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2 Introduction

Introduction

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

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

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

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

Keep this manual in the vehicle for quick reference.

Canadian Vehicle Owners

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

Propriétaires Canadiens

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

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

Using this Manual

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

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

⚠️ Danger

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

⚠️ Warning

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

⚠️ Caution

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

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

Symbols

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

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

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

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

Vehicle Symbol Chart

Here are some additional symbols that may be found on the vehicle and what they mean. 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® (if equipped)

️: Brake System Warning Light

️: Charging System

️: Cruise Control

️: Do Not Puncture

️: Do Not Service

️: Engine Coolant Temperature

️: Exterior Lamps

️: Flame/Fire Prohibited

️: Fog Lamps

️: Fuel Gauge

️: Fuses
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- LATCH System Child Restraints
- Malfunction Indicator Lamp
- Oil Pressure
- Power
- Remote Vehicle Start
- Safety Belt Reminders
- Tire Pressure Monitor
- Traction Control/StabiliTrak®
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Instrument Panel

Instrument Panel Overview
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8  In Brief

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.

Stop/Start System
The vehicle may have a fuel saving stop/start system to shut off the engine and help conserve fuel.

When the brakes are applied and the vehicle is at a complete stop, the engine may turn off. When the brake pedal is released or the accelerator pedal is pressed, the engine will restart. See Starting the Engine 214.

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

Flip Key
Press the key release button to extend the key blade. The key can be used for the ignition and all locks.

Keyless Access
Press the key release button to remove the key. The key can be used for all locks.

Press  to unlock the driver door. Press unlock again within five seconds to unlock all doors, depending on vehicle personalization. See Vehicle Personalization 150.

Press  to lock all doors.
Lock and unlock feedback can be personalized. See Vehicle Personalization 150.
Press <img src=/> twice quickly to open the trunk.

Press and hold <img src=/> briefly to initiate vehicle locator.

Press and hold <img src=/> for at least three seconds to sound the panic alarm.

Press <img src=/> again to cancel the panic alarm.

See Keys ⊕ 31 and Remote Keyless Entry (RKE) System Operation (Key Access) ⊕ 34 or Remote Keyless Entry (RKE) System Operation (Keyless Access) ⊕ 36.

**Remote Vehicle Start**
If equipped, the engine can be started from outside of the vehicle.

**Starting the Vehicle**

1. Press and release <img src=/> on the RKE transmitter.

2. Immediately press and hold <img src=/> for at least four seconds or until the turn signal lamps flash.

Start the vehicle normally after entering.

When the vehicle starts, the parking lamps will turn on.

Remote start can be extended.

**Canceling a Remote Start**
To cancel a remote start, do one of the following:

- Press and hold <img src=/> until the parking lamps turn off.
- Turn on the hazard warning flashers.
- Turn the vehicle on and then off.

See Remote Vehicle Start ⊕ 42.

**Door Locks**
To lock or unlock the vehicle from the outside:

- Use the key. The key lock cylinder is covered with a cap. See Door Locks ⊕ 44.

- Press <img src=/> or <img src=/> on the Remote Keyless Entry (RKE) transmitter.

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

**Power Door Locks**

- : Press to unlock the doors.
- : Press to lock the doors.
10  In Brief

Keyless Access

If equipped, press the button on the driver door handle when the RKE transmitter is within 1 m (3 ft) of the driver door handle. When unlocking from the driver door, the first press unlocks that door; press again within five seconds to unlock all passenger doors. See Remote Keyless Entry (RKE) System Operation (Key Access) 34 or Remote Keyless Entry (RKE) System Operation (Keyless Access) 36.

Trunk

To open the trunk:
- Press the trunk release button on the driver door.
- Press and hold twice on the Remote Keyless Entry (RKE) transmitter.
- Press the touch pad on the trunk above the license plate after unlocking all doors.

See Trunk 47.

Windows

Press the switch down to open the window. Pull the switch up to close it. See Power Windows 55.

The switches work when the ignition is in ON/RUN, ACC/ACCESSORY, or in Retained Accessory Power (RAP). See Retained Accessory Power (RAP) 219.

See Remote Keyless Entry (RKE) System Operation (Key Access) 34 or Remote Keyless Entry (RKE) System Operation (Keyless Access) 36.
Seat Adjustment

Manual Front Seats

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

Seat Height Adjuster

If equipped, move the lever up or down to manually raise or lower the seat.
See Seat Adjustment \( \diamond 61. \)

Reclining Seatbacks

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

To return the seatback to an upright position:
1. Lift the lever fully without applying pressure to the seatback, and the seatback returns to the upright position.
12 In Brief

2. Push and pull on the seatback to make sure it is locked.

To recline a power seatback, if equipped:
- Tilt the top of the control rearward to recline.
- Tilt the top of the control forward to raise.

See Reclining Seatbacks 62.

Power Driver Seat

To adjust a power driver seat, if equipped:
- Move the seat forward or rearward by sliding the control forward or rearward.
- Raise or lower the front part of the seat cushion by moving the front of the control up or down.
- Raise or lower the entire seat by moving the rear of the control up or down.

See Power Seat Adjustment 62.

Rear Seats

The rear seatbacks can be folded.

For detailed instructions, see Rear Seats 65.
Heated Seats

If equipped, the controls are on the center stack. The engine must be running to operate the heated seats.

Press \( \overline{M} \) or \( \overline{L} \) to heat the driver or passenger seat cushion.

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

See Heated Front Seats \( \Rightarrow 64 \).

Head Restraint Adjustment

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

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

See Head Restraints \( \Rightarrow 60 \) and Seat Adjustment \( \Rightarrow 61 \).

Safety Belts

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

- Safety Belts \( \Rightarrow 67 \).
- How to Wear Safety Belts Properly \( \Rightarrow 68 \).
- Lap-Shoulder Belt \( \Rightarrow 69 \).
- Lower Anchors and Tethers for Children (LATCH System) \( \Rightarrow 92 \).
14 In Brief

### Passenger Sensing System

**United States**

The passenger sensing system turns off the front outboard passenger frontal airbag and knee airbag under certain conditions. No other airbag is affected by the passenger sensing system. See *Passenger Sensing System* for important information.

**Canada**

The passenger airbag status indicator will be visible on the overhead console when the vehicle is started. See *Passenger Airbag Status Indicator*.

### Mirror Adjustment

**Exterior**

1. Turn the control knob to L (Left) or R (Right) to choose the driver or passenger mirror.
2. Move the control knob up, down, left, or right to adjust the mirror.

If the vehicle has heated mirrors, see *Heated Mirrors*.

### Interior Mirror

**Adjustment**

Adjust the rearview mirror to view the area behind the vehicle.

**Manual Rearview Mirror**

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

**Automatic Dimming Rearview Mirror**

If equipped with an automatic dimming rearview mirror, the mirror will automatically reduce the glare of headlamps from behind. The dimming feature comes on each time the vehicle is started. See *Automatic Dimming Rearview Mirror*.
**Steering Wheel Adjustment**

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

Do not adjust the steering wheel while driving.

**Interior Lighting**

**Dome Lamps**

- ☀️ : Press to turn the lamps off, even when a door is open.
- 🗓️ : Press to turn the lamps on automatically when a door is opened.
- 🌟 : Press to turn on the dome lamps.

**Reading Lamps**

**Front Reading Lamps**

**Rear Reading Lamps, If Equipped**

There are front reading lamps on the overhead console and rear reading lamps in the headliner, if equipped.
16 In Brief

**Instrument Panel Illumination Control**

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

**Exterior Lighting**

- The exterior lamp control is to the left of the steering column on the instrument panel.
  - Briefly turn to this position to turn the automatic lamp control off or on again.

**AUTO**: Turns the headlamps on automatically at normal brightness, together with the parking lamps, taillamps, license plate lamps, instrument panel lights, and sidemarker lamps.

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

**D**: Turns on the headlamps together with the parking lamps and instrument panel lights. A warning chime sounds if the driver door is opened when the ignition switch is off and the headlamps are on.

**#:** If equipped with fog lamps, press to turn the lamps on or off.

See:
- *Exterior Lamp Controls* 158.
- *Fog Lamps* 162.
Windshield Wiper/Washer

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

**HI** : Use for fast wipes.

**LO** : Use for slow wipes.

**INT** : Move the lever up to INT for intermittent wipes, then adjust the band to control the frequency of wipes.

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

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

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

See *Windshield Wiper/Washer* 109.
Climate Controls
The heating, cooling, and ventilation for the vehicle can be controlled with these systems.

Climate Control System (With Air Conditioning)

1. Fan Control
2. A/C (Air Conditioning)
3. Air Delivery Mode Controls
4. Defrost
5. TEMP (Temperature Control)
6. Heated Front Seats (If Equipped)
7. Rear Window Defogger
8. Recirculation
Climate Control System (With Heater Only)

1. Fan Control
2. Defrost
3. Rear Window Defogger
4. TEMP (Temperature Control)
5. Air Delivery Mode Controls
20 In Brief

Automatic Climate Control System

1. Fan Control
2. AUTO (Automatic Operation)
3. Air Delivery Mode Controls
4. Defrost
5. Temperature Control
6. A/C (Air Conditioning) or (Comfort/Eco Air Conditioning, If Equipped)
7. Heated Front Seats (If Equipped)
8. Rear Window Defogger
9. Recirculation
10. Power

Transmission

Manual Mode

Driver Shift Control (DSC) allows the automatic transmission to be shifted similar to a manual transmission.

Electronic Range Select (ERS) allows for the selection of a range of gears.

See Manual Mode 230.

Up-Shift Light

If the vehicle has a manual transmission, it will have an up-shift light that indicates when to shift to the next higher gear for the best fuel economy.

See Manual Transmission 231.
Vehicle Features

Infotainment System
Base radio information is included in this manual. See the infotainment manual for information on other available infotainment systems. Read the following pages to become familiar with these features.

Warning
Taking your eyes off the road for too long or too often while using any infotainment feature can cause a crash. You or others could be injured or killed. Do not give extended attention to infotainment tasks while driving. Limit your glances at the vehicle displays and focus your attention on driving. Use voice commands whenever possible.

The infotainment system has built-in features intended to help avoid distraction by disabling some functions when driving. These functions may gray out when they are unavailable. Many infotainment features are also available through the instrument cluster and steering wheel controls.

Before driving:
- Become familiar with the operation, faceplate buttons, and screen buttons.
- Set up the audio by presetting favorite stations, setting the tone, and adjusting the speakers.
- Set up phone numbers in advance so they can be called easily by pressing a single button or by using a single voice command if equipped with Bluetooth phone capability.

See Defensive Driving 201.

To play the infotainment system with the ignition off, see Retained Accessory Power (RAP) 219.

Radio(s)

- Press to turn the power on.
- Press and hold to turn the power off.
- Press to mute/unmute the system when on.
- Turn to decrease or increase the volume.

- Radio: Press and release to fast seek the strongest previous station or channel.
- USB/Music/Pictures: Press to go to the previous content. Press and hold to fast rewind.

- Radio: Press and release to fast seek the next strongest station or channel.
- USB/Music/Pictures: Press to go to the next content. Press and hold to fast forward.
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• Press and release to access the phone screen, answer an incoming call, or access the device home screen.

See Overview 168.

Satellite Radio

If equipped, vehicles with a SiriusXM® satellite radio tuner and a valid SiriusXM satellite radio subscription can receive SiriusXM programming.

SiriusXM Satellite Radio Service

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

Refer to:
• www.siriusxm.com or call 1-888-601-6296 (U.S.).
• www.siriusxm.ca or call 1-877-438-9677 (Canada).

See Satellite Radio (If Equipped) 171.

Portable Audio Devices

This vehicle may have two USB ports. One port in the center console for data and charging and one in the rear of the center console for charging only. External devices such as iPhones/iPods® and USB storage devices may be connected.

See USB Port 174.

Bluetooth®

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

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

See Bluetooth (Infotainment Controls) 181 or Bluetooth (Overview) 180.

Steering Wheel Controls

If equipped, some audio controls can be adjusted at the steering wheel.

If equipped with OnStar® or a Bluetooth® system, press to interact with those systems. See OnStar Overview 383, Bluetooth (Infotainment Controls) 181 or Bluetooth (Overview) 180, or “Bluetooth (Overview)” in the infotainment manual.
**In Brief 23**

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

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

1. Favorite: When on a radio source, press to select the next or previous favorite. When on a media source, press to select the next or previous track.

2. Volume: Press to increase or decrease the volume.

See *Steering Wheel Controls* 108.

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**Cruise Control**

- Press to turn the cruise control system on and off. A white indicator comes on in the instrument cluster when cruise is turned on.

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

- **RES**: If there is a set speed in memory, press briefly to resume that speed or press and hold to accelerate. If cruise control is already active, use to increase vehicle speed.

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

See *Cruise Control* 237.

---

**Driver Information Center (DIC)**

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

**Uplevel DIC Controls**

- Press to move up or down in a list, or on the main view press to cycle through the different Info app pages.
24 In Brief

○ or △: Press ○ to open application menus on the left. Press △ to open interaction menus on the right. Or on the base cluster, press to move between the DIC menus.

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

See Instrument Cluster ▷ 116 and Driver Information Center (DIC) (Uplevel) ▷ 137 or Driver Information Center (DIC) (Base Level) ▷ 134.

Forward Collision Alert (FCA) System

If equipped, FCA may help avoid or reduce the harm caused by front-end crashes. FCA provides a green indicator, ▶, when a vehicle is detected ahead. This indicator displays amber if you follow a vehicle much too closely. When approaching a vehicle ahead too quickly, FCA provides a red flashing alert on the windshield and rapidly beeps.

See Forward Collision Alert (FCA) System ▷ 243.

Lane Keep Assist (LKA)

If equipped, LKA may help avoid crashes due to unintentional lane departures. It may assist by gently turning the steering wheel if the vehicle approaches a detected lane marking without using a turn signal in that direction. It may also provide a Lane Departure Warning (LDW) alert as the lane marking is crossed. The system will not assist or alert if it detects that you are actively steering. Override LKA by turning the steering wheel. LKA uses a camera to detect lane markings between 60 km/h (37 mph) and 180 km/h (112 mph).

See Lane Departure Warning (LDW) ▷ 247 and Lane Keep Assist (LKA) ▷ 247.

Lane Change Alert (LCA)

If equipped, the LCA system is a lane-changing aid that assists drivers with avoiding lane change crashes that occur with moving vehicles in the side blind zone (or spot) areas or with vehicles rapidly approaching these areas from behind. The LCA warning display will light up in the corresponding outside side mirror and will flash if the turn signal is on. The Side Blind Zone Alert (SBZA) system is included as part of the LCA system.

See Side Blind Zone Alert (SBZA) ▷ 245 and Lane Change Alert (LCA) ▷ 245.

Rear Vision Camera (RVC)

If equipped, RVC displays a view of the area behind the vehicle on the infotainment display when the vehicle is shifted into R (Reverse) to aid with parking and low-speed backing maneuvers.

See Assistance Systems for Parking or Backing ▷ 240.
Rear Cross Traffic Alert (RCTA) System
If equipped, the RCTA system uses a triangle with an arrow displayed on the RVC screen to warn of traffic behind your vehicle that may cross your vehicle’s path while in R (Reverse). In addition, beeps will sound.
See Assistance Systems for Parking or Backing 240.

Parking Assist
If equipped, Rear Parking Assist (RPA) uses sensors on the rear bumper to assist with parking and avoiding objects while in R (Reverse). It operates at speeds less than 8 km/h (5 mph). RPA may display a warning triangle on the Rear Vision Camera screen and/or a graphic on the instrument cluster to provide the object distance. In addition, multiple beeps may occur if very close to an object.
See Assistance Systems for Parking or Backing 240.

Power Outlets
The 12-volt accessory power outlet can be used to plug in electrical equipment, such as a cell phone or MP3 player.
There is an accessory power outlet on the center floor console in front of the shift lever. This outlet is powered when the ignition is in the ON/RUN or ACC/ACCESSORY position, or until the driver door is opened within 10 minutes of turning off the vehicle. See Retained Accessory Power (RAP) 219.
See Power Outlets 112.

Sunroof
If equipped, the sunroof only operates with the ignition on or in ACC/ACCESSORY, or when Retained Accessory Power (RAP) is active. See Retained Accessory Power (RAP) 219.

Slide Switch
Express-Open/Express-Close: To express-open the sunroof, press (1) to the second detent position and release. To express-close the sunroof, press (1) to the second detent position and release. Press the switch again to stop.
26 In Brief

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

**Tilt Switch**

**Vent:** From the closed position, press $f$ (2) to vent the sunroof. Press $g$ (2) to close.

The sunroof also has an automatic reversal system.

See *Sunroof* \(\supseteq 57\).

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**Performance and Maintenance**

**Traction Control/Electronic Stability Control**

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

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

- To turn off traction control, press and release $g$ on the center console. The traction off light $\omega$ illuminates.

- To turn off both traction control and StabiliTrak, press and hold $g$, until the traction off light $\omega$ and the StabiliTrak OFF light $\omega$ illuminate.

- Press and release $g$ again to turn on both systems.

See *Traction Control/Electronic Stability Control* \(\supseteq 235\).

**Tire Pressure Monitor**

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

The low tire pressure warning light alerts to a significant loss in pressure of one of the vehicle's tires. If the warning light comes on, stop as soon as possible and inflate the tires to the recommended pressure shown on the Tire and Loading Information label. See *Vehicle Load Limits* \(\supseteq 206\). The warning light will remain on until the tire pressure is corrected.
The low tire pressure warning light may come on in cool weather when the vehicle is first started, and then turn off as the vehicle is driven. This may be an early indicator that the tire pressures are getting low and the tires need to be inflated to the proper pressure.

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

See Tire Pressure Monitor System 310.

Fuel (Gasoline)

Fuel (Diesel)

Use of diesel fuel with ultra low sulfur content (15 ppm, maximum) is required. See Fuel for Diesel Engines 250.

E85 or FlexFuel

No E85 or FlexFuel

Gasoline-ethanol fuel blends greater than E15 (15% ethanol by volume), such as E85, cannot be used in this vehicle.

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

(Base Level Cluster)

1. Display the REMAINING OIL LIFE on the DIC. See Driver Information Center (DIC) (Uplevel) 137 or Driver Information Center (DIC) (Base Level) 134.

2. Press and hold SET/CLR on the turn signal lever while the Oil Life display is active. The oil life will change to 100%.

Resetting the Oil Life System

(Uplevel Cluster)

1. Display the REMAINING OIL LIFE on the DIC. See Driver Information Center (DIC) (Uplevel) 137 or Driver Information Center (DIC) (Base Level) 134.
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2. Press and hold ✔ on the DIC while the Oil Life display is active. The oil life will change to 100%.

The oil life system can also be reset as follows:

1. Turn the ignition on with the engine off. See Ignition Positions (Keyless Access) ▷ 212 or Ignition Positions (Key Access) ▷ 210.

2. Fully press and release the accelerator pedal three times within five seconds.

See Engine Oil Life System ▷ 273.

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.

Diesel Particulate Filter

The engine is equipped with a Diesel Particulate Filter (DPF) that, by design, will filter or trap particulates. The DPF is located in the exhaust system.

Depending on a number of factors monitored by the engine computer, the DPF will need to be cleaned of accumulated solids. When a cleaning is needed, the engine computer will initiate a cleaning action by warming the exhaust gas temperature. This feature has been designed to operate automatically, with limited operator involvement or awareness.

Special DPF Driver Messages

If the vehicle is used for numerous short trips or extended slow-speed operation, the engine computer may not be able to adequately heat up the exhaust system to clean the DPF effectively. The engine computer has been designed to continuously monitor the condition of the DPF. When the engine computer detects that the DPF is full of particulates but the vehicle is being operated in a manner that does not allow effective automatic DPF cleaning, a Driver Information Center (DIC) message will display.
If the vehicle continues to be driven in a manner that prevents effective DPF cleaning, the DPF will become plugged with particulates. If this occurs, the engine computer will turn on the service engine soon light in the instrument cluster and a DIC message will display. See **Diesel Particulate Filter** \( \Rightarrow 222 \), **Engine Power Messages** \( \Rightarrow 142 \), and **Diesel Particulate Filter Messages** \( \Rightarrow 143 \). 

**Fuel**

Use Ultra-Low Sulfur Diesel Fuel (ULSD)

Use Ultra-Low Sulfur Diesel Fuel (ULSD) only. The emission control hardware used on the vehicle may be damaged by using fuel with high sulfur levels. Use only fuel that is dispensed from pumps bearing the ULSD label.

Do Not Use Low Sulfur Diesel Fuel (LSD)

Do not use fuel that is dispensed from pumps bearing the LSD label.

Do Not Use Non-Highway Fuel

Fuel labeled as off road or non-highway is typically very high in sulfur content and will damage the emission control system. Non-highway fuel is not intended for use in on-highway vehicles.

In addition:

- Use the correct engine oil.
- Do not add gasoline to diesel fuel.
- Do not modify the induction or exhaust systems.

See **Fuel for Diesel Engines** \( \Rightarrow 250 \) and **Engine Oil** \( \Rightarrow 270 \). 

**Diesel Exhaust Fluid**

Diesel Exhaust Fluid (DEF) is used with diesel engines to reduce the amount of regulated emissions produced. The DEF system must be maintained for the vehicle to run properly. It is normal to hear the DEF system purge fluid back into the tank after the vehicle is shut off.

As the DEF tank becomes low on fluid, warnings begin with approximately 1,600 km (1,000 miles) of remaining range. These warnings will increase in intensity as the tank becomes empty. Once the tank is empty, the vehicle speed will be limited. If there is an issue with the quality of the fluid or the exhaust fluid system, warnings will be displayed in the Driver Information Center (DIC). See **Diesel Exhaust Fluid** \( \Rightarrow 223 \).
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Roadside Assistance Program

U.S.: 1-800-243-8872
TTY Users (U.S. Only):
1-888-889-2438
Canada: 1-800-268-6800
New Chevrolet owners are automatically enrolled in the Roadside Assistance Program.
See Roadside Assistance Program 373.
Keys, Doors, and Windows

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Keys

⚠️ Warning

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

**Warning**

If the key is unintentionally rotated while the vehicle is running, the ignition could be moved out of the RUN position. This could be caused by heavy items hanging from the key ring, or by large or long items attached to the key ring that could be contacted by the driver or steering wheel. If the ignition moves out of the RUN position, the engine will shut off, braking and steering power assist may be impacted, and airbags may not deploy. To reduce the risk of unintentional rotation of the ignition key, do not change the way the ignition key and Remote Keyless Entry (RKE) transmitter, if equipped, are connected to the provided key rings.

If the vehicle is equipped with a keyed ignition, the ignition key, key rings, and RKE transmitter, if equipped, are designed to work together. As a system, they reduce the risk of unintentionally moving the key out of the RUN position. If replacements or additions are required, see your dealer. Limit added items to a few essential keys or small, light items no larger than an RKE transmitter.

Interference from radio-frequency identification (RFID) tags may prevent the key from starting the vehicle. Keep RFID tags away from the key when starting the vehicle. The key that is part of the RKE transmitter can be used for the ignition and all locks if the vehicle is a Key Access vehicle. If the vehicle has the keyless ignition, the key can be used for the locks.
Flip Key

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

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

Keyless Access

Remove the key by pressing the button on the side of the RKE transmitter near the bottom and pull the key out. Never pull the key out without pressing the button.

See your dealer if a new key is needed.

If locked out of the vehicle, see Roadside Assistance Program 373.

With an active OnStar subscription, an OnStar Advisor may remotely unlock the vehicle. See OnStar Overview 383.

Remote Keyless Entry (RKE) System

See Radio Frequency Statement 379.

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

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

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

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

With Remote Start Similar

_pressed_ : Press to lock all doors.

_pressed_ : Press twice quickly to open the trunk.

_pressed_ : Press to unlock the driver door. Press _pressed_ again within five seconds to unlock all doors, depending on vehicle personalization. See Vehicle Personalization  150.

_pressed_ : Press to lock all doors. The turn signal indicators may flash and/or the horn may sound on the second press to indicate locking. See Vehicle Personalization  150.

_pressed_ : Press and hold briefly to initiate vehicle locator. The exterior lamps flash and the horn chirps three times.

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

_pressed_ : If equipped, press and release _pressed_ and then immediately press and hold _pressed_ for at least four seconds to start the engine from outside the vehicle using the RKE transmitter. See Remote Vehicle Start  42.

The RKE transmitter buttons will not operate when the key is in the ignition.

Programming Keys to the Vehicle

Only keys programmed to the vehicle will work. If a key is lost or stolen, a replacement can be
Keys, Doors, and Windows  35

purchased and programmed through your dealer. The vehicle can be reprogrammed so that lost or stolen keys no longer work. Any remaining keys will need to be reprogrammed. Each vehicle can have up to eight keys matched to it.

Programming with Two Recognized Keys (Key Vehicles Only)

This procedure is for adding a transmitter, not replacing a transmitter. To program:

1. Insert the original, already programmed key in the ignition and turn the key to the ON/RUN position.
2. Turn the key to LOCK/OFF, and remove the key.
3. Quickly, within five seconds, insert the second original already programmed key in the ignition and turn the key to the ON/RUN position.
4. Turn the key to LOCK/OFF, and remove the key.
5. Insert the new key to be programmed and turn it to the ON/RUN position within five seconds.
   The security light will turn off once the key has been programmed.
6. Repeat Steps 1–5 if additional keys are to be programmed.

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

Programming without Two Recognized Keys (Key Vehicles Only)

Program a new key to the vehicle when a recognized key is not available. Canadian regulations require that owners see their dealer. If two currently recognized keys are not available, follow this procedure to program the first key.

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

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

After two keys are learned, remaining keys can be learned by following the procedure in “Programming with Two Recognized Keys (Key Vehicles Only).”

Battery Replacement

Replace the battery if the REPLACE BATTERY IN REMOTE KEY message displays in the DIC. See Key and Lock Messages 143.
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Caution

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

The battery is not rechargeable. To replace the battery:

1. Separate the two halves of the transmitter by inserting a flat tool into the recess of the transmitter.

2. Remove the battery with a small tool by pushing it toward the top of the transmitter.

3. Insert a new battery, positive side up, pushing it down until it is held in place. Use a CR 2032 or equivalent battery.

4. Snap the battery cover back on to the transmitter.

Remote Keyless Entry (RKE) System Operation (Keyless Access)

The Keyless Access system allows for vehicle entry when the transmitter is within range. See “Keyless Access Operation” later in this section.

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

Keep in mind that other conditions, such as those previously stated, can impact the performance of the transmitter.
$: Press to lock all doors.
The turn signal indicators may flash and/or the horn may sound on the second press to indicate locking. See Vehicle Personalization 150.

If the driver door is open when $ is pressed, all doors will lock and then the driver door will immediately unlock, if enabled through the vehicle personalization.

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

Pressing $ may also arm the alarm system. See Vehicle Alarm System 50.

$: Press to unlock the driver door.
Press $ again within five seconds to unlock all doors, depending on vehicle personalization. See Vehicle Personalization 150.

The turn signal indicators may flash to indicate unlocking. See Vehicle Personalization 150.

Pressing $ will disarm the alarm system. See Vehicle Alarm System 50.

$: Press twice quickly to open the trunk.
$: Press and hold briefly to initiate vehicle locator. The exterior lamps flash and the horn chirps three times.

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

$: If equipped, press and release $ and then immediately press and hold $ for at least four seconds to start the engine from outside the vehicle using the RKE transmitter. See Remote Vehicle Start 42.

Keyless Access Operation
The Keyless Access system allows for the doors and trunk to be locked and unlocked without pressing the RKE transmitter button. 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 button on the outside door handles.

Keyless Access can be programmed to unlock all doors on the first lock/unlock press from the driver door. See Vehicle Personalization 150.

Keyless Unlocking/Locking from the Driver Door
When the doors are locked and the RKE transmitter is within range of the door handle, pressing the lock/unlock button on the driver door handle will unlock the driver door. If the lock/unlock button is pressed again within five seconds, all passenger doors will unlock.
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Keyless Unlocking/Locking from the Passenger Doors
When the doors are locked and the RKE transmitter is within range of the door handle, pressing the lock/unlock button on a passenger door handle will unlock all doors. Pressing the lock/unlock button will cause all doors to lock if any of the following occur:

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

Passive Locking
If equipped with Keyless Access, the vehicle will lock several seconds after all doors are closed if the vehicle is off and at least one RKE transmitter has been removed or none remain in the vehicle.

If other electronic devices interfere with the RKE transmitter signal, the vehicle may not detect the RKE transmitter inside the vehicle. Do not leave the RKE transmitter in an unattended vehicle.

To customize the doors to automatically lock when exiting the vehicle, see Vehicle Personalization 150.

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

Remote Left In Vehicle Alert
When the vehicle is turned off and a remote is left in the vehicle, the horn will chirp three times after all doors are closed. To turn on or off see Vehicle Personalization 150.
Keyless Trunk Opening
Press the touch pad on the rear of the trunk above the license plate to open the trunk when the RKE transmitter is in range.

Keyed Access
To access a vehicle with a dead transmitter battery, see Door Locks 44.

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

Programming with Recognized Transmitters (Keyless Access Vehicles Only)
A new transmitter can be programmed to the vehicle when there are two recognized transmitters. To program, the vehicle must be off and all of the transmitters, both currently recognized and new, must be with you.

1. Place the two recognized keys in the front cupholder.
2. Remove the key lock cylinder cap on the driver door handle. See Door Locks 44. Insert the vehicle key of the new transmitter into the key lock cylinder on the outside of the driver door and turn the key to the unlock position five times within 10 seconds.

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

3. Remove the recognized key and place the new transmitter into the front cupholder.
4. Press ENGINE START/STOP. When the transmitter is learned, the DIC will show that it is ready to program the next transmitter.
5. Remove the transmitter from the front cupholder and press 1 or 2 on the transmitter.

   To program additional transmitters, repeat Steps 3–5.

When all additional transmitters are programmed, press and hold ENGINE START/STOP for 12 seconds to exit programming mode.
6. Return the vehicle key back into the transmitter.

Programming without Recognized Transmitters (Keyless Access Vehicles Only)

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

1. Remove the key lock cylinder cap on the driver door handle. See Door Locks 44. Insert the vehicle key of the transmitter into the key lock cylinder on the outside of the driver door and turn the key to the unlock position five times within 10 seconds.

   The 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 ENGINE START/STOP.

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

3. Repeat Step 2 two additional times. After the third time all previously known transmitters will no longer work with the vehicle. Remaining transmitters can be relearned during the next steps.

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

4. Place the transmitter in the front cupholder.

5. Press ENGINE START/STOP. When the transmitter is learned the DIC will show that it is ready to program the next transmitter.

6. Remove the transmitter from the front cupholder and press or on the transmitter.

To program additional transmitters, repeat Steps 4–6.
When all additional transmitters are programmed, press and hold ENGINE START/STOP for 12 seconds to exit programming mode.

7. Return the vehicle key back into the transmitter.

Starting the Vehicle with a Low Transmitter Battery

If the transmitter battery is weak or if there is interference with the signal when trying to start the vehicle, the DIC may display NO REMOTE DETECTED or NO REMOTE KEY WAS DETECTED PLACE KEY IN TRANSMITTER POCKET THEN START YOUR VEHICLE. The REPLACE BATTERY IN REMOTE KEY message may also be displayed at this time.

To start the vehicle:

1. Place the transmitter in the front cupholder.
2. With the vehicle in P (Park) or N (Neutral), press the brake pedal and ENGINE START/STOP. See Starting the Engine 214 for additional information about the vehicle’s keyless ignition with pushbutton start.

Replace the transmitter battery as soon as possible.

Battery Replacement

Replace the battery if the REPLACE BATTERY IN REMOTE KEY message displays in the DIC. See Key and Lock Messages 143.

Caution

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

The battery is not rechargeable. To replace the battery:
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1. Press the button on the side of the transmitter near the bottom and pull the key out.

2. Separate the two halves of the transmitter using a flat tool inserted into the area near the key slot.

3. Remove the battery by pushing on the battery and sliding it toward the bottom of the transmitter.

4. Insert the new battery, positive side facing the back cover. Push the battery down until it is held in place. Replace with a CR2032 or equivalent battery.

5. Snap the battery cover back on to the transmitter.

Remote Vehicle Start

If equipped, this feature allows the engine to be started from outside the vehicle. See Engine Exhaust 221.

This button will be on the RKE transmitter if the vehicle has remote start.

If equipped with remote start, the climate control system will come on when the vehicle is started remotely, depending on the outside temperature.

The rear window defogger and heated seats, if equipped, may also come on. See “Remote Start Climate Control Operation” in Climate Control Systems (With Air Conditioning) 190 or Climate Control Systems (With Heater Only) 192 and Heated Front Seats 64.

Laws in some local communities may restrict the use of remote starters. For example, some laws require a person using remote start to have the vehicle in view. Check local regulations for any requirements.
Other conditions can affect the performance of the transmitter. See Remote Keyless Entry (RKE) System \(\triangleleft 33\).

**Starting the Vehicle**

To start the engine using the remote start feature:

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

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

The engine will continue to run for 15 minutes. After 30 seconds, repeat the steps if a 15-minute extension is desired. Remote start can be extended only once.

Place the ignition in ON/RUN/START to drive.

**Extending Engine Run Time**

The engine run time can be extended by another 15 minutes, if during the first 15 minutes Step 2 and 3 are repeated while the engine is still running. An extension can be requested 30 seconds after starting. When the remote start is extended, the second 15-minute period is added on to the first 15 minutes for a total of 30 minutes.

The remote start can be extended once.

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

The vehicle's ignition must be turned on and then back off to use remote start again.

**Canceling a Remote Start**

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

- Aim the RKE transmitter at the vehicle and press and hold \(\mathcal{H}\) until the parking lamps turn off.
- Turn on the hazard warning flashers.
- Turn the vehicle on and then off.

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

The remote vehicle start feature will not operate if:

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

Door Locks

**Warning**

Unlocked doors can be dangerous.

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

**Warning (Continued)**

- 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 the doors from outside the vehicle:

- Press $Q$ or $K$ on the Remote Keyless Entry (RKE) transmitter.

To lock or unlock the doors from inside the vehicle:

- Use the key in the driver door. The key cylinder is covered with a cap.

To lock or unlock the doors from inside the vehicle:

- Press $Q$ or $K$ on the power door lock switch.
- If equipped with Keyless Access, pushing down the manual lock knob on the driver door will lock all doors.
- Pulling an interior door handle will unlock the door. Pulling the door handle again unlatches it.

**Key Cylinder Access**

To access the key lock cylinder:

1. Pull the door handle to the open position.
2. Insert the key into the slot on the bottom of the cap and pry outward.
3. Move the cap rearward and remove. Replace the cap by snapping on the tabs.

Keyless Access
If equipped, the RKE transmitter must be within 1 m (3 ft) of the door being opened. Press the button on the door handle to open. See “Keyless Access Operation” in Remote Keyless Entry (RKE) System Operation (Key Access) \(\diamond 34\) or Remote Keyless Entry (RKE) System Operation (Keyless Access) \(\diamond 36\).

Power Door Locks

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

If equipped with Keyless Access, delayed locking can only be turned on when the Unlocked Door Anti-Lockout has been turned off.

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

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

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

This feature can also be programmed. See Vehicle Personalization \(\diamond 150\).
### Automatic Door Locks

When the doors are closed, the ignition is on, and the shift lever is moved out of P (Park) for an automatic transmission, or the vehicle speed is above 13 km/h (8 mph) for a manual transmission, the doors will lock.

To unlock the doors:

- Press $\mathcal{R}$.
- For automatic transmissions, shift the vehicle into P (Park).
- For manual transmissions and a keyed ignition system, remove the key from the ignition when parked.
- For manual transmissions and a pushbutton start system, turn the vehicle off when parked.

The automatic door lock feature cannot be disabled. Automatic door unlocking can be programmed.

See *Vehicle Personalization* $\Rightarrow$ 150.

### Lockout Protection

**Key Access**: When locking is requested with the driver door open and the key in the ignition, all the doors will lock and then the driver door will unlock.

This can be manually overridden by pressing and holding $\mathcal{R}$ on the power door lock switch.

**Keyless Access**: When locking is requested with the driver door open and the vehicle is in ACC/ACCESSORY or ON/RUN/START, all the doors will lock and then the driver door will unlock.

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

This can be manually overridden by pressing and holding $\mathcal{R}$ on the power door lock switch.

### Unlocked Door Anti-Lockout

**Keyless Access**: Unlocked Door Anti-Lockout, when on, will unlock the driver door if locking is requested while the driver door is open. This feature can be turned on or off using the vehicle personalization menus. See *Vehicle Personalization* $\Rightarrow$ 150.

### Safety Locks

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

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

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

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

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

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

To cancel the safety lock:

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

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.
- Adjust the climate control system to a setting that brings in only outside air and set the fan speed to the...
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Warning (Continued)

highest setting. See “Climate Control Systems” in the Index.

- If the vehicle has a power liftgate, disable the power liftgate function.

For more information about carbon monoxide, see Engine Exhaust 221.

To open the trunk, the vehicle must be off or stopped with the parking brake applied for manual transmissions, or with the shift lever in P (Park) for automatic transmissions.

Press the trunk release button.

To open the trunk from outside the vehicle, press twice on the Remote Keyless Entry (RKE) transmitter, or press the touch pad above the license plate after unlocking all doors.

If equipped with Keyless Access, the trunk may be opened while the vehicle is locked by pressing the touch pad when the RKE transmitter is within 1 m (3 ft) of the rear of the vehicle.

Emergency Trunk Release Handle

Caution

Do not use the emergency trunk release handle as a tie-down or anchor point when securing items in the trunk as it could damage the handle.
There is a glow-in-the-dark emergency trunk release handle on the trunk lid. The handle will glow following exposure to light. Pull the release handle to open the trunk from the inside.

After pulling the emergency trunk release handle, push the handle back into the bezel.

**Warning**

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

- Close all of the windows.
- Fully open the air outlets on or under the instrument panel.
- Adjust the climate control system to a setting that brings in only outside air and set the fan speed to the highest setting. See “Climate Control Systems” in the Index.
- If the vehicle is equipped with a power liftgate, disable the power liftgate function.

For more information about carbon monoxide, see *Engine Exhaust* 221.
To lock or unlock the liftgate, if equipped, from the inside, press $\text{Q}$ or $\text{K}$ on the driver door.

To open the liftgate from the outside, press $\text{K}$ on the RKE transmitter to unlock all doors, then use the center touch pad. See Remote Keyless Entry (RKE) System Operation (Key Access) $\diamondsuit$ 34 or Remote Keyless Entry (RKE) System Operation (Keyless Access) $\diamondsuit$ 36.

When closing the liftgate, close using the grip cup to ensure that it fully latches.

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

### Vehicle Alarm System
This vehicle has an anti-theft alarm system.

The indicator light, on the instrument panel near the windshield, indicates the status of the system:

- **Off**: Alarm system is disarmed.
- **On Solid**: Vehicle is secured during the delay to arm the system.
- **Fast Flash**: Vehicle is unsecured. A door, the hood, or the trunk is open.
- **Slow Flash**: Alarm system is armed.

#### Arming the Alarm System

1. Close the trunk and the hood. Turn off the vehicle.
2. Lock the vehicle in one of three ways:
   - Use the RKE transmitter.
   - Use the Keyless Access system, if equipped.
   - With a door open, press the interior $\text{Q}$.
3. After 30 seconds the alarm system will arm, and the indicator light will begin to slowly flash indicating the alarm system is operating. Pressing $\text{Q}$ on the RKE transmitter a second time will...
Keys, Doors, and Windows

Disarming the Alarm System
Do one of the following to disarm the alarm system or turn off the alarm if it has been activated:

- Press 🗝️ on the RKE transmitter.
- Unlock the vehicle using the Keyless Access system, if equipped.
- Start the vehicle.

To avoid setting off the alarm by accident:

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

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

How to Detect a Tamper Condition

If 🗝️ is pressed on the RKE transmitter and the horn chirps and the lamps flash three times, an alarm occurred previously while the alarm system was armed.

If the alarm has been activated, a message will appear on the DIC. See Security Messages ⇒ 146.

Immobilizer

See Radio Frequency Statement ⇒ 379.

Immobilizer Operation (Key Access)

This vehicle has a passive theft-deterrent system.

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

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

bypass the 30-second delay and immediately arm the alarm system.

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

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

If a door, the hood, or the trunk is opened without first disarming the system, 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 system is automatically disarmed when the vehicle is started with the correct key. The key uses a transponder that matches an immobilizer control unit in the vehicle and automatically disarms the system. Only an authorized key starts the vehicle. The vehicle may not start if the key is damaged.

The security light in the instrument cluster comes on if there is a problem with arming or disarming the theft-deterrent system. When trying to start the vehicle, the security light comes on briefly when the ignition is turned on. If the engine does not start and the security light stays on, there is a problem with the system. Turn the ignition off and try again.

If the engine still does not start, and the key appears to be undamaged or the light continues to stay on, try another ignition key. If the engine does not start with the other key, the vehicle needs service. If the vehicle does start, the first key may be damaged. See your dealer who can service the theft-deterrent system and have a new key made.

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

**Immovilizer Operation (Keyless Access)**

This vehicle has a passive theft-deterrent system.

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

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

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

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

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

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

If the engine does not start and the security light stays on, there is a problem with the system. Turn the vehicle off and try again.
If the RKE transmitter appears to be undamaged, try another transmitter. Or, you may try placing the transmitter in the transmitter pocket in the center console. See “Starting the Vehicle with a Low Transmitter Battery” under Remote Keyless Entry (RKE) System Operation (Key Access) \(\Rightarrow\) 34 or Remote Keyless Entry (RKE) System Operation (Keyless Access) \(\Rightarrow\) 36.

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

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

### Exterior Mirrors

#### Convex Mirrors

**Warning**

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

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

#### Power Mirrors

To adjust the mirror:

1. Turn the control knob to L (Left) or R (Right) to choose the driver or passenger mirror.
2. Move the control knob up, down, right, or left to adjust the mirror.
3. Turn the control knob to the O position to deselect the mirror.
54 Keys, Doors, and Windows

Folding Mirrors
The vehicle has folding mirrors. These mirrors can be folded inward to prevent damage when going through an automatic car wash.

Manual Folding Mirrors
To fold manual folding mirrors, if equipped, pull the mirror toward the vehicle. Push the mirror outward to return it to the original position.

Power Folding
To fold the power folding mirrors, if equipped:
1. Move the selector switch to O.
2. Press the knob down toward \( \square \) to fold the mirrors.
3. Press the knob down again toward \( \square \) to unfold the mirrors.

If one power folding mirror is manually unfolded, pressing down on the knob will only unfold the other mirror.

Heated Mirrors
The rear window defogger also heats the outside mirrors, if equipped.

\( \square \) : Press to heat the outside rearview mirrors. See “Rear Window Defogger” under Automatic Climate Control System \( \Rightarrow 193 \).

Interior Mirrors

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

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

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

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

⚠️ Warning

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

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

Power Windows

⚠️ Warning

Children could be seriously injured or killed if caught in the path of a closing window. Never leave keys in a vehicle with children. When there are children in the rear seat, use the window lockout button to prevent operation of the windows. See Keys 31.

The windows work when the vehicle is in ON/RUN, ACC/ACCESSORY, or Retained Accessory Power (RAP). See Retained Accessory Power (RAP) 219.

Press or pull the switch to open or close the window.

The windows will be temporarily disabled if the window switches are used repeatedly within a short time.
56 Keys, Doors, and Windows

Window Lockout

This feature stops the rear door passenger window switches from working.

Press \( \text{Z} \) to engage the rear window lockout feature. The indicator light is on when engaged.

Press \( \text{Z} \) again to disengage.

Express Window Obstacle Detection

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

Obstacle Detection Override

⚠️ Warning

If obstacle detection override is activated, the window will not reverse automatically. You or others could be injured and the window could be damaged.

Before you use obstacle detection override, make sure that all people and obstructions are clear of the window path.

Programming the Power Windows

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

1. Close all doors.
2. Place the ignition in ACC/ACCESSORY or ON/RUN.
3. Partially open the window to be programmed, then close it and continue to pull the switch briefly after the window has fully closed.
4. Press the power window switch until the window is fully open and briefly hold.

The window can be closed by holding the window switch in the up position if conditions prevent it from express closing.
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, if equipped, extend along the rod.

Roof

Sunroof

If equipped, the sunroof only operates with the ignition on or in ACC/ACCESSORY, or when Retained Accessory Power (RAP) is active. See Retained Accessory Power (RAP)  219.

Slide Switch

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

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

Tilt Switch

Vent :
From the closed position, press (2) to vent the sunroof. Press (2) to close.

When the sunroof is opened, an air deflector will automatically raise. The air deflector will retract when the sunroof is closed.

The sunroof also has a sunshade which can be pulled forward to block sun rays. The sunshade must be opened and closed manually.
Automatic Reversal System
The sunroof is equipped with an automatic reversal system that is only active when the sunroof is being operated in express-close mode. If an object is in the path of the sunroof while it is express-closing, the reversal system will detect the object and stop. In the event of closing difficulties like frost or other conditions, it is possible to override the reversal system. To override the reversal system, close in manual mode. To stop the movement, release the switch.

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

Head Restraints
The vehicle's front and rear seats have adjustable head restraints in the 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 removable.

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

The height of the head restraint can be adjusted.

Pull the head restraint up to raise it. Try to move the head restraint to make sure it is locked in place.

To lower the head restraint, press the button 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 it is locked in place.
The rear outboard head restraints are designed to be removed. See “Head Restraint Removal and Reinstallation” under Lower Anchors and Tethers for Children (LATCH System) \( \Rightarrow \) 92.

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) \( \Rightarrow \) 92.

### Front Seats

#### Seat Adjustment

<table>
<thead>
<tr>
<th>Warning</th>
</tr>
</thead>
<tbody>
<tr>
<td>You can lose control of the vehicle if you try to adjust a driver seat while the vehicle is moving. Adjust the driver seat only when the vehicle is not moving.</td>
</tr>
</tbody>
</table>

To adjust a manual seat:

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

2. Slide the seat to the desired position and release the handle.

3. Try to move the seat back and forth to be sure it is locked in place.

#### Seat Height Adjuster

If equipped, move the lever up or down to manually raise or lower the seat.
62 Seats and Restraints

Power Seat Adjustment

To adjust the power driver seat, if equipped:

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

To adjust the seatback, see Reclining Seatbacks 62.

Reclining Seatbacks

⚠️ Warning

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

To recline a manual seatback:

1. Lift the lever.

To return the seatback to an upright position:

1. Lift the lever fully without applying pressure to the seatback, and the seatback returns to the upright position.

2. Push and pull on the seatback to make sure it is locked.
To recline a power seatback, if equipped:

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

⚠️ **Warning**

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

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

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

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

Do not have a seatback reclined if the vehicle is moving.
64 Seats and Restraints

Heated Front Seats

⚠️ Warning

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

If equipped, the controls are on the center stack. The engine must be running to operate the heated seats.

Press 🙇 or ♂ to heat the driver or passenger seat cushion.

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

The passenger seat may take longer to heat up.

Remote Start Heated Seats

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

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

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

The heated seats will not turn on during a remote start unless the heated seat feature is enabled in the vehicle personalization menu. See Remote Vehicle Start 42 and Vehicle Personalization 150.
Rear Seats

The rear seatbacks can be folded. To fold the rear seatbacks:

1. Place the front seatbacks in the upright position. See Reclining Seatbacks 62.

Caution

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

2. Unbuckle the rear safety belt and make sure the safety belt is in the guide on top of the seatback.

3. Reach under the safety belt and pull the lever on top of the seatback to unlock the seatback. A tab near the seatback lever moves forward when the seatback is unlocked.

4. Fold the seatback forward.

5. Stow the safety belt in the belt stowage clip.

6. Repeat the steps for the other seatback, if desired.
66 Seats and Restraints

To raise the seatback:

<table>
<thead>
<tr>
<th>Warning</th>
</tr>
</thead>
<tbody>
<tr>
<td>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.</td>
</tr>
</tbody>
</table>

1. Make sure the safety belt is in the belt stowage clip.

2. Lift the seatback up and push it rearward firmly until it locks into place.
   
   Use two hands to press firmly against the seatback. Apply enough pressure to both sides of the seatback to lock it when returning it to its upright position.

<table>
<thead>
<tr>
<th>Warning</th>
</tr>
</thead>
<tbody>
<tr>
<td>If the seatback is not locked, it could move forward in a sudden stop or crash. That could cause injury to the person sitting there. Always pull forward on the top of the seatback at the area of the latch to be sure it is locked.</td>
</tr>
</tbody>
</table>
3. When the seatback is raised and locked into place, the red portion on the release buttons on both outboard sides will not be visible. Push and pull on the seatback to make sure it is locked into position and visually check that both rear seatback tabs are retracted and no red is visible before driving.

Keep the seat in the upright locked position when not in use.

Safety Belts

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

⚠️ Warning

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

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

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

This vehicle has indicators as a reminder to buckle the safety belts. See Safety Belt Reminders 124.

This vehicle may have the Safety Belt Assurance System, which may prevent the vehicle from shifting out of P (Park). See Safety Belt Messages 146.
68 Seats and Restraints

Why Safety Belts Work

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

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

Questions and Answers About Safety Belts

Q: Will I be trapped in the vehicle after a crash if I am wearing a safety belt?
A: You could be — whether you are wearing a safety belt or not. Your chance of being conscious during and after a crash, so you can unbuckle and get out, is much greater if you are belted.

Q: If my vehicle has airbags, why should I have to wear safety belts?
A: Airbags are supplemental systems only. They work with safety belts — not instead of them. Whether or not an airbag is provided, all occupants still have to buckle up to get the most protection.

Also, in nearly all states and in all Canadian provinces, the law requires wearing safety belts.

How to Wear Safety Belts Properly

This section is only for people of adult size.

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

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

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

### Warning

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

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

#### Lap-Shoulder Belt

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

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

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

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

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

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.

Engaging the child restraint locking feature in the front outboard seating position may affect the passenger sensing system. See Passenger Sensing System 79.

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

3. Push the latch plate into the buckle until it clicks. Pull up on the latch plate to make sure it is secure. If the belt is not long enough, see Safety Belt Extender 72.

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

Position the release button on the buckle so that the safety belt could be quickly unbuckled if necessary.
To unlatch the belt, push the button on the buckle. The belt should return to its stowed position.

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

Before a door is closed, be sure the 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.

**Safety Belt Pretensioners**

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

Pretensioners work only once. If the pretensioners activate in a crash, the pretensioners and probably other parts of the vehicle's safety belt system will need to replaced. See *Replacing Safety Belt System Parts after a Crash* 73.

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

**Rear Safety Belt Comfort Guides**

Rear safety belt comfort 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, the comfort guide positions the shoulder belt away from the neck and head.

Comfort guides are available through your dealer for the rear outboard seating positions. Instructions are included with the guide.

**Safety Belt Use During Pregnancy**

Safety belts work for everyone, including pregnant women. Like all occupants, they are more likely to be seriously injured if they do not wear safety belts.
A pregnant woman should wear a lap-shoulder belt, and the lap portion should be worn as low as possible, below the rounding, throughout the pregnancy.

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

Safety Belt Extender
If the vehicle’s safety belt will fasten around you, you should use it.

But if a safety belt is not long enough, your dealer will order you an extender. When you go in to order it, take the heaviest coat you will wear, so the extender will be long enough for you. To help avoid personal injury, do not let someone else use it, and use it only for the seat it is made to fit. The extender has been designed for adults. Never use it for securing child restraints. 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
Check that the safety belt reminder, safety belts, buckles, latch plates, and retractors, are all working properly. Look for any other loose or damaged safety belt system parts that might keep a safety belt system from performing properly. 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, have it replaced immediately.

Make sure the safety belt reminder light is working. See Safety Belt Reminders 124.

Keep safety belts clean and dry. See Safety Belt Care 72.

Safety Belt Care
Keep belts clean and dry.

⚠️ Warning

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

Safety belts should be properly cared for and maintained.

Safety belt hardware should be kept dry and free of dust or debris. As necessary exterior hard surfaces and safety belt webbing may be lightly cleaned with mild soap and water. Ensure there is not excessive dust or debris in the mechanism. If dust or debris exists in the system please see the dealer. Parts may need to be replaced to ensure proper functionality of the system.
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 \(\Rightarrow\) 125.

Airbag System
The vehicle has the following airbags:

- A frontal airbag for the driver.
- A frontal airbag for the front outboard passenger.
- A knee airbag for the driver.
- A knee airbag for the front outboard passenger.
- A seat-mounted side impact airbag for the driver.
- A seat-mounted side impact airbag for the front outboard passenger.
- Seat-mounted side impact airbags for the second row outboard passengers.
- A roof-rail airbag for the driver and the passenger seated directly behind the driver.
- A roof-rail airbag for the front outboard passenger and the passenger seated directly behind the front outboard passenger.
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All vehicle airbags have the word AIRBAG on the trim or on a label near the deployment opening.

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

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

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

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

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

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

⚠️ Warning

You can be severely injured or killed in a crash if you are not wearing your safety belt, even with airbags. Airbags are designed to work with safety belts, not replace them. Also, airbags are not designed to inflate in every crash. In some crashes safety belts are the only restraint. See When Should an Airbag Inflate? 76.

Wearing your 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

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

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

Children who are up against, or very close to, any airbag when it inflates can be seriously injured or killed. Always secure children properly in the vehicle. To read how, see \textit{Older Children} $\Rightarrow$ 86 or \textit{Infants and Young Children} $\Rightarrow$ 87.

There is an airbag readiness light on the instrument cluster, which shows the airbag symbol. The system checks the airbag electrical system for malfunctions. The light tells you if there is an electrical problem. See \textit{Airbag Readiness Light} $\Rightarrow$ 125 for more information.

\section{Where Are the Airbags?}

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

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

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

Driver Side Shown, Passenger Side Similar

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

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

Rear Seat Driver Side Shown, Passenger Side Similar

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

Warning

If something is between an occupant and an airbag, the airbag might not inflate properly or it might force the object into that person causing severe injury or even death. The path of an inflating airbag must be kept clear. Do not put anything between an occupant and an airbag, and do not attach or put anything on the steering wheel hub or on or near any other airbag covering.

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

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

When Should an Airbag Inflate?

This vehicle is equipped with airbags. See Airbag System 73. Airbags are designed to inflate if the impact exceeds the specific airbag system's deployment threshold. Deployment thresholds are used to
predict how severe a crash is likely to be in time for the airbags to inflate and help restrain the occupants. The vehicle has electronic sensors that help the airbag system determine the severity of the impact. Deployment thresholds can vary with specific vehicle design.

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

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

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

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

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

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

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

A seat-mounted side impact airbag is designed to inflate on the side of the vehicle that is struck.

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

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

What Makes an Airbag Inflate?

In a deployment event, the sensing system sends an electrical signal triggering a release of gas from the inflator. Gas from the inflator fills the airbag causing the bag to break out of the cover. The inflator, the airbag, and related hardware are all part of the airbag module.
For airbag locations, see Where Are the Airbags? 75.

How Does an Airbag Restrain?

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

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

Rollover capable roof-rail airbags, if equipped, 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? 76.

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, knee airbags (if equipped), 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 (if equipped) may still be at least partially inflated for some time after they inflate. Some components of the airbag module may be hot for several minutes. For location of the airbags, see Where Are the Airbags? 75.

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. The feature may also activate, without airbag inflation, after an event that exceeds a predetermined threshold. You can lock the doors, turn off the interior lamps, and turn off the hazard warning flashers by using the controls for those features.

⚠️ Warning

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

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

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

- Airbags are designed to inflate only once. After an airbag inflates, you will need some new parts for the airbag system. If you do not get them, the airbag system will not be there to help protect you in another crash. A new system will include airbag modules and possibly other parts. The service manual for the vehicle covers the need to replace other parts.

- The vehicle has a crash sensing and diagnostic module which records information after a crash. See Vehicle Data Recording and Privacy 381 and Event Data Recorders 381.

- Let only qualified technicians work on the airbag systems. Improper service can mean that an airbag system will not work properly. See your dealer for service.

Passenger Sensing System

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

United States
80 Seats and Restraints

Canada

The words ON and OFF, or the symbol for on and off, will be visible during the system check. When the system check is complete, either the word ON or OFF, or the symbol for on or off, will be visible. See Passenger Airbag Status Indicator ▶ 125.

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

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

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

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

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

Warning

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

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

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

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

When the passenger sensing system has turned off the front outboard passenger frontal airbag and knee airbag, the off indicator will light and stay lit as a reminder that the airbags are off. See Passenger Airbag Status Indicator  125.

The passenger sensing system is designed to turn on the front outboard passenger frontal and knee airbag anytime the system senses that a person of adult size is sitting properly in the front outboard passenger seat. When the passenger sensing system has allowed the airbag(s) to be enabled, the on indicator will light and stay lit as a reminder that the airbag(s) are active.

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

---

**Warning**

If the airbag readiness light ever comes on and stays on, it means that something may be wrong with the airbag system. To help avoid injury to yourself or others, have the vehicle serviced right away. See Airbag Readiness Light  125 for more information, including important safety information.

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

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

1. Turn the vehicle off.
2. Remove the child restraint from the vehicle.
3. Remove any additional items from the seat such as blankets, cushions, seat covers, seat heaters, or seat massagers.
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4. Reinstall the child restraint following the directions provided by the child restraint manufacturer and refer to Securing Child Restraints (With the Safety Belt in the Rear Seat) or Securing Child Restraints (With the Safety Belt in the Front Seat). Make sure the safety belt retractor is locked by pulling the shoulder belt all the way out of the retractor when installing the child restraint, even if the child restraint is equipped with a safety belt lock off. When the retractor lock is set, the belt can be tightened but not pulled out of the retractor.

5. If, after reinstalling the child restraint and restarting the vehicle, the on indicator is still lit, turn the vehicle off. Then slightly recline the vehicle seatback and adjust the seat cushion, if adjustable, to make sure that the vehicle seatback is not pushing the child restraint into the seat cushion. Also make sure the child restraint is not trapped under the vehicle head restraint. If this happens, adjust the head restraint. See Head Restraints.

6. Restart the vehicle.

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

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

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

1. Turn the vehicle off.
2. Remove any additional material from the seat, such as blankets, cushions, seat
covers, seat heaters, or seat massagers. Also remove laptops or other electronic devices.

3. Place the seatback in the fully upright position.

4. Have the person sit upright in the seat, centered on the seat cushion, with legs comfortably extended.

5. If the shoulder portion of the belt is pulled out all the way, the child restraint locking feature will be engaged. This may unintentionally cause the passenger sensing system to turn the airbag off for some adult-sized occupants. If this happens, unbuckle the belt, let the belt go back all the way, and then buckle the belt again without pulling the belt out all the way.

6. Restart the vehicle and have the person remain in this position for two to three minutes after the on indicator is lit.

---

**Warning**

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

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**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.

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**Warning**

Stowing of articles under the passenger seat or between the passenger seat cushion and (Continued)
Warning (Continued)

seatback may interfere with the proper operation of the passenger sensing system.

Servicing the Airbag-Equipped Vehicle

Airbags affect how the vehicle should be serviced. There are parts of the airbag system in several places around the vehicle. Your dealer and the service manual have information about servicing the vehicle and the airbag system. To purchase a service manual, see Service Publications Ordering Information ▷ 378.

⚠️ Warning

For up to 10 seconds after the vehicle is turned off and the battery is disconnected, an airbag can still inflate during improper service. You can be injured if you

(Continued)

Warning (Continued)

are close to an airbag when it inflates. Avoid yellow connectors. They are probably part of the airbag system. Be sure to follow proper service procedures, and make sure the person performing work for you is qualified to do so.

Adding Equipment to the Airbag-Equipped Vehicle

Adding accessories that change the vehicle's frame, bumper system, height, front end, or side sheet metal, may keep the airbag system from working properly. The operation of the airbag system can also be affected by changing any parts of the front seats, safety belts, airbag sensing and diagnostic module, steering wheel, instrument panel, any of the airbag modules, ceiling or pillar garnish trim, front sensors, side impact sensors, or airbag wiring.

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

In addition, the vehicle has a passenger sensing system for the front outboard passenger position, which includes sensors that are part of the passenger seat. The passenger sensing system may not operate properly if the original seat trim is replaced with non-GM covers, upholstery, or trim; or with GM covers, upholstery, or trim designed for a different vehicle. Any object, such as an aftermarket seat heater or a comfort-enhancing pad or device, installed under or on top of the seat fabric, could also interfere with the operation of the passenger sensing system. This could either prevent proper deployment of the passenger airbag(s) or prevent the passenger sensing system from properly turning off the passenger airbag(s). See Passenger Sensing System ▷ 79.
If the vehicle has rollover roof-rail airbags, see *Different Size Tires and Wheels* 317 for additional important information.

If you have to modify your vehicle because you have a disability and you have questions about whether the modifications will affect the vehicle's airbag system, or if you have questions about whether the airbag system will be affected if the vehicle is modified for any other reason, call Customer Assistance. See *Customer Assistance Offices* 371.

### 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* 125.

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<th>Caution (Continued)</th>
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<td>open or break the airbag coverings. If there are any opened or broken airbag coverings, have the airbag covering and/or airbag module replaced. For the location of the airbags, see <em>Where Are the Airbags?</em> 75. See your dealer for service.</td>
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<th>Warning (Continued)</th>
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<td>inspected and any necessary replacements made as soon as possible.</td>
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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* 125.

### Replacing Airbag System Parts after a Crash

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<td>A crash can damage the airbag systems in the vehicle. A damaged airbag system may not properly protect you and your passenger(s) in a crash, resulting in serious injury or even death. To help make sure the airbag systems are working properly after a crash, have them (Continued)</td>
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Child Restraints

Older Children

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

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

- Sit all the way back on the seat. Do the knees bend at the seat edge? If yes, continue. If no, return to the booster seat.
- Buckle the lap-shoulder belt. Does the shoulder belt rest on the shoulder? If yes, continue. If no, try using the rear safety belt comfort guide, if available. See “Rear Safety Belt Comfort Guides” under Lap-Shoulder Belt.  
- 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. According to accident statistics, children are safer when properly restrained in a rear seating position.
In a crash, children who are not buckled up can strike other people who are buckled up, or can be thrown out of the vehicle. Older children need to use safety belts properly.

**Warning**

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

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.

**Warning (Continued)**

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

Never leave children unattended in a vehicle and never allow children to play with the safety belts.

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

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

⚠️ Warning

Never hold an infant or a child while riding in a vehicle. Due to crash forces, an infant or a child will become so heavy it is not possible to hold it during a crash. For example, in a crash at only 40 km/h (25 mph), a 5.5 kg (12 lb) infant will suddenly become a 110 kg (240 lb) force on a person's arms. An infant or child should be secured in an appropriate restraint.

⚠️ Warning

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

There are three basic types of child restraints:
- Forward-facing child restraints
- Rearward-facing child restraints
- Belt-positioning booster seats

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

For each type of child restraint, there are many different models available. When purchasing a child restraint, be sure it is designed to be used in a motor vehicle. 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 in a crash, infants and toddlers should be secured in a rear-facing child restraint until age two, or until they reach the maximum height and weight limits of their child restraint.

⚠️ Warning
A young child's hip bones are still so small that the vehicle'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.
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Child Restraint Systems

Rear-Facing Infant Seat
A rear-facing child restraint provides restraint with the seating surface against the back of the infant. The harness system holds the infant in place and, in a crash, acts to keep the infant positioned in the restraint.

Forward-Facing Child Seat
A forward-facing child restraint provides restraint for the child's body with the harness.

Booster Seats
A belt-positioning booster seat is used for children who have outgrown their forward-facing child restraint. Boosters are designed to improve the fit of the vehicle's safety belt system until the child is large enough for the vehicle safety belts to fit properly without a booster seat. See the safety belt fit test in Older Children 86.
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’s 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) ☞ 92 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 an appropriate child restraint secured in a rear seating position.

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

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

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

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

(Continued)

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

See Passenger Sensing System  79 for additional information.

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

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

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

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

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

Lower Anchors and Tethers for Children (LATCH System)

The LATCH system secures a child restraint during driving or in a crash. LATCH attachments on the child restraint are used to attach the child restraint to the anchors in the vehicle. The LATCH system is designed to make installation of a child restraint easier.
In order to use the LATCH system in your vehicle, you need a child restraint that has LATCH attachments. LATCH-compatible rear-facing and forward-facing child seats can be properly installed using either the LATCH anchors or the vehicle’s safety belts. Do not use both the safety belts and the LATCH anchorage system to secure a rear-facing or forward-facing child seat.

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

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

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

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

See Securing Child Restraints (With the Safety Belt in the Rear Seat) or Securing Child Restraints (With the Safety Belt in the Front Seat).

Lower Anchors

Not all vehicle seating positions or child restraints have lower anchors and attachments or top tether anchors and attachments. In this case, the safety belt must be used (with top tether where available) to secure the child restraint. See Securing Child Restraints (With the Safety Belt in the Rear Seat) or Securing Child Restraints (With the Safety Belt in the Front Seat).

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

**Top Tether Anchor**

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

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

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

**Lower Anchor and Top Tether Anchor Locations**

- Rear Seat

**Lower Anchor and Top Tether Anchor Locations**

- **Leash**: Seating positions with top tether anchors.
- **Leather**: Seating positions with two lower anchors.
To assist in locating the lower anchors, each rear anchor position has a label, near the crease between the seatback and the seat cushion.

The top tether anchors are under the covers on the rear seatback filler panel. 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  91 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’s safety belts to secure the restraint, following the instructions that came with the child restraint and the instructions in this manual.

⚠️ Warning

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

(Continued)
96 Seats and Restraints

**Warning (Continued)**

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.

---

**Warning**

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

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

---

**Caution (Continued)**

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

If you need to secure more than one child restraint in the rear seat, see *Where to Put the Restraint* 91 for additional information.

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

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

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

1.2. Put the child restraint on the seat.
For 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. Refer to the child restraint instructions and the following steps:

2.1. Find the top tether anchor.
Open the cover to expose the anchor.

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

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

If you are using a dual tether in a rear outboard seating position with an adjustable head restraint, raise the head restraint and route the tether under the head restraint and around the head restraint posts.
98 Seats and Restraints

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

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

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.

To remove the head restraint:

1. Partially fold the seatback forward. See Rear Seats 65 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 trunk of the vehicle.

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

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

To reinstall the head restraint:

1. Insert the head restraint posts into the holes in the top of the seatback. The notches on the posts must face the driver side of the vehicle.
2. Push the head restraint down. If necessary, press the height adjustment release button to further lower the head restraint. See Head Restraints 60.
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, (Continued)

Warning (Continued)

see your dealer to have the system inspected and any necessary replacements made as soon as possible.

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

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

Securing Child Restraints (With the Safety Belt in the 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.
100 Seats and Restraints

If the child restraint has the LATCH system, see Lower Anchors and Tethers for Children (LATCH System) 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) 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.

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

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

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).

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. If the latch plate will not go fully into the buckle, check if the correct buckle is being used.

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

4. Pull the shoulder belt all the way out of the retractor to set the lock. When the retractor lock is set, the belt can be tightened but not pulled out of the retractor.
5. To tighten the belt, push down on the child restraint, pull the shoulder portion of the belt to tighten the lap portion of the belt, and feed the shoulder belt back into the retractor. When installing a forward-facing child restraint, it may be helpful to use your knee to push down on the child restraint as you tighten the belt. Try to pull the belt out of the retractor to make sure the retractor is locked. If the retractor is not locked, repeat Steps 4 and 5.

6. If the child restraint has a top tether, follow the child restraint manufacturer's instructions regarding the use of the top tether. See Lower Anchors and Tethers for Children (LATCH System) \(\triangleright 92\).

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) \(\triangleright 92\) for additional information on installing the head restraint properly.

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

This vehicle has airbags. A rear seat is a safer place to secure a forward-facing child restraint. See Where to Put the Restraint \(\triangleright 91\).

In addition, the vehicle has a passenger sensing system which is designed to turn off the front outboard passenger frontal airbag and knee airbag under certain conditions. See Passenger Sensing System \(\triangleright 79\) and Passenger Airbag Status Indicator \(\ddagger 125\) for more information, including important safety information.

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

⚠️ Warning

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

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

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

(Continued)

⚠️ Warning (Continued)

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

See Passenger Sensing System for additional information.

If a child restraint uses a top tether, see Lower Anchors and Tethers for Children (LATCH System) 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.

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

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

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

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.

Tilt the latch plate to adjust the belt if needed.

4. Push the latch plate into the buckle until it clicks. Position the release button on the buckle, away from the child restraint system, so that the safety belt could be quickly unbuckled if necessary.

5. Pull the shoulder belt all the way out of the retractor to set the lock. When the retractor lock is set, the belt can be tightened but not pulled out of the retractor.
6. To tighten the belt, push down on the child restraint, pull the shoulder portion of the belt to tighten the lap portion of the belt, and feed the shoulder belt back into the retractor. When installing a forward-facing child restraint, it may be helpful to use your knee to push down on the child restraint as you tighten the belt.

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

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

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

If a child restraint has been installed and the on indicator is lit, see “If the On Indicator Is Lit for a Child Restraint” under Passenger Sensing System ▶ 79.

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

Storage Compartments

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⚠️ Warning

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

Glove Box

Open the glove box by lifting up on the lever.

If equipped, a coin holder is on the interior side of the glove box door.

Cupholders

Cupholders are in the center console.

Cupholders may be located in the second row seat armrest. To access, pull the armrest down.
106 Storage

Center Console Storage
The center console has a storage area under the armrest.

Fixed Armrest
If equipped with a fixed armrest, pull up on the latch on the front of the armrest to access the storage area.

Sliding Armrest
If equipped with a sliding armrest, return the armrest to the rear position.

Pull up on the latch to access the storage area.
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Steering Wheel Controls

If equipped, some audio controls can be adjusted at the steering wheel.

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

Do not adjust the steering wheel while driving.

If equipped with OnStar® or a Bluetooth® system, press to interact with those systems. See OnStar Overview 383, Bluetooth (Infotainment Controls) 181 or Bluetooth (Overview) 180, or “Bluetooth (Overview)” in the infotainment manual.
Press to reject an incoming call or end a current call. Press to mute or unmute the infotainment system when not on a call.

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

1. Favorite: When on a radio source, press to select the next or previous favorite. When on a media source, press to select the next or previous track.

2. Volume: Press to increase or decrease the volume.

Heated Steering Wheel

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

The steering wheel takes about three minutes to start heating.

Horn

Press on the steering wheel pad to sound the horn.

Windshield Wiper/Washer

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

HI: Use for fast wipes.
LO: Use for slow wipes.
110 Instruments and Controls

INT: Move the lever up to INT for intermittent wipes, then adjust the band to control the frequency of wipes.

OFF: Use to turn the wipers off.

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

Clear snow and ice from the wiper blades and windshield before using them. If frozen to the windshield, carefully loosen or thaw them. Damaged blades should be replaced. See Wiper Blade Replacement ➔ 288.

Heavy snow or ice can overload the wiper motor. If the wiper motor overheats, the windshield wipers will stop until the motor cools and the wiper control is turned off. See Electrical System Overload ➔ 293.

Wiper Parking

If the vehicle is turned to LOCK/OFF while the wipers are on LO, HI, or INT, they will immediately stop.

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

If the vehicle 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.

⚠️: Pull the windshield wiper lever toward you to spray windshield washer fluid and activate the wipers. The wipers will continue until the lever is released or the maximum wash time is reached. When the lever is released, additional wipes may occur depending on how long the windshield washer had been activated. See Washer Fluid ➔ 282 for information on filling the windshield washer fluid reservoir.

⚠️ Warning

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

Compass

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

Avoid covering the GPS antenna, located on the roof, for long periods of time with objects that may interfere with the antenna's ability to receive a satellite signal. 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 the GPS signal is restored and provide a heading again. See Compass Messages  for more information on the messages that may be displayed for the compass.

Clock

Base Radio

The infotainment system controls are used to access the time and date settings through the menu system. See Operation  on how to use the menu system.

Setting the Time and Date

When Auto Set is enabled the time cannot be manually set.

1. Press \( \text{" SETTINGS"} \), then touch SETTINGS.
2. Touch Time and Date, then Set Time or Set Date.
3. Touch + or − to adjust the value.

4. Touch \( \text{"","} \) or \( \text{"","} \) to adjust AM or PM for 12 hour format.
5. Touch \( \text{"","} \).

Using Auto Set

1. Press \( \text{" SETTINGS"} \), then touch SETTINGS.
2. Touch Time and Date, then Auto Set.
3. Select from the available selections.
4. Touch \( \text{"","} \).

Setting the 12/24 Hour Format

1. Press \( \text{" SETTINGS"} \), then touch SETTINGS.
2. Touch Time and Date, then select 12h or 24h format.
3. Touch \( \text{"","} \).

Setting the Month and Day Format

1. Press \( \text{" SETTINGS"} \), then touch SETTINGS.

Uplevel Radio Using Faceplate Controls

To set the time or date:

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

Auto Set requires an OnStar subscription.
112 Instruments and Controls

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

To set the clock display:
1. Select SETTINGS from the Home Page, then select Time and Date.
2. Select Clock Display.
3. Turn the MENU knob to Off or On.
4. Press the MENU knob to select.

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

Uplevel Radio Using Touchscreen Controls

The infotainment system controls are used to access the time and date settings through the menu system. See "Using the System" under "Introduction" in the infotainment manual.

To set the time:
1. Touch SETTINGS from the Home Page, then touch Time and Date.
2. Touch Set Time and touch ▲ or ▼ to increase or decrease hours, minutes, and AM or PM. Touch 12–24 Hr for 12 or 24 hour clock.
3. Touch ◄ to go back to the previous menu.

Auto Set requires an OnStar subscription.

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

To set the date:
1. Touch SETTINGS from the Home Page, then touch Time and Date.
2. Touch Set Date and touch ▲ or ▼ to increase or decrease month, day, or year.

To set the clock display:
1. Touch SETTINGS and touch Time and Date.
2. Touch Clock Display and touch OFF or ON to turn the clock display off or on.
3. Touch ◄ to go back to the previous menu.

The clock settings can also be accessed by touching the time display, then touching Set.

Power Outlets

Power Outlet 12-Volt Direct Current

The accessory power outlet can be used to plug in electrical equipment, such as a cell phone or MP3 player. There is an accessory power outlet on the center floor console in front of the shift lever. This outlet is powered when the ignition is in the ON/RUN or ACC/ACCESSORY position, or until the driver door is
opened within 10 minutes of turning off the vehicle. See Retained Accessory Power (RAP) \(\Rightarrow 219\).

Open the cover to access.

<table>
<thead>
<tr>
<th>Caution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leaving electrical equipment plugged in for an extended period of time while the vehicle is off will drain the battery. Always unplug electrical equipment when not in use and do not plug in equipment that exceeds the maximum 20 amp rating.</td>
</tr>
</tbody>
</table>

Certain electrical accessories 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 installation instructions included with the equipment. See Add-On Electrical Equipment \(\Rightarrow 262\).

<table>
<thead>
<tr>
<th>Caution</th>
</tr>
</thead>
<tbody>
<tr>
<td>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.</td>
</tr>
</tbody>
</table>

**Power Outlet 110/120V Volt Alternating Current**

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

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

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

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

If equipment is connected using more than 150 watts or a system fault is detected, the equipment may
operate briefly then turn off. A protection circuit shuts off the power supply and the indicator light turns off. To reset the circuit, unplug the item and plug it back in or turn the Retained Accessory Power (RAP) off and then back on. See Retained Accessory Power (RAP) \( \diamond \) 219. The power restarts when equipment using 150 watts or less is plugged into the outlet and a system fault is not detected.

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

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

### Wireless Charging

The vehicle may have a wireless charging pocket in the center floor console. The system wirelessly charges one PMA or Qi compatible mobile device.

To check for phone or other device compatibility:

- In the U.S., see my.chevrolet.com/learn.
- In Canada, see gmtotalconnect.ca.
- Or, see your dealer for details.

**Warning**

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

The vehicle must be in ON/RUN, ACC/ACCESSORY, or Retained Accessory Power (RAP). The wireless charging feature may not correctly indicate charging when the vehicle is in RAP. See Retained Accessory Power (RAP) \( \diamond \) 219.

The operating temperature is \(-20 ^\circ C (\sim -4 ^\circ F)\) to 60 \(^\circ C (140 ^\circ F)\) for the charging system and 0 \(^\circ C (32 ^\circ F)\) to 35 \(^\circ C (95 ^\circ F)\) for the phone.

**Warning**

Remove all metal objects from the charging pocket before charging your mobile device. Metal objects, such as coins, keys, rings, or paper clips, between the phone and the charger will become very hot. On the rare occasion that the charging system does not detect a metal object, and the object gets wedged between the phone and the charger, remove the phone and allow the metallic object to cool before removing it from the charging pocket, to prevent burns.
To charge a mobile device:

1. Remove all objects from the charging pocket. The system may not charge if there are any objects in the charging pocket.

2. With the mobile device screen facing the rear of the vehicle, slowly insert the device into the charging pocket until \( \text{\textcopyright} \) displays on the infotainment screen. This indicates that the mobile device is properly positioned and charging. If a phone is inserted into the pocket and \( \text{\textcopyright} \) does not display, remove the phone from the pocket, turn 180 degrees and wait three seconds before inserting the phone into the pocket again.

Warning Lights, Gauges, and Indicators

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

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

Instrument Cluster

Base Level Auto Stop English, Metric Similar
Uplevel Auto Stop English, Metric Similar
118 Instruments and Controls

Base Level Diesel Auto Stop English, Metric Similar
Uplevel Diesel Auto Stop English, Metric Similar
Cluster Menu

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

- Info app. This is where you can view the selected Driver Information Center (DIC) displays. See Driver Information Center (DIC) (Uplevel) \( \odot 137 \) or Driver Information Center (DIC) (Base Level) \( \odot 134 \).
- Audio
- Phone
- Navigation
- Settings

Audio

In the main view of the Audio app, press \( \Delta \) or \( \nabla \) to scroll through radio stations or move to the next/previous track of a CD/USB/Bluetooth device that is connected to the vehicle. Press \( \checkmark \) to select the Audio app, then press \( \triangleright \) to enter the Audio menu. In the Audio menu browse for music, select from the favorites, or change the audio source.

Phone

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

Navigation

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

Settings

Press \( \checkmark \) to select the Settings app. Use \( \Delta \) or \( \nabla \) to scroll through the items in the Settings menu.
**Units**: Press ▼ while Units is displayed to enter the Units menu. Choose U.S. or metric units by pressing ▶ while the desired item is highlighted.

**Info Pages**: Press ▼ while Info Pages is displayed to enter the Info Pages menu and select the items to be displayed in the Info app. See *Driver Information Center (DIC) (Uplevel)* ▷ 137 or *Driver Information Center (DIC) (Base Level)* ▷ 134.

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

**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.

**Trip Odometer**
The trip odometer shows how far the vehicle has been driven since the trip odometer was last reset. The trip odometer is accessed and reset through the Driver Information Center (DIC). See *Driver Information Center (DIC) (Uplevel)* ▷ 137 or *Driver Information Center (DIC) (Base Level)* ▷ 134.

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

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

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

A slight bump may be felt when the transmission is determining the most fuel efficient operating range.

**Caution**
If the engine is operated with the rpm’s in the warning area at the high end of the tachometer, the vehicle could be damaged, and the damage would not be covered.

(Continued)
**Fuel Gauge**

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

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

When the indicator nears empty, the low fuel light comes on. There is a small amount of fuel left, but the fuel tank should be filled soon.
Here are four things that some owners ask about. None of these show a problem with the fuel gauge:

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

Safety Belt Reminders

Driver Safety Belt Reminder Light
There is a driver safety belt reminder light on the instrument cluster.

When the vehicle is started, this light flashes and a chime may come on to remind the driver to fasten their safety belt. Then the light stays on solid until the belt is buckled. This cycle may continue several times if the driver remains or becomes unbuckled while the vehicle is moving.
If the driver safety belt is buckled, neither the light nor the chime comes on.

Passenger Safety Belt Reminder Light
There is a passenger safety belt reminder light near the passenger airbag status indicator. See Passenger Sensing System \( \Rightarrow 79 \).

When the vehicle is started, this light flashes and a chime may come on to remind passengers to fasten their safety belt. Then the light stays on solid until the belt is buckled. This cycle continues several times if the passenger remains or becomes unbuckled while the vehicle is moving.
If the passenger safety belt is buckled, neither the chime nor the light comes on.

The front passenger safety belt reminder light and chime may turn on if an object is put on the seat such as a briefcase, handbag, etc.
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.

**Airbag Readiness Light**

This light shows if there is an electrical problem with the airbag system. The system check includes the airbag sensor(s), passenger sensing system, the pretensioners, the airbag modules, the wiring, and the crash sensing and diagnostic module. For more information on the airbag system, see *Airbag System* 73.

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

<table>
<thead>
<tr>
<th>Warning</th>
</tr>
</thead>
<tbody>
<tr>
<td>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.</td>
</tr>
</tbody>
</table>

**Passenger Airbag Status Indicator**

The vehicle has a passenger sensing system. See *Passenger Sensing System* 79 for important safety information. The overhead console has a passenger airbag status indicator.

United States

Canada

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

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

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

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

---

### 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 could be a problem with the electrical charging system. Have it checked by your dealer. Driving while this light is on could drain the battery.

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

This light is part of the vehicle’s emission control on-board diagnostic system. If this light is on while the engine is running, a malfunction has been detected and the vehicle may require service. The light should come on to show that it is working when the ignition is in ON/RUN with the engine not running for Key Access or in Service Only Mode for Keyless Access. See Ignition Positions (Keyless Access) § 212 or Ignition Positions (Key Access) § 210.

This light may also come on when the system has detected a problem with the Diesel Exhaust Fluid (DEF) management system. See Diesel Exhaust Fluid § 223.
Malfunctions are often indicated by the system before any problem is noticeable. Being aware of the light and seeking service promptly when it comes on may prevent damage.

**Caution**

If the vehicle is driven continually with this light on, the emission control system may not work as well, the fuel economy may be lower, and the vehicle may not run smoothly. This could lead to costly repairs that might not be covered by the vehicle warranty.

**Caution (Continued)**

costly repairs not covered by the vehicle warranty. This could also affect the vehicle’s ability to pass an Emissions Inspection/Maintenance test. See Accessories and Modifications ▷ 265.

**Light Flashing (Gasoline Engine Only)**

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

To help prevent damage, reduce vehicle speed and avoid hard accelerations and uphill grades.

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

**Light on Steady (All Engines)**

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

Check the following:

- A loose or missing fuel cap may cause the light to come on. See Filling the Tank ▷ 259. A few driving trips with the cap properly installed may turn the light off.

- Poor fuel quality can cause inefficient engine operation and poor driveability, which may go away once the engine is warmed up. If this occurs, change the fuel brand. It may require at least one full tank of the proper fuel to turn the light off. See Fuel (Gasoline) ▷ 249 or Fuel for Diesel Engines ▷ 250.

If the light remains on, see your dealer.
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Emissions Inspection and Maintenance Programs
If the vehicle requires an Emissions Inspection/Maintenance test, the test equipment will likely connect to the vehicle's Data Link Connector (DLC).

The DLC is under the instrument panel to the left of the steering wheel. Connecting devices that are not used to perform an Emissions Inspection/Maintenance test or to service the vehicle may affect vehicle operation. See Add-On Electrical Equipment 262. See your dealer if assistance is needed.

The vehicle may not pass inspection if:

- The light is on when the engine is running.
- Critical emission control systems have not been completely diagnosed. If this happens, the vehicle would not be ready for inspection and might require several days of routine driving before the system is ready for inspection. This can happen if the 12-volt battery has recently been replaced or run down, or if the vehicle has been recently serviced.

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

Brake System Warning Light
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.

![BRAKE](image)

This light should come on briefly when the engine is started. If it does not come on then, have it fixed so it will be ready to warn you if there is a problem.

When the ignition is on, the brake system warning light also comes on when the parking brake is set. The light stays on if the parking brake does not fully release. If it stays on after the parking brake is fully released, it means the vehicle has a brake problem.
Warning

The brake system might not be working properly if the brake system warning light is on. Driving with the brake system warning light on can lead to a crash. If the light is still on after the vehicle has been pulled off the road and carefully stopped, have the vehicle towed for service.

Antilock Brake System (ABS) Warning Light

The Antilock Brake System (ABS) 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 128.

See Brake System Messages 140 for all brake-related DIC messages.

Up-Shift Light

This light comes on when an up-shift is recommended for best fuel economy. The number displayed with the arrow indicates the recommended gear.

Lane Keep Assist (LKA) Light

For some vehicles, this light comes on briefly while starting the vehicle. If it does not come on, have the vehicle serviced.
130 Instruments and Controls

For vehicles with the uplevel cluster, this light may not come on when starting the vehicle.

This light is green if LKA is available to assist.

LKA may assist by gently turning the steering wheel if the vehicle approaches a detected lane marking without using the turn signal in that direction. The LKA light will turn amber.

This light is amber and flashes as a Lane Departure Warning (LDW) alert, to indicate that the lane marking has been crossed.

See Lane Keep Assist (LKA)  247.

Vehicle Ahead Indicator

If equipped, this indicator will display green when a vehicle is detected ahead and amber when you are following a vehicle ahead much too closely.

See Forward Collision Alert (FCA) System  243.

Traction Off Light

This light comes on briefly while starting the engine. If it does not, have the vehicle serviced by your dealer. If the system is working normally, the indicator light then turns off.

The traction off light comes on when the Traction Control System (TCS) has been turned off by pressing and releasing the TCS/StabiliTrak button.

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

If the TCS is off, wheel speed will be limited when necessary to protect the driveline from damage. Adjust driving accordingly.

See Traction Control/Electronic Stability Control  235.

StabiliTrak® OFF Light

This light comes on briefly while starting the engine. If it does not, have the vehicle serviced by your dealer.

This light comes on when the StabiliTrak system is turned off. If StabiliTrak is off, the Traction Control System (TCS) is also off.
If StabiliTrak and TCS are off, the system does not assist in controlling the vehicle. Turn on the TCS and the StabiliTrak systems, and the warning light turns off.

See Traction Control/Electronic Stability Control \( \Rightarrow 235 \).

**Traction Control System (TCS)/StabiliTrak® Light**

This light comes on briefly when the engine is started.

If the light does not come on, have the vehicle serviced by your dealer.

If the system is working normally, the indicator light turns off.

If the light is on and not flashing, the TCS and potentially the StabiliTrak system have been disabled.

A Driver Information Center (DIC) message may display. Check the DIC messages to determine which feature(s) is no longer functioning and whether the vehicle requires service. See Ride Control System Messages \( \Rightarrow 146 \).

If the light is on and flashing, the TCS and/or the StabiliTrak system is actively working.

See Traction Control/Electronic Stability Control \( \Rightarrow 235 \).

**Wait-to-Start Light**

For diesel engines, the wait-to-start light shows that the engine is functioning properly and indicates when the engine can be started.

The fast warm-up glow plug system makes the wait-to-start light stay on for a shorter amount of time than most diesel engines.

**Tire Pressure Light**

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

**When the Light Is On Steady**

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

A Driver Information Center (DIC) tire pressure message may also display. See Tire Messages \( \Rightarrow 147 \). Stop as soon as possible, and inflate the tires to the pressure value shown on the Tire and Loading Information label. See Tire Pressure \( \Rightarrow 308 \).
132 Instruments and Controls

When the Light Flashes First and Then Is On Steady
If the light flashes for about a minute and then stays on, there may be a problem with the TPMS. If the problem is not corrected, the light will come on at every ignition cycle. See Tire Pressure Monitor Operation 311.

Engine Oil Pressure Light

<table>
<thead>
<tr>
<th>Caution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lack of proper engine oil maintenance can damage the engine. Driving with the engine oil low can also damage the engine. The repairs would not be covered by the vehicle warranty. Check the oil level as soon as possible. Add oil if required, but if the oil level is within the operating range and the oil pressure is still low, have the vehicle serviced. Always follow the maintenance schedule for changing engine oil.</td>
</tr>
</tbody>
</table>

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

If the light comes on and stays on, it means that oil is not flowing through the engine properly. The vehicle could be low on oil and might have some other system problem. See your dealer.

Low Fuel Warning Light

This light is near the fuel gauge and comes on briefly when the ignition is turned on as a check to show it is working.

It also comes on when the fuel tank is low on fuel. The light turns off when fuel is added. If it does not, have the vehicle serviced.

Diesel Exhaust Fluid (DEF) Warning Light

This light, a Driver Information Center (DIC) Message, and a chime come on when there is an issue with the Diesel Exhaust Fluid. See Diesel Exhaust Fluid Messages 142 for information on the specific message displaying with the light.

If the DEF fluid issue has not been corrected, the light will continue to flash. The vehicle's speed may also be limited.

Also see Diesel Exhaust Fluid 223.
Security Light

The security light should come on briefly as the engine is started. If it does not come on, have the vehicle serviced by your dealer. If the system is working normally, the indicator light turns off.

If the light stays on and the engine does not start, there could be a problem with the theft-deterrent system. See Immobilizer Operation (Key Access) 51 or Immobilizer Operation (Keyless Access) 52.

High-Beam On Light

This light comes on when the high-beam headlamps are in use. See Headlamp High/Low-Beam Changer 160.

IntelliBeam® Light

This light comes on when the IntelliBeam system, if equipped, is enabled. See Exterior Lamp Controls 158.

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 Fog Lamps 162 for more information.

Lamps On Reminder

This light comes on when the exterior lamps are in use. See Exterior Lamp Controls 158.

Cruise Control Light

For vehicles with cruise control, the cruise control light is white when the cruise control is on and ready, and turns green when the cruise control is set and active.
The light turns off when the cruise control is turned off. See Cruise Control \(\Rightarrow\) 237.

**Door Ajar Light**

If equipped, this light comes on when a door is open or not securely latched. Before driving, check that all doors are properly closed. See Door Ajar Messages \(\Rightarrow\) 141.

### Information Displays

**Driver Information Center (DIC) (Base Level)**

The DIC displays information about your vehicle. It also displays warning messages if a system problem is detected. See Vehicle Messages \(\Rightarrow\) 140. All messages appear in the DIC display in the center of the instrument cluster.

**DIC Operation and Displays**

The DIC has different displays which can be accessed by using the DIC buttons on the turn signal lever.

**DIC Buttons**

- **SET/CLR** : Press to set, or press and hold to clear, the menu item displayed.
- **\(\Rightarrow\) : Use the band to scroll through the items in each menu.
- **MENU** : Press to display the Trip/Fuel Menu, the Vehicle Information Menu, and the ECO Menu. This button is also used to return to or exit the last screen displayed on the DIC.

#### Trip/Fuel Menu (TRIP) Items

Press MENU on the turn signal lever until the TRIP menu displays. Use \(\Rightarrow\) to scroll through the menu items. Not all items are available on every vehicle. The following is a list of all possible menu items:

- **Digital Speed** : Displays how fast the vehicle is moving in either kilometers per hour (km/h) or miles per hour (mph). The speedometer cannot be reset.
- **Trip 1 or Trip 2, Average Fuel Economy** : Displays the current distance traveled, in either kilometers (km) or miles (mi), from the last reset for the trip odometer. The trip odometer can be reset to
zero by pressing and holding the SET/CLR button while the trip odometer display is showing.

Also displays the approximate average liters per 100 kilometers (L/100 km) or miles per gallon (mpg). This number is based on the number of L/100 km (mpg) recorded since the last time this menu item was reset. This number reflects only the approximate average fuel economy that the vehicle has right now and will change as driving conditions change. Reset the average consumption by pressing SET/CLR when it is displayed.

**Fuel Range** : Displays 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.

**Instantaneous Fuel Economy** : Displays the current fuel economy in liters per 100 kilometers (L/100 km) or miles per gallon (mpg). This number reflects only the approximate fuel economy that the vehicle has right now and changes frequently as driving conditions change. This display cannot be reset.

**Average Vehicle Speed** : Displays the average vehicle speed of the vehicle in kilometers per hour (km/h) or miles per hour (mph). This average is based on the various vehicle speeds recorded since the last reset. Reset the average speed by pressing SET/CLR when it is displayed.

**Timer** : To start the timer, press SET/CLR while Timer is displayed. The display will show the amount of time that has passed since the timer was last reset, not including time the ignition is off. Time will continue to be counted as long as the ignition is on, even if another display is being shown on the DIC. The timer will record up to 99 hours, 59 minutes, and 59 seconds (99:59:59) after which the display will return to zero. To stop the timer, press SET/CLR briefly while Timer is displayed. To reset the timer to zero, press and hold SET/CLR.

**Navigation** : Used for the OnStar Turn-by-Turn guidance. See *OnStar Overview* 383.

**Blank Display** : Displays no information.

**Vehicle Information Menu (VEHICLE) Items**

Press MENU on the turn signal lever until the VEHICLE menu is displayed. Use $\triangleleft$ to scroll through the menu items. Not all items are available on every vehicle. The following is a list of all possible menu items:

**Remaining Oil Life** : Displays an estimate of the oil’s remaining useful life. If REMAINING OIL LIFE 99% is displayed, that means 99% of the current oil life remains.
136 Instruments and Controls

When the remaining oil life is low, the CHANGE ENGINE OIL SOON message will appear on the display. See Engine Oil Messages 142. The oil should be changed as soon as possible. See Engine Oil 270. In addition to the engine oil life system monitoring the oil life, additional maintenance is recommended in the Maintenance Schedule in this manual. See Maintenance Schedule 352.

The Oil Life display must be reset after each oil change. Do not reset the Oil Life display accidentally at any time other than when the oil has just been changed. It cannot be reset accurately until the next oil change. To reset the engine oil life system, see Engine Oil Life System 273.

Oil Pressure: Oil pressure is displayed in either kilopascal (kPa) or in pounds per square inch (psi).

Tire Pressure: Displays 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 310 and Tire Pressure Monitor Operation 311.

Battery Voltage: Displays the current battery voltage, if equipped. Battery voltage changes are normal while driving. See Charging System Light 126. If there is a problem with the battery charging system, the DIC will display a message. See Battery Voltage and Charging Messages 140.

Speed Warning: This display is used to set the vehicle speed at which the speed warning chime sounds and the alert is displayed. The speed can be set by pressing SET/CLR while the speed warning display is showing.

Units: Move to change between Metric or US when the Unit display is active. Press SET/CLR to confirm the setting. This will change the displays on the DIC to the type of measurements you select.

ECO Drive Assist Menu (ECO) Items

This menu is only available on some vehicles. Press MENU on the turn signal lever until the ECO menu is displayed. Use to scroll through the menu items. Not all items are available on every vehicle. The following is a list of all possible menu items:

Best Average Fuel Economy: The bottom displays the best average fuel economy (AFE) that is achieved for a selected distance. The top displays a running average of fuel economy for the most recently traveled selected distance. The center bar graph displays the instantaneous fuel economy. Quickly press the SET/CLR button to change the settings for the distance options.

When viewing best AFE, a several second press and hold of SET/ CLR will reset the best value. The best
value will show “- - -” until the selected distance has been traveled.

The display provides feedback on how current driving behavior in the bar graph affects the running average in the top display and how well recent driving compares to the best that has been achieved.

Top Consumers: Shows a list of the features that are currently impacting the fuel economy, in order from highest to lowest. If a feature is turned off, it will be removed from the list.

Economy Trend: Shows history of the Average Fuel Economy from the last 50 km (30 mi). Each bar represents about 5 km (3 mi) of driving. During driving the bars will shift to always reflect the most recent distance on the right side. Press and hold V to clear the graph or press △ to reset through the menu.

Driver Information Center (DIC) (Uplevel)
The DIC displays are shown in the center of the instrument cluster in the Info app. See Instrument Cluster 116. The displays show the status of many vehicle systems. The controls for the DIC are on the right steering wheel control.

DIC Info Page Options
The info pages on the DIC can be turned on or off through the Settings menu.

1. Press ◀ to access the cluster applications.
2. Press △ or ▼ to scroll to the Settings application.
3. Press V to enter the Settings menu.
4. Scroll to Info Pages and press ▷.
5. Press △ or ▼ to move through the list of possible information displays.
6. Press V while an item is highlighted to select or deselect that item. When an item is selected, a checkmark will appear next to it.
DIC Info Pages

The following is the list of all possible DIC info page displays. Some may not be available for your particular vehicle. Some items may not be turned on by default but can be turned on through the Settings app. See “DIC Info Page Options” earlier in this section.

**Speed**: Shows the vehicle speed in either kilometers per hour (km/h) or miles per hour (mph).

**Trip A or Trip B**: Shows the current distance traveled, in either kilometers (km) or miles (mi), since the trip odometer was last reset. This also shows the approximate average liters per 100 kilometers (L/100 km) or miles per gallon (mpg). This number is calculated based on the number of L/100 km (mpg) recorded since the last time this menu item was reset. This number reflects only the approximate average fuel economy that the vehicle has right now, and will change as driving conditions change.

Press and hold ✓ while this display is active to reset the trip odometer and the average fuel economy. Trip A and Trip B can also be reset by pressing ▲ and choosing reset.

**Fuel Range**: Shows the approximate distance the vehicle can be driven without refueling. LOW will be displayed when the vehicle is low on fuel. The fuel range estimate is based on an average of the vehicle’s fuel economy over recent driving history and the amount of fuel remaining in the fuel tank.

**Oil Life**: Shows an estimate of the oil’s remaining useful life. If REMAINING OIL LIFE 99% is displayed, that means 99% of the current oil life remains. When the remaining oil life is low, the CHANGE ENGINE OIL SOON message will appear on the display. See Engine Oil Messages ▷ 142.

The oil should be changed as soon as possible. See Engine Oil ▷ 270. In addition to the engine oil life system monitoring the oil life, additional maintenance is recommended in the Maintenance Schedule. See Maintenance Schedule ▷ 352.

The Oil Life display must be reset after each oil change. It will not reset itself. Do not to reset the Oil Life display at any time other than when the oil has just been changed. It cannot be reset accurately until the next oil change. To reset the engine oil life system, press and hold ✓ for several seconds while the Oil Life display is active. See Engine Oil Life System ▷ 273.

**Tire Pressure**: Shows the approximate pressures of all four tires. Tire pressure is displayed in either kilopascal (kPa) or in pounds per square inch (psi). If the pressure is low, the value for that tire is shown in amber. See Tire Pressure Monitor System ▷ 310 and Tire Pressure Monitor Operation ▷ 311.

**Instantaneous Fuel Economy**: Displays the current fuel economy in liters per 100 kilometers (L/100 km) or miles per gallon (mpg). This number reflects only the approximate fuel economy that the
average is based on the various vehicle speeds recorded since the last reset. Reset the average speed by pressing \( \checkmark \) when it is displayed.

**Fuel Economy** : The center displays the approximate instantaneous fuel economy as a number and bar graph. Displayed above the bar graph is a running average of fuel economy for the most recently traveled selected distance. Displayed below the bar graph is the best average fuel economy that has been achieved for the selected distance. The selected distance is displayed at the top of the page as “last xxx mi/km.”

Press \( \uparrow \) to select the distance or reset best value. Use \( \triangle \) and \( \nabla \) to choose the distance and press \( \checkmark \). Press \( \triangle \) and \( \nabla \) to select “Reset Best Score.” Press \( \checkmark \) to reset the best average fuel economy. After reset, the best value displays “-,” until the selected distance has been traveled.

The display provides information on how current driving behavior affects the running average and how well recent driving compares to the best that has been achieved for the selected distance.

**Timer** : This display can be used as a timer. To start the timer, press \( \checkmark \) while this display is active. The display will show the amount of time that has passed since the timer was last reset. To stop the timer, press \( \checkmark \) briefly while this display is active and the timer is running. To reset the timer to zero, press and hold \( \checkmark \) while this display is active, or press \( \uparrow \) and select reset.

**Speed Limit** : Shows sign information, which comes from a roadway database in the onboard navigation, if equipped.

**Following Distance Indicator** : The current follow time to the vehicle ahead is displayed as a time value on this page.

**Battery Voltage** : Displays the current battery voltage, if equipped. Battery voltage changes are normal while driving. See Charging System Light \( \diamond \) 126. If there is a problem with the battery charging system, the DIC will display a message. See Battery Voltage and Charging Messages \( \diamond \) 140.

**Blank Page** : Shows no information.
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 or ✓. 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.

The following are some of the vehicle messages that may be displayed depending on your vehicle content.

Battery Voltage and Charging Messages

BATTERY SAVER ACTIVE
This message displays when the vehicle has detected that the battery voltage is dropping beyond a reasonable point. The battery saver system starts reducing features of the vehicle that may be noticed. At the point that features are disabled, this message displays. Turn off unnecessary accessories to allow the battery to recharge.

LOW BATTERY
This message is displayed when the battery voltage is low. See Battery - North America   285.

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  284.

RELEASE PARKING BRAKE
This message is displayed as a reminder that the parking brake is on. Release it before you attempt to drive.

Compass Messages

CAL
This message is displayed when the compass needs to be calibrated. See Compass  110.

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Two 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 \(\triangleright\) 237.

Door Ajar Messages

DOOR(S) OPEN
A vehicle symbol will be displayed on the DIC showing which door is open along with this message. Close the door completely.

HOOD OPEN
This message will display when the hood is open. Close the hood completely.

TRUNK OPEN
This message will display when the trunk is open. Close the trunk completely.

Engine Cooling System Messages

A/C OFF DUE TO HIGH ENGINE TEMP
This message displays when the engine coolant becomes hotter than the normal operating temperature. To avoid added strain on a hot engine, the air conditioning compressor automatically turns off. When the coolant temperature returns to normal, the air conditioning compressor turns back on. 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.

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 \(\triangleright\) 281.
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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 ♦ 273 and Driver Information Center (DIC) (Uplevel) ♦ 137 or Driver Information Center (DIC) (Base Level) ♦ 134 for information on how to reset the system. See Engine Oil ♦ 270 and Maintenance Schedule ♦ 352 for more information.

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, or displays repeatedly, 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 (Gas Engine Only)
This message displays when the fuel cap is not on tight on vehicles with gasoline engines. Tighten the fuel cap.

WATER IN FUEL — CONTACT SERVICE
This message displays when water level in the diesel fuel filter exceeds a specified level. Residual water in the diesel fuel filter must be drained. Water in Fuel (Diesel) ♦ 255.

Diesel Exhaust Fluid Messages

For more information on these messages, see “Exhaust Fluid Low” or “Exhaust Fluid Quality Poor” in Diesel Exhaust Fluid ♦ 223.

EXHAUST FLUID RANGE: XXXX KM (MI)
When the exhaust fluid is getting low, the range will be displayed in either kilometers or miles. It is normal for the EXHAUST FLUID RANGE to vary based on vehicle
and environmental driving conditions. When this message first displays at approximately 600 km (1,000 mi) of fluid range remaining, the fluid is approximately 5 L (1.3 gal) low.

**EXHAUST FLUID LOW SPEED LIMITED SOON**

When the exhaust fluid range is less than 120 km (75 mi) this message will be displayed.

**EXHAUST FLUID EMPTY REFILL NOW**

This message will be displayed when the exhaust fluid is empty. This message may be accompanied by other messages that provide more information.

**EXHAUST FLUID QUALITY POOR SEE OWNERS MANUAL NOW**

This message displays when the exhaust fluid is of poor quality or the wrong fluid was added. This message may be accompanied by other messages that provide more information.

**Diesel Particulate Filter Messages**

**DIESEL PARTIC (Particulate) FILTER IS FULL CONTINUE DRIVING**

This message may display when the soot particles in the diesel particulate filter reach a certain amount. Continue driving to prevent the filter from clogging. See Diesel Particulate Filter 222 for more information.

**DIESEL PARTIC (Particulate) FILTER IS FULL CONTINUED DRIVING MANDATORY**

This message may display when the soot particles in the diesel particulate filter reach a certain amount. Continued driving is mandatory to prevent the filter from clogging. See Diesel Particulate Filter 222 for more information.

**Key and Lock Messages**

**# KEYS PROGRAMMED**

This message displays when programming new keys to the vehicle.

**NO REMOTE DETECTED**

This message displays when the transmitter battery may be weak. See “Starting the Vehicle with a Low Transmitter Battery” under Remote Keyless Entry (RKE) System Operation (Key Access) 34 or Remote Keyless Entry (RKE) System Operation (Keyless Access) 36.

**NO REMOTE KEY WAS DETECTED PLACE KEY IN TRANSMITTER POCKET THEN START YOUR VEHICLE**

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 (Key Access) 34 or Remote Keyless Entry (RKE) System Operation (Keyless Access) 36.
Remote Keyless Entry (RKE) System Operation (Keyless Access) ⊳ 36.

NO REMOTE DETECTED PRESS BRAKE TO RESTART or NO REMOTE DETECTED PRESS CLUTCH TO RESTART
This message displays if the RKE transmitter is no longer detected in the vehicle. Press the brake pedal or clutch and the engine start/stop button to restart 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

AUTOMATIC LIGHT CONTROL ON
This message is displayed when the automatic light control has been turned on. See Automatic Headlamp System ⊳ 160.

AUTOMATIC LIGHT CONTROL OFF
This message is displayed when the automatic light control has been turned off. See Automatic Headlamp System ⊳ 160.

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 ⊳ 289 and Replacement Bulbs ⊳ 293 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

FORWARD COLLISION ALERT OFF
This message displays when the Forward Collision Alert has been turned off.

FRONT CAMERA BLOCKED CLEAN WINDSHIELD
This message displays when the camera is blocked. Cleaning the outside of the windshield behind the rearview mirror may correct the issue. The Lane Keep Assist (LKA) and the Lane Departure Warning (LDW) system will not operate. Forward Collision Alert (FCA) may not work or may not work as well.

LANE CHANGE ALERT OFF
This message indicates that the driver has turned the Side Blind Zone Alert (SBZA) and Lane Change Alert (LCA) systems off.
LANE KEEPING ASSIST UNAVAILABLE

This message displays when the Lane Keep Assist (LKA) and Lane Departure Warning (LDW) system is temporarily unavailable. The LKA system does not need service.

This message could be due to the camera being blocked. Cleaning the outside of the windshield behind the rearview mirror may correct the issue.

PARK ASSIST OFF

This message displays when the Parking Assist system has been turned off or when there is a temporary condition causing the system to be disabled.

SERVICE DRIVER ASSIST SYSTEM

If this message displays, take the vehicle to your dealer to repair the system.

Forward Collision Alert (FCA), Assistance Systems for Parking or Backing, and/or Lane Keep Assist (LKA) system may not work. Do not use these systems until the vehicle has been repaired.

SERVICE FRONT CAMERA

If this message remains on after continued driving, take the vehicle to your dealer for service. Do not use the Lane Keep Assist (LKA), Lane Departure Warning (LDW), and Forward Collision Alert (FCA) features.

SERVICE PARK ASSIST

This message displays if there is a problem with the Parking Assist system. Do not use this system to help you park. See your dealer for service.

SERVICE SIDE DETECTION SYSTEM

If this message remains on after continued driving, the vehicle needs service. Side Blind Zone Alert (SBZA), Lane Change Alert (LCA), and Rear Cross Traffic Alert (RCTA) features will not work. Take the vehicle to your dealer.

SIDE DETECTION SYSTEM UNAVAILABLE

This message indicates that Side Blind Zone Alert (SBZA), Lane Change Alert (LCA), and Rear Cross Traffic Alert (RCTA) are disabled either because the sensor is blocked and cannot detect vehicles in the blind zone, or the vehicle is passing through an open area, such as the desert, where there is insufficient data for operation. This message may also activate during heavy rain or due to road spray. The vehicle does not need service. For cleaning, see "Washing the Vehicle" under Exterior Care 342.

TAKE STEERING

If LKA does not detect active driver steering, an alert and chime may be provided. Move the steering wheel to dismiss. See Lane Keep Assist (LKA) 247.
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Ride Control System Messages

SERVICE TRACTION CONTROL
This message displays when there is a problem with the Traction Control System (TCS). See Traction Control/Electronic Stability Control  235.

SERVICE STABILITRAK
This message displays if there is a problem with the StabiliTrak system. See Traction Control/Electronic Stability Control  235.

Airbag System Messages

SERVICE AIRBAG
This message displays if there is a problem with the airbag system. See your dealer for service.

Safety Belt Messages

SHIFTER LOCKED. BUCKLE SEATBELT
This message displays if the vehicle is equipped with the Safety Belt Assurance System and the driver and front outboard passenger, if present, safety belts are not buckled. The vehicle will not shift out of P (Park). Buckle the safety belt(s) to unlock the shift lever.

This system may not allow the vehicle to shift out of P (Park) if an object — such as a briefcase, handbag, grocery bag, laptop, or other electronic device — is on the front outboard passenger seat. If this happens, remove the object from the seat or buckle the safety belt.

If the driver or front outboard passenger unbuckles their safety belt while driving, the safety belt reminder chime and light(s) will come on. See Safety Belt Reminders  124.

SHIFTER UNLOCKED. BRAKE TO SHIFT
This message displays when the Safety Belt Assurance System times out and allows the vehicle to be shifted out of P (Park) after 30 seconds following brake apply. See “Safety Belts” and “Child Restraints” in the Index for information about the importance of proper restraint use.

This system may not function properly if the airbag readiness light is on. See Airbag Readiness Light  125.

Security Messages

THEFT ATTEMPTED
This message displays if the vehicle detects a tamper condition.
Service Vehicle Messages

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.

SERVICE POWER STEERING
This message displays and a chime may sound when there may be a problem with the power steering system. If this message displays and a reduction in steering performance or loss of power steering assistance is noticed, see your dealer.

SERVICE STEERING COLUMN LOCK
This message displays if there is a problem with the steering column lock. Take the vehicle to your dealer for service.

SERVICE VEHICLE SOON
This message displays if there is a problem with the vehicle. Take the vehicle to your dealer for service.

Starting the Vehicle Messages

PRESS BRAKE TO START or PRESS CLUTCH TO START
This message displays when attempting to start the vehicle without first pressing the brake or clutch pedal.

TURN STEERING WHEEL START VEHICLE AGAIN
This message displays when you try to start the vehicle, but the column remains locked. Try turning the steering wheel while starting the vehicle to unlock the steering column. If the vehicle still does not start, turn the steering wheel the other way, and try starting the vehicle again.

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 311.

TIRE LEARNING ACTIVE
This message displays when the system is learning new tires. See Tire Pressure Monitor Operation 311.

TIRE PRESSURE LOW ADD AIR TO TIRE
On vehicles with the Tire Pressure Monitor System (TPMS), this message displays when the pressure in one or more of the vehicle's tires is low.

The low tire pressure warning light will also come on. See Tire Pressure Light 131.
If a tire pressure message displays, inflate the tires until the tire pressure is equal to the values shown on the Tire and Loading Information label. See Tires \(\rightarrow\) 301, Vehicle Load Limits \(\rightarrow\) 206, and Tire Pressure \(\rightarrow\) 308.

More than one tire pressure message can be received at a time. The DIC also shows the tire pressure values. See Driver Information Center (DIC) (Uplevel) \(\rightarrow\) 137 or Driver Information Center (DIC) (Base Level) \(\rightarrow\) 134.

Transmission Messages

**MANUAL TRANSMISSION — RELEASE CLUTCH PEDAL**
This message displays and a chime sounds if the manual transmission clutch pedal is partially applied for an extended period of time while the vehicle is being driven. Driving with the clutch pedal applied can reduce the life of the clutch. Fully release the clutch pedal after each gear change.

**REDUCED PERFORMANCE — REDUCE CLUTCH USE**
This message displays and engine torque is momentarily limited if excessive manual transmission clutch slip is detected while the clutch pedal is fully released. Reduce clutch slip during acceleration from a stop and during gear changes to allow the clutch to cool. This should prevent further slips with the clutch pedal fully released. If this message displays repeatedly, see your dealer.

**SERVICE TRANSMISSION**
This message displays if there is a problem with the transmission. See your dealer.

**TRANSMISSION HOT — SLOW DOWN**
This message displays and a chime sounds if the manual transmission fluid is hot and if the vehicle speed is high. Driving with the manual transmission fluid temperature high can cause damage to the vehicle. Drive at a slower speed to cool the manual transmission fluid. This message clears when the vehicle has slowed sufficiently or if the manual transmission fluid has cooled sufficiently.

**Vehicle Reminder Messages**

**ICE POSSIBLE DRIVE WITH CARE**
This message displays when ice conditions are possible.
STEERING COLUMN IS LOCKED
This message displays when the steering column is locked.

Vehicle Speed Messages
For more information on these messages, see Diesel Exhaust Fluid 223.

XXX KM (MI) UNTIL 105 KM/H (65 MPH) MAX SPEED
This message will be displayed along with other messages. These messages include EXHAUST FLUID EMPTY REFILL NOW, EXHAUST FLUID QUALITY POOR, SERVICE EMISSION SYSTEM, or SERVICE EXHAUST FLUID SYSTEM. The vehicle speed will be limited to 105 km/h (65 mph) when the countdown is over.

XXX KM (MI) UNTIL 88 KM/H (55 MPH) MAX SPEED
This message will be displayed along with other messages. These messages include EXHAUST FLUID EMPTY REFILL NOW, EXHAUST FLUID QUALITY POOR, or SERVICE EXHAUST FLUID SYSTEM. The vehicle speed will be limited to 88 km/h (55 mph) when the countdown is over.

XXX KM (MI) UNTIL 7 KM/H (4 MPH) MAX SPEED
This message will be displayed along with other messages. These messages include EXHAUST FLUID EMPTY REFILL NOW, EXHAUST FLUID QUALITY POOR, or SERVICE EXHAUST FLUID SYSTEM. The vehicle speed will be limited to 7 km/h (4 mph) when the countdown is over.

SPEED LIMITED TO 105 KM/H (65 MPH)
This message will be displayed along with other messages. These messages include EXHAUST FLUID EMPTY REFILL NOW, EXHAUST FLUID QUALITY POOR, SERVICE EMISSION SYSTEM, or SERVICE EXHAUST FLUID SYSTEM. When this message is displayed, the vehicle speed is being limited to 105 km/h (65 mph).

SPEED LIMITED TO 88 KM/H (55 MPH)
This message will be displayed along with other messages. These messages include EXHAUST FLUID EMPTY REFILL NOW, EXHAUST FLUID QUALITY POOR, SERVICE EMISSION SYSTEM, or SERVICE EXHAUST FLUID SYSTEM. When this message is displayed, the vehicle speed is being limited to 88 km/h (55 mph).

SPEED LIMITED TO 7 KM/H (4 MPH)
This message will be displayed along with other messages. These messages include EXHAUST FLUID EMPTY REFILL NOW, EXHAUST FLUID QUALITY POOR, or SERVICE EXHAUST FLUID SYSTEM. When this message is displayed, the vehicle speed is being limited to 7 km/h (4 mph).
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TRANSITIONING TO XX KM/H (XX MPH) MAX SPEED
This message will be displayed along with other messages. These messages include EXHAUST FLUID EMPTY REFILL NOW, EXHAUST FLUID QUALITY POOR, SERVICE EMISSION SYSTEM, or SERVICE EXHAUST FLUID SYSTEM. When this message is displayed, the end of the countdown has been reached and the vehicle speed is being limited.

Vehicle Personalization
Use the audio system controls to access the personalization menus for customizing vehicle features. The following are all possible personalization features. Depending on the vehicle, some may not be available.

Base Radio Audio System Controls
1. Press to access the Home Page Menu.
2. or : Touch to scroll through the menus or setup items.
3. : Touch to exit or return to the previous screen or menu.

Uplevel Radio Audio System Controls
1. Press the desired feature to display a list of available options.
2. Press to select the desired feature setting.
3. Press BACK on the faceplate or to return to the previous menu or exit.

Turn the vehicle to ON/RUN to access the Settings menu, then select SETTINGS from the Home Page on the infotainment display.

Personalization Menus
The following list of menu items may be available:
- Time and Date
- Language (Language)
- Rear Seat Reminder
- Teen Driver
- Valet Mode
- Radio
- Vehicle
- Bluetooth
- Apple CarPlay
- Android Auto
- USB Auto Launch
- Voice
- Display
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- Rear Camera
- Return to Factory Settings
- Software Information

Detailed information for each menu follows.

**Time and Date**
Manually set the time and date. See Clock 111.

**Language (Language)**
Select Language, then select from the available language(s).
The selected language will display on the system, and voice recognition will reflect the selected language.

**Rear Seat Reminder**
This allows for a chime and a message ‘Look in Rear Seat’ when the rear door has been opened before or during operation of the vehicle.
Select Off or On.

**Teen Driver**
See “Teen Driver” under “Settings” in the infotainment manual.

**Valet Mode**
This will lock the infotainment system and steering wheel controls. It may also limit access to vehicle storage locations (if equipped).

To enable valet mode:
1. Enter a four-digit code on the keypad.
2. Select Enter to go to the confirmation screen.
3. Re-enter the four-digit code.

Press LOCK or UNLOCK to lock or unlock the system. Press Back to go back to the previous menu.

**Radio**
Press and the following may display:
- Manage Favorites
- Number of Favorites Shown
- Audible Touch Feedback
- Text Scroll

- Tone Settings
- Auto Volume
- Maximum Startup Volume
- Audio Cue Volume

**Manage Favorites**
This allows favorites to be edited. See “Storing a Station as a Favorite” in AM-FM Radio 170 or “Manage Favorites” in “Settings” under “Radio” in the infotainment manual.

**Number of Favorites Shown**
Press to set the number of favorites to display.
Select the desired number or select Auto and the infotainment system will automatically adjust the number of favorites shown.

**Audible Touch Feedback**
This allows Audible Touch Feedback to be turned on or off.
Select Off or On.
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Text Scroll
Select to see text scroll on the screen.
Select Off or On.

Tone Settings
Select to adjust the radio tone. See Operation 169 or “Tone Settings” under “AM-FM Radio” in the infotainment manual.

Auto Volume
This feature adjusts the volume based on vehicle speed and ambient noise.
Select Off, Low, Medium-Low, Medium, Medium-High, or High.

Maximum Startup Volume
This feature sets the maximum startup volume. If the vehicle is started and the volume is greater than this level, the volume is adjusted to this level. To set the maximum startup volume, turn the MENU knob or press + or − to increase or decrease.

Audio Cue Volume
This feature sets the volume of audio files played at system startup and shutdown.
Select On, then press + or − to increase or decrease the volume.

Vehicle
Select and the following may display:
- Climate and Air Quality
- Collision/Detection Systems
- Comfort and Convenience
- Lighting
- Power Door Locks
- Remote Lock, Unlock, Start

Climate and Air Quality
Select and the following may display:
- Auto Fan Speed
- Auto Defog
- Auto Rear Defog

Auto Fan Speed
This feature will set the auto fan speed.
Select Low, Medium, or High.

Auto Defog
When turned on and high humidity is detected, the climate control system may adjust to outside air supply and turn on the air conditioner or the heater. The fan speed may slightly increase to help prevent fogging. When high humidity is no longer detected, the system will return to its prior operation.
Select Off or On.
Auto Rear Defog

When on, this feature turns on the rear defogger at vehicle start when the interior temperature is cold and fog is likely. The auto rear defog function can be canceled by pressing \( \text{III} \). See “Rear Window Defogger” under Climate Control Systems (With Air Conditioning) \( \bowtie 190 \) or Climate Control Systems (With Heater Only) \( \bowtie 192 \) or Automatic Climate Control System \( \bowtie 193 \).

Select Off or On.

Collision/Detection Systems

Select and the following may display:
- Park Assist
- Rear Cross Traffic Alert

Park Assist

If equipped, this feature can assist in backing up and parking the vehicle. See Assistance Systems for Parking or Backing \( \bowtie 240 \).

Select On or Off.

Rear Cross Traffic Alert

This allows the Rear Cross Traffic Alert feature to be turned on or off.

Select On or Off. See “Rear Cross Traffic Alert (RCTA)” in Assistance Systems for Parking or Backing \( \bowtie 240 \).

Comfort and Convenience

Select and the following may display:
- Chime Volume

Chime Volume

This allows the selection of the chime volume level.

Turn the MENU knob, touch + or - to adjust the volume, or select Normal or High.

Lighting

Select and the following may display:
- Vehicle Locator Lights
- Exit Lighting

Vehicle Locator Lights

This feature will flash the exterior lamps and allows some of the exterior lamps and most of the interior lamps to turn on briefly when \( \text{on} \) on the Remote Keyless Entry (RKE) transmitter is pressed to locate the vehicle.

Select Off or On.

Exit Lighting

This allows the selection of how long the exterior lamps stay on when leaving the vehicle when it is dark outside.

Select Off, 30 Seconds, 60 Seconds, or 120 Seconds.

Power Door Locks

Select and the following may display:
- Unlocked Door Anti Lock Out
- Auto Door Unlock
- Delayed Door Lock
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**Unlocked Door Anti Lock Out**
When on, this feature will keep the driver door from locking until the door is closed. If this feature is turned on, the Delayed Door Lock menu will not be available.
Select Off or On.

**Auto Door Unlock**
This allows selection of which of the doors will automatically unlock when the vehicle is shifted into P (Park) with an automatic transmission or when the vehicle is turned off with a manual transmission.
Select Off, All Doors, or Driver Door.

**Delayed Door Lock**
When on, this feature will delay the locking of the doors. To override the delay, press the power door lock switch on the door.
Select Off or On.

**Remote Lock, Unlock, Start**
Select and the following may display:
- Remote Unlock Light Feedback
- Remote Lock Feedback
- Remote Door Unlock
- Remote Start Auto Heat Seats
- Passive Door Unlock
- Passive Door Lock
- Remote Left in Vehicle Alert

**Remote Unlock Light Feedback**
When on, the exterior lamps will flash when unlocking the vehicle with the RKE transmitter.
Select Off or Flash Lights.

**Remote Lock Feedback**
This allows selection of what type of feedback is given when locking the vehicle with the RKE transmitter.
Select Off, Lights and Horn, Lights Only, or Horn Only.

**Remote Door Unlock**
This allows selection of which doors will unlock when pressing 🔐 on the RKE transmitter.
Select All Doors or Driver Door.

**Remote Start Auto Heat Seats**
If equipped and turned on, this feature will turn the heated seats on when using remote start on cold days.
Select Off or On.

**Passive Door Unlock**
This allows the selection of what doors will unlock when using the button on the driver door to unlock the vehicle.
Select All Doors or Driver Door.

**Passive Door Lock**
This feature can be turned on, off, or on with feedback. See Remote Keyless Entry (RKE) System Operation (Key Access) 34 or Remote Keyless Entry (RKE) System Operation (Keyless Access) 36.
Select Off, On with Horn Chirp, or On.

**Remote Left in Vehicle Alert**
This feature sounds an alert when the RKE transmitter is left in the vehicle.
Select Off or On.

**Bluetooth**
Select and the following may display:

- Pair New Device
- Discoverable
- Device Management
- Ringtones
- Voice Mail Numbers
- Text Message Alerts

Pair New Device
Select to pair a new device. See “Pairing” under Bluetooth (Infotainment Controls) 181 or Bluetooth (Overview) 180 or “Pairing” in “Infotainment Controls” under “Bluetooth” in the infotainment manual.

Discoverable
This allows the system to find a device.
Select Off or On.

**Device Management**
Select to connect to a different phone source, disconnect a phone, or delete a phone.

**Ringtones**
Press to change the ring tone for the specific phone. The phone does not need to be connected to change the ring tones.

**Voice Mail Numbers**
This feature displays the voice mail number for all connected phones. To change the voice mail number, select EDIT. Type a new number, then select SAVE.

**Text Message Alerts**
This allows the feature to be turned on or off.
Select Off or On.

**Apple CarPlay™**
Select and the following may display:

- Apple CarPlay
- Manage Apple CarPlay Devices

**Manage Apple CarPlay Devices**
Select to manage Apple devices. Apple CarPlay must be on for this feature to be accessed.

**Android Auto™**
Select and the following may display:

- Android Auto
- Manage Android Auto Devices

**Android Auto**
This feature allows Android devices to be connected to the infotainment system through a USB port.
Select Off or On.

Manage Android Auto Devices
Select to manage Android devices. Android Auto must be on for this feature to be accessed.
### 156 Instruments and Controls

#### USB Auto Launch
This allows Android and Apple CarPlay devices to automatically connect when plugged into the USB port.
Select Off or On.

#### Voice
Select and the following may display:
- **Confidence Threshold**
- **Prompt Length**
- **Audio Feedback Speed**
- **Display “What Can I Say?” Tips**

#### Confidence Threshold
This feature allows the adjustment of the sensitivity of the speech recognition system.
Select Confirm More or Confirm Less.

#### Prompt Length
This feature adjusts the voice prompt length.
Select Short or Long.

#### Audio Feedback Speed
This feature adjusts the audio feedback speed.
Select Slow, Medium, or Fast.

#### Display “What Can I Say?” Tips
This feature gives voice command tips.
Select Off or On.

#### Rear Camera
Select and the following may display:
- Guidance Lines
- Rear Park Assist Symbols

#### Guidance Lines
Select to turn Off or On. See Assistance Systems for Parking or Backing $\diamond$ 240.

#### Rear Park Assist Symbols
Select to turn Off or On. See Assistance Systems for Parking or Backing $\diamond$ 240.

#### Return to Factory Settings
Select and the following may display:
- Restore Vehicle Settings
- Clear All Private Data
- Restore Radio Settings

#### Restore Vehicle Settings
This allows selection of restoring vehicle settings.
Select Restore or Cancel.
Clear All Private Data
This allows selection to clear all private information from the vehicle.
Select Delete or Cancel.

Restore Radio Settings
This allows selection to restore radio settings.
Select Restore or Cancel.

Software Information
Select to view the infotainment system current software information.
Lighting

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Exterior Lighting
Exterior Lamp Controls

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

There are four positions:

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

AUTO : Turns the headlamps on automatically at normal brightness, together with the parking lamps, taillamps, license plate lamps, instrument panel lights, and sidemarker lamps.

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

0 : Turns on the headlamps together with the parking lamps and instrument panel lights. A warning chime sounds if the driver door is opened when the ignition switch is off and the headlamps are on.

If equipped, press to turn the fog lamps on or off. See Fog Lamps 000.

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

The system turns the high-beam headlamps on when it is dark enough and there is no other traffic present.
This light comes on in the instrument cluster when the IntelliBeam system is enabled.

**Turning On and Enabling IntelliBeam**

To enable the IntelliBeam system, press 🔄 on the turn signal lever when the exterior lamp control is in the AUTO or 🔄 position. The blue high-beam on light appears on the instrument cluster when the high beams are on.

**Driving with IntelliBeam**

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

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

The high-beam headlamps remain on, under the automatic control, until one of the following situations occurs:

- The system detects an approaching vehicle’s high beams.
- The system detects a preceding vehicle’s taillamps.
- The outside light is bright enough that high-beam headlamps are not required.
- The vehicle’s speed drops below 20 km/h (12 mph).
- The IntelliBeam system is disabled by the high/low-beam changer or the flash-to-pass feature. If this happens, press 🔄 on the turn signal lever when the exterior lamp control is in the AUTO or 🔄 position to reactivate the IntelliBeam system. The instrument cluster light will come on to indicate the IntelliBeam system is reactivated. See Headlamp High/Low-Beam Changer 🔄 160 and Flash-to-Pass 🔄 160.

The high beams may not turn off automatically if the system cannot detect another vehicle’s lamps because of any of the following:

- The other vehicle’s lamps are missing, damaged, obstructed from view, or otherwise undetected.
- The other vehicle’s lamps are covered with dirt, snow, and/or road spray.
- The other vehicle’s lamps cannot be detected due to dense exhaust, smoke, fog, snow, road spray, mist, or other airborne obstructions.
160 Lighting

- The vehicle's windshield is dirty, cracked, or obstructed by something that blocks the view of the light sensor.
- The vehicle is loaded such that the front end points upward, causing the light sensor to aim high and not detect headlamps and taillamps.
- The vehicle is being driven on winding or hilly roads.

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

Headlamp High/ Low-Beam Changer

Push the turn signal lever toward the instrument panel to change the headlamps from low to high beam. Pull the turn signal lever toward you and release it to return to low-beam headlamps.

When the high-beam headlamps are on, this indicator light on the instrument cluster will also be on.

Flash-to-Pass

To flash the high beams, pull the turn signal lever all the way toward you. Then release it.

Daytime Running Lamps (DRL)

If equipped, DRL can make it easier for others to see the front of your vehicle during the day. Fully functional DRL are required on all vehicles first sold in Canada. The vehicle may have dedicated Light-Emitting Diode (LED) DRL.

The DRL will come on when all of the following conditions are met:
- The ignition is on.

- The exterior lamp control is in AUTO.
- The light sensor determines it is daytime.
- The parking brake is released or the vehicle is not in P (Park).

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

The DRL turn off when the headlamps are turned to or the ignition is off.

Automatic Headlamp System

The feature only works on vehicles with automatic light control.

When it is dark enough outside and the exterior lamp control is in the automatic position, the headlamps come on automatically. See Exterior Lamp Controls 158.
The vehicle has a light sensor on top of the instrument panel. Make sure it is not covered, or the headlamps will be on when they are not needed.

The system may also turn on the headlamps when driving through a parking garage or tunnel. If the vehicle is started in a dark garage, the automatic headlamp system comes on immediately. If it is light outside when the vehicle leaves the garage, there is a slight delay before the automatic headlamp system changes to the DRL. During that delay, the instrument cluster may not be as bright as usual. Make sure the instrument panel illumination control is in the full bright position. See Instrument Panel Illumination Control \(\rightarrow 163\).

**Lights On with Wipers**

This feature only works on vehicles with automatic light control.

If the windshield wipers are activated in daylight with the engine on, and the exterior lamp control is in AUTO, the headlamps, parking lamps, and other exterior lamps come on. The transition time for the lamps coming on varies based on wiper speed. When the wipers are not operating, these lamps turn off. Move the exterior lamp control to \(\bigcirc\) or \(\bigodot\) to disable this feature.

**Hazard Warning Flashers**

Press to make the front and rear turn signal lamps flash on and off. This warns others that you are having trouble. Press again to turn the flashers off.
162 Lighting

Turn and Lane-Change Signals

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

An arrow on the instrument cluster will flash in the direction of the turn or lane change.

Raise or lower the lever until the arrow starts to flash to signal a lane change. Hold it there until the lane change is complete. If the lever is moved momentarily to the lane change position, the arrow will flash three times.

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

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

Have any burned out bulbs replaced. If a bulb is not burned out, check the fuse. See Instrument Panel Fuse Block 298.

To turn on the fog lamps, the ignition must be on and the exterior lamp control must be in  or 5.

: Press to turn the fog lamps on or off. An indicator light on the instrument cluster comes on when the fog lamps are on.

Some localities have laws that require the headlamps to be on along with the fog lamps.

Fog Lamps

If equipped with front fog lamps, the button is on the exterior lamp control, on the outboard side of the steering wheel.
Interior Lighting

Instrument Panel Illumination Control

This feature controls the brightness of the instrument panel controls and the infotainment display. The thumbwheel is next to the exterior lamp control.

- : Move the thumbwheel up or down and hold, to brighten or dim the instrument panel controls and infotainment display.

Courtesy Lamps

The courtesy lamps come on automatically when any door is opened and the dome lamp is in the door position.

Dome Lamps

: Press to turn the lamps on automatically when a door is opened.

: Press to turn on the dome lamps.

Reading Lamps

Front Reading Lamps

: Press to turn the lamps off, even when a door is open.
164 Lighting

Rear Reading Lamps, If Equipped
There are front reading lamps on the overhead console and rear reading lamps in the headliner, if equipped.

<Entry Lighting>

If equipped with automatic light control, some exterior lamps and most of the interior lamps turn on briefly at night or in areas with limited lighting when the Remote Keyless Entry (RKE) system is used. For more information, see Remote Keyless Entry (RKE) System Operation (Key Access) \(\rightarrow\) 34 or Remote Keyless Entry (RKE) System Operation (Keyless Access) \(\rightarrow\) 36. After about 30 seconds the exterior lamps turn off, then the dome lamps and remaining interior lamps dim to off. Entry lighting can be disabled manually by changing the ignition out of the OFF position, or by pressing the RKE transmitter button.

This feature can be changed. See Vehicle Personalization \(\rightarrow\) 150.

<Exit Lighting>

If equipped with automatic light control, some exterior lamps come on at night, or in areas with limited lighting, when the key is removed from the ignition. The dome lamps also come on when the key is removed from the ignition. The exterior lamps and dome lamps remain on after the door is closed for a set amount of time, then automatically turn off.

If equipped with Keyless Access, the exterior lamps automatically turn on when a door is opened after the ignition is changed to the OFF position. The dome lamps also come on after the ignition is changed to the OFF position. See Ignition Positions (Keyless Access) \(\rightarrow\) 212 or Ignition Positions (Key Access) \(\rightarrow\) 210.

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

This feature can be changed. See Vehicle Personalization \(\rightarrow\) 150.

Lighting Features

Entry Lighting

If equipped with automatic light control, some exterior lamps and most of the interior lamps turn on briefly at night or in areas with limited lighting when the Remote Keyless Entry (RKE) system is used. For more information, see Remote Keyless Entry (RKE) System Operation (Key Access) \(\rightarrow\) 34 or Remote Keyless Entry (RKE) System Operation (Keyless Access) \(\rightarrow\) 36. After about 30 seconds the exterior lamps turn off, then the dome lamps and remaining interior lamps dim to off. Entry lighting can be disabled manually by changing the ignition out of the OFF position, or by pressing the RKE transmitter button.

This feature can be changed. See Vehicle Personalization \(\rightarrow\) 150.
Battery Power Protection

The battery saver feature is designed to protect the vehicle’s battery.

If some interior lamps are left on and the ignition is turned off, the battery rundown protection system automatically turns the lamp off after some time.

Exterior Lighting Battery Saver

The exterior lamps turn off about 10 minutes after the ignition is turned off, if the parking lamps or headlamps have been manually left on. This protects against draining the battery. To restart the 10-minute timer, turn the exterior lamp control to the ◇ or ○ position and then back to the ● or ▲ position.

To keep the lamps on for more than 10 minutes, the ignition must be in the ACC/ACCESSORY or ON/RUN/START position.
## Infotainment System

### Introduction
- Infotainment information is included in this manual. See the infotainment manual for information on other available infotainment systems.

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### Warning

Taking your eyes off the road for too long or too often while using any infotainment feature can cause a crash. You or others could be injured or killed. Do not give extended attention to infotainment tasks while driving. Limit your glances at the vehicle displays and focus your attention on driving. Use voice commands whenever possible.
Infotainment System

The infotainment system has built-in features intended to help avoid distraction by disabling some functions when driving. These functions may gray out when they are unavailable. Many infotainment features are also available through the instrument cluster and steering wheel controls.

Before driving:

- Become familiar with the operation, faceplate buttons, and screen buttons.
- Set up the audio by presetting favorite stations, setting the tone, and adjusting the speakers.
- Set up phone numbers in advance so they can be called easily by pressing a single button or by using a single voice command if equipped with Bluetooth phone capability.

See Defensive Driving 201.

To play the infotainment system with the ignition off, see Retained Accessory Power (RAP) 219.

Theft-Deterrent Feature

The infotainment system has an electronic security system installed to prevent theft.

The infotainment system only works in the vehicle in which it was first installed, and cannot be used in another vehicle.
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Overview

1. Press to go to the Home Page. See Home Page 169.

2. Radio: Press and release to fast seek the strongest previous station or channel.
   USB/Music/Pictures: Press to go to the previous content. Press and hold to fast rewind.

3. Press to turn the power on.
   Press and hold to turn the power off.
   Press to mute/unmute the system when on.
   Turn to decrease or increase the volume.

4. Radio: Press and release to fast seek the next strongest station or channel.
• USB/Music/Pictures: Press to go to the next content. Press and hold to fast forward.

5. Phone
• Press and release to access the phone screen, answer an incoming call, or access the device home screen.

Home Page

Touchscreen Buttons

Touchscreen buttons show on the screen when available. When a function is unavailable, the button may gray out. When a function is selected, the button may highlight.

Home Page Features

Press \( \mathfrak{Q} \) to go to the Home Page.

Audio: Touch to select AM, FM, SiriusXM\textsuperscript{\textregistered} (if equipped), USB/iPod/Bluetooth Audio, or AUX.

Gallery: Touch to view a picture or movie.

Phone: Touch to activate the phone features (if equipped). See Bluetooth (Infotainment Controls) \( \Rightarrow 181 \) or Bluetooth (Overview) \( \Rightarrow 180 \).

Projection: Touch to access supported devices when connected. See USB Port \( \Rightarrow 174 \).

Settings: Touch to access the Personalization menu. See Vehicle Personalization \( \Rightarrow 150 \).

Climate: If equipped, touch to access the Climate menu. See Climate Control Systems (With Air Conditioning) \( \Rightarrow 190 \) or Climate Control Systems (With Heater Only) \( \Rightarrow 192 \).

OnStar: If equipped, touch to access the OnStar menu. See OnStar Overview \( \Rightarrow 383 \).

Operation

Radio Controls

The infotainment system is operated by using the pushbuttons, menus shown on the display, and steering wheel controls.

Turning the System On or Off

\( \mathcal{O} \): Press to turn the radio on. Press and hold to turn the radio off.

Automatic Switch-Off

If the infotainment system has been turned on after the ignition is turned off, the system will turn off automatically after 10 minutes.
170 Infotainment System

Volume Control

✧ : Turn to increase or decrease. Press when the system is on to mute and unmute the system.

System Settings

Auto Volume

This feature automatically adjusts the radio volume to compensate for road and wind noise.

The level of volume compensation can be selected, or the feature can be turned off.

Tone Settings

The tone settings can be set for each radio band and each audio player source.

Custom Tone Settings

1. Touch SETTINGS from the home screen.
2. Select Radio.
3. Select Tone Settings.
   - Bass, Midrange, or Treble: Touch – or +.
   - Fader or Balance: Adjust the front/rear or left/right speakers by dragging the dot in the vehicle image on the screen.
4. Touch ⬅️ to go back to the source screen.

Radio

AM-FM Radio

Playing the Radio

Audio Source Menu

✧ : Press to go to the Home Page.
✧ : Press to turn on, mute, or unmute the system. Press and hold to turn off the system.

Selecting a Band

1. Press ⬆️.
2. Touch AUDIO.
3. Touch Source.
4. Select AM, FM, or SXM (if equipped).

The last station that was playing starts playing again.
Selecting a Station

Seek Tuning
If the radio station is not known:
Press κκ or κκ to automatically search for available radio stations.

Direct Tune
From the AM or FM menu:
1. Touch Tune.
2. Enter the station number.
3. Touch Go.

Favorites
1. Touch < or > to scroll through the favorite pages.
2. Touch the station to select it.

Update Station List
- From the AM or FM menu, touch Menu, then touch Update Station List. The broadcasting list updating will begin.
- During the AM or FM broadcasting list update, touch Cancel to stop the updates.

Station List
1. From the AM or FM menu, touch Menu.
2. Select Station List.
3. Touch ▲ or ▼ to scroll through the list. Touch the station to select it.

Menu
Touch to choose between available menus for the current source.

Storing a Station as a Favorite
Stations from all bands can be stored in any order in the favorite pages.
Up to 25 stations can be stored.

Storing Stations
To store the station to a position in the list, touch the corresponding button 1–5 until a beep is heard.
1. Select the desired station.
2. Touch < or > to select the desired page of saved favorites.
3. Touch and hold any of the preset buttons to save the current radio station to that button of the selected favorites page.

To change a preset button, tune to the new desired radio station and touch and hold the preset button.

Satellite Radio (If Equipped)
Vehicles with an SXM Satellite Radio tuner and a valid SiriusXM® Satellite Radio subscription can receive SiriusXM programming.

SiriusXM Satellite Radio Service
SiriusXM is a satellite radio service based in the 48 contiguous United States and 10 Canadian provinces. SiriusXM Satellite Radio has a wide variety of programming and commercial-free music, coast to coast, and in digital-quality sound. During your trial or when you subscribe, you will get unlimited access to SiriusXM Radio Online for when you are not in the vehicle.
172 Infotainment System

A service fee is required to receive the SiriusXM service. If SiriusXM service needs to be reactivated, the radio will display “No Subscription Please Renew” on channel SXM1. For more information, contact SiriusXM at www.siriusxm.com or 1-866-635-2349 (U.S.), and www.xmradio.ca or 1-877-209-0079 (Canada).

Listening to SiriusXM Radio

1. Press \.
2. Touch AUDIO.
3. Touch Source.
4. Touch SXM and the most recent listened to SiriusXM channel will display.

Selecting a Category

From Menu, touch Categories, then touch the desired category or from Categories, touch ▲ or ▼ to find the desired channel. Touch the channel to select it.

Selecting a Channel

Press ◀ or ▶ to seek the previous or next channel.

Using the Preset Buttons

Up to five favorites pages can be saved, and each page can store up to five channels.

To change a preset button, tune to the new desired channel and hold the button.

Listening to Preset Channels

1. Touch < or > repeatedly to select the desired favorites page.
2. Touch the preset button to listen to the channel.

Using the SiriusXM Menu

Operation

1. Touch MENU on the SXM radio screen.
2. Touch the menu to select the desired item or to display the detail menu item.

3. Touch ◀ to return to the previous menu.

Channel List

1. Touch Channel List from the SXM menu. The channel list is displayed.
2. Touch ▲ or ▼ to find the desired channel. Touch the channel to select it.

Tone Settings

1. Touch Tone Settings. See “Tone Settings” under Operation Δ 169.
2. Touch ▼

Auto Volume

2. Touch ◀.
Categories
1. Touch Categories.
2. Touch ▲ or ▼ to find the desired category. Touch the category to select it.

Explicit Content Filter
When on, only a filtered list of channels will be received. When off, all regular SXM programming subscribed to will be received.
1. Touch SXM Explicit Filter.
2. Select to enable or disable.

Radio Reception
Frequency interference and static can occur during normal radio reception if items such as mobile phone chargers, vehicle convenience accessories, and external electronic devices are plugged into the accessory power outlet. If there is interference or static, unplug the item from the accessory power outlet.

FM
FM signals only reach about 16 to 65 km (10 to 40 mi). Although the radio has a built-in electronic circuit that automatically works to reduce interference, some static can occur, especially around tall buildings or hills, causing the sound to fade in and out.

AM
The range for most AM stations is greater than for FM, especially at night. The longer range can cause station frequencies to interfere with each other. Static can occur when things like storms and power lines interfere with radio reception. When this happens, try reducing the treble on the radio.

SiriusXM® Satellite Radio Service
SiriusXM Satellite Radio Service gives digital radio reception from coast to coast in the 48 contiguous United States, and in Canada. Just as with FM, tall buildings or hills can interfere with satellite radio signals, causing the sound to fade in and out. In addition, traveling or standing under heavy foliage, bridges, garages, or tunnels may cause loss of the SiriusXM signal for a period of time.

Cell Phone Usage
Cell phone usage, such as making or receiving phone calls, charging, or just having the phone on may cause static interference in the radio. Unplug the phone or turn it off if this happens.

Multi-Band Antenna
The multi-band antenna is on the roof of the vehicle. The antenna is used for OnStar, the SiriusXM Satellite Radio Service System, and GPS (Global Positioning System), if the vehicle has these features. Keep the antenna clear of obstructions for clear reception.

If the vehicle has a sunroof, and it is open, reception can also be affected.
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Audio Players

Avoiding Untrusted Media Devices

When using media devices such as CDs, DVDs, Blu-Ray Discs®, SD cards, USB drives, and mobile devices, consider the source. Untrusted media devices could contain files that affect system operation or performance. Avoid use if the content or origin cannot be trusted.

USB Port

Using the USB Port

The infotainment system can play music by connecting an auxiliary device to the USB port.

USB Support

This vehicle may have two USB ports. One port in the center console for data and charging and one in the rear of the center console for charging only. External devices such as iPhones/iPods® and USB storage devices may be connected.

USB Supported Devices
- USB Flash Drives
- Portable USB Hard Drives

Not all iPods and USB drives are compatible with the USB port. Make sure the iPod has the latest firmware from Apple® for proper operation. iPod firmware can be updated using the latest iTunes® application. See www.apple.com/itunes.

For help with identifying your iPod, go to www.apple.com/support.

The USB port can play both lower and upper case .mp3, .wma, .ogg, and .wav files stored on a USB storage device.

Supported Apple® Devices

To view supported devices in the U.S., see www.my.chevrolet.com/learned.

To view supported devices in Canada, see www.chevroletowner.ca.

To view supported devices in Mexico, see your dealer.

USB Supported File and Folder Structure

The infotainment system supports:
- FAT16
- FAT32
- exFAT

Connecting a USB Storage Device or iPod/iPhone

To connect a USB storage device, connect the device to the USB port.

To connect an iPod/iPhone, connect one end of the device’s cable to the iPod/iPhone and the other end to the USB port.

The iPod/iPhone charges while it is connected to the vehicle if the vehicle is in ACC/ACCESSORY or ON/RUN. See Ignition Positions (Keyless Access) 212 or Ignition Positions (Key Access) 210. When the vehicle is turned off, the iPod/iPhone automatically powers off and will not charge or draw power from the vehicle's battery.
Infotainment System

For more information on USB usage, see “Audio System Information” following.

Audio System Information
The infotainment system can play the music files contained in the USB storage device or iPod/iPhone products.

Using MP3/WMA/OGG/WAV Files
- Music files with .mp3, .wma, .ogg, and .wav file name extensions can be played.
- MP3 files that can be played: Bit rate: 8 kbps to 320 kbps. Sampling frequency: 48 kHz, 44.1 kHz, 32 kHz, 24 kHz, 22.05 kHz, and 16 kHz.
- Files with a bit rate above 128 kbps will result in higher quality sound.
- ID3 Tag information for MP3 files, such as the album name and the artist, can be played.
- To display album title, track title, and artist information, the file should be compatible with the ID3 Tag V1 and V2 formats.

Using USB Storage Devices and an iPod/iPhone
- Use a USB or flash memory type storage device. Do not connect using a USB adaptor.
- Do not connect and reconnect the USB device repeatedly in a short time, as this may cause static electricity and problems using the device.
- Use a USB device with a metal connecting terminal.
- Connection with i-Stick Type USB storage devices may be faulty due to vehicle vibration.
- Do not touch the USB connecting terminal.
- Only USB storage devices formatted in FAT16/32 or exFAT file systems are recognized. NTFS and other file systems are not recognized.
- The time it takes to process files will depend on the USB storage device type and capacity, and the type of files stored.

- Some USB storage device files may not be compatible.
- Up to two USB devices and one iPod can be played through a USB hub. All devices may not be supported, depending on the performance of the USB hub. If there is not enough power supply, it may not operate normally.
- Do not disconnect the USB storage device while it is playing. This may cause damage to the product or affect the performance of the USB device.
- Disconnect the USB storage device when the ignition is turned off. If the ignition is turned on while the USB device is connected, the USB device may be damaged or may not operate normally.
- USB storage devices can only be connected for playing music, viewing photo files, or upgrading.
176 Infotainment System

- Do not use the USB terminal to charge USB accessory equipment. The heat generated may cause performance issues or damage.
- Music files to which Digital Right Management (DRM) is applied cannot be played.
- USB storage device that are in capacity with a limit of 5,000 files, such as music, photo, video, 15 stages of folder structure. Normal usage cannot be guaranteed for a storage device that exceeds this limit. The iPod/iPhone can play all music files that are supported. The music file lists will only display up to 5,000 files on the screen. These files are sorted in alphabetical order.
- Some iPod/iPhone product models may not support the connectivity or functionality of this product.
- Only connect the iPod/iPhone with connection cables supported by iPod/iPhone products. Other connection cables cannot be used.
- The iPod/iPhone may be damaged if it is connected to the vehicle with the ignition on. When not in use, disconnect the iPod/iPhone.
- When the iPod/iPhone is connected to the USB port by using the iPod/iPhone cable, the Bluetooth music is not supported.
- The iPod/iPhone playback functions and the information displayed may be different when played on the infotainment system.
- Refer to the table for the classification items related to the search function provided by the iPod/iPhone.

<table>
<thead>
<tr>
<th>Classification</th>
<th>Step 1</th>
<th>Step 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Playlists</td>
<td>Playlists</td>
<td>Songs</td>
</tr>
<tr>
<td>Artists</td>
<td>Albums/All Songs</td>
<td>Songs</td>
</tr>
<tr>
<td>Albums</td>
<td>Albums</td>
<td>Songs</td>
</tr>
<tr>
<td>Songs</td>
<td>Songs</td>
<td></td>
</tr>
<tr>
<td>Genres</td>
<td>Albums/All Songs</td>
<td>Songs</td>
</tr>
<tr>
<td>Composer</td>
<td>Albums/All Songs</td>
<td>Songs</td>
</tr>
<tr>
<td>Audiobooks</td>
<td>Songs</td>
<td></td>
</tr>
</tbody>
</table>

USB Player

Playing Music from a USB Device

- Connect the USB device to the USB port.
- Play will start automatically after the system has finished reading the USB device.
- If a non-readable USB device is connected, an error message displays and the system will switch to the previous audio function.
Infotainment System

Changing to Next/Previous Files
- Touch ‹ to change to the next file.
- Touch ‹ within five seconds of the playback time to play the previous file.

Returning to the Beginning of the Current File
Touch ‹ after five seconds of the playback time.

Scanning Forward or Backward
Touch and hold ‹ or ‹ during playback to rewind or fast forward. Release the button to resume playback at normal speed.

Playing a File Randomly
Touch † during playback.
- ON: Plays all files randomly.
- OFF: Returns to normal playback.

Using the USB Music Menu
- Touch Menu during playback.
- Touch the desired menu.

Browse Music
2. Touch the desired music.

Tone Settings
- Touch Tone Settings. The Tone Settings menu is displayed. See “Tone Settings” under “Radio Controls” in Operation 169.

Auto Volume

Traffic Program (If Equipped)
- Touch On or Off.

If the USB device is already connected:
- Press 1.
- Touch AUDIO.
- Touch Source.
- Touch USB.

To stop the USB device and select another media source, touch Source, then select the other source.

To remove the USB device, select another function, then remove the USB device.

Pause
- Touch † to pause.
- Touch † to resume.
178 Infotainment System

MTP (Media Transfer Protocol)
- Connect an MTP supported device.
- Play will start automatically after the system has finished reading the MTP device.
- If a non-readable MTP device is connected, an error message displays and the system will switch to the previous audio function.

iPod/iPhone Player
This feature is limited to models supporting the iPod/iPhone connection.

Playing Music Files
- Connect the iPod/iPhone to the USB port.
- Play will start from the previously played point after the system has finished reading the USB device.
- If a non-readable USB device is connected, an error message displays and the system will switch to the previous audio function.

If the iPod/iPhone is already connected:
1. Press \[ \text{Audio} \].
2. Touch AUDIO.
3. Touch Source.
4. Touch iPod.

To stop the device and select another media source, touch Source, then select the other source.

To remove the device, select another function, then remove the device.

Pause
- Touch \[ \text{Pause} \] to pause.
- Touch \[ \text{Resume} \] to resume.

Changing to Next/Previous Song
- Touch \[ \text{Next} \] to change to the next song.
- Touch \[ \text{Previous} \] within two seconds of the playback time to play the previous file.

Returning to the Beginning of the Current File
Touch \[ \text{Previous} \] after two seconds of the playback time.

Scanning Forward or Backward
Touch and hold \[ \text{Previous} \] or \[ \text{Next} \] during playback to rewind or fast forward. Release the button to resume playback at normal speed.

Playing a File Randomly
Touch \[ \text{Random} \] during playback.
- ON: Plays all files randomly.
- OFF: Returns to normal playback.

Using the iPod Menu
- Touch Menu during playback.
- Touch the appropriate play mode.

Browse Music
2. Touch the desired music.
Infotainment System 179

Tone Settings
- Touch Tone Settings. The Tone Settings menu is displayed. See “Tone Settings” under “Radio Controls” in Operation 169.

Auto Volume

Picture System Information
The infotainment system can view picture files stored on a USB storage device and devices that support Media Transfer Protocol (MTP).
- Supported file extensions: .jpg, .bmp, .png, .gif.
- Animated GIF files are not supported.
- Some files may not operate due to a different recording format or the condition of the file.

Viewing Pictures
1. Connect the USB device to the USB port.
2. Touch the screen to open to full screen. Touch the screen again to return to the previous screen.
   - If the USB device is already connected:
     1. Press .
     2. Touch GALLERY.

Some features are disabled while the vehicle is in motion.

Viewing a Slide Show
1. Touch \ from the picture screen.
2. Touch the screen to cancel the slide show during the slide show playback.

Viewing a Previous or Next Picture
Touch < or > from the picture screen.

Rotating a Picture
Touch U from the picture screen.

Enlarging a Picture
Touch Q from the picture screen.

Using the USB Picture Menu
1. Touch MENU from the picture screen.
2. Touch the appropriate menu:
   - Slide Show Time: Allows selection of the slide show interval.
   - Clock, Temp. Display: Allows selection of On or Off to show the clock and temperature on the full screen.
   - Display Settings: Adjusts for Brightness and Contrast.
3. Touch to exit.
180 Infotainment System

Phone

Bluetooth (Overview)

If equipped with Bluetooth® capability, the system can interact with many Bluetooth phones, PDAs, or other devices to:

- Place and receive hands-free calls.
- Transmit hands-free data.
- Play audio streaming files.

The device must be paired first. See “Pairing” later in this section.

To minimize driver distraction, before driving, and with the vehicle parked:

- Become familiar with the features of the cell phone. Organize the phone book and contact lists clearly and delete duplicate or rarely used entries. If possible, program speed dial or other shortcuts.
- Review the controls and operation of the infotainment system.

- Pair cell phone(s) to the vehicle. The system may not work with all cell phones. See “Pairing” later in this section.

<table>
<thead>
<tr>
<th>Warning</th>
</tr>
</thead>
<tbody>
<tr>
<td>When using a cell phone, it can be distracting to look too long or too often at the screen of the phone or the infotainment system. Taking your eyes off the road too long or too often could cause a crash resulting in injury or death. Focus your attention on driving.</td>
</tr>
</tbody>
</table>

Vehicles with a Bluetooth system can use a Bluetooth-capable cell phone with a Hands-Free Profile to make and receive phone calls. The infotainment system is used to control the system. The system can be used while in ACC/ACCESSORY or ON/RUN. See Ignition Positions (Keyless Access) or Ignition Positions (Key Access). Not all phones support all functions and not all phones work with the Bluetooth system. See www.gm.com/bluetooth for more information about compatible phones in the U.S. and Canada only.

There may be restrictions on using Bluetooth wireless technology in some locations.

Due to the variety of Bluetooth devices and their firmware versions, the device may respond differently when performing over Bluetooth.

Refer to the cell phone manufacturer’s user guide for questions about the phone’s Bluetooth functionality.

Bluetooth Controls

For vehicles equipped with Bluetooth capability, use the buttons on the infotainment system and the steering wheel to operate the system.
Steering Wheel Controls

Bluetooth (Infotainment Controls)

To use infotainment controls to access the menu system, see Overview 168.

Pairing

A Bluetooth-enabled cell phone must be paired to the Bluetooth system and then connected to the vehicle before it can be used. See your cell phone manufacturer's user guide for Bluetooth functions before pairing the cell phone. If a Bluetooth phone is not connected, calls will be made using OnStar Hands-Free Calling, if available. See OnStar Overview 383.

Pairing Information

- A Bluetooth phone with MP3 capability cannot be paired to the vehicle as a phone and an MP3 player at the same time.
- Up to 10 cell phones can be paired to the Bluetooth system.
- The pairing process is disabled when the vehicle is moving.

- Pairing only needs to be completed once, unless the pairing information on the cell phone changes or the cell phone is deleted from the system.
- Only one paired cell phone can be connected to the Bluetooth system at a time.
- If multiple paired cell phones are within range of the system, the system connects to the first available paired cell phone in the order that they were first paired.

When the Bluetooth device and infotainment system are successfully paired, the phone book is downloaded automatically. This is dependent on the type of phone paired. If the automatic download does not occur, proceed with the phone book download on the phone.

Pairing a Phone – SSP and No Paired Device

When there is no paired device on the infotainment system and Simple Secure Pairing (SSP) is supported:

1. Press ⌂.
Infotainment System

2. Touch PHONE, press  on the faceplate, or press ☎ on the steering wheel without OnStar.
3. Touch Search Device.
4. Touch the desired device to pair on the searched list screen.
5. Touch Yes on the pop-up screen of the Bluetooth device and infotainment system.
6. When the Bluetooth device and infotainment system are successfully paired, the phone screen is displayed on the infotainment system.

Pairing a Phone – SSP and Paired Device

When a paired device is on the infotainment system and SSP is supported:

1. Press 📞.
2. Touch SETTINGS.
3. Touch Bluetooth, then Device Management.
4. Touch the desired device to pair. When the Bluetooth device and infotainment system are successfully paired, 📞 / 📞 is displayed on the pair device screen. If no desired device is available go to Step 5.
5. Touch Search Device to search for the desired device.
6. Touch the desired device to pair on the searched list screen.
7. Touch Yes on the pop-up screen of the Bluetooth device and infotainment system.
   - The connected phone is highlighted by ☎.
   - 📞 / 📞 indicates the hands-free and phone music functions are enabled.
   - 📞 indicates only the hands-free function is enabled.
   - 📞 indicates only Bluetooth music is enabled.

Pairing a Phone – No SSP and No Paired Device

When there is no paired device on the infotainment system and SSP is not supported:

1. Press 📞.
2. Touch PHONE, press  on the faceplate, or press ☎ on the steering wheel without OnStar.
3. Touch Search Device.
4. Touch the desired device to pair on the searched list screen.
5. Input the Personal Identification Number (PIN) code (default: 1234) to the Bluetooth device. When the Bluetooth device and infotainment system are successfully paired, the PHONE screen is displayed on the infotainment system.

When the connection fails, a failure message is displayed on the infotainment system.
Infotainment System

If a Bluetooth device was previously connected, the infotainment system executes the auto connection. However, if the Bluetooth setting on the Bluetooth device is turned off, a failure message is displayed on the infotainment system.

Pairing a Phone – No SSP and Paired Device

When a paired device is on the infotainment system and SSP is not supported:

1. Press 📞.
2. Touch SETTINGS.
3. Touch Bluetooth, then Device Management.
4. Touch the desired device to pair. When the Bluetooth device and infotainment system are successfully paired, 🎵 / 📞 is displayed on the pair device screen. If no desired device is available go to Step 5.
5. Touch Search Device to search for the desired device.
6. Touch the desired device to pair on the searched list screen.
7. Input the Personal Identification Number (PIN) code (default: 1234) to the Bluetooth device. When the Bluetooth device and infotainment system are successfully paired, 💭 / 📞 is displayed on the pair device screen.
   - The connected phone is highlighted by 📞.
   - 💭 / 📞 indicates the hands-free and phone music functions are enabled.
   - 📞 indicates only the hands-free function is enabled.
   - 💭 indicates only Bluetooth music is enabled.

Connecting a Paired Bluetooth Device

1. Press 📞.
2. Touch SETTINGS.

Checking the Bluetooth Connection

1. Press 📞.
2. Touch SETTINGS.
3. Touch Bluetooth, then Device Management.
4. The paired device will show.

Disconnecting a Bluetooth Device

1. Press 📞.
2. Touch SETTINGS.
3. Touch Bluetooth, then Device Management.
4. Touch the name of the device to be disconnected.
5. Touch Disconnect.

Deleting a Bluetooth Device

1. Press 📞.
2. Touch SETTINGS.
Infotainment System

3. Touch Bluetooth, then Device Management.
4. Touch the device to delete.
5. Touch  
6. Touch Delete.

Bluetooth Music

Before playing Bluetooth music, read the following information:

- A cell phone or Bluetooth device that supports Advanced Audio Distribution Profile (A2DP) versions over 1.2 must be registered and connected to the product.
- From the cell phone or Bluetooth device, find the Bluetooth device type to set/connect the item as a stereo headset.
-  will appear on the screen if the stereo headset is successfully connected.
- The sound played by the Bluetooth device is delivered through the infotainment system.

- Bluetooth music can be played only when a Bluetooth device has been connected. To play Bluetooth music, connect the Bluetooth phone to the infotainment system.
- If the Bluetooth device is disconnected while playing phone music, the music is discontinued. The audio streaming function may not be supported in some Bluetooth phones. Only one function can be used at a time between the Bluetooth hands-free or Phone music function. For example, if you convert to Bluetooth hands-free while playing Phone music, the music is discontinued. Playing music from the car is not possible when there are no music files stored in the cell phone.

Playing Bluetooth Music

1. Press  
2. Touch AUDIO.
3. Touch Source.
4. Touch Bluetooth.

Pause
Touch  to pause.
Touch  to resume.

Playing the Next Song
Touch  

Playing the Previous Song
Touch  after two seconds of playback time.

Returning to the Beginning of the Current Song
Touch  after two seconds of playback time.

Search
Touch and hold  or  to rewind or fast forward.

Playing Music Randomly
Touch  during playback. Touch again to return to normal play.
This function may not be supported depending on the Bluetooth device.
Do not change the track too quickly when playing Bluetooth music.

Conditions that may occur when playing Bluetooth music:

- It takes time to transmit data from the Bluetooth device to the infotainment system.
- If the cell phone or Bluetooth device is not in the waiting screen mode, it may not automatically play.
- The infotainment system transmits the order to play from the Bluetooth device in the Bluetooth music play mode. If this is done in a different mode, then the device transmits the order to stop. Depending on the Bluetooth device options, this order to play/stop may take time to activate.
- If the Bluetooth music playback is not functioning, then check to see if the Bluetooth device is in the waiting screen mode.
- Sounds may be cut off during the Bluetooth music playback.

- The infotainment system outputs the audio from the cell phone or Bluetooth device as it is transmitted.

Apple CarPlay and Android Auto

If equipped, Android Auto™ and/or Apple CarPlay™ capability may be available through a compatible smartphone. If available, a PROJECTION icon will appear as Android Auto or Car Play on the Home Page of the infotainment display.

To use Android Auto and/or Apple CarPlay:

1. Download the Android Auto app to your phone from the Google™ Play store. There is no app required for Apple CarPlay. Use the latest available operation system.

2. Connect your Android phone or Apple iPhone by using the compatible phone USB cable and plugging into a USB data port. For best performance, use the device’s factory-provided USB cable. Aftermarket or third-party cables may not work.

The PROJECTION icon on the Home Page will change to Android Auto or Apple CarPlay depending on the phone. Android Auto and/or Apple CarPlay may automatically launch upon USB connection. If not, touch the ANDROID AUTO and/or APPLE CARPLAY icon on the Home Page to launch.

For further information on how to set up Android Auto and Apple CarPlay in the vehicle, see www.my.chevrolet.com for U.S. and Canada only or Customer Assistance Offices 371.

Android Auto is provided by Google and is subject to Google’s terms and privacy policy. CarPlay is provided by Apple and is subject to Apple’s terms and privacy policy. For Android Auto support see https://support.google.com/androidauto or Apple CarPlay support at https://www.apple.com/ios/carplay/. Apple or Google may
Infotainment System

change or suspend availability at any time. Android Auto is a trademark of Google Inc.; Apple CarPlay is a trademark of Apple Inc.

Hands-Free Phone

General Information

Vehicles with a Hands-Free Phone system can use a Bluetooth-capable cell phone with a hands-free profile to make and receive phone calls. The infotainment system and voice control are used to operate the system. Not all phones support all functions and not all phones work with the Hands-Free Phone system.

Hands-Free Phone Controls

Use the buttons on the infotainment system and the steering wheel to operate the Hands-Free Phone system.

Steering Wheel Controls

Steering wheel controls can be used to:

- Answer incoming calls.
- Confirm system information.

Making a Call by Entering a Phone Number

1. Press \( 5 \) on the faceplate.
2. Press \{ \), then touch PHONE on the screen.
3. Press \( \) on the steering wheel.

If a wrong number is entered, touch \( \) to delete the number one digit at a time, or touch and hold \( \) to delete all digits of the number.

Switching a Call to the Cell Phone (Private Mode)

To switch the call from the cell phone to hands-free:

1. Touch \( \) again to switch back to hands-free.

Turning the Microphone On and Off

Touch \( \) to turn the microphone on or off.

Calling by Redial

To call by using redial:

- Press \( \) on the steering wheel controls to display the redial guidance screen.
- Touch \( \) on the phone screen.

Redialing is not possible when there is no call history.

Taking Calls

When a phone call comes through the connected Bluetooth cell phone, the audio system will be muted or paused and the phone will ring with the relevant information displayed.

Press \( \) on the steering wheel controls, touch \( \) on the screen, or press \( \) on the faceplate.
To decline the call, press on the steering wheel controls or touch Reject on the screen.

**Using the Contacts Menu**

1. Touch contacts on the phone screen.
2. Touch or to scroll through the list.
3. Touch the phone book entry to call.
4. If there is more than one number associated with the name, touch the number to dial.

**Searching for Contacts Entries**

1. Touch contacts on the phone screen.
2. Touch on the contacts screen.
3. Use the keypad to input the name to search. For details, see “Searching for a Name” following.
4. Touch the phone book entry to call.
5. If there is more than one number associated with the name, touch the number to dial.

When the Bluetooth device and infotainment system are successfully paired, the phone book will download. Some phones may not download automatically. If this happens, connect it again or proceed with the phone book download on the phone.

**Searching for a Name**

Select characters by using the keypad on the phone book screen. As characters are selected, the names that include those characters will display on the phone book screen. As more characters of the name are entered, the list of possible names is shortened.

To search for the name Alex:

1. Touch (abc) to select the first character.
2. Touch (jkl) three times to select the second character.
3. Touch (def) two times to select the third character.
4. Touch (wxy) two times to select the fourth character.

**Making a Call from Call History**

1. Touch Call History on the phone screen.
2. Touch one of the following for:
   - , All calls history.
   - , Dialed calls.
   - , Missed calls.
   - , Received calls.
3. Select the contact entry to call.
Infotainment System

Making a Call with Speed Dial Numbers
Touch and hold the speed dial number using the keypad on the phone screen.
Only speed dial numbers already stored on the cell phone can be used for speed dial calls. Up to two-digit speed dial numbers are supported.
For two-digit speed dial numbers, press and hold the second digit to make a call to the speed dial number.

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See Radio Frequency Statement § 379.

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Climate Controls

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Climate Control Systems

Climate Control Systems (With Air Conditioning)
The heating, cooling, defrosting, and ventilation for the vehicle can be controlled with this system.

1. Fan Control
2. A/C (Air Conditioning)
3. Air Delivery Mode Controls
4. Defrost
5. TEMP (Temperature Control)
6. Heated Front Seats (If Equipped)
7. Rear Window Defogger
8. Recirculation
   : Turn to increase or decrease the fan speed.

Temperature Control : Turn to increase or decrease the temperature.
Air Delivery Mode Control: Press to change the direction of the airflow. The indicator light in the button will turn on. The current mode appears in the display screen.

To change the current mode, select one of the following:

ǹ: Air is directed to the instrument panel outlets.
ǹ: Air is directed to the instrument panel outlets and the floor outlets.
ǹ: Air is directed to the floor outlets.
ǹ: Clears the windows of fog or moisture. Air is directed to the windshield and floor outlets.
ǹ: Clears the windshield of fog or frost more quickly. Air is directed to the windshield and side window outlets.

For best results, clear all snow and ice from the windshield before defrosting.

Do not drive the vehicle until all windows are clear.

Air Conditioning

A/C: Press to turn the air conditioning on or off. If the fan is turned off or the outside temperature falls below freezing, the air conditioning compressor will not work.

ǹ: Press to turn on the recirculation. An indicator light comes on. Air is recirculated inside the vehicle. It helps to quickly cool the air inside the vehicle and reduce the entry of outside air and odors.

Rear Window Defogger

ǹ: Press to turn the rear window defogger on or off. An indicator light on the button comes on to show that the rear window defogger is on.

The defogger only works when the ignition is in ON/RUN. The defogger turns off if the ignition is in the ACC/ACCESSORY or LOCK/OFF position.

Do not drive the vehicle until all windows are clear.

If equipped with heated outside rearview mirrors, they 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 54.

Caution

Do not use a razor blade or sharp object to clear the inside rear window. Do not adhere anything to the defogger grid lines in the rear glass. These actions may damage the rear defogger. Repairs would not be covered by the vehicle warranty.

ǹ or ǹ: If equipped, press to turn the heated seats on or off. See Heated Front Seats 64.
192 Climate Controls

Climate Control Systems (With Heater Only)

If equipped, the heating, defrosting, and ventilation for the vehicle can be controlled with this system.

1. Fan Control  
2. Defrost  
3. Rear Window Defogger  
4. TEMP (Temperature Control)  
5. Air Delivery Mode Controls

- : Turn to increase or decrease the fan speed.  
- TEMP : Turn to increase or decrease the temperature.

Air Delivery Mode Control: Press to change the direction of the airflow. The indicator light in the button will turn on. The current mode appears in the display screen.

To change the current mode, select one of the following:

- : Air is directed to the instrument panel outlets.  
- : Air is directed to the instrument panel outlets and the floor outlets.

: Clear the windows of fog or moisture. Air is directed to the windshield and floor outlets.  
: Air is directed to the windshield and side window outlets.

For best results, clear all snow and ice from the windshield before defrosting.

Do not drive the vehicle until all windows are clear.

Rear Window Defogger

: Press to turn the rear window defogger on or off. An indicator light on the button comes on to show that the rear window defogger is on.

The defogger only works when the ignition is in ON/RUN. The defogger turns off if the ignition is in the ACC/ACCESSORY or LOCK/OFF position.

Do not drive the vehicle until all windows are clear.
If equipped with heated outside rearview mirrors, they 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 54**.

**Caution**

Do not use a razor blade or sharp object to clear the inside rear window. Do not adhere anything to the defogger grid lines in the rear glass. These actions may damage the rear defogger. Repairs would not be covered by the vehicle warranty.

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**Automatic Climate Control System**

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

1. Fan Control
2. AUTO (Automatic Operation)
3. Air Delivery Mode Controls
4. Defrost
5. Temperature Control
6. A/C (Air Conditioning) or (Comfort/Eco Air Conditioning, If Equipped)
7. Heated Front Seats (If Equipped)
8. Rear Window Defogger
9. Recirculation
10. Power

**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.
194 Climate Controls

When AUTO is lit, all four functions operate automatically. Each function can also be manually set and the setting is displayed. Functions not manually set will continue to be automatically controlled, even if the AUTO indicator is not lit.

For automatic operation:
1. Press AUTO.
2. Set the temperature. Allow the system time to stabilize. Then adjust the temperature as needed for best comfort.

To improve fuel efficiency and to cool the vehicle faster, recirculation may be automatically selected in warm weather. The recirculation light will not come on. Press to select recirculation; press it again to select outside air.

To change English units to metric units, see "Cluster Menu" then "Units" under Instrument Cluster 116.

Manual Operation
🗑️: Press to turn the climate control system on or off.

Fan Control: Turn the knob clockwise or counterclockwise to increase or decrease the fan speed. The selected fan speed is indicated by a number on the display screen. Press AUTO to return to automatic operation.

Air Delivery Mode Controls: Press to change the direction of the airflow. The indicator light in the button will turn on. The current mode appears in the display screen. Automatic operation is canceled and manual mode is initiated. Press AUTO to return to automatic operation.

To change the current mode, select one of the following:

🗑️: Air is directed to the instrument panel outlets.
🗑️: Air is divided between the instrument panel outlets and the floor outlets.
🗑️: Air is directed to the floor outlets.
🗑️: Clears the windows of fog or moisture. Air is directed to the windshield and floor outlets.

A/C (Air Conditioning): Press to turn the air conditioning on or off. If the fan is turned off or the outside temperature falls below freezing, the air conditioning will not work.

A/C (Comfort/Eco Air Conditioning) (For Start/Stop Vehicles): Press to cycle between the comfort, eco, and off air conditioning modes. The indicator will be lit in comfort and eco modes, and turns off in the off air conditioning mode. If the fan is turned off, the air conditioner will not run and the indicator light will turn off.
Press AUTO to return to automatic operation and the air conditioner runs automatically as needed. With Stop/Start vehicles, the A/C will return to the last selected a/c mode.

For comfort a/c, press A/C. The indicator will turn amber. This setting limits Auto Stops to ensure cabin comfort is maintained and reduces the likelihood of window fogging.

For eco a/c, press A/C again. The indicator will turn green. This setting balances fuel economy and air conditioning comfort. In warm weather conditions, Auto Stops may occur more frequently and the vehicle interior may be warmer as compared to the comfort air conditioning setting. This setting allows higher humidity inside the vehicle and window fogging before the engine restarts. Pressing during an Auto Stop will restart the engine to prevent window fogging.

Air Recirculation : Press to turn on recirculation. An indicator light comes on. Air is recirculated to quickly cool the inside of the vehicle and reduce the entry of outside air and odors.

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.

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 150.

Rear Window Defogger

: Press to turn the rear window defogger on or off. An indicator light on the button comes on to show that the rear window defogger is on.

The defogger only works when the ignition is in ON/RUN. The defogger turns off if the ignition is in the ACC/ACCESSORY or LOCK/OFF position.

The rear window defogger can be set to automatic operation. See “Climate and Air Quality” under Vehicle Personalization 150.

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 5 °C (40 °F) and below. The auto rear defogger turns off automatically. At higher speeds, the rear window defogger may stay on continuously.
If equipped with heated outside mirrors, they turn on when the rear window defogger button is on and help to clear fog or frost from the surface of the mirrors. See Heated Mirrors ∆ 54.

**Caution**

Do not try to clear frost or other material from the inside of the front windshield and rear window with a razor blade or anything else that is sharp. This may damage the rear window defogger grid and affect the radio’s ability to pick up stations clearly. The repairs would not be covered by the vehicle warranty.

かれ or たら: If equipped, press to turn the heated seats on or off. See Heated Front Seats ∆ 64.

**Remote Start Climate Control Operation**: If the vehicle is equipped with the remote vehicle start feature, the climate control system may run when the vehicle is started remotely with settings according to ambient conditions. The rear defog may come on during remote start based on cold ambient conditions. The rear defog indicator light does not come on during a remote start. If the vehicle has front heated seats, they may come on during a remote start. The heated seat indicator lights do not come on during a remote start. See Remote Vehicle Start ∆ 42 and Heated Front Seats ∆ 64.

**Sensors**

The solar sensor, on top of the instrument panel near the windshield, monitors the solar heat. The climate control system uses the sensor information to adjust the temperature, fan speed, recirculation, and air delivery mode for best comfort.

If the sensor is covered, the automatic climate control system may not work properly.
Air Vents

Adjustable air vents are in the center and on the side of the instrument panel.

Move the slats (1) to change the direction of the airflow.

Use the thumbwheels (2) near the air vents to open or close off the airflow.

Additional air vents are located beneath the windshield, driver and passenger side door windows, and in the footwells. These are fixed and cannot be adjusted.

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 of the vehicle more effectively.
- Use of non-GM approved hood deflectors can adversely affect the performance of the system. Check with your dealer before adding equipment to the outside of the vehicle.

Maintenance

Passenger Compartment Air Filter

The filter reduces dust, pollen, and other airborne irritants from outside air that is pulled into the vehicle. The filter should be replaced as part of routine scheduled maintenance. See Maintenance Schedule § 352.

See your dealer regarding replacement of the filter.

Service

All vehicles have a label underhood that identifies the refrigerant used in the vehicle. The refrigerant system should only be serviced by trained and certified technicians. The air conditioning evaporator should never be repaired or replaced by one from a salvage vehicle. It should only be replaced by a new evaporator to ensure proper and safe operation.
198 Climate Controls

During service, all refrigerants should be reclaimed with proper equipment. Venting refrigerants directly to the atmosphere is harmful to the environment and may also create unsafe conditions based on inhalation, combustion, frostbite, or other health-based concerns.
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Driving Information

Distracted Driving
Distraction comes in many forms and can take your focus from the task of driving. Exercise good judgment and do not let other activities divert your attention away from the road. Many local governments have enacted laws regarding driver distraction. Become familiar with the local laws in your area.

To avoid distracted driving, always keep your eyes on the road, hands on the wheel, and mind on the drive.

- Do not use a phone in demanding driving situations. Use a hands-free method to place or receive necessary phone calls.
- Watch the road. Do not read, take notes, or look up information on phones or other electronic devices.
- Designate a front seat passenger to handle potential distractions.

- Become familiar with vehicle features before driving, such as programming favorite radio stations and adjusting climate control and seat settings. Program all trip information into any navigation device prior to driving.
- Wait until the vehicle is parked to retrieve items that have fallen to the floor.
- Stop or park the vehicle to tend to children.
- Keep pets in an appropriate carrier or restraint.
- Avoid stressful conversations while driving, whether with a passenger or on a cell phone.

⚠️ Warning

Taking your eyes off the road too long or too often could cause a crash resulting in injury or death. Focus your attention on driving.
Refer to the infotainment section for more information on using that system and the navigation system, if equipped, including pairing and using a cell phone.

### Defensive Driving

Defensive driving means “always expect the unexpected.” The first step in driving defensively is to wear the safety belt. See Safety Belts 67.

- Assume that other road users (pedestrians, bicyclists, and other drivers) are going to be careless and make mistakes. Anticipate what they might do and be ready.
- Allow enough following distance between you and the driver in front of you.
- Focus on the task of driving.

### Drunk Driving

Death and injury associated with drinking and driving is a global tragedy.

### Warning

Drinking and then driving is very dangerous. Your reflexes, perceptions, attentiveness, and judgment can be affected by even a small amount of alcohol. You can have a serious — or even fatal — collision if you drive after drinking.

- Do not drink and drive or ride with a driver who has been drinking. Ride home in a cab; or if you are with a group, designate a driver who will not drink.

### Control of a Vehicle

Braking, steering, and accelerating are important factors in helping to control a vehicle while driving.

### Braking

Braking action involves perception time and reaction time. Deciding to push the brake pedal is perception time. Actually doing it is reaction time.

Average driver reaction time is about three-quarters of a second. In that time, a vehicle moving at 100 km/h (60 mph) travels 20 m (66 ft), which could be a lot of distance in an emergency.

Helpful braking tips to keep in mind include:

- Keep enough distance between you and the vehicle in front of you.
- Avoid needless heavy braking.
- Keep pace with traffic.

If the engine ever stops while the vehicle is being driven, brake normally but do not pump the brakes. Doing so could make the pedal harder to push down. If the engine stops, there will be some power brake assist but it will be used when the brake is applied. Once the power assist is used up, it can take longer to stop and the brake pedal will be harder to push.
202 Driving and Operating

Steering

Electric Power Steering
The vehicle has electric power steering, it does not have power steering fluid. Regular maintenance is not required.

If power steering assist is lost due to a system malfunction, the vehicle can be steered, but may require increased effort. See your dealer if there is a problem.

If the steering wheel is turned until it reaches the end of its travel, and is held in that position for an extended period of time, power steering assist may be reduced.

If the steering assist is used for an extended period of time, power assist may be reduced.

Normal use of the power steering assist should return when the system cools down.

See specific vehicle steering messages under Vehicle Messages 140.

Curve Tips

- Take curves at a reasonable speed.
- Reduce speed before entering a curve.
- Maintain a reasonable steady speed through the curve.
- Wait until the vehicle is out of the curve before accelerating gently into the straightaway.

Curve Tips

Steering in Emergencies

- There are some situations when steering around a problem may be more effective than braking.
- Holding both sides of the steering wheel allows you to turn 180 degrees without removing a hand.
- Antilock Brake System (ABS) allows steering while braking.

Off-Road Recovery

The vehicle's right wheels can drop off the edge of a road onto the shoulder while driving. Follow these tips:

1. Ease off the accelerator and then, if there is nothing in the way, steer the vehicle so that it straddles the edge of the pavement.
2. Turn the steering wheel about one-eighth of a turn, until the right front tire contacts the pavement edge.

Curve Tips

Off-Road Recovery

140
3. Turn the steering wheel to go straight down the roadway.

Loss of Control

Skidding
There are three types of skids that correspond to the vehicle's three control systems:

- Braking Skid — wheels are not rolling.
- Steering or Cornering Skid — too much speed or steering in a curve causes tires to slip and lose cornering force.
- Acceleration Skid — too much throttle causes the driving wheels to spin.

Defensive drivers avoid most skids by taking reasonable care suited to existing conditions, and by not overdriving those conditions. But skids are always possible.

If the vehicle starts to slide, follow these suggestions:

- Ease your foot off the accelerator pedal and steer the way you want the vehicle to go.

The vehicle may straighten out. Be ready for a second skid if it occurs.

- Slow down and adjust your driving according to weather conditions. Stopping distance can be longer and vehicle control can be affected when traction is reduced by water, snow, ice, gravel, or other material on the road. Learn to recognize warning clues — such as enough water, ice, or packed snow on the road to make a mirrored surface — and slow down when you have any doubt.

- Try to avoid sudden steering, acceleration, or braking, including reducing vehicle speed by shifting to a lower gear. Any sudden changes could cause the tires to slide.

Remember: Antilock brakes help avoid only the braking skid.

Driving on Wet Roads

Rain and wet roads can reduce vehicle traction and affect your ability to stop and accelerate.

Always drive slower in these types of driving conditions and avoid driving through large puddles and deep-standing or flowing water.

⚠️ Warning

Wet brakes can cause crashes. They might not work as well in a quick stop and could cause pulling to one side. You could lose control of the vehicle.

After driving through a large puddle of water or a car/vehicle wash, lightly apply the brake pedal until the brakes work normally.

Flowing or rushing water creates strong forces. Driving through flowing water could cause the vehicle to be carried away. If this happens, you and other vehicle occupants could drown. Do not ignore police warnings and be very cautious about trying to drive through flowing water.
204 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 wiper equipment in good shape.
- Keep the windshield washer fluid reservoir filled.
- Have good tires with proper tread depth. See Tires 301.
- Turn off cruise control.

Hill and Mountain Roads
Driving on steep hills or through mountains is different than driving on flat or rolling terrain. Tips include:

- Keep the vehicle serviced and in good shape.
- Check all fluid levels and brakes, tires, cooling system, and transmission.
- Shift to a lower gear when going down steep or long hills.

Warning
Using the brakes to slow the vehicle on a long downhill slope can cause brake overheating, can reduce brake performance, and could result in a loss of braking. Shift the transmission to a lower gear to let the engine assist the brakes on a steep downhill slope.

Warning
Coasting downhill in N (Neutral) or with the ignition off is dangerous. This can cause overheating of the brakes and loss of steering. Always have the engine running and the vehicle in gear.

- Drive at speeds that keep the vehicle in its own lane. Do not swing wide or cross the center line.
- Be alert on top of hills; something could be in your lane (e.g., stalled car, accident).
- Pay attention to special road signs (e.g., falling rocks area, winding roads, long grades, passing or no-passing zones) and take appropriate action.
Winter Driving

Driving on Snow or Ice

Snow or ice between the tires and the road creates less traction or grip, so drive carefully. Wet ice can occur at about 0 °C (32 °F) when freezing rain begins to fall. Avoid driving on wet ice or in freezing rain until roads can be treated.

For Slippery Road Driving:

- Accelerate gently. Accelerating too quickly causes the wheels to spin and makes the surface under the tires slick.
- Turn on Traction Control. See Traction Control/Electronic Stability Control ☞ 235.
- The Antilock Brake System (ABS) improves vehicle stability during hard stops, but the brakes should be applied sooner than when on dry pavement. See Antilock Brake System (ABS) ☞ 233.
- Allow greater following distance and watch for slippery spots. Icy patches can occur on otherwise clear roads in shaded areas. The surface of a curve or an overpass can remain icy when the surrounding roads are clear. Avoid sudden steering maneuvers and braking while on ice.
- Turn off cruise control.

Blizzard Conditions

Stop the vehicle in a safe place and signal for help. Stay with the vehicle unless there is help nearby. If possible, use Roadside Assistance. See Roadside Assistance Program ☞ 373. To get help and keep everyone in the vehicle safe:

- Turn on the hazard warning flashers.
- Tie a red cloth to an outside mirror.

⚠️ Warning

Snow can trap engine exhaust under the vehicle. This may cause exhaust gases to get inside. Engine exhaust contains carbon monoxide (CO), which cannot be seen or smelled. It can cause unconsciousness and even death.

If the vehicle is stuck in snow:

- Clear snow from the base of the vehicle, especially any blocking the exhaust pipe.
- Open a window about 5 cm (2 in) on the vehicle side that is away from the wind, to bring in fresh air.
- Fully open the air outlets on or under the instrument panel.
- Adjust the climate control system to circulate the air inside the vehicle and set

(Continued)
206 Driving and Operating

Warning (Continued)

the fan speed to the highest setting. See "Climate Control Systems."

For more information about CO, see Engine Exhaust 221.

To save fuel, run the engine for short periods to warm the vehicle and then shut the engine off and partially close the window. Moving about to keep warm also helps.

If it takes time for help to arrive, when running the engine, push the accelerator pedal slightly so the engine runs faster than the idle speed. This keeps the battery charged to restart the vehicle and to signal for help with the headlamps. Do this as little as possible, to save fuel.

If the Vehicle Is Stuck

Slowly and cautiously spin the wheels to free the vehicle when stuck in sand, mud, ice, or snow.

If stuck too severely for the traction system to free the vehicle, turn the traction system off and use the rocking method. See Traction Control/Electronic Stability Control 235.

Warning

If the vehicle's tires spin at high speed, they can explode, and you or others could be injured. The vehicle can overheat, causing an engine compartment fire or other damage. Spin the wheels as little as possible and avoid going above 56 km/h (35 mph).

Rocking the Vehicle to Get it Out

Turn the steering wheel left and right to clear the area around the front wheels. Turn off any traction system. Shift back and forth between R (Reverse) and a low forward gear, spinning the wheels as little as possible. To prevent transmission wear, wait until the wheels stop spinning before shifting gears. Release the accelerator pedal while shifting, and press lightly on the accelerator pedal when the transmission is in gear. Slowly spinning the wheels in the forward and reverse directions causes a rocking motion that could free the vehicle. If that does not get the vehicle out after a few tries, it might need to be towed out. If the vehicle does need to be towed out, see Towing the Vehicle 339.

Vehicle Load Limits

It is very important to know how much weight the vehicle can carry. This weight is called the vehicle capacity weight and includes the weight of all occupants, cargo, and all nonfactory-installed options. Two labels on the vehicle may show how much weight it may properly carry: the Tire and Loading Information label and the Certification label.
**Warning**

Do not load the vehicle any heavier than the Gross Vehicle Weight Rating (GVWR), or either the maximum front or rear Gross Axle Weight Rating (GAWR). This can cause systems to break and change the way the vehicle handles. This could cause loss of control and a crash. Overloading can also reduce stopping distance, damage the tires, and shorten the life of the vehicle.

---

**Tire and Loading Information Label**

The Tire and Loading Information label also shows the tire size of the original equipment tires (3) and the recommended cold tire inflation pressures (4). For more information on tires and inflation see *Tires* 301 and *Tire Pressure* 308.

There is also important loading information on the Certification label. It may show the Gross Vehicle Weight Rating (GVWR) and the Gross Axle Weight Rating (GAWR) for the front and rear axle. See “Certification Label” later in this section.

**Steps for Determining Correct Load Limit—**

1. Locate the statement "The combined weight of occupants and cargo should never exceed XXX kg or XXX lbs." on your vehicle’s placard.

---

**Label Example**

A vehicle-specific Tire and Loading Information label is attached to the vehicle’s center pillar (B-pillar). The Tire and Loading Information label shows the number of occupant seating positions (1), and the maximum vehicle capacity weight (2) in kilograms and pounds.
2. Determine the combined weight of the driver and passengers that will be riding in your vehicle.

3. Subtract the combined weight of the driver and passengers from XXX kg or XXX lbs.

4. The resulting figure equals the available amount of cargo and luggage load capacity. For example, if the "XXX" amount equals 1400 lbs. and there will be five 150 lb passengers in your vehicle, the amount of available cargo and luggage load capacity is 650 lbs. (1400-750 (5 x 150) = 650 lbs.)

5. Determine the combined weight of luggage and cargo being loaded on the vehicle. That weight may not safely exceed the available cargo and luggage load capacity calculated in Step 4.

6. If your vehicle will be towing a trailer, load from your trailer will be transferred to your vehicle. Consult this manual to determine how this reduces the available cargo and luggage load capacity of your vehicle.

Example 1

1. Vehicle Capacity Weight for Example 1 = 453 kg (1,000 lbs).
2. Subtract Occupant Weight @ 68 kg (150 lbs) \times 2 = 136 kg (300 lbs).
3. Available Occupant and Cargo Weight = 317 kg (700 lbs).
Example 2

1. Vehicle Capacity Weight for Example 2 = 453 kg (1,000 lbs).
2. Subtract Occupant Weight @ 68 kg (150 lbs) × 5 = 340 kg (750 lbs).
3. Available Cargo Weight = 113 kg (250 lbs).

Example 3

1. Vehicle Capacity Weight for Example 3 = 453 kg (1,000 lbs).
2. Subtract Occupant Weight @ 91 kg (200 lbs) × 5 = 453 kg (1,000 lbs).
3. Available Cargo Weight = 0 kg (0 lbs).

Refer to the vehicle's Tire and Loading Information label for specific information about the vehicle's capacity weight and seating positions. The combined weight of the driver, passengers, and cargo should never exceed the vehicle's capacity weight.

Certification Label

A vehicle-specific Certification label is attached to the vehicle's center pillar (B-pillar). The label may show the gross weight capacity of the vehicle, called the Gross Vehicle Weight Rating (GVWR). The GVWR includes the weight of the vehicle, all occupants, fuel, and cargo.
210 Driving and Operating

⚠️ 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.
- Never stack heavier things, like suitcases, inside the vehicle so that some of them are above the tops of the seats.
- Do not leave an unsecured child restraint in the vehicle.
- Secure loose items in the vehicle.
- Do not leave a seat folded down unless needed.

Starting and Operating

New Vehicle Break-In

Caution

The vehicle does not need an elaborate break-in. But it will perform better in the long run if you follow these guidelines:

- Do not drive at any one constant speed, fast or slow, for the first 805 km (500 mi). Do not make full-throttle starts. Avoid downshifting to brake or slow the vehicle.
- Avoid making hard stops for the first 322 km (200 mi) or so. During this time the new brake linings are not yet broken in. Hard stops with new linings can mean premature wear and earlier replacement. Follow this (Continued)

Caution (Continued)

breaking-in guideline every time you get new brake linings.
Following break-in, engine speed and load can be gradually increased.

Ignition Positions (Key Access)

The ignition switch has four different positions.
Caution

Using a tool to force the key to turn in the ignition could cause damage to the switch or break the key. Use the correct key, make sure it is all the way in, and turn it only with your hand. If the key cannot be turned by hand, see your dealer.

The key must be fully extended to start the vehicle.

To shift out of P (Park), turn the ignition to ON/RUN and apply the brake pedal.

0 : Stopping the Engine/LOCK/OFF: When the vehicle is stopped, turn the ignition switch to LOCK/OFF to turn the engine off. Retained Accessory Power (RAP) will remain active. See Retained Accessory Power (RAP) \( \Rightarrow \) 219.

This is the only position from which the key can be removed. This locks the ignition and automatic transmission. The steering wheel may also lock, if equipped.

Do not turn the engine off when the vehicle is moving. This will cause a loss of power assist in the brake and steering systems and disable the airbags.

If the vehicle must be shut off in an emergency:

1. Brake using a firm and steady pressure. Do not pump the brakes repeatedly. This may deplete power assist, requiring increased brake pedal force.

2. Shift the vehicle to N (Neutral). This can be done while the vehicle is moving. After shifting to N (Neutral), continue to firmly apply the brakes and steer the vehicle to a safe location.

3. Come to a complete stop. Shift to P (Park) with an automatic transmission, or Neutral with a manual transmission. Turn the ignition to LOCK/OFF.

4. Set the parking brake. See Parking Brake \( \Rightarrow \) 234.

Warning

Turning off the vehicle while moving may cause loss of power assist in the brake and steering systems and disable the airbags. While driving, only shut the vehicle off in an emergency.

If the vehicle cannot be pulled over and must be shut off while driving, turn the ignition to ACC/ACCESSORY.

1 : ACC/ACCESSORY: This position provides power to some of the electrical accessories. It unlocks the steering wheel and ignition. To move the key from ACC/ACCESSORY to LOCK/OFF, push in the key and then turn it to LOCK/OFF.

2 : ON/RUN: The ignition switch stays in this position when the engine is running. This position can be used to operate the electrical accessories, including the ventilation fan and 12-volt power outlet, as well as to display some
warning and indicator lights. This position can also be used for service and diagnostics, and to verify the proper operation of the malfunction indicator lamp as may be required for emission inspection purposes. The transmission is also unlocked in this position on automatic transmission vehicles.

The battery could be drained if the key is left in the ACC/ACCESSORY or ON/RUN position with the engine off. The vehicle might not start if the battery is allowed to drain for an extended period of time.

3 : START: This position starts the engine. When the engine starts, release the key. The ignition switch will return to ON/RUN for normal driving.

A warning tone sounds when the driver door is opened if the ignition is still in ACC/ACCESSORY and the key is in the ignition.

If the ignition becomes difficult to turn, see Keys 31.

Ignition Positions (Keyless Access)

The vehicle may be equipped with an electronic keyless ignition with pushbutton start.

Pressing the button cycles it through three modes: ACC/ACCESSORY, ON/RUN/START, and Stopping the Engine/OFF.

The Remote Keyless Entry (RKE) transmitter must be in the vehicle for the system to operate. If the pushbutton start is not working, the vehicle may be near a strong radio antenna signal causing interference to the Keyless Access system. See Remote Keyless Entry (RKE) System Operation (Key Access) 34 or Remote Keyless Entry (RKE) System Operation (Keyless Access) 36.

To shift out of P (Park), the vehicle must be in ACC/ACCESSORY or ON/RUN and the brake pedal must be applied.

Stopping the Engine/OFF: When the vehicle is stopped, press ENGINE START/STOP once to turn the engine off.

If the vehicle is in P (Park), the ignition will turn off, and Retained Accessory Power (RAP) will remain active. See Retained Accessory Power (RAP) 219.
If the vehicle is not in P (Park), the ignition will return to ACC/ACCESSORY and the Driver Information Center (DIC) will display the message SHIFT TO PARK. See Transmission Messages 148.

When the vehicle is shifted into P (Park), the ignition system will switch to OFF.

Do not turn the engine off when the vehicle is moving. This will cause a loss of power assist in the brake and steering systems and disable the airbags.

If the vehicle must be shut off in an emergency:

1. Brake using a firm and steady pressure. Do not pump the brakes repeatedly. This may deplete power assist, requiring increased brake pedal force.

2. Shift the vehicle to N (Neutral). This can be done while the vehicle is moving. After shifting to N (Neutral), firmly apply the brakes and steer the vehicle to a safe location.

3. Come to a complete stop. Shift to P (Park) with an automatic transmission, or Neutral with a manual transmission. Press ENGINE START/STOP.

4. Set the parking brake. See Parking Brake 234.

Turning off the vehicle while moving may cause loss of power assist in the brake and steering systems and disable the airbags. While driving, only shut the vehicle off in an emergency.

If the vehicle cannot be pulled over and must be shut off while driving, press and hold ENGINE START/STOP for longer than two seconds, or press twice in five seconds.

**Warning**

With the ignition off, pressing the button one time without the brake pedal applied will place the ignition system in ACC/ACCESSORY. The ignition will switch from ACC/ACCESSORY to OFF after five minutes to prevent battery rundown.

**ON/RUN/START** : This mode has a green light and is for starting the engine and driving. With the ignition off, and the brake or clutch pedal applied, pressing the button once will place the ignition system in ON/RUN/START. Once engine cranking begins, release the button. Engine cranking will continue until the engine starts. See Starting the Engine 214. The ignition will then remain in ON/RUN.

**Service Only Mode**

This power mode is available for service and diagnostics, and to verify the proper operation of the malfunction indicator lamp as may be required for emission inspection purposes. With the vehicle off and the brake pedal not applied, pressing and holding ENGINE
START/STOP for more than five seconds will place the vehicle in Service Only Mode. The instruments and audio systems will operate as they do in ON/RUN, but the vehicle will not be able to be driven. The engine will not start in Service Only Mode. Press ENGINE START/STOP again to turn the vehicle off.

Starting the Engine
Place the transmission in the proper gear.

<table>
<thead>
<tr>
<th>Caution</th>
</tr>
</thead>
<tbody>
<tr>
<td>If you add electrical parts or accessories, you could change the way the engine operates. Any resulting damage would not be covered by the vehicle warranty. See Add-On Electrical Equipment § 262.</td>
</tr>
</tbody>
</table>

Automatic Transmission
Move the shift lever to P (Park) or N (Neutral). To restart the vehicle when it is already moving, use N (Neutral) only.

<table>
<thead>
<tr>
<th>Caution</th>
</tr>
</thead>
<tbody>
<tr>
<td>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.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Caution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cranking the engine for long periods of time, by returning the ignition to the START position immediately after cranking has ended, can overheat and damage the cranking motor, and drain the battery. Wait at least 15 seconds between each try, to let the cranking motor cool down.</td>
</tr>
</tbody>
</table>

Manual Transmission
The shift lever should be in Neutral and the parking brake engaged. Hold the clutch pedal down to the floor and start the engine.

Gasoline Engine Starting Procedure (Key Access)
1. With your foot off the accelerator pedal, turn the ignition key to START. When the engine starts, let go of the key. The idle speed will go down as the engine warms. Do not race the engine immediately after starting it. Allow the oil to warm up and lubricate all moving parts.

2. If the engine does not start after five to 10 seconds, especially in very cold weather (below −18°C or 0°F), it could be flooded with too much gasoline. Push the accelerator pedal all the way to the floor and hold it there as you hold the key in START for a maximum of 15 seconds. Wait at least 15 seconds between each try, to allow the cranking motor to cool. When the engine starts, let go of the key and accelerator. If the vehicle starts briefly but then stops again, repeat the procedure. This
clears the extra gasoline from the engine. Do not race the engine immediately after starting it. Operate the engine and transmission gently until the oil warms up and lubricates all moving parts.

Gasoline Engine Starting Procedure (Keyless Access)

1. With the Keyless Access system, the RKE transmitter must be in the vehicle. Press ENGINE START/STOP with the brake pedal applied. When the engine begins cranking, let go of the button.

The idle speed will go down as the engine gets warm. Do not race the engine immediately after starting it. Operate the engine and transmission gently until the oil warms up and lubricates all moving parts.

2. If the engine does not start after five to 10 seconds, especially in very cold weather (below −18 °C or 0 °F), it could be flooded with too much gasoline. Try pushing the accelerator pedal all the way to the floor and holding it there as you press ENGINE START/STOP, for up to a maximum of 15 seconds. Wait at least 15 seconds between each try, to allow the cranking motor to cool down. When the engine starts, let go of the button and the accelerator. If the vehicle starts briefly but then stops again, do the same thing. This clears the extra gasoline from the engine. Do not race the engine immediately after starting it. Operate the engine and transmission gently until the oil warms up and lubricates all moving parts.

Caution

Cranking the engine for long periods of time, by returning the ignition to the START position immediately after cranking has ended, can overheat and damage the cranking motor, and drain the battery. Wait at least 15 seconds between each try, to let the cranking motor cool down.
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Stop/Start System

Warning

Exiting the vehicle without first shifting into P (Park) may cause the vehicle to move. You or others may be injured. Because the vehicle has the auto engine stop/start feature, the vehicle’s engine might seem to be shut off; however, once the brake pedal is released, the engine will start up again.

Shift to P (Park) and turn the ignition to LOCK/OFF, before exiting the vehicle.

The vehicle may have a fuel saving stop/start system to shut off the engine to help conserve fuel.

Auto Engine Stop/Start

When the brakes are applied and the vehicle is at a complete stop, the engine may turn off. When stopped, the tachometer displays AUTO STOP. See Tachometer 121. When the brake pedal is released or the accelerator pedal is pushed, the engine will restart.

Auto Stop may be deactivated if:

- A minimum vehicle speed is not reached.
- The engine or transmission is not at the required operating temperature.
- The outside temperature is not in the required operating range, typically below 5 °C (41 °F) or above 50 °C (122 °F).
- The shift lever is in any gear other than D (Drive).
- The battery has been recently disconnected.
- The battery charge is low.

- The interior comfort level has not reached the required level for the climate control system or defog settings. Use the eco (green indicator on) air conditioning mode for better efficiency. See Automatic Climate Control System 193.
- The Auto Stop time is greater than two minutes.

Diesel Engine Starting Procedure

The diesel engine starts differently than a gasoline engine.

1. With the Keyless Access system, the RKE transmitter must be in the vehicle. Observe the wait-to-start light. See Wait-to-Start Light 131. This light may not come on if the engine is warm.

2. Press the ENGINE START/STOP button with the brake pedal or clutch pedal applied to START. The start will be delayed if the wait-to-start lamp is illuminated.
The engine has a fast warm-up glow plug system. The wait-to-start light will illuminate for a much shorter time than most diesel engines, due to the rapid heating of the glow plug system.

**Caution**

If the wait-to-start light stays on after starting the vehicle, the vehicle may not run properly. Have the vehicle serviced right away.

3. If the engine does not start after 15 seconds of cranking, wait one minute for the starter to cool, then try the same steps again.

If you are trying to start the engine after you have run out of fuel, follow the steps in *Running Out of Fuel (Diesel)* \(\Rightarrow 258\).

When the engine is cold, let it run for a few minutes before you move the vehicle. This lets oil pressure build up. The engine will sound louder when it's cold.

**Cold Weather Starting (Diesel Engine)**

The following tips will help with cold weather starting.

Use the recommended engine oil when the outside temperature drops below freezing. See *Engine Oil* \(\Rightarrow 270\). When the outside temperature drops below \(-18°C\) \((0°F)\), use of the engine heater is recommended.

See *Fuel for Diesel Engines* \(\Rightarrow 250\) for information on what fuel to use in cold weather.

**If the Diesel Engine Will Not Start**

If you have run out of fuel, see *Running Out of Fuel (Diesel)* \(\Rightarrow 258\).

If the vehicle is not out of fuel, and the engine will not start, do this:

Turn the ignition on. Immediately after the wait-to-start light goes off, press ENGINE START/STOP.

If the light does not go off, wait a few seconds, then try starting the engine again. See your dealer for a starting system check.

If the light comes on and then goes off, and it is known that the batteries are charged, but the engine still will not start, the vehicle needs service.

If the light does not come on when the engine is cold, the vehicle needs service.

If the batteries do not have enough charge to start the engine, see *Battery - North America* \(\Rightarrow 285\).

Check that the correct engine oil has been used and changed at appropriate intervals. If the wrong oil is used, the engine may be harder to start.

Be sure you are using the proper fuel for existing weather conditions. See *Fuel for Diesel Engines* \(\Rightarrow 250\).

If the engine starts, runs a short time, then stops, the vehicle needs service.
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<table>
<thead>
<tr>
<th>Warning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do not use gasoline or starting aids, such as ether, in the air intake. They could damage the engine, which may not be covered by the vehicle warranty. They could also cause a fire, which could cause serious personal injury.</td>
</tr>
</tbody>
</table>

### Engine Heater

The engine block heater and diesel engine oil pan heater, if equipped, can help in cold weather conditions at or below −18 °C (0 °F) for easier starting and better fuel economy during engine warm-up. Plug in the heater at least four hours before starting the vehicle. A thermostat that is part of the block heater cord will prevent engine block heater operation at temperatures above −18 °C (0 °F).

#### To Use the Heater

1. Turn off the engine.
2. Open the hood and unwrap the electrical cord. For gasoline engines, the electrical cord is on the passenger side of the engine compartment between the headlamp and the air cleaner. For diesel engines, the electrical cord is on the driver side of the engine compartment near the fuse box.
3. Check the heater cord for damage. If it is damaged, do not use it. See your dealer for a replacement. Inspect the cord for damage yearly.
4. Plug it into a normal, grounded 110-volt AC outlet.
5. 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.

<table>
<thead>
<tr>
<th>Warning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improper use of the heater cord or an extension cord can damage the cord and may result in overheating and fire.</td>
</tr>
</tbody>
</table>

- Plug the cord into a three-prong electrical utility receptacle that is protected by a ground fault detection function. An ungrounded outlet could cause an electric shock.
- Use a weatherproof, heavy-duty, 15 amp-rated extension cord if needed. Failure to use the recommended extension cord in good operating condition, or using a damaged heater or extension cord, could make it overheat and cause a fire, property damage, electric shock, and injury. |
Warning (Continued)

- Do not operate the vehicle with the heater cord permanently attached to the vehicle. Possible heater cord and thermostat damage could occur.
- While in use, do not let the heater cord touch vehicle parts or sharp edges. Never close the hood on the heater cord.
- Before starting the vehicle, unplug the cord, reattach the cover to the plug, and securely fasten the cord. Keep the cord away from any moving parts.

The length of time the heater should remain plugged in depends on several factors. Ask a dealer in the area where you will be parking the vehicle for the best advice on this.

Retained Accessory Power (RAP)

These vehicle accessories may be used for up to 10 minutes after the engine is turned off:
- Audio System
- Power Windows
- Sunroof

The power windows and sunroof will continue to work for up to 10 minutes or until any door is opened. The radio will work when the key is in ON/RUN or ACC/ACCESSORY. Once the key is turned from ON/RUN to LOCK/OFF, the radio will continue to work for 10 minutes, or until the driver door is opened or the key is removed from the ignition.

Shifting Into Park

1. Hold the brake pedal down and set the parking brake.
   See Parking Brake \(\Rightarrow\) 234.

2. Hold the button on the shift lever and push the lever toward the front of the vehicle into P (Park).

3. Turn off the ignition.

Leaving the Vehicle with the Engine Running

Warning

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

It is dangerous to get out of the vehicle if the shift lever is not fully in P (Park) with the parking brake firmly set. The vehicle can roll.

Do not leave the vehicle when the engine is running. If you have left the engine running, the vehicle can move suddenly. You or others could be injured. To be sure the vehicle will not move, even when you are on fairly level ground, always set the parking brake and move the shift lever to P (Park). See Shifting Into Park \(\Rightarrow\) 219.
If you have to leave the vehicle with the engine running, the vehicle must be in P (Park) and the parking brake set.

Release the button and check that the shift lever cannot be moved out of P (Park).

**Torque Lock**

Torque lock is when the weight of the vehicle puts too much force on the parking pawl in the transmission. This happens when parking on a hill and shifting the transmission into P (Park) is not done properly and then it is difficult to shift out of P (Park). To prevent torque lock, set the parking brake and then shift into P (Park). To find out how, see “Shifting Into Park” listed previously.

If torque lock does occur, the vehicle may need to be pushed uphill by another vehicle to relieve the parking pawl pressure, so you can shift out of P (Park).

**Shifting out of Park**

This vehicle is equipped with an automatic transmission shift lock control system. The shift lock is designed to:

- Prevent ignition key removal unless the shift lever is in P (Park) with the shift lever button fully released.
- Prevent movement of the shift lever out of P (Park) unless the ignition is in ON/RUN and the brake pedal is applied.

The shift lock release is always functional except in the case of an uncharged or low voltage (less than 9-volt) battery.

If the vehicle has an uncharged battery or a battery with low voltage, try charging or jump starting the battery. See **Jump Starting - North America** ≥ 336

To shift out of P (Park):

1. Apply the brake pedal.
2. Turn the ignition on.
3. Press the shift lever button.
4. Move the shift lever to the desired position.

If still unable to shift out of P (Park):

1. Fully release the shift lever button.
2. Hold the brake pedal down and press the shift lever button again.
3. Move the shift lever to the desired position.

If the shift lever still cannot be moved from P (Park), see your dealer.

This vehicle may have the Safety Belt Assurance System, which may prevent the vehicle from shifting out of P (Park). See **Safety Belt Messages** ≥ 146.
Parking

If the vehicle has a manual transmission, before getting out of the vehicle, move the shift lever into R (Reverse) if parking on a downhill slope. On a level surface or an uphill slope, use 1 (First) gear. Firmly apply the parking brake. See Parking Brake 234. Turn the wheels toward the curb for a downhill slope, or away from the curb for an uphill slope. Once the shift lever has been placed into gear with the clutch pedal pressed in, turn the ignition off, and release the clutch.

Parking over Things That Burn

⚠️ Warning

Things that can burn could touch hot exhaust parts under the vehicle and ignite. Do not park over papers, leaves, dry grass, or other things that can burn.

Extended Parking

It is better not to park with the vehicle running. If the vehicle is left while running, follow the proper steps to be sure the vehicle will not move and there is adequate ventilation. See Shifting Into Park 219 and Engine Exhaust 221.

If the vehicle is left in P (Park) while running and the Remote Keyless Entry (RKE) transmitter is outside the vehicle, the vehicle will turn off after one hour.

If the vehicle is left in P (Park) while running and the RKE transmitter is inside, the vehicle will run for two hours. At the end of the second hour, the vehicle will turn off.

The timer will reset if the vehicle is taken out of P (Park) while it is running.

Engine Exhaust

⚠️ Warning

Engine exhaust contains carbon monoxide (CO), which cannot be seen or smelled. Exposure to CO can cause unconsciousness and even death.

Exhaust may enter the vehicle if:

- The vehicle idles in areas with poor ventilation (parking garages, tunnels, deep snow that may block underbody airflow or tail pipes).
- The exhaust smells or sounds strange or different.
- The exhaust system leaks due to corrosion or damage.
- The vehicle exhaust system has been modified, damaged, or improperly repaired.

(Continued)
Warning (Continued)

- There are holes or openings in the vehicle body from damage or aftermarket modifications that are not completely sealed.

If unusual fumes are detected or if it is suspected that exhaust is coming into the vehicle:
- Drive it only with the windows completely down.
- Have the vehicle repaired immediately.

Never park the vehicle with the engine running in an enclosed area such as a garage or a building that has no fresh air ventilation.

Running the Vehicle While Parked

It is better not to park with the engine running.

If the vehicle is left with the engine running, follow the proper steps to be sure the vehicle will not move. See Shifting Into Park \( \Rightarrow 219 \) and Engine Exhaust \( \Rightarrow 221 \). 

Diesel Particulate Filter

The Diesel Particulate Filter (DPF) filters soot particles out of the exhaust gases. The system includes a self-cleaning function that runs automatically during driving without any notification. The filter is cleaned by periodically burning off the soot particles at high temperature. This process takes place automatically and may take up to 20 minutes. Fuel consumption may be higher during this period.

Under certain driving conditions, e.g. short distances, the system cannot clean itself automatically.

If the cleaning of the filter is required and if previous driving conditions did not enable automatic cleaning, a warning message appears in the DIC. See Diesel Particulate Filter Messages \( \Rightarrow 143 \). Start the cleaning process as soon as possible.
Cleaning Process
To activate the cleaning process, continue driving safely, and keep vehicle speed above 41 km/h (25 mph) until the warning message in the DIC goes off.

If the vehicle continues to be driven with the DPF warning message on, and the exhaust filter is not cleaned as required, the malfunction indicator lamp and the ENGINE POWER IS REDUCED message will come on and dealer service is necessary. See Malfunction Indicator Lamp ⇒ 126 and Engine Power Messages ⇒ 142.

⚠️ Warning
During DPF self cleaning or during extended idling in P (Park), the exhaust system and exhaust gases are very hot. Things that burn could touch hot exhaust parts under the vehicle and ignite. You or others could be burned. Do not park, or idle for an extended period of time, near or over papers, leaves, dry grass, or other things that can burn. Keep the exhaust area clear of material that could ignite or burn. See Parking over Things That Burn ⇒ 221 for more information.

Diesel Exhaust Fluid
⚠️ Warning
Diesel Exhaust Fluid (DEF) is corrosive. Do not allow it to come in contact with your skin, eyes, or the finished surfaces of the vehicle. If exposed, it may cause skin and eye irritation. Wear skin and eye protection when handling. Inhalation may cause irritation to the upper respiratory tract. Store in a cool, well-ventilated area. For more safety and storage information, see the label of the Diesel Exhaust Fluid container.

DEF is used with diesel engines to reduce the amount of regulated emissions produced. The fluid level in the DEF tank must be maintained for the vehicle to run correctly. The capacity of the DEF tank is 14.25 L (3.76 gal).
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It is normal to hear the DEF system purge fluid back into the tank after the vehicle is shut off.

Locating Diesel Exhaust Fluid
DEF can be purchased at a Chevrolet dealer. It can also be purchased at authorized vehicle dealerships. Additionally, some diesel fueling stations or retailers may have DEF for purchase. For vehicles with an active OnStar subscription, OnStar can help to locate a DEF retailer. See Customer Assistance Offices for phone numbers to assist in contacting a GM dealer. See Recommended Fluids and Lubricants.

Filling the DEF Tank

<table>
<thead>
<tr>
<th>Caution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use only DEF that is GM approved, or fluid containing the API certified or ISO 22241 label. The use of other fluids could damage the system, requiring costly repairs that will not be covered by the vehicle warranty.</td>
</tr>
</tbody>
</table>

When adding DEF to an empty or very low tank, always add at least 7.6 L (2 gal) of fluid to release the vehicle from speed limitation.

To prevent damage to the system, do not overfill the DEF tank. When fluid reaches the top of the fill pipe, stop filling. Do not top off the DEF tank.

If you spill DEF during filling, wipe any affected surface with a damp cloth.

For information on the DEF tank, see Filling the Tank.

Exhaust Fluid Low

A full DEF tank will last for several thousand kilometers (miles), depending on vehicle usage. As the exhaust fluid level drops, warnings will automatically be displayed in the DIC. Exhaust fluid level status is available on the DIC under the Vehicle Information menu. See “Diesel Exhaust Fluid Level (Diesel Engine Only)” in Driver Information Center (DIC) (Uplevel) or Driver Information Center (DIC) (Base Level).

To avoid vehicle speed limitations, the DEF tank should be refilled at the first opportunity after a low warning indication. If DEF is added before the EXHAUST FLUID EMPTY REFILL NOW message appears, it may take several km/mi for the DIC message to update.

If the vehicle speed has been limited and DEF has been added, it may take up to 30 seconds after engine start with the vehicle stopped for the EXHAUST FLUID EMPTY REFILL NOW message to clear. If the vehicle is driven prior to the DIC message clearing, the vehicle speed will still be limited. If the DIC message clears while driving, the speed limitation will be removed gradually.

If DEF is added under freezing conditions, additional time may be required to remove speed limitations and may require less fluid to fill the DEF tank.

The following actions describe strategies required by the U.S. Environmental Protection Agency.
(EPA) and the California Air Resource Board (CARB). The DEF messages relate to these strategies. The DIC message EXHAUST FLUID RANGE: XXXX km (mi) displays at approximately 1 600 km (1,000 mi) of fluid range remaining. This message appears again at approximately 500 km (300 mi) of remaining range before the exhaust fluid tank becomes empty. Below 500 km (300 mi) of range remaining, these messages will appear every time the vehicle is started.

Below 121 km (75 mi) of range remaining, the DIC message EXHAUST FLUID LOW SPEED LIMITED SOON displays. This message will display every time the vehicle is started. If these warnings are ignored and the DEF tank becomes empty, the DIC message EXHAUST FLUID EMPTY REFILL NOW - 644 KM (400 MI) UNTIL 105 KM/H (65 MPH) MAX SPEED displays. The displayed mileage will decrease as driving continues. A warning light also comes on.

When the mileage countdown is zero, the DIC message EXHAUST FLUID EMPTY REFILL NOW - TRANSITIONING TO 105 KM/H (65 MPH) MAX SPEED displays. A warning light and a chime also come on. Vehicle speed will be reduced to a maximum speed limit of 105 km/h (65 mph).

After the transition to 105 km/h (65 mph) is complete, the DIC message EXHAUST FLUID EMPTY REFILL NOW - SPEED LIMITED TO 89 KM/H (55 MPH) – 120 KM (75 MI) UNTIL 89 KM/H (55 MPH) MAX SPEED displays. The displayed mileage will decrease as driving continues. A flashing warning light and a chime also come on.

When the mileage countdown is zero, the DIC message EXHAUST FLUID EMPTY REFILL NOW - TRANSITIONING TO 89 KM/H (55 MPH) displays. A flashing warning light and a chime also come on. Vehicle speed will be reduced to a maximum speed limit of 89 km/h (55 mph).

After the transition to 89 km/h (55 mph) is complete, the DIC message EXHAUST FLUID EMPTY REFILL NOW - SPEED LIMITED TO 7 KM/H (4 MPH) displays. A flashing warning light and a chime also come on. Vehicle speed will be reduced to a maximum speed limit of 7 km/h (4 mph).

After the transition to 7 km/h (4 mph) is complete, the DIC message EXHAUST FLUID EMPTY REFILL NOW - SPEED LIMITED TO 7 KM/H (4 MPH) displays. A flashing warning light and a chime also come on.
Add at least 7.6 L (2 gal) of fluid to release the vehicle from speed limitation from a very low or empty tank. The capacity of the DEF tank is 14.25 L (3.76 gal).

See Diesel Exhaust Fluid Messages 142, Diesel Exhaust Fluid (DEF) Warning Light 132, and Recommended Fluids and Lubricants 361.

Exhaust Fluid Quality Poor
Use only exhaust fluid that is GM approved, or fluid containing the API certified or ISO 22241 label.

All DEF has an expiration date. If the system detects poor quality, or contaminated or diluted DEF, the DIC message EXHAUST FLUID QUALITY POOR - SEE OWNERS MANUAL NOW - TRANSITIONING TO 105 KM/H (65 MPH) MAX SPEED displays. A warning light and a chime also come on. Vehicle speed will be reduced to a maximum speed limit of 105 km/h (65 mph).

After the transition to 105 km/h (65 mph) is complete, the DIC message EXHAUST FLUID QUALITY POOR - SEE OWNERS MANUAL NOW - SPEED LIMITED TO 89 KM/H (55 MPH) – 120 KM (75 MI) UNTIL 7 KM/H (4 MPH) MAX SPEED displays. The displayed mileage will decrease as driving continues. A flashing warning light and a chime also come on.

When the mileage countdown is zero, the DIC message EXHAUST FLUID QUALITY POOR - SEE OWNERS MANUAL NOW - TRANSITIONING TO 7 KM/H (4 MPH) MAX SPEED displays. A flashing warning light and a chime also come on. Vehicle speed will be reduced to a maximum speed limit of 7 km/h (4 mph).
After the transition to 7 km/h (4 mph) is complete, a DIC message EXHAUST FLUID QUALITY POOR - SEE OWNERS MANUAL NOW - SPEED LIMITED TO 7 KM/H (4 MPH) displays. A flashing warning light and a chime also come on.

**Service Exhaust Fluid System**

If a problem occurs with the DEF system, the DIC message SERVICE EXHAUST FLUID SYSTEM - SEE OWNERS MANUAL NOW – 160 KM (99 MI) UNTIL 105 KM/H (65 MPH) MAX SPEED displays. The displayed mileage will decrease as driving continues. A warning light also comes on. In some cases this message will clear itself, indicating that the DEF system was able to correct the condition. If the DIC message persists, see your dealer or additional DIC messages may display.

When the mileage countdown is zero, the DIC message SERVICE EXHAUST FLUID SYSTEM - SEE OWNERS MANUAL NOW - TRANSITIONING TO 105 KM/H (65 MPH) MAX SPEED displays. A warning light and a chime also come on. Vehicle speed will be reduced to a maximum speed limit of 105 km/h (65 mph).

After the transition to 105 km/h (65 mph) is complete, a DIC message SERVICE EXHAUST FLUID SYSTEM - SEE OWNERS MANUAL NOW - SPEED LIMITED TO 105 KM/H (65 MPH) – 120 KM (75 MI) UNTIL 89 KM/H (55 MPH) MAX SPEED displays. The displayed mileage will decrease as driving continues. A warning light and a chime also come on.

When the mileage countdown is zero, the DIC message SERVICE EXHAUST FLUID SYSTEM - SEE OWNERS MANUAL NOW - TRANSITIONING TO 89 KM/H (55 MPH) MAX SPEED displays. A flashing warning light and a chime also come on. Vehicle speed will be reduced to a maximum speed limit of 89 km/h (55 mph).

After the transition to 89 km/h (55 mph) is complete, the DIC message SERVICE EXHAUST FLUID SYSTEM - SEE OWNERS MANUAL NOW - SPEED LIMITED TO 89 KM/H (55 MPH) – 120 KM (75 MI) UNTIL 7 KM/H (4 MPH) MAX SPEED displays. The displayed mileage will decrease as driving continues. A flashing warning light and a chime also come on.

When the mileage countdown is zero, the DIC message SERVICE EXHAUST FLUID SYSTEM - SEE OWNERS MANUAL NOW - TRANSITIONING TO 7 KM/H (4 MPH) displays. A flashing warning light and a chime also come on. Vehicle speed will be reduced to a maximum speed limit of 7 km/h (4 mph).

After the transition to 7 km/h (4 mph) is complete, the DIC message SERVICE EXHAUST FLUID SYSTEM - SEE OWNERS MANUAL NOW - SPEED LIMITED TO 7 KM/H (4 MPH) displays. A flashing warning light and a chime also come on.
Service Emission System

If a problem occurs with the vehicle emission system, the DIC message SERVICE EMISSION SYSTEM - SEE OWNERS MANUAL NOW – 282 KM (175 MI) UNTIL 105 KM/H (65 MPH) MAX SPEED displays. The displayed mileage will decrease as driving continues. In some cases this message will clear itself, indicating that the emission system was able to correct the condition. If the DIC message persists, see your dealer or additional DIC messages may display.

When the mileage countdown is zero, the DIC message SERVICE EMISSION SYSTEM - SEE OWNERS MANUAL NOW - TRANSITIONING TO 105 KM/H (65 MPH) MAX SPEED displays. A chime also comes on. Vehicle speed will be reduced to a maximum speed limit of 105 km/h (65 mph).

After the transition to 105 km/h (65 mph) is complete, the DIC message SERVICE EMISSION SYSTEM - SEE OWNERS MANUAL NOW - SPEED LIMITED TO 89 KM/H (55 MPH) displays. A chime also comes on.

Automatic Transmission

The selected gear is also shown in the instrument cluster.

P : This position locks the drive wheels. It is the best position to use when starting the engine because the vehicle cannot move easily.
Warning
It is dangerous to get out of the vehicle if the shift lever is not fully in P (Park) with the parking brake firmly set. The vehicle can roll.

Do not leave the vehicle when the engine is running. If you have left the engine running, the vehicle can move suddenly. You or others could be injured. To be sure the vehicle will not move, even when you are on fairly level ground, always set the parking brake and move the shift lever to P (Park). See Shifting Into Park 219.

Make sure the shift lever is fully in P (Park) before starting the engine. The vehicle has an automatic transmission shift lock control system. The regular brake must be fully applied first and then the shift lever button pressed before shifting 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, then push the shift lever all the way into P (Park) as you maintain brake application. Then press the shift lever button and move the shift lever into another gear. See Shifting out of Park 220.

R : Use this gear to back up.

Caution
Shifting to R (Reverse) while the vehicle is moving forward could damage the transmission. The repairs would not be covered by the vehicle warranty. Shift to R (Reverse) only after the vehicle is stopped.

Warning
Shifting into a drive gear while the engine is running at high speed is dangerous. Unless your foot is firmly on the brake pedal, the vehicle could move very rapidly. You could lose control and hit people or objects. Do not shift into a drive gear while the engine is running at high speed.

Caution
Shifting out of P (Park) or N (Neutral) with the engine running at high speed may damage the transmission. The repairs would not be covered by the vehicle warranty. Be sure the engine is not running at high speed when shifting the vehicle.

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 206.

N : In this position, the engine does not connect with the wheels. To restart the engine when the vehicle is already moving, use N (Neutral) only. Also, use N (Neutral) when the vehicle is being towed.
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D: This position is for normal driving. It provides the best fuel economy. If more power is needed for passing, and the vehicle is:

- Going less than 56 km/h (35 mph), push the accelerator pedal about halfway down.
- Going about 56 km/h (35 mph) or more, push the accelerator all the way down.

Caution
If the vehicle does not shift gears, the transmission could be damaged. Have the vehicle serviced right away.

L: Electronic Range Select (ERS) or Manual Mode allows for the selection of the range of gear positions. See Manual Mode 230.

Operating Modes
The transmission may operate in a lower gear than normal to improve vehicle performance. The engine speed may be higher and there may be an increase in noise during the following conditions:
- When climbing a grade.
- When driving downhill.
- When driving in hot temperatures or at high altitude.

Manual Mode

Driver Shift Control (DSC)

Electronic Range Select (ERS) or Manual Mode allows the range of gear positions to be selected. Use this mode when driving downhill or to limit the top gear and vehicle speed. The shift position indicator in the Driver Information Center (DIC) will display a number next to the L. This indicates the highest available gear under Manual Mode.

To use:
1. Move the shift lever to L (Low).
2. Press + (plus) or − (minus) on the shift lever to increase or decrease the available gear range.

When shifting to L (Low), the transmission will shift to a preset lower gear range. For this preset range, the highest gear available is displayed next to the L in the DIC. See Driver Information Center (DIC) (Uplevel) 137 or Driver Information Center (DIC) (Base Level) 134.

All gears below that number are available to use.

While using ERS, cruise control can be used.

The transmission will not allow shifting to the next lower gear if the vehicle speed or engine rpm is too high.

If vehicle speed is not reduced within the time allowed, the lower gear range shift will not be completed. Slow the vehicle, then press − (minus) to the desired lower gear range.
Second Gear Start Feature
When accelerating the vehicle from a stop in snowy and icy conditions, you may want to shift into 2 (Second) gear. A higher gear allows you to gain more traction on slippery surfaces.

With the DSC feature, the vehicle can be set to pull away in 2 (Second) gear.

1. Move the shift lever from D (Drive) to L (Low).
2. With the vehicle stopped, press the + (plus) end of the button to select 2 (Second) gear. The vehicle will start from a stop position in 2 (Second) gear.
3. Once moving, select the desired drive gear.

Manual Transmission Shift Pattern

Caution
Do not rest your hand on the shift lever while driving. The pressure could cause premature wear in the transmission. The repairs would not be covered by the vehicle warranty.

Caution
Do not rest your foot on the clutch pedal while driving or while stopped. The pressure can cause premature wear in the clutch. The repairs would not be covered by the vehicle warranty.

1 : Press the clutch pedal fully to the pedal stop and shift into 1 (First). Then slowly let up on the clutch pedal as the accelerator pedal is pressed.

If the vehicle comes to a complete stop and it is hard to shift into 1 (First), put the shift lever in Neutral and let up on the clutch. Press the clutch pedal back down. Then shift into 1 (First).

2 : Press the clutch pedal fully to the pedal stop while letting up on the accelerator pedal and shifting into 2 (Second). Then, slowly let up on the clutch pedal as the accelerator pedal is pressed.
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3, 4, 5, and 6: Shift into 3 (Third), 4 (Fourth), 5 (Fifth), and 6 (Sixth) the same way as for 2 (Second). Slowly let up on the clutch pedal as the accelerator pedal is pressed.

For the best fuel economy, use 6 (Sixth) gear whenever vehicle speed and driving conditions allow.

Neutral: Use this position when you start or idle the engine. The shift lever is in Neutral when it is centered in the shift pattern, not in any gear.

R: To back up, with the vehicle at a complete stop, press down the clutch pedal. Then pull up the shift lever release button, and shift into R (Reverse). Let up on the clutch pedal slowly while pressing the accelerator pedal.

If the gear does not engage, shift the transmission to Neutral, release the clutch pedal, and press it back down. Repeat the gear selection.

Warning
If you skip a gear when downshifting, you could lose control of the vehicle. You could injure yourself or others. Do not shift down more than one gear at a time when downshifting.

Caution
Do not skip gears while upshifting. This can cause premature wear in the transmission. The repairs would not be covered by the vehicle warranty.
Brakes

Antilock Brake System (ABS)

This vehicle has an Antilock Brake System (ABS), an advanced electronic braking system that helps prevent a braking skid.

When the vehicle begins to drive away, ABS checks itself. A momentary motor or clicking noise may be heard while this test is going on, and it may 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 \(\Rightarrow\) 129.

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 the wheels are slowing down. If one of the wheels is about to stop rolling, the computer will separately work the brakes at each wheel.

ABS can change the brake pressure to each wheel, as required, faster than any driver could. This can help you steer around the obstacle while braking hard.

As the brakes are applied, the computer keeps receiving updates on wheel speed and controls braking pressure accordingly.

Remember: ABS does not change the time needed to get a foot up to the brake pedal or always decrease stopping distance. If you get too close to the vehicle in front of you, there will not be enough time to apply the brakes if that vehicle suddenly slows or stops. Always leave enough room up ahead to stop, even with ABS.

Using ABS

Do not pump the brakes. Just hold the brake pedal down firmly and let ABS work. You may hear the ABS pump or motor operating and feel the brake pedal pulsate. This is normal.

Braking in Emergencies

ABS allows you to steer and brake at the same time. In many emergencies, steering can help more than even the very best braking.
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Parking Brake
Lever Apply

With the brake pedal applied, pull up firmly on the parking brake handle without pressing the release button. See Shifting Into Park  219 or Parking  221. If the ignition is in the ON/RUN position, the brake system warning light will come on. See Brake System Warning Light  128.

To release the parking brake:
1. Hold the brake pedal down.
2. Pull the parking brake handle up until you can press the release button.
3. Hold the release button in as you move the brake handle all the way down.

Caution

Driving with the parking brake on can overheat the brake system and cause premature wear or damage to brake system parts. Make sure that the parking brake is fully released and the brake warning light is off before driving.

Pedal Apply

With the brake pedal applied, push the parking brake pedal down. See Shifting Into Park  219 or Parking  221.

If the ignition is on, the brake system warning light will come on. See Brake System Warning Light  128.
Caution

Driving with the parking brake on can overheat the brake system and cause premature wear or damage to brake system parts. Make sure that the parking brake is fully released and the brake warning light is off before driving.

Brake Assist

To release the parking brake, hold the regular brake pedal down, then push down momentarily on the parking brake pedal until you feel the pedal release. Slowly pull your foot up off the parking brake pedal. If the parking brake is not released when you begin to drive, the brake system warning light will be on and a chime will sound warning you that the parking brake is still on.

Brake Assist feature is 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.

Ride Control Systems

Traction Control/ Electronic Stability Control

System Operation

The vehicle has a Traction Control System (TCS) and StabiliTrak®, an electronic stability control system. These systems help limit wheel slip and assist the driver in maintaining control, especially on slippery road conditions.

TCS activates if it senses that any of the drive wheels are spinning or beginning to lose traction. When this happens, TCS applies the brakes to the spinning wheels and reduces engine power to limit wheel spin.

StabiliTrak activates when the vehicle senses a difference between the intended path and the direction the vehicle is actually traveling. StabiliTrak selectively applies braking pressure to any one of the
vehicle wheel brakes to assist the driver in keeping the vehicle on the intended path.

If cruise control is being used and traction control or StabiliTrak begins to limit wheel spin, cruise control will disengage. Cruise control may be turned back on when road conditions allow.

Both systems come on automatically when the vehicle is started and begins to move. The systems may be heard or felt while they are operating or while performing diagnostic checks. This is normal and does not mean there is a problem with the vehicle.

It is recommended to leave both systems on for normal driving conditions, but it may be necessary to turn TCS off if the vehicle gets stuck in sand, mud, ice, or snow. See If the Vehicle Is Stuck and “Turning the Systems Off and On” later in this section.

The indicator light for both systems is in the instrument cluster. This light will:

- Flash when TCS is limiting wheel spin.
- Flash when StabiliTrak is activated.
- Turn on and stay on when either system is not working.

If either system fails to turn on or to activate, a message displays in the Driver Information Center (DIC), and \( \text{Off} \) comes on and stays on to indicate that the system is inactive and is not assisting the driver in maintaining control. The vehicle is safe to drive, but driving should be adjusted accordingly.

If \( \text{Off} \) comes on and stays on:

1. Stop the vehicle.

2. Turn the engine off and wait 15 seconds.

3. Start the engine.

Drive the vehicle. If \( \text{Off} \) comes on and stays on, the vehicle may need more time to diagnose the problem. If the condition persists, see your dealer.

**Turning the Systems Off and On**

The button for TCS and StabiliTrak is on the center console, behind the shift lever.

<table>
<thead>
<tr>
<th><strong>Caution</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Do not repeatedly brake or accelerate heavily when TCS is off. The vehicle driveline could be damaged.</td>
</tr>
</tbody>
</table>
To turn off only TCS, press and release ⚪. The traction off light ⚪ displays in the instrument cluster. To turn TCS on again, press and release ⚪. The traction off light ⚪ displayed in the instrument cluster will turn off.

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

To turn off both TCS and StabiliTrak, press and hold ⚪ until the traction off light ⚪ and StabiliTrak OFF light ⚪ come on and stay on in the instrument cluster. To turn TCS and StabiliTrak on again, press and release ⚪. The traction off light ⚪ and StabiliTrak OFF light ⚪ in the instrument cluster turn off.

Adding accessories can affect the vehicle performance. See Accessories and Modifications  265.

**Cruise Control**

The cruise control lets the vehicle 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).

**Warning**

Cruise control can be dangerous where you cannot drive safely at a steady speed. Do not use cruise control on winding roads or in heavy traffic.

Cruise control can be dangerous on slippery roads. On such roads, fast changes in tire traction can cause excessive wheel slip, and you could lose control. Do not use cruise control on slippery roads.

If equipped with a manual transmission, the cruise control will remain active when the gears are shifted. The cruise is deactivated if the clutch is pressed for several seconds.

With the Traction Control System (TCS) or Electronic Stability Control (ESC), the system may begin to limit wheel spin while you are using cruise control. If this happens, the cruise control will automatically disengage. See Traction Control/ Electronic Stability Control  235. If a collision alert occurs when cruise control is activated, cruise control is disengaged. See Forward Collision Alert (FCA) System  243. When road conditions allow you to safely use it again, cruise control can be turned back on.

If the brakes are applied, cruise control disengages.
### Setting Cruise Control

If *( senators)* is on when not in use, -SET or +RES could get bumped and go into cruise when not desired. Keep *( senators)* off when cruise is not being used.

To set a speed:

1. Press *( senators)* to turn the cruise system on.
2. Get up to the desired speed.
3. Press and release -SET. The desired set speed briefly appears in the instrument cluster.
4. Remove your foot from the accelerator pedal.

The cruise control indicator on the instrument cluster turns green after cruise control has been set to the desired speed. See Instrument Cluster 116.

### Resuming a Set Speed

If the cruise control is set at a desired speed and then the brakes are applied or *( senators)* is pressed, the cruise control is disengaged without erasing the set speed from memory.

Once the vehicle speed reaches about 40 km/h (25 mph) or more, briefly press +RES. The vehicle returns to the previous set speed.

### Increasing Speed While Using Cruise Control

If the cruise control system is already activated:

- Press and hold +RES on the steering wheel until the vehicle accelerates to the desired speed, then release it.
- To increase the speed in small increments, briefly press +RES. For each press, the vehicle goes about 1 km/h (1 mph) faster.

The speedometer reading can be displayed in either English or metric units. See Instrument Cluster 116. The increment value used depends on the units displayed.

### Reducing Speed While Using Cruise Control

If the cruise control system is already activated:

- Press and hold -SET until the desired lower speed is reached, then release it.
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To slow down in small increments, briefly press -SET. For each press, the vehicle goes about 1 km/h (1 mph) slower.

The speedometer reading can be displayed in either English or metric units. See Instrument Cluster  116. The increment value used depends on the units displayed.

Passing Another Vehicle While Using Cruise Control

Use the accelerator pedal to increase the vehicle speed. When you take your foot off the pedal, the vehicle will slow down to the previous set cruise speed. While pressing the accelerator pedal or shortly following the release to override cruise control, briefly pressing -SET will result in cruise control set to the current vehicle speed.

Using Cruise Control on Hills

How well 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 keep your speed down. If the brake pedal is applied, cruise control will disengage.

Ending Cruise Control

There are four ways to end cruise control:

- Step lightly on the brake pedal.
- Press the clutch pedal for several seconds or shift to Neutral (manual transmissions).
- Shift the transmission to N (Neutral).
- Press 🚹.
- Press 🚹.

Erasing Speed Memory

The cruise control set speed is erased from memory if 🚹 is pressed or if the vehicle is turned off.

Driver Assistance Systems

This vehicle may have features that work together to help avoid crashes or reduce crash damage while driving, backing, and parking. Read this entire section before using these systems.

⚠️ Warning

Do not rely on the Driver Assistance Systems. These systems do not replace the need for paying attention and driving safely. You may not hear or see alerts or warnings provided by these systems. Failure to use proper care when driving may result in injury, death, or vehicle damage. See Defensive Driving  201.
Warning (Continued)
Under many conditions, these systems will not:

- Detect children, pedestrians, bicyclists, or animals.
- Detect vehicles or objects outside the area monitored by the system.
- Work at all driving speeds.
- Warn you or provide you with enough time to avoid a crash.
- Work under poor visibility or bad weather conditions.
- Work if the detection sensor is not cleaned or is covered by ice, snow, mud, or dirt.
- Work if the detection sensor is covered up, such as with a sticker, magnet, or metal plate.

Warning (Continued)
- Work if the area surrounding the detection sensor is damaged or not properly repaired.

Complete attention is always required while driving, and you should be ready to take action and apply the brakes and/or steer the vehicle to avoid crashes.

Audible Alert
Some driver assistance features alert the driver of obstacles by beeping. To change the volume of the warning chime, see “Comfort and Convenience” under Vehicle Personalization ∗ 150.

Assistance Systems for Parking or Backing
If equipped, the Rear Vision Camera (RVC), Rear Parking Assist (RPA), and Rear Cross Traffic Alert (RCTA) may help the driver park or avoid objects. Always check around the vehicle when parking or backing.

Rear Vision Camera (RVC)
When the vehicle is shifted into R (Reverse), the RVC displays an image of the area behind the vehicle in the infotainment display. The previous screen displays when the vehicle is shifted out of R (Reverse) after a short delay. To return to the previous screen sooner, press a button on the infotainment system, shift into P (Park), or reach a vehicle speed of 8 km/h (5 mph).
Displayed images may be farther or closer than they appear. The area displayed is limited and objects that are close to either corner of the bumper or under the bumper do not display.

A warning triangle may display on the RVC screen to show that Rear Parking Assist (RPA) has detected an object. This triangle changes from amber to red and increases in size the closer the object.

### Warning

The camera(s) do not display children, pedestrians, bicyclists, crossing traffic, animals, or any other object outside of the cameras’ field of view, below the bumper, or under the vehicle. Shown distances may be different from actual distances. Do not drive or park the vehicle using only these camera(s). Always check behind and around the vehicle before driving. Failure to use proper care may result in injury, death, or vehicle damage.

### Parking Assist

With RPA, as the vehicle backs up at speeds of less than 8 km/h (5 mph), the sensors on the rear bumper may detect objects up to 2.5 m (8 ft) behind the vehicle within a zone 25 cm (10 in) high off the ground and below bumper level. These detection distances may be shorter during warmer or humid weather.

Blocked sensors will not detect objects and can also cause false detections. Keep the sensors clean of mud, dirt, snow, ice, and slush; and clean sensors after a car wash in freezing temperatures.

### Warning

The Parking Assist system does not detect children, pedestrians, bicyclists, animals, or objects located below the bumper or that are too close or too far from the vehicle. It is not available at speeds greater than 8 km/h (5 mph). To prevent injury, death, (Continued)
or vehicle damage, even with parking assist, always check the area around the vehicle and check all mirrors before moving forward or backing.

The instrument cluster may have a parking assist display with bars that show “distance to object” and object location information for RPA. As the object gets closer, more bars light up and the bars change color from yellow to amber to red.

When an object is first detected in the rear, one beep will be heard from the rear. When an object is very close (<0.6 m (2 ft) in the vehicle rear), five beeps will sound from the rear.

**Rear Cross Traffic Alert (RCTA)**

If equipped, RCTA displays a red warning triangle with a left or right pointing arrow on the RVC screen to warn of traffic coming from the left or right. This system detects objects coming from up to 20 m (65 ft) from the left or right side of the vehicle. When an object is detected, three beeps sound from the left or right, depending on the direction of the detected vehicle.

Use caution while backing up when towing a trailer, as the RCTA detection zones that extend out from the back of the vehicle do not move further back when a trailer is towed.

**Turning the Features On or Off**

The button on the center console is used to turn on or off the Rear Parking Assist and RCTA. The indicator light next to the button comes on when the features are on and turns off when the features have been disabled.

Turn off RPA when towing a trailer.

To turn the rear parking assist symbols or guidance lines on or off, see “Rear Camera” under *Vehicle Personalization* ▷ 150.

RCTA can also be turned on or off through vehicle personalization. see “Collision/Detection Systems” under *Vehicle Personalization* ▷ 150.

**Assistance Systems for Driving**

If equipped, when driving the vehicle in a forward gear, Forward Collision Alert (FCA), Lane Departure Warning (LDW), Lane Keep Assist (LKA), Side Blind Zone Alert (SBZA), and/or Lane Change Alert (LCA) can help to avoid a crash or reduce crash damage.
Forward Collision Alert (FCA) System

If equipped, the FCA system may help to avoid or reduce the harm caused by front-end crashes. When approaching a vehicle ahead too quickly, FCA provides a flashing red alert on the windshield and rapidly beeps. FCA also lights an amber visual alert if following another vehicle much too closely.

FCA detects vehicles within a distance of approximately 60 m (197 ft) and operates at speeds above 40 km/h (25 mph).

⚠️ Warning

FCA is a warning system and does not apply the brakes. When approaching a slower-moving or stopped vehicle ahead too rapidly, or when following a vehicle too closely, FCA may not provide a warning with enough time to help avoid a crash. It also may not provide any warning at all. FCA

(Continued)

Warning (Continued)

does not warn of pedestrians, animals, signs, guardrails, bridges, construction barrels, or other objects. Be ready to take action and apply the brakes. See Defensive Driving ⇒ 201.

FCA can be disabled with the FCA steering wheel control.

Detecting the Vehicle Ahead

FCA warnings will not occur unless the FCA system detects a vehicle ahead. When a vehicle is detected, the vehicle ahead indicator will display green. Vehicles may not be detected on curves, highway exit ramps, or hills, due to poor visibility; or if a vehicle ahead is partially blocked by pedestrians or other objects. FCA will not detect another vehicle ahead until it is completely in the driving lane.

⚠️ Warning

FCA does not provide a warning to help avoid a crash, unless it detects a vehicle. FCA may not detect a vehicle ahead if the FCA sensor is blocked by dirt, snow, or ice, or if the windshield is damaged. It may also not detect a vehicle on winding or hilly roads, or in conditions that can limit visibility such as fog, rain, or snow, or if the headlamps or windshield are not cleaned or in proper condition. Keep the windshield, headlamps, and FCA sensors clean and in good repair.
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Collision Alert

When your vehicle approaches another detected vehicle too rapidly, the red FCA display will flash on the windshield. Also, eight rapid high-pitched beeps will sound from the front. When this Collision Alert occurs, the brake system may prepare for driver braking to occur more rapidly which can cause a brief, mild deceleration. Continue to apply the brake pedal as the driving situation dictates. Cruise control may be disengaged when the Collision Alert occurs.

Tailgating Alert

The vehicle ahead indicator will display amber when you are following a detected vehicle ahead much too closely.

Selecting the Alert Timing

The Collision Alert control is on the steering wheel. Press \( \text{ } \) to set the FCA timing to far, medium, near, or off. The first button press shows the current control setting on the DIC. Additional button presses will change this setting. The chosen setting will remain until it is changed and will affect the timing of both the Collision Alert and the Tailgating Alert features. The timing of both alerts will vary based on vehicle speed. The faster the vehicle speed, the farther away the alert will occur. Consider traffic and weather conditions when selecting the alert timing. The range of selectable alert timing may not be appropriate for all drivers and driving conditions.

Following Distance Indication

The following distance to a moving vehicle you are following is indicated in following time in seconds on the Driver Information Center (DIC). See Driver Information Center (DIC) (Uplevel)  137 or Driver Information Center (DIC) (Base Level)  134. The minimum following time is 0.5 seconds away. If there is no vehicle detected ahead, or the vehicle ahead is out of sensor range, dashes will be displayed.

Unnecessary Alerts

FCA may provide unnecessary alerts to turning vehicles, vehicles in other lanes, objects that are not vehicles, or shadows. These alerts are normal operation and the vehicle does not need service.
Cleaning the System
If the FCA system does not seem to operate properly, cleaning the outside of the windshield in front of the camera sensor may correct the issue.

Side Blind Zone Alert (SBZA)
If equipped, the SBZA system is a lane-changing aid that assists drivers with avoiding crashes that occur with moving vehicles in the side blind zone (or spot) areas. When the vehicle is in a forward gear, the left or right side mirror display will light up if a moving vehicle is detected in that blind zone. If the turn signal is activated and a vehicle is also detected on the same side, the display will flash as an extra warning not to change lanes. Since this system is part of the Lane Change Alert (LCA) system, read the entire LCA section before using this feature.

Lane Change Alert (LCA)
If equipped, the LCA system is a lane-changing aid that assists drivers with avoiding lane change crashes that occur with moving vehicles in the side blind zone (or spot) areas or with vehicles rapidly approaching these areas from behind. The LCA warning display will light up in the corresponding outside side mirror and will flash if the turn signal is on.

⚠️ Warning
LCA does not alert the driver to vehicles outside of the system detection zones, pedestrians, bicyclists, or animals. It may not provide alerts when changing lanes under all driving conditions. Failure to use proper care when changing lanes may result in injury, death, or vehicle damage. Before making a lane change, always check mirrors, glance over your shoulder, and use the turn signals.

LCA Detection Zones

1. SBZA Detection Zone
2. LCA Detection Zone

The LCA sensor covers a zone of approximately one lane over from both sides of the vehicle, or 3.5 m (11 ft). The height of the zone is approximately between 0.5 m (1.5 ft) and 2 m (6 ft) off the ground. The Side Blind Zone Alert (SBZA) warning area starts at approximately the middle of the vehicle and goes back 5 m (16 ft). Drivers are also warned of vehicles rapidly approaching from up to 25 m (82 ft) behind the vehicle.
How the System Works

The LCA symbol lights up in the side mirrors when the system detects a moving vehicle in the next lane over that is in the side blind zone or rapidly approaching that zone from behind. A lit LCA symbol indicates it may be unsafe to change lanes. Before making a lane change, check the LCA display, check mirrors, glance over your shoulder, and use the turn signals.

If the turn signal is activated in the same direction as a detected vehicle, this display will flash as an extra warning not to change lanes.

LCA can be disabled through vehicle personalization. See “Collision/Detection Systems” under Vehicle Personalization ♦ 150.

If LCA is disabled by the driver, the LCA mirror displays will not light up.

When the System Does Not Seem to Work Properly

The LCA system requires some driving for the system to calibrate to maximum performance. This calibration may occur more quickly if the vehicle is driven on a straight highway road with traffic and roadside objects (e.g., guardrails, barriers). During a trip, the LCA system is not operational until the vehicle first reaches a speed of 24 km/h (15 mph).

LCA displays may not come on when passing a vehicle quickly, for a stopped vehicle, or when towing a trailer. The LCA detection zones that extend back from the side of the vehicle do not move further back when a trailer is towed. Use caution while changing lanes when towing a trailer. LCA may alert to objects attached to the vehicle, such as a trailer, bicycle, or object extending out to either side of the vehicle. Attached objects may also interfere with the detection of vehicles. This is normal system operation; the vehicle does not need service.

LCA may not always alert the driver to vehicles in the next lane over, especially in wet conditions or when driving on sharp curves. The system does not need to be serviced. The system may light up due to guardrails, signs, trees, shrubs, and other non-moving objects. This is normal system operation; the vehicle does not need service.

LCA may not operate when the LCA sensors in the left or right corners of the rear bumper are covered with mud, dirt, snow, ice, or slush, or in heavy rainstorms. For cleaning instructions, see "Washing the Vehicle" under Exterior Care ♦ 342. If the DIC still displays the system unavailable message after cleaning
both sides of the vehicle toward the rear corners of the vehicle, see your dealer.

If the LCA displays do not light up when moving vehicles are in the side blind zone or rapidly approaching this zone and the system is clean, the system may need service. Take the vehicle to your dealer.

When LCA is disabled for any reason other than the driver turning it off, the Lane Change Alert On option will not be available on the personalization menu.

Radio Frequency Information
See Radio Frequency Statement ⇒ 379.

Lane Departure Warning (LDW)
If equipped, LDW may help avoid crashes due to unintentional lane departures. It may provide a warning if the vehicle approaches a detected lane marking without using a turn signal in that direction. It may also provide a Lane Departure Warning (LDW) system alert as the lane marking is crossed. The LKA system will not assist or provide an LDW alert if it detects that you are actively steering. Override LKA by turning the steering wheel. LKA uses a camera to detect lane markings between 60 km/h (37 mph) and 180 km/h (112 mph).

⚠️ Warning
The LKA system does not continuously steer the vehicle. It may not keep the vehicle in the
(Continued)
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Warning (Continued)

alert when approaching the lane on the side where it has detected a lane marking. Even with LKA and LDW, you must steer the vehicle. Always keep your attention on the road and maintain proper vehicle position within the lane, or vehicle damage, injury, or death could occur. Always keep the windshield, headlamps, and camera sensors clean and in good repair. Do not use LKA in bad weather conditions.

Warning

Using LKA while towing a trailer or on slippery roads could cause loss of control of the vehicle and a crash. Turn the system off.

How the System Works

The LKA camera sensor is on the windshield ahead of the rearview mirror.

To turn LKA on and off, press \ on the steering wheel.

When on, \ is green if LKA is available to assist and provide LDW alerts. It may assist by gently turning the steering wheel and display \ as amber if the vehicle approaches a detected lane marking without using a turn signal in that direction. It may also provide an LDW alert by flashing \ amber as the lane marking is crossed. Additionally, there will be three beeps on the right or left, depending on the lane departure direction.

The LKA system does not continuously steer the vehicle. If LKA does not detect active driver steering, an alert and chime may be provided. Move the steering wheel to dismiss.

When the System Does Not Seem to Work Properly

The system performance may be affected by:

- Close vehicles ahead.
- Sudden lighting changes, such as when driving through tunnels.
- Banked roads.
- Roads with poor lane markings, such as two-lane roads.

If the LKA system is not functioning properly when lane markings are clearly visible, cleaning the windshield may help.

LKA assistance and/or LDW alerts may occur due to tar marks, shadows, cracks in the road, temporary or construction lane markings, or other road imperfections. This is normal system operation; the vehicle does not need service. Turn LKA off if these conditions continue.
Fuel

Fuel (Gasoline)

GM recommends the use of TOP TIER Detergent Gasoline to keep the engine cleaner and reduce engine deposits. See www.toptiergas.com for a list of TOP TIER Detergent Gasoline marketers and applicable countries.

Use regular unleaded gasoline meeting ASTM specification D4814 with a posted octane rating of 87 or higher. Do not use gasoline with a posted octane rating of less than 87, as this may cause engine knock and will lower fuel economy.

Prohibited Fuels

Caution

Do not use fuels with any of the following conditions; doing so may damage the vehicle and void its warranty:

- For vehicles which are not FlexFuel, fuel labeled greater than 15% ethanol by volume, such as mid-level ethanol blends (16 – 50% ethanol), E85, or FlexFuel.
- Fuel with any amount of methanol, methylal, and aniline. These fuels can corrode metal fuel system parts or damage plastic and rubber parts.

Caution (Continued)

- Fuel containing metals such as methylcyclopentadienyl manganese tricarbonyl (MMT), which can damage the emissions control system and spark plugs.
- Fuel with a posted octane rating of less than the recommended fuel. Using this fuel will lower fuel economy and performance, and may decrease the life of the emissions catalyst.

California Fuel Requirements (Gasoline)

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
Driving and Operating

Control system performance may be affected. The malfunction indicator lamp could turn on and the vehicle may not pass a smog-check test. See Malfunction Indicator Lamp \( \Leftrightarrow 126 \). If this occurs, return to your authorized dealer for diagnosis. If it is determined that the condition is caused by the type of fuel used, repairs may not be covered by the vehicle warranty.

Fuels in Foreign Countries (Gasoline)

The U.S., Canada, and Mexico post fuel octane ratings in anti-knock index (AKI). For fuel not to use in a foreign country, see “Prohibited Fuels” in Fuel (Gasoline) \( \Leftrightarrow 249 \).

Fuel Additives (Gasoline)

To keep fuel systems clean, TOP TIER Detergent Gasoline is recommended. See Fuel (Gasoline) \( \Leftrightarrow 249 \).

If TOP TIER Detergent Gasoline is not available, one bottle of GM Fuel System Treatment Cleaner added to the fuel tank at every engine oil change, can help. GM Fuel System Treatment Cleaner is the only gasoline additive recommended by General Motors. It is available at your dealer.

Fuel for Diesel Engines

The selection of a high quality fuel is important for maintaining optimum performance. Do not use diesel fuel with more than 15 ppm sulfur content. Do not use a diesel blend containing more than 20% biodiesel by volume. Both diesel and biodiesel blends must meet all the requirements as defined in the most current versions of the local fuel standards. See the recommended fuels under What Fuel to Use in the U.S. (Diesel) \( \Leftrightarrow 251 \) and What Fuel to Use in Canada (Diesel) \( \Leftrightarrow 252 \).

Caution

Engine damage may occur if recommended fuels are not used, which may void the vehicle warranty. Some improper fuels are:

- Diesel fuel with the addition of gasoline.
- Diesel fuel mixed with engine oil or automatic transmission fluid.
- Triglyceride fuels, such as raw vegetable oil or animal fat, in any form, including with blends of diesel or biodiesel.
- Marine diesel fuel and fuel oils.
- Diesel-water emulsions, such as Aquazole®.
- Aftermarket diesel fuel additives, which contain alcohols, organo-metallic additives, or water emulsifiers.

(Continued)
Caution (Continued)

- Diesel fuel with sulfur greater than 15 ppm.

Some conditions, such as dirty fuel, may decrease fuel filter life and a CHANGE FUEL FILTER message may come on in the Driver Information Center (DIC).

What Fuel to Use in the U.S. (Diesel)

Use of diesel fuel with ultra low sulfur content (15 ppm, maximum) is required. Look for service station fuel dispensers with this label in green:

ULTRA-LOW SULFUR HIGHWAY DIESEL FUEL
(15 ppm Sulfur Maximum)

Required for use in all model year 2007 and later highway diesel vehicles and engines.
Recommended for use in all diesel vehicles and engines.

The diesel fuel must meet ASTM International specification D 975, Grades No. 2-D or No. 1-D S15, also known as Ultra Low Sulfur Diesel. Contact a fuel supplier or fueling station with any questions.

Caution

Use of diesel fuel other than Ultra Low Sulfur Diesel (15 ppm sulfur maximum) will cause damage to the exhaust after-treatment system. This damage would not be covered by the vehicle warranty. Do not use marine, (Continued)

Diesel Fuel Grades

For best results use No. 2-D diesel fuel year-round because it is blended for seasonal temperature differences, both above and below freezing conditions. No. 1-D diesel also meeting ASTM International D975 fuel can be used in very cold temperatures (below -18 °C or 0 °F); however, it will reduce power and fuel economy. Avoid using No. 1-D diesel fuel in warm or hot climates. It can result in stalling, poor starting when the engine is hot, and damage to the fuel injection system.

Premium Diesel Fuel

Premium Diesel Fuel (FQP-1A) corresponds to the Engine Manufacturers Association (EMA) Recommended Guideline. It may
Driving and Operating

provide less noise, better starting, and better vehicle performance, but is not required.

**Biodiesel Blends**

Retail pumps dispensing blends containing up to 5% biodiesel (B5) are not required to be labeled with the concentration of biodiesel. Blends up to B5 must meet ASTM D975 (Grades No. 2-D or No. 1-D S15 Ultra Low Sulfur Diesel). When refueling with a biodiesel blend above B5, one of the following labels should appear on the dispenser:

<table>
<thead>
<tr>
<th>B-20 Biodiesel Blend</th>
</tr>
</thead>
<tbody>
<tr>
<td>contains biomass-based diesel or biodiesel in quantities between 5 percent and 20 percent</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>20% Biomass-Based Diesel Blend</th>
</tr>
</thead>
<tbody>
<tr>
<td>contains biomass-based diesel or biodiesel in quantities between 5 percent and 20 percent</td>
</tr>
</tbody>
</table>

Blends containing more than 5% and up to 20% biodiesel must meet ASTM specification D7467 (Biodiesel blend, B6 - B20) and are labeled with an orange or blue pump label. To reduce the risk of poor quality fuel, purchase biodiesel blends from a fuel supplier or fueling station that sells BQ-9000® certified biodiesel. See www.bq-9000.org for a list of certified marketers. For detailed information on the use of biodiesel, see *Biodiesel* 253.

**What Fuel to Use in Canada (Diesel)**

Use of diesel fuel with ultra low sulfur content (15 ppm, maximum) is required. Use diesel fuel that meets the CAN/CGSB-3.517 specification in Canada. Contact a fuel supplier with questions about fuel.

**Caution**

Use of diesel fuel other than Ultra Low Sulfur Diesel (15 ppm sulfur maximum) will cause damage to the exhaust after-treatment system. This damage would not be covered by the vehicle warranty. Do not use marine, (Continued)
Caution (Continued)

locomotive, or boiler distillate fuel since it may contain higher sulfur levels.

Diesel Fuel Types

For best results use Ultra Low Sulfur Type B Diesel. This fuel is blended for seasonal changes. In extreme cold temperatures (below -18 °C or 0 °F) Ultra Low Sulfur Type A Diesel fuel can be used, but it may cause power and fuel economy losses. Avoid using Type A Diesel fuel in warm or hot climates. Doing so can result in stalling, poor starting when the engine is hot, and damage to the fuel injection system.

Premium Diesel Fuel

If available, premium diesel fuel (FQP-1A) corresponding to the Engine Manufacturers Association (EMA) Recommended Guideline could provide better starting and vehicle performance with less noise.

Biodiesel Blends in Canada

Biodiesel blends that meet the CAN/CGSB-3.522 specifications up to 20% (B20) can be used. Avoid the use of biodiesel blends above 20%, as they may damage the engine and fuel system. For detailed information on the use of biodiesel, see Biodiesel ⇒ 253.

Refueling

Diesel fuel can foam when filling the tank. This can cause the automatic pump nozzle to shut off, even if the tank is not full. If this happens, wait for the foaming to stop, and then fill the tank more slowly. See Filling the Tank ⇒ 259.

Caution

Heat coming from the engine can cause the fuel to expand and force the fuel out of the tank. If something ignites the fuel, a fire could start. To help avoid this, fill the tank slowly and only until the nozzle shuts off. Do not top it off. Clean up any spilled fuel.

Accidental Refueling with Gasoline

If the vehicle is accidentally refueled with gasoline, do not continue driving the vehicle except to get to a location where it can be stopped safely. Driving the vehicle will damage the fuel system. Have the vehicle towed to a qualified technician to have the gasoline removed from the tank and fuel system. Flush the fuel system with Ultra Low Sulfur Diesel fuel to ensure all gasoline is removed.

Biodiesel

Biodiesel is a renewable fuel produced from vegetable oils or animal fats that have been chemically modified to make it compatible with diesel fuel.
254 Driving and Operating

Caution

Do not use home-made biodiesel or home test kits because the quality cannot be verified by approved scientific methods. Do not use raw vegetable oil or other unmodified bio-oils, fats, or blends of vegetable oil with diesel. They could damage the fuel system and engine, and damages would not be covered by the vehicle warranty.

Caution

Do not use blends containing more than 20% biodiesel. Any engine, fuel system, or exhaust after-treatment system damage would not be covered by the vehicle warranty.

Biodiesel fuel quality degrades with time and exposure to high temperature quicker than Ultra Low Sulfur Diesel fuel. More frequent refueling provides the best opportunity to have a supply of fresh fuel. Storage at hot ambient temperatures will accelerate biodiesel degradation.

Owners who use very little fuel, or who have vehicles stored for extended periods of time, should avoid the use of biodiesel blended fuels above 5% by volume. When vehicles are stored for longer than one month, they should be run out of biodiesel to below one-quarter tank, refueled with Ultra Low Sulfur Diesel fuel, and driven at least 32 km (20 mi) before storage.

At temperatures below 0 °C (32 °F), it is recommended to switch to Ultra Low Sulfur Diesel fuel with no biodiesel content, or to blends with biodiesel containing less than 5% by volume. At these extreme cold temperatures, biodiesel blends higher than 5% by volume may cause fuel filter plugging and system gelling, which can lead to vehicle operability problems.

Fuels improperly blended for cold temperature operation may result in restricted fuel filters and degraded vehicle performance. GM diesel vehicles are equipped with a fuel heating system to provide an extra level of protection against filter plugging from gelling or waxing of conventional diesel fuel and biodiesel blends. If the operating temperature is far below the temperature at which gelling or waxing of the fuel occurs, the system cannot prevent all cases of filter plugging.

If the vehicle experiences a fuel filter restriction, the on-board monitoring system will alert the driver that the fuel filter requires service. The fuel filter, however, will not prevent all damage caused by poor quality biodiesel.
Cold Weather Operation (Diesel)

In cold weather, the fuel filter may become clogged by wax naturally present in the fuel. To unclog it, move the vehicle to a warm garage area and allow the filter to warm up. The fuel filter may need to be replaced. See Fuel Filter Replacement (Diesel) 258.

At temperatures below 0 °C (32 °F), it is recommended to avoid using biodiesel blends above 5% blend. This blend may cause fuel filter plugging, system gelling, and freezing that may affect vehicle starting. You may need to place the ignition in Service Only Mode and off a few times before the vehicle will start, see Ignition Positions (Keyless Access) 212 or Ignition Positions (Key Access) 210. Also, idle the vehicle for a couple of minutes before accelerating.

For additional information for better cold weather operation, see Engine Heater 218.

Water in Fuel (Diesel)

Improper fuel tank inspection or cleaning, or contaminated fuel from suppliers, can cause water to be pumped into the fuel tank along with the diesel fuel. If a WATER IN FUEL - CONTACT SERVICE message displays, the water must be drained immediately.

⚠️ Warning

Diesel fuel containing water is still combustible. You or others could be burned. If the fuel needs to be drained, keep sparks, flames, and smoking materials away from the mixture.

As an added precaution, drain the diesel fuel filter of residual water at every engine oil change. If the WATER IN FUEL - CONTACT SERVICE message comes on frequently, even after draining water from the fuel filter, see your dealer.

Water in Fuel Troubleshooting

<table>
<thead>
<tr>
<th>Problem</th>
<th>Recommended Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Message displays but goes off during the ignition cycle.</td>
<td>The fuel filter is partially filled with water. Drain the water as soon as possible. See &quot;Removing Water from the Fuel Filter&quot; following.</td>
</tr>
</tbody>
</table>
## Driving and Operating

<table>
<thead>
<tr>
<th>Problem</th>
<th>Recommended Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Message displays and stays on.</td>
<td>Drain the fuel filter immediately. If no water can be drained, and the temperature is below freezing, then water may be frozen in the filter. Move the vehicle to a warm location to thaw the water, then drain the fuel. If water still does not drain, see your dealer.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Problem</th>
<th>Recommended Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Immediately after refueling, message displays and stays on.</td>
<td>A large amount of water is in the fuel tank. Drain the fuel filter immediately. If the message stays on or comes back on without refueling, then fuel tank purging is required. See your dealer. If the message displays and the engine stalls or runs rough, do not drive until the water contaminated fuel is drained.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Caution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Driving with this message on can damage the fuel injection system and the engine. If the message comes on right after a refuel, water was pumped into the fuel tank. Turn off the engine and drain the water immediately.</td>
</tr>
</tbody>
</table>

### Removing Water from the Fuel Filter

To drain water:

1. Turn the engine off and apply the parking brake.
2. Place a container under the filter drain valve, which is on the bottom of the fuel filter.
3. Turn the drain plug counterclockwise using a suitable tool.

4. With the engine off, press and hold ENGINE START/STOP without applying the brake for five seconds to place the vehicle in Service mode. Wait approximately five seconds, and then press ENGINE START/STOP again to turn it off. This operation will enhance water flow out of the filter. The filter is drained as soon as diesel fuel emerges from the port.

5. Retighten the drain plug by turning it clockwise.

6. Properly dispose of the water contaminated fuel.

7. Start the engine and let it run for a few minutes. During the draining process, air may have entered the fuel system. If the engine stalls, the fuel system may need to be primed. See “Fuel Priming” following.

Fuel Priming

For the fuel system to work properly, air cannot be in the fuel lines. If air gets in, the engine may not start and the fuel lines will need to be primed before operating the vehicle.

If air is present, the following may have happened:
- The vehicle ran out of fuel.
- The fuel filter was removed.
- The fuel lines were removed or disconnected.
- The fuel filter water drain valve was opened while the engine was running.

To prime the fuel system:

1. With the engine off, press and hold the start button without applying the brake for five seconds to place the vehicle in Service mode. Wait approximately five seconds and press start again to turn it off. Do this step three times or more while the engine is off.

2. Press the start button with brake applied for a maximum of 40 seconds at a time, with five seconds between ignition attempts, until the engine starts. If the engine tries to run, but does not run smoothly, increase the RPMs slightly by using the accelerator pedal. This will help force air through the system.

3. Repeat Step 2 if the engine stalls and will not restart.

4. After a few attempts, if the engine still does not start, see your dealer.
Running Out of Fuel (Diesel)

⚠️ Warning

Diesel fuel is flammable. It could start a fire if something ignites it, and people could be burned. Do not let it get on hot engine parts, and keep matches or other ignition sources away.

If the engine has stalled due to running out of fuel, add at least 7.6 L (2 gal) of fuel if parked on a level surface, or up to 18.9 L (5 gal) of fuel if parked on a slope, and perform the procedure under “Fuel Priming” previously in this section.

Fuel Filter Replacement (Diesel)

⚠️ Warning

Diesel fuel is flammable. It could start a fire if something ignites it, and people could be burned. Do not let it get on hot engine parts, and keep matches or other ignition sources away.

1. Drain any water from the filter. See “Removing Water from Fuel Filter” in Water in Fuel (Diesel) 255.
2. Apply the parking brake.
3. Remove the filter element cap by turning it counterclockwise.
4. Remove the filter element and o-rings. If there is any dirt on the filter sealing surface, clean it off.
5. Install the new filter element and o-rings.
6. Reinstall and tighten the filter cap to the housing.
7. Use the fuel filter priming procedure to prime the fuel filter. See “Fuel Priming” in Water in Fuel (Diesel) 255.
8. Start the engine and let it idle for five minutes. Check the fuel filter and air bleed valve for leaks.

**Filling the Tank**

<table>
<thead>
<tr>
<th>Warning</th>
</tr>
</thead>
</table>

*Warning*

Fuel vapors and fuel fires burn violently and can cause injury or death.

- To help avoid injuries to you and others, read and follow all the instructions on the fuel pump island.
- Turn off the engine when refueling.
- Keep sparks, flames, and smoking materials away from fuel.
- Do not leave the fuel pump unattended.
- Do not use a cell phone while refueling.

(Continued)

<table>
<thead>
<tr>
<th>Warning (Continued)</th>
</tr>
</thead>
</table>

- Do not re-enter the vehicle while pumping fuel.
- Keep children away from the fuel pump and never let children pump fuel.
- Fuel can spray out if the fuel cap is opened too quickly. This spray can happen if the tank is nearly full, and is more likely in hot weather. Open the fuel cap slowly and wait for any hiss noise to stop, then unscrew the cap all the way.

The fuel cap is behind a hinged fuel door on the passenger side of the vehicle. To open the fuel door, push and release the rearward center edge of the door.

Turn the fuel cap counterclockwise to remove. Reinstall the cap by turning it clockwise until it clicks.

On vehicles with gasoline engines, if the cap is not properly installed, the malfunction indicator lamp will come on. See *Malfunction Indicator Lamp* 126.
Driving and Operating

⚠️ Warning

Overfilling the fuel tank by more than three clicks of a standard fill nozzle may cause:
- Vehicle performance issues, including engine stalling and damage to the fuel system.
- Fuel spills.
- Potential fuel fires.

Be careful not to spill fuel. 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 342.

⚠️ Warning

If a fire starts while you are refueling, do not remove the nozzle. Shut off the flow of fuel by shutting off the pump or by notifying the station attendant. Leave the area immediately.

Caution

If a new fuel cap is needed, be sure to get the right type of cap from your dealer. The wrong type of fuel cap may not fit properly, may cause the malfunction indicator lamp to light, and could damage the fuel tank and emissions system. See Malfunction Indicator Lamp 126.

Diesel Exhaust Fluid (DEF)

DEF is a non-toxic solution that is sprayed into the exhaust stream of diesel vehicles to cause a chemical reaction and break down NOx emissions into harmless nitrogen and water.

DEF is not a fuel additive and never comes into contact with diesel fuel. It is stored in a separate tank. The fill port is behind the fuel door next to the regular fuel cap. It has a blue filler cap. See Diesel Exhaust Fluid 223.
Filling a Portable Fuel Container

⚠️ Warning

Filling a portable fuel container while it is in the vehicle can cause fuel vapors that can ignite either by static electricity or other means. You or others could be badly burned and the vehicle could be damaged. Always:

- Use approved fuel containers.
- Remove the container from the vehicle, trunk, or pickup bed before filling.
- Place the container on the ground.

(Continued)

<table>
<thead>
<tr>
<th>Warning (Continued)</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Place the nozzle inside the fill opening of the container before dispensing fuel, and keep it in contact with the fill opening until filling is complete.</td>
</tr>
<tr>
<td>- Fill the container no more than 95% full to allow for expansion.</td>
</tr>
<tr>
<td>- Do not smoke, light matches, or use lighters while pumping fuel.</td>
</tr>
<tr>
<td>- Avoid using cell phones or other electronic devices.</td>
</tr>
</tbody>
</table>

Trailer Towing

General Towing Information

The vehicle is neither designed nor intended to tow a trailer.
262 Driving and Operating

Conversions and Add-Ons

Add-On Electrical Equipment

⚠️ Warning

The Data Link Connector (DLC) is used for vehicle service and Emission Inspection/Maintenance testing. See Malfunction Indicator Lamp 126. A device connected to the DLC — such as an aftermarket fleet or driver-behavior tracking device — may interfere with vehicle systems. This could affect vehicle operation and cause a crash. Such devices may also access information stored in the vehicle’s systems.

Caution

Some electrical equipment can damage the vehicle or cause components to not work and would not be covered by the vehicle warranty. Always check with your dealer before adding electrical equipment.

Add-on equipment can drain the vehicle’s 12-volt battery, even if the vehicle is not operating.

The vehicle has an airbag system. Before attempting to add anything electrical to the vehicle, see Servicing the Airbag-Equipped Vehicle 84 and Adding Equipment to the Airbag-Equipped Vehicle 84.
# Vehicle Care

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General Information
For service and parts needs, visit your dealer. You will receive genuine GM parts and GM-trained and supported service people. Genuine GM parts have one of these marks:

California Proposition 65 Warning
WARNING: Most motor vehicles, including this one, as well as many of its service parts and fluids, contain and/or emit chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. Engine exhaust, many parts and systems, many fluids, and some component wear by-products contain and/or emit these chemicals.


California Perchlorate Materials Requirements
Certain types of automotive applications, such as airbag initiators, safety belt pretensioners, and lithium batteries contained in Remote Keyless Entry transmitters, may contain perchlorate materials. Special handling may be necessary. For additional information, see www.dtsc.ca.gov/hazardouswaste/perchlorate.
Accessories and Modifications

Adding non-dealer accessories or making modifications to the vehicle can affect vehicle performance and safety, including such things as airbags, braking, stability, ride and handling, emissions systems, aerodynamics, durability, and electronic systems like antilock brakes, traction control, and stability control. These accessories or modifications could even cause malfunction or damage not covered by the vehicle warranty.

Damage to suspension components caused by modifying vehicle height outside of factory settings will not be covered by the vehicle warranty.

Damage to vehicle components resulting from modifications or the installation or use of non-GM certified parts, including control module or software modifications, is not covered under the terms of the vehicle warranty and may affect remaining warranty coverage for affected parts.

GM Accessories are designed to complement and function with other systems on the vehicle. See your dealer to accessorize the vehicle using genuine GM Accessories installed by a dealer technician.

Also, see Adding Equipment to the Airbag-Equipped Vehicle 84.

Vehicle Checks

Doing Your Own Service Work

⚠️ Warning

It can be dangerous to work on your vehicle if you do not have the proper knowledge, service manual, tools, or parts. Always follow owner manual procedures and consult the service manual for your vehicle before doing any service work.

If doing some of your own service work, use the proper service manual. It tells you much more about how to service the vehicle than this manual can. To order the proper service manual, see Service Publications Ordering Information 378.

This vehicle has an airbag system. Before attempting to do your own service work, see Servicing the Airbag-Equipped Vehicle 84.
266 Vehicle Care

Keep a record with all parts receipts and list the mileage and the date of any service work performed. See Maintenance Records 364.

Caution

Even small amounts of contamination can cause damage to vehicle systems. Do not allow contaminants to contact the fluids, reservoir caps, or dipsticks.

Hood

To open the hood:

1. Open the driver side door and pull the hood release handle. It is on the lower left side of the instrument panel between the door and the steering wheel.
2. Release the handle, then pull the handle again to fully open the hood.
3. Go to the front of the vehicle and lift the hood and release the hood prop from its retainer, located above the radiator. Securely place the hood prop into the slot on the underside of the hood.

To close the hood:

1. Before closing the hood, be sure all the filler caps are properly installed.
2. Lift the hood to relieve pressure on the hood prop. Remove the hood prop from the slot on the underside of the hood and return the prop to its retainer. The prop rod must click into place when returning it to the retainer to prevent hood damage.
3. Lower the hood 30 cm (12 in) above the vehicle and release it so it fully latches.
4. Check to make sure the hood is closed. If not, release the hood from inside and repeat Steps 1–3.
Engine Compartment Overview

1.4L L4 Engine (LE2)
## 268 Vehicle Care

1. *Engine Air Cleaner/ Filter* \(\Rightarrow 276.\)
2. Engine Oil Fill Cap. See “When to Add Engine Oil” under *Engine Oil* \(\Rightarrow 270.\)
3. Engine Oil Dipstick. See “Checking Engine Oil” under *Engine Oil* \(\Rightarrow 270.\)
4. Engine Cooling Fan (Out of View). See *Cooling System* \(\Rightarrow 277.\)
5. Brake/Clutch Fluid Reservoir. See *Brake Fluid* \(\Rightarrow 284\) and *Hydraulic Clutch* \(\Rightarrow 275.\)
6. Engine Coolant Surge Tank and Pressure Cap. See *Engine Coolant* \(\Rightarrow 278.\)
7. Windshield Washer Fluid Reservoir. See “Adding Washer Fluid” under *Washer Fluid* \(\Rightarrow 282.\)
8. *Engine Compartment Fuse Block* \(\Rightarrow 294.\)
1.6L L4 Diesel Engine (LH7)
270 Vehicle Care

1. Engine Air Cleaner/Filter ⇒ 276.
2. Engine Oil Dipstick. See “Checking Engine Oil” under Engine Oil ⇒ 270.
4. Engine Oil Fill Cap. See “When to Add Engine Oil” under Engine Oil ⇒ 270.
8. Engine Compartment Fuse Block ⇒ 294.

Engine Oil
To ensure proper engine performance and long life, careful attention must be paid to engine oil.

Following these simple, but important steps will help protect your investment:

- Use engine oil approved to the proper specification and of the proper viscosity grade. See “Selecting the Right Engine Oil” in this section.

- Check the engine oil level regularly and maintain the proper oil level. See “Checking Engine Oil” and “When to Add Engine Oil” in this section.

- Change the engine oil at the appropriate time. See Engine Oil Life System ⇒ 273.

- Always dispose of engine oil properly. See “What to Do with Used Oil” in this section.

Checking Engine Oil
Check the engine oil level regularly (every 650 km (400 mi), especially prior to a long trip. The engine oil dipstick handle is a loop. See Engine Compartment Overview ⇒ 267 for the location.

⚠️ Warning
The engine oil dipstick handle may be hot; it could burn you. Use a towel or glove to touch the dipstick handle.

If a low oil Driver Information Center (DIC) message displays, check the oil level.

Follow these guidelines:

- To get an accurate reading, park the vehicle on level ground. Check the engine oil level after the engine has been off for at least two hours. Checking the engine oil level on steep grades or too soon after engine shutoff can result in incorrect readings. Accuracy improves when checking a cold engine prior to starting. Remove the dipstick and check the level.

- If unable to wait two hours, the engine must be off for at least 15 minutes if the engine is warm, or at least 30 minutes if the engine is not warm. Pull out
the dipstick, wipe it with a clean paper towel or cloth, then push it back in all the way. Remove it again, keeping the tip down, and check the level.

**When to Add Engine Oil**

If the oil is below the cross-hatched area at the tip of the dipstick and the engine has been off for at least 15 minutes, add 1 L (1 qt) of the recommended oil and then recheck the level. See “Selecting the Right Engine Oil” later in this section for an explanation of what kind of oil to use. For engine oil crankcase capacity, see *Capacities and Specifications* 366.

---

**Caution**

Do not add too much oil. Oil levels above or below the acceptable operating range shown on the dipstick are harmful to the engine. If you find that you have an oil level above the operating range, i.e., the engine has so much oil that the oil level gets above the 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* 267 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 (Gasoline Engines)**

Selecting the right engine oil depends on both the proper oil specification and viscosity grade. See *Recommended Fluids and Lubricants* 361.

**Specification**

Ask for and use engine oils that meet the dexos1™ specification.

Engine oils that have been approved by GM as meeting the dexos1 specification are marked with the dexos1 approved logo. See www.gmdexos.com.
272 Vehicle Care

Caution
Failure to use the recommended engine oil or equivalent can result in engine damage not covered by the vehicle warranty.

Viscosity Grade
Use SAE 5W-30 viscosity grade engine oil.

Cold Temperature Operation: In an area of extreme cold, where the temperature falls below $-29 \, ^\circ C$ ($-20 \, ^\circ F$), an SAE 0W-30 oil may be used. An oil of this viscosity grade will provide easier cold starting for the engine at extremely low temperatures. When selecting an oil of the appropriate viscosity grade, it is recommended to select an oil of the correct specification. See “Specification” earlier in this section.

Selecting the Right Engine Oil (Diesel Engines)
Selecting the right engine oil depends on both the proper oil specification and viscosity grade:

Specification
Ask for and use engine oils that meet the dexos2™ specification. Engine oils that have been approved by GM as meeting the dexos2 specification are marked with the dexos2 approved logo. See www.gmdexos.com.

Caution
Use only engine oil that is approved to the dexos2 specification or equivalent engine oil as defined in the preceding paragraph. Failure to use the recommended engine oil can result in engine damage not covered by the vehicle warranty.

Viscosity Grade
Use SAE 5W-30 viscosity grade engine oil.

Cold Temperature Operation: In an area of extreme cold, where the temperature falls below $-29 \, ^\circ C$ ($-20 \, ^\circ F$), an SAE 0W-30 oil may be used. An oil of this viscosity grade will provide easier cold starting for the engine at extremely low temperatures. When selecting an oil of the appropriate viscosity grade, it is recommended to select an oil of the correct specification. See “Specification” earlier in this section. See “Specification” earlier in this section.
Vehicle Care

Engine Oil Additives/Engine Oil Flushes
Do not add anything to the oil. The recommended oils meeting the dexos specification are all that is needed for good performance and engine protection.

Engine oil system flushes are not recommended and could cause engine damage not covered by the vehicle warranty.

What to Do with Used Oil
Used engine oil contains certain elements that can be unhealthy for your skin and could even cause cancer. Do not let used oil stay on your skin for very long. Clean your skin and nails with soap and water, or a good hand cleaner. Wash or properly dispose of clothing or rags containing used engine oil. See the manufacturer’s warnings about the use and disposal of oil products.

Used oil can be a threat to the environment. If you change your own oil, be sure to drain all the oil from the filter before disposal. Never dispose of oil by putting it in the trash or pouring it on the ground, into sewers, or into streams or bodies of water. Recycle it by taking it to a place that collects used oil.

Engine Oil Life System
When to Change Engine Oil
This vehicle has a computer system that indicates when to change the engine oil and filter. This is based on a combination of factors which include engine revolutions, engine temperature, and miles driven.
Based on driving conditions, the mileage at which an oil change is indicated can vary considerably. For the oil life system to work properly, the system must be reset every time the oil is changed.
When the system has calculated that oil life has been diminished, it indicates that an oil change is necessary. A CHANGE ENGINE OIL SOON message comes on. See Engine Oil Messages 142.

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:

Resetting the Oil Life System (Base Level Cluster)

1. Display the REMAINING OIL LIFE on the DIC. See Driver Information Center (DIC) (Uplevel) 137 or Driver Information Center (DIC) (Base Level) 134.
2. Press and hold SET/CLR on the turn signal lever while the Oil Life display is active. The oil life will change to 100%.

The oil life system can also be reset as follows:

1. Turn the ignition on with the engine off. See Ignition Positions (Keyless Access) 212 or Ignition Positions (Key Access) 210.
2. Fully press and release the accelerator pedal three times within five seconds.

The system is reset when the CHANGE ENGINE OIL SOON message goes 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 and have it repaired as soon as possible.

The vehicle is not equipped with a transmission fluid level dipstick. There is a special procedure for checking and changing the transmission fluid. Because this procedure is difficult, this should be done at the dealer. Contact the dealer for additional information.

Change the fluid at the intervals listed in **Maintenance Schedule** ⇒ 352, and be sure to use the fluid listed in **Recommended Fluids and Lubricants** ⇒ 361.

### Manual Transmission Fluid

#### How to Check Manual Transmission Fluid

It is not necessary to check the manual transmission fluid level. A transmission fluid leak is the only reason for fluid loss. If a leak occurs, take the vehicle to your dealer and have it repaired as soon as possible. See **Recommended Fluids and Lubricants** ⇒ 361 for the proper fluid to use.

### Hydraulic Clutch

For vehicles with a manual transmission, it is not necessary to regularly check brake/clutch fluid unless there is a leak suspected. Adding fluid will not correct a leak. A fluid loss in this system could indicate a problem. Have the system inspected and repaired.

### When to Check and What to Use

The hydraulic brake/clutch fluid reservoir cap has either a symbol or text specifying the type of brake fluid. The common brake/clutch fluid reservoir is filled with GM approved DOT 3 brake fluid as indicated on the reservoir cap. See **Engine Compartment Overview** ⇒ 267 for reservoir location.

#### How to Check and Add Fluid

Visually check the brake/clutch fluid reservoir to make sure the fluid level is between the MIN (minimum) and MAX (maximum) lines on the side of the reservoir. The hydraulic brake/clutch fluid system should be closed and sealed.
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Do not remove the cap to check the fluid level or to top off the fluid level. Remove the cap only when necessary to add the proper fluid until the level reaches between the MIN and MAX lines.

Engine Air Cleaner/Filter

The engine air cleaner/filter is in the engine compartment on the passenger side of the vehicle. See Engine Compartment Overview 267.

When to Inspect the Engine Air Cleaner/Filter

For intervals on changing and inspecting the engine air cleaner/filter, see Maintenance Schedule 352.

How to Inspect the Engine Air Cleaner/Filter

Do not start the engine or have the engine running with the engine air cleaner/filter housing open. Before removing the engine air cleaner/filter, make sure that the engine air cleaner/filter housing and nearby components are free of dirt and debris. Remove the engine air cleaner/filter. Lightly tap and shake the engine air cleaner/filter (away from the vehicle), to release loose dust and dirt. Inspect the engine air cleaner/filter for damage, and replace if damaged. Do not clean the engine air cleaner/filter or components with water or compressed air.

To inspect or replace the engine air cleaner/filter:

1. Disconnect the harness connector from the air cleaner/filter cover electrical connector (4).
2. Remove the secondary air duct (2).
3. Loosen the screw on the air duct clamp (3) holding the air outlet duct in place. Do not remove the clamp. Move the air duct aside.
4. Remove the four air cleaner/filter housing cover screws (1).
5. Raise the air cleaner/filter housing cover and remove the air cleaner/filter from the air cleaner/filter housing.
6. Clean the air cleaner/filter sealing surface and the air cleaner/filter housing.
7. Install the new engine air cleaner/filter.
8. Lower the air cleaner housing cover and secure with the four screws (1).
9. Install the air inlet duct (2).
10. Install the air duct and tighten the screw on the air duct clamp (3) to secure it to the air cleaner/filter housing.
11. Install the harness electrical connector (4).

**Warning**

Operating the engine with the air cleaner/filter off can cause you or others to be burned. The air cleaner not only cleans the air; it helps to stop flames if the engine backfires. Use caution when working on the engine and do not drive with the air cleaner/filter off.

**Caution**

If the air cleaner/filter is off, dirt can easily get into the engine, which could damage it. Always have the air cleaner/filter in place when you are driving.

**Cooling System**

The cooling system allows the engine to maintain the correct working temperature.

1.4L L4 Engine (LE2)

1.6L L4 Diesel Engine (LH7)

1. Engine Cooling Fan (Out of View)
2. 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.
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**Warning**

Heater and radiator hoses, and other engine parts, can be very hot. Do not touch them. If you do, you can be burned.

Do not run the engine if there is a leak. If you run the engine, it could lose all coolant. That could cause an engine fire, and you could be burned. Get any leak fixed before you drive the vehicle.

**Caution**

Using coolant other than DEX-COOL® can cause premature engine, heater core, or radiator corrosion. In addition, the engine coolant could require changing sooner. Any repairs would not be covered by the 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* 281.

**What to Use**

**Warning (Continued)**

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.

(Continued)
### Caution

If improper coolant mixture, inhibitors, or additives are used in the vehicle cooling system, the engine could overheat and be damaged. Too much water in the mixture can freeze and crack engine cooling parts. The repairs would not be covered by the vehicle warranty. Use only the proper mixture of engine coolant for the cooling system. See *Recommended Fluids and Lubricants* ⇒ 361.

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* ⇒ 281.

The coolant surge tank is located in the engine compartment on the driver side of the vehicle. See *Engine Compartment Overview* ⇒ 267.

### How to Add Coolant to the Coolant Surge Tank

<table>
<thead>
<tr>
<th>Caution</th>
</tr>
</thead>
<tbody>
<tr>
<td>This vehicle has a specific coolant fill procedure. Failure to follow this procedure could cause the engine to overheat and be severely damaged.</td>
</tr>
</tbody>
</table>

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.

<table>
<thead>
<tr>
<th>Warning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Steam and scalding liquids from a hot cooling system can blow out and burn you badly. They are</td>
</tr>
</tbody>
</table>

(Continued)
### Vehicle Care

<table>
<thead>
<tr>
<th><strong>Warning (Continued)</strong></th>
<th><strong>Warning (Continued)</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>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.</td>
<td>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.</td>
</tr>
<tr>
<td><strong>Caution</strong></td>
<td><strong>Warning</strong></td>
</tr>
<tr>
<td>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.</td>
<td>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.</td>
</tr>
</tbody>
</table>

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.
1. Fill the coolant surge tank with the proper DEX-COOL coolant mixture to the indicated level mark.

2. With the coolant surge tank pressure cap off, start the engine, switch off the A/C and let the engine run until the upper radiator hose can be felt getting hot. Watch out for the engine cooling fan.

By this time, the coolant level inside the coolant surge tank may be lower. If the level is lower, add more of the proper DEX-COOL coolant mixture to the coolant surge tank until the level reaches the indicated level mark.

3. 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 1–3 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 engine coolant temperature gauge on the instrument cluster to warn of engine overheating. See Engine Coolant Temperature Gauge \( 123 \).

If the decision is made not to lift the hood when this warning appears, get service help right away. Contact your dealer for additional information.

**If Steam Is Coming from the Engine Compartment**

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.
282 Vehicle Care

Warning (Continued)
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.

If the overheat warning is displayed
with no sign of steam:
1. Turn the air conditioning off.
2. Turn the heater on to the
highest temperature and to the
highest fan speed. Open the
windows as necessary.
3. When it is safe to do so, pull off
the road, shift to P (Park) or
N (Neutral), and let the
engine idle.
If the engine coolant temperature
gauge is no longer in the overheat
zone, the vehicle can be driven.
Continue to drive the vehicle slowly
for about 10 minutes. Keep a safe
distance from the vehicle in front.
If the warning does not come back
on, continue to drive normally and
have the cooling system checked
for proper fill and function.
If the warning continues, pull over,
stop, and park the vehicle
right away.

If there is no sign of steam, idle the
engine for three minutes while
parked. If the warning is still
displayed, turn off the engine until it
cools down.

Washer Fluid
What to Use
When windshield washer fluid is
needed, be sure to read the
manufacturer’s instructions before
use. If operating the vehicle in an
area where the temperature may fall
below freezing, use a fluid that has
sufficient protection against
freezing.

Adding Washer Fluid
Open the cap with the washer symbol on it. Add washer fluid until the tank is full. See Engine Compartment Overview 267 for reservoir location.

**Caution**
- Do not use washer fluid that contains any type of water repellent coating. This can cause the wiper blades to chatter or skip.
- Do not use engine coolant (antifreeze) in the windshield washer. It can damage the windshield washer system and paint.
- Do not mix water with ready-to-use washer fluid. Water can cause the solution to freeze and damage the washer fluid tank and other parts of the washer system.

(Continued)

**Caution (Continued)**
- When using concentrated washer fluid, follow the manufacturer instructions for adding water.
- Fill the washer fluid tank only three-quarters full when it is very cold. This allows for fluid expansion if freezing occurs, which could damage the tank if it is completely full.

**Brakes**
Disc brake pads have built-in wear indicators that make a high-pitched warning sound when the brake pads are worn and new pads are needed. The sound can come and go or 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.

**Caution**
Continuing to drive with worn-out brake pads could result in costly brake repair.

Some driving conditions or climates can cause a brake squeal when the brakes are first applied or lightly applied. This does not mean something is wrong with the brakes. Properly torqued wheel nuts are necessary to help prevent brake pulsation. When tires are rotated, inspect brake pads for wear and evenly tighten wheel nuts in the...
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Proper sequence to torque specifications in Capacities and Specifications $\diamondsuit$ 366.

If the vehicle has rear drum brakes, they do not have wear indicators, but if a rear brake rubbing noise is heard, have the rear brake linings inspected immediately. Rear brake drums should be removed and inspected each time the tires are removed for rotation or changing. Drum brakes have an inspection hole to inspect lining wear during scheduled maintenance. When the front brake pads are replaced, have the rear brakes inspected, too.

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 may be required.

Replacing Brake System Parts
Always replace brake system parts with new, approved replacement parts. If this is not done, the brakes may not work properly. The braking performance expected can change in many other ways if the wrong replacement brake parts are installed or parts are improperly installed.

Brake Fluid

The brake/clutch master cylinder reservoir is filled with GM approved DOT 3 brake fluid as indicated on the reservoir cap. See Engine Compartment Overview $\diamondsuit$ 267 for the location of the reservoir.

Checking Brake Fluid
Place the vehicle in P (Park) or Neutral with the parking brake applied if equipped with a manual transmission. On a level surface, the brake fluid level should be between the minimum and maximum marks on the brake fluid reservoir.

There are only two reasons why the brake fluid level in the reservoir may go down:

- Normal brake lining wear. When new linings are installed, the fluid level goes back up.
- A fluid leak in the brake/clutch hydraulic system. Have the brake/clutch hydraulic system fixed. With a leak, the brakes will not work well.

Always clean the brake fluid reservoir cap and the area around the cap before removing it.

Do not top off the brake/clutch fluid. Adding fluid does not correct a leak.

If fluid is added when the linings are worn, there will be too much fluid when new brake linings are installed. Add or remove fluid, as necessary, only when work is done on the brake/clutch 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/clutch hydraulic system.

When the brake/clutch fluid falls to a low level, the brake warning light comes on. See Brake System Warning Light \(\Rightarrow 128\).

Brake fluid absorbs water over time which degrades the effectiveness of the brake fluid. Replace brake fluid at the specified intervals to prevent increased stopping distance. See Maintenance Schedule \(\Rightarrow 352\).

What to Add

Use only GM approved DOT 3 brake fluid from a clean, sealed container. See Recommended Fluids and Lubricants \(\Rightarrow 361\).

Warning

The wrong or contaminated brake fluid could result in damage to the brake system. This could result in the loss of braking leading to a possible injury. Always use the proper GM approved brake fluid.

Caution

If brake fluid is spilled on the vehicle's painted surfaces, the paint finish can be damaged. Immediately wash off any painted surface.

Battery - North America

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

Refer to the replacement number on the original battery label when a new battery is needed.

Warning

WARNING: Battery posts, terminals, and related accessories contain lead and lead compounds, chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. Batteries also contain other chemicals known to the State of California to cause cancer. WASH HANDS AFTER HANDLING.

See California Proposition 65 Warning \(\Rightarrow 264\).
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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 - North America 336 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.

Fuel Filter

The fuel filter is under the vehicle on the driver side in front of the left rear tire. For replacement of the filter, see Fuel Filter Replacement (Diesel) 258. Also see Maintenance Schedule 352 for recommended draining and replacement intervals.

Starter Switch Check

⚠️ Warning

When you are doing this inspection, the vehicle could move suddenly. If the vehicle moves, you or others could be injured.

1. Before starting this check, be sure there is enough room around the vehicle.

2. Apply both the parking brake and the regular brake. Do not use the accelerator pedal, and be ready to turn off the engine immediately if it starts.

3. For automatic transmission vehicles, 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.
For manual transmission vehicles, put the shift lever in Neutral, push the clutch pedal down halfway, and try to start the engine. The vehicle should start only when the clutch pedal is pushed down all the way to the floor. If the vehicle starts when the clutch pedal is not pushed all the way down, contact your dealer for service.

**Automatic Transmission Shift Lock Control Function Check**

1. Before starting this check, be sure there is enough room around the vehicle. It should be parked on a level surface.

2. Apply the parking brake. Be ready to apply the regular brake immediately if the vehicle begins to move.

3. With the engine off, turn the ignition on, but do not start the engine. Without applying the regular brake, try to move the shift lever out of P (Park) with normal effort. If the shift lever moves out of P (Park), contact your dealer for service.

**Ignition Transmission Lock Check**

If equipped with a key access ignition, while parked and with the parking brake set, try to turn the ignition to LOCK/OFF in each shift lever position.

- The ignition should turn to LOCK/OFF only when the shift lever is in P (Park).
- The ignition key should come out only in LOCK/OFF.

Contact your dealer if service is required.

**Park Brake and P (Park) Mechanism Check**

- **Warning**
  
  When you are doing this check, the vehicle could begin to move. You or others could be injured and property could be damaged. Make sure there is room in front of the vehicle in case it begins to roll. Be ready to apply the regular brake at once should the vehicle begin to move.

Park on a fairly steep hill, with the vehicle facing downhill. Keeping your foot on the regular brake, set the parking brake.

- To check the parking brake’s holding ability: With the engine running and the transmission in N (Neutral), slowly remove foot pressure from the regular brake pedal. Do this until the vehicle is held by the parking brake only.
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- 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 and cracking. See the Maintenance Schedule ⇒ 352.

Replacement blades come in different types and are removed in different ways. For proper type and length, see Maintenance Replacement Parts ⇒ 362.

<table>
<thead>
<tr>
<th>Caution</th>
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<tbody>
<tr>
<td>Allowing the wiper arm to touch the windshield when no wiper blade is installed could damage the windshield. Any damage that occurs would not be covered by the vehicle warranty. Do not allow the wiper arm to touch the windshield.</td>
</tr>
</tbody>
</table>

To replace the windshield wiper blade:

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 1–3 for wiper blade replacement.
Headlamp Aiming
Headlamp aim has been preset and should need no further adjustment. If the vehicle is damaged in a crash, the headlamp aim may be affected. If adjustment to the headlamps is necessary, see your dealer.

Bulb Replacement
For the proper type of replacement bulbs, see Replacement Bulbs \(\Rightarrow\) 293. For any bulb-changing procedure not listed in this section, contact your dealer.

Halogen Bulbs

<table>
<thead>
<tr>
<th>Warning</th>
</tr>
</thead>
<tbody>
<tr>
<td>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.</td>
</tr>
</tbody>
</table>

High Intensity Discharge (HID) Lighting

<table>
<thead>
<tr>
<th>Warning</th>
</tr>
</thead>
<tbody>
<tr>
<td>The High Intensity Discharge (HID) lighting system operates at a very high voltage. If you try to service any of the system components, you could be seriously injured. Have your dealer or a qualified technician service them.</td>
</tr>
</tbody>
</table>

After an HID headlamp bulb has been replaced, the beam might be a slightly different shade than it was originally. This is normal.
290 Vehicle Care

Headlamps and Front Turn Signal

Base Level Assembly
1. Turn Signal Lamp
2. High-Beam Headlamp
3. Low-Beam Headlamp

Uplevel Assembly
For the uplevel assembly, only the turn signal lamp is replaceable.

High-Beam Headlamp/
Low-Beam Headlamp
1. Open the hood. See Hood 266.
2. For the driver side bulb, remove the windshield washer bottle filler neck by unclipping it from the tie bar and firmly pulling it straight up and out of the bottle.

3. For the passenger side, disengage the air cleaner, and push it aside to allow easier access to the bulb cover.
4. Remove the bulb cover by turning counterclockwise.
5. Remove the bulb socket from the headlamp assembly by turning counterclockwise.
6. Remove the bulb socket from the plug connector.
7. Attach the new bulb socket to the plug connector.
8. Install the bulb socket from the headlamp assembly by turning clockwise.
9. Install the bulb cover by turning clockwise.
10. For the driver side, reinstall the windshield washer bottle filler neck by firmly pushing it straight into the bottle and re-attaching it to the tie bar.
### Turn Signal Lamp
1. Open the hood. See *Hood* 266.
2. For the driver side bulb, remove the windshield washer bottle filler neck by firmly pulling it straight up and out of the bottle.
3. Remove the bulb socket by turning counterclockwise.
4. Remove the bulb from the socket by pulling it straight out.
5. Install the new bulb by pushing it into the bulb socket.
6. Install the bulb socket to the headlamp assembly by turning clockwise.
7. For the driver side, reinstall the windshield washer bottle filler neck by firmly pushing it straight into the bottle and re-attaching it to the tie bar.

### Taillamps and Back-Up Lamps

#### Decklid Back-Up Lamp and Taillamp

1. **Back-Up Lamp**
2. **Taillamp**

1. Open the trunk.
2. Remove and retain the pushpins securing the flocking. Pull back the flocking to expose the bulb sockets.
3. Remove the bulb socket by turning counterclockwise and pulling it straight out.
4. Remove the bulb from the socket by pulling it straight out.
5. Install the new bulb in the bulb socket.
6. Install the bulb socket by turning clockwise.
7. Push the flocking back into place and secure with the retained pushpins.
292 Vehicle Care

Taillamp

To replace this bulb:
1. Open the trunk.
2. For the passenger side, remove and retain one pushpin and pull back the flocking. The driver side has an access port and does not require the removal of any pins.
3. Remove the three screws that secure the taillamp assembly.
4. Remove the taillamp assembly by pulling it straight back.
5. Remove the bulb socket from the taillamp assembly by turning it counterclockwise.
6. Remove the bulb from the socket by pulling it straight out.
7. Install a new bulb into the bulb socket.
8. Install the bulb socket into the taillamp assembly by turning it clockwise.
9. Install the taillamp assembly and tighten the three screws.
10. Push the flocking back into place and reinstall any retained pushpins.
Replacement Bulbs

<table>
<thead>
<tr>
<th>Exterior Lamp</th>
<th>Bulb Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uplevel Turn Signal</td>
<td>7444NA-T</td>
</tr>
<tr>
<td>Base Level Turn Signal</td>
<td>W5WLL</td>
</tr>
<tr>
<td>Base Level High Beam</td>
<td>9005LL</td>
</tr>
<tr>
<td>Base Level Low Beam</td>
<td>H11LL</td>
</tr>
<tr>
<td>Decklid Back-Up Lamp</td>
<td>921</td>
</tr>
<tr>
<td>Decklid Taillamp</td>
<td>194</td>
</tr>
<tr>
<td>Body-Side Taillamp</td>
<td>7443LL</td>
</tr>
</tbody>
</table>

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 power devices in the vehicle.

Replace a bad fuse with a new one of the identical size and rating.

If there is a problem on the road and a fuse needs to be replaced, the same amperage fuse can be borrowed. Choose some feature of the vehicle that is not needed to use and replace it as soon as possible.

Headlamp Wiring

An electrical overload may cause the lamps to go on and off, or in some cases to remain off. Have the headlamp wiring checked right away if the lamps go on and off or remain off.

Windshield Wipers

Heavy snow or ice can overload the wipers. If the wiper motor overheats, the windshield wipers will stop until the motor cools and the wiper control is turned off.

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.
294 Vehicle Care

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 possible.

To identify and check fuses, circuit breakers, and relays, see Engine Compartment Fuse Block  294 and Instrument Panel Fuse Block  298.

Engine Compartment Fuse Block

Caution

Spilling liquid on any electrical component on the vehicle may damage it. Always keep the covers on any electrical component.

To remove the fuse block cover, squeeze the clips and swing it up.
Engine Compartment Fuse Block
## 296 Vehicle Care

The vehicle may not be equipped with all of the fuses, relays, and features shown.

<table>
<thead>
<tr>
<th>Fuses</th>
<th>Usage</th>
<th>Fuses</th>
<th>Usage</th>
</tr>
</thead>
<tbody>
<tr>
<td>F01</td>
<td>Starter</td>
<td>F15</td>
<td>O2 sensor</td>
</tr>
<tr>
<td>F02</td>
<td>Starter</td>
<td>F16</td>
<td>Fuel injection</td>
</tr>
<tr>
<td>F03</td>
<td>O2 sensor</td>
<td>F17</td>
<td>Fuel injection</td>
</tr>
<tr>
<td>F04</td>
<td>Engine control module</td>
<td>F18</td>
<td>Diesel NOx</td>
</tr>
<tr>
<td></td>
<td></td>
<td>F19</td>
<td>Diesel NOx</td>
</tr>
<tr>
<td>F05</td>
<td>Engine functions</td>
<td>F20</td>
<td></td>
</tr>
<tr>
<td>F06</td>
<td>Transmission control</td>
<td>F21</td>
<td>Electric parking brake</td>
</tr>
<tr>
<td></td>
<td>module</td>
<td>F22</td>
<td>ABS system</td>
</tr>
<tr>
<td></td>
<td></td>
<td>F23</td>
<td>Windsheild washer/ Rear windows</td>
</tr>
<tr>
<td>F07</td>
<td></td>
<td>F24</td>
<td></td>
</tr>
<tr>
<td>F08</td>
<td>Engine control module</td>
<td>F25</td>
<td>Diesel fuel heating/ Secondary air induction</td>
</tr>
<tr>
<td>F09</td>
<td>A/C</td>
<td>F26</td>
<td>Transmission</td>
</tr>
<tr>
<td>F10</td>
<td>Canister vent</td>
<td>F27</td>
<td></td>
</tr>
<tr>
<td>F11</td>
<td>Heated seats</td>
<td>F28</td>
<td></td>
</tr>
<tr>
<td>F12</td>
<td>CGM module</td>
<td>F29</td>
<td>Heated rear window</td>
</tr>
<tr>
<td>F13</td>
<td>After boil pump/ Heated</td>
<td>F30</td>
<td>Mirror defogger</td>
</tr>
<tr>
<td></td>
<td>steering wheel</td>
<td>F31</td>
<td></td>
</tr>
<tr>
<td>F14</td>
<td>Diesel NOx/CVT8 transmission</td>
<td></td>
<td></td>
</tr>
<tr>
<td>F15</td>
<td>O2 sensor</td>
<td>F32</td>
<td>Display LED/DC DC converter/FPPM/ Electrical</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>heater/A/C module</td>
</tr>
<tr>
<td>F33</td>
<td>Anti-theft warning horn</td>
<td>F34</td>
<td>Horn</td>
</tr>
<tr>
<td>F35</td>
<td>Trunk power outlet</td>
<td>F36</td>
<td>Right high-beam headlamp</td>
</tr>
<tr>
<td>F37</td>
<td>Left high-beam headlamp</td>
<td>F38</td>
<td></td>
</tr>
<tr>
<td>F39</td>
<td>Front fog lamps</td>
<td>F40</td>
<td>AIR solenoid</td>
</tr>
<tr>
<td>F41</td>
<td>Switchable water pump/</td>
<td>F42</td>
<td>Manual headlamp leveling</td>
</tr>
<tr>
<td></td>
<td>Water in fuel sensor</td>
<td></td>
<td></td>
</tr>
<tr>
<td>F43</td>
<td>Fuel pump</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Fuses

<table>
<thead>
<tr>
<th>Fuses</th>
<th>Usage</th>
</tr>
</thead>
<tbody>
<tr>
<td>F44</td>
<td>Interior rearview mirror/Rear vision camera/Trailer</td>
</tr>
<tr>
<td>F45</td>
<td>Heated steering wheel</td>
</tr>
<tr>
<td>F46</td>
<td>Cluster</td>
</tr>
<tr>
<td>F47</td>
<td>Steering column lock</td>
</tr>
<tr>
<td>F48</td>
<td>Rear wiper</td>
</tr>
<tr>
<td>F49</td>
<td>-</td>
</tr>
<tr>
<td>F50</td>
<td>-</td>
</tr>
<tr>
<td>F51</td>
<td>-</td>
</tr>
<tr>
<td>F52</td>
<td>Engine/Transmission control module</td>
</tr>
<tr>
<td>F53</td>
<td>-</td>
</tr>
<tr>
<td>F54</td>
<td>Windshield wiper</td>
</tr>
<tr>
<td>F55</td>
<td>Diesel NOx</td>
</tr>
<tr>
<td>F56</td>
<td>Aeroshutter</td>
</tr>
<tr>
<td>F57</td>
<td>-</td>
</tr>
</tbody>
</table>

### Relays

<table>
<thead>
<tr>
<th>Relays</th>
<th>Usage</th>
</tr>
</thead>
<tbody>
<tr>
<td>K01</td>
<td>Starter</td>
</tr>
<tr>
<td>K02</td>
<td>A/C control</td>
</tr>
<tr>
<td>K03</td>
<td>Engine functions</td>
</tr>
<tr>
<td>K04</td>
<td>CVT8 transmission</td>
</tr>
<tr>
<td>K05</td>
<td>Starter</td>
</tr>
<tr>
<td>K06</td>
<td>Diesel fuel heating/Secondary air induction</td>
</tr>
<tr>
<td>K07</td>
<td>Right low-beam headlamp/Right daytime running lamp</td>
</tr>
<tr>
<td>K08</td>
<td>Transmission</td>
</tr>
<tr>
<td>K09</td>
<td>Diesel NOx</td>
</tr>
<tr>
<td>K10</td>
<td>Fuel pump</td>
</tr>
<tr>
<td>K11</td>
<td>-</td>
</tr>
<tr>
<td>K12</td>
<td>High-beam headlamps</td>
</tr>
<tr>
<td>K13</td>
<td>Left daytime running lamp/Left low-beam headlamp</td>
</tr>
<tr>
<td>K14</td>
<td>Run/Crank</td>
</tr>
<tr>
<td>K15</td>
<td>Mirror defogger/Rear window defogger/Anti-theft warning sensor</td>
</tr>
<tr>
<td>K16</td>
<td>Horn/Dual horn</td>
</tr>
<tr>
<td>K17</td>
<td>Diesel NOx</td>
</tr>
<tr>
<td>K18</td>
<td>Front fog lamps</td>
</tr>
<tr>
<td>K19</td>
<td>After boil pump/Heated steering wheel</td>
</tr>
<tr>
<td>K20</td>
<td>Anti-theft warning horn</td>
</tr>
<tr>
<td>K21</td>
<td>Rear window washer</td>
</tr>
<tr>
<td>K22</td>
<td>Front window washer</td>
</tr>
<tr>
<td>K23</td>
<td>Rear window wiper</td>
</tr>
</tbody>
</table>
298 Vehicle Care

Instrument Panel Fuse Block

The instrument panel fuse block is in the center of the console, under the heater, ventilation, and air conditioning controls. To access the fuses:

1. Open the fuse block cover by pulling out at the top.
2. Remove the lower edge of the cover.
3. Remove the cover.

To reinstall the cover, reverse the steps.
Instrument Panel Fuse Block
### 300 Vehicle Care

The vehicle may not be equipped with all of the fuses, relays, and features shown.

<table>
<thead>
<tr>
<th>Fuses</th>
<th>Usage</th>
</tr>
</thead>
<tbody>
<tr>
<td>F1</td>
<td>Right rear power window</td>
</tr>
<tr>
<td>F2</td>
<td>Blower</td>
</tr>
<tr>
<td>F3</td>
<td>Driver power seat</td>
</tr>
<tr>
<td>F4</td>
<td>Front power outlet</td>
</tr>
<tr>
<td>F5</td>
<td>Right front power window</td>
</tr>
<tr>
<td>F6</td>
<td>Front left power window</td>
</tr>
<tr>
<td>F7</td>
<td>ABS valves</td>
</tr>
<tr>
<td>F8</td>
<td>Cyber gateway module</td>
</tr>
<tr>
<td>F9</td>
<td>Body control module 8</td>
</tr>
<tr>
<td>F10</td>
<td>Left rear power window</td>
</tr>
<tr>
<td>F11</td>
<td>Sunroof</td>
</tr>
<tr>
<td>F12</td>
<td>Body control module 4</td>
</tr>
<tr>
<td>F13</td>
<td>Heated front seats</td>
</tr>
<tr>
<td>F14</td>
<td>Exterior mirrors/Lane keep assist/High-beam headlamp auto control</td>
</tr>
<tr>
<td>F15</td>
<td>Body control module 1</td>
</tr>
<tr>
<td>F16</td>
<td>Body control module 7</td>
</tr>
<tr>
<td>F17</td>
<td>Body control module 6</td>
</tr>
<tr>
<td>F18</td>
<td>Body control module 3</td>
</tr>
<tr>
<td>F19</td>
<td>Data link connector</td>
</tr>
<tr>
<td>F20</td>
<td>Airbag</td>
</tr>
<tr>
<td>F21</td>
<td>A/C</td>
</tr>
<tr>
<td>F22</td>
<td>Trunk release</td>
</tr>
<tr>
<td>F23</td>
<td>Passive entry/Passive start</td>
</tr>
<tr>
<td>F24</td>
<td>Right front child presence detection</td>
</tr>
<tr>
<td>F25</td>
<td>Steering wheel illumination switch</td>
</tr>
<tr>
<td>F26</td>
<td>Ignition switch</td>
</tr>
<tr>
<td>F27</td>
<td>Body control module 2</td>
</tr>
<tr>
<td>F28</td>
<td>Amplifier</td>
</tr>
<tr>
<td>F29</td>
<td>--</td>
</tr>
<tr>
<td>F30</td>
<td>Shifter illumination</td>
</tr>
<tr>
<td>F31</td>
<td>Rear wiper</td>
</tr>
<tr>
<td>F32</td>
<td>Transmission control module (with Stop/Start)</td>
</tr>
<tr>
<td>F33</td>
<td>Mobile phone wireless charging/DC AC converter</td>
</tr>
<tr>
<td>F34</td>
<td>Parking assist/Side blind zone alert/Infotainment/USB</td>
</tr>
<tr>
<td>F35</td>
<td>OnStar</td>
</tr>
<tr>
<td>F36</td>
<td>Display/Cluster</td>
</tr>
<tr>
<td>F37</td>
<td>Radio</td>
</tr>
</tbody>
</table>
Wheels and Tires

Tires
Every new GM vehicle has high-quality tires made by a leading tire manufacturer. See the warranty manual for information regarding the tire warranty and where to get service. For additional information refer to the tire manufacturer.

⚠️ Warning

- Poorly maintained and improperly used tires are dangerous.
- Overloading the tires can cause overheating as a result of too much flexing. There could be a blowout and a serious crash. See Vehicle Load Limits ◊ 206.

(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.

(Continued)

- Replace any tires that have been damaged by impacts with potholes, curbs, etc.
- Improperly repaired tires can cause a crash. Only the dealer or an authorized tire service center should repair, replace, dismount, and mount the tires.
- Do not spin the tires in excess of 56 km/h (35 mph) on slippery surfaces such as snow, mud, ice, etc. Excessive spinning may cause the tires to explode.

All-Season Tires
This vehicle may come with all-season tires. These tires are designed to provide good overall performance on most road surfaces.
Vehicle Care

and weather conditions. Original equipment tires designed to GM's specific tire performance criteria have a TPC specification code molded onto the sidewall. Original equipment all-season tires can be identified by the last two characters of this TPC code, which will be “MS.”

Consider installing winter tires on the vehicle if frequent driving on snow or ice-covered roads is expected. All-season tires provide adequate performance for most winter driving conditions, but they may not offer the same level of traction or performance as winter tires on snow or ice-covered roads. See Winter Tires 302.

Winter Tires

This vehicle was not originally equipped with winter tires. Winter tires are designed for increased traction on snow and ice-covered roads. Consider installing winter tires on the vehicle if frequent driving on ice or snow covered roads is expected. See your dealer for details regarding winter tire availability and proper tire selection. Also, see Buying New Tires 316.

With winter tires, there may be decreased dry road traction, increased road noise, and shorter tread life. After changing to winter tires, be alert for changes in vehicle handling and braking.

If using winter tires:

- Use tires of the same brand and tread type on all four wheel positions.
- Use only radial ply tires of the same size, load range, and speed rating as the original equipment tires.

Winter tires with the same speed rating as the original equipment tires may not be available for H, V, W, Y, and ZR speed rated tires. If winter tires with a lower speed rating are chosen, never exceed the tire's maximum speed capability.

Low-Profile Tires

If the vehicle has 225/45R17 or P225/40R18 size tires, they are classified as low-profile tires.

<table>
<thead>
<tr>
<th>Caution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low-profile tires are more susceptible to damage from road hazards or curb impact than standard profile tires. Tire and/or wheel assembly damage can occur when coming into contact with road hazards like potholes, or sharp edged objects, or when sliding into a curb. The warranty does not cover this type of damage. Keep tires set to the correct inflation pressure and when possible, avoid contact with curbs, potholes, and other road hazards.</td>
</tr>
</tbody>
</table>
Tire Sidewall Labeling

Useful information about a tire is molded into its sidewall. The examples show a typical passenger vehicle tire and a compact spare tire sidewall.

Passenger (P-Metric) Tire Example

1. **Tire Size**: The tire size is a combination of letters and numbers used to define a particular tire's width, height, aspect ratio, construction type, and service description. See the “Tire Size” illustration later in this section.

2. **TPC Spec (Tire Performance Criteria Specification)**: Original equipment tires designed to GM's specific tire performance criteria have a TPC specification code molded onto the sidewall. GM's TPC specifications meet or exceed all federal safety guidelines.

3. **DOT (Department of Transportation)**: The Department of Transportation (DOT) code indicates that the tire is in compliance with the U.S. Department of Transportation Motor Vehicle Safety Standards.

4. **DOT Tire Date of Manufacture**: The last four digits of the TIN indicate the tire manufactured date. The first two digits represent the week (01–52) and the last two digits, the year. For example, the third week of the year 2010 would have a four-digit DOT date of 0310.

5. **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.

6. **Tire Ply Material**: The type of cord and number of plies in the sidewall and under the tread.

7. **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 \( \Rightarrow 318 \).
Vehicle Care

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

Compact Spare Tire Example

(1) **Tire Ply Material**: The type of cord and number of plies in the sidewall and under the tread.

(2) **Temporary Use Only**: The compact spare tire or temporary use tire should not be driven at speeds over 80 km/h (50 mph). The compact spare tire is for emergency use when a regular road tire has lost air and gone flat. If the vehicle has a compact spare tire, see *Compact Spare Tire* \(\Rightarrow 335\) and *If a Tire Goes Flat* \(\Rightarrow 321\).

(3) **Tire Identification Number (TIN)**: The letters and numbers following the DOT (Department of Transportation) code are the Tire Identification Number (TIN). The TIN shows the manufacturer and plant code, tire size, and date the tire was manufactured. The TIN is molded onto both sides of the tire, although only one side may have the date of manufacture.

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

(5) **Tire Inflation**: The temporary use tire or compact spare tire should be inflated to 420 kPa (60 psi). For more information on tire pressure and inflation see *Tire Pressure* \(\Rightarrow 308\).

(6) **Tire Size**: A combination of letters and numbers define a tire’s width, height, aspect ratio, construction type, and service description. The letter T as the first character in the tire size means the tire is for temporary use only.

(7) **TPC Spec (Tire Performance Criteria Specification)**: Original equipment tires designed to GM's specific tire performance criteria have a TPC specification code molded onto the sidewall. GM's TPC specifications meet or exceed all federal safety guidelines.
Tire Designations

Tire Size
The following is an example of a typical passenger vehicle tire size.

![Tire Designation Example]

(1) Passenger (P-Metric) Tire: The United States version of a metric tire sizing system. The letter P as the first character in the tire size means a passenger vehicle tire engineered to standards set by the U.S. Tire and Rim Association.

(2) Tire Width: The three-digit number indicates the tire section width in millimeters from sidewall to sidewall.

(3) Aspect Ratio: A two-digit number that indicates the tire height-to-width measurements. For example, if the tire size aspect ratio is 60, as shown in item 3 of the illustration, it would mean that the tire's sidewall is 60 percent as high as it is wide.

(4) Construction Code: A letter code is used to indicate the type of ply construction in the tire. The letter R means radial ply construction; the letter D means diagonal or bias ply construction; and the letter B means belted-bias ply construction.

(5) Rim Diameter: Diameter of the wheel in inches.

(6) Service Description: These characters represent the load index and speed rating of the tire. The load index represents the load carrying capacity a tire is certified to carry. The speed rating is the maximum speed a tire is certified to carry a load.

Tire Terminology and Definitions

Air Pressure: The amount of air inside the tire pressing outward on each square inch of the tire. Air pressure is expressed in kPa (kilopascal) or psi (pounds per square inch).

Accessory Weight: The combined weight of optional accessories. Some examples of optional accessories are automatic transmission, power windows, power seats, and air conditioning.

Aspect Ratio: The relationship of a tire's height to its width.

Belt: A rubber coated layer of cords between the plies and the tread. Cords may be made from steel or other reinforcing materials.
### Vehicle Care

<table>
<thead>
<tr>
<th>Term</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bead</strong></td>
<td>The tire bead contains steel wires wrapped by steel cords that hold the tire onto the rim.</td>
</tr>
<tr>
<td><strong>Bias Ply Tire</strong></td>
<td>A pneumatic tire in which the plies are laid at alternate angles less than 90 degrees to the centerline of the tread.</td>
</tr>
<tr>
<td><strong>Cold Tire Pressure</strong></td>
<td>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 (\Rightarrow 308).</td>
</tr>
<tr>
<td><strong>Curb Weight</strong></td>
<td>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.</td>
</tr>
<tr>
<td><strong>DOT Markings</strong></td>
<td>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.</td>
</tr>
<tr>
<td><strong>GVWR</strong></td>
<td>Gross Vehicle Weight Rating. See Vehicle Load Limits (\Rightarrow 206).</td>
</tr>
<tr>
<td><strong>GAWR FRT</strong></td>
<td>Gross Axle Weight Rating for the front axle. See Vehicle Load Limits (\Rightarrow 206).</td>
</tr>
<tr>
<td><strong>GAWR RR</strong></td>
<td>Gross Axle Weight Rating for the rear axle. See Vehicle Load Limits (\Rightarrow 206).</td>
</tr>
<tr>
<td><strong>Intended Outboard Sidewall</strong></td>
<td>The side of an asymmetrical tire that must always face outward when mounted on a vehicle.</td>
</tr>
<tr>
<td><strong>Kilopascal (kPa)</strong></td>
<td>The metric unit for air pressure.</td>
</tr>
<tr>
<td><strong>Light Truck (LT-Metric) Tire</strong></td>
<td>A tire used on light duty trucks and some multipurpose passenger vehicles.</td>
</tr>
<tr>
<td><strong>Load Index</strong></td>
<td>An assigned number ranging from 1 to 279 that corresponds to the load carrying capacity of a tire.</td>
</tr>
<tr>
<td><strong>Maximum Inflation Pressure</strong></td>
<td>The maximum air pressure to which a cold tire can be inflated. The maximum air pressure is molded onto the sidewall.</td>
</tr>
<tr>
<td><strong>Maximum Load Rating</strong></td>
<td>The load rating for a tire at the maximum permissible inflation pressure for that tire.</td>
</tr>
<tr>
<td><strong>Maximum Loaded Vehicle Weight</strong></td>
<td>The sum of curb weight, accessory weight, vehicle capacity weight, and production options weight.</td>
</tr>
</tbody>
</table>
Normal Occupant Weight: The number of occupants a vehicle is designed to seat multiplied by 68 kg (150 lb). See Vehicle Load Limits $\Rightarrow$ 206.

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 $\Rightarrow$ 308 and Vehicle Load Limits $\Rightarrow$ 206.

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 $\Rightarrow$ 315.

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 $\Rightarrow$ 318.
308 Vehicle Care

Vehicle Capacity Weight: The number of designated seating positions multiplied by 68 kg (150 lb) plus the rated cargo load. See Vehicle Load Limits 206.

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 206.

Tire Pressure

Tires need the correct amount of air pressure to operate effectively.

Caution

Neither tire underinflation nor overinflation is good. Underinflated tires, or tires that do not have enough air, can result in:

- Tire overloading and overheating which could lead to a blowout.
- Premature or irregular wear.
- Poor handling.
- Reduced fuel economy.

Overinflated tires, or tires that have too much air, can result in:

- Unusual wear.
- Poor handling.
- Rough ride.
- Needless damage from road hazards.

The Tire and Loading Information label on the vehicle indicates the original equipment tires and the correct cold tire inflation pressures. The recommended pressure is the minimum air pressure needed to support the vehicle’s maximum load carrying capacity. See Vehicle Load Limits 206.

How the vehicle is loaded affects vehicle handling and ride comfort. Never load the vehicle with more weight than it was designed to carry.

When to Check

Check the tires once a month or more. Do not forget the compact spare, if the vehicle has one. The cold compact spare tire pressure should be at 420 kPa (60 psi). See Compact Spare Tire 335.
How to Check

Use a good quality pocket-type gauge to check tire pressure. Proper tire inflation cannot be determined by looking at the tire. Check the tire inflation pressure when the tires are cold, meaning the vehicle has not been driven for at least three hours or no more than 1.6 km (1 mi).

Remove the valve cap from the tire valve stem. Press the tire gauge firmly onto the valve to get a pressure measurement. If the cold tire inflation pressure matches the recommended pressure on the Tire and Loading Information label, no further adjustment is necessary. If the inflation pressure is low, add air until the recommended pressure is reached. If the inflation pressure is high, press on the metal stem in the center of the tire valve to release air.

Recheck the tire pressure with the tire gauge. Put the valve caps back on the valve stems to keep out dirt and moisture and prevent leaks. Use only valve caps designed for the vehicle by GM. TPMS sensors could be damaged and would not be covered by the vehicle warranty.

Tire Pressure for High-Speed Operation

Put the valve caps back on the valve stems to keep out dirt and moisture and prevent leaks. Use only valve caps designed for the vehicle by GM. TPMS sensors could be damaged and would not be covered by the vehicle warranty.

**Warning**

Driving at high speeds, 160 km/h (100 mph) or higher, puts additional strain on tires. Sustained high-speed driving causes excessive heat buildup and can cause sudden tire failure. This could cause a crash, and you or others could be killed. Some high-speed rated tires require inflation pressure adjustment for high-speed operation. When speed limits and road conditions allow the vehicle to be driven at high speeds, make sure the tires are rated for high-speed operation, are in excellent condition, and are set to the correct cold tire inflation pressure for the vehicle load.

Vehicles with P225/40R18 size tires require inflation pressure adjustment when driving the vehicle at speeds of 160 km/h (100 mph) or higher. Set the cold tire inflation pressure to 7 kPa (1 psi) above the recommended cold tire pressure shown on the Tire and Loading Information label.

Return the tires to the recommended cold tire inflation pressure when high-speed driving has ended. See Vehicle Load Limits 206 and Tire Pressure 308.
310 Vehicle Care

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.

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.

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 311.

See Radio Frequency Statement 379.
Tire Pressure Monitor Operation

This vehicle may have a Tire Pressure Monitor System (TPMS). The TPMS is designed to warn the driver when a low tire pressure condition exists. TPMS sensors are mounted onto each tire and wheel assembly, excluding the spare tire and wheel assembly. The TPMS sensors monitor the air pressure in the tires and transmits the tire pressure readings to a receiver located in the vehicle.

When a low tire pressure condition is detected, the TPMS illuminates the low tire pressure warning light located on the instrument cluster. If the warning light comes on, stop as soon as possible and inflate the tires to the recommended pressure shown on the Tire and Loading Information label. See Vehicle Load Limits 206.

A message to check the pressure in a specific tire displays in the Driver Information Center (DIC). The low tire pressure warning light and the DIC warning message come on at each ignition cycle until the tires are inflated to the correct inflation pressure. Using the DIC, tire pressure levels can be viewed. For additional information and details about the DIC operation and displays see Driver Information Center (DIC) (Uplevel) 137 or Driver Information Center (DIC) (Base Level) 134.

The low tire pressure warning light may come on in cool weather when the vehicle is first started, and then turn off as the vehicle is driven. This could be an early indicator that the air pressure is getting low and needs to be inflated to the proper pressure.

A Tire and Loading Information label, attached to your vehicle, shows the size of the original equipment tires and the correct inflation pressure for the tires when they are cold. See Vehicle Load Limits 206, for an example of the Tire and Loading Information label and its location. Also see Tire Pressure 308.

The TPMS can warn about a low tire pressure condition but it does not replace normal tire maintenance. See Tire Inspection 314, Tire Rotation 314 and Tires 301.

**Caution**

Tire sealant materials are not all the same. A non-approved tire sealant could damage the TPMS sensors. TPMS sensor damage caused by using an incorrect tire sealant is not covered by the vehicle warranty. Always use only the GM approved tire sealant available through your dealer or included in the vehicle.
312 Vehicle Care

Factory-installed Tire Inflator Kits use a GM-approved liquid tire sealant. Using non-approved tire sealants could damage the TPMS sensors. See Tire Sealant and Compressor Kit 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 warning light flashes for about one minute and then stays on for the remainder of the ignition cycle. A DIC warning message also displays. The malfunction light and DIC warning message come on at each ignition cycle until the problem is corrected. Some of the conditions that can cause these to come on are:

- One of the road tires has been replaced with the spare tire. The spare tire does not have a TPMS sensor. The malfunction light and DIC message should go off after the road tire is replaced and the sensor matching process is performed successfully. See “TPMS Sensor Matching Process” later in this section.
- The TPMS sensor matching process was not done or not completed successfully after rotating the tires. The malfunction light and the DIC message should go off after successfully completing the sensor matching process. See "TPMS Sensor Matching Process" later in this section.
- One or more TPMS sensors are missing or damaged. The malfunction light and the DIC message should go off when the TPMS sensors are installed and the sensor matching process is performed successfully. See your dealer for service.
- Replacement tires or wheels do not match the original equipment tires or wheels. Tires and wheels other than those recommended could prevent the TPMS from functioning properly. See Buying New Tires.
- Operating electronic devices or being near facilities using radio wave frequencies similar to the TPMS could cause the TPMS sensors to malfunction.

If the TPMS is not functioning properly it cannot detect or signal a low tire condition. See your dealer for service if the TPMS malfunction light and DIC message comes on and stays on.

TPMS Sensor Matching Process

Each TPMS sensor has a unique identification code. The identification code needs to be matched to a new tire/wheel position after rotating the vehicle’s tires or replacing one or more of the TPMS sensors. The TPMS sensor matching process should also be performed after replacing a spare tire with a road tire containing the TPMS sensor. The malfunction light and the DIC message should go off at the next ignition cycle. The sensors are
matched to the tire/wheel positions, using a TPMS relearn tool, in the following order: driver side front tire, passenger side front tire, passenger side rear tire, and driver side rear. See your dealer for service or to purchase a relearn tool. A TPMS relearn tool can also be purchased. See Tire Pressure Monitor Sensor Activation Tool at www.gmtoolsandequipment.com or call 1-800-GM TOOLS (1-800-468-6657).

There are two minutes to match the first tire/wheel position, and five minutes overall to match all four tire/wheel positions. If it takes longer, the matching process stops and must be restarted.

The TPMS sensor matching process is:

1. Set the parking brake.
2. Place the vehicle power mode in ON/RUN/START. See Ignition Positions (Keyless Access) □ 212 or Ignition Positions (Key Access) □ 210.
3. Uplevel DIC Only: Make sure the Tire Pressure info page option is turned on. The info pages on the DIC can be turned on and off through the Settings menu. See Driver Information Center (DIC) (Uplevel) □ 137 or Driver Information Center (DIC) (Base Level) □ 134.
4. If the vehicle has an uplevel DIC, use the DIC controls on the right side of the steering wheel to scroll to the Tire Pressure screen under the DIC info page.
   If the vehicle has a base level DIC, press MENU to select the Vehicle Information Menu in the DIC. Use the thumbwheel to scroll to the Tire Pressure Menu item screen.
5. If the vehicle has an uplevel DIC, press and hold the ✓ (Set/Reset) button in the center of the DIC controls.
   If the vehicle has a base level DIC, press SET/CLR to begin the sensor matching process.
   A message requesting acceptance of the process may display.
   If the vehicle has a base level DIC, press SET/CLR again to confirm the selection.
   The horn sounds twice to signal the receiver is in relearn mode and the TIRE LEARNING ACTIVE message displays on the DIC screen.
6. Start with the driver side front tire.
7. Place the relearn tool against the tire sidewall, near the valve stem. Then press the button to activate the TPMS sensor. A horn chirp confirms that the sensor identification code has been matched to this tire and wheel position.
8. Proceed to the passenger side front tire, and repeat the procedure in Step 7.
9. Proceed to the passenger side rear tire, and repeat the procedure in Step 7.
314 Vehicle Care

10. Proceed to the driver side rear tire, and repeat the procedure in Step 7. The horn sounds two times to indicate the sensor identification code has been matched to the driver side rear tire, and the TPMS sensor matching process is no longer active. The TIRE LEARNING ACTIVE message on the DIC display screen goes off.

11. Turn the ignition off.

12. Set all four tires to the recommended air pressure level as indicated on the Tire and Loading Information label.

Tire Inspection

We recommend that the tires, including the spare tire, if the vehicle has one, be inspected for signs of wear or damage at least once a month.

Replace the tire if:

- The indicators at three or more places around the tire can be seen.
- There is cord or fabric showing through the tire's rubber.
- The tread or sidewall is cracked, cut, or snagged deep enough to show cord or fabric.
- The tire has a bump, bulge, or split.
- The tire has a puncture, cut, or other damage that cannot be repaired well because of the size or location of the damage.

Anytime unusual wear is noticed, rotate the tires as soon as possible, check for proper tire inflation pressure, and check for damaged tires or wheels. If the unusual wear continues after the rotation, check the wheel alignment. See When It Is Time for New Tires ⇒ 315 and Wheel Replacement ⇒ 319.

Tire Rotation

Tires should be rotated every 12,000 km (7,500 mi). See Maintenance Schedule ⇒ 352.

Tires are rotated to achieve a more uniform wear for all tires. The first rotation is the most important.

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 ⊳ 308 and Vehicle Load Limits ⊳ 206.

Reset the Tire Pressure Monitor System. See Tire Pressure Monitor Operation ⊳ 311.

Check that all wheel nuts are properly tightened. See “Wheel Nut Torque” under Capacities and Specifications ⊳ 366.

⚠️ 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 ⊳ 314 and Tire Rotation ⊳ 314.

The rubber in tires ages over time. This also applies to the spare tire, if the vehicle has one, even if it is never used. Multiple factors including temperatures, loading conditions, and inflation pressure maintenance affect how fast aging takes place. GM recommends that tires, including the spare if equipped, be replaced after six years, regardless of tread wear. The
tire manufacture date is the last four digits of the DOT Tire Identification Number (TIN) which is molded into one side of the tire sidewall. The first two digits represent the week (01–52) and the last two digits, the year. For example, the third week of the year 2010 would have a four-digit DOT date of 0310.

**Vehicle Storage**

Tires age when stored normally mounted on a parked vehicle. Park a vehicle that will be stored for at least a month in a cool, dry, clean area away from direct sunlight to slow aging. This area should be free of grease, gasoline, or other substances that can deteriorate rubber.

Parking for an extended period can cause flat spots on the tires that may result in vibrations while driving. When storing a vehicle for at least a month, remove the tires or raise the vehicle to reduce the weight from the tires.

**Buying New Tires**

GM has developed and matched specific tires for the vehicle. The original equipment tires installed were designed to meet General Motors Tire Performance Criteria Specification (TPC Spec) system rating. When replacement tires are needed, GM strongly recommends buying tires with the same TPC Spec rating.

GM's exclusive TPC Spec system considers over a dozen critical specifications that impact the overall performance of the vehicle, including brake system performance, ride and handling, traction control, and tire pressure monitoring performance. GM's TPC Spec number is molded onto the tire's sidewall near the tire size. If the tires have an all-season tread design, the TPC Spec number will be followed by MS for mud and snow. See **Tire Sidewall Labeling** \(\text{\textsuperscript{0}303}\).

GM recommends replacing worn tires in complete sets of four. Uniform tread depth on all tires will help to maintain the performance of the vehicle.

Braking and handling performance may be adversely affected if all the tires are not replaced at the same time. If proper rotation and maintenance have been done, all four tires should wear out at about the same time. See **Tire Rotation** \(\text{\textsuperscript{0}314}\). However, if it is necessary to replace only one axle set of worn tires, place the new tires on the rear axle.

Winter tires with the same speed rating as the original equipment tires may not be available for H, V, W, Y and ZR speed rated tires. Never exceed the winter
tires’ maximum speed capability when using winter tires with a lower speed rating.

⚠️ Warning

Tires could explode during improper service. Attempting to mount or dismount a tire could cause injury or death. Only your dealer or authorized tire service center should mount or dismount the tires.

⚠️ Warning

Mixing tires of different sizes, brands, or types may cause loss of control of the vehicle, resulting in a crash or other vehicle damage. Use the correct size, brand, and type of tires on all wheels.

⚠️ Warning

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

If the vehicle tires must be replaced with a tire that does not have a TPC Spec number, make sure they are the same size, load range, speed rating, and construction (radial) as the original tires.

Vehicles that have a tire pressure monitoring system could give an inaccurate low-pressure warning if non-TPC Spec rated tires are installed. See Tire Pressure Monitor System ⇒ 310.

The Tire and Loading Information label indicates the original equipment tires on the vehicle. See Vehicle Load Limits ⇒ 206.

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, roll bars, traction control, electronic stability control, or All-Wheel Drive, the performance of these systems can also be affected.

⚠️ Warning

If different sized wheels are used, there may not be an acceptable level of performance and safety if (Continued)
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Warning (Continued)

Tires not recommended for those wheels are selected. This increases the chance of a crash and serious injury. Only use GM specific wheel and tire systems developed for the vehicle, and have them properly installed by a GM certified technician.

See Buying New Tires  316 and Accessories and Modifications  265.

Uniform Tire Quality Grading

The following information relates to the system developed by the United States National Highway Traffic Safety Administration (NHTSA), which grades tires by treadwear, traction, and temperature performance. This applies only to vehicles sold in the United States. The grades are molded on the sidewalls of most passenger car tires. The Uniform Tire Quality Grading (UTQG) system does not apply to deep tread, winter tires, compact spare tires, tires with nominal rim diameters of 10 to 12 inches (25 to 30 cm), or to some limited-production tires.

While the tires available on General Motors passenger cars and light trucks may vary with respect to these grades, they must also conform to federal safety requirements and additional General Motors Tire Performance Criteria (TPC) standards.

Quality grades can be found where applicable on the tire sidewall between tread shoulder and maximum section width. For example:

- Treadwear 200
- Traction AA
- Temperature A

All Passenger Car Tires Must Conform to Federal Safety Requirements In Addition To These Grades.

Treadwear

The treadwear grade is a comparative rating based on the wear rate of the tire when tested under controlled conditions on a specified government test course. For example, a tire graded 150 would wear one and one-half (1½) times as well on the government course as a tire graded 100. The relative performance of tires depends upon the actual conditions of their use, however, and may depart significantly from the norm due to variations in driving habits, service practices and differences in road characteristics and climate.
Traction
The traction grades, from highest to lowest, are AA, A, B, and C. Those grades represent the tire's ability to stop on wet pavement as measured under controlled conditions on specified government test surfaces of asphalt and concrete. A tire marked C may have poor traction performance. Warning: The traction grade assigned to this tire is based on straight-ahead braking traction tests, and does not include acceleration, cornering, hydroplaning, or peak traction characteristics.

Temperature
The temperature grades are A (the highest), B, and C, representing the tire's resistance to the generation of heat and its ability to dissipate heat when tested under controlled conditions on a specified indoor laboratory test wheel. Sustained high temperature can cause the material of the tire to degenerate and reduce tire life, and excessive temperature can lead to sudden tire failure. The grade C corresponds to a level of performance which all passenger car tires must meet under the Federal Motor Safety Standard No. 109. Grades B and A represent higher levels of performance on the laboratory test wheel than the minimum required by law. Warning: The temperature grade for this tire is established for a tire that is properly inflated and not overloaded. Excessive speed, underinflation, or excessive loading, either separately or in combination, can cause heat buildup and possible tire failure.

Wheel Alignment and Tire Balance
The tires and wheels were aligned and balanced at the factory to provide the longest tire life and best overall performance. Adjustments to wheel alignment and tire balancing are not necessary on a regular basis. Consider an alignment check if there is unusual tire wear or the vehicle is significantly pulling to one side or the other. Some slight pull to the left or right, depending on the crown of the road and/or other road surface variations such as troughs or ruts, is normal. If the vehicle is vibrating when driving on a smooth road, the tires and wheels may need to be rebalanced. See your dealer for proper diagnosis.

Wheel Replacement
Replace any wheel that is bent, cracked, or badly rusted or corroded. If wheel nuts keep coming loose, the wheel, wheel bolts, and wheel nuts should be replaced. If the wheel leaks air, replace it.
Vehicle Care

Some aluminum wheels can be repaired. See your dealer if any of these conditions exist.

Your dealer will know the kind of wheel that is needed.

Each new wheel should have the same load-carrying capacity, diameter, width, offset, and be mounted the same way as the one it replaces.

Replace wheels, wheel bolts, wheel nuts, or Tire Pressure Monitor System (TPMS) sensors with new GM original equipment parts.

**Warning**

Using the wrong replacement wheels, wheel bolts, or wheel nuts can be dangerous. It could affect the braking and handling of the vehicle. Tires can lose air, and cause loss of control, causing a crash. Always use the correct wheel, wheel bolts, and wheel nuts for replacement.

<table>
<thead>
<tr>
<th>Caution</th>
</tr>
</thead>
<tbody>
<tr>
<td>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.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Used Replacement Wheels</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Warning</strong></td>
</tr>
<tr>
<td>Replacing a wheel with a used one is dangerous. How it has been used or how far it has been driven may be unknown. It could fail suddenly and cause a crash. When replacing wheels, use a new GM original equipment wheel.</td>
</tr>
</tbody>
</table>

Tire Chains

**Warning**

If the vehicle has 225/45R17 or P225/40R18 size tires, do not use tire chains. There is not enough clearance. Tire chains used on a vehicle without the proper amount of clearance can cause damage to the brakes, suspension, or other vehicle parts. The area damaged by the tire chains could cause loss of control and a crash.

Use another type of traction device only if its manufacturer recommends it for the vehicle's tire size combination and road conditions. Follow that manufacturer's instructions. To avoid vehicle damage, drive slow and readjust or remove the traction device if it contacts the vehicle. Do not spin the wheels. If traction devices are used, install them on the front tires.
Caution
If the vehicle is equipped with 195/65R15 or 205/55R16 size tires, use tire chains only where legal and only when necessary. Use low profile chains that add no more than 12 mm thickness to the tire tread and inner sidewall. Use chains that are the proper size for the tires. Install them on the tires of the front axle. Do not use chains on the tires of the rear axle. Tighten them as tightly as possible with the ends securely fastened. Drive slowly and follow the chain manufacturer's instructions. If the chains contact the vehicle, stop and retighten them. If the contact continues, slow down until it stops. Driving too fast or spinning the wheels with chains on will damage the vehicle.

If a Tire Goes Flat
It is unusual for a tire to blow out while driving, especially if the tires are maintained properly. See Tires \( \Rightarrow 301 \). If air goes out of a tire, it is much more likely to leak out slowly. But if there ever is a blowout, here are a few tips about what to expect and what to do:

If a front tire fails, the flat tire creates a drag that pulls the vehicle toward that side. Take your foot off the accelerator pedal and grip the steering wheel firmly. Steer to maintain lane position, and then gently brake to a stop, well off the road, if possible.

A rear blowout, particularly on a curve, acts much like a skid and may require the same correction as used in a skid. Stop pressing the accelerator pedal and steer to straighten the vehicle. It may be very bumpy and noisy. Gently brake to a stop, well off the road, if possible.

Warning
Driving on a flat tire will cause permanent damage to the tire. Re-inflating a tire after it has been driven on while severely underinflated or flat may cause a blowout and a serious crash. Never attempt to re-inflate a tire that has been driven on while severely underinflated or flat. Have your dealer or an authorized tire service center repair or replace the flat tire as soon as possible.

Warning
Lifting a vehicle and getting under it to do maintenance or repairs is dangerous without the appropriate safety equipment and training. If a jack is provided with the vehicle, it is designed only for changing a flat tire. If it is used for anything else, you or others could
### Vehicle Care

#### Warning (Continued)

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* § 161.

<table>
<thead>
<tr>
<th>Warning</th>
</tr>
</thead>
<tbody>
<tr>
<td>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:</td>
</tr>
<tr>
<td>1. Set the parking brake firmly.</td>
</tr>
</tbody>
</table>

(Continued)

#### Warning (Continued)

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, if equipped, on both sides of the tire at the opposite corner of the tire being changed.

When the vehicle has a flat tire (2), use the following example as a guide to assist in the placement of the wheel blocks (1), if equipped.

| 1. Wheel Block (If Equipped) |
| 2. Flat Tire |

The following information explains how to repair or change a tire.

### Tire Sealant and Compressor Kit

<table>
<thead>
<tr>
<th>Warning</th>
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<tbody>
<tr>
<td>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 with poor ventilation.</td>
</tr>
</tbody>
</table>

(Continued)
Warning (Continued)

engine in an enclosed area that has no fresh air ventilation. For more information, see Engine Exhaust 221.

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 or 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 (0.25 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 373.

Read and follow all of the tire sealant and compressor kit instructions.

The kit includes:

1. Sealant Canister Inlet Valve
2. Sealant/Air Hose
3. Base of Sealant Canister
4. Tire Sealant Canister
5. On/Off Button
6. Slot on Top of Compressor
7. Pressure Deflation Button
8. Pressure Gauge
324 Vehicle Care

**Tire Sealant**

Read and follow the safe handling instructions on the label adhered to the tire sealant canister (4).

Check the tire sealant expiration date on the tire sealant canister. The tire sealant canister (4) should be replaced before its expiration date. Replacement tire sealant canisters are available at your local dealer.

There is only enough sealant to seal one tire. After usage, the tire sealant canister must be replaced.

**Using the Tire Sealant and Compressor Kit to Temporarily Seal and Inflate a Punctured Tire**

When using the tire sealant and compressor kit during cold temperatures, warm the kit in a 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*  161.

See *If a Tire Goes Flat*  321 for other important safety warnings.

Do not remove any objects that have penetrated the tire.

1. Remove the tire sealant canister (4) and compressor from its storage location. See *Storing the Tire Sealant and Compressor Kit*  329.

2. Remove the air only hose (10) and the power plug (9) from the bottom of the compressor.

3. Place the compressor on the ground near the flat tire.

4. Attach the air only hose (10) to the sealant canister inlet valve (1) by turning it clockwise until tight.
5. Slide the base of the tire sealant canister (3) into the slot on the top of the compressor (6) to hold it upright. Make sure the tire valve stem is positioned close to the ground so the hose will reach it.

6. Remove the valve stem cap from the flat tire by turning it counterclockwise.

7. Attach the sealant/air hose (2) to the tire valve stem by turning it clockwise until tight.

8. Plug the power plug (9) into the accessory power outlet in the vehicle. Unplug all items from other accessory power outlets. See Power Outlets 112.

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.

9. Start the vehicle. The vehicle must be running while using the air compressor.

10. Press the on/off button (5) to turn the tire sealant and compressor kit on.

The compressor will inject sealant and air into the tire.

The pressure gauge (8) 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.

11. Inflate the tire to the recommended inflation pressure using the pressure gauge (8). The recommended inflation pressure can be found on the Tire and Loading Information label. See Tire Pressure 308.

The pressure gauge (8) may read higher than the actual tire pressure while the compressor
326 Vehicle Care

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.

<table>
<thead>
<tr>
<th>Caution</th>
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<tbody>
<tr>
<td>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 373.</td>
</tr>
</tbody>
</table>

12. Press the on/off button (5) 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 13–21 must be done immediately after Step 12.

Be careful while handling the tire sealant and compressor kit as it could be warm after usage.

13. Unplug the power plug (9) from the accessory power outlet in the vehicle.

14. Turn the sealant/air hose (2) counterclockwise to remove it from the tire valve stem.

15. Replace the tire valve stem cap.

16. Remove the tire sealant canister (4) from the slot on top of the compressor (6).

17. Turn the air only hose (10) counterclockwise to remove it from the tire sealant canister inlet valve (1).

18. Turn the sealant/air hose (2) clockwise onto the sealant canister inlet valve (1) to prevent sealant leakage.

19. Return the air only hose (10) and power plug (9) back to their original storage location.

20. If the flat tire was able to inflate to the recommended inflation pressure, remove the maximum speed label from the sealant canister and place it in a highly visible location. Do not exceed the speed on this label until the damaged tire is repaired or replaced.

21. Return the equipment to its original storage location in the vehicle.

22. Immediately drive the vehicle 8 km (5 mi) to distribute the sealant in the tire.

23. Stop at a safe location and check the tire pressure. Refer to Steps 1–10 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* \( \Rightarrow \) 373.

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.

24. Wipe off any sealant from the wheel, tire, or vehicle.

25. Dispose of the used tire sealant canister (4) at a local dealer or in accordance with local state codes and practices.

26. Replace it with a new canister available from your dealer.

27. After temporarily sealing a tire using the tire sealant and compressor kit, take the vehicle to an authorized dealer within 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)**

The kit includes:

1. Sealant Canister Inlet Valve
2. Sealant/Air Hose
3. Base of Sealant Canister
4. Tire Sealant Canister
5. On/Off Button
6. Slot on Top of Compressor
7. Pressure Deflation Button
8. Pressure Gauge
9. Power Plug
10. Air Only Hose

If a 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* \( \Rightarrow \) 161.

See *If a Tire Goes Flat* \( \Rightarrow \) 321 for other important safety warnings.
328  Vehicle Care

1. Remove the compressor from its storage location. See Storing the Tire Sealant and Compressor Kit ⇒ 329.
2. Remove the air only hose (10) and the power plug (9) from the bottom of the compressor.
3. Place the compressor on the ground near the flat tire. 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 air only hose (10) to the tire valve stem by turning it clockwise until tight.
6. Plug the power plug (9) into the accessory power outlet in the vehicle. Unplug all items from other accessory power outlets. See Power Outlets ⇒ 112.
7. Start the vehicle. The vehicle must be running while using the air compressor.
8. Press the on/off button (5) to turn the tire sealant and compressor kit on.
   The compressor will inflate the tire with air only.
9. Inflate the tire to the recommended inflation pressure using the pressure gauge (8). The recommended inflation pressure can be found on the Tire and Loading Information label. See Tire Pressure ⇒ 308.
   The pressure gauge (8) 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.
   
<table>
<thead>
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<tbody>
<tr>
<td>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 ⇒ 373.</td>
</tr>
</tbody>
</table>
10. Press the on/off button (5) to turn the tire sealant and compressor kit off. Be careful while handling the compressor as it could be warm after usage.
11. Unplug the power plug (9) from the accessory power outlet in the vehicle.

If the vehicle only has a cigarette lighter, use the cigarette lighter.
Do not pinch the power plug cord in the door or window.

If the vehicle has an accessory power outlet, do not use the cigarette lighter.
12. Turn the air only hose (10) counterclockwise to remove it from the tire valve stem.

13. Replace the tire valve stem cap.

14. Return the air only hose (10) and power plug (9) back to their original storage location.

15. Return the equipment to its original storage location in the vehicle.

The tire sealant and compressor kit has accessory adapters located in a compartment on the bottom of its housing that can be used to inflate air mattresses, balls, etc.

### Storing the Tire Sealant and Compressor Kit

The tire sealant and compressor kit is in the trunk under the load floor.

To remove the kit:

1. Open the trunk or liftgate. See Trunk ◊ 47 or Liftgate ◊ 49.

   ![Diagram](image)

   2. Remove the compressor (1) and the tire sealant canister (2).

To store the inflator kit, reverse the steps.

### Tire Changing

### Removing the Spare Tire and Tools

To access the spare tire and tools:

1. Tow Hook
2. Jack
3. Wrench
4. Screwdriver (If Equipped)

**Vehicles with a Trunk**
330 Vehicle Care

Vehicles with a Liftgate

1. Jack
2. Wrench
3. Tow Hook
4. Strap

1. Open the trunk or liftgate. See Trunk \(\Rightarrow 47\) or Liftgate \(\Rightarrow 49\).
2. Lift the load floor.
3. Turn the retainer nut counterclockwise and remove the spare tire. Place the spare tire next to the tire being changed.

Removing the Flat Tire and Installing the Spare Tire

1. Do a safety check before proceeding. See If a Tire Goes Flat \(\Rightarrow 321\).
2. Turn the wheel wrench counterclockwise to loosen all the wheel nuts, but do not remove them yet.
3. Place the jack near the flat tire.
4. The jack and tools are stored under the spare tire. Remove them from their container and place them near the tire being changed.
4. Place the jack under the vehicle.
5. Put the compact spare tire near you.

⚠️ Warning

Getting under a vehicle when it is lifted on a jack is dangerous. If the vehicle slips off the jack, 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.

Caution
Make sure that the jack lift head is in the correct position or you may damage your vehicle. The repairs would not be covered by your warranty.

6. Position the jack lift head at the jack location nearest the flat tire. The location is indicated by a notch on the bottom edge of the body side. The jack must not be used in any other position.

7. Raise the vehicle by turning the jack handle clockwise. Raise the vehicle far enough off the ground so there is enough
room for the road tire to clear the ground. Do not raise the jack any further.

8. Remove all of the wheel nuts.
9. 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.

10. Remove any rust or dirt from the wheel bolts, mounting surfaces, and spare wheel.
11. Place the compact spare tire on the wheel-mounting surface.

12. Reinstall the wheel nuts. Tighten each nut by hand until the wheel is held against the hub.
13. Lower the vehicle by turning the jack handle 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

(Continued)
Warning (Continued)

n. See Capacities and Specifications for original equipment wheel nut torque specifications.

Caution

Improperly tightened wheel nuts can lead to brake pulsation and rotor damage. To avoid expensive brake repairs, evenly tighten the wheel nuts in the proper sequence and to the proper torque specification. See Capacities and Specifications for the wheel nut torque specification.

14. Tighten the wheel nuts firmly in a crisscross sequence, as shown.

15. Lower the jack all the way and remove the jack from under the vehicle.

16. Tighten the wheel nuts firmly with the wheel wrench.

When reinstalling the wheel cover or center cap on the full-size tire, tighten all five plastic caps hand snug with the aid of the wheel wrench and tighten them with the wheel wrench an additional one-quarter of a turn.

Caution

Wheel covers will not fit on the vehicle's compact spare. If you try to put a wheel cover on the compact spare, the cover or the spare could be damaged.

Storing a Flat or Spare Tire and Tools

Warning

Storing a jack, a tire, or other equipment in the passenger compartment of the vehicle could cause injury. In a sudden stop or collision, loose equipment could strike someone. Store all these in the proper place.

Storing a Flat or Spare Tire and Tools — Vehicles with a Trunk

1. Replace the jack and tools in their original storage location.
2. Place the tire, lying flat, valve stem down in the spare tire well.

3. Turn the retainer nut clockwise until tight.

4. Replace the load floor.

**Storing a Flat Tire and Tools — Vehicles with a Liftgate**

The spare tire wheel well is not designed to store a full size tire. A damaged full size tire must be stored on the load floor and secured with the strap provided.

1. Replace the jack and tools in their original storage location.

2. Open and remove the storage compartment door. Store the door under the rear floor storage cover.

3. Attach the loop end of the strap to the thread and secure it with the wing nut.

4. Replace the load floor.

5. Place the tire, lying flat, valve stem up, on the right side of the load floor.

6. Route the strap hook through the wheel.

7. Route and attach the strap around the strut in the storage compartment.

8. Tighten the strap and secure it using the buckle.
Storing the Spare Tire and Tools — Vehicles with a Liftgate

Reverse the directions for removing the jack, tools, and spare tire. The compact spare is for temporary use only. Replace the compact spare tire with a full-size tire as soon as you can.

Compact Spare Tire

⚠️ Warning

Driving with more than one compact spare tire at a time could result in loss of braking and handling. This could lead to a crash and you or others could be injured. Use only one compact spare tire at a time.

If this vehicle has a compact spare tire, it was fully inflated when new; however, it can lose air over time. Check the inflation pressure regularly. It should be 420 kPa (60 psi).

Stop as soon as possible and check that the spare tire is correctly inflated after being installed on the vehicle. The compact spare tire is designed for temporary use only. The vehicle will perform differently with the spare tire installed and it is recommended that the vehicle speed be limited to 80 km/h (50 mph). To conserve the tread of the spare tire, have the standard tire repaired or replaced as soon as convenient and return the spare tire to the storage area.

When using a compact spare tire, the AWD (if equipped), ABS, and Traction Control systems may engage until the spare tire is recognized by the vehicle, especially on slippery roads. Adjust driving to reduce possible wheel slip.

Caution

When the compact spare is installed, do not take the vehicle through an automatic car wash (Continued)

Caution (Continued)

with guide rails. The compact spare can get caught on the rails which can damage the tire, wheel, and other parts of the vehicle.

Do not use the compact spare on other vehicles.

Do not mix the compact spare tire or wheel with other wheels or tires. They will not fit. Keep the spare tire and its wheel together.

Caution

Tire chains will not fit the compact spare. Using them can damage the vehicle and the chains. Do not use tire chains on the compact spare.
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Jump Starting

Jump Starting - North America

For more information about the vehicle battery, see Battery - North America 285.

If the battery has run down, try to use another vehicle and some jumper cables to start your vehicle. Be sure to use the following steps to do it safely.

⚠️ Warning

**WARNING:** Battery posts, terminals, and related accessories contain lead and lead compounds, chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. Batteries also contain other chemicals known to the State of California to cause cancer. WASH HANDS AFTER HANDLING.

(Continued)

<table>
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<tr>
<th>Warning (Continued)</th>
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<tr>
<td>See California Proposition 65 Warning 264.</td>
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⚠️ Warning

Batteries can hurt you. They can be dangerous because:
- They contain acid that can burn you.
- They contain gas that can explode or ignite.
- They contain enough electricity to burn you.

If you do not follow these steps exactly, some or all of these things can hurt you.

Caution

Ignoring these steps could result in costly damage to the vehicle that would not be covered by the vehicle warranty. Trying to start the vehicle by pushing or pulling it will not work, and it could damage the vehicle.

1.4L L4 Engine (LE2) Shown, 1.6L L4 Diesel Engine (LH7) Similar

1. Discharged Battery Positive Terminal
2. Discharged Battery Negative Grounding Terminal
3. Good Battery Negative Terminal
4. Good Battery Positive Terminal

The jump start remote negative grounding terminal (2) for the discharged battery is on the driver side shock tower.

The jump start positive terminal on the discharged battery (1) is located in the engine compartment on the driver side of the vehicle.

The jump start positive terminal (4) and negative terminal (3) are on the battery of the vehicle providing the jump start.

The positive jump start connection for the discharged battery is under a trim cover. Open the cover to expose the terminal.

1. Check the other vehicle. It must have a 12-volt battery with a negative ground system.

## Caution

If the other vehicle does not have a 12-volt system with a negative ground, both vehicles can be damaged. Only use a vehicle that has a 12-volt system with a negative ground for jump starting.

2. Position the two vehicles so that they are not touching.

3. Set the parking brake firmly and put the shift lever in P (Park) with an automatic transmission, or Neutral with a manual transmission. See Shifting Into Park \( \text{\textit{219}} \) with an automatic transmission, or Parking \( \text{\textit{221}} \) with a manual transmission.

## Caution

If any accessories are left on or plugged in during the jump starting procedure, they could be damaged. The repairs would not be covered by the vehicle warranty. Whenever possible, turn off or unplug all accessories on either vehicle when jump starting.

4. Turn the ignition to off. Turn off all lights and accessories in both vehicles, except the hazard warning flashers if needed.

## Warning

An electric fan can start up even when the engine is not running and can injure you. Keep hands, clothing, and tools away from any underhood electric fan.

## Warning

Using a match near a battery can cause battery gas to explode. People have been hurt doing this,
Warning (Continued)

and some have been blinded. Use a flashlight if you need more light.

Battery fluid contains acid that can burn you. Do not get it on you. If you accidentally get it in your eyes or on your skin, flush the place with water and get medical help immediately.

5. Connect one end of the red positive (+) cable to the positive (+) terminal of the discharged battery.

6. Connect the other end of the red positive (+) cable to the positive (+) terminal of the good battery.

7. Connect one end of the black negative (−) cable to the negative (−) terminal of the good battery.

8. Connect the other end of the black negative (−) cable to the negative (−) grounding terminal for the discharged battery.

9. Start the engine in the vehicle with the good battery and run the engine at idle speed for at least four minutes.

10. Try to start the vehicle that had the dead battery. If it will not start after a few tries, it probably needs service.

Caution (Continued)

vehicle. The repairs would not be covered by the vehicle warranty. Always connect and remove the jumper cables in the correct order, making sure that the cables do not touch each other or other metal.

Jumper Cable Removal

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

Caution

If the jumper cables are connected or removed in the wrong order, electrical shorting may occur and damage the

(Continued)
Towing the Vehicle

**Caution**

Incorrectly towing a disabled vehicle may cause damage. The damage would not be covered by the vehicle warranty.

Do not lash or hook to suspension components. Use the proper straps around the tires to secure the vehicle.

Use only a flatbed tow truck for towing a disabled vehicle. Never use a sling type lift or damage will occur. Use ramps to help reduce approach angles if necessary. A towed vehicle should have its drive wheels off the ground.

Consult a professional towing service if the disabled vehicle must be towed.

---

**Caution**

Improper use of the tow eye can cause vehicle damage. Use caution and low speeds to prevent damage to the vehicle.

If the vehicle is equipped with tow eye, only use the tow eye to pull the vehicle onto a flatbed car carrier from a flat road surface. Do not use the tow eye to pull the vehicle from snow, mud or sand.

---

**Recreational Vehicle Towing**

Recreational vehicle towing refers to towing the vehicle behind another vehicle, such as behind a motor home. The two most common types of recreational vehicle towing are known as dinghy towing and dolly towing. Dinghy towing is towing the vehicle with all four wheels on the ground. Dolly towing is towing the vehicle with two wheels on the ground and two wheels up on a device known as a dolly.

Here are some important things to consider before recreational vehicle towing:

- The towing capacity of the towing vehicle. Be sure to read the tow vehicle manufacturer’s recommendations.
- How far the vehicle will be towed. Some vehicles have restrictions on how far and how long they can tow.
- The proper towing equipment. See your dealer or trailering professional for additional advice and equipment recommendations.
- Whether the vehicle is ready to be towed. Just as preparing the vehicle for a long trip, make sure the vehicle is prepared to be towed.

**Caution**

Use of a shield mounted in front of the vehicle grille could restrict airflow and cause damage to the (Continued)
340 Vehicle Care

<table>
<thead>
<tr>
<th>Caution (Continued)</th>
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<tr>
<td>transmission. The repairs would not be covered by the vehicle warranty. If using a shield, only use one that attaches to the towing vehicle.</td>
</tr>
</tbody>
</table>

Caution

If the vehicle is towed with all four wheels on the ground, the drivetrain components could be damaged. The repairs would not be covered by the vehicle warranty. Do not tow the vehicle with all four wheels on the ground.

Dinghy Towing (with Automatic Transmission)

Vehicles with an automatic transmission should not be towed with all four wheels on the ground. If the vehicle must be towed, a dolly should be used. See "Dolly Towing" later in this section.

Dinghy Towing (with Manual Transmission)

To dinghy tow the vehicle from the front with all four wheels on the ground:

1. Position the vehicle to tow and then secure it to the towing vehicle.
2. Shift the transmission to Neutral.
3. Turn the ignition to ACC/ACCESSORY.

4. To prevent the battery from draining while the vehicle is being towed, remove fuses F15, F23, F26, and F27 from the instrument panel fuse block. See Instrument Panel Fuse Block \(\Rightarrow\) 298.

Remember to reinstall the fuses once the destination has been reached.

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**Caution**

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.

---

**Caution**

Towing the vehicle from the rear could damage it. Also, repairs would not be covered by the vehicle warranty. Never have the vehicle towed from the rear.

---

**Dolly Towing**

To tow the vehicle with the two rear wheels on the ground and the front wheels on a dolly:

1. Put the front wheels on a dolly.
2. Shift an automatic transmission into P (Park) or a manual transmission into 1 (First) gear.
3. Set the parking brake.
4. Clamp the steering wheel in a straight-ahead position with a clamping device designed for towing.
5. Turn the ignition off.
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6. Secure the vehicle to the dolly.
7. Release the parking brake.

Appearance Care

Exterior Care

Locks
Locks are lubricated at the factory. Use a de-icing agent only when absolutely necessary, and have the locks greased after using. See Recommended Fluids and Lubricants \( \rightarrow \) 361.

Washing the Vehicle
To preserve the vehicle's finish, wash it often and out of direct sunlight.

Caution
Towing the vehicle from the rear could damage it. Also, repairs would not be covered by the vehicle warranty. Never have the vehicle towed from the rear.

Caution
Do not use petroleum-based, acidic, or abrasive cleaning agents as they can damage the vehicle's paint, metal, or plastic parts. If damage occurs, it would not be covered by the vehicle warranty. Approved cleaning products can be obtained from your dealer. Follow all manufacturer directions regarding correct product usage, necessary safety precautions, and appropriate disposal of any vehicle care product.

Caution
Avoid using high-pressure 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.

Caution
Do not power wash any component under the hood that has this \( \rightarrow \) symbol.

(Continued)
Caution (Continued)

This could cause damage that would not be covered by the vehicle warranty.

If using an automatic car wash, comply with the car wash instructions. The windshield wiper and rear window wiper, if equipped, must be off. Remove any accessories that may be damaged or interfere with the car wash equipment.

Rinse the vehicle well, before washing and after, to remove all cleaning agents completely. If they are allowed to dry on the surface, they could stain.

Dry the finish with a soft, clean chamois or an all-cotton towel to avoid surface scratches and water spotting.

Finish Care

Application of aftermarket clearcoat sealant/wax materials is not recommended. If painted surfaces are damaged, see your dealer to have the damage assessed and repaired. Foreign materials such as calcium chloride and other salts, ice melting agents, road oil and tar, tree sap, bird droppings, chemicals from industrial chimneys, etc., can damage the vehicle's finish if they remain on painted surfaces. Wash the vehicle as soon as possible. If necessary, use non-abrasive cleaners that are marked safe for painted surfaces to remove foreign matter.

Occasional hand waxing or mild polishing should be done to remove residue from the paint finish. See your dealer for approved cleaning products.

Do not apply waxes or polishes to uncoated plastic, vinyl, rubber, decals, simulated wood, or flat paint as damage can occur.

Caution

Machine compounding or aggressive polishing on a basecoat/clearcoat paint finish may damage it. Use only non-abrasive waxes and polishes that are made for a basecoat/clearcoat paint finish on the vehicle.

To keep the paint finish looking new, keep the vehicle garaged or covered whenever possible.

Protecting Exterior Bright Metal Moldings

Caution

Failure to clean and protect the bright metal moldings can result in a hazy white finish or pitting. This damage would not be covered by the vehicle warranty.
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The bright metal moldings on the vehicle are aluminum, chrome, or stainless steel. To prevent damage always follow these cleaning instructions:

- Be sure the molding is cool to the touch before applying any cleaning solution.
- Use only approved cleaning solutions for aluminum, chrome, or stainless steel. Some cleaners are highly acidic or contain alkaline substances and can damage the moldings.
- Always dilute a concentrated cleaner according to the manufacturer’s instructions.
- Do not use cleaners that are not intended for automotive use.
- Use a non-abrasive wax on the vehicle after washing to protect and extend the molding finish.

Cleaning Exterior Lamps/
Lenses, Emblems, Decals, and Stripes

Use only lukewarm or cold water, a soft cloth, and a car washing soap to clean exterior lamps, lenses, emblems, decals, and stripes. Follow instructions under "Washing the Vehicle" previously in this section.

Lamp covers are made of plastic, and some have a UV protective coating. Do not clean or wipe them while they are dry.

Do not use any of the following on lamp covers:

- Abrasive or caustic agents.
- Washer fluids and other cleaning agents in higher concentrations than suggested by the manufacturer.
- Solvents, alcohols, fuels, or other harsh cleaners.
- Ice scrapers or other hard items.

Aftermarket appearance caps or covers while the lamps are illuminated, due to excessive heat generated.

<table>
<thead>
<tr>
<th>Caution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Failure to clean lamps properly can cause damage to the lamp cover that would not be covered by the vehicle warranty.</td>
</tr>
</tbody>
</table>

Caution

Using wax on low gloss black finish stripes can increase the gloss level and create a non-uniform finish. Clean low gloss stripes with soap and water only.

Air Intakes

Clear debris from the air intakes, between the hood and windshield, when washing the vehicle.
Windshield and Wiper Blades
Clean the outside of the windshield with glass cleaner.
Clean rubber blades using lint-free cloth or paper towel soaked with windshield washer fluid or a mild detergent. Wash the windshield thoroughly when cleaning the blades. Bugs, road grime, sap, and a buildup of vehicle wash/wax treatments may cause wiper streaking.
Replace the wiper blades if they are worn or damaged. Damage can be caused by extreme dusty conditions, sand, salt, heat, sun, snow and ice.
Clear ice and snow from the wiper blades before using them. If frozen to the windshield, carefully loosen them or thaw them. Damaged wiper blades should be replaced. See Wiper Blade Replacement 288.
Heavy snow or ice can overload the wipers. If the wiper motor overheats, the windshield wipers will stop until the motor cools and the wiper control is turned off. See Electrical System Overload 293.

Weatherstrips
Apply Dielectric silicone grease on weatherstrips to make them last longer, seal better, and not stick or squeak. Lubricate weatherstrips at least once a year. Hot, dry climates may require more frequent application. Black marks from rubber material on painted surfaces can be removed by rubbing with a clean cloth. See Recommended Fluids and Lubricants 361.

Tires
Use a stiff brush with tire cleaner to clean the tires.

Caution
Using petroleum-based tire dressing products on the vehicle may damage the paint finish and/or tires. When applying a tire dressing, always wipe off any overspray from all painted surfaces on the vehicle.

Wheels and Trim — Aluminum or Chrome
Use a soft, clean cloth with mild soap and water to clean the wheels. After rinsing thoroughly with clean water, dry with a soft, clean towel. A wax may then be applied.

Caution
Chrome wheels and other chrome trim may be damaged if the vehicle is not washed after driving on roads that have been sprayed with magnesium, calcium, or sodium chloride. These chlorides are used on roads for conditions such as ice and dust. Always wash the chrome with soap and water after exposure.
# Vehicle Care

## Caution

- **To avoid surface damage, do not use strong soaps, chemicals, abrasive polishes, cleaners, brushes, or cleaners that contain acid on aluminum or chrome-plated wheels. Use only approved cleaners. Also, never drive a vehicle with aluminum or chrome-plated wheels through an automatic car wash that uses silicone carbide tire cleaning brushes. Damage could occur and the repairs would not be covered by the vehicle warranty.**

## Brake System

Visually inspect brake lines and hoses for proper hook-up, binding, leaks, cracks, chafing, etc. Inspect disc brake pads for wear and rotors for surface condition. Inspect drum brake linings/shoes for wear or cracks. Inspect all other brake parts.

## Steering, Suspension, and Chassis Components

Visually inspect steering, suspension, and chassis components for damaged, loose, or missing parts or signs of wear at least once a year.

Inspect power steering for proper attachment, connections, binding, leaks, cracks, chafing, etc.

Visually check constant velocity joint boots and axle seals for leaks.

## Body Component Lubrication

Lubricate all key lock cylinders, hood hinges, liftgate hinges, steel fuel door hinge and power assist step hinges, unless the components are plastic. Applying silicone grease on weatherstrips with a clean cloth will make them last longer, seal better, and not stick or squeak.

## Underbody Maintenance

At least twice a year, spring and fall, use plain water to flush any corrosive materials from the underbody. Take care to thoroughly clean any areas where mud and other debris can collect.

Do not directly power wash the transfer case and/or front/rear axle output seals. High pressure water can overcome the seals and contaminate the fluid. Contaminated fluid will decrease the life of the transfer case and/or axles and should be replaced.

## Sheet Metal Damage

If the vehicle is damaged and requires sheet metal repair or replacement, make sure the body repair shop applies anti-corrosion material to parts repaired or replaced to restore corrosion protection.

Original manufacturer replacement parts will provide the corrosion protection while maintaining the vehicle warranty.

## Finish Damage

Quickly repair minor chips and scratches with touch-up materials available from your dealer to avoid
corrosion. Larger areas of finish damage can be corrected in your dealer's body and paint shop.

**Chemical Paint Spotting**

Airborne pollutants can fall upon and attack painted vehicle surfaces causing blotchy, ring-shaped discolorations, and small, irregular dark spots etched into the paint surface. See “Finish Care” previously in this section.

**Interior Care**

To prevent dirt particle abrasions, regularly clean the vehicle's interior. Immediately remove any soils. Newspapers or dark garments can transfer color to the vehicle’s interior.

Use a soft bristle brush to remove dust from knobs and crevices on the instrument cluster. Using a mild soap solution, immediately remove hand lotions, sunscreen, and insect repellent from all interior surfaces or permanent damage may result.

Use cleaners specifically designed for the surfaces being cleaned to prevent permanent damage. Apply all cleaners directly to the cleaning cloth. Do not spray cleaners on any switches or controls. Remove cleaners quickly.

Before using cleaners, read and follow all safety instructions on the label. While cleaning the interior, open the doors and windows to get proper ventilation.

To prevent damage, do not clean the interior using the following cleaners or techniques:

- Never use a razor or any other sharp object to remove soil from any interior surface.
- Never use a brush with stiff bristles.
- Never rub any surface aggressively or with too much pressure.
- Do not use laundry detergents or dishwashing soaps with degreasers. For liquid cleaners, use approximately 20 drops per 3.8 L (1 gal) of water.

A concentrated soap solution will create streaks and attract dirt. Do not use solutions that contain strong or caustic soap.

- Do not heavily saturate the upholstery when cleaning.
- Do not use solvents or cleaners containing solvents.

**Interior Glass**

To clean, use a terry cloth fabric dampened with water. Wipe droplets left behind with a clean dry cloth. If necessary, use a commercial glass cleaner after cleaning with plain water.

<table>
<thead>
<tr>
<th>Caution</th>
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<tbody>
<tr>
<td>To prevent scratching, never use abrasive cleaners on automotive glass. Abrasive cleaners or aggressive cleaning may damage the rear window defogger.</td>
</tr>
</tbody>
</table>

Cleaning the windshield with water during the first three to six months of ownership will reduce tendency to fog.
348 Vehicle Care

Speaker Covers
Vacuum around a speaker cover gently, so that the speaker will not be damaged. Clean spots with water and mild soap.

Coated Moldings
Coated moldings should be cleaned.
- When lightly soiled, wipe with a sponge or soft, lint-free cloth dampened with water.
- When heavily soiled, use warm soapy water.

Fabric/Carpet/Suede
Start by vacuuming the surface using a soft brush attachment. If a rotating vacuum brush attachment is being used, only use it on the floor carpet. Before cleaning, gently remove as much of the soil as possible:
- Gently blot liquids with a paper towel. Continue blotting until no more soil can be removed.
- For solid soils, remove as much as possible prior to vacuuming.
To clean:
1. Saturate a clean, lint-free colorfast cloth with water. Microfiber cloth is recommended to prevent lint transfer to the fabric or carpet.
2. Remove excess moisture by gently wringing until water does not drip from the cleaning cloth.
3. Start on the outside edge of the soil and gently rub toward the center. Fold the cleaning cloth to a clean area frequently to prevent forcing the soil in to the fabric.
4. Continue gently rubbing the soiled area until there is no longer any color transfer from the soil to the cleaning cloth.
5. If the soil is not completely removed, use a mild soap solution followed only by plain water.
If the soil is not completely removed, it may be necessary to use a commercial upholstery cleaner or spot lifter. Test a small hidden area for colorfastness before using a commercial upholstery cleaner or spot lifter. If ring formation occurs, clean the entire fabric or carpet.
After cleaning, use a paper towel to blot excess moisture.

Cleaning High Gloss Surfaces and Vehicle Information and Radio Displays
Use a microfiber cloth on high gloss surfaces or vehicle displays. First, use a soft bristle brush to remove dirt that can scratch the surface. Then gently clean by rubbing with a microfiber cloth. Never use window cleaners or solvents. Periodically hand wash the microfiber cloth separately, using mild soap. Do not use bleach or fabric softener. Rinse thoroughly and air dry before next use.
**Caution**

Do not attach a device with a suction cup to the display. This may cause damage and would not be covered by the vehicle warranty.

**Instrument Panel, Leather, Vinyl, Other Plastic Surfaces, Low Gloss Paint Surfaces, and Natural Open Pore Wood Surfaces**

Use a soft microfiber cloth dampened with water to remove dust and loose dirt. For a more thorough cleaning, use a soft microfiber cloth dampened with a mild soap solution.

**Caution (Continued)**

Wipe excess moisture from these surfaces after cleaning and allow them to dry naturally. Never use heat, steam, or spot removers. Do not use cleaners that contain silicone or wax-based products. Cleaners containing these solvents can permanently change the appearance and feel of leather or soft trim, and are not recommended.

**Caution**

Soaking or saturating leather, especially perforated leather, as well as other interior surfaces, may cause permanent damage.

(Continued)

**Caution**

Use of air fresheners may cause permanent damage to plastics and painted surfaces. If an air freshener comes in contact with any plastic or painted surface in

(Continued)

**Caution (Continued)**

the vehicle, blot immediately and clean with a soft cloth dampened with a mild soap solution. Damage caused by air fresheners would not be covered by the vehicle warranty.

**Cargo Cover and Convenience Net**

Wash with warm water and mild detergent. Do not use chlorine bleach. Rinse with cold water, and then dry completely.

**Care of Safety Belts**

Keep belts clean and dry.

**Warning**

Do not bleach or dye safety belt webbing. It may severely weaken the webbing. In a crash, they might not be able to provide adequate protection. Clean and
Vehicle Care

Warning (Continued)

rinse safety belt webbing only with mild soap and lukewarm water. Allow the webbing to dry.

Floor Mats


Warning

If a floor mat is the wrong size or is not properly installed, it can interfere with the pedals. Interference with the pedals can cause unintended acceleration and/or increased stopping distance which can cause a crash and injury. Make sure the floor mat does not interfere with the pedals.

Use the following guidelines for proper floor mat usage:

- The original equipment floor mats were designed for your vehicle. If the floor mats need replacing, it is recommended that GM certified floor mats be purchased. Non-GM floor mats may not fit properly and may interfere with the pedals. Always check that the floor mats do not interfere with the pedals.
- Do not use a floor mat if the vehicle is not equipped with a floor mat retainer on the driver side floor.
- Use the floor mat with the correct side up. Do not turn it over.
- Do not place anything on top of the driver side floor mat.
- Use only a single floor mat on the driver side.
- Do not place one floor mat on top of another.

Removing and Replacing the Driver and Front Passenger Floor Mats

If equipped, pull up on the rear of the floor mat to unlock each retainer and remove.

Reinstall by lining up the floor mat retainer openings over the carpet retainers and snapping into position. Make sure the floor mat is properly secured in place. Verify the floor mat does not interfere with the pedals.
Service and Maintenance

General Information
Your vehicle is an important investment. This section describes the required maintenance for the vehicle. Follow this schedule to help protect against major repair expenses resulting from neglect or inadequate maintenance. It may also help to maintain the value of the vehicle if it is sold. It is the responsibility of the owner to have all required maintenance performed.

Your dealer has trained technicians who can perform required maintenance using genuine replacement parts. They have up-to-date tools and equipment for fast and accurate diagnostics. Many dealers have extended evening and Saturday hours, courtesy transportation, and online scheduling to assist with service needs.

The Tire Rotation and Required Services are the responsibility of the vehicle owner. It is recommended to have your dealer perform these services every 12,000 km/7,500 mi. Proper vehicle maintenance helps to keep the vehicle in good working condition, improves fuel economy, and reduces vehicle emissions.

Because of the way people use vehicles, maintenance needs vary. There may need to be more changes and tire rotations and additional maintenance items like tires, brakes, batteries, and wiper blades.

Caution
Damage caused by improper maintenance can lead to costly repairs and may not be covered by the vehicle warranty. Maintenance intervals, checks, inspections, recommended fluids, and lubricants are important to keep the vehicle in good working condition.
Service and Maintenance

frequent checks and services. The Additional Required Services - Normal are for vehicles that:

- Carry passengers and cargo within recommended limits on the Tire and Loading Information label. See Vehicle Load Limits 206.
- Are driven on reasonable road surfaces within legal driving limits.
- Use the recommended fuel. See Fuel (Gasoline) 249 or see Fuel for Diesel Engines 250.

Refer to the information in the Maintenance Schedule Additional Required Services - Normal chart.

The Additional Required Services - Severe are for vehicles that are:

- Mainly driven in heavy city traffic in hot weather.
- Mainly driven in hilly or mountainous terrain.
- Frequently towing a trailer.
- Used for high speed or competitive driving.

- Used for taxi, police, or delivery service.

Refer to the information in the Maintenance Schedule Additional Required Services - Severe chart.

⚠️ Warning
Performing maintenance work can be dangerous and can cause serious injury. Perform maintenance work only if the required information, proper tools, and equipment are available. If they are not, see your dealer to have a trained technician do the work. See Doing Your Own Service Work 265.

Maintenance Schedule

Owner Checks and Services

At Each Fuel Stop
- Check the engine oil level. See Engine Oil 270.

Once a Month
- Check the tire inflation pressures. See Tire Pressure 308.
- Inspect the tires for wear. See Tire Inspection 314.
- Check the windshield washer fluid level. See Washer Fluid 282.
Once a Year (Minimum)

- On vehicles with diesel engines, it is recommended to drain the diesel fuel filter of water when the WATER IN FUEL - CONTACT SERVICE message displays or a minimum of once a year.

Engine Oil Change

When the CHANGE ENGINE OIL SOON DIC message displays, have the engine oil and filter changed within the next 1,000 km/600 mi. If driven under the best conditions, the engine oil life system may not indicate the need for vehicle service for up to a year. The engine oil and filter must be changed at least once a year and the oil life system must be reset. Your trained dealer technician can perform this work. If the engine oil life system is reset accidentally, service the vehicle within 5,000 km/3,000 mi since the last service. Reset the oil life system when the oil is changed. See Engine Oil Life System  273.

Tire Rotation and Required Services Every 12,000 km/7,500 mi

- Rotate the tires, if recommended for the vehicle, and perform the following services. See Tire Rotation  314.

- Check engine oil level and oil life percentage. If needed, change engine oil and filter, and reset oil life system. See Engine Oil  270 and Engine Oil Life System  273.

- Check engine coolant level. See Engine Coolant  278.

- Check windshield washer fluid level. See Washer Fluid  282.

- Visually inspect windshield wiper blades for wear, cracking, or contamination. See Exterior Care  342. Replace worn or damaged wiper blades. See Wiper Blade Replacement  288.

- Check tire inflation pressures. See Tire Pressure  308.

- Inspect tire wear. See Tire Inspection  314.

- Visually check for fluid leaks.

- Inspect engine air cleaner filter. See Engine Air Cleaner/Filter  276.

- Inspect brake system. See Exterior Care  342.

- Visually inspect steering, suspension, and chassis components for damaged, loose, or missing parts or signs of wear. See Exterior Care  342.

- Check restraint system components. See Safety System Check  72.

- Visually inspect fuel system for damage or leaks.

- Visually inspect exhaust system and nearby heat shields for loose or damaged parts.
354   Service and Maintenance

- Lubricate body components. See *Exterior Care* 342.
- Check starter switch. See *Starter Switch Check* 286.
- Check automatic transmission shift lock control function. See *Automatic Transmission Shift Lock Control Function Check* 287.
- Check ignition transmission lock. See *Ignition Transmission Lock Check* 287.

- Check parking brake and automatic transmission park mechanism. See *Park Brake and P (Park) Mechanism Check* 287.
- Check accelerator pedal for damage, high effort, or binding. Replace if needed.
- Visually inspect gas strut for signs of wear, cracks, or other damage. Check the hold open ability of the strut. See your dealer if service is required.

- Check tire sealant expiration date, if equipped. See *Tire Sealant and Compressor Kit* 322.
- Inspect sunroof track and seal, if equipped. See *Sunroof* 57.
# Maintenance Schedule

## Additional Required Services - Normal

<table>
<thead>
<tr>
<th>Mileage</th>
<th>Service Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>12,000 km</td>
<td>Rotate tires and perform Required Services. Check engine oil level and oil life percentage. Change engine oil and filter, if needed.</td>
</tr>
<tr>
<td>24,000 km</td>
<td>Replace passenger compartment air filter. (1)</td>
</tr>
<tr>
<td>36,000 km</td>
<td>Inspect evaporative control system. (2)</td>
</tr>
<tr>
<td>48,000 km</td>
<td>Diesel Engine Only: Replace fuel filter. (3)</td>
</tr>
<tr>
<td>60,000 km</td>
<td>Replace engine air cleaner filter. (4)</td>
</tr>
<tr>
<td>72,000 km</td>
<td>Replace spark plugs. Inspect ignition coil boots.</td>
</tr>
<tr>
<td>84,000 km</td>
<td>Drain and fill engine cooling system. (5)</td>
</tr>
<tr>
<td>96,000 km</td>
<td>Visually inspect accessory drive belts. (6)</td>
</tr>
<tr>
<td>108,000 km</td>
<td>Replace brake fluid. (7)</td>
</tr>
<tr>
<td>120,000 km</td>
<td>Replace brake/clutch fluid. If equipped with manual transmission. (7)</td>
</tr>
</tbody>
</table>
356  Service and Maintenance

Footnotes — Maintenance Schedule Additional Required Services - Normal

(1) Or every two years, whichever comes first. More frequent passenger compartment air filter replacement may be needed if driving in areas with heavy traffic, poor air quality, high dust levels, or environmental allergens. Passenger compartment air filter replacement may also be needed if there is reduced airflow, window fogging, or odors. Your GM dealer can help determine when to replace the filter.

(2) Visually check all fuel and vapor lines and hoses for proper attachment, connection, routing, and condition.

(3) Or every two years, whichever comes first. The diesel fuel filter cartridge may need to be replaced more frequently, based on biodiesel usage, driving in severe dust climate or off-road driving or towing a trailer for extended periods.

(4) Or every four years, whichever comes first.

(5) Or every five years, whichever comes first. See Cooling System 277.

(6) Or every 10 years, whichever comes first. Inspect for fraying, excessive cracking, or damage; replace, if needed.

(7) Replace brake fluid every five years. See Brake Fluid 284.
## Maintenance Schedule Additional Required Services - Severe

<table>
<thead>
<tr>
<th>Service</th>
<th>12,000 km/7,500 mi</th>
<th>24,000 km/15,000 mi</th>
<th>36,000 km/22,500 mi</th>
<th>48,000 km/30,000 mi</th>
<th>60,000 km/37,500 mi</th>
<th>72,000 km/45,000 mi</th>
<th>84,000 km/52,500 mi</th>
<th>96,000 km/60,000 mi</th>
<th>108,000 km/67,500 mi</th>
<th>120,000 km/75,000 mi</th>
<th>132,000 km/82,500 mi</th>
<th>144,000 km/90,000 mi</th>
<th>156,000 km/97,500 mi</th>
<th>168,000 km/105,000 mi</th>
<th>180,000 km/112,500 mi</th>
<th>192,000 km/120,000 mi</th>
<th>204,000 km/127,500 mi</th>
<th>216,000 km/135,000 mi</th>
<th>228,000 km/142,500 mi</th>
<th>240,000 km/150,000 mi</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rotate tires and perform Required Services. Check engine oil level and oil life percentage. Change engine oil and filter, if needed.</td>
<td>✓</td>
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<tr>
<td>Replace passenger compartment air filter. (1)</td>
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<tr>
<td>Inspect evaporative control system. (2)</td>
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<tr>
<td>Diesel Engine Only: Replace fuel filter. (3)</td>
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<tr>
<td>Replace engine air cleaner filter. (4)</td>
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<td>Change automatic transmission fluid.</td>
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<td>Change manual transmission fluid.</td>
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<tr>
<td>Replace spark plugs. Inspect ignition coil boots.</td>
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<tr>
<td>Drain and fill engine cooling system. (5)</td>
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<tr>
<td>Visually inspect accessory drive belts. (6)</td>
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<tr>
<td>Replace brake fluid. (7)</td>
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<tr>
<td>Replace brake/clutch fluid. If equipped with manual transmission. (7)</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

### Footnotes — Maintenance Schedule Additional Required Services - Severe

1. Or every two years, whichever comes first. More frequent passenger compartment air filter replacement may be needed if driving in areas with heavy traffic, poor air quality, high dust levels, or environmental allergens. Passenger compartment air filter replacement may also be needed if there is reduced airflow, window fogging, or odors. Your GM dealer can help determine when to replace the filter.
358 Service and Maintenance

(2) Visually check all fuel and vapor lines and hoses for proper attachment, connection, routing, and condition.

(3) Or every two years, whichever comes first. The diesel fuel filter cartridge may need to be replaced more frequently, based on biodiesel usage, driving in severe dust climate or off-road driving or towing a trailer for extended periods.

(4) Or every four years, whichever comes first.

(5) Or every five years, whichever comes first. See Cooling System  277.

(6) Or every 10 years, whichever comes first. Inspect for fraying, excessive cracking, or damage; replace, if needed.

(7) Replace brake fluid every five years. See Brake Fluid  284.

Special Application Services

- Severe Commercial Use Vehicles Only: Lubricate chassis components every oil change.
- Have underbody flushing service performed. See "Underbody Maintenance" in Exterior Care  342.

Additional Maintenance and Care

Your vehicle is an important investment and caring for it properly may help to avoid future costly repairs. To maintain vehicle performance, additional maintenance services may be required.

It is recommended that your dealer perform these services — their trained dealer technicians know your vehicle best. Your dealer can also perform a thorough assessment with a multi-point inspection to recommend when your vehicle may need attention.
The following list is intended to explain the services and conditions to look for that may indicate services are required.

### Battery
The battery supplies power to start the engine and operate any additional electrical accessories.
- To avoid break-down or failure to start the vehicle, maintain a battery with full cranking power.
- Trained dealer technicians have the diagnostic equipment to test the battery and ensure that the connections and cables are corrosion-free.

### Belts
- Belts may need replacing if they squeak or show signs of cracking or splitting.
- Trained dealer technicians have access to tools and equipment to inspect the belts and recommend adjustment or replacement when necessary.

### Brakes
Brakes stop the vehicle and are crucial to safe driving.
- Signs of brake wear may include chirping, grinding, or squealing noises, or difficulty stopping.
- Trained dealer technicians have access to tools and equipment to inspect the brakes and recommend quality parts engineered for the vehicle.

### Fluids
Proper fluid levels and approved fluids protect the vehicle’s systems and components. See Recommended Fluids and Lubricants ◊ 361 for GM approved fluids.
- Engine oil and windshield washer fluid levels should be checked at every fuel fill.

### Hoses
Hoses transport fluids and should be regularly inspected to ensure that there are no cracks or leaks. With a multi-point inspection, your dealer can inspect the hoses and advise if replacement is needed.

### Lamps
Properly working headlamps, taillamps, and brake lamps are important to see and be seen on the road.
- Signs that the headlamps need attention include dimming, failure to light, cracking, or damage.
- The brake lamps need to be checked periodically to ensure that they light when braking.
- With a multi-point inspection, your dealer can check the lamps and note any concerns.
**360 Service and Maintenance**

**Shocks and Struts**
Shocks and struts help aid in control for a smoother ride.

- Signs of wear may include steering wheel vibration, bounce/sway while braking, longer stopping distance, or uneven tire wear.
- As part of the multi-point inspection, trained dealer technicians can visually inspect the shocks and struts for signs of leaking, blown seals, or damage, and can advise when service is needed.

**Tires**
Tires need to be properly inflated, rotated, and balanced. Maintaining the tires can save money and fuel, and can reduce the risk of tire failure.

- Signs that the tires need to be replaced include three or more visible treadwear indicators; cord or fabric showing through the rubber; cracks or cuts in the tread or sidewall; or a bulge or split in the tire.

**Vehicle Care**
To help keep the vehicle looking like new, vehicle care products are available from your dealer. For information on how to clean and protect the vehicle’s interior and exterior, see Interior Care 347 and Exterior Care 342.

**Wheel Alignment**
Wheel alignment is critical for ensuring that the tires deliver optimal wear and performance.

- Signs that the alignment may need to be adjusted include pulling, improper vehicle handling, or unusual tire wear.
- Your dealer has the required equipment to ensure proper wheel alignment.

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

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

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

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

#### Recommended Fluids and Lubricants

<table>
<thead>
<tr>
<th>Usage</th>
<th>Fluid/Lubricant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engine Oil (Gasoline)</td>
<td>Engine oil meeting the dexos1™ specification of the proper SAE viscosity grade. ACDelco dexos1 Synthetic Blend is recommended. See Engine Oil 270.</td>
</tr>
<tr>
<td>Engine Oil (Diesel)</td>
<td>Engine oil meeting the dexos2™ specification of the proper SAE viscosity grade. ACDelco dexos2 Synthetic Blend is recommended. See Engine Oil 270.</td>
</tr>
<tr>
<td>Engine Coolant</td>
<td>50/50 mixture of clean, drinkable water and use only DEX-COOL® Coolant. See Engine Coolant 278.</td>
</tr>
<tr>
<td>Hydraulic Brake/Clutch System</td>
<td>DOT 3 Hydraulic Brake Fluid (GM Part No. 19299818, in Canada 19299819).</td>
</tr>
<tr>
<td>Windshield Washer</td>
<td>Automotive windshield washer fluid that meets regional freeze protection requirements.</td>
</tr>
<tr>
<td>Diesel Exhaust Aftertreatment System</td>
<td>Diesel Exhaust Fluid (GM Part No. 19286291, in Canada 88862660) or diesel exhaust fluid that meets ISO 22241-1 or displays the API Diesel Exhaust Fluid Certification Mark.</td>
</tr>
<tr>
<td>Automatic Transmission</td>
<td>DEXRON®-VI Automatic Transmission Fluid.</td>
</tr>
</tbody>
</table>
## 362 Service and Maintenance

### Usage Fluid/Lubricant

<table>
<thead>
<tr>
<th>Usage</th>
<th>Fluid/Lubricant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hood Latch Assembly, Secondary Latch, Pivots, Spring Anchor, and Release Pawl</td>
<td>Lubriplate Lubricant Aerosol (GM Part No. 89021668, in Canada 89021674) or lubricant meeting requirements of NLGI #2, Category LB or GC-LB.</td>
</tr>
<tr>
<td>Key Lock Cylinders, Hood and Door Hinges</td>
<td>Multi-Purpose Lubricant, Superlube (GM Part No. 12346241, in Canada 10953474).</td>
</tr>
<tr>
<td>Weatherstrip Conditioning</td>
<td>Weatherstrip Lubricant (GM Part No. 3634770, in Canada 10953518) or Dielectric Silicone Grease (GM Part No. 12345579, in Canada 10953481).</td>
</tr>
</tbody>
</table>

### Maintenance Replacement Parts

Replacement parts identified here by name, part number, or specification can be obtained from your dealer.

<table>
<thead>
<tr>
<th>Part</th>
<th>GM Part Number</th>
<th>ACDelco Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engine Air Cleaner/Filter</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.4L L4 Gas Engine (LE2)</td>
<td>13367308</td>
<td>A3202C</td>
</tr>
<tr>
<td>1.6L L4 Diesel Engine (LH7)</td>
<td>39030321</td>
<td>A3220C</td>
</tr>
<tr>
<td>Engine Oil Filter</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.4L L4 Gas Engine (LE2)</td>
<td>12674698</td>
<td>UPF64R</td>
</tr>
<tr>
<td>1.6L L4 Diesel Engine (LH7)</td>
<td>55588497</td>
<td>PF2264G</td>
</tr>
</tbody>
</table>
## Service and Maintenance

<table>
<thead>
<tr>
<th>Part</th>
<th>GM Part Number</th>
<th>ACDelco Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fuel Filter</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.6L L4 Diesel Engine (LH7)</td>
<td>23456595</td>
<td>TP1003</td>
</tr>
<tr>
<td>Passenger Compartment Air Filter</td>
<td>13356916</td>
<td>CF185</td>
</tr>
<tr>
<td>Spark Plugs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.4L L4 Gas Engine (LE2)</td>
<td>12673527</td>
<td>41-153</td>
</tr>
<tr>
<td>Wiper Blades</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Driver – 70 cm (27.6 in)</td>
<td>13466310</td>
<td>—</td>
</tr>
<tr>
<td>Passenger – 60 cm (23.6 in)</td>
<td>13466311</td>
<td>—</td>
</tr>
</tbody>
</table>
### Service and Maintenance

#### Maintenance Records

After the scheduled services are performed, record the date, odometer reading, who performed the service, and the type of services performed in the boxes provided. Retain all maintenance receipts.

<table>
<thead>
<tr>
<th>Date</th>
<th>Odometer Reading</th>
<th>Serviced By</th>
<th>Services Performed</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>
Technical Data

Vehicle Identification

Vehicle Identification Number (VIN) .................. 365
Service Parts Identification
Label ....................... 365

Vehicle Data

Capacities and Specifications .................. 366
Engine Drive Belt Routing .... 368

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 Vehicle Identification Number (VIN) also appears on the Vehicle Certification and Service Parts labels and certificates of title and registration.

Engine Identification

The eighth character in the VIN is the engine code. This code identifies the vehicle's engine, specifications, and replacement parts. See "Engine Specifications" under Capacities and Specifications 366 for the vehicle's engine code.

Service Parts Identification Label

This label, located inside the trunk area, has the following information:

- Vehicle Identification Number (VIN).
- Model designation.
- Paint information.
- Production options and special equipment.

Do not remove this label from the vehicle.
## Vehicle Data

### Capacities and Specifications

The following approximate capacities are given in English and metric conversions. See *Recommended Fluids and Lubricants* 361.

<table>
<thead>
<tr>
<th>Application</th>
<th>Capacities</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Metric</td>
</tr>
<tr>
<td>Air Conditioning Refrigerant</td>
<td>For the air conditioning system refrigerant type and charge amount, see the refrigerant label under the hood. See your dealer for more information.</td>
</tr>
<tr>
<td>Cooling System</td>
<td></td>
</tr>
<tr>
<td>1.4L L4 Gas Engine (LE2)</td>
<td>5.9 L</td>
</tr>
<tr>
<td>1.6L L4 Diesel Engine (LH7)</td>
<td>4.5 L</td>
</tr>
<tr>
<td>Engine Oil with Filter</td>
<td></td>
</tr>
<tr>
<td>1.4L L4 Gas Engine (LE2)</td>
<td>4.0 L</td>
</tr>
<tr>
<td>1.6L L4 Diesel Engine (LH7)</td>
<td>5.0 L</td>
</tr>
<tr>
<td>Fuel Tank</td>
<td></td>
</tr>
<tr>
<td>Base Diesel</td>
<td>51.3 L</td>
</tr>
<tr>
<td>Base Gasoline</td>
<td>51.7 L</td>
</tr>
<tr>
<td>LS Trim with Automatic Transmission</td>
<td>45.6 L</td>
</tr>
<tr>
<td>DEF Tank (LH7 Only)</td>
<td>14.3 L</td>
</tr>
</tbody>
</table>
Wheel Nut Torque

<table>
<thead>
<tr>
<th>Application</th>
<th>Metric</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wheel Nut Torque</td>
<td>140 N•m</td>
<td>100 lb ft</td>
</tr>
</tbody>
</table>

All capacities are approximate. When adding, be sure to fill to the approximate level, as recommended in this manual.

### Engine Specifications

<table>
<thead>
<tr>
<th>Engine</th>
<th>VIN Code</th>
<th>Transmission</th>
<th>Spark Plug Gap</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.4L L4 Gas Engine (LE2)</td>
<td>M</td>
<td>Automatic Manual</td>
<td>0.60 – 0.70 mm (0.024 – 0.028 in)</td>
</tr>
<tr>
<td>1.6L L4 Diesel Engine (LH7)</td>
<td>E</td>
<td>Automatic Manual</td>
<td>—</td>
</tr>
</tbody>
</table>

Spark plug gap is for replacement spark plugs.
Technical Data

Engine Drive Belt Routing

1.4L L4 Engine

1.6L L4 Diesel Engine
Customer Information

Customer Satisfaction Procedure
Your satisfaction and goodwill are important to your dealer and to Chevrolet. Normally, any concerns with the sales transaction or the operation of the vehicle will be resolved by your dealer’s sales or service departments. Sometimes, however, despite the best intentions of all concerned, misunderstandings can occur. If your concern has not been resolved to your satisfaction, the following steps should be taken:

STEP ONE: Discuss your concern with a member of dealership management. Normally, concerns can be quickly resolved at that level. If the matter has already been reviewed with the sales, service, or parts manager, contact the owner of your dealership or the general manager.

Reporting Safety Defects
Reporting Safety Defects to the United States Government ............... 380
Reporting Safety Defects to the Canadian Government ............... 380
Reporting Safety Defects to General Motors ............... 381

Vehicle Data Recording and Privacy
Vehicle Data Recording and Privacy ......................... 381
Event Data Recorders ............... 381
Infotainment System ............... 382
**STEP TWO :** If after contacting a member of dealership management, it appears your concern cannot be resolved by your dealership without further help, in the U.S., call the Chevrolet Customer Assistance Center at 1-800-222-1020. In Canada, call General Motors of Canada Customer Care Centre at 1-800-263-3777 (English), or 1-800-263-7854 (French). We encourage you to call the toll-free number in order to give your inquiry prompt attention. Have the following information available to give the Customer Assistance representative:

- Vehicle Identification Number (VIN). This is available from the vehicle registration or title, or the plate at the top left of the instrument panel and visible through the windshield.
- Dealership name and location.
- Vehicle delivery date and present mileage.

When contacting Chevrolet, remember that your concern will likely be resolved at a dealer's facility. That is why we suggest following Step One first.

**STEP THREE — U.S. Owners :** Both General Motors and your dealer are committed to making sure you are completely satisfied with your 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.
3033 Wilson Boulevard
Suite 600
Arlington, VA 22201
Telephone: 1-800-955-5100
http://www.bbb.org/council/programs-services/dispute-handling-and-resolution/bbb-auto-line

This program is available in all 50 states and the District of Columbia. Eligibility is limited by vehicle age, mileage, and other factors. General Motors reserves the right to change eligibility limitations and/or discontinue its participation in this program.
STEP THREE — Canadian Owners: In the event that you do not feel your concerns have been addressed after following the procedure outlined in Steps One and Two, General Motors of Canada Company wants you to be aware of its participation in a no-charge Mediation/Arbitration Program. General Motors of Canada Company has committed to binding arbitration of owner disputes involving factory-related vehicle service claims. The program provides for the review of the facts involved by an impartial third party arbiter, and may include an informal hearing before the arbiter. The program is designed so that the entire dispute settlement process, from the time you file your complaint to the final decision, should be completed in about 70 days. We believe our impartial program offers advantages over courts in most jurisdictions because it is informal, quick, and free of charge.

For further information concerning eligibility in the Canadian Motor Vehicle Arbitration Plan (CAMVAP), call toll-free 1-800-207-0685, or call the General Motors Customer Care Centre, 1-800-263-3777 (English), 1-800-263-7854 (French), or write to:
The Mediation/Arbitration Program
c/o Customer Care Centre
General Motors of Canada Company
Mail Code: CA1-163-005
1908 Colonel Sam Drive
Oshawa, Ontario L1H 8P7
Your inquiry should be accompanied by the Vehicle Identification Number (VIN).

Customer Assistance Offices
Chevrolet encourages customers to call the toll-free number for assistance. However, if a customer wishes to write or e-mail Chevrolet, the letter should be addressed to:

United States and Puerto Rico
Chevrolet Motor Division
Chevrolet Customer Assistance Center
P.O. Box 33170
Detroit, MI 48232-5170
www.Chevrolet.com
1-800-222-1020
1-800-833-2438 (For Text Telephone Devices (TTYs))
Roadside Assistance:
1-800-243-8872
From U.S. Virgin Islands:
1-800-496-9994
372 Customer Information

Canada
General Motors of Canada Company
Customer Care Centre,
Mail Code: CA1-163-005
1908 Colonel Sam Drive
Oshawa, Ontario L1H 8P7
www.gm.ca
1-800-263-3777 (English)
1-800-263-7854 (French)
1-800-263-3830 (For Text Telephone devices (TTYs))
Roadside Assistance:
1-800-268-6800

Overseas
Please contact the local General Motors Business Unit.

Customer Assistance for Text Telephone (TTY) Users
To assist customers who are deaf, hard of hearing, or speech-impaired and who use Text Telephones (TTYs), Chevrolet has TTY equipment available at its Customer Assistance Center. Any TTY user in the U.S. can communicate with Chevrolet by dialing: 1-800-833-2438. TTY users in Canada can dial 1-800-263-3830.

Online Owner Center
Online Owner Experience (U.S.) my.chevrolet.com
The Chevrolet online owner experience allows interaction with Chevrolet and keeps important vehicle-specific information in one place.

Membership Benefits
黾 : Download owner manuals and view vehicle-specific how-to videos.
 kInstruction : View maintenance schedules, alerts, and OnStar Vehicle Diagnostic Information. Schedule service appointments.
黾 : View and print dealer-recorded service records and self-recorded service records.
黾 : Select a preferred dealer and view locations, maps, phone numbers, and hours.

 hurd : Track your vehicle’s warranty information.
 hurd : View active recalls by Vehicle Identification Number (VIN). See Vehicle Identification Number (VIN) 365.
 hurd : View GM Card, SiriusXM Satellite radio (if equipped), and OnStar account information (if equipped).
�� : Chat with online help representatives.

See my.chevrolet.com to register your vehicle.

Chevrolet Owner Centre (Canada) chevroletowner.ca
Visit the Chevrolet Owner Centre:
• Chat live with online help representatives.
• Locate owner resources such as lease-end, financing, and warranty information.
Customer Information

- Retrieve your favorite articles, quizzes, tips, and multimedia galleries organized into the Featured Articles and Auto Care Sections.
- Download owner manuals.
- Find the Chevrolet-recommended maintenance services.

GM Mobility Reimbursement Program

GM MOBILITY

This program is available to qualified applicants for cost reimbursement of eligible aftermarket adaptive equipment required for the vehicle, such as hand controls or a wheelchair/scooter lift for the vehicle.

For more information on the limited offer, visit www.gmmobility.com or call the GM Mobility Assistance Center at 1-800-323-9935. Text Telephone (TTY) users, call 1-800-833-9935.

General Motors of Canada also has a Mobility Program. Visit www.gm.ca or call 1-800-GM-DRIVE (463-7483) for details. TTY users call 1-800-263-3830.

Roadside Assistance Program

For U.S.-purchased vehicles, call 1-800-243-8872. (Text Telephone (TTY): 1-888-889-2438.)

For Canadian-purchased vehicles, call 1-800-268-6800.

Service is available 24 hours a day, 365 days a year.

Calling for Assistance

When calling Roadside Assistance, have the following information ready:

- Your name, home address, and home telephone number.
- Telephone number of your location.
- Location of the vehicle.
- Model, year, color, and license plate number of the vehicle.
- Odometer reading, Vehicle Identification Number (VIN), and delivery date of the vehicle.
- Description of the problem.

Coverage

Services are provided for the duration of the vehicle’s powertrain warranty.

In the U.S., anyone driving the vehicle is covered. In Canada, a person driving the vehicle without permission from the owner is not covered.

Roadside Assistance is not a part of the New Vehicle Limited Warranty. General Motors North America and Chevrolet reserve the right to make any changes or discontinue the Roadside Assistance program at any time without notification.
Customer Information

General Motors North America and Chevrolet reserve the right to limit services or payment to an owner or driver if they decide the claims are made too often, or the same type of claim is made many times.

Services Provided

- **Emergency Fuel Delivery:** Delivery of enough fuel for the vehicle to get to the nearest service station.

- **Lock-Out Service:** Service to unlock the vehicle if you are locked out. A remote unlock may be available if you have OnStar. For security reasons, the driver must present identification before this service is given.

- **Emergency Tow from a Public Road or Highway:** Tow to the nearest Chevrolet dealer for warranty service, or if the vehicle was in a crash and cannot be driven. Assistance is not given when the vehicle is stuck in the sand, mud, or snow.

  - **Flat Tire Change:** Service to change a flat tire with the spare tire. The spare tire, if equipped, must be in good condition and properly inflated. It is the owner's responsibility for the repair or replacement of the tire if it is not covered by the warranty.

  - **Battery Jump Start:** Service to jump start a dead battery.

  - **Trip Interruption Benefits and Assistance:** If your trip is interrupted due to a warranty event, incidental expenses may be reimbursed within the Powertrain warranty period. Items considered are reasonable and customary hotel, meals, rental car, or a vehicle being delivered back to the customer, up to 805 km (500 mi).

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.

Service is not provided if a vehicle is in an area that is not accessible to the service vehicle or is not a regularly traveled or maintained public road, which includes ice and winter roads. Off-road use is not covered.

Services Specific to Canadian-Purchased Vehicles

- **Fuel Delivery:** Reimbursement is up to 7 liters. If available, diesel fuel delivery may be restricted. Propane and other fuels are not provided through this service.

- **Lock-Out Service:** Vehicle registration is required.

- **Trip Interruption Benefits and Assistance:** Must be over 150 km from where your trip was started to qualify. Pre-authorization, original detailed receipts, and a copy of the repair orders are required. Once authorization has been
received, the Roadside Assistance advisor will help to make arrangements and explain how to receive payment.

- **Alternative Service**: If assistance cannot be provided right away, the Roadside Assistance advisor may give permission to get local emergency road service. You will receive payment, up to $100, after sending the original receipt to Roadside Assistance. Mechanical failures may be covered, however any cost for parts and labor for repairs not covered by the warranty are the owner responsibility.

### Scheduling Service Appointments

When the vehicle requires warranty service, contact your dealer and request an appointment. By scheduling a service appointment and advising the service consultant of your transportation needs, your dealer can help minimize your inconvenience.

If the vehicle cannot be scheduled into the service department immediately, keep driving it until it can be scheduled for service, unless, of course, the problem is safety related. If it is, please call your dealership, let them know this, and ask for instructions.

If your dealer requests you to bring the vehicle for service, you are urged to do so as early in the work day as possible to allow for same-day repair.

### Courtesy Transportation Program

To enhance your ownership experience, we and our participating dealers are proud to offer Courtesy Transportation, a customer support program for vehicles with the Bumper-to-Bumper (Base Warranty Coverage period in Canada), extended powertrain, and/or hybrid-specific warranties in both the U.S. and Canada.

Several Courtesy Transportation options are available to assist in reducing inconvenience when warranty repairs are required.

Courtesy Transportation is not a part of the New Vehicle Limited Warranty. A separate booklet entitled “Limited Warranty and Owner Assistance Information” furnished with each new vehicle provides detailed warranty coverage information.

### Transportation Options

Warranty service can generally be completed while you wait. However, if you are unable to do so, your dealer may offer the following transportation options:

#### Shuttle Service

This includes one-way or round-trip shuttle service within reasonable time and distance parameters of your dealer's area.
376 Customer Information

Public Transportation or Fuel Reimbursement
If overnight warranty repairs are needed, and public transportation is used, the expense must be supported by original receipts and within the maximum amount allowed by GM for shuttle service. If U.S. customers arrange their own transportation, limited reimbursement for reasonable fuel expenses may be available. Claim amounts should reflect actual costs and be supported by original receipts. See your dealer for information.

Courtesy Rental Vehicle
For an overnight warranty repair, the dealer may provide an available courtesy rental vehicle or provide for reimbursement of a rental vehicle. Reimbursement is limited and must be supported by original receipts as well as a signed and completed rental agreement and meet state/provincial, local, and rental vehicle provider requirements. Requirements vary and may include minimum age requirements, insurance coverage, credit card, etc. Additional fees such as fuel usage charges, taxes, levies, usage fees, excessive mileage, or rental usage beyond the completion of the repair are also your responsibility.

It may not be possible to provide a like vehicle as a courtesy rental.

Additional Program Information
All program options, such as shuttle service, may not be available at every dealer. Contact your dealer for specific availability.

General Motors reserves the right to unilaterally modify, change, or discontinue Courtesy Transportation at any time and to resolve all questions of claim eligibility pursuant to the terms and conditions described herein at its sole discretion.

Collision Parts
Genuine GM Collision parts are new parts made with the same materials and construction methods as the parts with which the vehicle was originally built. Genuine GM Collision parts are the best choice to ensure that the vehicle’s designed appearance, durability, and safety are preserved. The use of Genuine GM parts can help maintain the GM New Vehicle Limited Warranty.

Recycled original equipment parts may also be used for repair. These parts are typically removed from vehicles that were total losses in prior crashes. In most cases, the parts being recycled are from undamaged sections of the vehicle. A recycled original equipment GM part may be an acceptable choice to maintain the vehicle’s originally designed appearance and safety.
performance; however, the history of these parts is not known. Such parts are not covered by the GM New Vehicle Limited Warranty, and any related failures are not covered by that warranty.

Aftermarket collision parts are also available. These are made by companies other than GM and may not have been tested for the vehicle. As a result, these parts may fit poorly, exhibit premature durability/corrosion problems, and may not perform properly in subsequent collisions. Aftermarket parts are not covered by the GM New Vehicle Limited Warranty, and any vehicle failure related to such parts is not covered by that warranty.

**Repair Facility**

GM also recommends that you choose a collision repair facility that meets your needs before you ever need collision repairs. Your dealer may have a collision repair center with GM-trained technicians and state-of-the-art equipment, or be able to recommend a collision repair center that has GM-trained technicians and comparable equipment.

**Insuring the Vehicle**

Protect your investment in the GM vehicle with comprehensive and collision insurance coverage. There are significant differences in the quality of coverage afforded by various insurance policy terms. Many insurance policies provide reduced protection to the GM vehicle by limiting compensation for damage repairs through the use of aftermarket collision parts. Some insurance companies will not specify aftermarket collision parts. When purchasing insurance, we recommend that you ensure that the vehicle will be repaired with GM original equipment collision parts. If such insurance coverage is not available from your current insurance carrier, consider switching to another insurance carrier.

If the vehicle is leased, the leasing company may require you to have insurance that ensures repairs with Genuine GM Original Equipment Manufacturer (OEM) parts or Genuine Manufacturer replacement parts. Read the lease carefully, as you may be charged at the end of the lease for poor quality repairs.

**If a Crash Occurs**

If there has been an injury, call emergency services for help. Do not leave the scene of a crash until all matters have been taken care of. Move the vehicle only if its position puts you in danger, or you are instructed to move it by a police officer.

Give only the necessary information to police and other parties involved in the crash.

For emergency towing see **Roadside Assistance Program**

Gather the following information:

- Driver name, address, and telephone number.
- Driver license number.
- Owner name, address, and telephone number.
Customer Information

- 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? 78.

Managing the Vehicle Damage Repair Process

In the event that the vehicle requires damage repairs, GM recommends that you take an active role in its repair. If you have a pre-determined repair facility of choice, take the vehicle there, or have it towed there. Specify to the facility that any required replacement collision parts be original equipment parts, either new Genuine GM parts or recycled original GM parts. Remember, recycled parts will not be covered by the GM vehicle warranty.

Insurance pays the bill for the repair, but you must live with the repair. Depending on your policy limits, your insurance company may initially value the repair using aftermarket parts. Discuss this with the repair professional, and insist on Genuine GM parts. Remember, if the vehicle is leased, you may be obligated to have the vehicle repaired with Genuine GM parts, even if your insurance coverage does not pay the full cost.

If another party's insurance company is paying for the repairs, you are not obligated to accept a repair valuation based on that insurance company's collision policy repair limits, as you have no contractual limits with that company. In such cases, you can have control of the repair and parts choices as long as the cost stays within reasonable limits.

Service Publications Ordering Information

Service Manuals

Service Manuals have the diagnosis and repair information on the engines, transmission, axle, suspension, brakes, electrical, steering, body, etc.

Service Bulletins

Service Bulletins give additional technical service information needed to knowledgeably service General Motors cars and trucks. Each bulletin contains instructions to assist in the diagnosis and service of the vehicle.

Owner Information

Owner publications are written specifically for owners and intended to provide basic operational information about the vehicle. The Owner Manual includes the Maintenance Schedule for all models.

RETAIL SELL PRICE: $35.00 – $40.00 (U.S.) plus handling and shipping fees.

Without Pouch: Owner Manual only.

RETAIL SELL PRICE: $25.00 (U.S.) plus handling and shipping fees.

**Current and Past Models**

Technical Service Bulletins and Manuals are available for current and past model GM vehicles.

ORDER TOLL FREE: 1-800-551-4123 Monday – Friday 8:00 AM – 6:00 PM Eastern Time

For Credit Card Orders Only (VISA-MasterCard-Discover), see Helm, Inc. at: www.helminc.com.

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

Prices are subject to change without notice and without incurring obligation. Allow ample time for delivery.

All listed prices are quoted in U.S. funds. Make checks payable in U.S. funds.

**Radio Frequency Statement**

This vehicle has systems that operate on a radio frequency that complies with Part 15/Part 18 of the Federal Communications Commission (FCC) rules and with Industry Canada Standards RSS-GEN/210/216/220/251/310, ICES-001.

Operation is subject to the following two conditions:

1. The device may not cause harmful interference.
2. The device must accept any interference received, including interference that may cause undesired operation of the device.

Changes or modifications to any of these systems by other than an authorized service facility could void authorization to use this equipment.
Customer Information

Reporting Safety Defects

Reporting Safety Defects to the United States Government
If you believe that your vehicle has a defect which could cause a crash or could cause injury or death, you should immediately inform the National Highway Traffic Safety Administration (NHTSA) in addition to notifying General Motors.

If NHTSA receives similar complaints, it may open an investigation, and if it finds that a safety defect exists in a group of vehicles, it may order a recall and remedy campaign.

However, NHTSA cannot become involved in individual problems between you, your dealer, or General Motors.

To contact NHTSA, you may call the Vehicle Safety Hotline toll-free at 1-888-327-4236 (TTY: 1-800-424-9153); go to http://www.safercar.gov; or write to:

Administrator, NHTSA
1200 New Jersey Avenue, S.E.
Washington, D.C. 20590

You can also obtain other information about motor vehicle safety from http://www.safercar.gov.

Reporting Safety Defects to the Canadian Government
If you live in Canada, and you believe that the vehicle has a safety defect, notify Transport Canada immediately, and notify General Motors of Canada Company. Call Transport Canada at 1-800-333-0510 or write to:

Transport Canada
Road Safety Branch
80 rue Noel
Gatineau, QC J8Z 0A1
Reporting Safety Defects to General Motors

In addition to notifying NHTSA (or Transport Canada) in a situation like this, notify General Motors.

Call 1-800-222-1020, or write:

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

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

General Motors of Canada Company
Customer Care Centre,
Mail Code: CA1-163-005
1908 Colonel Sam Drive
Oshawa, Ontario L1H 8P7

Vehicle Data Recording and Privacy

The vehicle has a number of computers that record information about the vehicle’s performance and how it is driven. For example, the vehicle uses computer modules to monitor and control engine and transmission performance, to monitor the conditions for airbag deployment and deploy them in a crash, and, if equipped, to provide antilock braking to help the driver control the vehicle. These modules may store data to help the dealer technician service the vehicle. Some modules may also store data about how the vehicle is operated, such as rate of fuel consumption or average speed. These modules may retain personal preferences, such as radio presets, seat positions, and temperature settings.

Event Data Recorders

This vehicle is equipped with an event data recorder (EDR). The main purpose of an EDR is to record, in certain crash or near crash-like situations, such as an 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 your vehicle were operating;
- Whether or not the driver and passenger safety belts were buckled/fastened;
- How far (if at all) the driver was depressing the accelerator and/or brake pedal; and,
- How fast the vehicle was traveling.
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These data can help provide a better understanding of the circumstances in which crashes and injuries occur.

Note
EDR data are recorded by your vehicle only if a non-trivial crash situation occurs; no data are recorded by the EDR under normal driving conditions and no personal data (e.g., name, gender, age, and crash location) are recorded. However, other parties, such as law enforcement, could combine the EDR data with the type of personally identifying data routinely acquired during a crash investigation.

To read data recorded by an EDR, special equipment is required, and access to the vehicle or the EDR is needed. In addition to the vehicle manufacturer, other parties, such as law enforcement, that have the special equipment, can read the information if they have access to the vehicle or the EDR.

GM will not access these data or share it with others except: with the consent of the vehicle owner or, if the vehicle is leased, with the consent of the lessee; in response to an official request by police or similar government office; as part of GM's defense of litigation through the discovery process; or, as required by law. Data that GM collects or receives may also be used for GM research needs or may be made available to others for research purposes, where a need is shown and the data is not tied to a specific vehicle or vehicle owner.

Infotainment System

If the vehicle is equipped with a navigation system as part of the infotainment system, use of the system may result in the storage of destinations, addresses, telephone numbers, and other trip information. See the infotainment manual for information on stored data and for deletion instructions.
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OnStar Overview

Voice Command Button
Blue OnStar Button
Red Emergency Button

This vehicle may be equipped with a comprehensive, in-vehicle system that can connect to an OnStar Advisor for Emergency, Security, Navigation, Connections, and Diagnostics Services. OnStar services may require a paid subscription and data plan. OnStar requires the vehicle battery and electrical system, cellular service, and GPS satellite signals to be available and operating. OnStar acts as a link to existing emergency service providers. OnStar may collect information about you and your vehicle, including location information. See OnStar User

OnStar Overview

OnStar Additional Information

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Terms, Privacy Statement, and Software Terms for more details including system limitations at www.onstar.com (U.S.) or www.onstar.ca (Canada).

The OnStar system status light is next to the OnStar buttons. If the status light is:

• Solid Green: System is ready.
• Flashing Green: On a call.
• Red: Indicates a problem.
• Off: System is active. Press twice to speak with an OnStar Advisor.

Press or call 1-888-4ONSTAR (1-888-466-7827) to speak to an Advisor.

Press to:

• Make a call, end a call, or answer an incoming call.
• Give OnStar Hands-Free Calling voice commands.
• Give OnStar Turn-by-Turn Navigation voice commands.
OnStar

- Obtain and customize the Wi-Fi® hotspot name or SSID and password, if equipped.

Press \( \text{OnStar} \) to connect to an Advisor to:
- Verify account information or update contact information.
- Get driving directions.
- Receive a Diagnostic check of the vehicle's key operating systems.
- Receive Roadside Assistance.
- Manage Wi-Fi Settings, if equipped.

Press \( \text{OnStar} \) to get a priority connection to an OnStar Advisor available 24/7 to:
- Get help for an emergency.
- Be a Good Samaritan or respond to an AMBER Alert.
- Get assistance in severe weather or other crisis situations and find evacuation routes.

OnStar Services

Emergency
Emergency Services require an active, OnStar service plan (excludes Basic Plan). With Automatic Crash Response, built-in sensors can automatically alert a specially trained OnStar Advisor who is immediately connected in to the vehicle to help.

Press \( \text{OnStar} \) for a priority connection to an OnStar Advisor who can contact emergency service providers, direct them to your exact location, and relay important information.

With OnStar Crisis Assist, specially trained Advisors are available 24 hours a day, 7 days a week, to provide a central point of contact, assistance, and information during a crisis.

With Roadside Assistance, Advisors can locate a nearby service provider to help with a flat tire, a battery jump, or an empty gas tank.

Security
If equipped, OnStar provides these services:
- With Stolen Vehicle Assistance, OnStar Advisors can use GPS to pinpoint the vehicle and help authorities quickly recover it.
- With Remote Ignition Block™, if equipped, OnStar can block the engine from being restarted.
- With Stolen Vehicle Slowdown®, if equipped, OnStar can work with law enforcement to gradually slow the vehicle down.

Theft Alarm Notification
If equipped, if the doors are locked and the vehicle alarm sounds, a notification by text, e-mail, or phone call will be sent. If the vehicle is stolen, an OnStar Advisor can work with authorities to recover the vehicle.
Navigation
OnStar navigation requires a specific OnStar service plan.

Press $\text{OnStar}$ to receive Turn-by-Turn directions or have them sent to the vehicle’s navigation screen, if equipped.

Turn-by-Turn Navigation
1. Press $\text{OnStar}$ to connect to an Advisor.
2. Request directions to be downloaded to the vehicle.
3. Follow the voice-guided commands.

Using Voice Commands During a Planned Route

Cancel Route
2. Say “Cancel route.” System responds: “Do you want to cancel directions?”
3. Say “Yes.” System responds: “OK, request completed, thank you, goodbye.”

Route Preview
2. Say “Route preview.” System responds with the next three maneuvers.

Repeat
2. Say “Repeat.” System responds with the last direction given, then responds with “OnStar ready,” then a tone.

Get My Destination
2. Say “Get my destination.” System responds with the address and distance to the destination, then responds with “OnStar ready,” then a tone.

Send Destination to Vehicle
Subscribers can have directions sent to the vehicle’s navigation screen, if equipped.

Press $\text{OnStar}$. then ask the Advisor to download directions to the vehicle’s navigation system, if equipped. After the call ends, the navigation screen will provide prompts to begin driving directions. Routes that are sent to the navigation screen can only be canceled through the navigation system.

See www.onstar.com (U.S.) or www.onstar.ca (Canada).

Connections
The following OnStar services help with staying connected.

For coverage maps, see www.onstar.com (U.S.) or www.onstar.ca (Canada).

Ensuring Security
- Change the default passwords for the Wi-Fi hotspot and RemoteLink mobile application. Make these passwords different
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from each other and use a combination of letters, numbers, and symbols to increase the security.

- Change the default name of the SSID (Service Set Identifier). This is your network’s name that is visible to other wireless devices. Choose a unique name and avoid family names or vehicle descriptions.

OnStar Wi-Fi® Hotspot (If Equipped)
The vehicle may have a built-in Wi-Fi hotspot that provides access to the Internet and web content at 4G LTE speed. Up to seven mobile devices can be connected. A data plan is required. Use the in-vehicle controls only when it is safe to do so.

1. To retrieve Wi-Fi hotspot information, press \( = \), wait for the prompt, then say “Wi-Fi settings.” On some vehicles, touch Wi-Fi Settings on the screen.

2. The Wi-Fi settings will display the Wi-Fi hotspot name (SSID), password, and on some vehicles, the connection type (no Internet connection, 3G, 4G, 4G LTE), and signal quality (poor, good, excellent).

3. To change the SSID or password, press \( \) or call 1-888-4ONSTAR to connect with an Advisor.

After initial set-up, your vehicle’s Wi-Fi hotspot will connect automatically to your mobile devices. Manage data usage by turning Wi-Fi on or off on your mobile device, using the RemoteLink mobile app, or by contacting an OnStar Advisor.

OnStar RemoteLink® Mobile App (If Equipped)
Download the OnStar RemoteLink mobile app to select Apple® iOS, Android™, BlackBerry™, or Windows® mobile devices. OnStar Subscribers can access the following services from a mobile device:

- Remotely start/stop the vehicle, if factory-equipped.
- Lock/unlock doors, if equipped with automatic locks.
- Activate the horn and lamps.
- Check the vehicle’s fuel level, oil life, or tire pressure, if factory-equipped with the Tire Pressure Monitor System.
- Send directions to the vehicle.
- Locate the vehicle on a map (U.S. market only).
- Turn the vehicle’s Wi-Fi hotspot on/off, manage settings, and monitor data consumption, if equipped.

For OnStar RemoteLink information and compatibility, see www.onstar.com (U.S.) or www.onstar.ca (Canada).

Remote Services
Contact an OnStar Advisor to unlock the doors or sound the horn and flash the lamps.
OnStar AtYourService
OnStar Advisors can provide offers from restaurants and retailers on your route, help locate hotels, or book a room. These services vary by market.

OnStar Hands-Free Calling
Make and receive calls with the built-in wireless calling service, which requires available minutes.

Make a Call
2. Say “Call.” System responds: “Call. Please say the name or number to call.”

Retrieve My Number
2. Say “My number.” System responds: “Your OnStar Hands-Free Calling number is,” then says the number.

End a Call
Press ☑. System responds: “Call ended.”

Verify Minutes and Expiration
Press ☑ and say “Minutes” then “Verify” to check how many minutes remain and their expiration date.

Diagnostics
Advanced Diagnostics provides a status of the vehicle’s key systems with a monthly e-mail, or by pressing ☑. If equipped, Diagnostic Alerts can be received in real-time via e-mail or text. The Proactive Alerts feature (if available) can help predict and alert of potential upcoming maintenance issues with select components on the vehicle, before they become a problem.

OnStar can also monitor and report tire pressure, if the vehicle is equipped with a Tire Pressure Monitoring System.
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OnStar Additional Information

In-Vehicle Audio Messages
Audio messages may play important information at the following times:
- Prior to vehicle purchase. Press # to set up an account.
- With the OnStar Basic Plan, every 60 days.
- After change in ownership and at 90 days.

Transferring Service
Press # to request account transfer eligibility information. The Advisor can cancel or change account information.

Selling/Transferring the Vehicle
Call 1-888-4ONSTAR (1-888-466-7827) immediately to terminate your OnStar services if the vehicle is disposed of, sold, transferred, or if the lease ends.

Reactivation for Subsequent Owners
Press # and follow the prompts to speak to an Advisor as soon as possible. The Advisor will update vehicle records and explain OnStar service options.

How OnStar Service Works
Automatic Crash Response, Emergency Services, Crisis Assist, Stolen Vehicle Assistance, Advanced Vehicle Diagnostics, Remote Services, Roadside Assistance, Turn-by-Turn Navigation, and Hands-Free Calling are available on most vehicles. Not all OnStar services are available everywhere or on all vehicles. For more information, a full description of OnStar services, system limitations, and OnStar User Terms, Privacy Statement, and Software Terms:
- Call 1-888-4ONSTAR (1-888-466-7827).
- See www.onstar.com (U.S.).
- See www.onstar.ca (Canada).

- Call TTY 1-877-248-2080.
- Press # to speak with an Advisor.

OnStar services cannot work unless the vehicle is in a place where OnStar has an agreement with a wireless service provider for service in that area. The wireless service provider must also have coverage, network capacity, reception, and technology compatible with OnStar services. Service involving location information about the vehicle cannot work unless GPS signals are available, unobstructed, and compatible with the OnStar hardware. OnStar services may not work if the OnStar equipment is not properly installed or it has not been properly maintained. If equipment or software is added, connected, or modified, OnStar services may not work. Other problems beyond the control of OnStar — such as hills, tall buildings, tunnels, weather, electrical system design and architecture of the vehicle, damage
to the vehicle in a crash, or wireless phone network congestion or jamming — may prevent service.

See Radio Frequency Statement ✿ 379.

Services for People with Disabilities

Advisors provide services to help Subscribers with physical disabilities and medical conditions.

Press  to help:

- Locate a gas station with an attendant to pump gas.
- Find a hotel, restaurant, etc., that meets accessibility needs.
- Provide directions to the closest hospital or pharmacy in urgent situations.

TTY Users

OnStar has the ability to communicate to deaf, hard-of-hearing, or speech-impaired customers while in the vehicle. The available dealer-installed TTY system can provide in-vehicle access to all OnStar services, except Virtual Advisor and OnStar Turn-by-Turn Navigation.

OnStar Personal Identification Number (PIN)

A PIN is needed to access some OnStar services. The PIN will need to be changed the first time when speaking with an Advisor. To change the OnStar PIN, contact an OnStar Advisor by pressing or calling 1-888-4ONSTAR.

Warranty

OnStar equipment may be warranted as part of the vehicle warranty.

Languages

The vehicle can be programmed to respond in multiple languages. Press and ask for an Advisor. Advisors are available in English, Spanish, and French. Available languages may vary by country.

Potential Issues

OnStar cannot perform Remote Door Unlock or Stolen Vehicle Assistance after the vehicle has been off continuously for 10 days without an ignition cycle. If the vehicle has not been started for five days, OnStar can contact Roadside Assistance or a locksmith to help gain access to the vehicle.

Global Positioning System (GPS)

- Obstruction of the GPS can occur in a large city with tall buildings; in parking garages; around airports; in tunnels and underpasses; or in an area with very dense trees. If GPS signals are not available, the OnStar system should still operate to call OnStar. However, OnStar could have difficulty identifying the exact location.
- In emergency situations, OnStar can use the last stored GPS location to send to emergency responders.
OnStar

A temporary loss of GPS can cause loss of the ability to send a Turn-by-Turn Navigation route. The Advisor may give a verbal route or may ask for a call back after the vehicle is driven into an open area.

Cellular and GPS Antennas

Cellular reception is required for OnStar to send remote signals to the vehicle. Do not place items over or near the antenna to prevent blocking cellular and GPS signal reception.

Unable to Connect to OnStar Message

If there is limited cellular coverage or the cellular network has reached maximum capacity, this message may come on. Press \( \text{Q} \) to try the call again or try again after driving a few miles into another cellular area.

Vehicle and Power Issues

OnStar services require a vehicle electrical system, wireless service, and GPS satellite technologies to be available and operating for features to function properly. These systems may not operate if the battery is discharged or disconnected.

Add-on Electrical Equipment

The OnStar system is integrated into the electrical architecture of the vehicle. Do not add any electrical equipment. See Add-On Electrical Equipment 262. Added electrical equipment may interfere with the operation of the OnStar system and cause it to not operate.

Vehicle Software Updates

OnStar or GM may remotely deliver software updates or changes to the vehicle without further notice or consent. These updates or changes may enhance or maintain safety, security, or the operation of the vehicle or the vehicle systems. Software updates or changes may affect or erase data or settings that are stored in the vehicle, such as OnStar Hands-Free Calling name tags, saved navigation destinations, or pre-set radio stations. Neither OnStar nor GM is responsible for any affected or erased data or settings. These updates or changes may also collect personal information. Such collection is described in the OnStar privacy statement or separately disclosed at the time of installation. These updates or changes may also cause a system to automatically communicate with GM servers to collect information about vehicle system status, identify whether updates or changes are available, or deliver updates or changes. An active OnStar agreement constitutes consent to these software updates or changes and agreement that either OnStar or GM may remotely deliver them to the vehicle.

Privacy

The complete OnStar Privacy Statement may be found at www.onstar.com (U.S.), or www.onstar.ca (Canada). We recommend that you review it. If you have any questions, call 1-888-4ONSTAR (1-888-466-7827) or press \( \text{Q} \) to speak with an Advisor. Users of wireless communications are cautioned that
the privacy of any information sent via wireless cellular communications cannot be assured. Third parties may unlawfully intercept or access transmissions and private communications without consent.

**OnStar - Software Acknowledgements**

Certain OnStar components include libcurl and unzip software and other third party software. Below are the notices and licenses associated with libcurl and unzip and for other third party software please see http://www.lg.com/global/support/opensource/index and https://www.onstar.com/us/en/support/getdocuments.html

**libcurl:**

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**unzip:**

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