehicle may not pass inspection if:

- The malfunction indicator lamp is on with the engine running, or if the light does not come on when the ignition is turned to ON/RUN while the engine is off.
- The critical emission control systems have not been completely diagnosed by the system. This can happen if the battery has recently been replaced or if the battery has run down. The diagnostic system evaluates critical emission control systems during normal driving. This can take several days of routine driving. If this has been done and the vehicle still does not pass the inspection, 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

The brake indicator light should come on briefly as the engine is started. If it does not come on have the vehicle serviced by your dealer.

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.

If the light comes on while driving, a chime sounds. Pull off the road and stop. The pedal might be harder to push or go closer to the floor. It might also take longer to stop. If the light is still on, have the vehicle towed for service. See *Towing the Vehicle on page 10-97*.

Electric Parking Brake Light



Metric



English

For vehicles with the Electric Parking Brake (EPB), this light should come on briefly as the engine is started. If it does not come on, have the vehicle serviced by your dealer.

The parking brake status light comes on when the brake is applied. If the light continues flashing after the parking brake is released, or while driving, there is a problem with the Electric Parking Brake system. A SERVICE PARKING BRAKE message may also display in the Driver Information Center (DIC). See *Brake System Messages on page 5-34* for more information.

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



For vehicles with the EPB, the brake warning light should come on briefly when the engine is started. If it does not come on, have the vehicle serviced by your dealer.

If this light comes on, there is a problem with a 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 *Parking Brake* on page 9-31 for more information.

Antilock Brake System (ABS) Warning Light



For vehicles with the Antilock Brake System (ABS), 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 comes on and stays on while driving, stop as soon as possible and turn the ignition off.

Start the engine again to reset the system. If the light stays on after driving at a speed above 20 km/h (13 mph), see your dealer for service. A chime may also sound when the light comes on steady.

If the regular brake system warning light is not on, the vehicle still has brakes, but not antilock brakes.

If the regular brake system warning light is also on, the vehicle does not have antilock brakes and there is a problem with the regular brakes. See *Brake System Warning Light* on page 5-22.

See *Brake System Messages* on page 5-34 for all brake-related DIC messages.

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 traction control button.

This light and the StabiliTrak Off light come on when StabiliTrak is turned off.

If the Traction Control System (TCS) is off, wheelspin is not limited. Adjust driving accordingly.

See *Traction Control System (TCS)* on page 9-34 and *Electronic Stability Program (ESP)* on page 9-36 for more information.

Electronic Stability Program (ESP) Off Light



This light comes on when the StabiliTrak system is turned off by pressing the StabiliTrak/TCS button. If the Traction Control System (TCS) is off, wheel spin is not limited.

When the Electronic Stability Program (ESP) is off, the system does not assist in controlling the vehicle. Adjust driving accordingly.

The warning light goes off when traction control and the StabiliTrak system are enabled.

See *Traction Control System (TCS)* on page 9-34 and *Electronic Stability Program (ESP)* on page 9-36 for more information.

Electronic Stability Program (ESP)/Traction Control System Indicator Light



The StabiliTrak system or the Traction Control System (TCS) indicator/warning light come on briefly when the engine is started.

If the light does not come on, have the vehicle serviced by the 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 System (TCS)* on page 9-34 and *Electronic Stability Program (ESP)* on page 9-36 for more information.

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 tire pressure message can accompany the light. See *Tire Messages on page 5-41* for more information. 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 10-59* for more information.

When the Light Flashes First and Then is On Steady

This indicates that there may be a problem with the TPMS. The light flashes for about a minute and stays on steady for the remainder of the ignition cycle. This sequence repeats with every ignition cycle. See *Tire Pressure Monitor Operation on page 10-63* for more information.

Engine Oil Pressure Light



Do not keep driving if the oil pressure is low. The engine can become so hot that it catches fire. Someone could be burned. Check the oil as soon as possible and have the vehicle serviced.

Notice: Lack of proper engine oil maintenance can damage the engine. The repairs would not be covered by the vehicle warranty. Always follow the maintenance schedule for changing engine oil.



The oil pressure 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.

Fuel Economy Light

eco

For vehicles with the fuel economy mode light, it comes on when the eco (economy) switch, located next to the shift lever, is pressed. Press the switch again to turn off the light and exit the fuel saver mode. See *Driving for Better Fuel Economy on page 1-22* for more information.

Low Fuel Warning Light



This light is located 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



This light flashes when the security system is activated.

For more information, see *Vehicle Security on page 2-16*.

High-Beam On Light



This light comes on when the high-beam headlamps are in use.

See *Headlamp High/Low-Beam Changer* on page 6-2 for more information.

Adaptive Forward Lighting (AFL) Light



The Adaptive Forward Lighting System (AFL) pivots the headlamps horizontally to provide greater road illumination while turning. AFL will operate when the vehicle speed is greater than 3 mph (2 km/h). This light comes on solid when there is a problem with the system. It flashes when the system is switching between lighting modes.

Front Fog Lamp Light



The fog lamp light comes on when the fog lamps are in use.

The light goes out when the fog lamps are turned off. See *Front Fog Lamps* on page 6-5 for more information.

Lamps On Reminder



For vehicles with the lamps on reminder light, it comes on when the lights are in use.

Cruise Control Light



The cruise control light is white whenever the cruise control is set, and turns green when the cruise control is active.

The light turns off when the cruise control is turned off. See *Cruise Control* on page 9-39 for more information.

Information Displays

Driver Information Center (DIC)

The DIC displays information about the vehicle. It also displays warning messages if a system problem is detected. See *Vehicle Messages* on page 5-34 for more information. All messages appear in the DIC display located in the center of the instrument panel cluster.

The vehicle may also have features that can be customized through the controls on the radio. See *Vehicle Personalization* on page 5-42 for more information.

The DIC displays an indicator when the Rainsense wipers are active.

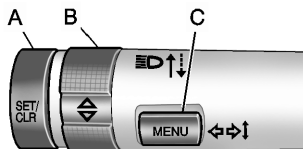
5-30 Instruments and Controls

DIC Operation and Displays

The DIC has different displays which can be accessed by using the DIC buttons on the turn signal lever located on the left side of the steering wheel. The DIC displays trip, fuel, vehicle system information, and warning messages if a system problem is detected.

The bottom of the DIC display shows what position the shift lever is in and the odometer. The direction the vehicle is driving will be shown on the top of the display.

DIC Buttons



- A. **SET/CLR (Set/Clear):** Use this button to set or clear the menu item when it is displayed.
- B. **△ ▽ (Thumbwheel):** Use the thumbwheel to scroll through the items in each menu. A small marker will move up or down the side of the display as you scroll through the items. This shows where each item is in the menu.
- C. **MENU:** Press this button to get to the Trip/Fuel Information Menu and the Vehicle Information Menu.

Trip/Fuel Information Menu Items

Press the MENU button on the turn signal lever until Trip/Fuel Information Menu is displayed. Use the thumbwheel to scroll through the following menu items:

- Digital Speedometer
- Trip
- Fuel Range
- Average Fuel Economy or Average Fuel Economy and Instantaneous Fuel Economy
- Average Vehicle Speed
- Navigation
- Speed and Curve Assist
- Distance to Destination
- Blank Display

Digital Speedometer

The speedometer shows how fast the vehicle is moving in either kilometers per hour (km/h) or miles per hour (mph). The speedometer cannot be reset.

Trip

The Trip display shows the current distance traveled, in either kilometers (km) or miles (mi), since the trip odometer was last reset. The trip odometer can be reset to zero by pressing the trip reset stem or the SET/CLR button while the trip odometer display is showing.

Fuel Range

The Fuel Range display shows the approximate distance the vehicle can be driven without refueling. 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. Fuel range cannot be reset.

Average Fuel Economy or Average Fuel Economy and Instantaneous Fuel Economy

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 can be reset by pressing SET/CLR while the Average Fuel Economy display is showing.

The Instantaneous Fuel Economy display shows 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. Unlike average economy, this display cannot be reset.

Average Vehicle Speed

The Average Vehicle Speed display shows 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 the SET/CLR button while the Average Vehicle Speed display is showing.

Navigation

This display is used for the OnStar or Navigation System Turn-by-Turn guidance. See the OnStar Owner's Guide or the infotainment system manual, if the vehicle has navigation, for more information.

5-32 Instruments and Controls

Speed and Curve Assist

This display will show the speed limit or the advised speed as determined by the information provided by the navigation system. The map database loaded in the navigation system may need to be updated periodically to display accurate information. See “Maps” in the infotainment system manual for information on updating the map database.

Distance to Destination

This display will show the vehicle distance with estimated time of arrival to destination. The value can be cleared or reset by pressing the SET/CLR button. Move the thumbwheel up or down to increase or decrease the destination value.

Blank Display

This display shows no information.

Vehicle Information Menu Items

Press the MENU button on the turn signal lever until Vehicle Information Menu is displayed. Use the thumbwheel to scroll through the following menu items:

- Unit
- Battery Voltage
- Oil Life Remaining
- Tire Pressure
- Speed Warning
- Blank Display

Unit

Move the thumbwheel up or down to switch between metric or English when the Unit display is active. Press SET/CLR to confirm the setting. This will change the displays on the cluster and DIC to either metric or English measurements.

Battery Voltage

This display, available on some vehicles, shows the current battery voltage. If the voltage is in the normal range, the value will display. For example, the display may read BATTERY VOLTAGE 15.0 VOLTS. The vehicle's charging system regulates voltage based on the state of the battery. The battery voltage can fluctuate while viewing this information on the DIC. This is normal. See *Charging System Light on page 5-18* for more information. If there is a problem with the battery charging system, the DIC will display a message. See *Battery Voltage and Charging Messages on page 5-34*.

Instruments and Controls 5-33

Oil Life Remaining

This display shows an estimate of the oil's remaining useful life. If 99% OIL LIFE REMAINING 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 5-37*. The oil should be changed as soon as possible. See *Engine Oil on page 10-10*. In addition to the engine oil life system monitoring the oil life, additional maintenance is recommended in the Maintenance Schedule in this manual. See *Scheduled Maintenance on page 11-3* for more information.

Remember, the Oil Life display must be reset after each oil change. It will not reset itself. Also, be careful not to 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 the SET/CLR button while the Oil Life display is active. See *Engine Oil Life System on page 10-14*.

Tire Pressure

The display will show a vehicle with the approximate pressures of all four tires. Tire pressure is displayed in either kilopascal (kPa) or in pounds per square inch (psi). See *Tire Pressure Monitor System on page 10-61* and *Tire Pressure Monitor Operation on page 10-63* for more information.

Speed Warning

Speed Warning allows the driver to set a speed that they do not want to exceed. To set the Speed Warning, press SET/CLR when Speed Warning is displayed. After selecting ON, use the thumbwheel to increase or decrease the desired speed limit. The value can be set from 0-250 km/h (0-160 mph). Press SET/CLR to confirm. If the selected speed limit is exceeded, a pop-up warning is displayed with a chime.

Blank Display

This display shows no information.

Compass

The vehicle may have a compass display in the Driver Information Center (DIC). See *Compass on page 5-6*.

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 display one after the other.

The messages that do not require immediate action can be acknowledged and cleared by pressing SET/CLR. The messages that require immediate action cannot be cleared until that action is performed. All messages should be taken seriously and clearing the messages does not correct the problem.

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 certain features of the vehicle that you may be able to notice. At the point that features are disabled, this message is displayed. It means that the vehicle is trying to save the charge in the battery. 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 10-30* for more information.

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 10-28*.

BRAKES OVERHEATED

This message is displayed when the brakes are becoming overheated. You may see this when driving on hills. Shift to a lower gear.

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* for more information.

RELEASE PARKING BRAKE

This message is displayed if the Electric Parking Brake is on while the vehicle is in motion. Release it before you attempt to drive. See *Parking Brake on page 9-31* for more information.

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.

Compass Messages

CAL

This message is displayed when the compass needs to be calibrated. See *Compass on page 5-6*.

Three dashes will be displayed if the compass needs service. See your dealer for service.

Cruise Control Messages

APPLY BRAKE BEFORE CRUISE

If this message displays when attempting to activate cruise control, apply the brake pedal and try again.

CRUISE SET TO XXX

This message displays when the cruise control is set and shows the speed it was set to. See *Cruise Control on page 9-39* for more information.

Door Ajar Messages

DOOR OPEN

A door open symbol will be displayed 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. 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.

POWER LIFTGATE UNAVAILABLE

This message will display if the power liftgate encounters multiple obstacles on the same power cycle. After removing the obstructions, the liftgate will resume normal power operation.

REAR ACCESS OPEN

This message will display along with a symbol when the liftgate is open. Close the liftgate 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. You can continue to drive the vehicle.

If this message continues to appear, have the system repaired by your dealer as soon as possible to avoid damage to the engine.

COOLANT LEVEL LOW ADD COOLANT

This message will display if the coolant is low. See *Engine Coolant on page 10-20*.

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.

HIGH COOLANT TEMPERATURE

This message displays if the coolant temperature is hot. See *Engine Overheating on page 10-24*.

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* and *Driver Information Center (DIC) on page 5-29* for information on how to reset the system. See *Engine Oil on page 10-10* and *Scheduled Maintenance on page 11-3* for more information.

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

This message displays when the engine oil level is too low. Check the oil level. See *Engine Oil on page 10-10*.

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” 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.

Lamp Messages

AFL (ADAPTIVE FORWARD LIGHTING) LAMPS NEED SERVICE

This message displays when the Adaptive Forward Lighting (AFL) system is disabled and needs service. See your dealer. See *Adaptive Forward Lighting (AFL) on page 6-4* for more information.

AUTOMATIC LIGHT CONTROL ON

This message is displayed when the exterior lamp control is in AUTO and the lights have turned on. See *Automatic Headlamp System on page 6-3*.

AUTOMATIC LIGHT CONTROL OFF

This message is displayed when the exterior lamp control is in AUTO and the lights have turned off. See *Automatic Headlamp System on page 6-3*.

XXX 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 10-38* and *Replacement Bulbs on page 10-43* for more information on turn signal bulb replacement.

TURN SIGNAL ON

This message is displayed if the turn signal has been left on. Turn off the turn signal.

Object Detection System Messages

PARK ASSIST OFF

This message is displayed when the park assist system has been turned off. See *Ultrasonic Parking Assist on page 9-41*.

SERVICE PARK ASSIST

This message is displayed if there is a problem with the park assist system. Take the vehicle to your dealer for service.

Ride Control System Messages

COMFORT MODE ON

This message displays when Comfort Mode has been activated. See *Selective Ride Control on page 9-37* for more information.

SERVICE REAR AXLE

This message displays when there is a problem with the All-Wheel Drive (AWD) System. See your dealer for service.

SERVICE ESP

This message displays if there is a problem with the Electronic Stability Program (ESP). See *Electronic Stability Program (ESP) on page 9-36*.

SERVICE SUSPENSION SYSTEM

This message displays if there is a problem with the selective ride control. See *Selective Ride Control on page 9-37*.

SERVICE TRACTION CONTROL

This message displays when there is a problem with the Traction Control System (TCS). See *Traction Control System (TCS) on page 9-34*.

SPORT MODE ON

This message displays when Sport Mode has been activated. See *Selective Ride Control on page 9-37* and *Manual Mode on page 9-28* for more information.

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.

Safety Belt Messages

BUCKLE SEATBELT

This message displays as a reminder when the safety belt is not buckled.

Anti-theft Alarm System Messages

THEFT ATTEMPTED

This message displays if the vehicle detects a tamper condition.

Service Vehicle Messages

SERVICE AC SYSTEM

This message is displayed if there is a problem with the air conditioning system. Take the vehicle to your dealer for service.

SERVICE POWER STEERING

This message is displayed if there is a problem with the power steering system. 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

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 10-63 for more information.

TIRE LEARNING ACTIVE

This message displays when the system is learning new tires. See *Tire Pressure Monitor Operation* on page 10-63 for more information.

TIRE LOW ADD AIR TO TIRE

This message displays when the pressure in one or more of the tires is low.

This message also displays LEFT FRONT, RIGHT FRONT, LEFT REAR, or RIGHT REAR to indicate the location of the low tire.

The low tire pressure warning light will also come on. See *Tire Pressure Light* on page 5-25.

If a tire pressure message appears on the DIC, stop as soon as you can. Inflate the tires by adding air until the tire pressure is equal to the values shown on the Tire and Loading Information label. See *Tires* on page 10-52, *Vehicle Load Limits* on page 9-12, and *Tire Pressure* on page 10-59.

You can receive more than one tire pressure message at a time. The DIC also shows the tire pressure values. See *Driver Information Center (DIC)* on page 5-29.

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 9-28 for more information.

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 5-3.

Washer Fluid Messages

WASHER FLUID LOW ADD FLUID

This message displays when the washer fluid level is low. For information on filling the washer fluid, see *Washer Fluid* on page 10-26.

Vehicle Personalization

The audio system controls are used to access the personalization menus for customizing vehicle features. Not all features are available on every vehicle. Only the features available on a particular vehicle will be displayed on that vehicle.

CONFIG (Configuration): Press to access the Configuration Settings Menu.

MENU/SELECT Knob: Press the center of this knob to enter the menus and select menu items. Turn the knob to scroll through the menus.

← BACK: Press to exit or move backward in a menu.

Entering the Personalization Menus

1. Press CONFIG to access the Configuration Settings menu.
2. Turn the MENU/SELECT knob to highlight Vehicle Settings.
3. Press the center of the MENU/SELECT knob to select the Vehicle Settings menu.

The following list of menu items will be available:

- Climate and Air Quality
- Comfort and Convenience
- Language
- Lighting
- Power Door Locks
- Remote Locking, Unlocking, Starting
- Return to Factory Settings

Turn the MENU/SELECT knob to highlight the menu. Press the knob to select it. Each of the menus is detailed in the following information.

Climate and Air Quality

Select the Climate and Air Quality menu and the following will be displayed:

- Auto Fan Speed
- Air Quality Sensor
- Remote Start Auto Seat Cool
- Remote Start Auto Heated Seats
- Auto Defog
- Auto Rear Defog

Auto Fan Speed

This will allow you to select the automatic fan speed. This feature sets the climate control fan speed to maintain the interior temperature.

Press the MENU/SELECT knob when Auto Fan Speed is highlighted to open the menu. Turn the knob to highlight High, Medium, or Low. Press the knob to confirm the selection and move back to the last menu.

Air Quality Sensor

This will allow you to select whether the system will operate at high or low sensitivity. Only vehicles with the dual zone climate control will have this option.

Press the MENU/SELECT knob when Air Quality Sensor is highlighted to open the menu. Turn the knob to highlight High or Low Sensitivity. Press the knob to confirm the selection and move back to the last menu.

Remote Start Auto Seat Cool

When on, this feature will turn the vented seats on when using remote start on warm days.

Press the MENU/SELECT knob when Remote Start Auto Seat Cool is highlighted. Turn the knob to select On or Off. Press the knob to confirm and go back to the last menu.

Remote Start Auto Heated Seats

When on, this feature will turn the heated seats on when using remote start on cold days.

Press the MENU/SELECT knob when Remote Start Auto Heated Seats is highlighted. Turn the knob to select On or Off. Press the knob to confirm and go back to the last menu.

Auto Defog

This will allow you to turn the auto defog on or off.

Press the MENU/SELECT knob when Auto Defog is highlighted to open the menu. Turn the knob to highlight On or Off. Press the knob to confirm the selection and move back to the last menu.

5-44 Instruments and Controls

Auto Rear Defog

This will allow you to turn the auto rear defog on or off.

Press the MENU/SELECT knob when Auto Rear Defog is highlighted to open the menu. Turn the knob to highlight On or Off. Press the knob to confirm the selection and move back to the last menu.

Comfort and Convenience

Select the Comfort and Convenience menu and the following will be displayed:

- Easy Exit Driver Seat
- Chime Volume
- Reverse Tilt Mirror
- Auto Wipe in Reverse Gear

Easy Exit Driver Seat

This allows you to turn the easy exit driver seat feature on or off. When on, this feature will move the driver seat rearward upon turning the ignition off and opening the driver door. This may be performed to make it easier to exit the vehicle. See *Power Seat Adjustment on page 3-4* for more information.

Press the MENU/SELECT knob when Easy Exit Driver Seat is highlighted. Turn the knob to select On or Off. Press the knob to confirm and go back to the last menu.

Chime Volume

This allows the selection of the chime volume level.

Press the MENU/SELECT knob when Chime Volume is highlighted. Turn the knob to select Normal or High. Press the knob to confirm and go back to the last menu.

Reverse Tilt Mirror

This allows you to turn the reverse tilt mirror feature on or off. When on, both the driver and passenger mirrors will tilt downward when vehicle is shifted to R (Reverse) to improve visibility of the ground near the rear wheels. They will return to their previous driving position when the vehicle is shifted out of R (Reverse), the ignition is turned to OFF, or the vehicle is left in R (Reverse).

Press the MENU/SELECT knob when Reverse Tilt Mirror is highlighted. Turn the knob to select Driver & Passenger or Off. Press the knob to confirm and go back to the last menu.

Auto Wipe in Reverse Gear

When on, and the front windshield wipers are on, the rear window wiper will turn on automatically when the vehicle is shifted into R (Reverse).

Press the MENU/SELECT knob when Auto Wipe in Reverse Gear is highlighted. Turn the knob to select On or Off. Press the knob to confirm and go back to the last menu.

Language

Select the Language menu and the following will be displayed:

- English
- French
- Spanish

Turn the MENU/SELECT knob to select the language. Press the knob to confirm and go back to the last menu.

Lighting

Select the Lighting menu and the following will be displayed:

- Vehicle Locator Lights
- Exit Lighting

Vehicle Locator Lights

This allows the vehicle locator lights to be turned on or off.

Press the MENU/SELECT knob when Vehicle Locator Lights is highlighted. Turn the knob to select On or Off. Press the knob to confirm and go back to the last menu.

Exit Lighting

This allows the selection of how long the exterior lamps stay on when leaving the vehicle when it is dark outside.

Press the MENU/SELECT knob when Exit Lighting is highlighted. Turn the knob to select Off, 30 Seconds, 1 Minute, or 2 Minutes. Press the knob to confirm and go back to the last menu.

Power Door Locks

Select Power Door Locks and the following will 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 and the door will lock as programmed through this menu.

Press the MENU/SELECT knob when Unlocked Door Anti Lock Out is highlighted. Turn the knob to select On or Off. Press the knob to confirm and go back to the last menu.

Auto Door Unlock

This allows selection of which of the doors will automatically unlock when the vehicle is shifted into P (Park).

Press the MENU/SELECT knob when Auto Door Unlock is highlighted. Turn the knob to select All Doors, Driver Door, or Off. Press the knob to confirm and go back to the last menu.

Delayed Door Lock

When on, this feature will delay the locking of the doors until five seconds after the last door is closed. You will hear three chimes to signal delayed locking is in use. Pressing either the power lock button or the lock button on the RKE transmitter twice will override the delayed locking feature and immediately lock all of the doors.

Press the MENU/SELECT knob when Delayed Door Lock is highlighted. Turn the knob to select On or Off. Press the knob to confirm and go back to the last menu.

Remote Lock/Unlock/Start

Select Remote Lock/Unlock/Start and the following will be displayed:

- Unlock Feedback (Lights)
- Locking Feedback
- Door Unlock Options
- Passive Door Lock
- Passive Door Unlock
- Memory Remote Recall
- Remote Left in Vehicle Reminder

Unlock Feedback (Lights)

When on, the exterior lamps will flash when unlocking the vehicle with the RKE transmitter.

Press the MENU/SELECT knob when Unlock Feedback (Lights) is highlighted. Turn the knob to select Flash Lights or Off. Press the knob to confirm and go back to the last menu.

Locking Feedback

This allows selection of what type of feedback is given when locking the vehicle with the RKE transmitter.

Press the MENU/SELECT knob when Locking Feedback is highlighted. Turn the knob to select Lights and Horn, Lights Only, Horn Only, or Off. Press the knob to confirm and go back to the last menu.

Door Unlock Options

This allows selection of which doors will unlock when pressing the unlock button on the RKE transmitter.

Press the MENU/SELECT knob when Door Unlock Options is highlighted. Turn the knob to select All Doors or Driver Door Only. When set to Driver Door Only, the driver door will unlock the first time the unlock button is pressed and all doors will unlock when the button is pressed a second time. When set to All Doors, all of the doors will unlock at the first press of the unlock button. Press the knob to confirm and go back to the last menu.

Passive Door Lock

If the vehicle has the keyless access system, when enabled, this feature allows the doors to lock after several seconds if all doors are closed and at least one RKE transmitter has been removed from the interior of the vehicle. It does not matter how far away that the transmitter is from the vehicle. This feature can also be configured to chirp the horn when the doors are passively locked.

Press the MENU/SELECT knob when Passive Door Lock is highlighted. Turn the knob to select On With Chirp, On, or Off. Press the knob to confirm and go back to the last menu.

Passive Door Unlock

If the vehicle has the keyless access system, this feature allows you to select which doors will automatically unlock when you open the driver door with the RKE transmitter present.

Press the MENU/SELECT knob when Passive Door Unlock is highlighted. Turn the knob to select All Doors or Driver Door. Press the knob to confirm and go back to the last menu.

Memory Remote Recall

This allows the Memory Remote Recall feature to be turned on or off.

Press the MENU/SELECT knob when Memory Remote Recall is highlighted. Turn the knob to select On or Off. Press the knob to confirm and go back to the last menu.

Remote Left in Vehicle Reminder

This allows the Remote Left In Vehicle reminder feature to be turned on or off. If on, the horn will chirp if a remote is left in the vehicle.

Press the MENU/SELECT knob when Remote Left In Vehicle is highlighted. Turn the knob to select On or Off. Press the knob to confirm and go back to the last menu.

Return to Factory Settings

Select Return to Factory Settings to return all of the vehicle personalization to the default settings. Turn the knob to select Yes or No. Press the knob to confirm and go back to the last menu.

Universal Remote System

See *Radio Frequency Statement on page 13-12* for information regarding Part 15 of the Federal Communications Commission (FCC) rules and Industry Canada Standards RSS-210/220/310.

Universal Remote System Programming



If the vehicle has this feature, you will see these buttons with one LED indicator next to them in the overhead console.

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.

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 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.

Keep the original hand-held transmitter for use in other vehicles as well as for future Universal Remote system programming. It is also recommended that upon the sale of the vehicle, the programmed Universal Remote system buttons be erased for security purposes. See “Erasing Universal Remote System Buttons” later in this section.

When programming a garage door, park outside of the garage. Park directly in line with and facing the garage door opener motor-head or gate motor-head. Be sure that people and objects are clear of the garage door or gate being programmed.

It is recommended that a new battery be installed in the hand-held transmitter for quicker and more 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 go to www.homelink.com.

Programming a garage door opener involves time-sensitive actions, so read the entire procedure before starting. Otherwise, the device will time out and the procedure will have 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 while keeping the indicator light in view. The hand-held transmitter was supplied by the manufacturer of the garage door opener receiver (motor-head unit).

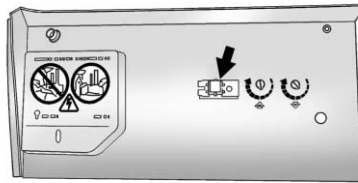
2. At the same time, press and hold both the hand-held transmitter button and one of the three Universal Remote system buttons to be used to operate the garage door. Do not release the Universal Remote system button or the hand-held transmitter button until the indicator light changes from a slowly to a rapidly flashing light. You now may release both buttons.

Some entry gates and garage door openers may require substitution of Step 2 with the procedure noted in “Gate Operator and Canadian Programming” later in this section.

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3. Press and hold for five seconds the newly trained Universal Remote system button (the button selected in Step 2) while observing the indicator light and garage door activation.
 - If the indicator light stays on continuously or the garage door starts to move when the Universal Remote system button is pressed and released, then the programming is complete. There is no need to continue programming Steps 4 through 6.
 - If the Universal Remote system indicator light blinks rapidly for two seconds, then turns to a constant light and the garage door does not move, continue with programming Steps 4 through 6.

It may be helpful to have another person assist with the remaining Steps 4 through 6.



“Learn” or “Smart” Buttons

4. After Steps 1 through 3 have been completed, locate the “Learn” or “Smart” button inside the garage on the garage door opener receiver (motor-head unit). The name and color of the button may vary by manufacturer.
5. Firmly press and release the “Learn” or “Smart” button. After you press this button, you will have 30 seconds to complete Step 6.

6. Immediately return to the vehicle. Firmly press and hold for two seconds the Universal Remote system button, selected in Step 2 to control the garage door, and then release it. If the garage door does not move or the lamp on the garage door opener receiver (motor-head unit) does not flash, press and hold the same button a second time for two seconds, and 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, and then release.

The Universal Remote system should now activate the garage door.

To program the remaining two Universal Remote system buttons, begin with Step 1 of “Programming the Universal Remote System.”

Gate Operator and Canadian Programming

If you have questions or need help programming the Universal Remote system, call 1-800-355-3515 or go to www.homelink.com.

Canadian radio-frequency laws 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. Similarly, some U.S. gate operators are manufactured to time out in the same manner.

If you live in Canada, or you are having difficulty programming a gate operator or garage door opener by using the “Programming the Universal Remote System” procedures, regardless of where you live, replace Step 2 under “Programming the Universal Remote System” with the following:

Continue to press and hold the Universal Remote system button while you press and release every two seconds (cycle) the hand-held transmitter button until the frequency 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 half of a second. The indicator light will come on while the signal is being transmitted.

Erasing Universal Remote System Buttons

All programmed buttons should be erased when the vehicle is sold or the lease ends.

To erase all programmed buttons on the Universal Remote system device:

1. Press and hold down 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 three Universal Remote system buttons:

1. Press and hold the desired Universal Remote system button. Do not release the button.
2. The indicator light will begin to flash after 20 seconds. Without releasing the button, proceed with Step 1 of the section "Programming the Universal Remote System."

If you have questions or need help programming the Universal Remote system, call 1-800-355-3515 or go to www.homelink.com. You may also call the customer assistance phone number under *Customer Assistance Offices on page 13-3*.

Lighting

Exterior Lighting

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Flash-to-Pass	6-2
Daytime Running Lamps (DRL)	6-3
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Interior Lighting

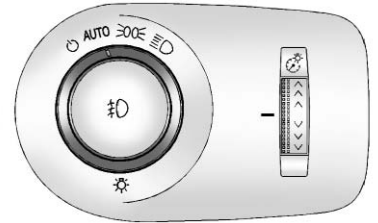
Instrument Panel Illumination Control	6-6
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Exterior Lighting

Exterior Lamp Controls



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

It controls the following systems:

- Headlamps
- Taillamps
- Parking Lamps
- License Plate Lamps
- Instrument Panel Lights
- Fog Lamps

6-2 Lighting

The exterior lamps control has four positions:

⏏ (**Off**): Briefly turn to this position to turn the automatic light control off or on again.

AUTO (Automatic): Turns the headlamps on automatically at normal brightness, together with the following:

- Parking Lamps
- Taillamps
- License Plate Lamps
- Instrument Panel Lights

🚗 (**Parking Lamps**): Turns the parking lamps on together with the following:

- Taillamps
- License Plate Lamps
- Instrument Panel Lights

🚗 (**Headlamps**): Turns the headlamps on together with the lamps listed below. A warning chime sounds if the driver door is opened when the ignition switch is off and the headlamps are on.

- Parking Lamps
- Taillamps
- License Plate Lamps
- Instrument Panel Lights

🚗 (**Front Fog Lamps**): For vehicles with fog lamps, press to turn the lamps on or off.

See *Front Fog Lamps* on page 6-5.

Headlamp High/Low-Beam Changer

Push the turn signal/lane change lever away from you to turn the high beams on.

Pull the lever toward you to return to low beams.



This indicator light turns on in the instrument panel cluster when the high-beam headlamps are on.

Flash-to-Pass

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

To flash the high beams, pull the turn signal/lane change lever all the way toward you, then release it.

Daytime Running Lamps (DRL)

Daytime Running Lamps (DRL) can make it easier for others to see the front of your vehicle during the day.

A light sensor on top of the instrument panel makes the DRL work, so be sure it is not covered.

The DRL system makes the low-beam headlamps come on at a reduced brightness or for vehicles with High Intensity Discharge (HID) headlamps, the DRL lights will come on when the following conditions are met:

- The ignition is in the ON/RUN mode.
- The exterior lamp control is in AUTO.
- The engine is running.

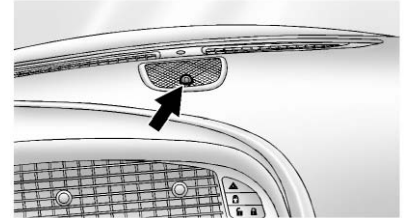
When the DRL are on, only the low-beam headlamps, at a reduced level of brightness, will be on. The headlamps, taillamps, sidemarker, instrument panel, and other lamps will not be on.

The headlamps automatically change from DRL to the regular headlamps depending on the darkness of the surroundings. The other lamps that come on with the headlamps will also come on.

When it is bright enough outside, the headlamps go off and the DRL come on.

To turn the DRL off or on again, turn the exterior lamp control to the off position and then release.

Automatic Headlamp System



This feature automatically turns the lamps on and off. A light sensor on top of the instrument panel makes the automatic headlamp system work, so be sure it is not covered.

With the automatic headlamp system, the following will happen:

- When it is dark enough outside, and the exterior lamp control is in the AUTO position, the Daytime Running Lamps (DRL) go off, and the headlamps and parking lamps come on. The other lamps that come on with the headlamps also come on.


6-4 Lighting

- When it is bright enough outside, the headlamps go off, and the DRL come on, as long as the exterior lamp control is in the AUTO position. See *Exterior Lamp Controls on page 6-1*.

If the vehicle is started in a dark garage, the automatic headlamp system comes on immediately. If it is light outside when the vehicle leaves the garage, there is a slight delay before the automatic headlamp system changes to the DRL. During that delay, the instrument panel cluster may not be as bright as usual. Make sure the instrument panel brightness control is in full bright position. See *Instrument Panel Illumination Control on page 6-6* for more information.

The vehicle can be idled with the lamps off, even when it is dark outside. After starting the vehicle, turn the exterior lamps control to off, then release it. The lamps will remain off until the control is turned to off again.

The automatic headlamp system also provides exterior illumination as you leave the vehicle. If the automatic headlamp system has turned on the lamps when the ignition is turned off, the lamps remain on until one of the following occurs:

- The exterior lamp control is moved from  to the parking lamp position.
- The delay time selected has elapsed.

See *Vehicle Personalization on page 5-42* to select the delay time. You can also select no delay time.

If the ignition is turned off with the exterior lamps control in the parking lamp or headlamp position, the delay will not occur. The lamps will turn off as soon as the control is turned off.

The regular headlamp system should be turned on when needed.

Adaptive Forward Lighting (AFL)

For vehicles with uplevel headlamps, the Adaptive Forward Lighting System (AFL) adjusts the headlamps to provide greater road illumination in various driving conditions.

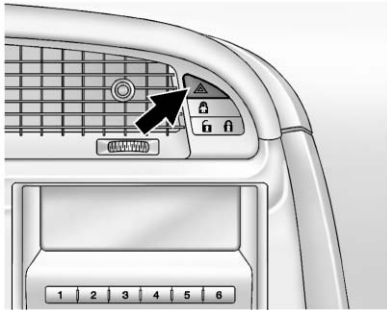
To enable AFL, set the exterior lamp control to the AUTO position. Moving the control out of the AUTO position will deactivate the system. AFL will operate when the vehicle speed is greater than 3 km/h (2 mph). AFL will not operate when the transmission is in R (Reverse). AFL is not immediately operable after starting the vehicle; driving a short distance is required to calibrate the AFL. See *Exterior Lamp Controls on page 6-1*.

Curve Lighting

The light beam pivots based on the steering wheel position and vehicle speed of at least 10 km/h (6 mph).

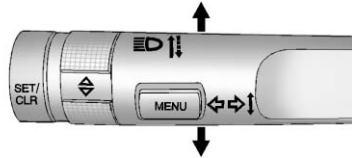
The headlamps shine at an angle of up to 15 degrees to the right or left of the direction of travel.

Hazard Warning Flashers



⚠ (Hazard Warning Flashers): Press this button on the instrument panel, to make the front and rear turn signal lamps flash on and off. This warns others that you are having trouble. Press again to turn the flashers off.

Turn and Lane-Change Signals



An arrow on the instrument panel will flash in the direction of the turn or lane change.

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

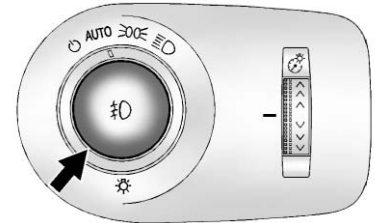
Raise or lower the lever until the arrow starts to flash to signal a lane change. The turn signal flashes three times.

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

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

Have the bulbs replaced. If the bulb is not burned out, check the fuse. See *Fuses and Circuit Breakers* on page 10-44 for more information.

Front Fog Lamps



The front fog lamp button is located on the exterior lamp control, on the outboard side of the steering wheel.

The ignition and the low-beam headlamps must be on to turn on the fog lamps.

6-6 Lighting

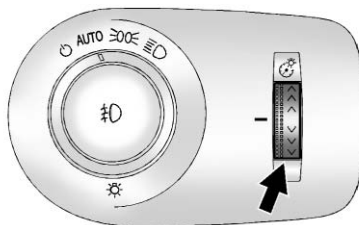
☁ (Front Fog Lamps) : Press to turn the fog lamps on or off. An indicator light on the instrument panel cluster comes on when the fog lamps are on.

The fog lamps come on together with the parking lamps.

Some localities have laws that require the headlamps to be on along with the fog lamps.

Interior Lighting

Instrument Panel Illumination Control



This feature controls the brightness of the instrument panel lights.

☀ (Instrument Panel Brightness): Turn the thumbwheel up or down to brighten or dim the instrument panel lights.

Night Panel



The night panel feature reduces the interior lighting during night time driving.

Press the night panel button, on the instrument panel to the right of the steering wheel, to turn it on or off. When the feature is on, the vehicle displays, instrument panel center stack area, and cluster lighting is reduced. The speedometer is not affected. All button backlighting is reduced, but can still be adjusted with the instrument panel illumination control.

Cargo Lamp

The cargo lamp is located over the rear compartment and is controlled by the dome lamp. See *Dome Lamps on page 6-7*.


Courtesy Lamps


The courtesy lamps come on automatically when any door is opened and the dome lamp is in the door position.


Dome Lamps

The dome lamp is located in the overhead console.

To change the dome lamp settings, press the following:

 **(Dome Lamp Override):** Turns the lamp off, even when a door is open.



 **(Door):** The lamp comes on automatically when a door is opened.

 **(On):** Turns the dome lamp on.

Reading Lamps



There are reading lamps located on the overhead console and over the rear passenger doors. These lamps come on automatically when any door is opened.

To manually turn the reading lamps on or off:

- Press  or  next to each overhead console reading lamp.
- Press the lamp lens on the rear passenger reading lamps.

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  is pressed on the Remote Keyless Entry (RKE) transmitter, or when the door handle is pulled. After about 30 seconds the exterior lamps turn off, and then the dome and remaining interior lights dim to off. The entry lighting can be manually turned off, by changing the ignition out of the off position, or by pressing  on the RKE transmitter.

This feature can be changed. See *Vehicle Personalization on page 5-42*.

Exit Lighting

The headlamps, taillamps, parking lamps, back-up lamps, and license plate lamps come on at night, or in areas with limited lighting, when a

6-8 Lighting

door is opened after the ignition is turned off. The dome lamps also come on when a door is opened after the ignition is changed to the off position.

The exterior lights and dome lamp remain on after the door is closed for a set amount of time, then automatically turn off.

The exterior lights turn off immediately by turning the exterior lamps control to off.

This feature can be changed. See *Vehicle Personalization on page 5-42*.

Battery Load Management

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

When the battery's state of charge is low, the voltage is raised slightly to quickly bring the charge back up. When the state of charge is high, the voltage is lowered slightly to prevent overcharging. If the vehicle has a voltmeter gauge or a voltage display on the Driver Information Center (DIC), you may see the voltage move up or down. This is normal. If there is a problem, an alert will be displayed.

The battery can be discharged at idle if the electrical loads are very high. This is true for all vehicles. This is because the generator (alternator) may not be spinning fast enough at idle to produce all of the power needed for very high electrical loads.

A high electrical load occurs when several of the following are on, such as: headlamps, high beams, 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, such as BATTERY SAVER ACTIVE, BATTERY VOLTAGE LOW, or LOW BATTERY. If one of these messages displays, it is recommended that the driver reduce the electrical loads as much as possible. See *Driver Information Center (DIC) on page 5-29*.

Infotainment System

Introduction

Infotainment 7-1

Introduction

Infotainment

Your vehicle has an infotainment system. For more information, see the separate infotainment system manual.

Climate Controls

Climate Control Systems

Dual Automatic Climate Control System 8-1
 Rear Climate Control System 8-5

Air Vents

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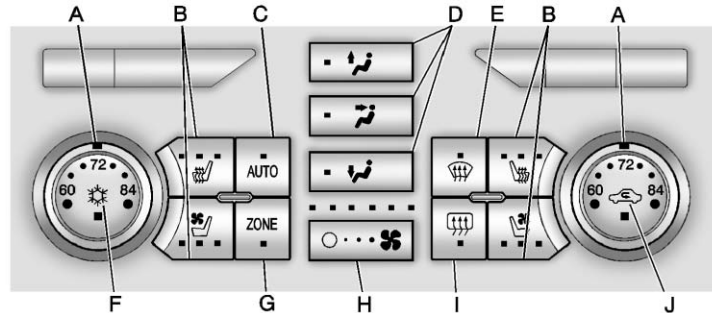
Maintenance

Passenger Compartment Air Filter 8-7

Climate Control Systems

Dual Automatic Climate Control System

The heating, cooling, and ventilation for the vehicle can be controlled with this system.



- | | |
|--|---|
| <ul style="list-style-type: none"> A. Driver and Passenger Temperature Control B. Driver and Passenger Heated and Ventilated Seats C. AUTO (Automatic Operation) D. Air Delivery Mode Controls | <ul style="list-style-type: none"> E. Defrost F. Air Conditioning G. ZONE H. Fan Control I. Rear Window Defogger J. Recirculation |
|--|---|

8-2 Climate Controls

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.



English units can be changed to metric units through the Driver Information Center (DIC). See *Vehicle Personalization on page 5-42*.

Driver and Passenger

Temperature Control: The temperature can be adjusted separately for the driver and the passenger. Turn the knob clockwise or counterclockwise to increase or decrease the temperature.

ZONE: Press to link all climate zone settings to the driver settings. The ZONE indicator light turns off. When the passenger settings are adjusted, the ZONE indicator light is on.

Manual Operation

 ...  **(Fan Control):** Press to increase or decrease the fan speed. Pressing the button cancels automatic operation and the system goes into manual mode. Press AUTO to return to automatic operation.



Air Delivery Mode Controls:

Press to change the direction of the airflow. The current mode appears in the display screen. Changing the mode cancels the automatic


operation and the system goes into manual mode. Press AUTO to return to automatic operation.



To change the current mode, press one or a combination of the buttons indicated:


 **(Vent):** Air is directed to the instrument panel outlets.



 /  **(Bi-Level):** Air is divided between the instrument panel outlets and the floor outlets.


 /  **(Tri-Level):** Air is divided between the windshield, instrument panel, and floor outlets.


 **(Floor):** Air is directed to the floor outlets.

 /  **(Defog):** Clears the windows of fog or moisture. Air is directed to the windshield and floor outlets.


 **(Upper):** Air is directed to the windshield outlets.

 /  **(Hi-Level):** Air is divided between the windshield and instrument panel outlets.

 **(Defrost):** Press to clear the windshield of fog or frost more quickly. Air is directed to the windshield.

 **(Air Conditioning):** Press to turn the automatic air conditioning on or off. If the fan is turned off or the outside temperature falls below freezing, the air conditioner will not run.

Press AUTO to return to automatic operation and the air conditioner runs as needed. When the indicator light is on, the air conditioner runs automatically to cool the air inside the vehicle or to dry the air needed to defog the windshield faster.

 **(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.


Automatic Air Recirculation:

When the AUTO indicator light is on, the air is automatically recirculated as needed to help quickly cool the inside of the vehicle.

The climate control system may have a sensor to detect air pollution. In auto recirculation control, the Air Quality Control system may operate. To adjust the sensitivity of the Air Quality Control, see “Climate and Air Quality” under *Vehicle Personalization* on page 5-42.

Auto Defog: The climate control system may have a sensor to automatically detect high humidity inside the vehicle. When high humidity is detected, the climate control system may adjust to outside air supply and turn on the air conditioner. If the climate control system does not detect possible window fogging, it returns to normal operation. To turn Auto Defog off or on, see “Climate and Air Quality” under *Vehicle Personalization* on page 5-42.

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 rear window defogger can be set to automatic operation; see “Climate and Air Quality” under *Vehicle Personalization* on page 5-42. When auto rear defog is selected, the rear window defogger turns on automatically when the interior temperature is cold and the outside temperature is about 4°C (40°F) and below. The auto rear defogger turns off automatically after about 10 minutes. At higher speeds, the rear window defogger may stay on continuously.

8-4 Climate Controls

The heated outside rearview mirrors turn on when the rear window defogger button is on and help to clear fog or frost from the surface of the mirrors. See *Heated Mirrors* on page 2-20.

Notice: Do not try to clear frost or other material from the inside of the front windshield and rear window with a razor blade or anything else that is sharp. This may damage the rear window defogger grid and affect your radio's ability to pick up stations clearly. The repairs wouldn't be covered by your warranty.

Heated and Ventilated Seats:

Press to heat or ventilate the seat. See *Heated and Ventilated Front Seats* on page 3-10.

Remote Start Climate Control

Operation: For vehicles with the remote vehicle start feature, 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. See *Remote Vehicle Start* on page 2-9.

The rear window defogger turns on if it is cold outside.

Sensor

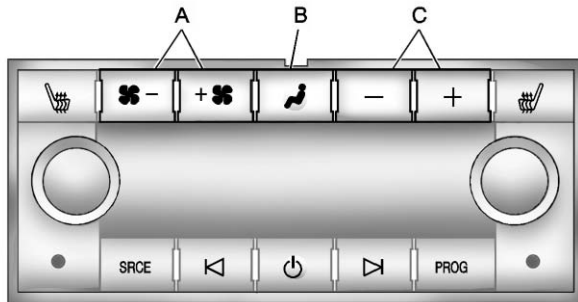
The solar sensor located on top of the instrument panel near the windshield, monitors the solar heat.

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.

Rear Climate Control System

For vehicles with the rear heat and air conditioning controls, they are integrated with the rear seat audio controls located in the center console.



Rear Climate Control with Rear Seat Audio Controls

- A. Fan Control
- B. Air Delivery Mode Control
- C. Temperature Control

ZONE: When the rear climate control is turned on from the rear, the ZONE indicator light will turn on.

Press the ZONE button on the front climate control system to turn off the rear blower and match the rear settings to the front. The ZONE indicator light and rear climate control display will turn off.

The rear climate control can be turned off by pressing -.

Independent Mode: This mode directs rear seating airflow according to the settings of the rear controls.

The front climate control system must be on for the rear climate control to work. To turn on the rear climate control from rear seating, press any rear climate control button.




The rear climate control will not work if the front climate control system is in defrost.

Automatic Operation


AUTO: Press until the AUTO setting is selected to control the rear temperature, air delivery, and fan speed automatically.

8-6 Climate Controls

Manual Operation

 **-/+**  **(Fan Control):** Press these buttons on the rear seat audio control panel to increase or decrease the airflow. Pressing +  when the system is off will turn the system on. The air delivery mode remains in its previous setting.

- /+ (Temperature Control): Press these buttons to adjust the temperature of the air flowing into the passenger area. Press + for warmer air and press - for cooler air.

 **(Air Delivery Mode Control):** Press the mode button to change the direction of the airflow. Multiple presses will cycle through the delivery selections.

Air Vents

Move the sliding knob on the air outlets up and down or left and right to direct the airflow. Use the thumbwheels near the air outlets to open or close off the airflow.

Operation Tips

- Clear away any ice, snow, or leaves from air inlets at the base of the windshield that could block the flow of air into the vehicle.

- Keep the path under the front seats clear of objects to help circulate the air inside the vehicle more effectively.
- Use of non-Saab approved hood deflectors can adversely affect the performance of the system. Check with your dealer before adding equipment to the outside of the vehicle.

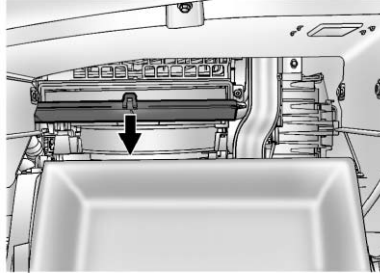
Maintenance

Passenger Compartment Air Filter

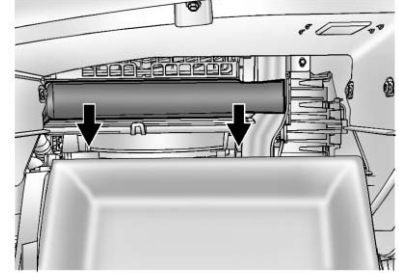
The filter removes dust, pollen, and other airborne irritants from outside air that is pulled into the vehicle.

The filter should be replaced as part of routine scheduled maintenance. To find out what type of filter to use, see *Maintenance Replacement Parts* on page 11-6.

1. Open the glove box completely and remove the four screws along the upper portion of the glove box.
2. When released, lower the upper portion of the glove box.
3. Locate the service door for the passenger compartment air filter.



4. Release the two latches holding the service door. Lower the service door.



5. Remove the old air filter.
6. Install the new air filter.
7. Close the service door and latches.
8. Reinstall the upper portion of the glove box.

See your dealer if additional assistance is needed.

Driving and Operating

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Driving Information

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 3-14*.

WARNING

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. In addition:

- Allow enough following distance between you and the driver in front of you.
- Focus on the task of driving.

(Continued)

WARNING (Continued)

Driver distraction can cause collisions resulting in injury or possible death. These simple defensive driving techniques could save your life.

Drunk Driving

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.

Death and injury associated with drinking and driving is a global tragedy.

Alcohol affects four things that anyone needs to drive a vehicle: judgment, muscular coordination, vision, and attentiveness.

Police records show that almost 40 percent of all motor vehicle-related deaths involve alcohol. In most cases, these deaths are the result of someone who was drinking and driving. In recent years, more than 17,000 annual motor vehicle-related deaths have been associated with the use of alcohol, with about 250,000 people injured.

For persons under 21, it is against the law in every U.S. state to drink alcohol. There are good medical, psychological, and developmental reasons for these laws.

The obvious way to eliminate the leading highway safety problem is for people never to drink alcohol and then drive.

Medical research shows that alcohol in a person's system can make crash injuries worse, especially injuries to the brain, spinal cord, or heart. This means that when anyone who has been drinking — driver or passenger — is in a crash, that person's chance of being killed or permanently disabled is higher than if the person had not been drinking.

Control of a Vehicle

The following three systems help to control the vehicle while driving — brakes, steering, and accelerator. At times, as when driving on snow or ice, it is easy to ask more of those control systems than the tires and road can provide. Meaning, you can lose control of the vehicle. See *Traction Control System (TCS)* on page 9-34 and *Electronic Stability Program (ESP)* on page 9-36.

Adding non-dealer accessories can affect vehicle performance. See *Accessories and Modifications* on page 10-3.

9-4 Driving and Operating

Braking

See *Brake System Warning Light* on page 5-22.

Braking action involves perception time and reaction time. Deciding to push the brake pedal is perception time. Actually doing it is reaction time.

Average reaction time is about three-fourths of a second. But that is only an average. It might be less with one driver and as long as two or three seconds or more with another. Age, physical condition, alertness, coordination, and eyesight all play a part. So do alcohol, drugs, and frustration. But even in three-fourths of a second, a vehicle moving at 100 km/h (60 mph) travels 20 m (66 ft). That could be a lot of distance in an emergency, so keeping enough space between the vehicle and others is important.

And, of course, actual stopping distances vary greatly with the surface of the road, whether it is pavement or gravel; the condition of the road, whether it is wet, dry, or icy; tire tread; the condition of the brakes; the weight of the vehicle; and the amount of brake force applied.

Avoid needless heavy braking. Some people drive in spurts — heavy acceleration followed by heavy braking — rather than keeping pace with traffic. This is a mistake. The brakes might not have time to cool between hard stops. The brakes will wear out much faster with a lot of heavy braking. Keeping pace with the traffic and allowing realistic following distances eliminates a lot of unnecessary braking. That means better braking and longer brake life.

If the engine ever stops while the vehicle is being driven, brake normally but do not pump the brakes. If the brakes are pumped, the pedal could get harder to push down. If the engine stops, there will still 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.

Adding non-dealer accessories can affect vehicle performance. See *Accessories and Modifications* on page 10-3.

Steering

Power Steering

If power steering assist is lost because the engine stops or the power steering system is not functioning, the vehicle can be steered but it will take more effort.

Steering Tips

It is important to take curves at a reasonable speed.

Traction in a curve depends on the condition of the tires and the road surface, the angle at which the curve is banked, and vehicle speed. While in a curve, speed is the one factor that can be controlled.

If there is a need to reduce speed, do it before entering the curve, while the front wheels are straight.

Try to adjust the speed so you can drive through the curve. Maintain a reasonable, steady speed. Wait to accelerate until out of the curve, and then accelerate gently into the straightaway.

Steering in Emergencies

There are times when steering can be more effective than braking. For example, you come over a hill and find a truck stopped in your lane, or a car suddenly pulls out from nowhere, or a child darts out from between parked cars and stops right in front of you. These problems can be avoided by braking — if you can stop in time. But sometimes you cannot stop in time because there is no room. That is the time for evasive action — steering around the problem.

The vehicle can perform very well in emergencies like these. First apply the brakes. See *Braking on page 9-4*. It is better to remove as much speed as possible from a collision. Then steer around the problem, to the left or right depending on the space available.

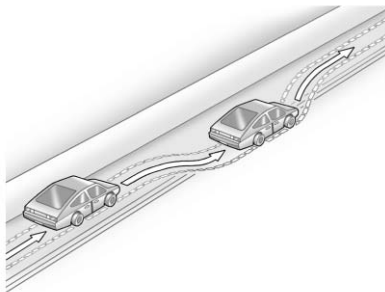


An emergency like this requires close attention and a quick decision. If holding the steering wheel at the recommended 9 and 3 o'clock positions, it can be turned a full 180 degrees very quickly without removing either hand. But you have to act fast, steer quickly, and just as quickly straighten the wheel once you have avoided the object.

The fact that such emergency situations are always possible is a good reason to practice defensive driving at all times and wear safety belts properly.

Off-Road Recovery

The vehicle's right wheels can drop off the edge of a road onto the shoulder while driving.



If the level of the shoulder is only slightly below the pavement, recovery should be fairly easy. Ease off the accelerator and then, if there is nothing in the way, steer

so that the vehicle straddles the edge of the pavement. Turn the steering wheel 8 to 13 cm (3 to 5 in), about one-eighth turn, until the right front tire contacts the pavement edge. Then turn the steering wheel to go straight down the roadway.

Loss of Control

Let us review what driving experts say about what happens when the three control systems — brakes, steering, and acceleration — do not have enough friction where the tires meet the road to do what the driver has asked.

In any emergency, do not give up. Keep trying to steer and constantly seek an escape route or area of less danger.

Skidding

In a skid, a driver can lose control of the vehicle. Defensive drivers avoid most skids by taking reasonable care suited to existing conditions, and by not overdriving those conditions. But skids are always possible.

The three types of skids correspond to the vehicle's three control systems. In the braking skid, the wheels are not rolling. In the steering or cornering skid, too much speed or steering in a curve causes tires to slip and lose cornering force. And in the acceleration skid, too much throttle causes the driving wheels to spin.

If the vehicle starts to slide, ease your foot off the accelerator pedal and quickly steer the way you want the vehicle to go. If you start steering quickly enough, the vehicle may straighten out. Always be ready for a second skid if it occurs.

Of course, traction is reduced when water, snow, ice, gravel, or other material is on the road. For safety, slow down and adjust your driving to these conditions. It is important to slow down on slippery surfaces because stopping distance is longer and vehicle control more limited.

While driving on a surface with reduced traction, 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. You might not realize the surface is slippery until the vehicle is skidding. 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.

Remember: Antilock brakes help avoid only the braking skid.

Driving on Wet Roads

Rain and wet roads can reduce vehicle traction and affect your ability to stop and accelerate. Always drive slower in these types of driving conditions and avoid driving through large puddles and deep-standing or flowing water.

WARNING

Wet brakes can cause crashes. They might not work as well in a quick stop and could cause pulling to one side. You could lose control of the vehicle.

(Continued)

WARNING (Continued)

After driving through a large puddle of water or a car/vehicle wash, lightly apply the brake pedal until the brakes work normally.

Flowing or rushing water creates strong forces. Driving through flowing water could cause the vehicle to be carried away. If this happens, you and other vehicle occupants could drown. Do not ignore police warnings and be very cautious about trying to drive through flowing water.

9-8 Driving and Operating

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 10-52*.
- 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 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

If you do not shift down, the brakes could get so hot that they would not work well. You would then have poor braking or even none going down a hill. You could crash. Shift down 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. The brakes will have to do all the work of slowing down and they could get so hot that they would not work well. You would then have poor braking or even none going down a hill. You could crash. Always have the engine running and the vehicle in gear when going downhill.

- 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.
- Top of hills: Be alert — 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)* on page 9-30 improves vehicle stability during hard stops on slippery roads, but apply the brakes sooner than when on dry pavement.

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 the *Roadside Assistance Program on page 13-4*. 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.

(Continued)

WARNING (Continued)

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.
- 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 System in the Index.

(Continued)

WARNING (Continued)

For more information about carbon monoxide, see *Engine Exhaust on page 9-24*.

Snow can trap exhaust gases under your vehicle. This can cause deadly CO (Carbon Monoxide) gas to get inside. CO could overcome you and kill you. You cannot see it or smell it, so you might not know it is in your vehicle. Clear away snow from around the base of your vehicle, especially any that is blocking the exhaust.

Run the engine for short periods only as needed to keep warm, but be careful.

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.

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 55 km/h (35 mph).

For information about using tire chains on the vehicle, see *Tire Chains on page 10-75*.

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 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 10-97*.

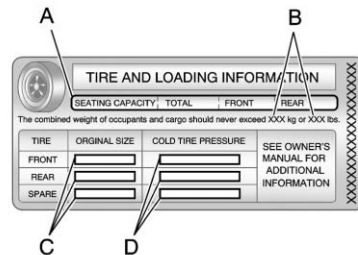
Vehicle Load Limits

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

A vehicle-specific Tire and Loading Information label is attached to the vehicle's center pillar (B-pillar). With the driver door open, the label is attached near the door lock post.

The Tire and Loading Information label shows the number of occupant seating positions (A), and the maximum vehicle capacity weight (B) in kilograms and pounds.

The Tire and Loading Information label also shows the tire size of the original equipment tires (C) and the recommended cold tire inflation pressures (D). For more information on tires and inflation see *Tires on page 10-52* and *Tire Pressure on page 10-59*.

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.

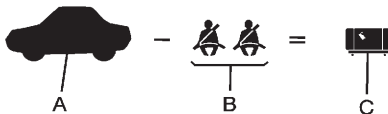
Steps for Determining Correct Load Limit

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 ($1400 - 750$ (5×150) = 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.

9-14 Driving and Operating

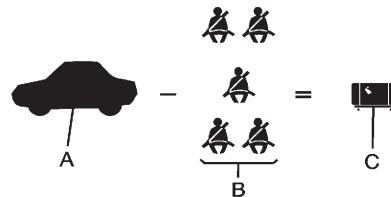
6. If your vehicle will be towing a trailer, the load from your trailer will be transferred to your vehicle. Consult this manual to determine how this reduces the available cargo and luggage load capacity of your vehicle.

See *Trailer Towing on page 9-56* for important information on towing a trailer, towing safety rules and trailering tips.



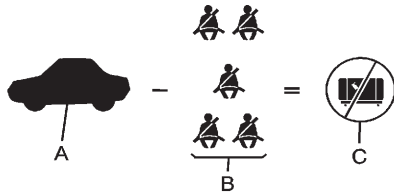
Example 1

- Vehicle Capacity Weight for Example 1 = 453 kg (1,000 lbs).
- Subtract Occupant Weight @ 68 kg (150 lbs) \times 2 = 136 kg (300 lbs).
- Available Occupant and Cargo Weight = 317 kg (700 lbs).



Example 2

- Vehicle Capacity Weight for Example 2 = 453 kg (1,000 lbs).
- Subtract Occupant Weight @ 68 kg (150 lbs) \times 5 = 340 kg (750 lbs).
- Available Cargo Weight = 113 kg (250 lbs).

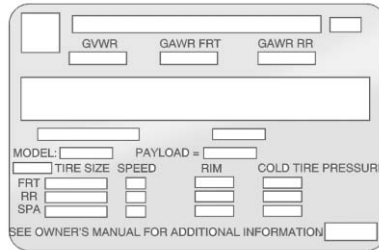


Example 3

- A. Vehicle Capacity Weight for Example 3 = 453 kg (1,000 lbs).
- B. Subtract Occupant Weight @ 91 kg (200 lbs) × 5 = 453 kg (1,000 lbs).
- C. 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/Tire label is attached to the center b-pillar. The label shows

the size of the vehicle's original tires and the inflation pressures needed to obtain the gross weight capacity of the vehicle. This is called Gross Vehicle Weight Rating (GVWR). The GVWR includes the weight of the vehicle, all occupants, fuel, and cargo.

The Certification/Tire label also tells you the maximum weights for the front and rear axles, called Gross Axle Weight Rating (GAWR). To find out the actual loads on the front and rear axles, you need to go to a weigh station and weigh the vehicle. Your dealer can help you with this. Be sure to spread out the load equally on both sides of the center line.

Never exceed the GVWR for the vehicle, or the GAWR for either the front or rear axle.

9-16 Driving and Operating

If the vehicle is carrying 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.

Your warranty does not cover parts or components that fail because of overloading.

The label will help you decide how much cargo and installed equipment your vehicle can carry.

Using heavier suspension components to get added durability might not change your weight ratings. Ask your dealer to help you load your vehicle the right way.

If you put things inside your 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

Notice: 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.
- During the first 1 000 km (600 mi), avoid using more than moderate acceleration in lower gears and avoid vehicle speeds above 110 km/h (68 mph).
- Between the first 1 000 km (600 mi) and 5 000 km (3,000 mi), heavy acceleration in lower gears

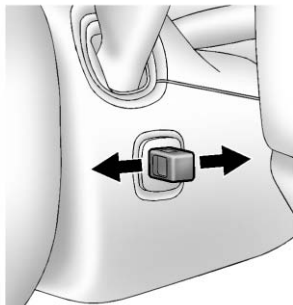
can be used. Vehicle speeds above 110 km/h (68 mph) should be limited to five minutes per use.

- 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 breaking-in guideline every time you get new brake linings.
- Do not tow a trailer during break-in. See *Driving Characteristics and Towing Tips* on page 9-52 for the trailer towing capabilities of your vehicle and more information.

Following break-in, engine speed and load can be gradually increased.

Adjustable Throttle and Brake Pedal

If the vehicle has this feature, the position of the throttle and brake pedals can be adjusted.



The switch used to adjust the pedals is located on the right side of the steering column, below the wiper stalk. Pull the switch toward you to move the pedals further from the floor, or push the switch away from you to move the pedals closer to the floor.

Adjust the throttle and brake pedals while the vehicle is in P (Park) without pressing on the pedals. The pedals cannot be adjusted while the vehicle is in R (Reverse) or when cruise control is engaged. The throttle and brake pedals can also be adjusted while driving.

Ignition Positions



The vehicle has 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.

If the pushbutton start is not working, the vehicle may be near a strong radio antenna signal causing interference to the keyless entry system. See *Driver Information Center (DIC)* on page 5-29 for more information.

To shift out of P (Park), the vehicle must be in ON/RUN and the brake pedal must be applied.

STOPPING THE ENGINE/OFF (No LED 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 9-22* for more information. 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 *Driver Information Center (DIC) on page 5-29* for more information. When the vehicle is shifted into P (Park), the ignition system will switch to OFF. In an emergency, if the vehicle must be shut off while driving:

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 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.

5. In case of emergency the engine can be switched off while the vehicle is running: push the Start/Stop button twice within five seconds, or hold the button down for more than two seconds. When the engine is not running, considerably more force is needed to brake and steer.

ACC/ACCESSORY (Amber LED Light): This mode allows you to use some electrical accessories when the engine is off.

With the ignition off, pressing the button one time without the brake pedal applied will place the ignition system in ACC/ACCESSORY.

The ignition will switch from ACC/ACCESSORY to OFF after 10 minutes to prevent battery run down.

ON/RUN/START (Green LED

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 Gasoline Engine* on page 9-20 for more information. The ignition will then remain in ON/RUN.

Starting the Gasoline Engine

To place the transmission in the proper gear:

Move the shift lever to P (Park) or N (Neutral). To restart the engine when the vehicle is already moving, use N (Neutral).

Notice: 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.

The RKE transmitter must be inside the vehicle for the ignition to work.

Cell phone chargers can interfere with the operation of the keyless access system. Battery chargers should not be plugged in when starting or turning off the engine.

To start the vehicle:

Starting Procedure

1. With the brake pedal applied, press the START button located on the center console.
2. When the engine begins cranking, let go of the button and the engine cranks automatically until it starts.

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 5-29 for more information.

If the battery in the RKE transmitter needs replacing, the DIC displays REPLACE BATTERY IN REMOTE KEY. The vehicle can still be driven.

See *Remote Keyless Entry (RKE) System Operation* on page 2-3 for more information.

3. 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.
4. If the engine does not start and no DIC message is displayed, wait 15 seconds before trying again to let the cranking motor cool down.

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. Try pushing the accelerator pedal all the way to the floor while cranking for up to 15 seconds.

Notice: Cranking the engine for long periods of time, by pressing the START button 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 allow the cranking motor to cool down.

When the engine starts, let go of the accelerator. If the vehicle starts briefly but then stops again, do the same thing. This clears the extra gasoline from the engine.

The vehicle has a Computer-Controlled Cranking System. This feature assists in starting the engine and protects components. Once cranking has been initiated, the engine continues

cranking for a few seconds or until the vehicle starts. If the engine does not start, cranking automatically stops after 15 seconds to prevent cranking motor damage. To prevent gear damage, this system also prevents cranking if the engine is already running.

Notice: The engine is designed to work with the electronics in the vehicle. If you add electrical parts or accessories, you could change the way the engine operates. Before adding electrical equipment, check with your dealer. If you do not, the engine might not perform properly. Any resulting damage would not be covered by the vehicle warranty.

Engine Heater

The engine coolant heater, if available, can help in cold weather conditions at or below -18°C (0°F) for easier starting and better fuel economy during engine warm-up. Plug in the 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 cord is located near the air cleaner.
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. If you do not it could be damaged.

The length of time the heater should remain plugged in depends on several factors. Ask a dealer in the area where you will be parking the vehicle for the best advice on this.

Retained Accessory Power (RAP)

These accessories can be used after the engine is turned off:

- Audio system (up to 10 minutes or driver door is opened).
- Power windows, sunroof (if equipped), and power outlets (up to 10 minutes or any door is opened).

Shifting Into Park

WARNING

It can be dangerous to get out of the vehicle if the shift lever is not fully in P (Park) with the parking brake firmly set. The vehicle can roll. If you have left the engine running, the vehicle can move suddenly. You or others could be injured. To be sure the vehicle will not move, even when you are on fairly level ground, use the steps that follow.

1. Hold the brake pedal down and set the parking brake.
See Parking Brake on page 9-31 for more information.
2. Move the shift lever into P (Park) by pushing the lever all the way toward the front of the vehicle.
3. Turn the ignition off.

Leaving the Vehicle with the Engine Running

WARNING

It can be dangerous to leave the vehicle with the engine running. The vehicle could move suddenly if the shift lever is not fully in P (Park) with the parking brake firmly set. And, if you leave the vehicle with the engine running, it could overheat and even catch fire. You or others could be injured. Do not leave the vehicle with the engine running.

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 down the regular brake pedal. See if you can move the shift lever away from P (Park) without first pulling it

toward you. If you can, it means that the shift lever was not fully locked into P (Park).

Torque Lock

Torque lock is when the weight of the vehicle puts too much force on the parking pawl in the transmission. This happens when parking on a hill and shifting the transmission into P (Park) is not done properly and then it is difficult to shift out of P (Park). To prevent torque lock, set the parking brake and then shift into P (Park). To find out how, see "Shifting Into P (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 9-52*.

Shifting out of Park

This vehicle is equipped with an automatic transmission shift lock control system. The shift lock control is designed to 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 control is always functional except in the case of an uncharged or low voltage (less than 9-volt) battery.

If the vehicle has an uncharged battery or a battery with low voltage, try charging or jump starting the battery. See *Jump Starting on page 10-92*.

To shift out of P (Park):

1. Apply the brake pedal.
2. Turn the ignition to ON/RUN.
3. Press the shift lever button.
4. Move the shift lever to the desired position.

If you still are unable to shift out of P (Park):

1. Fully release the shift lever button.
2. Hold the brake pedal down and press the shift lever button again.
3. Move the shift lever to the desired position.

If you still cannot move the shift lever from P (Park), consult your dealer or a professional towing service.

Parking over Things That Burn

WARNING

Things that can burn could touch hot exhaust parts under the vehicle and ignite. Do not park over papers, leaves, dry grass, or other things that can burn.

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 after market 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. But if you ever have to, here are some things to know.

 WARNING

Idling a vehicle in an enclosed area with poor ventilation is dangerous. Engine exhaust may enter the vehicle. Engine exhaust contains Carbon Monoxide (CO) which cannot be seen or smelled. It can cause unconsciousness and even death. Never run the engine in an enclosed area that has no fresh air ventilation. For more information, see *Engine Exhaust on page 9-24*.

 WARNING

It can be dangerous to get out of the vehicle if the automatic transmission 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 unless you have to. 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).

Follow the proper steps to be sure the vehicle will not move. See *Shifting Into Park on page 9-23*.

If parking on a hill and pulling a trailer, see *Driving Characteristics and Towing Tips on page 9-52*.

Automatic Transmission

The shift lever is located on the center console between the front seats.



There are several different positions for the shift lever.

P (Park): This position locks the wheels. It is the best position to use when you start the engine because the vehicle cannot move easily.

⚠ CAUTION

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 unless you have to. 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 9-23. If you are pulling a trailer, see *Driving Characteristics and Towing Tips* on page 9-52.

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 regular brakes first and then press the shift lever button before you can shift from P (Park) when 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 press the shift lever button and move the shift lever into another gear. See *Shifting out of Park* on page 9-24.

Notice: 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.

R (Reverse): Use this gear to back up.

At low vehicle speeds, R (Reverse) can be used to rock the vehicle back and forth to get out of snow, ice, or sand without damaging the transmission. See *If the Vehicle Is Stuck on page 9-11* for additional information.

N (Neutral): In this position, the engine does not connect with the wheels. To restart when the vehicle is already moving, use N (Neutral) only. You can also use N (Neutral) when the vehicle is being towed.

 **CAUTION**

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.

Notice: Shifting out of P (Park) or N (Neutral) with the engine running at high speed may damage the transmission. The repairs would not be covered by the vehicle warranty. Be sure the engine is not running at high speed when shifting the vehicle.

D (Drive): This position is for normal driving. It provides the best fuel economy. If you need more power for passing, and you are:

- Going less than 55 km/h (35 mph), push the accelerator pedal about halfway down.
- Going about 55 km/h (35 mph) or more, push the accelerator all the way down.

The transmission will shift down to a lower gear and have more power.

Downshifting the transmission in slippery road conditions could result in skidding; see *Skidding under Loss of Control on page 9-6*

Notice: Spinning the tires or holding the vehicle in one place on a hill using only the accelerator pedal may damage the transmission. If you are stuck, do not spin the tires. When stopping on a hill, use the brakes to hold the vehicle in place.

Manual Mode

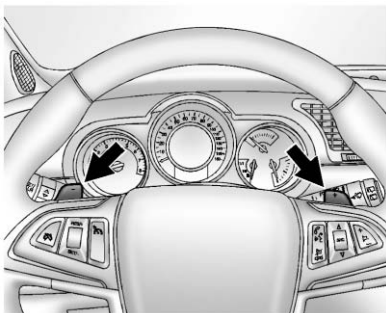
Driver Shift Control (DSC)

Notice: If you drive the vehicle at a high rpm without upshifting while using Driver Shift Control (DSC), you could damage the vehicle. Always upshift when necessary while using DSC.

DSC allows you to shift an automatic transmission similar to a manual transmission. To use the DSC feature:

1. Move the shift lever to the left from D (Drive) to M (Manual Mode).
2. Press the shift lever forward (+) to upshift or rearward (-) to downshift.

An M will be displayed in the DIC.



To use the DSC feature with the tap shift controls (if equipped):

1. Move the shift lever to the left from D (Drive) to M (Manual Mode).
2. The tap shift controls are on the back of the steering wheel. Tap the left control (-) to downshift, and the right control (+) to upshift.



The tachometer display on the instrument panel cluster will show which gear the vehicle is in. The number indicates the requested gear range when moving the shift lever forward or rearward. See *Tachometer* on page 5-12 for more information.

While using the DSC feature, the vehicle will have firmer, quicker shifting. You can use this for sport driving or when climbing or descending hills, to stay in gear longer, or to downshift for more power or engine braking.

The transmission will only allow you to shift into gears appropriate for the vehicle speed and engine revolutions per minute (rpm). The transmission will not automatically shift to the next lower gear if the engine rpm is too high, nor to the next higher gear when the maximum engine rpm is reached.

If shifting is prevented for any reason, the currently selected gear will flash multiple times, indicating that the transmission has not shifted gears.

While in the DSC mode, the transmission will automatically downshift when the vehicle comes to a stop. This will allow for more power during take-off.

When accelerating the vehicle from a stop in snowy and icy conditions, you may want to shift into second gear. A higher gear ratio allows you to gain more traction on slippery surfaces.

Fuel Economy Mode

The vehicle may have a fuel economy mode. When engaged, fuel economy mode can improve the vehicle's fuel economy.



Pressing the eco button by the shift lever will engage fuel economy mode. When activated, the eco light in the instrument cluster will come on. See *Fuel Economy Light* on page 5-27. Pressing the button a second time will turn fuel economy mode off.

When fuel economy mode is on:

- The transmission will upshift sooner, and downshift later.
- The torque converter will lock up sooner, and stay on longer.
- The gas pedal will be less sensitive.
- The vehicle's computers will more aggressively shut off fuel to the engine under deceleration.
- The engine operates at lower rpm's in fuel economy mode, which can increase noise and vibration. This is normal.

Drive Systems

All-Wheel Drive

Vehicles with this feature always send engine power to all four wheels. It is fully automatic, and adjusts itself as needed for road conditions.

When using a compact spare tire on an AWD vehicle, the system automatically detects the compact spare and disables AWD. To restore AWD operation and prevent excessive wear on the system, replace the compact spare with a full-size tire as soon as possible. See *Compact Spare Tire* on page 10-92 for more information.

Brakes

Antilock Brake System (ABS)

This vehicle has the Antilock Brake System (ABS), an advanced electronic braking system that helps prevent a braking skid.

When the engine is started and 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 5-23.

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 the driver 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.

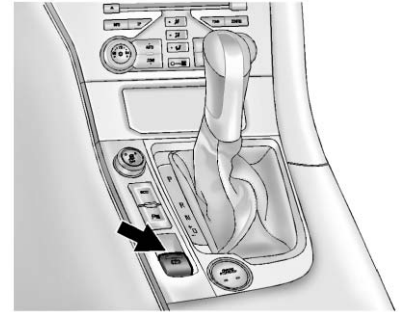
Using ABS

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 the driver to steer and brake at the same time. In many emergencies, steering can help more than even the very best braking.

Parking Brake



The vehicle has an Electric Parking Brake (EPB). The switch for the EPB is in the center console. The EPB can always be activated, even if the ignition is OFF. To avoid draining the battery, do not operate the EPB too often without the engine running.

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The system has a parking brake status light and a parking brake warning light. See *Brake System Warning Light* on page 5-22. There are also three Driver Information Center (DIC) messages. See *Driver Information Center (DIC)* on page 5-29 for more information. In case of insufficient electrical power, the EPB cannot be applied or released.

Before leaving the vehicle, check the parking brake status light to ensure the parking brake is applied.

EPB Apply

The EPB can be applied any time the vehicle is stopped. The EPB is applied by momentarily lifting up on the EPB switch. Once fully applied, the parking brake status light will be on. While the brake is being applied, the status light will flash until full apply is reached. If the light does not come on, or remains flashing,

you need to have the vehicle serviced. Do not drive the vehicle if the parking brake status light is flashing. See your dealer. See *Brake System Warning Light* on page 5-22 for more information.

If the EPB is applied while the vehicle is in motion, a chime will sound, and the DIC message **RELEASE PARKING BRAKE** will be displayed. The vehicle will decelerate as long as the switch is held in the up position. Releasing the EPB switch during the deceleration will release the parking brake. If the switch is held in the up position until the vehicle comes to a stop, the EPB will remain applied.

If the parking brake status light flashes continuously, the EPB is only partially applied or released, or there is a problem with the EPB. The DIC message **SERVICE PARKING BRAKE** will be displayed.

If this light flashes continuously, release the EPB and attempt to apply it again. If this light continues to flash, do not drive the vehicle. See your dealer.

If the parking brake warning light is on, the EPB has detected an error in another system and is operating with reduced functionality. To apply the EPB when this light is on, lift up on the EPB switch and hold it in the up position. Full application of the parking brake by the EPB system may take a longer period of time than normal when this light is on. Continue to hold the switch until the parking brake status light remains on. If the parking brake warning light is on, see your dealer.

If the EPB fails to apply, the rear wheels should be blocked to prevent vehicle movement.

EPB Release

To release the EPB, place the ignition in the ON/RUN position, apply and hold the brake pedal, and push down momentarily on the EPB switch. If you attempt to release the EPB without the brake pedal applied, a chime will sound, and the DIC message STEP ON BRAKE TO RELEASE PARK BRAKE will be displayed. The EPB is released when the parking brake status light is off.

If the parking brake warning light is on, the EPB has detected an error in another system and is operating with reduced functionality. To release the EPB when this light is on, push down on the EPB switch and hold it in the down position. EPB release may take a longer period of time than normal when this light is on. Continue to hold the switch until the parking brake status light is off. If the light is on, see your dealer.

Notice: 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 you are towing a trailer and parking on a hill, see *Driving Characteristics and Towing Tips* on page 9-52 for more information.

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 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)

This vehicle has a Hill Start Assist (HSA) feature, which may be useful when the vehicle is stopped on a grade. This feature is designed to 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 when the accelerator pedal is applied within the two-second window. 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).

Ride Control Systems

Traction Control System (TCS)


The vehicle may have a Traction Control System (TCS) that limits wheel spin. On a front-wheel-drive vehicle, the system operates if it senses that one or both of the front wheels are spinning or beginning to lose traction. On an All-Wheel-Drive (AWD) vehicle, the system will operate if it senses that any of the wheels are spinning or beginning to lose traction. When this happens, the system brakes the spinning wheel(s) and/or reduces engine power to limit wheel spin.


The system may be heard or felt while it is working, but this is normal.


TCS automatically comes on whenever the vehicle is started. To limit wheel spin, especially in slippery road conditions, the system should always be left on. But, TCS can be turned off if needed.




TCS/ESP Light

 flashes to indicate that the traction control system is active.

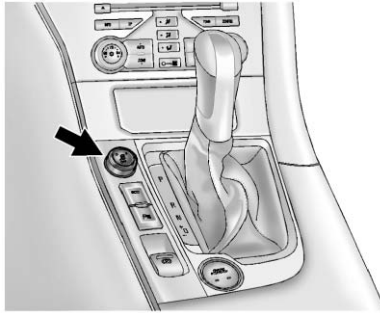
If there is a problem detected with TCS, SERVICE TRACTION CONTROL is displayed on the Driver Information Center (DIC). See *Ride Control System Messages on page 5-39*. When this message is displayed and  comes on and stays on, the vehicle is safe to drive but the system is not operational. Driving should be adjusted accordingly.

If  comes on and stays on, reset the system by:

1. Stopping the vehicle.
2. Turning the engine off and waiting 15 seconds.
3. Starting the engine.

If  still comes on and stays on, the vehicle needs service.

Notice: Do not repeatedly brake or accelerate heavily when TCS is off. The vehicle's driveline could be damaged.




TCS/ESP Button

TCS can be turned on and off by pressing and releasing the TCS/ESP button.



TCS Off Light

When TCS is turned off,  comes on and the system will not limit wheel spin. Driving should be

adjusted accordingly. Press and release the TCS/ESP button again to turn the system back on.

When TCS is turned off on AWD vehicles, the system may still make noise. This is normal and necessary with AWD hardware.

It may be necessary to turn the system off if the vehicle gets stuck in sand, mud or snow and rocking the vehicle is required. See *If the Vehicle Is Stuck* on page 9-11 for more information. See also *Winter Driving* on page 9-9 for information on using TCS when driving in snowy or icy conditions.

Adding accessories can affect the vehicle performance. See *Accessories and Modifications* on page 10-3 for more information.

Electronic Stability Program (ESP)


The vehicle may have a vehicle stability enhancement system called Electronic Stability Program (ESP). It is an advanced computer-controlled system that assists with directional control of the vehicle in difficult driving conditions.


ESP activates when the computer senses a difference between the intended path and the direction the vehicle is actually traveling. ESP selectively applies braking pressure at any one of the vehicle brakes to help steer the vehicle in the intended direction.


ESP comes on automatically whenever the vehicle is started. To assist with directional control of the vehicle, the system should always be left on.




TCS/ESP Light

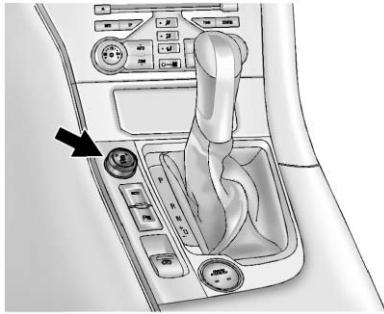
When the ESP system activates,  flashes on the instrument panel. This also occurs when traction control is activated. A noise may be heard or vibration may be felt in the brake pedal. This is normal. Continue to steer the vehicle in the intended direction.

If there is a problem detected with ESP, SERVICE ESP is displayed on the Driver Information Center (DIC). See *Ride Control System Messages on page 5-39*. When this message is displayed and  comes on and stays on, the vehicle is safe to drive but the system is not operational. Driving should be adjusted accordingly.

If  comes on and stays on, reset the system by:

1. Stopping the vehicle.
2. Turning the engine off and waiting 15 seconds.
3. Starting the engine.

If  still comes on and stays on, the vehicle needs service.





TCS/ESP Button

ESP can be turned on and off by pressing and holding the TCS/ESP button.



ESP Off Light TCS Off Light

When ESP is turned off,  and  come on the instrument panel. The system will not assist with

directional control of the vehicle or limit wheel spin. Driving should be adjusted accordingly.

If cruise control is being used when ESP activates, cruise control will automatically disengage. Press the cruise control button to reengage when road conditions allow. See *Cruise Control* on page 9-39 for more information.

Limited-Slip Rear Axle

Vehicles with a limited-slip rear axle can give more traction on snow, mud, ice, sand, or gravel. When traction is low, this feature allows the drive wheel with the most traction to move the vehicle. The limited-slip rear axle also gives the driver enhanced control when cornering hard or completing a maneuver, such as a lane change.

Selective Ride Control

TCS/ESP Button



2.8 L V6 Engine

The vehicle may have a ride control system called Selective Ride Control. The suspension setting can be changed at any time by turning the TCS/ESP button to S (Sport) or C (Comfort). Turning the TCS/ESP button to the S (Sport) position will provide a stiffer and firmer suspension. Turning the TCS/ESP button to the C (Comfort)

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position will provide a smoother suspension. Changes will occur in the transmission patterns, steering, and suspension.

3.0 L V6 Engine

The vehicle may have a ride control system called Selective Ride Control. The suspension setting can be changed at any time by turning the TCS/ESP button to S (Sport) or C (Comfort). Turning the TCS/ESP button to the S (Sport) position will provide a sporty shift pattern in the transmission but will not affect the suspension. Turning the TCS/ESP button to the C (Comfort) position will provide a normal suspension. Changes will occur only in the transmission shift patterns and not in steering or suspension.

The S (Sport) and C (Comfort) modes can be change independent of the shift lever position.

When in the Sport Mode, the vehicle will still shift automatically. The transmission may remain in a gear longer than it would in the normal driving mode based on braking, throttle input, and vehicle lateral acceleration. SPORT MODE ON will be displayed in the DIC. See *Ride Control System Messages on page 5-39*. The word "Sport" will display below the odometer. The gear position will also be indicated in the tachometer.

Within Sport Mode there is a further performance feature called Performance Mode Lift Foot (PMLF) Mode. The feature is activated automatically when sports oriented driving is detected, based on cornering and on/off throttle application. PMLF allows the transmission to hold the current gear instead of upshifting when the throttle is lifted.

If the shift lever is moved to the left from the D (Drive) position, the vehicle will enter the M (Manual Mode). See *Manual Mode on page 9-28* under "Automatic Transmission" for more information.

If there is a problem detected with Selective Ride Control, SERVICE SUSPENSION SYSTEM displays on the DIC. See *Ride Control System Messages on page 5-39*. Driving should be adjusted accordingly.

Cruise Control

With cruise control, the vehicle 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 40 km/h (25 mph).

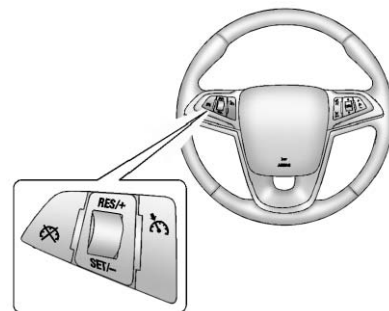
If the brakes are applied, the cruise control is turned off.

If the vehicle has an Electronic Stability Program (ESP) or Traction Control System (TCS) and begins to limit wheel spin while using cruise control, the cruise control automatically disengages. See *Electronic Stability Program (ESP)* on page 9-36 or *Traction Control System (TCS)* on page 9-34. When road conditions allow you to safely use it again, the cruise control can be turned back on.


WARNING


Cruise control can be dangerous where you cannot drive safely at a steady speed. So, 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.



The cruise control buttons are on the steering wheel.

 **(On/Off):** Press to turn the cruise control system on and off.

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


RES/+ (Resume/Accelerate):
Move the thumbwheel up to make the vehicle resume to a previously set speed or to accelerate.

SET/- (Set/Coast): Move the thumbwheel down to set a speed and activate cruise control, or to make the vehicle decelerate.

Setting Cruise Control

If the cruise button is on when not in use, it could get bumped and go into cruise when not desired. Keep the cruise button turned off when cruise control is not being used.

To set a speed:

1. Press  to turn the cruise control system on.
2. Get to the speed desired.
3. Move the thumbwheel down toward SET/- and release it. The desired set speed briefly appears in the instrument panel cluster.
4. Take your foot off the accelerator pedal.

Resuming a Set Speed

If the cruise control is set at a desired speed and then the brakes are applied or the cancel button is pressed, the cruise control is disengaged without erasing the set speed from memory.

Once the vehicle reaches about 40 km/h (25 mph) or more, move the thumbwheel up toward RES/+ briefly. The vehicle returns to the speed selected previously and stays there.

Increasing Speed While Using Cruise Control

If the cruise control system is already activated:

- Move the thumbwheel up toward RES/+ and hold it until the vehicle accelerates to the desired speed, and then release it.

- To increase the speed in small amounts, move the thumbwheel up toward RES/+ briefly and then release it. Each time this is done, 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:

- Move the thumbwheel down toward SET/- and hold until the desired lower speed is reached, then release it.
- To slow down in small amounts, move the thumbwheel down toward SET/- briefly and then release it. Each time this is done, the vehicle goes about 1.6 km/h (1 mph) slower.

Passing Another Vehicle While Using Cruise Control



Use the accelerator pedal to increase the vehicle's speed. When you take your foot off the pedal, the vehicle will slow down to the previous set cruise speed.

Using Cruise Control on Hills


How well the cruise control works on hills depends upon the vehicle speed, load, and the steepness of the hills. When going up steep hills, you might have to step on the accelerator pedal to maintain the vehicle speed. When going downhill, you might have to brake or shift to a lower gear to maintain the vehicle's speed. When the brakes are applied the cruise control is disengaged.

Ending Cruise Control

There are three ways to end cruise control:

- To disengage the cruise control, step lightly on the brake pedal. The indicator light will go off.
- Press .
- Press  to turn the cruise control system off completely. The cruise control cannot be resumed.

Erasing Speed Memory

The cruise control set speed is erased from memory if  is pressed or if the vehicle is turned off.

Object Detection Systems

Ultrasonic Parking Assist

For vehicles with the Ultrasonic Front and Rear Parking Assist (UFRPA) system, it assists the driver with parking and avoiding objects. UFRPA operates at speeds less than 8 km/h (5 mph). The sensors on the front and rear bumper detect objects up to 1.2 m (4 ft) in front of the vehicle, 2.5 m (8 ft) behind the vehicle, and at least 25.4 cm (10 in) off the ground.

WARNING

The Ultrasonic Front and Rear Parking Assist (UFRPA) system does not replace driver vision. It cannot detect:

- Objects that are below the bumper, underneath the vehicle, or if they are too close or far from the vehicle.
- Children, pedestrians, bicyclists, or pets.

If you do not use proper care before moving forward and while backing; vehicle damage, injury, or death could occur. Even with UFRPA, always check in front of the vehicle before moving forward and behind the vehicle before backing up. While moving forward and backing, be sure to look for objects and check the vehicle mirrors.

How the System Works

When the vehicle is shifted into R (Reverse), the front and rear sensors automatically turn on. After the vehicle is shifted out of R (Reverse), the rear sensors turn off and the front sensors stay on until the vehicle is above a certain speed. The front sensors may also be turned on by pressing the park assist button located next to the shift lever without shifting into R (Reverse) while the vehicle is traveling at a low speed. See “Turning the System On and Off” later in this section.

When the vehicle is in N (Neutral), the system may be active. If the vehicle is in a car wash, the sensors may detect objects in the car wash. See “Turning the System On and Off” later in this section to turn the system off.

High-toned beeps heard from the front speakers are for objects detected near the front bumper.

Low-toned beeps heard from the rear speakers are for objects detected near the rear bumper.

When an object is detected, high- or low-toned beeps are heard. As the vehicle gets closer to an object, the time between the beeps becomes shorter. When the distance is less than 30 cm (11.8 in), beeping is continuous. The distance may be less during warmer or humid weather.

PARK ASSIST OFF displays on the Driver Information Center (DIC) to indicate that UFRPA is off. The message disappears after a short period of time.

Turning the System On and Off

The UFRPA system can be turned on and off by pressing the park assist button located next to the shift lever.



The LED next to the park assist button lights up when the system is on and turns off when it has been disabled.

When the System Does Not Seem to Work Properly

UFRPA defaults to the on setting each time the vehicle is started; if UFRPA does not turn on and the light on the park assist button is off, the system may not be working properly. One of the following messages may appear on the DIC.

SERVICE PARK ASSIST: If this message occurs, take the vehicle to your dealer to repair the system.

PARK ASSIST OFF: This message can occur under the following conditions:

- The driver has disabled the system.
- The ultrasonic sensors are not clean. Keep the vehicle's bumpers free of mud, dirt, snow, ice, and slush. For cleaning instructions, see *Exterior Care* on page 10-101.
- A trailer was attached to the vehicle, or an object was hanging out of the liftgate during the last drive cycle. Once the attached object is removed, UFRPA will return to normal operation.
- An object is attached to the front of the vehicle.
- A tow bar is attached to the vehicle.

- The vehicle's bumper is damaged. Take the vehicle to your dealer to repair the system.
- Other conditions may affect system performance, such as vibrations from a jackhammer or the compression of air brakes on a very large truck.

If the system is still disabled, after driving forward at least 25 km/h (15 mph), take the vehicle to your dealer.

Rear Vision Camera (RVC)

The vehicle may have a Rear Vision Camera (RVC) system. Read this entire section before using it.

The RVC system can assist the driver when backing up by displaying a view of the area behind the vehicle.

WARNING

The Rear Vision Camera (RVC) system does not replace driver vision. RVC does not:

- Detect objects that are outside the camera's field of view, below the bumper, or underneath the vehicle.
- Detect children, pedestrians, bicyclists, or pets.

Do not back the vehicle by only looking at the RVC screen, or use the screen during longer, higher speed backing maneuvers or where there could be cross-traffic. Your judged distances using the screen will differ from actual distances.

If you do not use proper care before backing up, you could hit a vehicle, child, pedestrian, bicyclist, or pet, resulting in vehicle damage, injury, or death.

(Continued)


WARNING (Continued)


Even though the vehicle has the RVC system, always check carefully before backing up by checking behind and around the vehicle.

Vehicles Without a Navigation System

When the vehicle is on and the driver shifts into R (Reverse), the video image automatically appears on the inside rearview mirror. Once the driver shifts out of R (Reverse), the video image automatically disappears from the inside rearview mirror.

Turning the Rear Vision Camera System Off or On

To turn off the RVC system, press and hold , located on the inside rearview mirror, until the left indicator light turns off. The RVC display is now disabled.

To turn the RVC system on again, press and hold  until the left indicator light illuminates. The RVC system display is now enabled and the display will appear in the mirror normally.

Vehicles With a Navigation System

An image appears on the navigation screen with the message "Check Surroundings for Safety" when the vehicle is shifted into R (Reverse). The navigation screen goes to the previous screen after approximately 10 seconds once the vehicle is shifted out of R (Reverse).

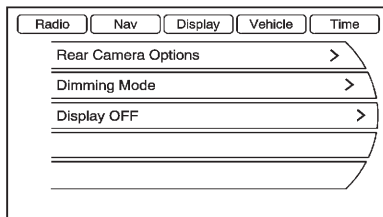
To cancel the delay, do one of the following:

- Press a hard key on the navigation system.
- Shift into P (Park).
- Reach a vehicle speed of 8 km/h (5 mph).

Turning the Rear Vision Camera System On or Off

To turn the rear vision camera system on or off:

1. Shift into P (Park).
2. Press the CONFIG button.
3. Select Display.



4. Select Camera. When a checkmark appears next to the Camera option, the RVC system is on.

Symbols

The navigation system may have a feature that lets the driver view symbols on the navigation screen while using the rear vision camera. The Ultrasonic Front and Rear Parking Assist (UFRPA) system must not be disabled to use the caution symbols. The error message "Rear Parking Assist Symbols Unavailable" may display if UFRPA has been disabled and the symbols have been turned on. See *Ultrasonic Parking Assist on page 9-41*.

The symbols appear and may cover an object when viewing the navigation screen when an object is detected by the UFRPA system.

To turn the symbols on or off:

1. Shift into P (Park).
2. Press the CONFIG button.
3. Select Display.
4. Select Symbols. When a checkmark appears next to the Symbols option, symbols will appear.

Guidelines

The RVC system has a guideline overlay that can help the driver align the vehicle when backing into a parking spot.

To turn the guidelines on or off:

1. Shift into P (Park).
2. Press the CONFIG button.
3. Select Display.
4. Select Guidelines. When a checkmark appears next to the Guidelines option, guidelines will appear.

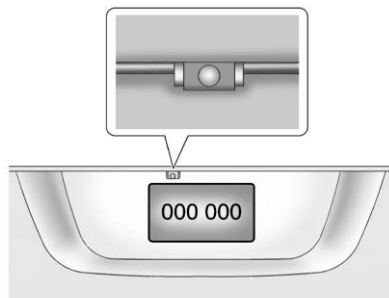
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Rear Vision Camera Error Messages

SERVICE REAR VISION CAMERA SYSTEM: This message can display when the system is not receiving information it requires from other vehicle systems.

If any other problem occurs or if a problem persists, see your dealer.

Rear Vision Camera Location

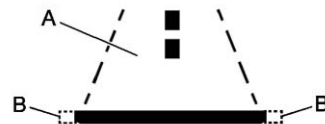
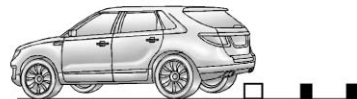
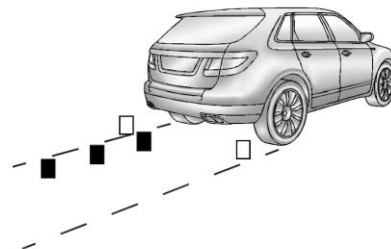


The camera is located above the license plate.

The area displayed by the camera is limited.

It does not display objects that are close to either corner or under the bumper and can vary depending on vehicle orientation or road conditions. The distance of the image that appears on the screen is different from the actual distance.

The following illustration shows the field of view that the camera provides.



- A. View displayed by the camera.
- B. Corner of the rear bumper.

When the System Does Not Seem to Work Properly

The rear vision camera system may not work properly or display a clear image if:

- The RVC is turned off. See “Turning the Rear Vision Camera System On or Off” earlier in this section.
- It is dark.
- The sun or the beam of headlamps is shining directly into the camera lens.
- Ice, snow, mud, or anything else builds up on the camera lens. Clean the lens, rinse it with water, and wipe it with a soft cloth.
- The back of the vehicle is in an accident. The position and mounting angle of the camera can change or the camera can be affected. Be sure to have the camera and its position and mounting angle checked at your dealer.

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 the use of gasoline advertised as TOP TIER Detergent Gasoline.

Look for the TOP TIER label on the fuel pump to ensure gasoline meets enhanced detergency standards developed by auto companies. A list of marketers providing TOP TIER Detergent Gasoline can be found at www.toptiergas.com.



The eighth digit of the Vehicle Identification Number (VIN) shows the code letter or number that identifies the vehicle's engine. The VIN is at the top left of the instrument panel. See *Vehicle Identification Number (VIN)* on page 12-1.

Recommended Fuel

If the vehicle has the 3.0L V6 engine (VIN Code Y), 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, commonly referred to as spark knock, might be heard when driving. If this occurs, use a gasoline rated at 87 octane or higher as soon as possible. If heavy knocking is heard when using gasoline rated at 87 octane or higher, the engine needs service.

If the vehicle has the 2.8L V6 engine (VIN Code 6), use premium unleaded gasoline with a posted octane rating of 91 or higher. For best performance, use premium unleaded gasoline with a posted octane rating of 93. In an emergency, you can use regular unleaded gasoline with an octane rating of 87 or higher. If 87 octane fuel is used, do not perform any aggressive driving maneuvers such as wide open throttle applications.

You might also hear audible spark knock during acceleration. Refill the tank with premium fuel as soon as possible to avoid damaging the engine. If heavy knocking is heard when using gasoline rated at 91 octane or higher, the engine needs service.

Gasoline Specifications (U.S. and Canada Only)

At a minimum, gasoline should meet ASTM specification D 4814 in the United States or CAN/CGSB-3.5 or 3.511 in Canada. Some gasolines contain an octane-enhancing additive called methylcyclopentadienyl manganese tricarbonyl (MMT). We recommend against the use of gasolines containing MMT. See *Fuel Additives on page 9-49* for additional information.

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 might fail a smog-check test. See *Malfunction Indicator Lamp on page 5-18*. 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 might not be covered by the vehicle warranty.

Fuels in Foreign Countries

Never use leaded gasoline or any other fuel not recommended in the previous text on fuel. Costly repairs caused by use of improper fuel would not be covered by the vehicle warranty.

To check the fuel availability, ask an auto club, or contact a major oil company that does business in the country where you will be driving.

Fuel Additives

To provide cleaner air, all gasolines in the United States are now required to contain additives that help prevent engine and fuel system deposits from forming, allowing the emission control system to work properly. In most cases, nothing should have to be added to the fuel. However, some gasolines contain only the minimum amount of additive required to meet U.S. Environmental Protection Agency

regulations. To help keep fuel injectors and intake valves clean and avoid problems due to dirty injectors or valves, look for gasoline that is advertised as TOP TIER Detergent Gasoline. Look for the TOP TIER label on the fuel pump to ensure gasoline meets enhanced detergency standards developed by the auto companies. A list of marketers providing TOP TIER Detergent Gasoline can be found at www.toptiergas.com.

Gasolines containing oxygenates, such as ethers and ethanol, and reformulated gasolines might be available in your area. We recommend that you use these gasolines, if they comply with the specifications described earlier. However, E85 (85% ethanol) and other fuels containing more than 10% ethanol must not be used in vehicles that were not designed for those fuels.

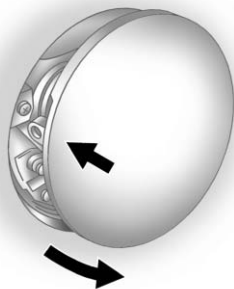
Notice: This vehicle was not designed for fuel that contains methanol. Do not use fuel containing methanol. It can corrode metal parts in the fuel system and also damage plastic and rubber parts. That damage would not be covered under the vehicle warranty.

Some gasolines that are not reformulated for low emissions can contain an octane-enhancing additive called methylcyclopentadienyl manganese tricarbonyl (MMT); ask the attendant where you buy gasoline whether the fuel contains MMT. We recommend against the use of such gasolines. Fuels containing MMT can reduce spark plug life and affect emission control system performance. The malfunction indicator lamp might turn on. If this occurs, return to your dealer for service.

Filling the Tank

WARNING

Fuel vapor burns violently and a fuel fire can cause bad injuries. 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. Do not smoke near fuel or when refueling the vehicle. Do not use cellular phones. Keep sparks, flames, and smoking materials away from fuel. Do not leave the fuel pump unattended when refueling the vehicle. This is against the law in some places. Do not re-enter the vehicle while pumping fuel. Keep children away from the fuel pump; never let children pump fuel.



The tethered fuel cap is located behind a hinged fuel door on the passenger side of the vehicle.

To open the fuel door, push the rearward center edge in and release and it will open.

To remove the fuel cap, turn it slowly counterclockwise.

While refueling, hang the tethered fuel cap from the hook on the fuel door.

When reinstalling the cap, turn it clockwise until it clicks once, otherwise the malfunction

indicator lamp could turn on. See *Malfunction Indicator Lamp on page 5-18*.

WARNING

Fuel can spray out on you if you open the fuel cap too quickly. If you spill fuel and then something ignites it, you could be badly burned. 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.

Be careful not to spill fuel. Do not top off or overfill the tank and wait a few seconds after you have finished pumping before removing the nozzle. Clean fuel from painted surfaces as soon as possible. See *Exterior Care on page 10-101*.

When replacing the fuel cap, turn it clockwise until it clicks once. Make sure the cap is fully installed. The

diagnostic system can determine if the fuel cap has been left off or improperly installed. This would allow fuel to evaporate into the atmosphere. See *Malfunction Indicator Lamp* on page 5-18.

 **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.

Notice: 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 5-18.

Filling a Portable Fuel Container

 **WARNING**

Never fill a portable fuel container while it is in the vehicle. Static electricity discharge from the container can ignite the fuel vapor. You can be badly burned and the vehicle damaged if this occurs. To help avoid injury to you and others:

- Dispense fuel only into approved containers.
- Do not fill a container while it is inside a vehicle, in a vehicle's trunk, pickup bed, or on any surface other than the ground.

(Continued)

WARNING (Continued)

- Bring the fill nozzle in contact with the inside of the fill opening before operating the nozzle. Contact should be maintained until the filling is complete.
- Do not smoke while pumping fuel.
- Do not use a cellular phone while pumping fuel.

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.

See the following trailer towing information in this section:

- For information on driving while towing a trailer, see “Driving Characteristics and Towing Tips.”

- For maximum vehicle and trailer weights, see “Trailer Towing.”
- For information on equipment to tow a trailer, see “Towing Equipment.”

For information on towing a disabled vehicle, see *Towing the Vehicle on page 10-97*. For information on towing the vehicle behind another vehicle such as a motor home, see *Recreational Vehicle Towing on page 10-97*.

Driving Characteristics and Towing Tips

WARNING

The driver can lose control when pulling a trailer if the correct equipment is not used or the vehicle is not driven properly. For example, if the trailer is too heavy, the brakes may not work well — or even at all. The driver and passengers could be seriously injured. The vehicle may also be damaged; the resulting repairs would not be covered by the vehicle warranty. Pull a trailer only if all the steps in this section have been followed. Ask your dealer for advice and information about towing a trailer with the vehicle.

The vehicle can tow a trailer when equipped with the proper trailer towing equipment. For trailering capacity, see *Trailer Towing on page 9-56*. Trailering changes handling, acceleration, braking, durability and fuel economy. With the added weight, the engine, transmission, wheel assemblies and tires are forced to work harder and under greater loads. The trailer also adds wind resistance, increasing the pulling requirements. For safe trailering, correctly use the proper trailering equipment.

The following information has important trailering tips and rules for your safety and that of your passengers. Read this section carefully before pulling a trailer.

Pulling a Trailer

Here are some important points:

- There are many laws, including speed limit restrictions that apply to trailering. Check for legal requirements.
 - Do not tow a trailer at all during the first 1 600 km (1,000 mi) the new vehicle is driven. The engine, axle or other parts could be damaged.
 - During the first 800 km (500 mi) that a trailer is towed, do not drive over 80 km/h (50 mph) and do not make starts at full throttle. This reduces wear on the vehicle.
- The vehicle can tow in D (Drive). Use a lower gear if the transmission shifts too often.
 - Do not use the Fuel Saver Mode when towing.
 - Obey speed limit restrictions. Do not drive faster than the maximum posted speed for trailers, or no more than 90 km/h (55 mph), to reduce wear on the vehicle.

Driving with a Trailer

Towing a trailer requires experience. Get familiar with handling and braking with the added trailer weight. The vehicle is now longer and not as responsive as the vehicle is by itself.

Check all trailer hitch parts and attachments, safety chains, electrical connectors, lamps, tires and mirror adjustments. If the trailer has electric brakes, start the vehicle and trailer moving and then apply the trailer brake controller by hand to be sure the brakes are working.

During the trip, check regularly to be sure that the load is secure, and the lamps and trailer brakes are working properly.

Towing with a Stability Control System

When towing, the sound of the stability control system might be heard. The system is reacting to the vehicle movement caused by the trailer, which mainly occurs during cornering. This is normal when towing heavier trailers.

Following Distance

Stay at least twice as far behind the vehicle ahead as you would when driving the vehicle without a trailer. This can help to avoid situations that require heavy braking and sudden turns.

Passing

More passing distance is needed when towing a trailer. Because the rig is longer, it is necessary to go 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

Notice: Making very sharp turns while trailering could cause the trailer to come in contact with the vehicle. The vehicle could be damaged. Avoid making very sharp turns while trailering.

When turning with a trailer, make wider turns than normal so the trailer will not strike soft shoulders, curbs, road signs, trees or other objects. Use the turn signal well in advance and avoid jerky or sudden maneuvers.

Turn Signals when Towing a Trailer

The turn signal indicators on the instrument panel flash whenever signaling a turn or lane change. Properly hooked up, the trailer lamps also flash, telling other drivers the vehicle is turning, changing lanes or stopping.

When towing a trailer, the arrows on the instrument panel flash for turns even if the bulbs on the trailer are burned out. 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 have to be used so much that they would get hot and no longer work well.

The vehicle can tow in D (Drive). Use a lower gear if the transmission shifts too often.

When towing at high altitude on steep uphill grades, engine coolant boils 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 could show signs similar to engine overheating. To avoid this, let the engine run while parked, preferably on level ground, with the transmission in P (Park) for a few minutes before turning the engine off. If the overheat warning comes on, see *Engine Overheating on page 10-24*.

Parking on Hills



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 brake pedal until the chocks absorb the load.

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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 while you:
 - Start the engine.
 - Shift into a gear.
 - Release the parking brake.
2. Let up on the brake pedal.
3. Drive slowly until the trailer is clear of the chocks.
4. Stop and have someone pick up and store the chocks.

Maintenance when Trailer Towing

The vehicle needs service more often when pulling a trailer. See the Maintenance Schedule for more information. Things that are especially important in trailer

operation are automatic transmission fluid, engine oil, axle lubricant, belts, cooling system and brake system. Inspect these before and during the trip.

Check periodically to see that all hitch nuts and bolts are tight.

Engine Cooling when Trailer Towing

The cooling system may temporarily overheat during severe operating conditions. See *Engine Overheating on page 10-24*.

Trailer Towing

Before pulling a trailer, there are three important considerations that have to do with weight:

- The weight of the trailer
- The weight of the trailer tongue
- The total weight on the vehicle's tires

Weight of the Trailer

How heavy can a trailer safely be?

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 for more information.

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.

Use the following chart to determine how much the vehicle can weigh, based upon the vehicle model and options.

Vehicle	Maximum Trailer Weight	GCWR*
2.8L Engine, AWD	1 588 kg (3,500 lbs)	3 725 kg (8,212 lbs)
3.0L Engine, FWD	1 134 kg (2,500 lbs)	3 187 kg (7,025 lbs)
3.0L Engine, FWD with Trailering Package	1 588 kg (3,500 lbs)	3 640 kg (8,025 lbs)
3.0L Engine, AWD	1 134 kg (2,500 lbs)	3 271 kg (7,212 lbs)
3.0L Engine, AWD with Trailering Package	1 588 kg (3,500 lbs)	3 725 kg (8,212 lbs)

*The Gross Combination Weight Rating (GCWR) is the total allowable weight of the completely loaded vehicle and trailer including any passengers, cargo, equipment and conversions. The GCWR for the vehicle should not be exceeded.

Ask your dealer for trailering information or advice. See *Customer Assistance Offices on page 13-3* for more information.

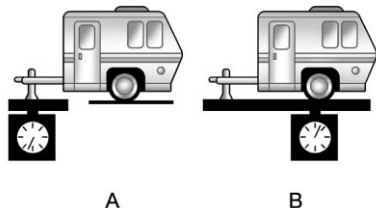
Weight of the Trailer Tongue

The tongue load (A) 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 9-12* for more information about the vehicle's maximum load capacity.

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If a weight-carrying hitch or a weight-distributing hitch is being used, the trailer tongue (A) should weigh 10-15 percent of the total loaded trailer weight (B).

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.

Trailing may be limited by the vehicle's ability to carry tongue weight. Tongue weight cannot cause the vehicle to exceed the GVWR

(Gross Vehicle Weight Rating) or the RGAWR (Rear Gross Axle Weight Rating). The effect of additional weight may reduce the trailering capacity more than the total of the additional weight.

Consider the following example:

A vehicle model base weight is 2 495 kg (5,500 lbs); 1 270 kg (2,800 lbs) at the front axle and 1 225 kg (2,700 lbs) at the rear axle. It has a GVWR of 3 266 kg (7,200 lbs), a RGAWR of 1 814 kg (4,000 lbs) and a GCWR (Gross Combination Weight Rating) of 6 350 kg (14,000 lbs). The trailer rating should be:

6350 kg (14,000 lbs)	GCWR
2495 kg (5,500 lbs)	Vehicle Weight
3855 kg (8,500 lbs)	Trailer Rating

Expect tongue weight to be at least 10 percent of trailer weight (386 kg (850 lbs)) and because the weight is

applied well behind the rear axle, the effect on the rear axle is greater than just the weight itself, as much as 1.5 times as much. The weight at the rear axle could be 386 kg (850 lbs) X 1.5 = 578 kg (1,275 lbs). Since the rear axle already weighs 1 225 kg (2,700 lbs), adding 578 kg (1,275 lbs) brings the total to 1 803 kg (3,975 lbs). This is very close to, but within the limit for RGAWR as well. The vehicle is set to trailer up to 3 856 kg (8,500 lbs).

If the vehicle has many options and there is a front seat passenger and two rear seat passengers with some luggage and gear in the vehicle as well. 136 kg (300 lbs) could be added to the front axle weight and 181 kg (400 lbs) to the rear axle weight. The vehicle now weighs:

1270 kg (2,800 lbs)	+	136 kg (300 lbs)	Front
1225 kg (2,700 lbs)	+	181 kg (400 lbs)	Rear
<hr/>			
2812 kg (6,200 lbs)			Total

Weight is still below 3 266 kg (7,200 lbs) and you might think 318 additional kilograms (700 lbs) should be subtracted from the trailering capacity to stay within GCWR limits. The maximum trailer would only be 3 538 kg (7,800 lbs). You may go further and think the tongue weight should be limited to less than 454 kg (1,000 lbs) to avoid exceeding GVWR. But the effect on the rear axle must still be considered. Because the rear axle now weighs 1 406 kg (3,100 lbs), 408 kg (900 lbs) can be put on the rear axle without exceeding RGAWR. The effect of tongue weight is about 1.5 times the actual weight. Dividing the 408 kg (900 lbs) by 1.5 leaves only 272 kg (600 lbs) of tongue weight that can be handled. Since tongue weight is usually at least 10 percent of total loaded trailer weight, expect that the largest trailer the vehicle can properly handle is 2 722 kg (6,000 lbs).

It is important that the vehicle does not exceed any of its ratings — GCWR, GVWR, RGAWR, Maximum Trailer Rating or Tongue Weight. The only way to be sure it is not exceeding any of these ratings is to weigh the vehicle and trailer.

Total Weight on the 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 Certification label or see *Vehicle Load Limits on page 9-12* for more information. Make sure not to go over the GVW limit for the vehicle, or the GAWR, including the weight of the trailer tongue. If using a weight distributing hitch, make sure not to go over the rear axle limit before applying the weight distribution spring bars.

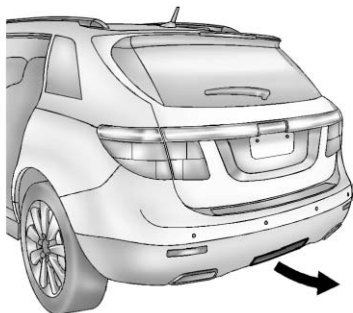
Towing Equipment

Hitches

It is important to have the correct hitch equipment. Crosswinds, large trucks going by and rough roads are a few reasons why the right hitch is needed.

- 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 there are, then be sure to seal the holes later 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 9-24*.

Hitch Cover



The vehicle may have a hitch cover. To remove the hitch cover:

1. Turn the fasteners on the lower tabs 90 degrees counterclockwise.
2. Lift the lower edge of the cover about 45 degrees.
3. Pull the cover downward to disengage the upper attachments.

To reinstall the hitch cover:

1. Hold the cover at a 45 degree angle to the vehicle and push the upper tabs in the hitch cover into the slots in the fascia.
2. Move the bottom of the cover forward until the lower tabs line up with the lower fascia slots.
3. Snap the hitch cover into place by pushing the upper corners forward.
4. Turn the fasteners on the lower tabs 90 degrees clockwise to lock the cover in place.

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. Always leave just enough slack so the rig can turn. Never allow safety chains to drag on the ground.

Trailer Brakes

A loaded trailer that weighs more than 450 kg (1,000 lbs) needs to have its own brake system that is adequate for the weight of the trailer. Be sure to read and follow the instructions for the trailer brakes so they are installed, adjusted and maintained properly.

Because the vehicle has anti-lock brakes, do not tap into the vehicle's brake system. If you do, both brake systems will not work well, or at all.

Trailer Wiring Harness

All of the electrical circuits required for the trailer lighting system can be accessed at a connector mounted to the frame, behind the rear bumper cover.

Trailer Sway Control (TSC)

The vehicle has a Trailer Sway Control (TSC) feature as part of the Electronic Stability Program (ESP) system. If TSC detects that the trailer is swaying, the vehicle brakes are automatically applied.



When TSC is applying the brakes, the TCS/ESP indicator light flashes to notify the driver to reduce speed. See *Electronic Stability Program (ESP) Off Light* on page 5-24. If the trailer continues to sway, ESP will reduce engine torque to help slow the vehicle.

TSC will not function if ESP is turned off.

Conversions and Add-Ons

Add-On Electrical Equipment

Notice: Do not add anything electrical to the vehicle unless you check with your dealer first. Some electrical equipment can damage the vehicle and the damage would not be covered by the vehicle's warranty. Some add-on electrical equipment can keep other components from working as they should.

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 3-42 and *Adding Equipment to the Airbag-Equipped Vehicle* on page 3-43.

Vehicle Care

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General Information

For service and parts needs, visit your dealer. You will receive genuine parts and trained and supported service people.

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, seat 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-company 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.

Accessories from your dealer are designed to complement and function with other systems on the vehicle. Your dealer can accessorize the vehicle using genuine accessories. When you go to your dealer and ask for accessories, you will know that company-trained and supported service technicians will perform the work using genuine accessories.

Vehicle Checks

Doing Your Own Service Work

 **WARNING**

You can be injured and the vehicle could be damaged if you try to do service work on a vehicle without knowing enough about it.

- Be sure you have sufficient knowledge, experience, the proper replacement parts, and tools before attempting any vehicle maintenance task.

(Continued)

WARNING (Continued)

- Be sure to use the proper nuts, bolts, and other fasteners. Metric and English fasteners can be easily confused. If the wrong fasteners are used, parts can later break or fall off. You could be hurt.

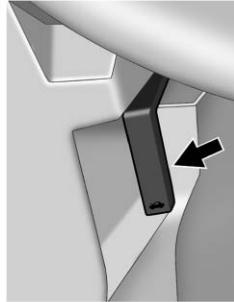
If doing some of your own service work, use the proper service manual. It tells you much more about how to service the vehicle than this manual can.

This vehicle has an airbag system. Before attempting to do your own service work, see *Airbag System Check* on page 3-44.

Keep a record with all parts receipts and list the mileage and the date of any service work performed.

Hood

To open the hood:



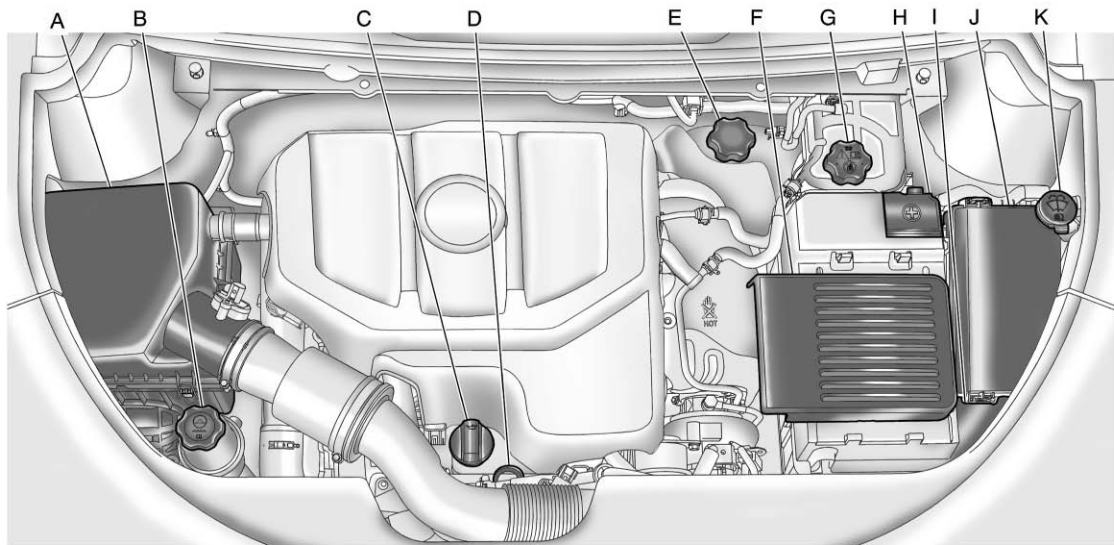
1. Pull the release handle with the above symbol on it. It is located below the instrument panel to the left of the steering wheel.



2. Move the secondary hood release lever to the right to release the striker. The lever is located near the middle of the hood.
3. Lift the hood.

Before closing the hood, be sure all the filler caps are on properly.

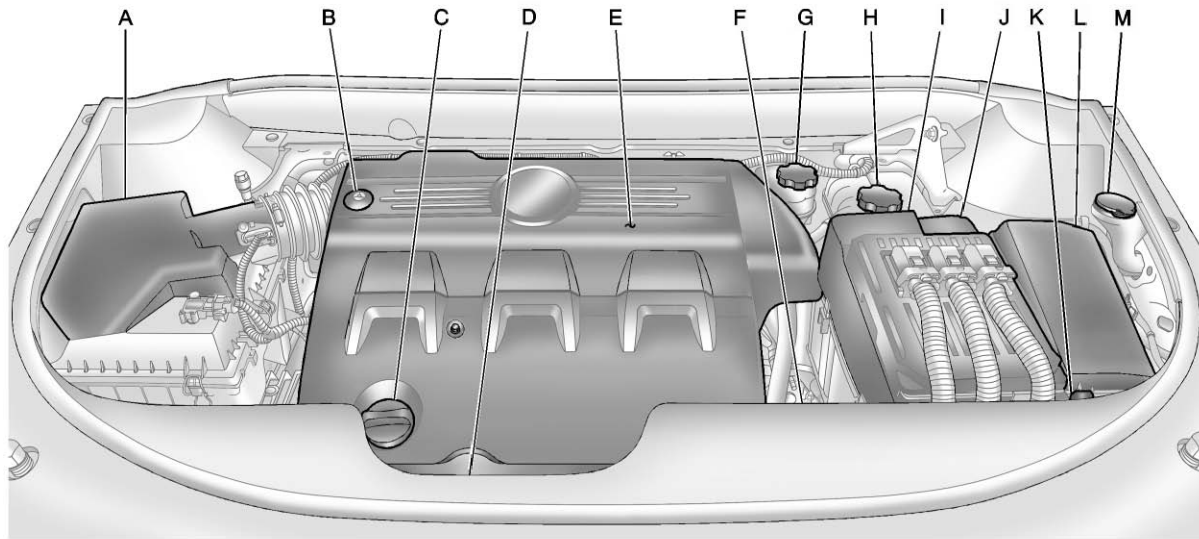
Engine Compartment Overview



2.8 L V6 Engine

- A. *Engine Air Cleaner/Filter on page 10-16.*
- B. *Power Steering Reservoir and Cap. See Power Steering Fluid on page 10-26.*
- C. *Engine Oil Fill Cap. See Engine Oil on page 10-10.*
- D. *Engine Oil Dipstick. See Engine Oil on page 10-10.*
- E. *Brake Master Cylinder Reservoir. See Brakes on page 10-27.*
- F. *Battery (Out of View). See Battery on page 10-30.*
- G. *Engine Coolant Surge Tank and Pressure Cap. See Engine Coolant on page 10-20.*
- H. *Remote Positive (+) Terminal. See Jump Starting on page 10-92.*
- I. *Remote Negative (-) Terminal (Out of View). See Jump Starting on page 10-92.*
- J. *Engine Compartment Fuse Block on page 10-45.*
- K. *Windshield Washer Fluid Reservoir. See Washer Fluid on page 10-26.*

10-8 Vehicle Care

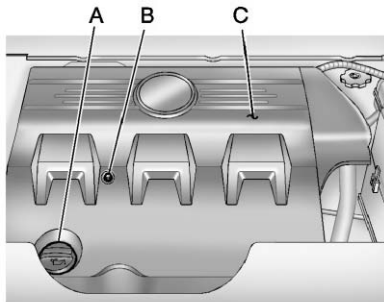


3.0 L V6 Engine

- A. *Engine Air Cleaner/Filter on page 10-16.*
- B. *Power Steering Reservoir and Cap (Under Engine Cover). See Power Steering Fluid on page 10-26.*
- C. *Engine Oil Fill Cap. See Engine Oil on page 10-10.*
- D. *Engine Oil Dipstick (Out of View). See Engine Oil on page 10-10.*
- E. *Engine Cover on page 10-10.*
- F. *Transmission Fluid Cap and Dipstick (Out of View). See Automatic Transmission Fluid on page 10-16.*
- G. *Brake Master Cylinder Reservoir. See Brakes on page 10-27.*
- H. *Engine Coolant Surge Tank and Pressure Cap. See Engine Coolant on page 10-20.*
- I. *Battery (Out of View). See Battery on page 10-30.*
- J. *Remote Positive (+) Terminal. See Jump Starting on page 10-92.*
- K. *Remote Negative (-) Terminal (Out of View). See Jump Starting on page 10-92.*
- L. *Engine Compartment Fuse Block on page 10-45.*
- M. *Windshield Washer Fluid Reservoir. See Washer Fluid on page 10-26.*

Engine Cover

Engine Cover (3.0 L V6)



- A. Oil Fill Cap
- B. Engine Cover Bolt
- C. Engine Cover

To remove:

1. Remove the oil fill cap (A).
2. Remove the engine cover bolt (B).
3. Raise the engine cover (C) to release it from the retainers.
4. Lift and remove the engine cover.
5. Reverse Steps 1 through 4 to reinstall the engine cover.

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 yellow 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.
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



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*.

Notice: 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 cross-hatched area 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:

Specification

Use and ask for engine oils with the dexos™ certification mark. Oils meeting the requirements of the vehicle should have the dexos certification mark on the container. This certification mark indicates that the oil has been approved to the dexos specification.



This vehicle was filled at the factory with dexos-approved engine oil.

Notice: Use only engine oil that is approved to the dexos specification or an equivalent engine oil of the appropriate viscosity grade. Engine oils approved to the dexos specification will show the dexos symbol on the container. Failure to use the recommended engine oil or equivalent can result in engine damage not covered by the vehicle warranty. If you are unsure whether the oil is approved to the dexos specification, ask your service provider.

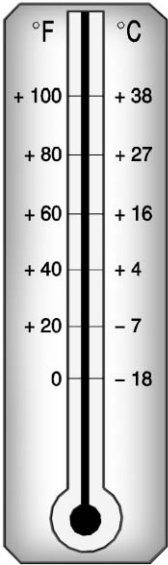
Use of Substitute Engine Oils if dexos is unavailable for top-up only: Engine oil not meeting the dexos specification or equivalent should not be used for an oil change. In the event that dexos-approved engine oil is not available for maintaining proper oil level, however, you may

use substitute engine oil displaying the API Starburst symbol and of SAE 5W-30 viscosity grade. Extensive use of oils that do not meet the dexos specification, however, may result in reduced performance under certain circumstances.

Maintaining the proper oil level is very important. However, if you use a substitute oil for any reason, we recommend that you perform a complete oil change back to dexos as soon as possible to protect the engine and maintain engine peak performance.

Viscosity Grade

SAE 5W-30 is the best viscosity grade for the vehicle. Do not use other viscosity 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 should 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, be sure to always select an oil that meets the required specification, dexos. 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 5-37*. 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 MENU button and thumbwheel on the turn signal lever, display OIL LIFE REMAINING on the DIC. See *Driver Information Center (DIC) on page 5-29* and *Engine Oil Messages on page 5-37*.
2. Press the SET/CLR button to 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.

Change the fluid and filter at the intervals listed in *Scheduled Maintenance on page 11-3*, and be sure to use the fluid listed in *Recommended Fluids and Lubricants on page 11-4*.

Engine Air Cleaner/Filter

See *Engine Compartment Overview on page 10-6* for the location of the engine air cleaner/filter.

When to Inspect the Engine Air Cleaner/Filter

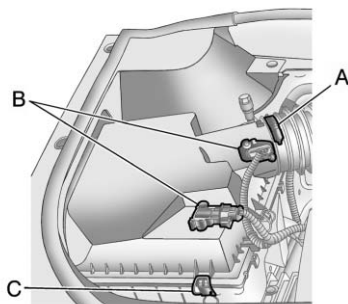
Inspect the air cleaner/filter at the scheduled maintenance intervals and replace it at the first oil change after each 80 000 km (50,000 mi) interval. See *Scheduled Maintenance on page 11-3* for more information. If driving in dusty/dirty conditions, inspect the filter at each engine oil change.

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. Never use compressed air to clean the filter.

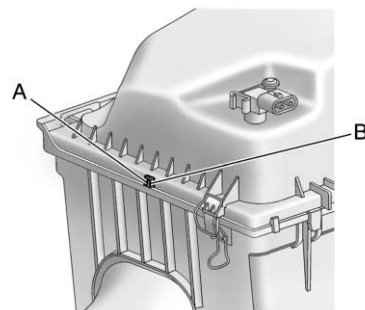
To inspect or replace the engine air cleaner/filter:

1. Open the hood. See *Hood* on page 10-5.
2. Locate the air filter housing on the front of the passenger side of the engine compartment. See *Engine Compartment Overview* on page 10-6.



- A. Air Duct Clamp
 - B. Electrical Connectors
 - C. Retaining Clips
3. Disconnect the outlet duct by loosening the air duct clamp (A).
 4. Disconnect the electrical connectors (B).

5. Lift the retaining clips (C) on the air filter housing.
6. Turn and tilt the cover slightly upward and slide the cover away from the outside edge of vehicle. Remove the air filter.



- A. Cover Cut Outs
- B. Air Filter Tabs

10-18 Vehicle Care

7. To install the air filter, place the filter inside the box where the pleats fit in between the tabs located inside the lower box. Ensure that the cover cut outs (A) on both sides match the air filter tabs (B) on both sides.
8. Replace the air cleaner cover by inserting the tabs appropriately into the slots. Lower the cover to meet the bottom of the box. Place the retaining clips on the retention features and clip closed.

9. Retighten the air duct clamp.
10. Reconnect the electrical connectors.



WARNING

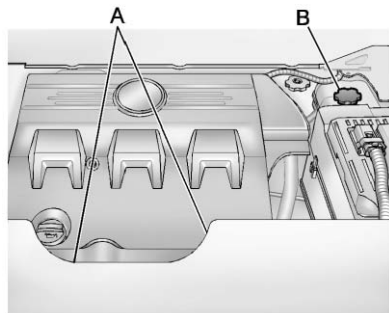
Operating the engine with the air cleaner/filter off can cause you or others to be burned. The air cleaner not only cleans the air; it helps to stop flames if the engine backfires. Use caution when working on the engine and do not drive with the air cleaner/filter off.

Notice: 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.

Notice: Installing an air cleaner different than the one recommended in Maintenance Replacement Parts may cause engine damage not covered by the vehicle warranty.

Cooling System

When it is safe to lift the hood:



3.0 L V6 Engine Shown, 2.8 L V6 Engine Similar

- A. Engine Cooling Fans
- B. Engine 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.

If the coolant inside the coolant surge tank is boiling, do not do anything else until it cools down. The vehicle should be parked on a level surface.

The coolant level should be between the MIN and MAX lines. If it is not, the vehicle may have a leak at the radiator hoses, heater hoses, radiator, water pump, or somewhere else in the cooling system.

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.

If there seems to be no leak, with the engine on, check to see if the electric engine cooling fans are running. If the engine is overheating, the fans should be running. If it is not, the vehicle needs service. Turn off the engine.

Notice: Using coolant other than DEX-COOL® can cause premature engine, heater core, or radiator corrosion. In addition, the engine coolant could require changing sooner, at 50 000 km (30,000 mi) or 24 months, whichever occurs first. Any repairs would not be covered by the 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 10-24*

What to Use



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.
- Helps keep the proper engine temperature.

Notice: If an improper coolant mixture is used, the engine could overheat and be badly damaged. The repair cost would not be covered by the vehicle warranty. Too much water in the mixture can freeze and crack the engine, radiator, heater core, and other parts.

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 the indicated 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 is cool before this is done. See *Engine Overheating on page 10-24* for more information.

The coolant surge tank is located in the engine compartment on the driver side of the vehicle. See *Engine Compartment Overview on page 10-6* for more information on location.

How to Add Coolant to the Coolant Surge Tank

Notice: 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. They are under pressure, and if you turn the coolant surge tank pressure cap — even a little — they can come out at high speed. Never turn the cap when the cooling system, including the coolant surge tank pressure cap, is hot. Wait for the cooling system and coolant surge tank pressure cap to cool if you ever have to turn the pressure cap.

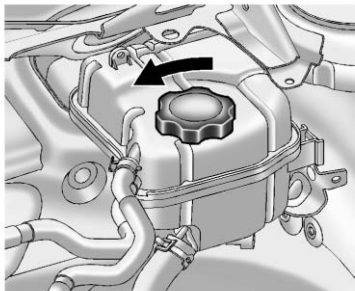
WARNING

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.

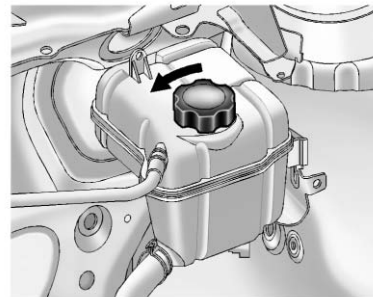
Notice: In cold weather, water can freeze and crack the engine, radiator, heater core and other parts. Use the recommended coolant and the proper coolant mixture.

⚠ 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.



2.8 L V6 Engine



3.0 L V6 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 fan(s).

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. Be sure the pressure cap is hand-tight.

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 through 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

The vehicle has an indicator to warn of engine overheating.

There is an engine coolant temperature warning light on the instrument panel. See *Engine Coolant Temperature Gauge on page 5-14*.

The decision may be made not to lift the hood when this warning appears, but instead get service help right away. See *Roadside Assistance Program on page 13-4*.

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, both fans should be running. If they are not, do not continue to run the engine and have the vehicle serviced.

Notice: Engine damage from running the engine without coolant is not covered by the warranty.

Notice: If the engine catches fire because of being driven with no coolant, the vehicle can be badly damaged. The costly repairs would not be covered by the vehicle warranty.

If Steam Is Coming from the Engine Compartment

WARNING

Steam from an overheated engine can burn you badly, even if you just open the hood. Stay away from the engine if you see or hear steam coming from it. Just turn it off and get everyone away from the vehicle until it cools down. Wait until there is no sign of steam or coolant before you open the hood.

If you keep driving when the engine is overheated, the liquids in it can catch fire. You or others could be badly burned. Stop the engine if it overheats, and get out of the vehicle until the engine is cool.

If No Steam Is Coming from the Engine Compartment

If an engine overheat warning is displayed but no steam can be seen or heard, the problem may not be too serious. Sometimes the engine can get a little too hot when the vehicle:

- Climbs a long hill on a hot day.
- Stops after high-speed driving.
- Idles for long periods in traffic.
- 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. In heavy traffic, let the engine idle in N (Neutral) while stopped. If it is safe to do so, pull off the road, shift to P (Park) or N (Neutral) and let the engine idle.

If the temperature overheat gauge is no longer in the overheat zone or an overheat warning no longer displays, the vehicle can be driven. Continue to drive the vehicle slow for about 10 minutes. Keep a safe vehicle distance from the vehicle in front of you. If the warning does not come back on, continue to drive normally.

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.

Power Steering Fluid



See *Engine Compartment Overview on page 10-6* for reservoir location.

When to Check Power Steering Fluid

It is not necessary to regularly check power steering fluid unless a leak is suspected in the system or an unusual noise is heard. A fluid loss in this system could indicate a problem. Have the system inspected and repaired.

How to Check Power Steering Fluid

To check the power steering fluid:

1. Turn the engine off and let the engine compartment cool down.
2. Remove the engine cover, if required. See *Engine Cover on page 10-10*.
3. Wipe the cap and the top of the reservoir clean.
4. Unscrew the cap and wipe the dipstick with a clean rag.
5. Replace the cap and completely tighten it.
6. Remove the cap again and look at the fluid level on the dipstick.

The level should be within the HOT mark. If necessary, add only enough fluid to bring the level within the mark.

What to Use

To determine what kind of fluid to use, see *Recommended Fluids and Lubricants on page 11-4*. Always use the proper fluid.

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

The WASHER FLUID LOW ADD FLUID message appears on the Driver Information Center (DIC) when the fluid level is low.



Open the cap with the washer symbol on it. Add washer fluid up to the fill mark. See *Engine Compartment Overview* on page 10-6 for reservoir location.

Notice

- When using concentrated washer fluid, follow the manufacturer's instructions for adding water.

- 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. Also, water does not clean as well as washer fluid.
- 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.
- Do not use engine coolant (antifreeze) in the windshield washer. It can damage the windshield washer system and paint.

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 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.

Notice: 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 in *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 5-22.

What to Add

Use only new DOT 3 brake fluid from a sealed container. See *Recommended Fluids and Lubricants* on page 11-4.

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.

Notice

- **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

Refer to the replacement number shown on the original battery label when a new battery is needed. See *Engine Compartment Overview on page 10-6* for battery location.

DANGER

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 on page 10-92* for tips on working around a battery without getting hurt.

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

Extended Storage: Remove the black, negative (-) cable from the battery or use a battery trickle charger.

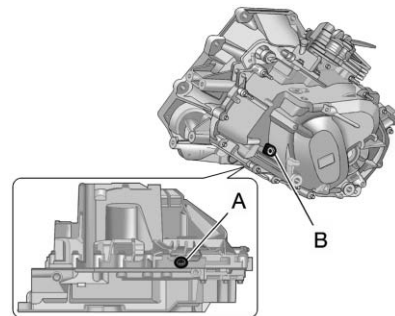
All-Wheel Drive

Transfer Case

When to Check and Change Lubricant

Refer to the Maintenance Schedule to determine how often to check the lubricant and when to change it. See *Scheduled Maintenance on page 11-3*.

How to Check Lubricant



A. Fill Plug

B. Drain Plug

To get an accurate reading, the vehicle should be on a level surface.

If the level is below the bottom of the filler plug hole, located on the transfer case, some lubricant needs to be added. Add enough lubricant to raise the level to the bottom of the filler plug hole. A fluid loss could indicate a problem; check and have it repaired, if needed.

What to Use

Refer to the Maintenance Schedule to determine what kind of lubricant to use. See *Recommended Fluids and Lubricants on page 11-4*.

Starter Switch Check



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. See *Parking Brake on page 9-31*.

Do not use the accelerator pedal, and be ready to turn off the engine immediately if it starts.

3. Try to start the engine in each gear. The vehicle should start only in P (Park) or N (Neutral). If the vehicle starts in any other position, contact your dealer for service.

Park Brake and P (Park) Mechanism Check

 **WARNING**

When you are doing this check, the vehicle could begin to move. You or others could be injured and property could be damaged. Make sure there is room in front of the vehicle in case it begins to roll. Be ready to apply the regular brake at once should the vehicle begin to move.

Park on a fairly steep hill, with the vehicle facing downhill. Keeping your foot on the regular brake, 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 *Scheduled Maintenance on page 11-3* for more information.

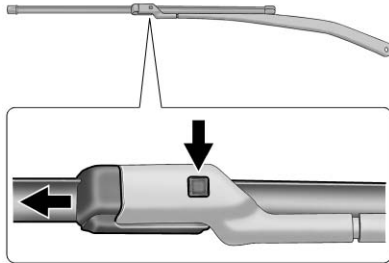
It is a good idea to clean or replace the wiper blade assembly on a regular basis or when worn. For proper windshield wiper blade length and type, see *Maintenance Replacement Parts on page 11-6*.

Notice: Allowing the wiper blade 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 blade arm to touch the windshield.

Front Wiper Blade Replacement

To replace the wiper blade assembly:

1. Pull the windshield wiper assembly away from the windshield.



2. Press the button in the middle of the wiper arm connector, and pull the wiper blade away from the arm connector.
3. Remove the wiper blade.
4. Reverse Steps 1 through 3 for wiper blade replacement.

Rear Wiper Blade Replacement

The rear wiper blade and wiper arm have a cover for protection. The cover must be removed before the wiper blade can be replaced.

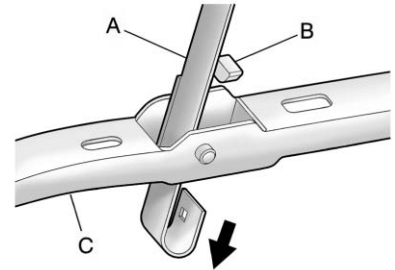
To remove the cover:



1. Slide a plastic tool under the cover and push upward to unlock.
2. Slide the cover toward the wiper blade tip to unhook it from the blade assembly.
3. Remove the cover.
4. After replacing the wiper blade, the cover hooks must slide into the blade assembly slots and lock.

To remove the wiper blade:

1. Lift the wiper arm away from the windshield.



- A. Wiper Arm
- B. Release Lever
- C. Blade Assembly

2. Push the release lever (B) to disengage the hook and push the wiper arm (A) out of the blade assembly (C).
3. Push the new blade assembly securely on the wiper arm until the release lever clicks into place.
4. Replace the wiper cover.

Headlamp Aiming

The headlamp aiming system has been preset at the factory.

If the vehicle is damaged in an accident, the aim of the headlamps can be affected and adjustment could be necessary.

It is recommended that a dealer adjust the headlamps. To re-aim the headlamps yourself, use the following procedure.

The vehicle should be properly prepared as follows:

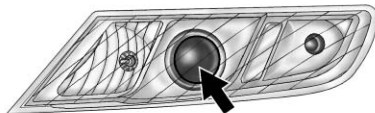
- The vehicle should be placed so the headlamps are 7.6 m (25 ft) from a light colored wall.
- The vehicle must have all four tires on a level surface which is level all the way to the wall.
- The vehicle should be placed so it is perpendicular to the wall or other flat surface.
- The vehicle should not have any snow, ice, or mud on it.
- The vehicle should be fully assembled and all other work stopped while headlamp aiming is being performed.

- The vehicle should be normally loaded with a full tank of fuel and one person or 75 kg (160 lbs) sitting on the driver seat.
- Tires should be properly inflated.

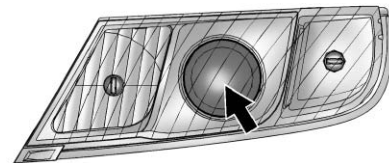
Headlamp aiming is done with the vehicle's low-beam headlamps. The high-beam headlamps will be correctly aimed if the low-beam headlamps are aimed properly.

To adjust the vertical aim:

1. Open the hood. See *Hood* on page 10-5 for more information.

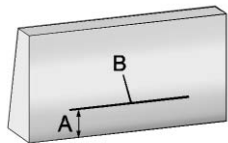


Base Vehicle (Halogen Headlamps)



Uplevel Vehicle (HID Headlamps)

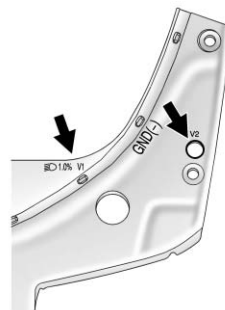
2. Locate the aim point at the center inner projector condensing lens of the low-beam headlamp (not the outer lens).
3. Measure the distance from the ground to the aim dot on the low-beam headlamp. Record the distance.



4. At the wall measure from the ground upward (A) to the recorded distance from Step 3 and mark it.
5. Draw or tape a horizontal line (B) on the wall the width of the vehicle at the height of the mark in Step 4.

Notice: Do not cover a headlamp to improve beam cut-off when aiming. Covering a headlamp may cause excessive heat build-up which may cause damage to the headlamp.

6. Turn on the low-beam headlamps and place a piece of cardboard or equivalent in front of the headlamp not being adjusted. This allows only the beam of light from the headlamp being adjusted to be seen on the flat surface.



7. Locate the vertical headlamp aiming screws, which are under the hood near each headlamp assembly.

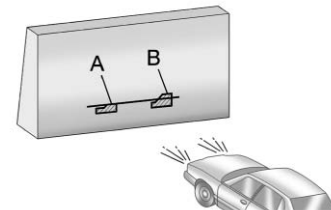
For the vehicle equipped with a base level lamp (halogen bulb), there will be one vertical headlamp aiming screw (V1). The aiming screw (V1) is adjusted from the engine compartment side of the beauty cover.

For the vehicle equipped with an uplevel headlamp (HID), there will be two vertical headlamp aiming screws (V1 and V2). The aiming screw (V2) is adjusted through the access hole in the beauty cover.

The adjustment screw can be turned with a 6 mm hex key.

8. For the base vehicle, turn the vertical aiming screw (V1) until the headlamp beam is aimed to the horizontal tape line. Turn it clockwise or counterclockwise to raise or lower the angle of the beam.

For the uplevel vehicle, turn the vertical aiming screws (V1 and V2) simultaneously until the headlamp beam is aimed to the horizontal tape line. Turn them clockwise or counterclockwise to raise or lower the angle of the beam.



9. Make sure that the light from the headlamp is positioned at the bottom edge of the horizontal tape line. The lamp on the left (A) shows the correct headlamp aim. The lamp on the right (B) shows the incorrect headlamp aim.
10. Repeat Steps 7 through 9 for the opposite headlamp.

Bulb Replacement

For the proper type of replacement bulbs, see *Replacement Bulbs* on page 10-43.

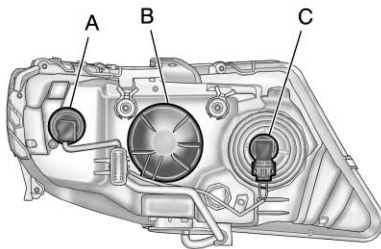
For any bulb-changing procedure not listed in this section, contact your dealer.

Halogen Bulbs

⚠ WARNING

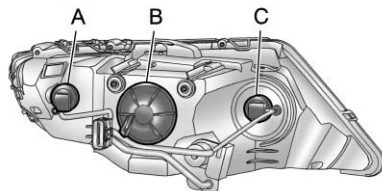
Halogen bulbs have pressurized gas inside and can burst if you drop or scratch the bulb. You or others could be injured. Be sure to read and follow the instructions on the bulb package.

Headlamps



Base Headlamp Assembly (Driver Side Shown, Passenger Side Similar)

- A. Turn Signal Lamp
- B. Low-Beam Headlamp/Daytime Running Lamp (DRL)
- C. High-Beam Headlamp



Uplevel Headlamp Assembly (Driver Side Shown, Passenger Side Similar)

- A. Turn Signal Lamp
- B. High/Low-Beam Headlamp
- C. Daytime Running Lamp (DRL)

Low-Beam Headlamps/Daytime Running Lamps (DRL) (Base)

1. Remove the protective cap from the back of the headlamp assembly.
2. Disconnect the electrical connector.
3. Remove the bulb socket from the headlamp assembly.
4. Replace the bulb in the bulb socket.
5. Install the bulb socket in the headlamp assembly.
6. Connect the electrical connector.
7. Install the protective cap in the back of the headlamp assembly.

High-Beam Headlamps (Base)

1. Disconnect the electrical connector for the low-beam/Daytime Running Lamp (DRL) from the back of the headlamp assembly.
2. Remove the bulb socket from the headlamp assembly.
3. Replace the bulb in the bulb socket.
4. Install the bulb socket in the headlamp assembly.
5. Connect the electrical connector.

High/Low-Beam Headlamps (Uplevel)

The high/low-beam headlamps on the uplevel are High Intensity Discharge (HID) and should be replaced at the dealer.

Daytime Running Lamp (DRL) (Uplevel)

To replace the Daytime Running Lamp:

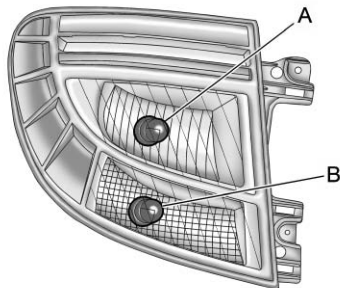
1. Disconnect the electrical connector for the DRL bulb replacement from the back of the headlamp assembly.
2. Remove the DRL bulb socket from the headlamp assembly.
3. Replace the bulb in the bulb socket.
4. Install the bulb socket in the headlamp assembly.
5. Connect the electrical connector.

Front Turn Signal Lamp (Base and Uplevel)

To replace the front turn signal lamp:

1. Remove the turn signal lamp bulb socket from the headlamp assembly.
2. Remove the turn signal lamp bulb from the socket.
3. Replace the bulb in the bulb socket.
4. Install the bulb socket in the headlamp assembly.

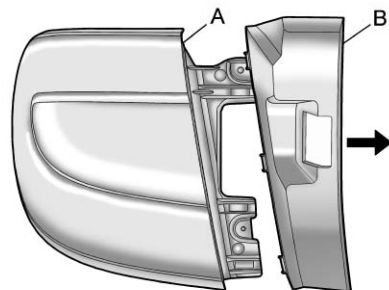
Taillamps and Turn Signal Lamps



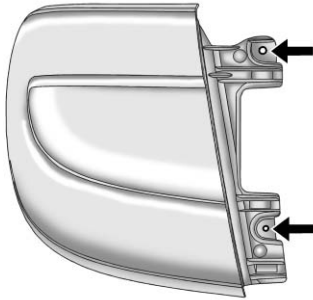
- A. Stoplamp
- B. Turn Signal Lamp

To replace one of these bulbs:

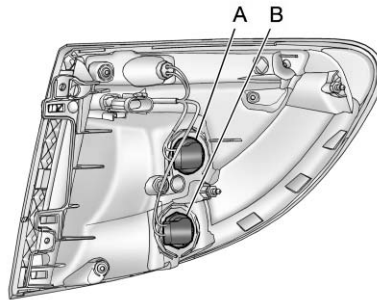
1. Open the liftgate. See *Liftgate* on page 2-12.



- A. Taillamp Assembly
 - B. Taillamp Cover
2. Remove the taillamp cover (B) from the lamp assembly (A) by pulling rearward to unfasten it from the tabs and clips.



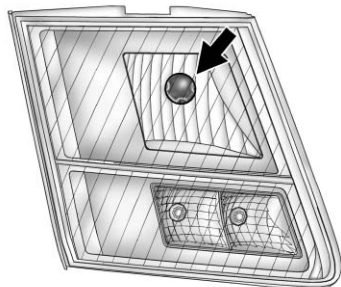
3. Remove the two screws from the taillamp assembly.
4. Pull the taillamp assembly straight back to remove.



- A. Stoplamp
B. Turn Signal Lamp
5. Turn the turn stoplamp (A) or turn signal lamp (B) bulb socket counterclockwise to remove it from the taillamp assembly.

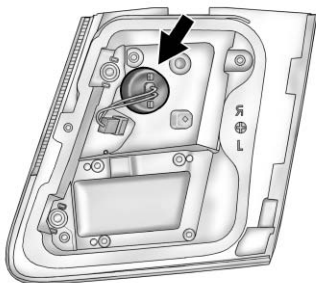
6. Pull the bulb straight out from the socket.
7. Press a new bulb into the socket, insert it into the taillamp assembly, and turn the bulb socket clockwise.
8. Reinstall the taillamp assembly and tighten the screws.
9. Reinstall the taillamp cover by snapping it into place.

Back-Up Lamps



To replace one of these bulbs:

1. Open the liftgate. See *Liftgate* on page 2-12.
2. Remove the top trim panel from the liftgate to gain access to the bulb.

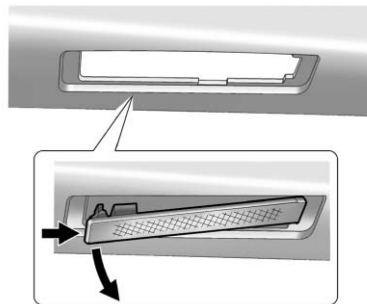


3. Turn the back-up bulb socket counterclockwise to remove it from the taillamp assembly.
4. Pull the bulb straight out from the socket.
5. Press a new bulb into the socket, insert it into the taillamp assembly, and turn the bulb socket clockwise until it clicks.
6. Reinstall the top trim panel into the liftgate by locking it into place.

License Plate Lamp

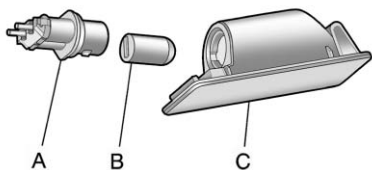
To replace one of these bulbs:

1. Open the liftgate. See *Liftgate* on page 2-12 for more information.



Passenger Side Shown, Driver Side Similar

2. Push the left end of the lamp assembly toward the right.
3. Turn the lamp assembly down to remove it from the liftgate.



A. Bulb Socket

B. Bulb

C. Lamp Assembly

4. Turn the bulb socket (A) counterclockwise to remove it from the lamp assembly (C).
5. Pull the bulb (B) straight out of the bulb socket.

6. Push the replacement bulb straight into the bulb socket and turn the bulb socket clockwise to install it into the lamp assembly.
7. Turn the lamp assembly into the liftgate engaging the clip side first.
8. Push on the lamp side opposite the clip until the lamp assembly locks into place.

Replacement Bulbs

Exterior Lamp	Bulb Number
Back-Up Lamp	912
Base Level Headlamp High-beam	H9

Exterior Lamp	Bulb Number
Base Level Headlamp Low-beam/Daytime Running Lamp (DRL)	H11
Daytime Running Lamp (DRL) for Uplevel System	W21/5W LL (T-20)
License Plate Lamp	W5W
Stoplamp/Taillamp/ Turn Signal Rear	7440
Turn Signal Front (Amber)	7443NA

For replacement bulbs not listed here, contact your dealer.

Electrical System

Electrical System Overload

The vehicle has fuses and circuit breakers to protect against an electrical system overload.

When the current electrical load is too heavy, the circuit breaker opens and closes, protecting the circuit until the current load returns to normal or the problem is fixed. This greatly reduces the chance of circuit overload and fire caused by electrical problems.

Fuses and circuit breakers protect the following in the vehicle:

- Headlamp Wiring
- Windshield Wiper Motor
- Power Windows and Other Power Accessories

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 and Circuit Breakers

The wiring circuits in the vehicle are protected from short circuits by a combination of fuses and circuit breakers. This greatly reduces the chance of damage caused by electrical problems.

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.

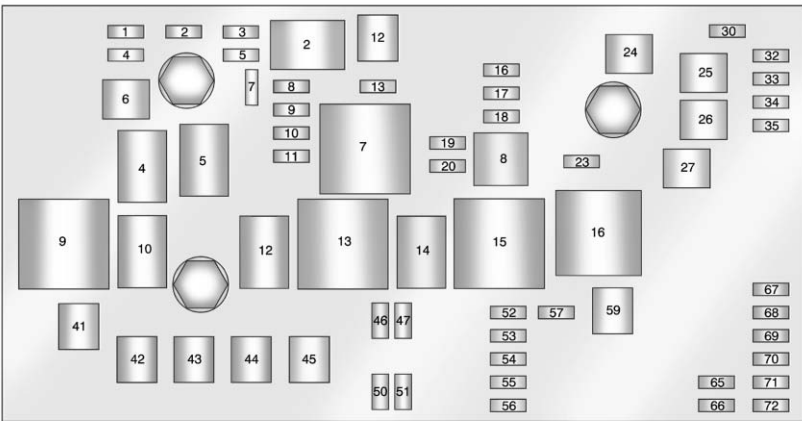
Fuses of the same amperage can be temporarily borrowed from another fuse location, if a fuse goes out. Replace the fuse as soon as you can.

To identify and check fuses, circuit breakers, and relays, see *Engine Compartment Fuse Block* on page 10-45 and *Rear Compartment Fuse Block* on page 10-49.

Engine Compartment Fuse Block

To remove the fuse block cover, press the clips on the cover and lift it straight up.

Notice: Spilling liquid on any electrical component on the vehicle may damage it. Always keep the covers on any electrical component.



Engine Compartment Fuse Block

The vehicle may not be equipped with all of the fuses, relays, and features shown.

J-Case Fuses	Usage
6	Wiper
12	Vacuum Pump

J-Case Fuses	Usage
24	Antilock Brake System Pump
25	Rear Electrical Center 1

10-46 Vehicle Care

J-Case Fuses	Usage
26	Rear Electrical Center 2
27	Not Used
41	Cooling Fan 2 (LF1)
42	Starter
43	Not Used
44	Not Used
45	Cooling Fan 1 (LF1)
59	Secondary AIR Pump

Mini Fuses	Usage
1	Engine Control Module Battery
2	Transmission Control Module Battery
3	Mass Air Flow Sensor
4	Afterboil Pump

Mini Fuses	Usage
5	Engine Control Module Run Crank
7	Post-Catalytic Converter O2 Sensor
8	Pre-Catalytic Converter O2 Sensor
9	Engine Control Module Powertrain
10	Fuel Injectors-Even
11	Fuel Injectors-Odd
13	Washer
16	Instrument Panel Cluster/Malfunction Indicator Lamp/Ignition
17	Air Quality Sensor
18	Headlamp Washer
19	Transmission Control Module Run Crank

Mini Fuses	Usage
20	Rear Electrical Center Run Crank
23	Heater Motor
30	Switch Back Light
32	Battery Sense (Regulated Voltage Control)
33	Adaptive Forward Lighting/Adaptive Headlamp Leveling Module
34	Body Control Module 7
35	Electronic Brake Control Module
46	Low-Beam Headlamp-Right
47	Low-Beam Headlamp-Left
50	Front Fog Lamps
51	Horn

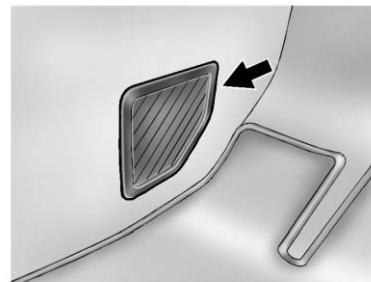
Mini Fuses	Usage
52	Fuel System Control Module
53	Headlamp Level
54	Sensing Diagnostic Module Ignition
55	High-Beam Headlamp-Right
56	High-Beam Headlamp-Left
57	Ignition Steering Column Lock
65	Trailer Right Stoplamp
66	Trailer Left Stoplamp
67	Spare
68	Spare
69	Spare
70	Spare
71	Spare
72	Spare

Mini Relays	Usage
7	Powertrain
9	Cooling Fan 2 (LF1)
13	Cooling Fan 1 (LF1)
15	Run/Crank
16	Secondary AIR Pump

Micro Relays	Usage
2	Vacuum Pump
4	Wiper Control
5	Wiper Speed
10	Starter
12	Cool Fan 3 (LF1)
14	Low Beam/HID

U Micro Relays	Usage
8	Headlamp Washer

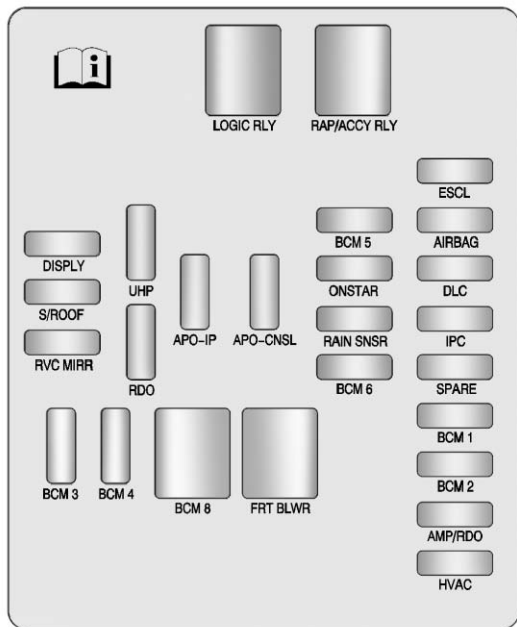
Instrument Panel Fuse Block



The instrument panel fuse block is located in the center console between the driver and passenger seats. To access the fuses, open the fuse panel door from the passenger side by pulling it out.

To reinstall the door, push the door back into its original location.

The vehicle may not be equipped with all of the fuses, relays and features shown.



Instrument Panel Fuse Block

Mini Fuses	Usage
DISPLY	Display
S/ROOF	Sun Roof
RVC MIRR	Rear Vision Camera Mirror
UHP	Universal Handsfree Phone
RDO	Radio
APO - IP	Auxiliary Power Outlet - Instrument Panel
APO - CNSL	Auxiliary Power Outlet - Floor Console
BCM 3	Body Control Module 3
BCM 4	Body Control Module 4
BCM 5	Body Control Module 5
ONSTAR	OnStar [®] System (If Equipped)

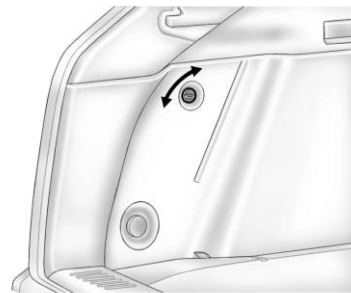
Mini Fuses	Usage
RAIN SNSR	Rain Sensor
BCM 6	Body Control Module 6
ESCL	Electronic Steering Column Lock
AIRBAG	Sensing and Diagnostic Module
DLC	Data Link Connection
IPC	Instrument Panel Cluster
SPARE	Not Used
BCM 1	Body Control Module 1
BCM 2	Body Control Module 2

Mini Fuses	Usage
AMP/RDO	Amplifier/Radio
HVAC	Heating Ventilation & Air Conditioning

J—Case Fuses	Usage
BCM 8	Body Control Module 8
FRT BLWR	Front Blower

Relays	Usage
LOGIC RLY	Logistics Relay
RAP/ ACCY RLY	Retained Accessory Power/ Accessory Relay

Rear Compartment Fuse Block



The rear compartment fuse block is located in the cargo area, on the driver side of the vehicle behind the lower trim panel. To open, turn the latch with a flat bladed tool and pull the trim panel from the edges to fold it down.

The vehicle may not be equipped with all of the fuses, relays, and features shown.

Fuses	Usage
RR HTD SEAT	Rear Heated Seats
FRT HTD SEAT	Front Heated Seats
THEFT HORN	Theft Horn
* LGATE	Liftgate
SHUNT	Shunt
REAR DEFOG	Rear Defog
* BCM THEFT	Body Control Module Theft
* TRLR 2	Trailer 2
UGDO	Universal Garage Door Opener
RT WDO	Right Window

Fuses	Usage
PRK BRK MDL	Park Brake Module
SPARE	Not Used
LT WDO	Left Window
IGN/ THEFT 1	Ignition/Theft 1
LGATE MDL	Liftgate Module
IGN/ THEFT 2	Ignition/Theft 2
SPARE	Not Used
HTD MIR	Heated Mirror
AUX PWR	Auxiliary Power Outlet

Relays	Usage
SPARE	Not Used
* FUEL PUMP	Fuel Pump
WPR CONTRL	Wiper Control
* RUN RLY	Run Relay
LOGIC	Logistic Relay (Export)
DEFOG REAR	Rear Window Defogger

*-Denotes up-level content.

Wheels and Tires

Tires

Every new Saab vehicle has high-quality tires made by a leading tire manufacturer. See the warranty manual for information regarding the tire warranty and where to get service. For additional information refer to the tire manufacturer.

WARNING

- Poorly maintained and improperly used tires are dangerous.
- Overloading the tires can cause overheating as a result of too much flexing. There could be a blowout and a serious crash. See *Vehicle Load Limits* on page 9-12.

(Continued)

WARNING (Continued)

- 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.
- 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.

(Continued)

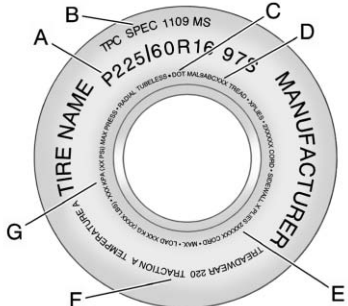
WARNING (Continued)

- 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 55 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 10-61 for inflation pressure adjustment for high-speed driving.

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

(A) 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 for more detail.

(B) TPC Spec (Tire Performance Criteria Specification): Original equipment tires designed to specific tire performance criteria have a TPC specification code molded onto the sidewall. TPC specifications meet or exceed all federal safety guidelines.

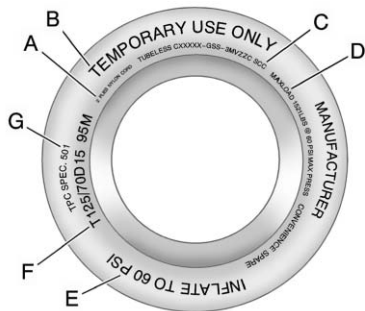
(C) DOT (Department of Transportation): The Department of Transportation (DOT) code indicates that the tire is in compliance with the U.S. Department of Transportation Motor Vehicle Safety Standards.

(D) 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.

(E) Tire Ply Material: The type of cord and number of plies in the sidewall and under the tread.

(F) 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 10-72*.

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



Compact Spare Tire Example

(A) Tire Ply Material: The type of cord and number of plies in the sidewall and under the tread.

(B) Temporary Use Only: The compact spare tire or temporary use tire has a tread life of approximately 5 000 km (3,000 mi) and should not be driven at speeds over 105 km/h (65 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 10-92* and *If a Tire Goes Flat on page 10-75*.

(C) 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.

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

(E) 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 10-59*.

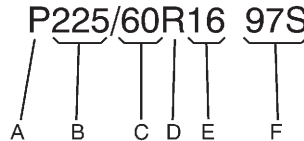
(F) Tire Size: A combination of letters and numbers define a tire's width, height, aspect ratio, construction type, and service description. The letter T as the first character in the tire size means the tire is for temporary use only.

(G) TPC Spec (Tire Performance Criteria Specification): Original equipment tires designed to specific tire performance criteria have a TPC specification code molded onto the sidewall. 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.



(A) 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.

(B) Tire Width: The three-digit number indicates the tire section width in millimeters from sidewall to sidewall.

(C) 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 C of the illustration, it would mean that the tire's sidewall is 60 percent as high as it is wide.

(D) 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.

(E) Rim Diameter: Diameter of the wheel in inches.

(F) 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 steering, power brakes, 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 that is located between the plies and the tread. Cords may be made from steel or other reinforcing materials.

Bead: The tire bead contains steel wires wrapped by steel cords that hold the tire onto the rim.

Bias Ply Tire: A pneumatic tire in which the plies are laid at alternate angles less than 90 degrees to the centerline of the tread.

Cold Tire Pressure: The amount of air pressure in a tire, measured in kPa (kilopascal) or psi (pounds per square inch) before a tire has built up heat from driving. See *Tire Pressure on page 10-59*.

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 9-12*.

GAWR FRT: Gross Axle Weight Rating for the front axle. See *Vehicle Load Limits on page 9-12*.

GAWR RR: Gross Axle Weight Rating for the rear axle. See *Vehicle Load Limits on page 9-12*.

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 lbs). See *Vehicle Load Limits on page 9-12*.

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 10-59* and *Vehicle Load Limits on page 9-12*.

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 10-68*.

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 10-72*.

Vehicle Capacity Weight:

The number of designated seating positions multiplied by 68 kg (150 lbs) plus the rated cargo load. See *Vehicle Load Limits on page 9-12*.

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 9-12.

Tire Pressure

Tires need the correct amount of air pressure to operate effectively.

Notice: 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.**

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.

For additional information regarding how much weight the vehicle can carry, and an example of the Tire and Loading Information label, see *Vehicle Load Limits on page 9-12*. 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 tire, if the vehicle has one. The compact spare should be at 420 kPa (60 psi). For additional information regarding the compact spare tire, see *Compact Spare Tire on page 10-92*.

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.

Re-check 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 P235/65R18, P235/55R20, or 235/55R20 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 the maximum inflation pressure shown on the tire sidewall, or 260 kPa (38 psi), whichever is lower. Return the tires to the recommended cold tire inflation pressure when high-speed driving has ended. See *Vehicle Load Limits on page 9-12* and *Tire Pressure on page 10-59*.

The maximum load and inflation pressure is molded on the tire sidewall, in small letters, near the rim flange. It will read something like this: Maximum load 690 kg (1521 lbs) 300 kPa (44 psi) Max. Press.

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 10-63 for additional information.

Federal Communications Commission (FCC) and Industry Canada

See *Radio Frequency Statement* on page 13-12 for information regarding Part 15 of the Federal Communications Commission (FCC) rules and Industry Canada Standards RSS-210/220/310.

Tire Pressure Monitor Operation

This vehicle may have a Tire Pressure Monitor System (TPMS). The TPMS is designed to warn the driver when a low tire pressure condition exists. TPMS sensors are mounted onto each tire and wheel assembly, excluding the spare tire and wheel assembly. The TPMS sensors monitor the air pressure in the tires and transmit the tire pressure readings to a receiver located in the vehicle.



When a low tire pressure condition is detected, the TPMS illuminates the low tire pressure warning light located on the instrument cluster. If the warning light comes on, stop as soon as possible and inflate the tires to the recommended pressure shown on the tire loading information label. See *Vehicle Load Limits* on page 9-12.

A message to check the pressure 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 5-29.

The low tire pressure warning light may come on in cool weather when the vehicle is first started, and then turn off as the vehicle is driven. This could be an early indicator that the air pressure is getting low and needs to be inflated to the proper pressure.

A Tire and Loading Information label shows the size of the original equipment tires and the correct inflation pressure for the tires when they are cold. See *Vehicle Load Limits* on page 9-12, for an example of the Tire and Loading Information label and its location. Also see *Tire Pressure* on page 10-59.

The TPMS can warn about a low tire pressure condition but it does not replace normal tire maintenance. See *Tire Inspection* on page 10-67, *Tire Rotation* on page 10-67 and *Tires* on page 10-52.

Notice: 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 Saab-approved tire sealant available through your dealer or included in the vehicle.

Factory-installed Tire Inflator Kits use a Saab approved liquid tire sealant. Using non-approved tire sealants could damage the TPMS sensors. See *Tire Sealant and Compressor Kit* on page 10-77 for information regarding the inflator kit materials and instructions.

TPMS Malfunction Light and Message

The TPMS will not function properly if one or more of the TPMS sensors are missing or inoperable. When the system detects a malfunction, the low tire pressure warning light flashes for about one minute and then stays on for the remainder of the ignition cycle. A DIC warning message also displays. The malfunction light and DIC warning message come on at each ignition cycle until the problem is corrected. Some of the conditions that can cause these to come on are:

- One of the road tires has been replaced with the spare tire. The spare tire does not have a TPMS sensor. The malfunction light and the DIC message should go off after the road tire is replaced and the sensor matching process is performed successfully. See "TPMS Sensor Matching Process" later in this section.

- The TPMS sensor matching process was not done or not completed successfully after rotating the tires. The malfunction light and the DIC message should go off after successfully completing the sensor matching process. See "TPMS Sensor Matching Process" later in this section.
- One or more TPMS sensors are missing or damaged. The malfunction light and the DIC message should go off when the TPMS sensors are installed and the sensor matching process is performed successfully. See your dealer for service.

- Replacement tires or wheels do not match the original equipment tires or wheels. Tires and wheels other than those recommended could prevent the TPMS from functioning properly. See *Buying New Tires on page 10-69*.
- 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 come on and stay 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. Also, the TPMS sensor matching process should be performed after replacing a spare tire with a road tire containing the TPMS sensor. The malfunction light and the DIC message 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.

10-66 Vehicle Care

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. Place the vehicle power mode in START. See *Ignition Positions on page 9-18*.
3. Select the vehicle information menu using the menu button.
4. Select the tire pressure screen using the up/down thumbwheel.
5. Press and hold SET/CLR to begin the sensor matching process.
6. Press SET/CLR to confirm selection. The horn sounds twice to signal the receiver is in relearn mode and TIRE LEARNING ACTIVE message displays on the DIC screen.
7. Start with the driver side front tire.
8. Place the relearn tool against the tire sidewall, near the valve stem. Then press the button to activate the TPMS sensor. A horn chirp confirms that the sensor identification code has been matched to this tire and wheel position.
9. Proceed to the passenger side front tire, and repeat the procedure in Step 8.
10. Proceed to the passenger side rear tire, and repeat the procedure in Step 8.
11. Proceed to the driver side rear tire, and repeat the procedure in Step 8. The horn sounds two times to indicate the sensor identification code has been matched to the driver side rear tire, and the TPMS sensor matching process is no longer active. The TIRE LEARNING ACTIVE message on the DIC display screen goes off.
12. Press STOP to turn the ignition off.
13. Set all four tires to the recommended air pressure level as indicated on the Tire and Loading Information label.

Tire Inspection

We recommend that the tires, including the spare tire, if the vehicle has one, be inspected for signs of wear or damage at least once a month.

Replace the tire if:

- The indicators at three or more places around the tire can be seen.
- There is cord or fabric showing through the tire's rubber.
- The tread or sidewall is cracked, cut, or snagged deep enough to show cord or fabric.

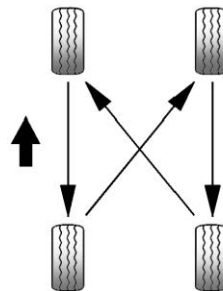
- The tire has a bump, bulge, or split.
- The tire has a puncture, cut, or other damage that cannot be repaired well because of the size or location of the damage.

Tire Rotation

Tires should be rotated every 12 000 km (7,500 mi). See *Scheduled Maintenance on page 11-3*.

Tires are rotated to achieve a uniform wear for all tires. The first rotation is the most important.

Any time unusual wear is noticed, rotate the tires as soon as possible and check the wheel alignment. Also check for damaged tires or wheels. Also check for damaged tires or wheels. See *When It Is Time for New Tires on page 10-68* and *Wheel Replacement on page 10-74*.



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 10-59* and *Vehicle Load Limits on page 9-12*.

Reset the Tire Pressure Monitor System. See *Tire Pressure Monitor Operation on page 10-63*.

Make certain that all wheel nuts are properly tightened. See “Wheel Nut Torque” under *Capacities and Specifications on page 12-2*.

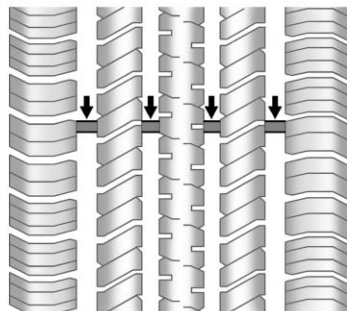
WARNING

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 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 10-67* and *Tire Rotation on page 10-67* for more information.

The rubber in tires ages over time. This also applies for the spare tire, if the vehicle has one, even if it is never used. Multiple conditions including temperatures, loading conditions, and inflation pressure maintenance affect how fast aging takes place. Tires will typically need to be replaced due to wear before they may need to be replaced due to age. Consult the tire manufacturer for more information on when tires should be replaced.

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

The original equipment tires have been developed and matched specifically for this vehicle and were designed to meet Tire Performance Criteria Specification (TPC Spec) system rating. When replacement tires are needed, Saab strongly recommends buying tires with the same TPC Spec rating.

The 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. The 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 10-53 for additional information.

10-70 Vehicle Care

Saab recommends replacing all the tires at the same time. 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. See *Tire Inspection* on page 10-67 and *Tire Rotation* on page 10-67 for information on proper tire rotation.

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 10-61.

The Tire and Loading Information label indicates the original equipment tires on the vehicle. See *Vehicle Load Limits* on page 9-12 for the label location and more information about the Tire and Loading Information label.

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, and electronic stability control, 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 Saab specific wheel and tire systems developed for the vehicle, and have them properly installed by a Saab certified technician.

See *Buying New Tires* on page 10-69 and *Accessories and Modifications* on page 10-3 for additional information.

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-type snow tires, space-saver, or temporary use 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 Saab passenger cars and light trucks may vary with respect to these grades, they must also conform to federal safety requirements and additional 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 a 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 – AA, A, B, C

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 – A, B, C

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 will not be necessary on a regular basis. However, check the alignment if there is unusual tire wear or if the vehicle is pulling to one side or the other. If the vehicle vibrates when driving on a smooth road, the tires and wheels might 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 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.

Notice: The wrong wheel can also cause problems with bearing life, brake cooling, speedometer or odometer calibration, headlamp aim, bumper height, vehicle ground clearance, and tire or tire chain clearance to the body and chassis.

See *If a Tire Goes Flat on page 10-75* for more information.

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 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,

(Continued)

WARNING (Continued)

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 blowout, especially if the tires are maintained properly. See Tires. If air goes out of a tire, it is much more likely to leak out slowly. But if there is ever a blowout, here are a few tips about what to expect and what to do:

If a front 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.

10-76 Vehicle Care

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 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 6-5*.

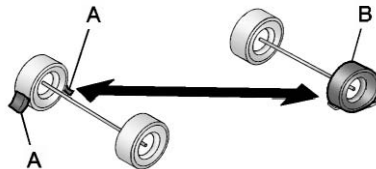
WARNING

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.

This vehicle may come with a jack and spare tire or a tire sealant and compressor kit. To use the jacking equipment to change a spare tire safely, follow the instructions below. Then see *Tire Changing on page 10-85*. To use the tire sealant and compressor kit, see *Tire Sealant and Compressor Kit on page 10-77*.

When the vehicle has a flat tire (B), use the following example as a guide to assist you in the placement of wheel blocks (A).



- A. Wheel Block
- B. Flat Tire

The following information explains how to repair or change a tire.

Tire Sealant and Compressor Kit

WARNING

Idling a vehicle in an enclosed area with poor ventilation is dangerous. Engine exhaust may enter the vehicle. Engine exhaust contains Carbon Monoxide (CO) which cannot be seen or smelled. It can cause unconsciousness and even death. Never run the engine in an enclosed area that has no fresh air ventilation. For more information, see *Engine Exhaust on page 9-24*.

⚠ WARNING

Overinflating a tire could cause the tire to rupture and you or others could be injured. Be sure to read and follow the tire sealant and compressor kit instructions and inflate the tire to its recommended pressure. Do not exceed the recommended pressure.

⚠ WARNING

Storing the tire sealant and compressor kit 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 the tire sealant and compressor kit in its original location.

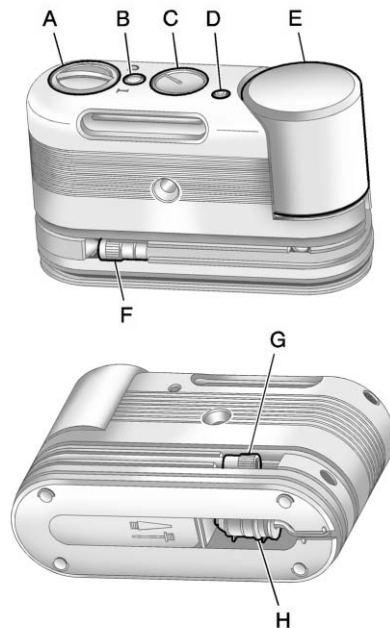
If this vehicle has a tire sealant and compressor kit, there may not be a spare tire, tire changing equipment, and on some vehicles there may not be a place to store a tire.

The tire sealant and compressor can be used to temporarily seal punctures up to 6 mm (¼ in) in the tread area of the tire. It can also be used to inflate an underinflated tire.

If the tire has been separated from the wheel, has damaged sidewalls, or has a large puncture, the tire is too severely damaged for the tire sealant and compressor kit to be effective. See *Roadside Assistance Program* on page 13-4.

Read and follow all of the tire sealant and compressor kit instructions.

The kit includes:



- A. Selector Switch (Sealant/Air or Air Only)
- B. On/Off Button
- C. Pressure Gauge
- D. Pressure Deflation Button (If equipped)
- E. Tire Sealant Canister
- F. Sealant/Air Hose (Clear)
- G. Air Only Hose (Black)
- H. Power Plug

Tire Sealant

Read and follow the safe handling instructions on the label adhered to the sealant canister.

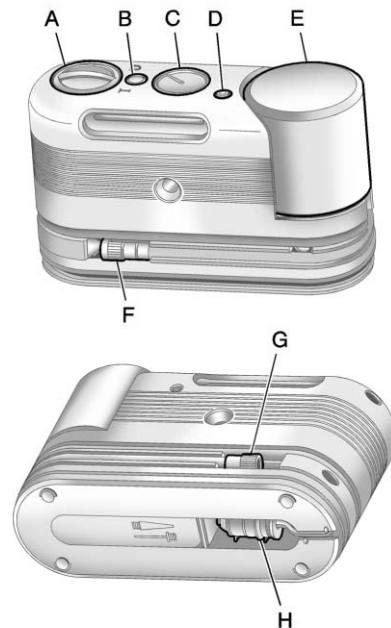
Check the tire sealant expiration date on the sealant canister. The sealant canister should be replaced before its expiration date.

Replacement sealant canisters are available at your local dealer. See “Removal and Installation of the Sealant Canister” following.

There is only enough sealant to seal one tire. After usage, the sealant canister and sealant/air hose assembly must be replaced. See “Removal and Installation of the Sealant Canister” following.

Using the Tire Sealant and Compressor Kit to Temporarily Seal and Inflate a Punctured Tire

Follow the directions closely for correct sealant usage.



When using the tire sealant and compressor kit during cold temperatures, warm the kit in a

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heated environment for five minutes. This will help to inflate the tire faster.

If a tire goes flat, avoid further tire and wheel damage by driving slowly to a level place. Turn on the hazard warning flashers. See *Hazard Warning Flashers* on page 6-5.

See *If a Tire Goes Flat* on page 10-75 for other important safety warnings.

Do not remove any objects that have penetrated the tire.

1. Remove the tire sealant and compressor kit from its storage location. See *Storing the Tire Sealant and Compressor Kit* on page 10-85.
2. Unwrap the sealant/air hose (F) and the power plug (H).

3. Place the kit on the ground.
Make sure the tire valve stem is positioned close to the ground so the hose will reach it.
4. Remove the valve stem cap from the flat tire by turning it counterclockwise.
5. Attach the sealant/air hose (F) onto the tire valve stem. Turn it clockwise until it is tight.
6. Plug the power plug (H) into the accessory power outlet in the vehicle. Unplug all items from other accessory power outlets. See *Power Outlets* on page 5-8.
If the vehicle has an accessory power outlet, do not use the cigarette lighter.
If the vehicle only has a cigarette lighter, use the cigarette lighter.
Do not pinch the power plug cord in the door or window.

7. Start the vehicle. The vehicle must be running while using the air compressor.
8. Turn the selector switch (A) counterclockwise to the Sealant + Air position.
9. Press the on/off button (B) to turn the tire sealant and compressor kit on.
The compressor will inject sealant and air into the tire.
The pressure gauge (C) will initially show a high pressure while the compressor pushes the sealant into the tire. Once the sealant is completely dispersed into the tire, the pressure will quickly drop and start to rise again as the tire inflates with air only.

10. Inflate the tire to the recommended inflation pressure using the pressure gauge (C). The recommended inflation pressure can be found on the Tire and Loading Information label. See *Tire Pressure* on page 10-59.

The pressure gauge (C) may read higher than the actual tire pressure while the compressor is on. Turn the compressor off to get an accurate pressure reading. The compressor may be turned on/off until the correct pressure is reached.

Notice: If the recommended pressure cannot be reached after approximately 25 minutes, the vehicle should not be driven farther. The tire is too severely damaged and the tire sealant and compressor kit cannot inflate the tire. Remove the power plug from

the accessory power outlet and unscrew the inflating hose from the tire valve. See *Roadside Assistance Program* on page 13-4.

11. Press the on/off button (B) to turn the tire sealant and compressor kit off.

The tire is not sealed and will continue to leak air until the vehicle is driven and the sealant is distributed in the tire; therefore, Steps 12 through 18 must be done immediately after Step 11.

Be careful while handling the tire sealant and compressor kit as it could be warm after usage.

12. Unplug the power plug (H) from the accessory power outlet in the vehicle.

13. Turn the sealant/air hose (F) counterclockwise to remove it from the tire valve stem.
14. Replace the tire valve stem cap.
15. Replace the sealant/air hose (F), and the power plug (H) back in their original location.



16. If the flat tire was able to inflate to the recommended inflation pressure, remove the maximum speed label from the sealant canister (E) and place it in a highly visible location. Do not exceed the speed on this label until the damaged tire is repaired or replaced.

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17. Return the equipment to its original storage location in the vehicle.
18. Immediately drive the vehicle 8 km (5 mi) to distribute the sealant in the tire.
19. Stop at a safe location and check the tire pressure. Refer to Steps 1 through 11 under “Using the Tire Sealant and Compressor Kit without Sealant to Inflate a Tire (Not Punctured).”

If the tire pressure has fallen more than 68 kPa (10 psi) below the recommended inflation pressure, stop driving the vehicle. The tire is too severely damaged and the tire sealant cannot seal the tire. See *Roadside Assistance Program on page 13-4*.

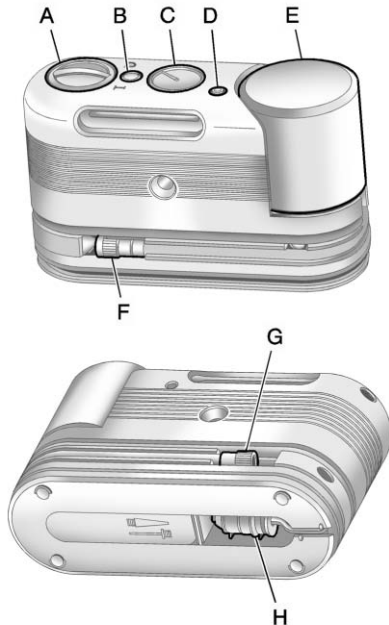
If the tire pressure has not dropped more than 68 kPa (10 psi) from the recommended inflation pressure, inflate the tire to the recommended inflation pressure.

20. Wipe off any sealant from the wheel, tire, and vehicle.

21. Dispose of the used sealant canister (E) and sealant/air hose (F) assembly at a local dealer or in accordance with local state codes and practices.
22. Replace it with a new canister available from your dealer.
23. After temporarily sealing a tire using the tire sealant and compressor kit, take the vehicle to an authorized dealer within a 161 km (100 mi) of driving to have the tire repaired or replaced.

Using the Tire Sealant and Compressor Kit without Sealant to Inflate a Tire (Not Punctured)

To use the air compressor to inflate a tire with air only and not sealant:



If a tire goes flat, avoid further tire and wheel damage by driving slowly to a level place. Turn on the hazard warning flashers. See *Hazard Warning Flashers* on page 6-5.

See *If a Tire Goes Flat* on page 10-75 for other important safety warnings.

1. Remove the tire sealant and compressor kit from its storage location. See *Storing the Tire Sealant and Compressor Kit* on page 10-85.
2. Unwrap the air only hose (G) and the power plug (H).
3. Place the kit on the ground.
Make sure the tire valve stem is positioned close to the ground so the hose will reach it.
4. Remove the tire valve stem cap from the flat tire by turning it counterclockwise.
5. Attach the air only hose (G) onto the tire valve stem by turning it clockwise until it is tight.

6. Plug the power plug (H) into the accessory power outlet in the vehicle. Unplug all items from other accessory power outlets. See *Power Outlets* on page 5-8.

If the vehicle has an accessory power outlet, do not use the cigarette lighter.

If the vehicle only has a cigarette lighter, use the cigarette lighter.

Do not pinch the power plug cord in the door or window.

7. Start the vehicle. The vehicle must be running while using the air compressor.
8. Turn the selector switch (A) clockwise to the Air Only position.
9. Press the on/off (B) button to turn the compressor on.
The compressor will inflate the tire with air only.

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- Inflate the tire to the recommended inflation pressure using the pressure gauge (C). The recommended inflation pressure can be found on the Tire and Loading Information label. See *Tire Pressure* on page 10-59.

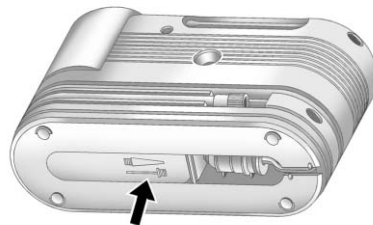
The pressure gauge (C) may read higher than the actual tire pressure while the compressor is on. Turn the compressor off to get an accurate reading. The compressor may be turned on/off until the correct pressure is reached.

If you inflate the tire higher than the recommended pressure you can adjust the excess pressure by pressing the pressure deflation button (D), if equipped, until the proper pressure reading is reached. This option is only functional when using the air only hose (G).

- Press the on/off button (B) to turn the tire sealant and compressor kit off.

Be careful while handling the tire sealant and compressor kit as it could be warm after usage.

- Unplug the power plug (H) from the accessory power outlet in the vehicle.
- Disconnect the air only hose (G) from the tire valve stem by turning it counterclockwise, and replace the tire valve stem cap.
- Replace the air only hose (G) and the power plug (H) and cord back in their original locations.
- Place the equipment in the original storage location in the vehicle.



The tire sealant and compressor kit has an accessory adapter located in a compartment on the bottom of its housing that may be used to inflate air mattresses, balls, etc.

Removal and Installation of the Sealant Canister

To remove the sealant canister:

1. Unwrap the sealant hose.
2. Press the canister release button.
3. Pull up and remove the canister.
4. Replace with a new canister which is available from your dealer.
5. Push the new canister into place.

Storing the Tire Sealant and Compressor Kit



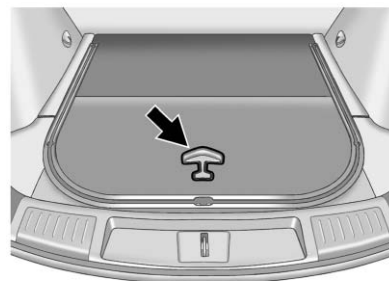
This vehicle may have a tire sealant and compressor kit in place of a jack or spare tire. It is located in a foam container in the rear compartment storage area. If the vehicle has a cargo cover, see *Cargo Management System* on page 4-5 for instructions on how to access the tire sealant and compressor kit.

Tire Changing

Removing the Spare Tire and Tools

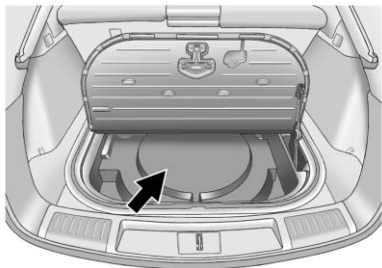
To access the spare tire and tools:

1. Open the liftgate. See *Liftgate* on page 2-12.

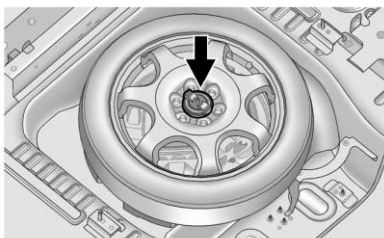


2. Lift the handle and pull up on the floor.

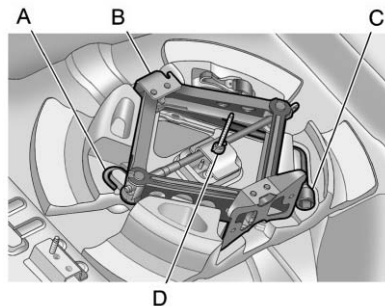
The prop rod locks into place when open.



3. Remove the spare tire cover.



4. Remove the nut retaining the spare tire.
5. Remove the compact spare tire. See *Compact Spare Tire* on page 10-92 for more information.

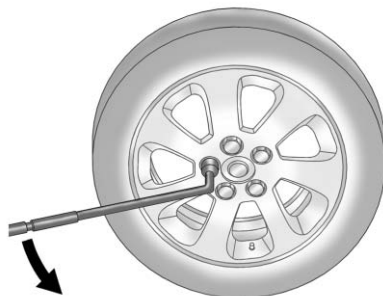


6. Remove the wing nut (D).
7. Remove the extension (A), jack (B) and wheel wrench (C) and place them near the tire being changed.

Removing the Flat Tire and Installing the Spare Tire

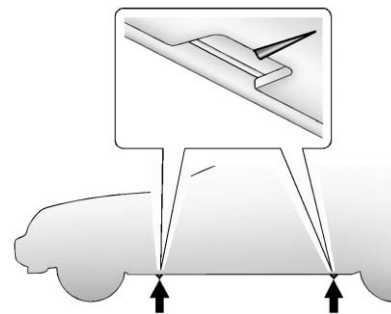
Take off the wheel cover or center cap, if the vehicle has one, to reach the wheel bolts.

1. Do a safety check before proceeding. See *If a Tire Goes Flat* on page 10-75 for more information.
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.

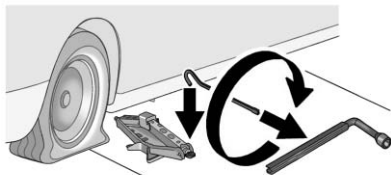


4. Turn the wheel wrench counterclockwise to loosen all the wheel nuts, but do not remove them yet.
5. Place the jack near the flat tire.

Notice: 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.



6. Position the jack lift head at the jack location nearest the flat tire.
The jacking location is indicated by a V-shaped notch in the plastic molding. The jack must not be used in any other position.



7. Insert the hooked end of the extension handle through the jack and the flat end through the wheel wrench.

⚠ WARNING

Getting under a vehicle when it is jacked up is dangerous. If the vehicle slips off the jack, you could be badly injured or killed. Never get under a vehicle when it is supported only by a jack.

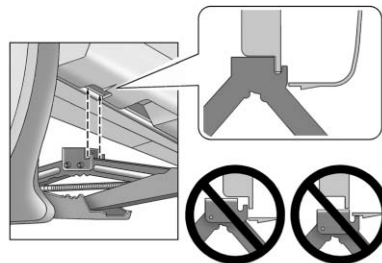
⚠ WARNING

Raising the vehicle with the jack improperly positioned can damage the vehicle and even make the vehicle fall. To help avoid personal injury and vehicle damage, be sure to fit the jack lift head into the proper location before raising the vehicle.

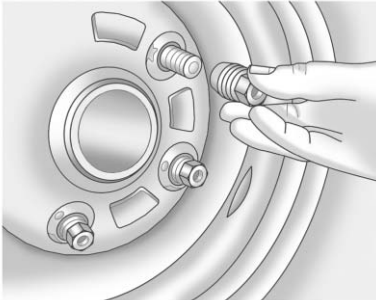
⚠ WARNING

Lifting a vehicle and getting under it to do maintenance or repairs is dangerous without the appropriate safety equipment and training. If a jack is provided with the vehicle, it is designed only for changing a flat tire. If it is used for anything else, you or others could be badly injured or killed if the vehicle slips off the jack. If a jack is provided with the vehicle, only use it for changing a flat tire.

8. Turn the extension with the wheel wrench clockwise to raise the jack lift head until the jack just fits under the vehicle.



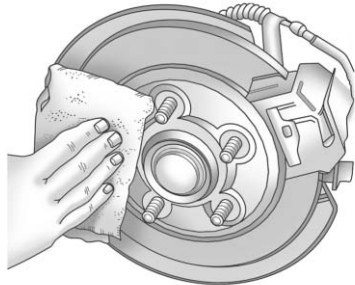
9. Raise the vehicle by turning the wheel wrench clockwise until the slots in the jack head fit into the metal flange located behind the triangle on the plastic moulding.



- 10. Remove all of the wheel nuts.
- 11. 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 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.



- 12. Remove any rust or dirt from the wheel bolts, mounting surfaces, and spare wheel.
- 13. 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.

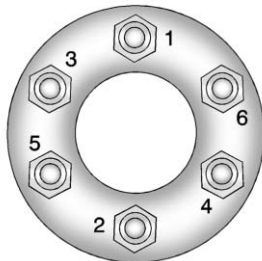
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14. Reinstall the wheel nuts. Tighten each nut by hand until the wheel is held against the hub.
15. Lower the vehicle by turning the jack handle counterclockwise.

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 aftermarket manufacturer when using accessory locking wheel nuts. See *Capacities and Specifications on page 12-2* for original equipment wheel nut torque specifications.

Notice: 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 on page 12-2* for the wheel nut torque specification.



16. Tighten the wheel nuts firmly in a crisscross sequence, as shown.

17. Lower the jack all the way and remove the jack from under the vehicle.
18. 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.

Notice: 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.

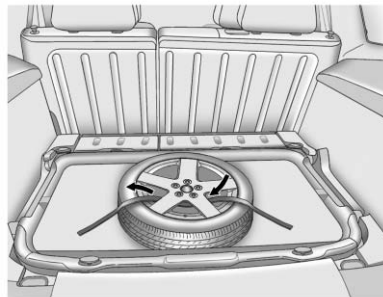
To store the flat or spare tire and tools:

1. Open the liftgate. See *Liftgate on page 2-12* for more information.
2. Put back all tools as they were stored in the rear storage compartment and put the compartment cover back on. For more information, see "Storing the Compact Spare Tire and Tools" next in this section.

3. Install the cargo cover. For more information, see *Cargo Management System on page 4-5*.
4. Place the tire, lying flat, in the rear storage compartment.



5. Attach the strap to the cargo tie-down in the rear of the vehicle.



6. Route the strap through the wheel, as shown.
7. Attach the strap to the other cargo tie-down in the rear of the vehicle.
8. Tighten the strap.

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 the vehicle was new; however, it can lose air after a time. Check the inflation pressure regularly. It should be 420 kPa (60 psi).

After installing the compact spare on the vehicle, stop as soon as possible and make sure the spare tire is correctly inflated. The compact spare is made to perform well at speeds up to 105 km/h (65 mph) for distances up to 5 000 km (3,000 mi), so you can finish your trip and have the full-size

tire repaired or replaced at your convenience. Of course, it is best to replace the spare with a full-size tire as soon as possible. The spare tire will last longer and be in good shape in case it is needed again.

Notice: 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.

Notice: Tire chains will not fit the compact spare. Using them can damage the vehicle and can damage the chains too. Do not use tire chains on the compact spare.

Jump Starting

For more information about the vehicle battery, see *Battery on page 10-30*.

If the vehicle battery has run down, you may want to use another vehicle and some jumper cables to start your vehicle. Be sure to use the following steps to do it safely.

WARNING

Batteries can hurt you. They can be dangerous because:

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

If you do not follow these steps exactly, some or all of these things can hurt you.

Notice: Ignoring these steps could result in costly damage to the vehicle that would not be covered by the warranty.

Trying to start the vehicle by pushing or pulling it will not work, and it could damage the vehicle.

1. Check the other vehicle. It must have a 12-volt battery with a negative ground system.

Notice: Only use a vehicle that has a 12-volt system with a negative ground for jump starting. If the other vehicle does not have a 12-volt system with a negative ground, both vehicles can be damaged.

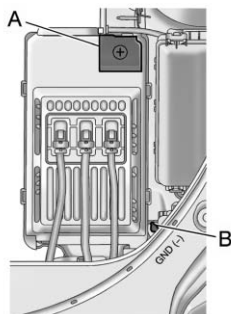
2. Get the vehicles close enough so the jumper cables can reach, but be sure the vehicles are not touching each other. If they are, it could cause a ground connection you do not want. You would not be able to start your vehicle, and the bad grounding could damage the electrical systems.

To avoid the possibility of the vehicles rolling, set the parking brake firmly on both vehicles involved in the jump start procedure. Put the transmission in P (Park) before setting the parking brake.

Notice: If the radio or other accessories are left on during the jump starting procedure, they could be damaged. The repairs would not be covered by the warranty. Always turn off the radio and other accessories when jump starting the vehicle.

3. Turn off the ignition on both vehicles. Unplug unnecessary accessories plugged into the cigarette lighter or the accessory power outlet. Turn off the radio and all lamps that are not needed. This will avoid sparks, helping save both batteries and the radio.
4. Open the hood on the other vehicle and locate the positive (+) and negative (-) terminal locations on that vehicle.

Open the hood on your vehicle and find the remote positive (+) and remote negative (-) jump starting terminals.



Your vehicle is equipped with a remote positive (+) terminal (A) and a remote negative (-) terminal (B). The remote positive (+) terminal is located in the engine compartment on the driver side of the vehicle, above the rear of the battery. The remote negative (-) terminal is a stud located in the engine compartment on the driver side of the vehicle, on the front tie bar. See *Engine Compartment Overview* on page 10-6 for more information on location.

To uncover the remote positive (+) terminal, lift open the access panel on the battery cover indicated by the (+) sign.

⚠ 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 an open flame 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

(Continued)

WARNING (Continued)

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. Check that the jumper cables do not have loose or missing insulation. If they do, you could get a shock. The vehicles could also be damaged.

Before you connect the cables, here are some basic things you should know. Positive (+) will go to positive (+) or to a remote positive (+) terminal if the vehicle has one. Negative (-) will go to a heavy, unpainted metal engine part or to a remote negative (-) terminal if the vehicle has one.

Do not connect positive (+) to negative (-) or you will get a short that would damage the battery and maybe other parts. Do not connect the negative (-) cable to the negative (-) terminal on the dead battery because this can cause sparks.

6. Connect the red positive (+) cable to the positive (+) terminal on the vehicle with the dead battery. Use a remote positive (+) terminal if the vehicle has one.

7. Do not let the other end touch metal. Connect it to the positive (+) terminal of the good battery. Use a remote positive (+) terminal if the vehicle has one.

8. Now connect the black negative (-) cable to the negative (-) terminal of the good battery. Use a remote negative (-) terminal if the vehicle has one.

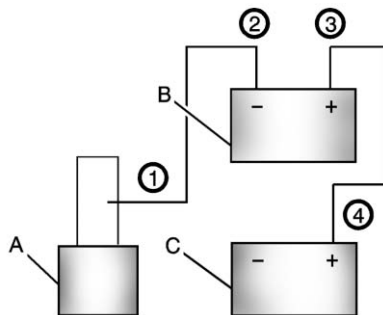
Do not let the other end touch anything until the next step. The other end of the negative (-) cable does not go to the dead battery. It goes to a heavy, unpainted metal engine part or to a remote negative (-) terminal on the vehicle with the dead battery.

9. Connect the other end of the negative (-) cable away from the dead battery, but not near engine parts that move. The electrical connection is just as good there, and the chance of sparks getting back to the battery is much less.

Your vehicle has a remote (-) terminal for this purpose.

10. Now start the vehicle with the good battery and run the engine for a while.
11. Try to start the vehicle that had the dead battery. If it will not start after a few tries, it probably needs service.

Notice: 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

- A. Heavy, Unpainted Metal Engine Part or Remote Negative (-) Terminal
- B. Good Battery or Remote Positive (+) and Remote Negative (-) Terminals
- C. Dead Battery or Remote Positive (+) Terminal

To disconnect the jumper cables from both vehicles, do the following:

1. Disconnect the black negative (-) cable from the vehicle that had the dead battery.
2. Disconnect the black negative (-) cable from the vehicle with the good battery.
3. Disconnect the red positive (+) cable from the vehicle with the good battery.
4. Disconnect the red positive (+) cable from the other vehicle.
5. Close the access panel on the battery cover, if applicable.

Towing

Towing the Vehicle

Notice: To avoid damage, the disabled vehicle should be towed with all four wheels off the ground. Care must be taken with vehicles that have low ground clearance and/or special equipment. Always flatbed on a car carrier.

Consult your dealer or a professional towing service if the disabled vehicle must be towed. See *Roadside Assistance Program* on page 13-4.

To tow the vehicle behind another vehicle for recreational purposes, such as behind a motorhome, see “Recreational Vehicle Towing” in this section.

Recreational Vehicle Towing

Recreational vehicle towing means towing the vehicle behind another vehicle – such as a motorhome. 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 distance that will be travelled? Some vehicles have restrictions on how far and how long they can tow.
 - Is the proper towing equipment going to be used? See your dealer or trailering professional for additional advice and equipment recommendations.
 - Is the vehicle ready to be towed? Just as preparing the vehicle for a long trip, make sure the vehicle is prepared to be towed.
- What is the towing capacity of the towing vehicle? Be sure to read the tow vehicle manufacturer's recommendations.

Dinghy Towing

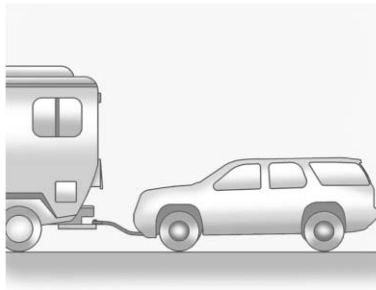
Front-wheel-drive and all-wheel-drive vehicles may be dinghy towed from the front. These vehicles can also be towed by placing them on a platform trailer with all four wheels off of the ground. For other towing options, see “Dolly Towing” following in this section.

Vehicles with a 2.8 L V 6 engine can be dinghy towed only for service and are restricted to a maximum distance of 100 km (60 miles) and not to exceed 80 km/h (50 mph).

Vehicles with the 3.0 L V 6 engine can be dinghy towed without distance restrictions.

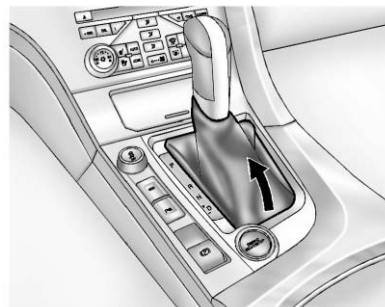
Notice: If 105 km/h (65 mph) is exceeded while towing the vehicle, it could be damaged. Never exceed 105 km/h (65 mph) while towing the vehicle.

For vehicles being dinghy towed, the vehicle should be run at the beginning of each day and at each RV fuel stop for about five minutes. This will ensure proper lubrication of transmission components.

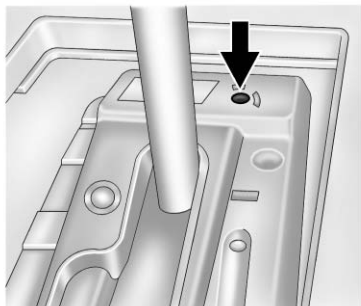


To tow the vehicle from the front with all four wheels on the ground:

1. Position the vehicle that will be towed and secure it to the towing vehicle.



2. Remove the shift lever boot by pulling up on the rear of the trim plate.



3. Use a small screw driver or tool to press and hold the manual release button on the front right.
4. Put the vehicle in N (Neutral).

Notice: If the vehicle is towed without performing each of the steps listed under “Dinghy Towing,” the automatic transmission could be damaged. Be sure to follow all steps of the dinghy towing procedure prior to and after towing the vehicle.

Once the destination has been reached:

1. Shift the vehicle to P (Park).
2. Reinstall the shift lever boot by inserting the front edge and pressing the rear of the trim plate until it snaps into place.
3. Start the engine and let it idle for more than three minutes before driving the vehicle.

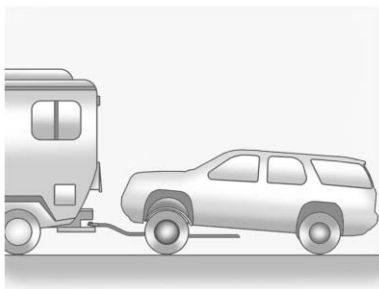
Notice: Too much or too little fluid can damage the transmission. Be sure that the transmission fluid is at the proper level before towing with all four wheels on the ground.

Notice: Do not tow a vehicle with the front drive wheels on the ground if one of the front tires is a compact spare tire. Towing with two different tire sizes on the front of the vehicle can cause severe damage to the transmission.

Dolly Towing (All-Wheel-Drive Vehicles)

All-wheel-drive vehicles should not be towed with two wheels on the ground. To properly tow these vehicles, they should be placed on a platform trailer with all four wheels off of the ground or dinghy towed from the front. See Dinghy Towing earlier in this section.

Dolly Towing (Front-Wheel-Drive Vehicles)

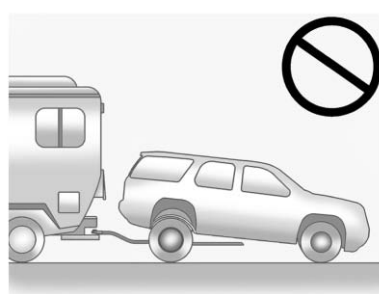
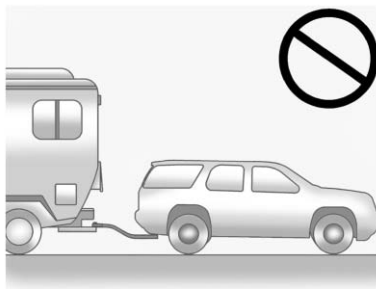


To tow the vehicle from the front with the rear wheels on the ground, do the following:

1. Put the front wheels on a dolly.
2. Move the shift lever to P (Park). See *Shifting Into Park* on page 9-23.

3. Set the parking brake.
4. Secure the vehicle to the dolly.
5. Follow the dolly manufacturer's instructions for preparing the vehicle and dolly for towing.
6. Release the parking brake.

Towing the Vehicle from the Rear



Notice: 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

Cleaning Exterior Lamps/Lenses

Use only lukewarm or cold water, a soft cloth, and a car washing soap to clean exterior lamps and lenses. Follow instructions under "Washing the Vehicle" later in this section.

Finish Care

Occasional waxing or mild polishing of the vehicle by hand may be necessary to remove residue from the paint finish. Approved cleaning products can be obtained from your dealer.

If the vehicle has a basecoat/clearcoat paint finish, the clearcoat gives more depth and gloss to the colored basecoat.

Always use waxes and polishes that are non-abrasive and made for a basecoat/clearcoat paint finish.

Notice: 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.

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.

Exterior painted surfaces are subject to aging, weather, and chemical fallout that can take their toll over a period of years. To keep the paint finish looking new, keep the vehicle garaged or covered whenever possible.

Protecting Exterior Bright Metal Parts

Bright metal parts should be cleaned regularly to keep their luster. Wash with water or use chrome polish on chrome or stainless steel trim, if necessary.

Use special care with aluminum trim. To avoid damaging protective trim, never use auto or chrome polish, steam, or caustic soap to clean aluminum. A coating of wax, rubbed to high polish, is recommended for all bright metal parts.

Washing the Vehicle

To preserve the vehicle's finish, keep it clean by washing it often.

Do not wash the vehicle in direct sunlight and use a car washing soap.

Notice: Do not use cleaning agents that are petroleum based or that contain acid or abrasives, as they can damage the paint, metal, or plastic on the vehicle. Approved cleaning products can be obtained from your dealer. Follow all manufacturer directions regarding correct product usage, necessary safety precautions, and appropriate disposal of any vehicle care product. Certain cleaners contain chemicals that can damage the emblems or nameplates on the vehicle. Check the cleaning product label. If it states that it

should not be used on plastic parts, do not use it on the vehicle or damage may occur and it would not be covered by the warranty.

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.

High pressure car washes could cause water to enter the vehicle. 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.

Notice: Conveyor systems on some automatic car washes could damage the vehicle. There may not be enough clearance for the undercarriage. Check with the car wash manager before using the automatic car wash.

Weatherstrips

Silicone grease on weatherstrips will make them last longer, seal better, and not stick or squeak. Apply silicone grease with a clean cloth. During very cold, damp weather frequent application may be required. See *Recommended Fluids and Lubricants* on page 11-4.

Wheels and Trim — Aluminum

The vehicle may have aluminum wheels.

Keep the wheels clean using a soft, clean cloth with mild soap and water. Rinse with clean water. After rinsing thoroughly, dry with a soft, clean towel. A wax may then be applied.

Notice: 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 vehicle with soap and water after exposure.

Notice: Do not use strong soaps, chemicals, abrasive polishes, cleaners, brushes, or cleaners that contain acid on aluminum, because the surface could be damaged. The repairs would not be covered by the vehicle warranty. Use only approved cleaners on aluminum wheels.

Notice: Never drive a vehicle through an automatic car wash that uses silicone carbide tire cleaning brushes, as this could cause damage. The repairs would not be covered by the vehicle warranty.

Windshield and Wiper Blades

Clean the outside of the windshield with glass cleaner.

Clean the rubber blades using a lint-free cloth or paper towel soaked with windshield washer fluid or a mild detergent. Wash the windshield thoroughly when cleaning the blades. Bugs, road grime, sap, and a buildup of vehicle wash/wax treatments may cause wiper streaking. Replace the wiper blades if they are worn or damaged.

Wipers can be damaged by:

- Extreme dusty conditions
- Sand and salt
- Heat and sun
- Snow and ice, without proper removal

Tires

Use a stiff brush with tire cleaner to clean the tires.

Notice: 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.

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

Any stone chips, fractures, or deep scratches in the finish should be repaired right away. Bare metal will corrode quickly and may develop into major repair expense.

Minor chips and scratches can be repaired with touch-up materials available from your dealer. Larger areas of finish damage can be corrected in your dealer's body and paint shop.

Underbody Maintenance

Chemicals used for ice and snow removal and dust control can collect on the underbody. If these are not removed, corrosion and rust can develop on the underbody parts such as fuel lines, frame, floor pan, and exhaust system even though they have corrosion protection.

At least every spring, flush these materials from the underbody with plain water. Clean any areas where mud and debris can collect. Dirt packed in close areas of the frame should be loosened before being flushed. Your dealer or an underbody car washing system can do this.

Chemical Paint Spotting

Some weather and atmospheric conditions can create a chemical fallout. Airborne pollutants can fall upon and attack painted surfaces on the vehicle. This damage can take two forms: blotchy, ring-shaped discolorations, and small, irregular dark spots etched into the paint surface.

Interior Care

The interior will continue to look its best if it is cleaned often. Dust and dirt can accumulate on the upholstery and cause damage to the carpet, fabric, leather, and plastic surfaces. Stains should be removed quickly as extreme heat could cause them to set rapidly.

Lighter colored interiors may require more frequent cleaning. Newspapers and garments that can transfer color to home furnishings can also transfer color to the interior.

Remove dust from small buttons and knobs with a small brush with soft bristles.

Your dealer has products for cleaning the interior. When cleaning the interior, only use cleaners specifically designed for the surfaces that are being cleaned. Permanent damage can result from using cleaners on surfaces for which they were not intended. Apply the cleaner directly to the cleaning cloth to prevent over-spray. Remove any accidental over-spray from other surfaces immediately.

Notice: Using abrasive cleaners when cleaning glass surfaces on the vehicle, could scratch the glass and/or cause damage to the rear window defogger. When cleaning the glass on the vehicle, use only a soft cloth and glass cleaner.

Cleaners can 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.

Do not clean the interior using the following cleaners or techniques:

- Never use a knife or any other sharp object to remove a soil from any interior surface.
- Never use a stiff brush. It can cause damage.
- Never apply heavy pressure or rub aggressively with a cleaning cloth. Use of heavy pressure can damage the interior and does not improve the effectiveness of soil removal.

10-106 Vehicle Care

- Avoid laundry detergents or dishwashing soaps with degreasers. Using too much soap will leave a residue that leaves streaks and attracts dirt. For liquid cleaners, about 20 drops per 3.78 L (1 gal) of water is a good guide. Use only mild, neutral-pH soaps.
- Do not heavily saturate the upholstery while cleaning.
- Cleaners that contain solvents can damage the interior.

Fabric/Carpet

Use a vacuum cleaner with a soft brush attachment to remove dust and loose dirt. A canister vacuum with rotating brushes in the nozzle may only be used on floor carpet and carpeted floor mats. For soils, always try to remove them first with plain water or club soda. Before cleaning, gently remove as much of the soil as possible using one of the following techniques:

- For liquids: gently blot the remaining soil with a paper towel. Allow the soil to absorb into the paper towel until no more can be removed.
- For solid dry soils: remove as much as possible and then vacuum.

To clean:

1. Saturate a lint-free, clean white cloth with water or club soda.
2. Remove excess moisture.
3. Start on the outside edge of the soil and gently rub toward the center. Continue cleaning, using a clean area of the cloth each time it becomes soiled.
4. Continue to gently rub the soiled area.
5. If the soil is not completely removed, use a mild soap solution and repeat the cleaning process with plain water.

If any of the soil remains, a commercial fabric cleaner or spot lifter may be necessary. Test a small hidden area for colorfastness before using a commercial upholstery cleaner or spot lifter. If the locally cleaned area gives any impression that a ring formation may result, clean the entire surface.

A paper towel can be used to blot excess moisture from the fabric or carpet after the cleaning process.

Leather

Leather, and lighter colored leather in particular, will need more frequent cleaning to prevent the buildup of dust, dirt, and colors transferred from other items so that these do not become permanent stains.

To remove dust, a soft cloth dampened with water can be used. If a more thorough cleaning is necessary, a soft cloth dampened with a mild soap solution can be used. Your dealer has approved leather cleaner available that provides superior cleaning performance when used regularly on finished automotive leathers. Allow the leather to dry naturally.

Do not use heat, steam, spot lifters or spot removers, or shoe polish on leather. Many commercial leather cleaners and coatings that are sold to preserve and protect leather may permanently change the appearance and feel of the leather and are not recommended. Do not use silicone or wax-based products, or those containing organic solvents to clean the interior because they can alter the appearance by increasing the gloss in a non-uniform manner.

Instrument Panel, Vinyl, and Other Plastic Surfaces

To remove dust, a soft cloth dampened with water can be used. If a more thorough cleaning is necessary, a clean soft cloth dampened with a mild soap solution can be used to gently remove dust and dirt. Never use spot lifters or removers on plastic surfaces.

Many commercial cleaners and coatings that are sold to preserve and protect soft plastic surfaces may permanently change the appearance and feel of the interior and are not recommended. Do not use silicone or wax-based products, or those containing organic solvents to clean the interior because they can alter the appearance by increasing the gloss in a non-uniform manner.

Some commercial products may increase gloss on the instrument panel. The increase in gloss may cause annoying reflections in the windshield and even make it difficult to see through the windshield under certain conditions.

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

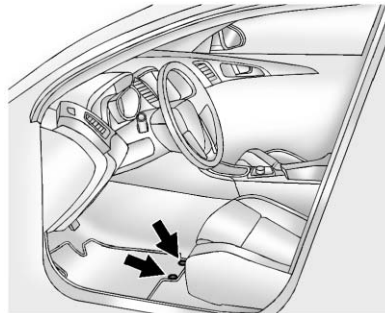
If a floor mat is the wrong size or is not properly installed, it can interfere with the accelerator pedal and/or brake pedal. Interference with the pedals can cause unintended acceleration and/or increased stopping distance which can cause a crash and injury. Make sure the floor mat does not interfere with the accelerator or brake pedal.

Use the following guidelines for proper floor mat usage.

- The original equipment floor mats were designed for your vehicle. If the floor mats need replacing, it is recommended that certified floor mats be purchased. Non-certified floor mats may not fit properly and may interfere with the accelerator or brake pedal. 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

The driver side floor mat is held in place by two button-type retainers. The passenger side floor mat is held in place by one button-type retainer.



1. Pull up on the rear of the floor mat to unlock each retainer and remove.

2. Reinstall by lining up the floor mat retainer openings over the carpet retainers and snapping into position.
3. Make sure the floor mat is properly secured and verify that it does not interfere with the accelerator or brake pedal.

Service and Maintenance

General Information

General Information 11-1

Scheduled Maintenance

Scheduled Maintenance 11-3

Recommended Fluids, Lubricants, and Parts

Recommended Fluids and Lubricants 11-4

Maintenance Replacement Parts 11-6

Maintenance Records

Maintenance Records 11-7

General Information

Notice: Maintenance intervals, checks, inspections, recommended fluids, and lubricants are necessary to keep this vehicle in good working condition. Damage caused by failure to follow scheduled maintenance might not be covered by the vehicle warranty.

As the vehicle owner, you are responsible for the scheduled maintenance in this section. We recommend having your dealer perform these services. Proper vehicle maintenance helps to keep the vehicle in good working condition, improves fuel economy, and reduces vehicle emissions for better air quality.

Because of all the different ways people use vehicles, maintenance needs vary. The vehicle might need more frequent checks and services. Please read the information under Scheduled Maintenance. To keep the vehicle in good condition, see your dealer.

The maintenance schedule is for vehicles that:

- Carry passengers and cargo within recommended limits on the Tire and Loading Information label. See *Vehicle Load Limits on page 9-12*.
- Are driven on reasonable road surfaces within legal driving limits.
- Use the recommended fuel. See *Recommended Fuel on page 9-48*.

11-2 Service and Maintenance

WARNING

Performing maintenance work can be dangerous. Some jobs can cause serious injury. Perform maintenance work only if you have the required know-how and the proper tools and equipment. If in doubt, see your dealer to have a qualified technician do the work. See *Doing Your Own Service Work* on page 10-4.

At your dealer, you can be certain that you will receive the highest level of service available. Your dealer has specially trained service technicians, uses genuine replacement parts, as well as, up-to-date tools and equipment to ensure fast and accurate diagnostics.

The proper replacement parts, fluids, and lubricants to use are listed in *Recommended Fluids and Lubricants* on page 11-4 and *Maintenance Replacement Parts* on page 11-6. We recommend the use of genuine parts from your dealer.

Rotation of New Tires

To maintain ride, handling, and performance of the vehicle, it is important that the first rotation service for new tires be performed. Tires should be rotated every 12 000 km/7,500 mi. See *Tire Rotation* on page 10-67.

Scheduled Maintenance

When the Change Engine Oil Soon Message Displays

Change engine oil and filter. See *Engine Oil on page 10-10. An Emission Control Service.*

When the CHANGE ENGINE OIL SOON message displays, service is required for the vehicle as soon as possible, within the next 1 000 km/ 600 miles. If driving 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 dealer has trained service technicians who will perform this work and reset the system. If the engine oil life system is reset accidentally, service the vehicle within 5 000 km/3,000 miles since the last service. Reset the oil life system whenever the oil is changed. See *Engine Oil Life System on page 10-14.*

Warranty and Service Booklet

Please refer to the Saab Warranty and Service Booklet for the complete scheduled maintenance chart and requirements.

Recommended Fluids, Lubricants, and Parts

Recommended Fluids and Lubricants

Usage	Fluid/Lubricant
Engine Oil	The engine requires engine oil approved to the dexos specification. Oils meeting this specification can be identified with the dexos certification mark. Look for and use only an engine oil that displays the dexos certification mark of the proper viscosity grade. See <i>Engine Oil on page 10-10</i> .
Engine Coolant	50/50 mixture of clean, drinkable water and use only DEX-COOL Coolant. See <i>Engine Coolant on page 10-20</i> .
Hydraulic Brake System	DOT 3 Hydraulic Brake Fluid (Part No. 88863461).
Windshield Washer	Optikleen [®] Washer Solvent.
Hydraulic Power Steering System	DEXRON [®] -VI Automatic Transmission Fluid.
Automatic Transmission (3.0L V6 Engine)	DEXRON [®] -VI Automatic Transmission Fluid.
Automatic Transmission (2.8L V6 Engine)	AW-1 Automatic Transmission Fluid (Part No.119256039).
Chassis Lubrication	Chassis Lubricant (Part No. 12377985) or lubricant meeting requirements of NLGI #2, Category LB or GC-LB.
Key Lock Cylinders	Multi-Purpose Lubricant, Superlube (Part No. 12346241).

Usage	Fluid/Lubricant
Hood Latch Assembly, Secondary Latch, Pivots, Spring Anchor, and Release Pawl	Lubriplate Lubricant Aerosol (Part No. 12346293) or lubricant meeting requirements of NLGI #2, Category LB or GC-LB.
Hood, Door, and Folding Seat Hinges	Multi-Purpose Lubricant, Superlube (Part No. 12346241).
Power Liftgate Actuator Ball Joint	Multi-Purpose Lubricant (Part No. 89021668).
Weatherstrip Conditioning	Weatherstrip Lubricant (Part No. 3634770) or Dielectric Silicone Grease (Part No. 12345579).

11-6 Service and Maintenance

Maintenance Replacement Parts

Replacement parts identified below by name, part number, or specification can be obtained from your dealer.

Part	Part Number
Engine Air Cleaner/Filter	20897358
Engine Oil Filter	
2.8L V6 Engine	12593333
3.0L V6 Engine	89017524
Passenger Compartment Air Filter Element	13271191
Spark Plugs	
2.8L V6 Engine	12622561
3.0L V6 Engine	12622561
Wiper Blades	
Driver Side – 65.0 cm (25.6 in)	25979378
Passenger Side – 42.5 cm (16.7 in)	25979379
Rear – 30.0 cm (11.8 in)	20825882

Technical Data

Vehicle Identification

Vehicle Identification Number (VIN)	12-1
Service Parts Identification Label	12-1

Vehicle Data

Capacities and Specifications	12-2
Engine Drive Belt Routing ...	12-4

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, on the inside of the rear side cargo management cover, 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 R134a	For the air conditioning system refrigerant charge amount, see the refrigerant label located under the hood. See your dealer for more information.	
Engine Cooling System		
2.8L V6 Engine	12.8 L	13.5 qt
3.0L V6 Engine	11.7 L	12.3 qt
Engine Oil with Filter		
2.8L V6 Engine	5.7 L	6.0 qt
3.0L V6 Engine	5.7 L	6.0 qt
Fuel Tank	79.5 L	21.0 gal
Transmission Fluid		
2.8L V6 6-Speed Automatic (Transmission Requires No Fluid Replacement)	—	—
3.0L V6 6-Speed Automatic* (Drain and Refill)	9.0 L	9.5 qt

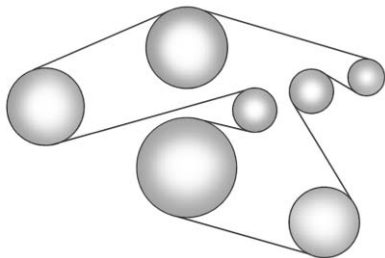
Application	Capacities	
	Metric	English
Wheel Nut Torque	150 N•m	110 ft lb
*See <i>Automatic Transmission Fluid</i> on page 10-16 for information on checking fluid level.		
All capacities are approximate. When adding, be sure to fill to the approximate level, as recommended in this manual. Recheck fluid level after filling.		

Engine Specifications

Engine	VIN Code	Transmission	Spark Plug Gap
2.8L V6 (LAU)	6	Automatic	1.10 mm (0.043 in)
3.0L V6 (LF1)	Y	Automatic	1.10 mm (0.043 in)

12-4 Technical Data

Engine Drive Belt Routing



2.8L, 3.0L V6 Engines

Customer Information

Customer Information

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Customer Information

Customer Satisfaction Procedure

Your satisfaction and goodwill are important to your dealer and to Saab. Normally, any concerns with the sales transaction or the operation of the vehicle will be resolved by your dealer 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.

13-2 Customer Information

STEP TWO: If after contacting a member of dealership management, it appears your concern cannot be resolved by your dealership without further help, in the U.S., call 1-800-955-9007. In Canada, contact Saab Customer Assistance Centre at 1-877-919-SAAB.

We encourage you to call the toll-free number in order to give the inquiry prompt attention. Have the following information available to give the Customer Assistance representative:

- Vehicle Identification Number (VIN). This is available from the vehicle registration or title, or the plate at the top left of the instrument panel and visible through the windshield.
- Dealership name and location.
- Vehicle delivery date and present mileage.

When contacting Saab, remember that your concern will likely be resolved at a dealer facility. That is why we suggest following Step One first.

STEP THREE — U.S. Owners:

Both Saab 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. Saab 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, Saab wants you to be aware of its participation in a no-charge Mediation/Arbitration Program. Saab 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 approximately 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 Saab Customer Assistance Centre, 1-877-919-SAAB, or write to:

Mediation/Arbitration Program
IFS Vehicle Distributors ULC
2400 South Service Road West
Oakville, Ontario L6L 5M9

The inquiry should be accompanied by the Vehicle Identification Number (VIN).

Customer Assistance Offices

Saab encourages customers to call the toll-free number for assistance. However, if a customer wishes to write or e-mail Saab, refer to the addresses below.

United States

Saab Customer Assistance Center
P.O. Box 33166
Detroit, MI 48232-5166
www.saabusa.com

1-800-955-9007
Roadside Assistance:
1-800-852-9001

Canada

IFS Vehicle Distributors ULC
2400 South Service Road West
Oakville, Ontario L6L 5M9
CustomerService@saabcac.com

1-877-919-SAAB
Roadside Assistance:
1-800-567-4555

Overseas

Please contact the local Saab 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), Saab has TTY equipment available at its Customer Assistance Center. Any TTY user can communicate with Saab by dialing: 1-866-612-0380. TTY users in Canada can dial 1-877-919-SAAB.

Roadside Assistance Program

For U.S.-purchased vehicles, call **1-800-852-9001**.

For Canadian-purchased vehicles, call **1-800-567-4555**.

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 4 years/80 000 km (50,000 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. Saab reserves the right to make any changes or discontinue the Roadside Assistance program at any time without notification.

Saab reserves 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 Saab 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 sand, mud, or snow.
 - **Flat Tire Change:** Service to change a flat tire with the spare tire. The spare tire, if equipped, must be in good condition and properly inflated. It is the owner's responsibility for the repair or replacement of the tire if it is not covered by the warranty.
 - **Battery Jump Start:** Service to jump start a dead battery.
 - **Trip Routing Service:** Detailed maps of North America are provided when requested either with the most direct route or the most scenic route. Additional travel information is also available. Allow three weeks for delivery.
 - **Trip Interruption Benefits and Assistance:** If your trip is interrupted due to a warranty failure, incidental expenses may be reimbursed during the 4 years/80 000 km (50,000 mi) Powertrain warranty period. Items considered are hotel, meals, and rental car.
- 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. Propane and other fuels are not provided through this service.
 - **Lock-Out Service:** Vehicle registration is required.

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- **Trip Routing Service:** Detailed maps of North America are provided when requested either with the most direct route or the most scenic route. There is a six request limit per year. Additional travel information is also available. Allow three weeks for delivery.
- **Trip Interruption Benefits and Assistance:** Must be over 250 kilometres from where your trip was started to qualify. Saab requires pre-authorization, original detailed receipts, and a copy of the repair orders. Once authorization has been received, the Roadside Assistance advisor will help you make arrangements and explain how to receive payment.
- **Alternative Service:** If assistance cannot be provided right away, the Roadside Assistance advisor may give you 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 the same-day repair.

Courtesy Transportation Program

During the warranty coverage period, alternate transportation and/or reimbursement of certain transportation expenses will be available under the Courtesy Transportation Program if your vehicle requires warranty repairs. Several transportation options are available. See your dealer for more information. Courtesy transportation is not part of, or included in, the coverage provided by IFS Vehicle Distributors ULC Saab warranty. IFS Vehicle Distributors ULC reserves the right to make any changes or discontinue the Courtesy Transportation Program at any time without notification.

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 Saab Collision parts are new parts made with the same materials and construction methods as the parts with which the vehicle was originally built. Genuine Saab Collision parts are the best choice to ensure that the vehicle's designed appearance, durability, and safety are preserved. The use of Genuine Saab parts can help maintain the Saab 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 Saab 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 Saab 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 Saab 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 Saab New Vehicle Limited Warranty, and any vehicle failure related to such parts is not covered by that warranty.

13-8 Customer Information

Repair Facility

Saab 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 Saab-trained technicians and state-of-the-art equipment, or be able to recommend a collision repair center that has Saab-trained technicians and comparable equipment.

Insuring the Vehicle

Protect your investment in the Saab 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 Saab 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 Saab 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 Saab 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 13-4*.

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 3-36.

Managing the Vehicle Damage Repair Process

In the event that the vehicle requires damage repairs, Saab 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 Saab parts or recycled original Saab parts. Remember, recycled parts will not be covered by the Saab 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 Saab parts. Remember, if the vehicle is leased, you may be obligated to have the vehicle repaired with Genuine Saab 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.

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 Saab.

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 Saab.

13-10 Customer Information

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 IFS Vehicle Distributors ULC. 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 Saab

In addition to notifying NHTSA (or Transport Canada) in a situation like this, notify Saab.

Call 1-800-955-9007, or write:

Saab Customer Assistance Center
P.O. Box 33166
Detroit, MI 48232-5166

In Canada, call 1-877-919-SAAB, or write:

IFS Vehicle Distributors ULC
2400 South Service Road West
Oakville, Ontario L6L 5M9

Vehicle Data Recording and Privacy

This Saab vehicle has a number of sophisticated 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 airbags in a crash, and, if so equipped, to provide antilock braking to help the driver control the vehicle. These modules may store data to help your dealer technician service the vehicle. Some modules may also store data about how you operate the vehicle, such as rate of fuel consumption or average speed. These modules may also retain the owner's personal preferences, such as radio pre-sets, seat positions, and temperature settings.

Event Data Recorders

This vehicle has 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 airbag 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 the vehicle were operating.
- Whether or not the driver and passenger safety belts were buckled/fastened.
- How far, if at all, the driver was pressing the accelerator and/or brake pedal.
- How fast the vehicle was traveling.

This data can help provide a better understanding of the circumstances in which crashes and injuries occur.

Important: EDR data is recorded by the vehicle only if a non-trivial crash situation occurs; no data is recorded by the EDR under normal driving conditions and no personal data (e.g., name, gender, age, and crash location) is 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.

13-12 Customer Information

Saab 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 Saab's defense of litigation through the discovery process; or, as required by law. Data that Saab collects or receives may also be used for Saab 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 an active OnStar system, that system may also record data in crash or near crash-like situations. The OnStar Terms and Conditions provides information on data collection and use and is available in the OnStar glove box kit, at www.onstar.com (U.S.) or

www.onstar.ca (Canada), or by pressing the  button and speaking to an advisor.

Navigation System

If the vehicle has a navigation system, use of the system may result in the storage of destinations, addresses, telephone numbers, and other trip information. Refer to the navigation system operating 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 key fobs for remote door locking/unlocking and starting, and in-vehicle transmitters for garage door openers. RFID technology in Saab vehicles does not use or

record personal information or link with any other Saab 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-210/220/310.

Operation is subject to the following two conditions:

1. The device may not cause 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.

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