

Escalade Owner's Manual



Contents

Introduction2
In Brief 5
Keys, Doors, and Windows 27
Seats and Restraints 56
Storage 121
Instruments and Controls 125
Lighting 167
Infotainment System 176
Climate Controls 177
Driving and Operating 186
Vehicle Care 266
Service and Maintenance 342
Technical Data 348
Customer Information 352
OnStar 362
Index

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, CADILLAC, the CADILLAC Emblem, and ESCALADE are trademarks and/or service marks of General Motors LLC, its subsidiaries, affiliates, or licensors.

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's manual.

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

Keep this manual in the vehicle for quick reference.

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's manual has additional instructions or information.

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

⇔: Shown when there is more information on another page — "see page."

Vehicle Symbol Chart

Here are some additional symbols that may be found on the vehicle and what they mean. See the features in this manual for information.

☆: Airbag Readiness Light

☆: Air Conditioning

(ABS): Antilock Brake System (ABS)

(I): Brake System Warning Light

E +: Charging System

Cruise Control

Do Not Puncture

To Not Service

E: Engine Coolant Temperature

- Exterior Lamps

: Flame/Fire Prohibited

: Fuel Gauge

Fuses:

ED: Headlamp Main/Dipped-Beam Changer

2: LATCH System Child Restraints

: Malfunction Indicator Lamp

📆 : Oil Pressure

ப் : Power

Q: Remote Vehicle Start

: Seat Belt Reminders

(!): Tyre Pressure Monitor

♬: Traction Control/StabiliTrak

. Under Pressure

: Windscreen Washer Fluid

4	INTRODUCTION		
		№ NOTES	

In Brief

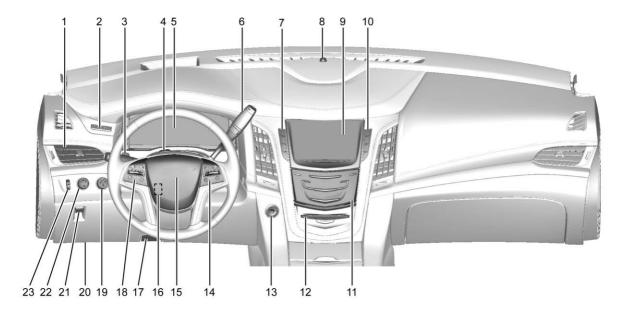
Instrument Panel Instrument Panel				
Initial Drive Information				
Initial Drive Information 8				
Remote Keyless Entry (RKE)				
System 8				
Remote Vehicle Start 8				
Door Locks 9				
Tailgate 9				
Windows 10				
Seat Adjustment 10				
Memory Features 13				
Second Row Seats 14				
Third Row Seats14				
Heated and Cooled Front Seats 14				
Head Restraint Adjustment 14				
Seat Belts 14				
Passenger Sensing System 15				
Mirror Adjustment 15				
Steering Wheel Adjustment 16				
Throttle and Brake Pedal				
Adjustment 16				
Interior Lighting 17				
Exterior Lighting 17				
Windscreen Wiper/Washer 18				
Climate Controls				

Transmission	19
Four-Wheel Drive	20
Vehicle Features	
Infotainment System	21
Steering Wheel Controls	
Cruise Control	
Driver Information	
Centre (DIC)	21
Forward Collision Alert (FCA)	
System	22
Forward Automatic	
Braking (FAB)	22
Lane Keep Assist (LKA)	22
Lane Change Alert (LCA)	
Surround Vision	23
Rear Vision Camera (RVC)	23
Rear Cross Traffic Alert (RCTA)	
System	23
Parking Assist	23
Power Sockets	
Universal Remote System	24
Sunroof	24

Periorilance and Manitenance	
Traction Control/Electronic	
Stability Control 25	5
Tyre Pressure Monitor 25	5
Fuel 26	ć
Engine Oil Life System 26	ć
Driving for Better Fuel	

Economy 26

Instrument Panel



- 1. *Air Vents* \$\dip\$ 183.
- 2. Head-Up Display (HUD)

 ⇒ 152 (If Equipped).

Windscreen Wiper/Washer

⇒ 126.

Rear Window Wiper/Washer

⇒ 128.

- 4. Hazard Warning Flashers \$\primeq\$ 171.
- 5. *Instrument Cluster* \$\dip 135.
- 6. Shift Lever. See *Automatic Transmission* \$\dip 209\$.

Tow/Haul Mode Selector Button. See *Tow/Haul Mode* \Rightarrow *213*.

Range Selection Mode Buttons (If Equipped). See *Manual Mode*

⇒ 212.

 Magnetic Ride Control Button. See Magnetic Ride Control

 [↑] 224.
 Pedal Adjust Switch (If Equipped). See Adjustable Throttle and Brake Pedal

 [↑] 202.

- 9. Infotainment ➪ 176.
- 0. Glove Box Button. See *Glove Box*

 ⇒ 121.

Lane Keep Assist (LKA) \Rightarrow 248 (If Equipped).

- 11. Dual Automatic Climate Control System

 ⇒ 177.
 - *Instrument Panel Storage* \$ 121.
- 12. CD Player. See the infotainment manual.
- 13. ENGINE START/STOP Button. See *Ignition Positions* \Rightarrow 203.
- 14. Steering Wheel Controls

 → 126.

 Driver Information Centre (DIC)

 Controls. See Driver Information
 Centre (DIC)

 → 150.
- 15. *Horn ⇒ 126*.
- 6. Steering Wheel Adjustment \$\primeq\$ 126.

- 7. Bonnet Release. See *Bonnet*

 ⇒ 268.
- 18. *Cruise Control* \$\dip 226\$ (If Equipped).

Adaptive Cruise Control \Rightarrow 228 (If Equipped).

Forward Collision Alert (FCA) System \Rightarrow 242 (If Equipped).

Heated Steering Wheel \Rightarrow 126 (If Equipped).

Phone Button. See the infotainment manual.

- 19. Automatic Transfer Case Knob (If Equipped). See *Four-Wheel Drive*

 ⇒ 214.
- 21. Electric Parking Brake

 ⇒ 219 (If Equipped).

Initial Drive Information

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

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

Remote Keyless Entry (RKE) System

The Remote Keyless Entry (RKE) transmitter is used to remotely lock and unlock the doors from up to 60 m (197 ft) away from the vehicle.



Press to unlock the driver door and if equipped, the fuel door. Press again within three seconds to unlock all remaining doors.

: Press to lock all doors and if equipped, the fuel door.

Lock and unlock feedback can be personalised. See *Vehicle Personalisation* ⇒ 156.

: Press twice to open or close the tailgate. Press once to stop the liftgate from moving.

 x^2y : Press twice to open the liftglass.

▶ : Press and release to initiate vehicle locator. The indicator lamps flash and the horn sounds three times.

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

Press again to cancel the panic alarm.

See Keys \Leftrightarrow 27 and Remote Keyless Entry (RKE) System \Leftrightarrow 28.

Remote Vehicle Start

The engine can be started from outside of the vehicle.

Starting the Vehicle

- 1. Press and release on the RKE transmitter.
- 2. Immediately press and hold Ω for at least four seconds or until the indicator lamps flash.

Start the vehicle normally after entering.

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

Remote start can be extended.

Cancelling a Remote Start

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

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

See Remote Vehicle Start \$\sigma\$ 34.

Door Locks

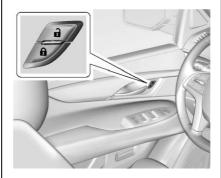
To lock or unlock the doors from inside the vehicle:

- Press or a on a power door lock switch.
- Push down the manual lock knob on the driver door to lock all doors. Push down the lock knob on a passenger door to lock that door only.

 Pull the door handle once to unlock that door. Pull the handle again to unlatch it.

To lock or unlock the doors from outside the vehicle press \bigcirc or \bigcirc on the RKE transmitter or use the key in the front doors. The key cylinder is covered by a cap. See *Door Locks* \Rightarrow 35. See *Remote Keyless Entry (RKE) System Operation* \Rightarrow 28.

Power Door Locks



: Press to lock the doors.

: Press to unlock the doors.

See *Door Locks* \Rightarrow 35.

Keyless Access

The RKE transmitter must be within 1 m (3 ft) of the tailgate or door being opened. Pressing the button on the driver door handle will unlock the driver door. If the handle button is pressed again within five seconds, the passenger doors and tailgate will unlock. See "Keyless Access Operation" in *Remote Keyless Entry (RKE) System Operation* ♀ 28.

Tailgate



To open the tailgate, press on the power door lock switch or press on the Remote Keyless Entry (RKE) transmitter twice to unlock all doors. Press the touch pad (1) on the underside of the tailgate handle and lift up. See *Remote Keyless Entry (RKE) System Operation* ♀ 28.

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

To open the liftglass, press the button (2) above the number plate. Close the liftglass before opening the tailgate to avoid damaging it.

Power Tailgate Operation

If equipped with a power tailgate, the switch is on the overhead console. The vehicle must be in P (Park).

Choose the power tailgate mode by selecting MAX or 3/4. Press on the overhead console or on the RKE transmitter press twice quickly.

Press any tailgate button while the tailgate is moving to stop it. Pressing again reverses the direction.

To close, press on the bottom of the tailgate next to the latch.

To disable the power tailgate function, select OFF on the tailgate switch. See *Tailgate* \Rightarrow 38.

Windows



Power windows work when the ignition is on, in ACC/ACCESSORY, or when Retained Accessory Power (RAP) is active. See *Retained Accessory Power (RAP)* ⇒ 205.

Using the window switch, press to open or pull to close the window.

The windows may be temporarily disabled if they are used repeatedly within a short time.

Seat Adjustment

Uplevel Seat Adjustment

If equipped, the ignition must be on to use all uplevel seat features.

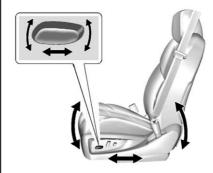
Uplevel Seat Control



- l. Feature Select
- 2. Up
- Rearward

- 4. Down
- 5. Forward
- Move Feature Select (1) to display seat adjustments on the infotainment display. Press and release or hold to scroll through features.
- Press Up (2) to make upward adjustments of the selected feature.
- Press Rearward (3) to make rearward adjustments of the selected feature.
- Press Down (4) to make downward adjustments of the selected feature.
- Press Forward (5) to make forward adjustments of the selected feature.

Base Seat Adjustment



To adjust the seat:

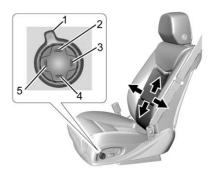
- Move the seat forward or rearward by sliding the control forward or rearward.
- Raise or lower the front part of the seat cushion by moving the front of the control up or down.
- Raise or lower the seat by moving the rear of the control up or down.

See *Electrically Operated Seat Adjustment ⇔ 58.*

Lumbar and Bolster Support Uplevel Seat Adjustment

If equipped, the ignition must be on to use all uplevel seat features.

To adjust lumbar support, if equipped:



- Press and release or hold Feature Select (1) to scroll to lumbar support on the infotainment display.
- Press Forward (5) or Rearward (3) to adjust lumbar forward or rearward.
- Press Up (2) or Down (4) to adjust lumbar up or down.

See Lumbar Adjustment \$ 59.

To adjust bolster support, if equipped:

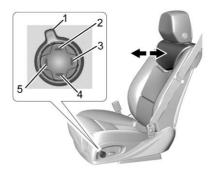


- Press and release or hold Feature Select (1) to scroll to bolster support on the infotainment display.
- Press Forward (5) or Rearward (3) to adjust bolster support inward or outward.

See Lumbar Adjustment \$ 59.

Upper Shoulder Support

To adjust upper shoulder support, if equipped:



- Press and release or hold Feature Select (1) to scroll to upper shoulder support on the infotainment display.
- Press Forward (5) or Rearward (3) to adjust shoulder support forward or rearward.

Reclining Seat Backrests

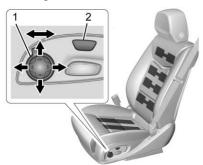


Base Shown, Uplevel Similar

To adjust the seat back:

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

Massage



Driver Seat Shown, Passenger Seat Similar

If equipped, the ignition must be on to use the massage feature.

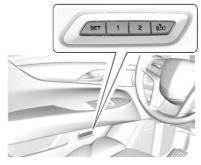
To activate and adjust massage:

- Turn the selection control (1) to view massage options on the infotainment display.
- 2. Select massage feature.
- 3. Press up or down to select massage type.

 To activate massage at last massage type and intensity settings or to turn massage off, press the massage On/Off control (2).

See Massage \$\dip 64.

Memory Features



If equipped, memory seats allow two drivers to store and recall their unique seat positions for driving the vehicle, and a shared exit position for getting out of the vehicle. Other feature positions may also be set, such as power mirrors, power steering wheel, and adjustable pedals, if equipped.

Memory positions are linked to RKE transmitter 1 or 2 for automatic memory recalls.

Before storing, adjust all available memory feature positions. Turn the ignition on and then press and release SET; a beep will sound. Then immediately press and hold 1, 2, or (Exit) on the driver door until two beeps sound. To manually recall these positions, press and hold 1, 2, or (T) until the saved position is reached.

When Auto Memory Recall is enabled in the personalisation menu, positions previously stored to memory buttons 1 and 2 are recalled when the ignition is changed from off to on or ACC/ACCESSORY.

When Easy Exit Options is enabled in the personalisation menu, the feature automatically recalls the previously stored exit position when exiting the vehicle. See *Memory Seats* \Rightarrow 61.

Second Row Seats

The second row backrests can be folded for additional cargo space, or the seats can be folded and tumbled for easy entry/exit to the third row seats. The backrests also recline.

See Second Row Seats \$\dip 67\$.

Third Row Seats

Third row backrests can be folded. See *Third Row Seats* \Rightarrow 71.

Heated and Cooled Front Seats



The buttons are near the climate controls on the centre stack. To operate, the engine must be running.

Press ♣ or ♣ to heat the driver or passenger backrest only.

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

Press 👺 or 💆 to cool the driver or passenger seat.

See Heated and Cooled Front Seats \Rightarrow 65.

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 \$\Dip 57\$ and Electrically Operated Seat Adjustment \$\Dip 58\$.

Seat Belts



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

- Seat Belts ⇒ 73.
- How to Wear Seat Belts Properly

 ⇒ 74.
- ISOFIX Child Restraint Systems

 ⇒ 115.

Passenger Sensing System



The passenger sensing system will turn off the front outboard passenger frontal airbag under certain conditions. No other airbag is affected by the passenger sensing system. See *Passenger Sensing System* ⇔ 88.

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

⇒ 140.

Mirror Adjustment

Interior Mirror

Adjustment

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

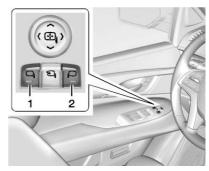
Automatic Dimming Rearview Mirror

The mirror automatically dims to reduce the glare of headlamps from behind. The dimming feature comes on when the vehicle is started.

Rear Camera Mirror

If equipped, this automatic dimming rear-view mirror provides a wide angle camera view of the area behind the vehicle. Adjust the mirror with the tab pushed forward so that the display is off. See *Rear Camera Mirror* \Rightarrow 49.

Exterior Mirrors Power Mirrors

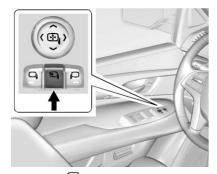


To adjust the mirrors:

- 1. Press (1) or (2) to select the driver or passenger side mirror.
- Press the arrows on the control pad to move each mirror in the desired direction.
- 3. Press either (1) or (2) again to deselect the mirror.

See *Power Mirrors* \$\dip\$ 48.

Power Folding Mirrors



- Press to fold the mirrors inward.
- 2. Press □ again to return the mirrors to the driving position.

Heated Mirrors

Press REAR to heat the door mirrors.

See "Rear Window Demister" under Dual Automatic Climate Control System ⇒ 177.

Steering Wheel Adjustment



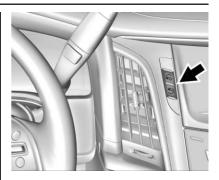
To adjust the power tilt and telescoping steering wheel:

Press the control to move the steering wheel up and down or forward and rearward.

Do not adjust the steering wheel while driving.

Throttle and Brake Pedal Adjustment

If equipped, the position of the throttle and brake pedals can be changed.



Press the top of the switch to move the pedals closer to your body. Press the bottom of the switch to move the pedals away.

The vehicle may have a memory function, which lets pedal settings be saved and recalled. See *Memory Seats* \Rightarrow 61.

Interior Lighting

Dome Lamps



There are dome lamps in the overhead console and the headliner, if equipped.

To change the dome lamp settings, press the following:

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

DOOR: The lamps come on automatically when a door is opened.

ON: Turns all dome lamps on.

Reading Lamps



There are reading lamps in the overhead console and the headliner, if equipped. To operate, the ignition must be on or in ACC/ACCESSORY or using Retained Accessory Power (RAP).



Press \mathscr{F} or \mathscr{T} next to each reading lamp to turn it on or off.

For more information about interior lighting, see *Instrument Panel Illumination Control*

→ 173.

Exterior Lighting



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

U: Turns off the automatic headlights and Daytime Running Lamps (DRL). Turning the headlight control to the off position again will turn the automatic headlights and DRL back on.

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

2007: Turns on the parking lamps including all lamps, except the headlamps.

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

See:

- Daytime Running Lamps (DRL)⇒ 169

Windscreen Wiper/Washer



The windscreen wiper control is on the indicator lever.

The windscreen wipers are controlled by turning the band with \heartsuit FRONT on it.

: Fast wipes.

: Slow wipes.



INT: Use this setting for intermittent wipes or Rainsense™. For intermittent wipes, turn the FRONT band up for more frequent wipes or down for less frequent wipes.

To turn on Rainsense, press \heartsuit AUTO on the lever, then turn the \heartsuit FRONT band on the wiper lever to adjust the sensitivity.

- Turn the band up to a higher INT setting for more sensitivity to moisture.
- Turn the band down to the lower INT setting for less sensitivity to moisture.

Move the band out of the $\overline{\mathbb{Q}}$ INT position to deactivate Rainsense.

OFF: Turns the windscreen wipers off.

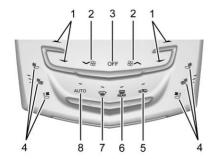
 ∇ : For a single wipe, turn to ∇ , then release. For several wipes, hold the band on ∇ longer.

: Push the paddle at the top of the lever to spray washer fluid on the windscreen.

See Windscreen Wiper/Washer \$ 126.

Climate Controls

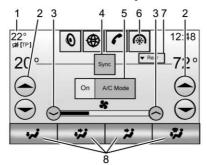
The climate control buttons and the touch screen are used to adjust the heating, cooling, and ventilation.



Centre Console Climate Controls

- Driver and Passenger Temperature Controls
- 2. Fan Control
- 3. OFF (Fan)
- 4. Driver and Passenger Heated and Cooled Seats
- 5. Recirculation
- 6. Rear Window Demister
- Defrost

8. AUTO (Automatic Operation)



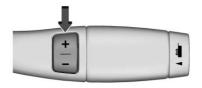
Climate Control Display

- 1. Outside Temperature Display
- Driver and Passenger Temperature Controls
- 3. Fan Control
- 4. SYNC (Synchronised Temperature)
- 5. A/C Mode (Air Conditioning)
- 6. Climate Control Selection (Application Tray Button)
- Rear (Rear Climate Control Touch Screen)
- 8. Air Delivery Mode Control

See Dual Automatic Climate Control System \$\phi\$ 177 and Rear Climate Control System \$\phi\$ 182 (If Equipped).

Transmission

Range Selection Mode



The Range Selection Mode switch, if equipped, is on the gear lever.

1. To enable the Range Selection feature, move the gear lever to the L (Manual Mode) position. The current range will appear next to the L. This is the highest attainable range with all lower gears accessible. As an example, when 5 (Fifth) gear is selected, 1 (First) through 5 (Fifth) gears are available.

 Press the plus/minus buttons on the gear lever to select the desired range of gears for current driving conditions. See Manual Mode

212.

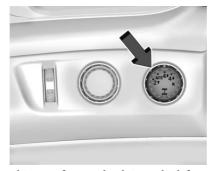
While using Range Selection Mode, cruise control and the Tow/Haul Mode can be used.

Grade Braking is not available when Range Selection Mode is active. See *Tow/Haul Mode ⇒* 213.

Four-Wheel Drive

If equipped with four-wheel drive, the engine's driving power can be sent to all four wheels for extra traction.

Automatic Transfer Case



This transfer case knob is to the left of the steering column.

The different drive options that may be available are the following:

2 † (Two-Wheel Drive High): This setting is used for driving in most street and highway situations.

AUTO (Automatic Four-Wheel Drive): This setting is ideal for use when road surface traction conditions are variable.

Do not use AUTO mode to park on a steep gradient with poor traction such as ice, snow, mud or gravel. In AUTO mode only the rear wheels will hold the vehicle from sliding when parked. If parking on a steep gradient, use 4 [↑] to keep all four wheels engaged.

4 ↑ **(Four-Wheel Drive High)**: Use this setting when extra traction is needed, such as on snowy or icy roads or in most off-road situations.

N (Neutral): Shift to this setting only when towing the vehicle. See *Trailer Towing* \$\dip 256\$.

4 ↓ **(Four-Wheel Drive Low) :** Choose 4 ↓ when driving in deep sand, mud, or snow, and while climbing or descending steep hills.

See Four-Wheel Drive \$ 214.

Infotainment System

See the infotainment manual for information on the radio, audio players, phone, navigation system, Rear Seat Entertainment (RSE), and voice or speech recognition. It also includes information on settings.

Steering Wheel Controls

The infotainment system can be operated by using the steering wheel controls. See "Steering Wheel Controls" in the infotainment manual.

Cruise Control



- (S): Press to turn the system on and off. A white indicator appears in the instrument cluster when cruise is turned on.
- **+RES**: If there is a set speed in memory, press the control up briefly to resume that speed or press and hold to accelerate. If the cruise control is already active, use to increase vehicle speed.

- **SET-:** Press the control down briefly to set the speed and activate cruise control. If the cruise control is already active, use to decrease vehicle speed.
- : Press to disengage cruise control without erasing the set speed from memory.

See Cruise Control \Rightarrow 226 or Adaptive Cruise Control \Rightarrow 228 (if equipped).

Driver Information Centre (DIC)

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



 \wedge or \vee : Move SEL up or down to go to the previous or next selection.

 ✓ or >: Press to move between the interactive display zones in the cluster. Press < to go back to the previous menu.

SEL: Press to open a menu or select a menu item. Press and hold to reset values on certain screens.

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 too closely. When approaching a vehicle ahead too quickly, FCA provides a flashing red alert on the windscreen and rapidly beeps or pulses the driver seat.

Forward Automatic Braking (FAB)

If the vehicle has Forward Collision Alert (FCA), it also has FAB, which includes Intelligent Brake Assist (IBA). When the system detects a vehicle ahead in your path that is travelling in the same direction that you may be about to crash into, it can provide a boost to braking or automatically brake the vehicle. This can help avoid or lessen the severity of crashes when driving in a forward gear.

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 indicator 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)

⇒ 248 and Lane Keep Assist (LKA)

⇒ 248.

Lane Change Alert (LCA)

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

See Side Blind Zone Alert (SBZA) \Rightarrow 246 and Lane Change Alert (LCA) \Rightarrow 246.

Surround Vision

If equipped, views around the vehicle display in the infotainment display to aid with parking and low-speed maneuvers.

Front Vision Camera

If equipped, a view of the area in front of the vehicle displays on the infotainment display to aid with parking and low-speed maneuvers.

See "Front Vision Camera" under Assistance Systems for Parking or Reversing

⇒ 237.

Rear Vision Camera (RVC)

If equipped, RVC shows 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 manoeuvres.

See Assistance Systems for Parking or Reversing \Leftrightarrow 237.

Rear Cross Traffic Alert (RCTA) System

If equipped, the RCTA system uses a triangle with an arrow on the infotainment display to warn of traffic behind your vehicle that may cross your vehicle's path while in R (Reverse). In addition, beeps will sound, or the driver seat will pulse.

See Assistance Systems for Parking or Reversing \Rightarrow 237.

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 show a warning triangle on the infotainment display and a graphic on the instrument cluster to provide the object distance. In addition, multiple beeps or seat pulses may occur if very close to an object.

The vehicle may also have the Front Parking Assist system.

See Assistance Systems for Parking or Reversing \Rightarrow 237.

Power Sockets

Power Sockets 12 Volt Direct Current

Accessory power sockets can be used to plug in electrical equipment, such as a mobile phone, MP3 player, etc.

The vehicle has five accessory power sockets:

- One near the cupholders on the centre console
- One inside the centre console
- One on the rear of the centre console
- One in the third row seat on the driver side
- One in the rear cargo area on the passenger side

Lift the cover to access and replace when not in use.

See Power Sockets \$\Rightarrow\$ 130.

Universal Remote System



If equipped, these buttons are in the front overhead console.

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

See *Universal Remote System Programming ⇒ 163*.

Sunroof



- 1. SLIDE Switch
- 2. TILT Switch

If equipped, the sunroof only operates when the ignition is on or in ACC/ ACCESSORY, or when Retained Accessory Power (RAP) is active. See Retained Accessory Power (RAP) ⇒ 205.

Slide Switch

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

express-close the sunroof, fully press and release (1). Press the switch again to stop the movement.

Open/Close (Manual Mode): To open the sunroof, press and hold (1). Release the switch to stop the movement. Press and hold (1) to close the sunroof. Release the switch to stop the movement.

Tilt Switch

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

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.

If an object is in the path of the sunroof while it is closing, the automatic reversal feature will detect the object and stop the sunroof.

See Sunroof \$ 54.

Performance and Maintenance

Traction Control/Electronic Stability Control

The vehicle has a Traction Control System (TCS) that limits wheel spin and the StabiliTrak system that assists with directional control of the vehicle in difficult driving conditions. Both systems come on automatically when the vehicle is started and begins to move.

- To turn off TCS, press and release on the centre console. The traction off light (2) displays in the instrument cluster. The appropriate Driver Information Centre (DIC) message displays.
- To turn off both TCS and StabiliTrak, press and hold and until and illuminate in the instrument cluster and the appropriate DIC message displays.
- Press and release again to turn on both systems.

StabiliTrak will automatically turn on if the vehicle exceeds 56 km/h (35 mph). Traction control will remain off.

Tyre Pressure Monitor

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



The low tyre pressure warning light alerts to a significant loss in pressure of one of the vehicle's tyres. If the warning light comes on, stop as soon as possible and inflate the tyres to the recommended pressure shown on the Tyre and Loading Information label. See *Vehicle Load Limits* \$\dip 197\$. The warning light will remain on until the tyre pressure is corrected.

The low tyre 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 tyre pressures are getting low and the tyres need to be inflated to the proper pressure.

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

Tyre Fill Alert (If Equipped)

This feature provides visual and audible alerts outside the vehicle to help when inflating an underinflated tyre to the recommended cold tyre pressure. See "Tyre Fill Alert (If Equipped)" under *Tyre Pressure Monitor Operation* ♀ 306.

Fuel



Premium Recommended Fuel

Use unleaded petrol rated at 95 RON or higher in your vehicle. Unleaded petrol with an octane rating as low as 91 RON may be used, but it will reduce performance and fuel economy. See *Fuel* \Rightarrow 250.

Engine Oil Life System

The engine oil life system calculates engine oil life based on vehicle use and displays 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

After you change the oil, the oil life system will need to be reset. See your dealer for service.

See Engine Oil Life System \Rightarrow 272.

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 tyres properly inflated.

- Combine several trips into a single trip.
- Replace the vehicle's tyres with the same TPC Spec number moulded into the tyre's sidewall near the size.
- Follow recommended scheduled maintenance.

Keys, Doors, and Windows

Keys and Locks	
Keys	27
Remote Keyless Entry (RKE)	
System	28
Remote Keyless Entry (RKE)	
System Operation	28
Remote Vehicle Start	34
Door Locks	35
Power Door Locks	37
Delayed Locking	37
Automatic Door Locks	37
Lockout Protection	
Safety Locks	38
Doors	
Tailgate	38
Power Assist Steps	
Vehicle Security	
Vehicle Security	44
Vehicle Alarm System	
Anti-theft Locking System	
Immobiliser	
Immobiliser Operation	46

Exterior Mirrors	
Convex Mirrors	4
Power Mirrors	
Folding Mirrors	48
Heated Mirrors	49
Reverse Tilt Mirrors	49
Interior Mirrors	
Interior Rearview Mirrors	49
Automatic Dimming Rear View	
Mirror	49
Rear Camera Mirror	49
Child-View Mirror	5
Windows	
Windows	52
Power Windows	52
Sun Visors	54
Roof	
Sunroof	54

Keys and Locks

Keys

⚠ Warning

Leaving children in a vehicle with a Remote Keyless Entry (RKE) transmitter is dangerous and children or others could be seriously injured or killed. They could operate the power windows or other controls or make the vehicle move. The windows will function with the 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 an RKE transmitter.





The key is used for the driver's door.



The transmitter has a button on the side used to remove the key. Do not pull the key out without pressing the button.

See your dealer if a replacement key or additional key is needed.

Remote Keyless Entry (RKE) System

See *Declaration of Conformity* \Rightarrow 355.

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

The Keyless Access system allows for vehicle entry when the Remote Keyless Entry (RKE) transmitter is within 1 m (3 ft). See "Keyless Access Operation" later in this section.

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

Other conditions can affect the performance of the RKE transmitter. See *Remote Keyless Entry (RKE) System* ⇒ 28.



 Ω : If equipped, press and release $\widehat{\Omega}$, then immediately press and hold Ω until the indicators flash or for at least four seconds. The engine may be started from outside the vehicle using the RKE transmitter. See *Remote Vehicle Start* \Rightarrow 34.

ress to lock all doors and the fuel door, if equipped.

If the driver door is open when **a** is pressed, all doors will lock and then the driver door will immediately unlock, if enabled in vehicle personalisation. See *Vehicle*

Personalisation

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

If enabled through vehicle personalisation, the indicator lamps flash once to indicate locking has occurred. If enabled through vehicle personalisation, the horn chirps when
☐ is pressed again within three seconds. See *Vehicle Personalisation*
☐ 156.

Pressing $\widehat{\bullet}$ arms the alarm system. See *Vehicle Alarm System* \Leftrightarrow 44.

If equipped with auto mirror folding, pressing and holding **1** for one second will fold the mirrors. The auto mirror folding feature will not operate unless it is enabled. See *Vehicle Personalisation* ♀ 156.

rest once to unlock only the driver door. If is pressed again within three seconds, all remaining doors unlock. The interior lamps may come on and stay on for 20 seconds or until the ignition is turned on.

Pressing on the RKE transmitter disarms the alarm system. See *Vehicle Alarm System* \$\dip 44\$.

If equipped with auto mirror folding, pressing and holding **1** for one second will unfold the mirrors. The auto mirror folding feature will not operate unless it is enabled. See *Vehicle Personalisation* ⇔ 156.

Pressing also unlocks the fuel door, if equipped.

 $\frac{\vec{x}^2}{\vec{y}}$: Press twice to open the liftglass.

翌: Press twice to open or close the tailgate. Press once to stop the liftgate from moving.

▶: Press and release to initiate vehicle locater. The indicators flash and the horn sounds three times. Press and hold for more than three seconds to activate the panic alarm. The indicators flash and the horn sounds repeatedly for 30 seconds. The alarm turns off when the ignition is turned on or is pressed again. The ignition must be off for the panic alarm to work.

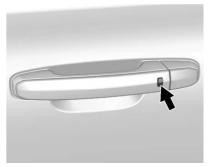
Keyless Access Operation

The Keyless Access system allows for the doors and tailgate to be accessed without pressing the RKE transmitter button. The RKE transmitter must be within 1 m (3 ft) of the tailgate or door being opened. The button is on the outside door handles.

If equipped with memory seats, RKE transmitters 1 and 2 are linked to seating positions of memory 1 or 2. See *Memory Seats* \Rightarrow 61.

Keyless Unlocking/Locking from the Driver Door

When the doors are locked and the RKE transmitter is within 1 m (3 ft) of the door handle, pressing the lock/unlock button on the driver door handle will unlock the driver door, unless the lock/unlock button was used to lock the doors within the last five seconds. When the driver door is unlocked using the lock/unlock button, and the lock/unlock button is press again with five seconds, all passenger doors will unlock.



Driver Side Shown, Passenger Similar

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

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

Keyless Unlocking/Locking from the Passenger Doors

When the doors are locked and the RKE transmitter is within 1 m (3 ft) of the door handle, pressing the lock/unlock button on a passenger door handle will unlock all doors, unless the lock/unlock button was used to lock the doors within the last five seconds.

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.

Anti-Theft Locking from Any Door

When all doors are locked using the lock/unlock button, a second press of the button within five seconds will activate the Anti-theft Locking System.

Anti-Theft Unlocking from Any Door

When all doors are unlocked using the lock/unlock button, the Anti-theft Locking system will be deactivated.

Passive Locking

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

The fuel door will also lock.

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

Temporary Disabling of Passive Locking

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

Remote Left In Vehicle Alert

Remote No Longer in Vehicle Alert

If the vehicle is on, with a door open, and then all doors are closed, the vehicle will check for RKE transmitters inside. If an RKE transmitter is not detected, the Driver Information Centre (DIC) will display NO REMOTE DETECTED and the horn will chirp three times. This occurs

only once each time the vehicle is driven. To turn on or off see *Vehicle Personalisation*

⇒ 156.

Auto Door Relock

If a door is not opened or the vehicle is not started within three minutes of unlocking the vehicle and disarming the alarm system with the RKE transmitter, all doors are automatically locked and the vehicle alarm system is re-armed. This can be turned on or off in through vehicle personalisation. See *Vehicle Personalisation* ⇔ 156.

Keyless Tailgate Opening

Press the touch pad on the rear of the tailgate above the number plate to open the tailgate when all doors are unlocked or when the RKE transmitter is within 1 m (3 ft).

Keyless Liftglass Opening

Press the exterior liftglass button to open the liftglass when all doors are unlocked or when the RKE transmitter is within 1 m (3 ft).

Key Access

To access a vehicle with a dead transmitter battery, see *Door Locks ⇔ 35*.

Programming Transmitters to the Vehicle

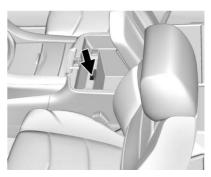
Only RKE transmitters programmed to the vehicle will work. If a transmitter is lost or stolen, a replacement can be purchased and programmed through your dealer. When the replacement transmitter is programmed to this vehicle, all remaining transmitters must also be reprogrammed. Any lost or stolen transmitters will no longer work once the new transmitter is programmed. Each vehicle can have up to eight transmitters programmed to it. See your retailer to program transmitters to the vehicle.

Starting the Vehicle with a Low Transmitter Battery

If the transmitter battery is weak or if there is interference with the signal, the DIC may display NO REMOTE DETECTED or NO REMOTE KEY WAS DETECTED. PLACE KEY IN TRANSMITTER POCKET. THEN START YOUR VEHICLE. when starting the vehicle.

To start the vehicle:

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



- 2. Place the transmitter in the transmitter pocket/insert.
- With the vehicle in P (Park) or N (Neutral) press the brake pedal and ENGINE START/STOP.

Replace the transmitter battery as soon as possible.

Battery Replacement

⚠ Warning

Make sure that you dispose of old batteries in accordance with environmental protection regulations to help protect the environment and your health.

Caution

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

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



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



Separate the two halves of the transmitter using a flat tool inserted into the bottom centre of the transmitter. Do not use the key slot.



- Remove the old battery. Do not use a metal object.
- Insert the new battery on the back housing, positive side facing down. Replace with a CR2032 or equivalent battery.
- Align the front and back housing then snap the transmitter together.

Remote Vehicle Start

The climate control system will come on when the vehicle is started remotely depending on the outside temperature.

The rear demist and heated and cooled seats, if equipped, may also come on.

See Heated and Cooled Front Seats \Leftrightarrow 65 and Vehicle Personalisation \Leftrightarrow 156.

Laws in some communities may restrict the use of remote starters. Check local regulations for any requirements on remote starting of vehicles.

Do not use remote start if the vehicle is low on fuel.

The vehicle cannot be remote started if:

- The transmitter is in the vehicle.
- The bonnet is not closed.
- There is an emission control system malfunction and the malfunction indicator lamp is on.

The engine will turn off during a remote vehicle start if:

- The coolant temperature gets too high.
- The oil pressure gets low.

The RKE transmitter range may be less while the vehicle is running.

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

⇒ 28 or *Vehicle Personalisation* ⇒ 156.

Starting the Engine Using Remote Start

- 1. Press and release
- Immediately press and hold Quntil the indicator lamps flash or for at least four seconds.

When the vehicle starts, the parking lights will turn on. The doors will be locked and the climate control system may come on.

The engine will continue to run for 10 minutes. Repeat Steps 1 and 2 for one 10-minute time extension.

Turn the ignition on to operate the vehicle.

Extending Engine Run Time

The engine run time can be extended by 10 minutes, for a total of 20 minutes, if during the first 10 minutes Steps 1 and 2 are repeated while the engine is still running. An extension can be requested 30 seconds after starting.

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.

Cancelling a Remote Start

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

- Press and hold Ω until the parking lamps turn off.
- Turn on the hazard warning lights.

Turn the ignition on and then off.

Door Locks

⚠ Warning

Unlocked doors can be dangerous.

- Passengers, especially children, can easily open the doors and fall out of a moving vehicle. The doors can be unlocked and opened while the vehicle is moving. The chance of being thrown out of the vehicle in a crash is increased if the doors are not locked. So, all passengers should wear seat belts properly and the doors should be locked whenever the vehicle is driven.
- Young children who get into unlocked vehicles may be unable to get out. A child can be overcome by extreme heat and can suffer permanent

 (Continued)

Warning (Continued)

injuries or even death from heat stroke. Always lock the vehicle whenever leaving it.

 Outsiders can easily enter through an unlocked door when you slow down or stop the vehicle. Locking the doors can help prevent this from happening.

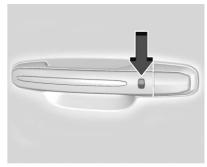
To lock or unlock the doors from inside the vehicle:

- Press or or on a power door lock switch.
- Push down the manual lock knob on the driver door to lock all doors. Push down the lock knob on a passenger door to lock that door only.
- Pull the door handle once to unlock that door. Pull the handle again to unlatch it.

To lock or unlock the doors from outside the vehicle:

- Press or on the RKE transmitter
- Use the key in the front doors. The key cylinder is covered by a cap.
 See "Driver Door Key Lock Cylinder Access" later in this section.

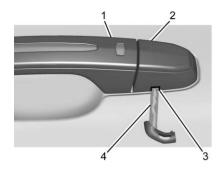
Keyless Access



The RKE transmitter must be within 1 m (3 ft) of the tailgate or door being opened. Press the button on the door

handle to open. See "Keyless Access Operation" in *Remote Keyless Entry* (*RKE*) System Operation \Rightarrow 28.

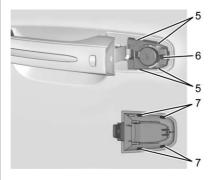
Driver Door Key Lock Cylinder Access (Slotted Cap Access) (In Case of Dead Battery)

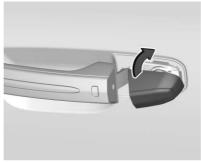


To access the driver door key lock cylinder:

- Pull the door handle (1) to the open position and hold it open until cap installation is complete.
- 2. Insert the key (4) into the slot (3) on the bottom of the cap (2) and lift the key upward.

- 3. Remove the cap (2).
- 4. Use the key (4) in the cylinder.





To replace the slotted cap:

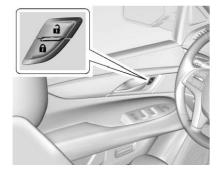
- Position the bottom edge of the cap under the lower edge of the metal piece (6). The tabs (7) attach to metal piece (6) at the positions (5).
- 2. Rotate the cap upward to install into place.
- 3. Check that the cap is secure.
- Release the door handle.

Free-Turning Locks

The door key lock cylinder turns freely when either the wrong key is used, or the correct key is not fully inserted. The free turning door lock feature prevents the lock from being forced open. To reset the lock, turn it to the vertical position with the correct key fully inserted. Remove the key and insert it again. If this does not reset the lock, turn the key halfway around in the cylinder and repeat the reset procedure.

Power Door Locks

Press $\widehat{\bullet}$ or $\widehat{\bullet}$ on the Remote Keyless Entry (RKE) transmitter. See *Remote Keyless Entry (RKE) System Operation* \Rightarrow 28.



: Press to lock the doors.

: Press to unlock the doors.

Delayed Locking

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

Delayed locking can only be turned on when the Unlocked Door Anti-Lockout feature has been turned off.

When is pressed on the power door lock switch while a door or the tailgate 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 doors immediately.

This feature can also be programmed. See *Vehicle Personalisation* \Rightarrow *156*.

Automatic Door Locks

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

If a vehicle door is unlocked and then opened and closed, the doors will lock either when your foot is removed from the brake or the vehicle speed becomes faster than 13 km/h (8 mph).

To unlock the doors:

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

Automatic door locking and unlocking cannot be programmed.

Lockout Protection

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.

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

Unlocked Door Anti-Lockout

If Unlocked Door Anti-Lockout is turned on and the vehicle is off, the driver door is open, and locking is requested, all the doors will lock and the driver door will remain open. Press the button again to lock the driver door. The Unlocked Door Anti-Lockout feature can be turned on or off. See *Vehicle Personalisation*

⇒ 1.56.

Safety Locks

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



Press at to activate the safety locks on the rear doors. The indicator light comes on when activated.

Press again to deactivate the safety locks.

Doors

Tailgate



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

(Continued)

Warning (Continued)

set the fan speed to the highest setting. See "Climate Control Systems" in the Index.

If the vehicle is equipped with a power tailgate, disable the power tailgate function.

See Engine Exhaust \$\dip 208\$.

Caution

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

Power Tailgate Operation



riangle Warning

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

Caution

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



The switch is on the overhead console. The vehicle must be in P (Park).

The modes are:

MAX: Opens to maximum height.

3/4: Opens to a reduced height that can be set from 3/4 to fully open. Use to prevent the liftgate from opening into overhead objects such as a garage door or roof-mounted cargo. The liftgate can be opened all the way manually.

OFF: Opens manually only.

To open or close the tailgate, select MAX or 3/4 mode and then:

- Press twice quickly on the RKE transmitter until the tailgate moves.
- Press on the overhead console. The driver door must be unlocked.
- Press the touch pad on the underside of the tailgate handle after unlocking all doors. A locked vehicle can be opened if the RKE transmitter is within 1 m (3 ft) of the touch pad.



 Press on the bottom edge of the tailgate next to the latch to close.

Press any tailgate button, the touch pad, or 2 on the RKE transmitter while the tailgate is moving to stop it. Pressing any tailgate button or pressing 2 twice quickly on the RKE transmitter restarts the operation in the reverse direction. Pressing the touch pad on the tailgate handle will restart the motion, but only in the opening direction.

Caution

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

The power tailgate may be temporarily disabled in extremely low temperatures, or after repeated power cycling over a short period of time. If this occurs, the tailgate can still be operated manually. Select OFF on the tailgate switch.

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

Falling Tailgate Detection

If the power tailgate automatically closes after a power opening cycle, it indicates that the system is reacting to excess weight on the tailgate or a possible support strut failure. Remove any excess weight. If the tailgate continues to automatically close after opening, see your dealer for service before using the power tailgate.

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

Obstacle Detection Features

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

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

Pinch sensors are on the side edges of the tailgate. If an object is caught between the tailgate and the vehicle and presses against a sensor, the tailgate will reverse direction and stop at a partially open position. The tailgate will remain open until it is activated again or closed manually.

Setting the 3/4 Mode

To change the position the tailgate stops at when opening:

- 1. Select MAX or 3/4 mode and open the liftgate.
- Stop the tailgate movement at the desired height by pressing any tailgate button. Manually adjust the liftgate position if needed.
- Press and hold on the bottom edge of the tailgate next to the latch on the outside of the tailgate until the indicators flash and a beep sounds. This indicates the setting has been recorded.

The liftgate cannot be set below a minimum programmable height. If there is no light flash or sound, then the height adjustment may be too low.

Manual Operation

Select OFF to manually operate the tailgate.

Caution

Attempting to move the tailgate too quickly and with excessive force may result in damage to the vehicle.

Operate the tailgate manually with a smooth motion and moderate speed. The system includes a feature which limits the manual closing speed to protect the components.



To open the tailgate, press on the power door lock switch or press on the RKE transmitter twice to unlock

all doors. Press the touch pad (1) on the underside of the tailgate handle and lift up.

Press the button (2) above the number plate to open the liftglass, or press twice quickly on the RKE transmitter. Do not leave the liftglass open when raising the tailgate.

There will be a delay in the release of the liftglass if there is an attempt to open it while the rear wiper is in motion.

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

The RKE transmitter must be within 1 m (3 ft) of the tailgate to automatically unlock it. See *Remote Keyless Entry (RKE) System Operation* ⇒ 28.

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

Hands-Free Operation

The tailgate may be operated with a kicking motion under the rear bumper.

The tailgate will not operate if the RKE transmitter is not within 1 m (3 ft).

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



Length of Kick Zone



To operate, move your foot in a forward kicking motion under the centre of the rear bumper, then pull it back.

Caution

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

- Do not sweep your foot side to side.
- Do not keep your foot under the bumper; the tailgate will not activate.
- Do not touch the tailgate until it has stopped moving.
- This feature may be temporarily disabled under some conditions.
 If the tailgate does not respond to the kick, open or close the tailgate

by another method or start the vehicle. The feature will be re-enabled.

When closing the tailgate using this feature, there will be a short delay. The rear lights will flash and a chime will sound. Step away from the tailgate before it starts moving.

Power Assist Steps



Never place hands or other body parts between the deployed power assist steps and the vehicle. You or others could be seriously injured.

⚠ Warning

Never step on a moving assist step. You or others could be seriously injured.

Disable the assist steps before jacking or placing any object under the vehicle.

Too much ice build-up may prevent deployment of the power assist steps. Check the step position before exiting the vehicle. If this happens, disable the power assist steps, clear the ice, then enable the assist steps and confirm normal function prior to use.

Keep hands, children, pets, objects, and clothing clear of the power assist steps when in motion. The steps will reverse direction if they encounter an obstruction when opening or closing. Remove the obstruction, then open and close the door on the same side to complete the motion of the assist steps. If the obstruction is not cleared, the assist steps remain extended while driving.

To change the settings:

- 1. Touch ₩.
- 2. Touch Running Boards icon.

The options are:

OFF: Disables the power assist steps, so they will not deploy.

ON: Power assist steps will deploy when a door is opened. When a door is closed the assist steps will automatically retract after three seconds

Extended: Keeps the steps deployed when the vehicle is in P (Park) or N (Neutral). This setting may be used when cleaning the steps.

Vehicle Security

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

Vehicle Alarm System



The indicator light, on the instrument panel near the windscreen, 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 tailgate or the bonnet is open.

Slow Flash: Alarm system is armed.

Arming the Alarm System

- 1. Turn off the vehicle.
- Lock the vehicle in one of three ways:
 - Use the RKE transmitter.
 - Use the Keyless Access system.
 - With a door open, press on the interior of the door.

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.

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

Disarming the Alarm System

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.
- Start the vehicle.

To avoid setting off the alarm by accident:

- Lock the vehicle after all occupants have exited.
- Always unlock a door with the RKE transmitter, or use the Keyless Access system.

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

How to Detect a Tamper Condition

If a is pressed on the RKE transmitter and the horn chirps 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.

Power Sounder, Inclination Sensor and Intrusion Sensor

In addition to the standard theft-deterrent system features, this system also has a power sounder, inclination sensor and intrusion sensor.

The power sounder provides an audible alarm which is distinct from the vehicle's horn. It has its own power source, and can sound an alarm if the vehicle's battery is compromised.

The inclination sensor can set off the alarm if it senses movement of the vehicle, such as a change in vehicle orientation.

The intrusion sensor monitors the vehicle interior, and can activate the alarm if it senses unauthorised entry into the vehicle's interior. Do not allow passengers or pets to remain in the vehicle when the intrusion sensor is activated.

Before arming the theft-deterrent system and activating the intrusion sensor:

- Make sure all doors and windows are completely closed.
- Secure any loose items such as sunshades.
- Make sure there are no obstructions blocking the sensors in the front overhead console.

 Close DVD screens before leaving the vehicle.

Inclination and Intrusion Sensors Disable Switch



It is recommended that the intrusion and inclination sensors be deactivated if pets are left in the vehicle or the vehicle is being transported.

With the vehicle turned off, press in the front overhead console. The indicator light will come on momentarily, indicating that these sensors have been disabled until the next time the alarm system is armed.

Anti-theft Locking System

⚠ Warning

Do not use the system if there are people in the vehicle! The doors cannot be unlocked or opened from the inside.

The vehicle is equipped with a deadbolt locking feature in addition to the standard door locks.

The deadbolt is engaged whenever you press on the RKE transmitter twice within five seconds with all doors closed and the vehicle off. The deadbolt lock can also be engaged with the Keyless Access system. See "Keyless Access Operation" under Remote Keyless Entry (RKE) System Operation \$\Rightarrow\$ 28.

When the doors are secured with the deadbolt, they cannot be unlocked or opened using the controls or handles inside the vehicle.

Press on the transmitter once to open the deadbolt and unlock the driver door. Pressing the button again within five seconds will unlock all of the doors.

Immobiliser

See *Declaration of Conformity* \Rightarrow 355.

Immobiliser Operation

This vehicle has a passive theft-deterrent system.

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

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

The immobilisation system is disarmed when the ignition is on and a valid transmitter is found in the vehicle.



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

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

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 place the transmitter in the transmitter pocket/insert next to the centre console storage area between the driver and front passenger seats.

If the engine does not start with the other transmitter or when the transmitter is in the pocket/insert, the 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

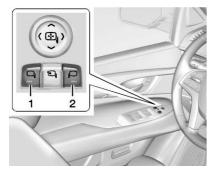
Convex Mirrors



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

Power Mirrors



To adjust the mirrors:

- Press (1) or (2) to select the driver or passenger side mirror.
 The indicator light comes on.
- Press the arrows on the control pad to move the mirror up, down, right, or left.
- Adjust the outside mirror so that the side of the vehicle and the area behind are seen.
- Press either (1) or (2) again to deselect the mirror. The indicator light goes off.

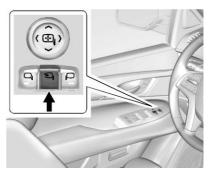
Exterior Automatic Dimming Mirror

Indicator

The vehicle may have an indicator on the mirrors that flashes in the direction of the turn or lane change.

Folding Mirrors

Power Folding



- Press to fold the mirrors inward.
- 2. Press □ again to return the mirrors to the driving position.

Resetting the Power Folding Mirrors

Reset the power folding mirrors if:

- The mirrors are accidentally obstructed while folding.
- They are accidentally manually folded/unfolded.

- The mirrors will not stay in the unfolded position.
- The mirrors vibrate at normal driving speeds.

Fold and unfold the mirrors one time using the mirror controls to reset them to their normal position.

A popping noise may be heard during the resetting of the power folding mirrors. This sound is normal after a manual folding operation.

Auto Mirror Folding

If equipped, with the ignition off, press and hold on the RKE transmitter for approximately one second to automatically fold the exterior mirrors. Press and hold on the RKE transmitter for approximately one second to unfold. See *Remote Keyless Entry (RKE) System Operation* ⇒ 28.

This feature is turned on or off through vehicle personalisation. See *Vehicle Personalisation* \$\to\$ 1.56.

Heated Mirrors

REAR: Press to heat the outside mirrors.

See "Rear Window Demister" under Dual Automatic Climate Control System

⇒ 177.

Reverse Tilt Mirrors

If equipped with memory seats, the passenger and/or driver mirror tilts to a preselected position when the vehicle is in R (Reverse). This allows the kerb to be seen when parallel parking.

The mirror(s) return to the original position when:

- The vehicle is shifted out of R (Reverse), or remains in R (Reverse) for about 30 seconds.
- The ignition is turned off.
- The vehicle is driven in R (Reverse) above a set speed.

To turn this feature on or off, see *Vehicle Personalisation* \Rightarrow 156.

Interior Mirrors

Interior Rearview Mirrors

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

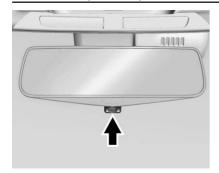
Do not spray glass cleaner directly on the mirror. Use a soft towel dampened with water.

Automatic Dimming Rear View Mirror

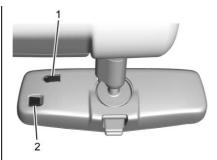
The rearview mirror automatically dims to reduce the glare of the headlamps from behind. This feature comes on when the vehicle is started.

Rear Camera Mirror

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



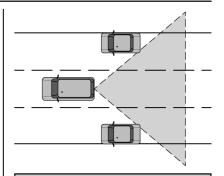
Pull the tab rearward to turn on the display. Push the tab forward to turn it off. When off, the mirror is automatic dimming. Adjust the mirror for a clear view of the area behind the vehicle while the display is off.



To adjust the brightness, press the button (1) on the back of the rear-view mirror without covering the light sensor (2).



Each button press cycles the brightness between five settings.



⚠ Warning

The Rear Camera Mirror (RCM) has a limited view. Portions of the road, vehicles, and other objects may not be seen. Do not drive or park the vehicle using only this camera. Objects may appear closer than they are. Check the outside mirrors or glance over your shoulder when making lane changes or merging. Failure to use proper care may result in injury, death, or vehicle damage.



The camera that provides the Rear Camera Mirror (RCM) image is above the license plate, next to the Rear Vision Camera (RVC).

To clean the rear camera, see *Rear Window Wiper/Washer* \Rightarrow 128.

Troubleshooting

If the tab is in the rearward position and a blue screen and the displayed in the mirror and the display shuts off, see your retailer for service.

The RCM may not work properly or display a clear image if:

- There is glare from the sun or headlights. This may obstruct objects from view.
- Dirt, snow, or other debris blocks the camera lens. Clean the lens with a soft damp cloth.
- The back of the vehicle has been damaged and the position and mounting angle of the camera has changed.

Child-View Mirror



If equipped, the child-view mirror is on the overhead console. Press the fixed button on the cover to release. Push the mirror back up when not in use.

Windows

Warning

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



The vehicle aerodynamics are designed to improve fuel economy performance. This may result in a

pulsing sound when either rear window is down and the front windows are up. To reduce the sound, open either a front window or the sunroof, if equipped.

Power Windows

⚠ Warning

Children could be seriously injured or killed if caught in the path of a closing window. Never leave the Remote Keyless Entry (RKE) transmitter in a vehicle with

children. When there are children in the rear seat, use the window lockout switch to prevent operation of the windows. See *Keys* \Rightarrow 27.



Power windows work when the ignition is on, in ACC/ACCESSORY, or when Retained Accessory Power (RAP) is active. See Retained Accessory Power $(RAP) \Rightarrow 205$.

Using the window switch, press to open or pull to close the window.

The windows may be temporarily disabled if they are used repeatedly within a short time.

Window Lockout

This feature stops the rear passenger window switches from working.



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

Window Express Movement

All windows can be opened without holding the window switch. Press the switch down fully and quickly release to express open the window.

If equipped, pull the window switch up fully and quickly release to express close the window.

Briefly press or pull the window switch in the same direction to stop that window's express movement.

Window Automatic Reversal System

The express-close 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 normally after the object or condition is removed.

Automatic Reversal System Override



If automatic reversal system override is active, the window will not reverse automatically. You or others could be injured and the window could be damaged. Before using automatic reversal system override, make sure that all people and obstructions are clear of the window path.

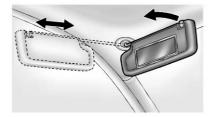
When the engine is on, override the automatic reversal system by pulling and holding the window switch if conditions prevent it from closing.

Programming the Power Windows

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

- Close all doors.
- Turn the ignition on or to ACC/ ACCESSORY.
- Partially open the window to be programmed. Then close it and continue to pull the switch briefly after the window has fully closed.
- Open the window and continue to press the switch briefly after the window has fully opened.

Sun Visors



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

Roof

Sunroof



- 1. SLIDE Switch
- 2. TILT Switch

If equipped, the sunroof only operates when the ignition is on or in ACC/ ACCESSORY, or when Retained Accessory Power (RAP) is active. See Retained Accessory Power (RAP) ⇒ 205.

Slide Switch

Express-Open/Express-Close: To express-open the sunroof, fully press and release (1). Press the switch

again to stop the movement. To express-close the sunroof, fully press and release (1). Press the switch again to stop the movement.

Open/Close (Manual Mode): To open the sunroof, press and hold (1). Release the switch to stop the movement. Press and hold (1) to close the sunroof. Release the switch to stop the movement.

Tilt Switch

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

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

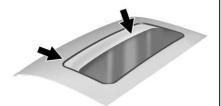
The sunroof also has a sunshade which can be pulled forward to block sun rays. The sunshade must be opened and closed manually when the sunroof is in the vent or fully closed position.

Automatic Reversal System

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

If an object is in the path during express closing, the reversal system will detect an object, stop, and open the sunroof again.

If frost or other conditions prevent closing, override the feature by closing the sunroof in manual mode. To stop 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.

Seats and Restraints

Head Restraints
Head Restraints 57
Front Seats
Electrically Operated Seat
Adjustment 58
Lumbar Adjustment 59
Reclining Seat Backrests 6
Memory Seats 6
Massage 64
Heated and Cooled Front Seats 65
Rear Seats
Rear Seats 66
Heated Rear Seats 66
Second Row Seats 67
Third Row Seats 7
Seat Belts
Seat Belts 73
How to Wear Seat Belts
Properly 74
Three-Point Belt 75
Seat Belt Use During
Pregnancy 80
Safety System Check 8
Seat Belt Care 8

Replacing Seat Belt System Parts
after a Crash 81
Airbag System
Air-Bag System 82
Where Are the Airbags? 84
When Should an Airbag
Inflate? 85
What Makes an Airbag Inflate? 86
How Does an Airbag Restrain? 86
What Will You See after an Airbag
Inflates? 87
Passenger Sensing System 88
Servicing the Airbag-Equipped
Vehicle 92
Adding Equipment to the
Airbag-Equipped Vehicle 92
Airbag System Check 93
Replacing Airbag System Parts
after a Crash 93
Child Restraints
Older Children 94
Infants and Young Children 96
Child Restraint Systems 98
Where to Put the Restraint 99
ISOFIX Child Restraint
Systems 115
Securing Child Restraints (With
the Seat Belt in the
Rear Seat) 116

Securing Child Restraints (With
the Seat Belt in the
Front Seat) 118

Head Restraints

Front Seats

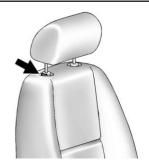
The vehicle's front seats have adjustable head restraints in the outboard seating positions.



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

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

The front seat outboard head restraints are not removable.

Second Row Seats

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

The second row seat outboard head restraints are not removable.

Third Row Seats



The third row seat head restraint can be lowered to allow for better visibility when the rear seat is unoccupied. To lower the head restraint, press the button located on the top of the backrest and push the head restraint down.

Return the lowered head restraint to the upright position until it locks into place. Push and pull on the head restraint to make sure it is locked.

The third row seat outboard head restraints are not removable.

Front Seats

Electrically Operated Seat Adjustment

Up-level Seat Adjustment

⚠ Warning

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

If equipped, the ignition must be on to use all up-level seat features.

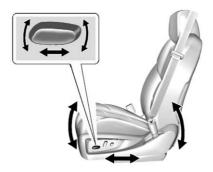
Up-level Seat Control



- 1. Feature Select
- 2. Up
- 3. Rearward
- 4. Down
- 5. Forward
- Move Feature Select (1) to display seat adjustments on the infotainment display. Press and release or hold to scroll through features.
- Press Up (2) to make upward adjustments of the selected feature.

- Press Rearward (3) to make rearward adjustments of the selected feature.
- Press Down (4) to make downward adjustments of the selected feature.
- Press Forward (5) to make forward adjustments of the selected feature.

Base Seat Adjustment



To adjust the seat:

 Move the seat forward or rearward by sliding the control forward or rearward.

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

Lumbar Adjustment Lumbar and Bolster Support



Base Seat Adjustment

To adjust lumbar support:

 Press and hold the control forward to increase or rearward to decrease upper and lower lumbar support at the same time. Press and hold the control up to increase upper lumbar support and decrease lower lumbar support.

Press and hold the control down to increase lower lumbar support and decrease upper lumbar support.



Up-level Seat Adjustment

To adjust lumbar support, if equipped:

 Press and release or hold Feature Select (1) to scroll to lumbar support on the infotainment display.

- Press Forward (5) or Rearward (3) to adjust lumbar forward or rearward.
- Press Up (2) or Down (4) to adjust lumbar up or down.

To adjust bolster support, if equipped:

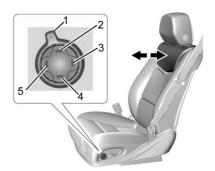


Up-level Seat Adjustment

- Press and release or hold Feature Select (1) to scroll to bolster support on the infotainment display.
- Press Forward (5) or Rearward (3) to adjust bolster support inward or outward.

Upper Shoulder Support

To adjust upper shoulder support, if equipped:



- Press and release or hold Feature Select (1) to scroll to upper shoulder support on the infotainment display.
- Press Forward (5) or Rearward (3) to adjust shoulder support forward or rearward.

Reclining Seat Backrests



Base Shown, Up-level Similar

To recline the seat backrest:

- 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 fastened, the seat belts cannot do their job.

(Continued)

Warning (Continued)

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. So sit well back in the seat and wear the seat belt properly.



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

Memory Seats



If equipped, memory seats allow two drivers to store and recall their unique seat positions for driving the vehicle, and a shared exit position for getting out of the vehicle. Other feature positions may also be set, such as power mirrors, power steering wheel, and adjustable pedals, if equipped. Memory positions are linked to RKE transmitter 1 or 2 for automatic memory recalls.

Before storing, adjust all available memory feature positions. Turn the ignition on and then press and release SET; a beep will sound. Then immediately press and hold 1, 2, or (Exit) on the driver door until two beeps sound. To manually recall these positions, press and hold 1, 2, or (Exit) until the saved position is reached.

The vehicle identifies the current driver's RKE transmitter number (1–8). See *Remote Keyless Entry (RKE)*System Operation

28. Only RKE transmitters 1 and 2 can be used for automatic memory recalls. A Driver Information Centre (DIC) welcome message indicating the transmitter

number may display for the first few ignition cycles following a transmitter change. For Auto Memory Recall to work properly, save the positions to the memory button (1 or 2) matching the RKE transmitter number displayed in the DIC welcome message. Carry the linked RKE transmitter when entering the vehicle.

Vehicle Personalisation Settings

- To have the Auto Memory Recall movement begin when the vehicle is started, select the Settings menu, then Vehicle, then Comfort and Convenience, and then Auto Memory Recall. Select On or Off. See "Auto Memory Recall" later in this section.
- To begin Easy Exit Recall movement when the ignition is turned off and the driver door is opened, or when the ignition is turned off with the driver door already opened, select the Settings menu, then Vehicle, then Comfort and Convenience, and then Easy Exit Options. Select On or Off. See "Easy Exit Recall" later in this section.

Identifying Driver Number

To identify the driver number:

- Start the vehicle with the other key or RKE transmitter. The DIC should display the driver number; 1 or 2. Turn the ignition off and remove the key or RKE transmitter from the vehicle.
- Start the vehicle with the initial key or RKE transmitter. The DIC should display the other driver number not shown in step 1.

Saving Memory Positions

Read these instructions completely before saving memory positions.

To save preferred driving positions 1 and 2:

 Turn the ignition on or to ACC/ ACCESSORY.

A DIC welcome message may be displayed indicating number 1 or 2 for memory recalls.

- Adjust all available memory features to the desired driving position.
- 3. Press and release SET; a beep will sound.
- 4. Immediately press and hold the 1 or 2 memory button matching the above DIC welcome message until two beeps sound.

If too much time passes between releasing SET and pressing 1, the memory position will not be saved and two beeps will not sound. Repeat Steps 3 and 4.

1 or 2 corresponds to the driver number. See "Identifying Driver Number" in this section.

5. Repeat Steps 1–4 for a second driver using 1 or 2.

To save positions for $(-1)^{-1}$ and easy exit features, repeat Steps 1–4 using $(-1)^{-1}$. This stores the positions for getting out of the vehicle.

Save preferred memory feature positions to both 1 and 2 if you are the only driver.

Manually Recalling Memory Positions

Press and hold 1, 2, or to recall the previously stored memory positions.

To stop manual recall movement, release 1, 2 or B. Recall can also be stopped by pressing a power seat, SET, power mirror control, power steering wheel control, or adjustable pedal control, if memory equipped. The driver or passenger side mirror must be selected.

Auto Memory Recall

The vehicle identifies the number of the current driver's RKE transmitter (1–8). See *Remote Keyless Entry (RKE) System Operation* ⇒ 28. If the RKE transmitter is 1 or 2, and Auto Memory Recall is programmed on in vehicle personalisation, the positions saved to the same memory button number 1 or 2 are automatically recalled when the ignition is turned on, or turned from off to ACC/ACCESSORY. RKE transmitters 3–8 will not provide automatic memory recalls.

The transmission must be in P (Park) to initiate Auto Memory Recall. Auto Memory Recall will complete if the vehicle is shifted out of P (Park) prior to reaching the stored memory position.

To stop Auto Memory Recall movement, turn the ignition off or press any of the following memory controls:

- Power seat
- Memory SET, 1, 2, or
- Power mirror, with the driver or passenger side mirror selected
- Power steering wheel, if equipped
- Adjustable pedals, if equipped

If the stored memory seat position does not automatically recall or recalls to the wrong positions, the driver's RKE transmitter number (1 or 2) may not match the memory button number that positions were saved to.

Try storing the position to the other memory button or try the other RKE transmitter.

Easy Exit Recall

Easy Exit Recall is not linked to an RKE transmitter. The position stored to recommend is used for all drivers. To turn Easy Exit Recall on or off, see "Vehicle Personalisation Settings" previously in this section and Vehicle Personalisation \$\displace\$ 156.

If turned on, the positions saved to are automatically recalled when one of the following occurs:

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

To stop Easy Exit Recall movement, press any of the following memory controls:

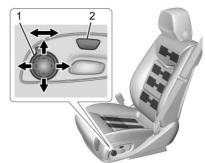
- Power seat
- Memory SET, 1, 2, or

- Power mirror, with the driver or passenger side mirror selected
- Power steering wheel, if equipped
- Adjustable pedals, if equipped

Obstructions

If something has blocked the driver seat and/or power steering wheel while recalling a memory position, the recall may stop. Remove the obstruction and try the recall again. If the memory position still does not recall, see your dealer for service.

Massage



Driver Seat Shown, Passenger Seat Similar

If equipped, the ignition must be on to use the massage feature.

To activate and adjust massage:

- Turn the selection control (1) to view massage options on the infotainment display.
- 2. Select massage feature.
- 3. Press up or down to select the massage type.
- 4. Press forward or rearward to change the intensity.

 To activate massage at last massage type and intensity settings or to turn massage off, press the massage On/Off control (2).

Heated and Cooled Front Seats

⚠ Warning

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



To operate, the engine must be running.

Press ♣ or ♣ to heat the driver or passenger backrest only.

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

Press or to cool the driver or passenger seat.

When this feature is off, the heated and cooled seat symbols on the buttons are white. When a heated seat is turned on, the symbol turns red. When a cooled seat is turned on, the symbol turns blue.

Press the button once for the highest setting. With each press of the button, the seat will change to the next lower setting, and then to the off setting. The indicator lights next to the buttons indicate three for the highest setting and one for the lowest. If the heated seats are on high for an extended time, their level may automatically be lowered.

The passenger seat may take longer to heat up.

Remote Start Auto Heated and Cooled Seats

During a remote start, the heated or cooled seats will turn on if enabled in vehicle personalisation. When it is cold outside, the heated seats turn on; when it is hot outside, the cooled seats turn on. The seats will continue to operate depending on the vehicle's internal temperature. If auto heated or cooled seats are not equipped or enabled, seat operation is cancelled when the ignition is turned on. Press the heated or cooled seats button to use the heated or cooled seats after

the vehicle is started. See *Remote Vehicle Start* \Rightarrow 34 and *Vehicle Personalisation* \Rightarrow 156.

The heated or cooled seat indicator lights do not turn on during a remote start.

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

Auto Heated and Cooled Seats

When the ignition is on, the auto heated or cooled seats will automatically activate at the level determined by the vehicle's interior temperature, if enabled in vehicle personalisation. See *Vehicle Personalisation* \$\phi\$ 156. The indicator lights next to the buttons indicate the level of operation. Use the heated or cooled seat buttons to turn off auto heated or cooled seats. If the passenger seat is unoccupied, this feature will not activate that seat.

Rear Seats

Rear Seat Reminder

If equipped, the message REAR SEAT REMINDER LOOK IN REAR SEAT displays under certain conditions indicating there may be an item or passenger in the rear seat. Check before exiting the vehicle.

This feature will activate when a second row door is opened while the vehicle is on, or up to 10 minutes before the vehicle is turned on. There will be an alert when the vehicle is turned off. The alert does not directly detect objects in the rear seat; instead, under certain conditions, it detects when a rear door is opened and closed, indicating that there may be something in the rear seat.

The feature is active only once each time the vehicle is turned on and off, and will require reactivation by opening and closing the second row doors. There may be an alert even when there is nothing in the rear seat; for example, if a child entered the

vehicle through the rear door and left the vehicle without the vehicle being turned off.

The feature can be turned on or off. See *Vehicle Personalisation* \Rightarrow 156.

Heated Rear Seats



If temperature change or pain to the skin cannot be felt, the seat heater may cause burns. See the Warning under *Heated and Cooled Front Seats* \Leftrightarrow 65.



The buttons are on the rear of the centre console.

With the ignition on, press ## or ## to heat the left or right outboard seat cushion. An indicator on the rear climate control display appears when this feature is on.

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

If the heated seats are on high for an extended time, their level may automatically be lowered.

Second Row Seats

The second row seats can be folded for additional cargo space or folded and tumbled for easy entry and exit to the third row seat.

Reclining Seat Backrests

To recline the seat backrest:



 Lift the lever on the outboard side of the seat.

- Move the backrest to the desired position, and then release the lever to lock the backrest in place.
- 3. Push and pull on the backrest to make sure it is locked.

To return the seat backrest to the upright position:



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.

- Lift the lever fully while applying pressure to the backrest, and the backrest will return to the upright position. If the lever is lifted without applying pressure, the seat will release to a folded position.
- Push and pull on the backrest to make sure it is locked.

Manual Fold and Tumble Feature

⚠ Warning

Do not leave the second row seat in a tumbled position while the vehicle is in motion. A tumbled seat is not locked. It can move when the vehicle is in motion. People in the vehicle could be injured in a sudden stop or crash. Be sure to return the seat to the passenger seating position before driving the vehicle. Push and pull on the seat to make sure it is locked into place.

Caution

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

Folding and Tumbling the Seat

To fold and tumble the seat:

 Make sure that there is nothing under, in front of, or on the seat.



Lift the lever on the outboard side of the seat to release the seatback.



The seatback will fold forward to create a flat load floor.

If the seatback cannot fold flat, try moving the front seat forward and/or put the front seatback in the upright position.



 Lift the lever again to release the rear of the seat from the floor. The seat will tumble forward.

Folding and Tumbling the Seat from the Third Row Seat

Marning

Using the third row seating position while the second row is folded, or folded and tumbled, could cause injury in a sudden stop or crash. Be sure to return the seat to the passenger seating position. Push and pull on the seat to make sure it is locked into place.

To fold and tumble the seat from the third row seat:

1. Make sure that there is nothing under, in front of, or on the seat.



Pull the strap on the bottom rear of the second row seat to release the backrest. The seatback will fold forward.



Pull the strap again to release the rear of the seat from the floor. The seat will tumble forward.

Automatic Fold and Tumble Feature



Do not leave the second row seat in a tumbled position while the vehicle is in motion. A tumbled seat is not locked. It can move when the vehicle is in motion. People in the vehicle could be injured in a sudden (Continued)

Warning (Continued)

stop or crash. Be sure to return the seat to the passenger seating position before driving the vehicle. Push and pull on the seat to make sure it is locked into place.



Automatically folding and tumbling the seat when someone is sitting in the seat, could cause injury to the person sitting there. Always make sure there is no one sitting in the seat before pressing the automatic seat release switch.

Caution

Folding a rear seat with the seat belts still fastened may cause damage to the seat or the seat belts. Always unfasten the seat (Continued)

Caution (Continued)

belts and return them to their normal stowed position before folding a rear seat.

The transmission must be in P (Park) for this feature to work.

Folding and Tumbling the Seat

To fold and tumble the seat:

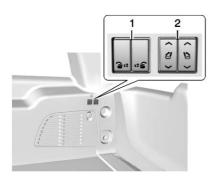
1. Make sure that there is nothing under, in front of, or on the seat.



Driver Side Rear Panel Switch

- Press the automatic seat release switch on the panel behind the rear doors. The backrest automatically folds flat.
- Press the switch again to release the rear of the seat from the floor. The seat will tumble forward.

Folding and Tumbling the Second Row Seat from the Cargo Area



- Second Row Power Seat Fold and Tumble Switches
- 2. Third Row Power Seat Fold and Raise Switches

To fold and tumble the seat from the cargo area:

- 1. Make sure that there is nothing under, in front of, or on the seat.
- Press the switch (1) on the side trim of the cargo area to fold the second row backrest.

- The left switch folds the left backrest, and the right switch folds the right backrest.
- Press the switch again to release the rear of the seat from the floor. The seat will tumble forward.

The switches (2) can be used to fold the third row backrests from the cargo area. See *Third Row Seats* \Rightarrow 71.

Returning the Seat to the Sitting Position



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 return the seat to the sitting position from the tumbled position:

- Pull the seat down until it latches to the floor. The seatback cannot be raised if the seat is not latched to the floor.
- Lift the seatback and push it rearward. Push and pull on the backrest to make sure it is locked.
- For the 60/40 split-bench seat, make sure the seat belt in the centre seating position is not caught between the two seats and is not twisted.

Third Row Seats Folding the Seat Backrest

Caution

Folding a rear seat with the seat belts still fastened may cause damage to the seat or the seat belts. Always unfasten the seat

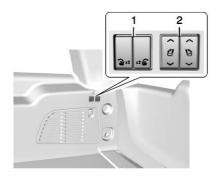
(Continued)

Caution (Continued)

belts and return them to their normal stowed position before folding a rear seat.

The transmission must be in P (Park) for this feature to work.

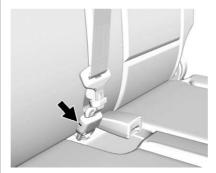
The third row backrests can be folded to increase cargo space.



- 1. Second Row Power Seat Fold and Tumble Switches
- 2. Third Row Power Seat Fold and Raise Switches

To fold the seatback:

- Open the tailgate to access the controls for the third row seat.
- 2. Make sure that there is nothing under, in front of, or on the seat.



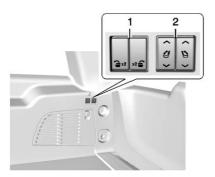
 Disconnect the rear seat belt mini-latch, using a key in the slot on the mini-buckle, and let the belt retract into the headlining.



- 5. Stow the mini-latch in the holder in the headliner.
- 6. Press and hold the switch (2) on the side trim of the cargo area to fold the third row backrest.
 - The left switch folds the left backrest, and the right switch folds the right backrest.
- 7. Repeat the steps for the other seatback, if desired.

The switches (1) can be used to fold or fold and tumble the second row seats from the cargo area. See *Second Row Seats* ⇔ 67.

Returning the Third Row **Backrest to the Upright Position**



- 1. Second Row Power Seat Fold and Tumble Switches
- 2. Third Row Power Seat Fold and Raise Switches

To return the third row backrest to the upright position:

- 1. Open the tailgate to access the controls for the seat
- 2. Press and hold the switch (2) on the side trim of the cargo area to raise the third row backrest.

The left switch raises the left backrest, and the right switch raises the right backrest.

🗥 Warning

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

- Reconnect the centre seat belt mini-latch to the mini-buckle. Do not let it twist.
- 4. Pull on the seat belt to be sure the mini-latch is secure.
- Repeat the steps for the other seatback, if desired.

Seat Belts

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



🗥 Warning

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

It is extremely dangerous to ride in a cargo area, inside or outside of a vehicle. In a collision, passengers riding in these areas are more likely to be seriously injured or killed. Do

(Continued)

Warning (Continued)

not allow passengers to travel in any area of the vehicle that is not equipped with seats and seat belts.

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

This vehicle has indicators as a reminder to fasten the seat belts. See *Seat Belt Reminders* \Rightarrow 139.

Why Seat Belts Work



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

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

Questions and Answers About Seat Belts

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

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

Also, in nearly all regions, the law requires wearing seat belts.

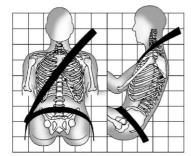
How to Wear Seat Belts Properly

This section is only for people of adult size.

There are special things to know about seat 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 94* or *Infants and Young Children 96*. 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 seat belts.

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



- Sit up straight and always keep your feet on the floor in front of you.
- Always use the correct buckle for your seating position.
- Wear the lap part of the belt low and snug on the hips, just touching the thighs. In a crash,

this applies force to the strong pelvic bones and you would be less likely to slide under the lap belt. If you slid under it, the belt would apply force on your abdomen. This could cause serious or even fatal injuries.

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

Marning

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

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

Three-Point Belt

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

If you are using a rear seating position with a detachable seat belt, and the seat belt is not attached, see *Third Row Seats* \$\phi\$ 71 for instructions on reconnecting the seat belt to the mini-buckle.

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

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



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

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

If the shoulder portion of the front 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 $\Rightarrow 88$.



For front seating positions, if the webbing locks in the latch plate before it reaches the buckle, tilt the latch plate flat to unlock.

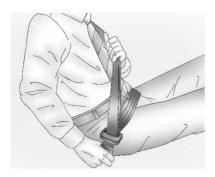


3. Push the latch plate into the buckle until it clicks. If the latch plate will not go fully into the buckle, check if the correct buckle is being used.

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

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

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



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

For third row seats, it may be necessary to pull the stitching on the seat belt through the latch plate to fully tighten the lap belt on smaller occupants.



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

For third row seats, slide the latch plate up the safety webbing when the seat belt is not in use. The latch plate should rest on the stitching on the seat belt.

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

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

Shoulder Belt Height Adjuster

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

Adjust the height so the shoulder portion of the belt is on the shoulder and not falling off it. The belt should be close to, but not contacting, the neck. Improper shoulder belt height adjustment could reduce the effectiveness of the seat belt in a crash. See *How to Wear Seat Belts Properly* \$ 74.



Push down on the release button to move the height adjuster to the desired position.

Move the adjuster up by pushing up on the shoulder belt guide.

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

Automatic Seat Belt Tightening System

The vehicle may have the Automatic Seat Belt Tightening System.

The system activates during emergency braking and/or sudden driving manoeuvres and releases when driving conditions return to normal.

The system will not activate if the Traction Control/Electronic Stability Control system is not functioning properly. See *Traction Control/Electronic Stability Control ⇒ 221*. If there is a problem with the Automatic Seat Belt Tightening System, a message displays on the Driver Information Centre (DIC). If a system unavailable message displays repeatedly or a service message displays, see your dealer. Other seat belt functions are not affected by the Automatic Seat Belt Tightening System.

Seat Belt Pretensioners

This vehicle has seat belt pretensioners for front outboard occupants. Although the seat belt pretensioners cannot be seen, they are part of the seat belt assembly. They can help tighten the seat belts during the early stages of a moderate to severe frontal, near frontal, or rear

crash if the threshold conditions for pretensioner activation are met. Seat belt pretensioners can also help tighten the seat belts in a side crash or a roll-over event.

Pretensioners work only once. If the pretensioners activate in a crash, the pretensioners and probably other parts of the vehicle's seat belt system will need to be replaced. See *Replacing Seat Belt System Parts after a Crash* $\Rightarrow 81$.

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

Rear Seat Belt Comfort Guides



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

(Continued)

Warning (Continued)

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

Rear seat belt comfort guides may provide added seat belt comfort for older children who have outgrown booster seats and for some adults. When installed on a shoulder belt, the comfort guide positions the shoulder belt away from the neck and head.

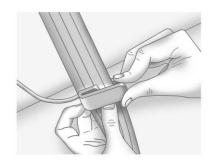
Second Row Outboard Seating Positions

The vehicle has comfort guides for the second row outboard seating positions. The comfort guides are stored on a clip on the interior trim next to the outboard backrest.

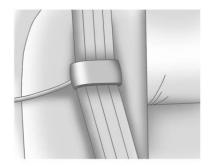
To install:



 Remove the guide from its storage clip on the interior trim next to the outboard backrest.



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



 Be sure that the belt is not twisted and it lies flat. The elastic cord must be behind the belt with the plastic guide on the front.



4. Buckle, position, and release the seat belt as described previously in this section. Make sure the shoulder portion of the belt is on the shoulder and not falling off of it. The belt should be close to, but not contacting, the neck. To remove and store the comfort guide, squeeze the belt edges together so that the seat belt can be removed from the guide. Slide the guide onto its storage clip.

Third Row Seating Positions

Comfort guides may be available through your retailer for third row seating positions. If available, instructions are included with the guides.

Seat Belt Use During Pregnancy

Seat belts work for everyone, including pregnant women. Like all occupants, they are more likely to be seriously injured if they do not wear seat belts.



A pregnant woman should wear a lap-shoulder belt, and the lap portion should be worn as low as possible, below the rounding, throughout the pregnancy.

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

Safety System Check

Periodically check the seat belt reminder, seat belts, buckles, latch plates, retractors, shoulder belt height adjusters (if equipped), and seat belt anchorages to make sure they are all in working order. Look for any other loose or damaged seat belt system parts that might keep a seat belt system from performing properly. See your dealer to have it repaired. Torn or frayed seat 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 seat belt reminder light is working. See *Seat Belt Reminders*

⇒ *139*.

Keep seat belts clean and dry. See *Seat Belt Care* \Rightarrow 81.

Seat Belt Care

Keep belts clean and dry.

⚠ Warning

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

Seat belts should be properly cared for and maintained.

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

Replacing Seat Belt System Parts after a Crash

⚠ Warning

A crash can damage the seat belt system in the vehicle. A damaged seat belt system may not properly protect the person using it, resulting in serious injury or even death in a crash. To help make sure the seat belt systems are working properly after a crash, have them inspected and any necessary replacements made as soon as possible.

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

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

Have the seat belt pretensioners checked if the vehicle has been in a crash, or if the airbag readiness light stays on after you start the vehicle or while you are driving. See *Airbag Readiness Light* ♀ 140.



Safety procedures must be followed at all times when disposing of the vehicle or vehicle parts. Disposal should be performed only by an authorised service centre, to help protect the environment and your health.

Airbag System

Air-Bag System

The vehicle has the following airbags:

- A frontal airbag for the driver
- A frontal airbag for the front outboard passenger
- A front centre airbag for the driver and front outboard passenger
- A seat-mounted side impact airbag for the driver
- A seat-mounted side impact airbag for the front outboard passenger
- A roof-rail airbag for the driver and for the second and third row passengers seated directly behind the driver
- A roof-rail airbag for the front outboard passenger and the second and third row passengers seated directly behind the front outboard passenger

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

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

For the front centre airbag, the word AIRBAG is on the inboard side of the driver backrest.

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

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

Airbags are designed to supplement the protection provided by seat belts. Even though today's airbags are also designed to help reduce the risk of injury from the force of an inflating bag, all airbags must inflate very quickly to do their job. Here are the most important things to know about the airbag system:



You can be severely injured or killed in a crash if you are not wearing your seat belt, even with airbags. Airbags are designed to work with seat belts, not replace them. Also, airbags are not designed to inflate in every crash. In some crashes seat belts are the only restraint. See When Should an Airbag Inflate? ♀ 85.

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

Warning

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

Occupants should not lean on or sleep against the front centre armrest or console in vehicles with a front centre airbag.

(Continued)

Warning (Continued)

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

⚠ Warning

Children who are up against, or very close to, any airbag when it inflates can be seriously injured or killed. Always secure children properly in the vehicle. To read how, see *Older Children* ⇔ 94 or *Infants and Young Children* ⇔ 96.



There is an airbag readiness light on the instrument cluster, which shows the airbag symbol.

The system checks the airbag electrical system for malfunctions. The light tells you if there is an electrical problem. See *Airbag Readiness Light* ⇒ 140.

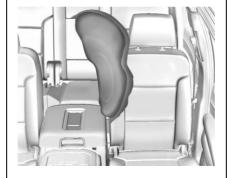
Where Are the Airbags?



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



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



The front centre airbag is in the inboard side of the driver backrest.



Driver Side Shown, Passenger Side Similar

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



Driver Side Shown, Passenger Side Similar

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

⚠ Warning

If something is between an occupant and an airbag, the airbag might not inflate properly or it might force the object into that person causing severe injury or even death. The path of an inflating [Continued]

Warning (Continued)

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 or console accessories that block the inflation path of a seat-mounted side impact airbag or the front centre 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 *Air-Bag System* ⇔ 82. 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 travelling. 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, rear impacts, or many side impacts.

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

The vehicle also has a seat position sensor that enables the sensing system to monitor the position of the driver seat. The seat position sensor provides information that is used to adjust the deployment of the driver frontal airbag.

The front centre airbag is designed to inflate in moderate to severe side crashes depending upon the location of the impact, when either side of the vehicle is struck. In addition, the front centre airbag is designed to inflate when the sensing system predicts that the vehicle is about to roll over on its side. The front centre airbag is not designed to inflate in frontal impacts, near frontal impacts, or rear 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 the 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? \Rightarrow 84.

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 seat belts by distributing the force of the impact more evenly over the occupant's body.

Roll-over capable roof-rail airbags are designed to help contain the head and chest of occupants in the outboard seating positions in the first, second, and third 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?* \$ 85.

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

What Will You See after an Airbag Inflates?

After frontal and seat-mounted side impact airbags inflate, they quickly deflate, so quickly that some people may not even realise the airbags have inflated. The front centre airbag and roof-rail airbags may still be at least partially inflated for some time after

they inflate. Some components of the airbag module may be hot for several minutes. For location of the airbags, see *Where Are the Airbags?* ♀ 84.

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 windscreen 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 should leave the vehicle 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

(Continued)

Warning (Continued)

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 lights, and shut off the fuel system after the airbags inflate. The feature may also activate, without airbag inflation, after an event that exceeds a predetermined threshold. After turning the ignition off and then on again, the fuel system will return to normal operation; the doors can be locked, the interior lamps can be turned off, and the hazard warning flashers can be turned off using the controls for those features. If any of these systems are damaged in the crash they may not operate as normal.

⚠ 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, windscreens are broken by vehicle deformation. Additional windscreen 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 \$ 360.
- 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.



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

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

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

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.

(Continued)

Warning (Continued)

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

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

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

 The front outboard passenger seat is unoccupied.

- The system determines an infant is present in a child restraint.
- A front outboard passenger takes his/her weight off of the seat for a period of time.
- 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, the off indicator will light and stay lit as a reminder that the airbag is off. See Passenger Airbag Status Indicator

⇒ 140.

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

When the passenger sensing system has allowed the airbag to be enabled, the on indicator will light and stay lit as a reminder that the airbag is active. For some children, including children in child restraints, and for very small adults, the passenger sensing system may or may not turn off the front outboard passenger frontal airbag, depending upon the person's seating posture and body build. Everyone in the vehicle who has outgrown child restraints should wear a seat belt properly — whether or not there is an airbag for that person.

Marning

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* ▷ 140 for more information, including important safety information.

If the On Indicator Is Lit for a Child Restraint

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

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

 → 118 or Securing Child Restraints (With the Seat Belt in the Rear Seat)

 → 116.

Make sure the seat belt retractor is locked by pulling the shoulder belt all the way out of the retractor when installing the child restraint, even if the child restraint is equipped with the seat belt lock off. When the retractor lock is set, the belt can be tightened but not pulled out of the retractor.

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

Also make sure the child restraint is not trapped under the vehicle head restraint. If this happens, adjust the head restraint. See *Head Restraints* \Rightarrow 57.

6. Restart the vehicle.

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

- Turn the vehicle off.
- Remove any additional material from the seat, such as blankets. cushions, seat covers, seat heaters, or seat massagers.
- 3. Place the seatback in the fully upright position.
- 4. Have the person sit upright in the seat, centred 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.

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



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

Additional Factors Affecting System Operation

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

A thick layer of additional material, such as a blanket or cushion, or aftermarket equipment such as seat covers, seat heaters, and seat massagers can affect how well the passenger sensing system operates. We recommend that you not use seat covers or other aftermarket equipment except when approved by GM for your specific vehicle. See *Adding Equipment to the Airbag-Equipped Vehicle* ♀ 92 for more information about modifications that can affect how the system operates.

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

⚠ Warning

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

Servicing the Airbag-Equipped Vehicle

Airbags affect how the vehicle should be serviced. There are parts of the airbag system in several places around the vehicle. Your dealer and the service manual have information about servicing the vehicle and the airbag system.

⚠ Warning

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

Warning (Continued)

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, seat belts, airbag sensing and diagnostic module, steering wheel, instrument panel, inner door seals including the speakers, any of the airbag modules, ceiling or pillar garnish trim, overhead

console, front sensors, side impact sensors, airbag wiring or front centre console.

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's seat. The passenger sensing system may not operate properly if the original seat trim is replaced with non-GM covers, upholstery, or trim, or with GM covers, upholstery, or trim designed for a different vehicle. Any object, such as an aftermarket seat heater or a comfort enhancing pad or device, installed under or on top of the seat fabric, could also interfere with the operation of the passenger sensing system. This could either prevent proper deployment of the passenger airbag(s) or prevent the passenger sensing system from properly turning off the passenger airbag(s). See Passenger Sensing System \$\dip\$ 88.

If the vehicle has rollover roof-rail airbags, see *Different Size Tyres and Wheels ⇔* 313 for additional important information.

If you have to modify your vehicle because you have a disability and have questions about whether the modifications will affect the vehicle's airbag system, or if you have questions about whether the airbag system will be affected if the vehicle is modified for any other reason, see your dealer.

Airbag System Check

Caution

If an airbag covering is damaged, opened, or broken, the airbag may not work properly. Do not open or break the airbag coverings. If there [Continued]

Caution (Continued)

are any opened or broken airbag coverings, have the airbag covering and/or airbag module replaced. For the location of the airbags, see *Where Are the Airbags?* \$\phi\$ 84. See your dealer for service.

Replacing Airbag System Parts after a Crash

⚠ Warning

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

If an airbag inflates, you will need to replace airbag system parts. See your dealer for service.

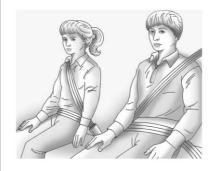
If the airbag readiness light stays on after the vehicle is started or comes on when you are driving, the airbag system may not work properly. Have the vehicle serviced right away. See Airbag Readiness Light $\[\Rightarrow \]$ 140.

⚠ Warning

Safety procedures must be followed at all times when disposing of the vehicle or vehicle parts. Disposal should be performed only by an authorised service centre, to help protect the environment and your health.

Child Restraints

Older Children



Older children who have outgrown booster seats should wear the vehicle's seat 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.
- Does the lap belt fit low and snug on the hips, touching the thighs?
 If yes, continue. If no, return to the booster seat.

 Can proper seat belt fit be maintained for the length of the trip? If yes, continue. If no, return to the booster seat.

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

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

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

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

⚠ Warning

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



⚠ Warning

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



Infants and Young Children

Everyone in a vehicle needs protection! This includes infants and all other children. Neither the distance travelled nor the age and size of the traveller changes the need, for everyone, to use safety restraints.

⚠ Warning

Children can be seriously injured or strangled if a shoulder belt is wrapped around their neck. Never leave children unattended in a vehicle and never allow children to play with the seat belts.

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

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

⚠ Warning

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



riangle 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. 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.

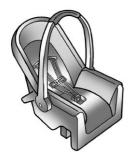
⚠ Warning

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 hipbones are still so small that the vehicle's regular seat belt may not remain low on the hipbones, as it should. Instead, it may settle up around the child's abdomen. In a crash, the belt would apply force on a body area that is unprotected by any bony structure. This alone could cause serious or fatal injuries. To reduce the risk of serious or fatal injuries during a crash, young children should always be secured in appropriate child restraints.

Child Restraint Systems



Rear-Facing Infant Restraint

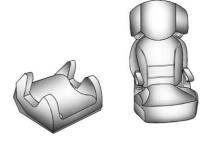
A rear-facing child restraint provides restraint with the seating surface against the back of the infant.

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



Forward-Facing Child Restraint

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



Booster Seats

A belt-positioning booster seat is used for children who have outgrown their forward-facing child restraint. Boosters are designed to improve the fit of the vehicle's seat belt system until the child is large enough for the vehicle seat belts to fit properly without a booster seat. See the seat belt fit test in *Older Children* \Rightarrow 94.

Securing an Add-On Child Restraint in the Vehicle



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 seat belt or ISOFIX 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 ISOFIX system. See ISOFIX Child Restraint *Systems* \Rightarrow 115 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.

Securing the Child Within the Child Restraint



⚠ Warning

A child can be seriously injured or killed in a crash if it 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.

The vehicle is equipped with a front centre airbag in the inboard side of the driver seat. Even with a front centre airbag, a child restraint can be installed in any second row seating position.



⚠ Danger

When using a child restraint system on the front passenger seat, the airbag systems for the front passenger seat must be deactivated; if not, the triggering of the airbags poses a risk of fatal injury to the child.

(Continued)

Danger (Continued)

This is especially the case if rear-facing child restraint systems are used on the front passenger seat.



EN: NEVER use a rearward-facing child restraint on a seat protected by an ACTIVE AIRBAG in front of it; DEATH or SERIOUS INJURY to the CHILD can occur.

FR: NE JAMAIS utiliser un siège d'enfant orienté vers l'arrière sur un siège protégé par un COUSSIN GONFLABLE ACTIF placé devant lui, sous peine d'infliger des BLESSURES GRAVES, voire MORTELLES à l'ENFANT. DE: Nach hinten gerichtete Kindersitze NIEMALS auf einem Sitz verwenden, der durch einen davor befindlichen AKTIVEN AIRBAG geschützt ist, da dies den TOD oder SCHWERE VERLETZUNGEN DES KINDES zur Folge haben kann.

ES: NUNCA utilice un sistema de retención infantil orientado hacia atrás en un asiento protegido por un AIRBAG FRONTAL ACTIVO. Peligro de MUERTE o LESIONES GRAVES para el NIÑO.

SV: Använd ALDRIG en bakåtvänd barnstol på ett säte som skyddas med en framförvarande AKTIV AIRBAG. DÖDSFALL eller ALLVARLIGA SKADOR kan drabba BARNET.

IT: Non usare mai un sistema di sicurezza per bambini rivolto all'indietro su un sedile protetto da AIRBAG ATTIVO di fronte ad esso: pericolo di MORTE o LESIONI GRAVI per il BAMBINO! NL: Gebruik NOOIT een achterwaarts gericht kinderzitje op een stoel met een ACTIEVE AIRBAG ervoor, om DODELIJK of ERNSTIG LETSEL van het KIND te voorkomen.

DA: Brug ALDRIG en bagudvendt autostol på et forsæde med AKTIV AIRBAG, BARNET kan komme i LIVSFARE eller komme ALVORLIGT TIL SKADE.

CS: NIKDY nepoužívejte dětský zádržný systém instalovaný proti směru jízdy na sedadle, které je chráněno před sedadlem AKTIVNÍM AIRBAGEM. Mohlo by dojít k VÁŽNÉMU PORANĚNÍ nebo ÚMRTÍ DÍTĚTE.

RU: ЗАПРЕЩАЕТСЯ устанавливать детское удерживающее устройство лицом назад на сиденье автомобиля, оборудованном фронтальной подушкой безопасности, если ПОДУШКА НЕ ОТКЛЮЧЕНА! Это может привести к СМЕРТИ или СЕРЬЕЗНЫМ ТРАВМАМ РЕБЕНКА.

FI: ÄLÄ KOSKAAN sijoita taaksepäin suunnattua lasten turvaistuinta istuimelle, jonka edessä on AKTIIVINEN TURVATYYNY, LAPSI VOI KUOLLA tai VAMMAUTUA VAKAVASTI.

NO: Bakovervendt barnesikringsutstyr må ALDRI brukes på et sete med AKTIV KOLLISJONSPUTE foran, da det kan føre til at BARNET utsettes for LIVSFARE og fare for ALVORLIGE SKADER.

PT: NUNCA use um sistema de retenção para crianças voltado para trás num banco protegido com um AIRBAG ACTIVO na frente do mesmo, poderá ocorrer a PERDA DE VIDA ou FERIMENTOS GRAVES na CRIANÇA.

ΕΙ: ΠΟΤΕ μη χρησιμοποιείτε παιδικό κάθισμα ασφαλείας με φορά προς τα πίσω σε κάθισμα που προστατεύεται από μετωπικό ΕΝΕΡΓΟ ΑΕΡΟΣΑΚΟ, διότι το παιδί μπορεί να υποστεί ΘΑΝΑΣΙΜΟ ή ΣΟΒΑΡΟ ΤΡΑΥΜΑΤΙΣΜΟ

PL: NIE WOLNO montować fotelika dziecięcego zwróconego tyłem do kierunku jazdy na fotelu, przed którym znajduje się WŁĄCZONA PODUSZKA POWIETRZNA. Niezastosowanie się do tego zalecenia może być przyczyną ŚMIERCI lub POWAŻNYCH OBRAŻEŃ u DZIECKA.

TR: Arkaya bakan bir çocuk emniyet sistemini KESİNLİKLE önünde bir AKTİF HAVA YASTIĞI ile korunmakta olan bir koltukta kullanmayınız. ÇOCUK ÖLEBİLİR veya AĞIR ŞEKİLDE YARALANABİLİR.

UK: НІКОЛИ не використовуйте систему безпеки для дітей, що встановлюється обличчям назад, на сидінні з УВІМКНЕНОЮ ПОДУШКОЮ БЕЗПЕКИ, інакше це може призвести до СМЕРТІ чи СЕРЙОЗНОГО ТРАВМУВАННЯ ДИТИНИ.

HU: SOHA ne használjon hátrafelé néző biztonsági gyerekülést előlről AKTÍV LÉGZSÁKKAL védett ülésen, mert a GYERMEK HALÁLÁT vagy KOMOLY SÉRÜLÉSÉT okozhatja.

HR: NIKADA nemojte koristiti sustav zadržavanja za djecu okrenut prema natrag na sjedalu s AKTIVNIM ZRAČNIM JASTUKOM ispred njega, to bi moglo dovesti do SMRTI ili OZBILJNJIH OZLJEDA za DIJETE.

SL: NIKOLI ne nameščajte otroškega varnostnega sedeža, obrnjenega v nasprotni smeri vožnje, na sedež z AKTIVNO ČELNO ZRAČNO BLAZINO, saj pri tem obstaja nevarnost RESNIH ali SMRTNIH POŠKODB za OTROKA.

SR: NIKADA ne koristiti bezbednosni sistem za decu u kome su deca okrenuta unazad na sedištu sa AKTIVNIM VAZDUŠNIM JASTUKOM ispred sedišta zato što DETE može da NASTRADA ili da se TEŠKO POVREDI.

МК: НИКОГАШ не користете детско седиште свртено наназад на седиште заштитено со АКТИВНО ВОЗДУШНО ПЕРНИЧЕ пред него, затоа што детето може ДА ЗАГИНЕ или да биде ТЕШКО ПОВРЕДЕНО.

ВG: НИКОГА не използвайте детска седалка, гледаща назад, върху седалка, която е защитена чрез АКТИВНА ВЪЗДУШНА ВЪЗГЛАВНИЦА пред нея - може да се стигне до СМЪРТ или СЕРИОЗНО НАРАНЯВАНЕ на ДЕТЕТО.

RO: Nu utilizați NICIODATĂ un scaun pentru copil îndreptat spre partea din spate a mașinii pe un scaun protejat de un AIRBAG ACTIV în fața sa; acest lucru poate duce la DECESUL sau VĂTĂMAREA GRAVĂ a COPILULUI.

SK: NIKDY nepoužívajte detskú sedačku otočenú vzad na sedadle chránenom AKTÍVNYM AIRBAGOM, pretože môže dôjsť k SMRTI alebo VÁŽNYM ZRANENIAM DIEŤAŤA.

LT: JOKIU BŪDU nemontuokite atgal atgręžtos vaiko tvirtinimo sistemos sėdynėje, prieš kurią įrengta AKTYVI ORO PAGALVĖ, nes VAIKAS GALI ŽŪTI arba RIMTAI SUSIŽALOTI.

LV: NEKĀDĀ GADĪJUMĀ neizmantojiet uz aizmuguri vērstu bērnu sēdeklīti sēdvietā, kas tiek aizsargāta ar tās priekšā uzstādītu AKTĪVU DROŠĪBAS SPILVENU, jo pretējā gadījumā BĒRNS var gūt SMAGAS TRAUMAS vai IET BOJĀ.

ET: ÄRGE kasutage tahapoole suunatud lapseturvaistet istmel, mille ees on AKTIIVSE TURVAPADJAGA kaitstud iste, sest see võib põhjustada LAPSE SURMA või TÕSISE VIGASTUSE.

MT: QATT tuża trażżin ghat-tfal li jhares lejn in-naha ta' wara fuq sit protett b'AIRBAG ATTIV quddiemu; dan jista' jikkawż l-MEWT jew ĠIEĦ SERJI lit-TFAL.

GA: Ná húsáid srian sábháilteachta linbh cúil RIAMH ar shuíochán a bhfuil mála aeir ag feidhmiú os a chomhair.Tá baol BÁIS nó GORTÚ DONA don PHÁISTE ag baint leis.

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

Child restraints and booster seats vary considerably in size, and some may fit in certain seating positions better than others. Depending on where you place the child restraint and the size of the child restraint, you may not be able to access adjacent seat belts or ISOFIX anchors for additional passengers or child restraints. Adjacent seating positions should not be used if the child restraint prevents access to or interferes with the routing of the seat belt.

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.

ISOFIX Child Restraint Systems Installation Suitability (Short Wheelbase Vehicles)

Use the following table to determine which seats are suitable for the ISOFIX child restraint systems in vehicles equipped with a second row bench seat.

	Class Size	Fixture	Vehicle ISOFIX Positions					
Mass Group			Front Passenger	Seco	Third Row Bench Seat			
				Left Outboard	Centre	Right Outboard	All Seating Positions	
Carrycot	F	ISO/L1	X	IUF	X	X	X	
	G	ISO/L2	X	X	X	IUF	X	
0 (up to 10 kg)	Е	ISO/R1	X	IUF	IUF	IUF	X	
0+	E	ISO/R1	X	IUF	IUF	IUF	X	
(up to 13 kg)	D	ISO/R2	X	IUF	IUF	IUF	X	
	С	ISO/R3	X	IUF	IUF	IUF*	X	
I (9 to 18 kg)	D	ISO/R2	X	IUF	IUF	IUF	X	
	С	ISO/R3	X	IUF	IUF	IUF*	X	
	В	ISO/F2	X	IUF	IUF	IUF	X	
	B1	ISO/F2X	X	IUF	IUF	IUF	X	
	A	ISO/F3	X	IUF	IUF	IUF	X	

Mass Group	Class Size	Fixture	Vehicle ISOFIX Positions				
			Front	Second Row Bench Seat			Third Row Bench Seat
			Passenger	Left Outboard	Centre	Right Outboard	All Seating Positions

IUF: Suitable for ISOFIX forward child restraint systems of universal category approved for use in this mass group.

 $X: ISOFIX \ position \ not \ suitable \ for \ ISOFIX \ child \ restraint \ systems \ in \ this \ mass \ group \ and/or \ this \ size \ class.$

*Track adjusted to 17 mm forward of the mid-track position.

ISOFIX Child Restraint Systems Installation Suitability (Short Wheelbase Vehicles)

Use the following table to determine which seats are suitable for the ISOFIX child restraint systems in vehicles equipped with second row bucket seats.

		Fixture	Vehicle ISOFIX Positions					
Mass Group	Class Size		Front Passenger	Second Row	Third Row Bench Seat			
				Left Outboard	Right Outboard	All Seating Positions		
Carrycot	F	ISO/L1	X	X	X	X		
	G	ISO/L2	X	X	X	X		
0 (up to 10 kg)	E	ISO/R1	X	IUF	IUF	X		
0+	E	ISO/R1	X	IUF	IUF	X		
(up to 13 kg)	D	ISO/R2	X	IUF	IUF	X		
	С	ISO/R3	X	IUF*	IUF*	X		
I	D	ISO/R2	X	IUF	IUF	X		
(9 to 18 kg)	С	ISO/R3	X	IUF	IUF	X		
	В	ISO/F2	X	IUF	IUF	X		
	B1	ISO/F2X	X	IUF	IUF	X		
	A	ISO/F3	X	IUF	IUF	X		

Mass Group	Class Size	Fixture	Vehicle ISOFIX Positions				
			Front Passenger	Second Row	Third Row Bench Seat		
				Left Outboard	Right Outboard	All Seating Positions	

IUF: Suitable for ISOFIX forward child restraint systems of universal category approved for use in this mass group.

X: ISOFIX position not suitable for ISOFIX child restraint systems in this mass group and/or this size class.

*Track adjusted to 4 mm forward of the mid-track position.

Child Restraint System Size Classes and Fixtures

- **A ISO/F3 :** Full-height forward-facing toddler child restraint system.
- **B ISO/F2 :** Reduced-height forward-facing toddler child restraint system.
- **B1 ISO/F2X**: Reduced-height forward-facing toddler child restraint system.
- **C ISO/R3 :** Full-size rear-facing toddler child restraint system.
- **D ISO/R2**: Reduced-size rear-facing toddler child restraint system.

- **E ISO/R1 :** Rear-facing infant child restraint system.
- **F ISO/L1 :** Left side-facing position carrycot.
- **G ISO/L2 :** Right side-facing position carrycot.

ISOFIX Child Restraint Systems Installation Suitability (Long Wheelbase Vehicles)

Use the following table to determine which seats are suitable for the ISOFIX child restraint systems in vehicles equipped with a second row bench seat.

	Class Size	Fixture	Vehicle ISOFIX Positions					
Mass Group			Front Passenger	Seco	Third Row Bench Seat			
				Left Outboard	Centre	Right Outboard	All Seating Positions	
Carrycot	F	ISO/L1	X	IUF	X	X	X	
	G	ISO/L2	X	X	X	IUF	X	
0 (up to 10 kg)	Е	ISO/R1	X	IUF	IUF	IUF	X	
0+	E	ISO/R1	X	IUF	IUF	IUF	X	
(up to 13 kg)	D	ISO/R2	X	IUF	IUF	IUF	X	
	С	ISO/R3	X	IUF	IUF	IUF*	X	
I (9 to 18 kg)	D	ISO/R2	X	IUF	IUF	IUF	X	
	С	ISO/R3	X	IUF	IUF	IUF*	X	
	В	ISO/F2	X	IUF	IUF	IUF	X	
	B1	ISO/F2X	X	IUF	IUF	IUF	X	
	A	ISO/F3	X	IUF	IUF	IUF	X	

				Vehicle ISOFIX Positions						
Mass Group	Class Size	Fixture	Front	Seco	Third Row Bench Seat					
			Passenger	Left Outboard	Centre	Right Outboard	All Seating Positions			

IUF: Suitable for ISOFIX forward child restraint systems of universal category approved for use in this mass group.

 $X: ISOFIX \ position \ not \ suitable \ for \ ISOFIX \ child \ restraint \ systems \ in \ this \ mass \ group \ and/or \ this \ size \ class.$

*Tracks adjusted to 11 mm forward of the mid-track position.

ISOFIX Child Restraint Systems Installation Suitability (Long Wheelbase Vehicles)

Use the following table to determine which seats are suitable for the ISOFIX child restraint systems in vehicles equipped with second row bucket seats.

			Vehicle ISOFIX Positions								
Mass Group	Class Size	Fixture	Second Row Bucket Seats			Third Row Bench Seat					
			Front Passenger	Left Outboard	Right Outboard	All Seating Positions					
Carrycot	F	ISO/L1	X	X	X	X					
	G	ISO/L2	X	X	X	X					
0 (up to 10 kg)	Е	ISO/R1	X	IUF	IUF	X					
0+	E	ISO/R1	X	IUF	IUF	X					
(up to 13 kg)	D	ISO/R2	X	IUF	IUF	X					
	С	ISO/R3	X	IUF*	IUF*	X					
I	D	ISO/R2	X	IUF	IUF	X					
(9 to 18 kg)	С	ISO/R3	X	IUF	IUF	X					
	В	ISO/F2	X	IUF	IUF	X					
	B1	ISO/F2X	X	IUF	IUF	X					
	A	ISO/F3	X	IUF	IUF	X					

				Vehicle ISOFIX Positions					
Mass Group	Class Size	Fixture	F . 1 B	Second Row	Third Row Bench Seat				
			Front Passenger	Left Outboard	Right Outboard	All Seating Positions			

IUF: Suitable for ISOFIX forward child restraint systems of universal category approved for use in this mass group.

X: ISOFIX position not suitable for ISOFIX child restraint systems in this mass group and/or this size class.

*Tracks adjusted to 5 mm forward of the mid-track position.

Child Restraint System Size Classes and Fixtures

- **A ISO/F3 :** Full-height forward-facing toddler child restraint system.
- **B ISO/F2 :** Reduced-height forward-facing toddler child restraint system.
- **B1 ISO/F2X**: Reduced-height forward-facing toddler child restraint system.
- **C ISO/R3 :** Full-size rear-facing toddler child restraint system.
- **D ISO/R2**: Reduced-size rear-facing toddler child restraint system.

- **E ISO/R1 :** Rear-facing infant child restraint system.
- \boldsymbol{F} $\boldsymbol{ISO/L1}$: Left side-facing position carrycot.
- **G ISO/L2**: Right side-facing position carrycot.

Child Restraint Systems Installation Suitability (Short Wheelbase Vehicles)

Use the following table to determine which seats are suitable for the carriage of child restraint systems in vehicles equipped with a second row bench seat.

			9	Seating Position	n						
Mass Group	Frant	Seco	nd Row Bench	Seat	Third Row Bench Seat						
Wass Group	Front Passenger	Left Outboard	Centre	Right Outboard	Left Outboard	Centre	Right Outboard				
0 (up to 10 kg)	X	U	U	U	X*	X*	X*				
0+ (up to 13 kg)	Х	U	Ū	U	X*	X*	X*				
I (9 to 18 kg)	X	U	Ū	U	X*	X*	X*				
II (15 to 25 kg)	Х	U	Ū	U	X*	X*	X*				
III (22 to 36 kg)	Х	U	U	U	X*	X*	X*				

U: Suitable for "Universal" category child restraints approved for use in this mass group.

X: Seat position not suitable for children in this mass group.

*Fixture installed in third row occupant does not allow for second row seats to lock into position; therefore, outboard occupants evaluated as not suitable.

Child Restraint Systems Installation Suitability (Short Wheelbase Vehicles)

Use the following table to determine which seats are suitable for the carriage of child restraint systems in vehicles equipped with second row bucket seats.

	Seating Position									
Mass Group	Front	Second Row	Bucket Seats	Third Row Bench Seat						
Mass Group	Passenger	Left Outboard	Right Outboard	Left Outboard	Centre	Right Outboard				
0 (up to 10 kg)	X	U	U	X*	U	X*				
0+ (up to 13 kg)	X	U	U	X*	U	X*				
I (9 to 18 kg)	X	U	U	X*	U	X*				
II (15 to 25 kg)	X	U	U	X*	U	X*				
III (22 to 36 kg)	X	U	U	X*	U	X*				

U: Suitable for "Universal" category child restraints approved for use in this mass group.

X: Seat position not suitable for children in this mass group.

*Fixture installed in third row occupant does not allow for second row seats to lock into position; therefore, outboard occupants evaluated as not suitable.

Child Restraint Systems Installation Suitability (Long Wheelbase Vehicles)

Use the following table to determine which seats are suitable for the carriage of child restraint systems in vehicles equipped with a second row bench seat.

			9	Seating Position	n						
Mass Group	Format	Seco	nd Row Bench	Seat	Third Row Bench Seat						
Mass Group	Front Passenger	Left Outboard	Centre	Right Outboard	Left Outboard	Centre	Right Outboard				
0 (up to 10 kg)	X	U	U	U	X*	X*	X*				
0+ (up to 13 kg)	X	U	U	U	X*	X*	X*				
I (9 to 18 kg)	X	U	Ū	Ū	X*	X*	X*				
II (15 to 25 kg)	X	U	Ū	Ū	X*	X*	X*				
III (22 to 36 kg)	X	U	U	Ū	X*	X*	X*				

U: Suitable for "Universal" category child restraints approved for use in this mass group.

X: Seat position not suitable for children in this mass group.

*Fixture installed in third row outboard occupants does not allow for second row seats to lock into position; therefore evaluated as not suitable.

Child Restraint Systems Installation Suitability (Long Wheelbase Vehicles)

Use the following table to determine which seats are suitable for the carriage of child restraint systems in vehicles equipped with second row bucket seats.

	Seating Position									
Mass Group	Front	Second Row	Bucket Seats	Third Row Bench Seat						
Mass Group	Passenger	Left Outboard	Right Outboard	Left Outboard	Centre	Right Outboard				
0 (up to 10 kg)	X	U	U	X*	X**	X*				
0+ (up to 13 kg)	X	U	U	X*	X**	X*				
I (9 to 18 kg)	X	U	U	X*	X**	X*				
II (15 to 25 kg)	X	U	U	X*	X**	X*				
III (22 to 36 kg)	X	U	U	X*	X**	X*				

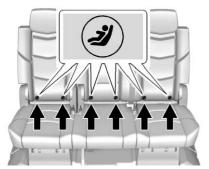
U: Suitable for "Universal" category child restraints approved for use in this mass group.

X: Seat position not suitable for children in this mass group.

*Fixture installed in third row outboard occupants does not allow for second row seats to lock into position; therefore evaluated as not suitable.

**Fixture installed in third row centre occupant does not allow for second row seats to lock into position, but shoulder belt fitment is not acceptable; therefore evaluated as not suitable.

ISOFIX Child Restraint Systems



Second Row - 60/40



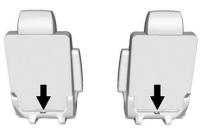
Second Row - Bucket

Fasten vehicle-approved ISOFIX child restraint systems to the ISOFIX mounting brackets.

ISOFIX mounting brackets are marked by a ② on the seatback.

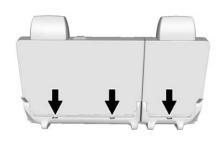
Specific vehicle ISOFIX restraint system positions are marked in the "ISOFIX Child Restraint Systems Installation Suitability" table. See Where to Put the Restraint \$ 99.

Top Tether Fastening Eyes



Second Row Seat - Bucket

The top tether anchors are at the bottom rear of the seat cushion for each seating position in the second row. Be sure to use an anchor on the same side of the vehicle as the seating position where the child restraint will be placed.



Second Row Seat - 60/40

The top tether anchors are at the bottom rear of the seat cushion for each seating position in the second row. Be sure to use an anchor on the same side of the vehicle as the seating position where the child restraint will be placed.

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

Top tether fastening eyes are marked with a so for a child seat.

Securing Child Restraints (With the Seat Belt in the Rear Seat)

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

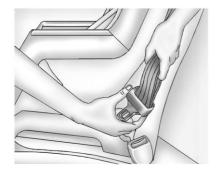
If the child restraint has the ISOFIX system, see *ISOFIX Child Restraint Systems ⇔ 115* for how and where to install the child restraint using ISOFIX. If a child restraint is secured in the vehicle using a seat belt and it uses a top tether, see *ISOFIX Child Restraint Systems ⇔ 115* for top tether 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 ISOFIX system, you will be using the seat belt to secure the child restraint. Be sure to follow the instructions that came with the child restraint.

If more than one child restraint needs to be installed in the rear seat, be sure to read Where to Put the Restraint ⇒ 99.

 Put the child restraint on the seat.



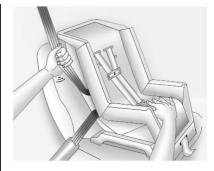
Pick up the latch plate, and run the lap and shoulder portions of the vehicle's seat belt through or around the restraint. The child restraint instructions will show you how.



Push the latch plate into the buckle until it clicks.

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

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



- Follow the instructions in the child restraint owner's manual to tighten and lock the child restraint using the vehicle seat belt.
- 5. If the child restraint has a top tether, follow the child restraint manufacturer's instructions regarding the use of the top tether. See ISOFIX Child Restraint Systems

 115.
- Before placing a child in the child restraint, make sure it is securely held in place. Push and pull the child restraint in different directions to be sure it is secure.

To remove the child restraint, follow the instructions in the child restraint owner's manual to unlock it. Unfasten the vehicle seat belt and let it return to the stowed position. If the top tether is attached to a top tether anchor, disconnect it.

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

This vehicle has airbags. A rear seat is a safer place to secure a forward-facing child restraint. See Where to Put the Restraint ♀ 99.

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

See Passenger Sensing System ⇒ 88 and Passenger Airbag Status Indicator ⇒ 140 for more information, including important safety information.

⚠ Danger

NEVER use a rearward-facing child restraint on a seat protected by an ACTIVE AIRBAG in front of it; DEATH or SERIOUS INJURY to the CHILD can occur.

⚠ Danger

When using a child restraint system on the front passenger seat, the airbag systems for the front passenger seat must be deactivated; if not, the triggering of the airbags poses a risk of fatal injury to the child.

This is especially the case if rear-facing child restraint systems are used on the front passenger seat.



If the child restraint uses a top tether, see *ISOFIX Child Restraint Systems*⇒ 115 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

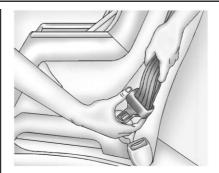
When using the lap-shoulder belt to secure the child restraint in this position, follow the instructions that came with the child restraint and the following instructions:

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

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

⇒ 140.

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



Tilt the latch plate to adjust the belt, if needed.

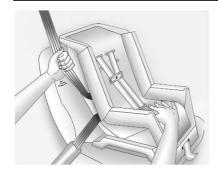


4. Push the latch plate into the buckle until it clicks.

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



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.

 Before placing a child in the child restraint, make sure it is securely held in place. Push and pull the child restraint in different directions to be sure it is secure.

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

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

Storage

Storage Compartments 121
Instrument Panel Storage 121
Glove Box 121
Cupholders 122
Sunglasses Storage 122
Armrest Storage 122
Rear Storage 122
Centre Console Storage 123
Additional Starage Feetures

Additional Storage Features

Cargo Tie-Downs	 123
Convenience Net	 123

Roof Rack System

Roof Rack System 12	Roof Rack	System										1	2
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Storage Compartments

⚠ Warning

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

Instrument Panel Storage

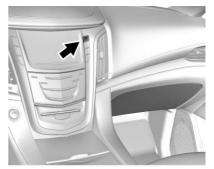


Touch the bottom of the climate control system panel until the door automatically starts to open. The storage area may contain a USB port. See the infotainment manual.

Keep the storage area door closed while driving.

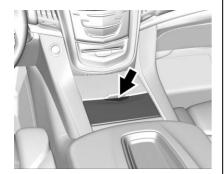
Touch the bottom of the climate control system again until the door automatically starts to close.

Glove Box



To open, press the button. Close the glove box manually.

Cupholders



To access the cupholders, press the cover and release.

There is storage in front of the cupholders. Push forward on the handle to open.

Sunglasses Storage

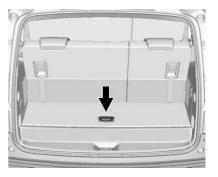


If equipped, sunglasses storage is on the overhead console. Press the fixed button on the cover and release to access.

Armrest Storage

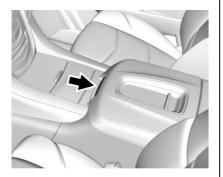
For vehicles with a rear seat armrest, pull the loop at the top of the armrest down to access the cupholders.

Rear Storage



There is storage in the floor of the rear cargo area. Lift the handle to access. There is a removable divider to help organize.

Centre Console Storage



Pull the handle and lift to access. There are auxiliary jacks, USB ports, an accessory power socket, a tote compartment and a device holder inside.

On the rear of the console there are auxiliary jacks, a power socket and a storage area.

See *Power Sockets* ⇒ 130 and the infotainment manual.



If equipped, press to turn on the cooled compartment inside the centre console storage.

The cooled compartment will help keep cold liquids cold, but is not intended to chill warm liquids. Do not use for items that need to be refrigerated.

Additional Storage Features

Cargo Tie-Downs



There are four cargo tie-downs in the rear cargo area. These can be used to strap cargo down and keep it from moving inside the vehicle.

Convenience Net

Use the convenience net, located in the rear, to store small loads as far forward as possible. The net should not be used to store heavy loads.

Roof Rack System

⚠ Warning

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

If equipped, the roof rack can be used to load items. For roof racks that do not have crossrails included, GM Certified crossrails can be purchased as an accessory. See your dealer for additional information.

Caution

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

To prevent damage or loss of cargo when driving, check to make sure crossrails and cargo are securely fastened. Loading cargo on the roof rack will make the vehicle's centre of gravity higher. Avoid high speeds, sudden starts, sharp turns, sudden braking, or abrupt manoeuvres, otherwise loss of control may result. If driving for a long distance, on rough roads, or at high speeds, occasionally stop the vehicle to make sure the cargo remains in its place.

Do not exceed the maximum vehicle capacity when loading the vehicle. For more information on vehicle capacity and loading, see *Vehicle Load Limits*

⇒ 197.

A Centre High-Mounted Brake lamp (CHMSL) is located above the rear window glass. Make sure items loaded on the roof of the vehicle do not block or damage the CHMSL.

Instruments and Controls

Controls

Steering wheel Adjustment 126
Steering Wheel Controls 126
Heated Steering Wheel 126
Horn 126
Windscreen Wiper/Washer 126
Rear Window Wiper/Washer 128
Clock 129
Power Sockets 130
Wireless Charging 132
Cigarette Lighter 134
Ashtrays

Warning Lights, Gauges, and Indicators

Warning Lights, Gauges, and
Indicators 134
Instrument Cluster 135
Speedometer
Mileometer
Trip Odometer
Rev Counter
Fuel Gauge 138
Engine Coolant Temperature
Gauge 139

Seat Belt Reminders 139
Airbag Readiness Light 140
Passenger Airbag Status
Indicator
Charging System Light 141
Malfunction Indicator Lamp
(Check Engine Light) 141
Brake System Warning Light 143
Electric Parking Brake Light 144
Service Electric Parking Brake
Light 144
Antilock Brake System (ABS)
Warning Light 144
Sport Mode Light 145
Tow/Haul Mode Light 145
Winter Driving Mode Light 145
Lane Keep Assist (LKA) Light 145
Vehicle Ahead Indicator 145
Traction Off Light 146
StabiliTrak OFF Light 146
Traction Control System (TCS)/
StabiliTrak Light 146
Engine Coolant Temperature
Warning Light 147
Tyre Pressure Light 147
Engine Oil Pressure Light 147
Low Fuel Warning Light 148
Security Light 148
High-Beam On Light 148
Lamps On Reminder 149
•

Cruise Control Light 14 Door Ajar Light 14	
Information Displays Driver Information Centre (DIC)	
Vehicle Messages15Vehicle Messages15Engine Power Messages15Vehicle Speed Messages15	5.5
Vehicle Personalisation Vehicle Personalisation 15	5 (
Universal Remote System Universal Remote System Universal Remote System Programming	
Operation 16	5(

Controls

Steering Wheel Adjustment



To adjust the power tilt and telescoping steering wheel:

Press the control to move the steering wheel up and down or forward and rearward.

Do not adjust the steering wheel while driving.

Steering Wheel Controls

The infotainment system can be operated by using the steering wheel controls. See "Steering Wheel Controls" in the infotainment manual.

Heated Steering Wheel



②: Press to turn the heated steering wheel on or off. An indicator next to the button is lit when the feature is turned on.

The steering wheel takes about three minutes to start heating.

Horn

To sound the horn, press on the steering wheel.

Windscreen Wiper/Washer



The windscreen wiper control is on the indicator lever.

The windscreen wipers are controlled by turning the band with \heartsuit FRONT on it.

: Fast wipes.

: Slow wipes.

INT: If Rainsense is turned off, turn the FRONT band up for more frequent wipes or down for less frequent wipes. If Rainsense is turned on, see Rainsense later in this section.

OFF: Turns the windscreen wipers off.

 $\widehat{\mathbb{W}}$: For a single wipe, turn to $\widehat{\mathbb{W}}$, then release. For several wipes, hold the band on $\widehat{\mathbb{W}}$ longer.

Heavy snow or ice can overload the wiper motor. An internal circuit breaker to the motor will stop the motor until it cools down.

Wiper Parking

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

If FRONT 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 windscreen.

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

Rainsense

With Rainsense, a sensor near the top centre of the windscreen detects the amount of water on the windscreen and controls the frequency of the windscreen wiper.

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

FRONT band on the wiper lever to adjust the sensitivity when Rainsense is turned on.



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

Move the band out of the $\overline{\mathbb{Q}}$ INT position to deactivate Rainsense.



AUTO: Press to turn Rainsense on or off. When turned on and FRONT is in one of the Rainsense wipe sensitivity positions the wipers can be adjusted for more or less sensitivity to moisture. When turned off, the wipers operate as timed intermittent wipers and can be adjusted for more or less frequent wipes.

If AUTO is turned on when the ignition is turned on, or if the ignition is in on and the FRONT band is in one of the sensitivity settings when AUTO is turned on or off, a message may display indicating if Rainsense was turned on or off.

If the ignition is in on and ∇ FRONT is not in one of the sensitivity settings when ∇ AUTO is turned on, a message may display indicating that the wiper band must be in one of the sensitivity settings for Rainsense to operate.

Wiper Arm Assembly Protection

When using an automatic car wash, move the windscreen wiper lever to OFF. This disables the automatic Rainsense windscreen wipers.

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

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

Windscreen Washer

⚠ Warning

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

the windscreen washer symbol at the top of the indicator lever to spray washer fluid and activate the wipers. The wipers will continue until the paddle is released or the maximum wash time is reached. When the paddle is released, additional wipes may occur depending on how long the windscreen washer had been activated. See Washer Fluid ⇒ 279 for information on filling the windscreen washer fluid reservoir.

Rear Window Wiper/ Washer



The rear wiper control is on the indicator lever.

To turn the rear wiper on, slide the stalk to a wiper position.

OFF: Turns the wiper off.

INT: Turns on the rear wiper with a delay between wipes.

ON: Turns on the rear wiper.



REAR: Press this button on the end of the stalk to spray washer fluid on the rear window. The wipers will clear the rear window and either stop or return to your preset speed. For more washer cycles, press and hold the button.

The rear window wiper/washer will not operate if the tailgate or liftglass is open or ajar. If the tailgate or liftglass is opened while the rear wiper is on, the wiper returns to the parked position and stops.

Rear Camera Mirror Washer:

If equipped, press $\stackrel{\bigcirc}{\square}$ REAR on the end of the lever to spray washer fluid on the rear mirror camera lens. See *Rear Camera Mirror* \Rightarrow 49.

Rear Wiper Arm Assembly Protection

When using an automatic car wash, move the rear wiper control to OFF to disable the rear wiper. In some vehicles, if the transmission is in N (Neutral) and the vehicle speed is very slow, the rear wiper will automatically park under the rear spoiler.

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

Reverse Gear Wipes

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

This feature can be turned on or off. See *Vehicle Personalisation* \Rightarrow 156.

The windscreen washer reservoir is used for the windscreen and the rear window. Check the fluid level in the reservoir if either washer is not working. See *Washer Fluid ⇔* 279.

Clock

The infotainment system controls are used to access the time and date settings through the menu system. See "Home Page" in the infotainment manual for information about how to use the menu system.

Setting the Clock

Time

To set the time:

- From the Home Page, touch SETTINGS, then touch Time and Date.
- Touch Set Time, then touch + or

 to increase or decrease hours
 or minutes, and change AM
 or PM.
- 3. Touch 12-24 Hr for a 12 or 24 hour clock.

4. Touch **\(\)** Back to go back to the previous menu.

Date

To set the date:

- From the Home Page, touch SETTINGS, then touch Time and Date.
- Touch Set Date, then touch + or

 to increase or decrease month,
 day, or year.
- 3. Touch \(\) Back to go back to the previous menu.

Auto Set

When on, the time and date will automatically update.

To set auto set:

- From the Home Page, touch SETTINGS, then touch Time and Date.
- Touch Set Time or Set Date.
- Touch Auto Set, then select On-Cell Network or Off-Manual to manually set the time and date.

4. Touch **\(\)** Back to go back to the previous menu.

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

In some regions, auto set may require an active OnStar service plan, if available.

Clock Display

When on, the digital clock will display on the infotainment screen.

To set the clock display:

- 1. From the Home Page, touch SETTINGS, then touch Time and Date.
- 2. Touch Clock Display, then select Off or On.
- 3. Touch \ Back to go back to the previous menu.

Power Sockets

Power Socket 12 Volt Direct Current

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

The vehicle has five accessory power sockets:

- One near the cupholders on the centre console
- One inside the centre console
- One on the rear of the centre console
- One in the third row seat on the driver side
- One in the rear cargo area on the passenger side

Lift the cover to access and replace when not in use.

The accessory power sockets are powered as follows:

The power socket near the cupholders on the centre console is powered in Retained Accessory Power (RAP) mode. This socket

can be configured to operate using RAP or battery power. If the power socket is used while in the battery power mode, this could cause interference between the RKE transmitter and the vehicle, and the vehicle may not start. See

- The power sockets inside the centre console and on the rear of the centre console are powered when the vehicle is started or the ignition is in ACC/ACCESSORY, or until the driver door is opened within 10 minutes of turning off the vehicle. See Retained Accessory Power $(RAP) \Rightarrow 205$.
- The power sockets in the third row seat and in the rear cargo area are powered at all times.



⚠ Warning

Power is always supplied to the outlets. Do not leave electrical equipment plugged in when the

(Continued)

Warning (Continued)

vehicle is not in use because the vehicle could catch fire and cause injury or death.

Caution

Leaving electrical equipment plugged in for an extended period of time while the 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 15 amp rating.

Certain power accessory plugs may not be compatible with the accessory power socket and could overload vehicle or adapter fuses. If a problem is experienced, see your dealer. When adding electrical equipment, ensure that you follow the proper installation instructions included with the equipment. See *Add-On Electrical Equipment* \Rightarrow 265.

Caution

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

Power Socket 220V/230V Volt Alternating Current

For vehicles with 220V/230V socket, use only accessories rated for 220V/230V.

This power socket can be used to plug in electrical equipment that uses a maximum limit of 150 watts.

The 220V/230V power socket is on the rear of the centre console.

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

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

If equipment is connected using more than 150 watts or a system fault is detected, a protection circuit shuts off the power supply and the indicator light turns off. To reset the circuit, unplug the item and plug it back in or turn the ignition off and then back to on. The power restarts when equipment using 150 watts or less is plugged into the outlet and a system fault is not detected.

The power socket 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 wireless charging on top of the centre console. See *Centre Console Storage* ⇔ *123*. The system operates at 145 kHz and wirelessly charges one PMA or Qi compatible mobile device. The power output of the system is capable of charging at a rate up to 1 amp (5W), as requested by the compatible mobile device. To check for phone or other device compatibility, see your retailer for details.

Marning

Wireless charging can affect the operation of an implanted pacemaker or other medical devices.

(Continued)

Warning (Continued)

If you have one, it is recommended to consult with your doctor before using the wireless charging system.

The vehicle must be on, in ACC/ ACCESSORY, or Retained Accessory Power (RAP) must be active. The wireless charging feature may not correctly indicate charging when the vehicle is in RAP. See *Retained Accessory Power (RAP)* ♀ 205.

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

⚠ Warning

Remove all objects from the charging pad before charging your mobile device. Objects, such as coins, keys, rings, paper clips, or cards, between the phone and charging pad will become very hot.

(Continued)

Warning (Continued)

On the rare occasion that the charging system does not detect an object, and the object gets wedged between the phone and charger, remove the phone and allow the object to cool before removing it from the charging pad, to prevent burns.



To charge a mobile device:

- Remove all objects from the charging pad. The system may not charge if there are any objects between the mobile device and charging pad.
- Place the mobile device face up against the alignment rib on the charge pad.
- 3. The will display on the on the infotainment screen. This indicates that the mobile device is properly positioned and charging. If a mobile device is placed on the charging pad and does not display, remove the mobile device from the pad, turn it 180 degrees, and wait three seconds before placing/aligning the mobile device on the pad again.

Software Acknowledgements

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

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Freescale-WCT library

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Cigarette Lighter

If equipped with a cigarette lighter, it is in the centre console near the cup-holders. Press on the access door to open it and use the lighter.

To use the cigarette lighter, push it in, and let go. When it is ready, it will pop back out by itself.

Caution

Holding a cigarette lighter in while it is heating does not let the lighter back away from the heating (Continued)

Caution (Continued)

element when it is hot. Damage from overheating can occur to the lighter or heating element, or a fuse could be blown. Do not hold a cigarette lighter in while it is heating.

Ashtrays

If equipped, the ashtray is in the centre console cupholder.

Caution

If papers, pins, or other flammable items are put in the ashtray, hot cigarettes or other smoking materials could ignite them and possibly damage the vehicle. Never put flammable items in the ashtray.

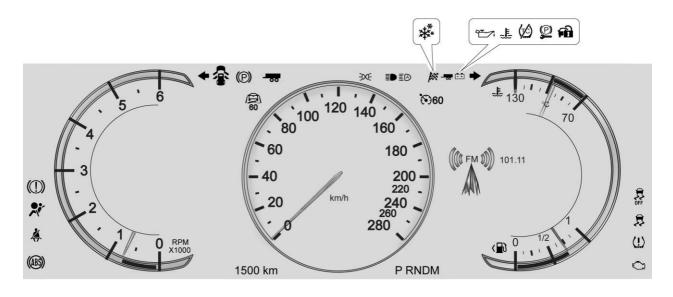
To remove the ashtray, pull it from the cupholder. Push it back down to be sure it is secure.

Warning Lights, Gauges, and Indicators

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

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

Instrument Cluster



Balanced Configuration

Reconfigurable Instrument Cluster

The cluster display layout can be changed.



Balanced Configuration

The Balanced configuration has three interactive display zones: one in the centre of each of the gauges.



Enhanced Configuration

The Enhanced configuration has three interactive display zones.

Use the five-way control on the right side of the steering wheel to move between the different display zones and scroll through the different displays.

To change the cluster configuration:

- Find the Options page in one of the interactive display zones on the cluster.
- 2. Press SEL to enter the Options menu.
- Scroll down to highlight Display Layout. Then press SEL to select it.

- Each layout in the menu is represented by a small preview image of the display layout.
 Scroll up or down and highlight the selection. Press SEL to select the desired cluster configuration.
- 5. Exit the Display Layout menu by pressing <.

Cluster Application Displays

The cluster can display information regarding Navigation, Audio, and Phone.

Navigation

If there is no active route, a compass will be displayed. If there is an active route, press SEL to end route guidance or turn the voice prompts on or off.

Audio

While the Audio application page is displayed, press SEL to enter the Audio menu. In the Audio menu, search for music, select from favourites, or change the audio source.

Phone

While the Phone application page is displayed, press SEL to enter the Phone menu. In the Phone menu, if there is no active phone call, view recent calls, select from favourites, or scroll through contacts. If there is an active call, mute the phone or switch to handset operation.

Cluster Options Menu

To enter the cluster Options menu:

- Use the five-way control on the right side of the steering wheel to find the Options page in one of the interactive display zones on the cluster.
- Press SEL on the centre of the five-way control to enter the Options menu.

Units: Press SEL while Units is highlighted to enter the Unit menu. Choose US or metric units by pressing SEL while the desired item is highlighted. A checkmark will be displayed next to the selected item.

Info Pages : Press SEL while Info Pages is highlighted to select the items to be displayed in the DIC info displays. See *Driver Information Centre* (DIC) ⇒ 150.

Head-up Display (HUD) Rotation : This feature allows for adjusting the angle of the HUD image. Press SEL on the steering wheel controls while

Head-up Display Rotation is highlighted to enter Adjust Mode.

Press ∧ or ∨ to adjust the angle of

the HUD display. Press \leq or \geq to highlight OK, then press SEL to save the setting. Cancel can also be selected to cancel the setting. The vehicle must be in P (Park).

Fav Button Options: Press SEL while Fav Button Options is highlighted to select between FAV Primary and SEEK Primary. This selection allows for configuration of the $\overline{\triangle}$ and $\overline{\boxtimes}$ steering wheel controls. When FAV Primary is selected, pressing $\overline{\triangle}$ and $\overline{\boxtimes}$ will go to the next or previous favourite and pressing and holding $\overline{\triangle}$ and $\overline{\boxtimes}$ will seek. When SEEK Primary

is selected, pressing $\overline{\Delta}$ and $\overline{\Delta}$ will seek and pressing and holding $\overline{\Delta}$ and $\overline{\Delta}$ will go to the next or previous favourite.

Display Layout: Press SEL while Display Layout is highlighted to change the configuration of the cluster. See "Reconfigurable Instrument Cluster" earlier in this section.

Open Source Software : Press SEL while Open Source Software is highlighted to display open source software information.

Speedometer

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

Mileometer

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

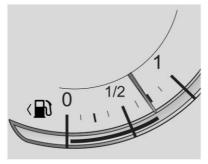
Trip Odometer

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

Rev Counter

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

Fuel Gauge



Balanced Configuration

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

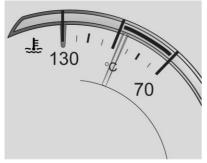
There is an arrow near the fuel gauge pointing to the side of the vehicle the fuel door is on.

When the indicator nears empty, the low fuel light comes on. There still is a little fuel left, but the vehicle should be refuelled 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 may have indicated the tank was half full, but it actually took a little more or less than half the tank's capacity to fill the tank.
- The gauge moves a little while turning a corner or speeding up.
- The gauge takes a few seconds to stabilise after the ignition is turned on and goes back to empty when the ignition is turned off.

Engine Coolant Temperature Gauge



Balanced Configuration

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

While driving under normal operating conditions, if the needle moves into the red area, the engine is too hot. Pull off the road, stop the vehicle, and turn off the engine as soon as possible.

Seat Belt Reminders Driver Seat Belt Reminder Light

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



When the vehicle is started, this light flashes and a chime may come on to remind the driver to fasten their seat belt. Then the light stays on solid until the belt is buckled. This cycle may continue several times if the driver remains or becomes unbuckled while the vehicle is moving.

If the driver seat belt is fastened, neither the light nor the chime comes on.

Passenger Seat Belt Reminder Light

There is a passenger seat belt reminder light near the passenger airbag status indicator. See *Passenger Sensing System* \Rightarrow 88.



When the vehicle is started, this light flashes and a chime may come on to remind passengers to fasten their seat belt. Then the light stays on solid until the belt is buckled. This cycle continues several times if the passenger remains or becomes unbuckled while the vehicle is moving.

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

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

laptop, or other electronic device. To turn off the reminder light and/or chime, remove the object from the seat or fasten the seat 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), the passenger sensing system, the pretensioners, the airbag modules, the wiring, and the crash sensing and diagnostic module. For more information on the airbag system, see *Air-Bag System* ♀ 82.



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

⚠ Warning

If the airbag readiness light stays on after the vehicle is started or comes on while driving, it means the airbag system might not be working properly. The airbags in the vehicle might not inflate in a crash, or they could even inflate without a crash. To help avoid injury, have the vehicle serviced right away.

If there is a problem with the airbag system, a Driver Information Centre (DIC) message may also come on.

Passenger Airbag Status Indicator

The vehicle has a passenger sensing system. See *Passenger Sensing System* ⇒ 88 for important safety information. The passenger airbag status indicator is in the overhead console.



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

If the on symbol is lit on the passenger airbag status indicator, it means that the front outboard passenger frontal airbag is allowed to inflate.

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

If, after several seconds, both status indicator lights remain on, or if there are no lights at all, there may be a

problem with the lights or the passenger sensing system. See your retailer for service.



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* ⇔ 140 for more information, including important safety information.

Charging System Light



The charging system light comes on briefly when the ignition is turned on, but the engine is not running, as a check to show the light is working. It should go out when the engine is started.

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

When this light comes on, or is flashing, the Driver Information Centre (DIC) also displays a message.

If a short distance must be driven with the light on, be sure to turn off all accessories, such as the radio and air conditioner.

Malfunction Indicator Lamp (Check Engine Light)

This light is part of the vehicle's emission control on-board diagnostic system. If this light is on while the engine is running, a malfunction has been detected and the vehicle may require service. The light should come on to show that it is working when the ignition is in Service Mode. See *Ignition Positions* \Rightarrow 203.



Malfunctions are often indicated by the system before any problem is noticeable. Being aware of the light and seeking service promptly when it comes on may prevent damage.

Caution

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

Caution

Modifications to the engine, transmission, exhaust, intake, or fuel system, or the use of replacement tyres that do not meet the original tyre specifications, can cause this light to come on. This could lead to costly repairs not covered by the vehicle warranty. This could also affect the vehicle's ability to pass an Emissions Inspection/Maintenance test. See *Accessories and Modifications* ⇔ 267.

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 gradients. If towing a trailer, reduce the amount of cargo being hauled as soon as possible.

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

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

Check the following:

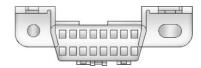
- Poor fuel quality can cause inefficient engine operation and poor driveability, which may go

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* \Rightarrow 250.

If the light remains on, see your retailer.

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* ⇒ 265. See your dealer if assistance is needed.

The vehicle may not pass inspection if:

- The light is on when the engine is running.
- The light does not come on when the ignition is in Service Mode.
- 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 retailer 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 immediately.



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 applied. The light stays on if the handbrake does not fully release. If it stays on after the handbrake is fully released, it means the vehicle has a brake problem.

If the light comes on while driving, pull off the road and stop carefully. The pedal might be harder to push, or the pedal can go closer to the floor. It may take longer to stop. If the light is still on, have the vehicle towed for service. See *Towing the Vehicle* ⇒ 328.



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

Electric Parking Brake Light



The parking brake status light comes on when the parking brake is applied. If the light continues flashing after the parking brake is released, or while driving, there is a problem with the electric parking brake system. A message may also display in the Driver Information Centre (DIC). If the light does not come on,

or remains flashing, see your dealer.

Service Electric Parking Brake Light



If this light comes on and stays on, there is a problem with a system on the vehicle that is causing the parking brake system to work at a reduced level. The vehicle can still be driven, but should be taken to a dealer as soon as possible. See *Electric Parking Brake* \Rightarrow 219. A message may also display in the Driver Information Centre (DIC).

Antilock Brake System (ABS) Warning Light



This light comes on briefly when the engine is started.

If the light does not come on, have it fixed so it will be ready to warn if there is a problem.

If the light comes on while driving, stop as soon as it is safely possible and turn off the vehicle. Then start the engine again to reset the system. If the ABS light stays on, or comes on again while driving, the vehicle needs service. A chime may also sound when the light comes on steady.

If the ABS light is the only light on, the vehicle has regular brakes, but the anti-lock brakes are not functioning. If both the ABS and the brake system warning light are on, the vehicle's anti-lock brakes are not functioning and there is a problem with the regular brakes. See your retailer for service.

Sport Mode Light



This light comes on when Sport mode is selected. See *Magnetic Ride Control* ⇒ 224.

Tow/Haul Mode Light



For vehicles with the Tow/Haul Mode feature, this light comes on when the Tow/Haul Mode has been activated.

See *Tow/Haul Mode* \$\dip 213.

Winter Driving Mode Light



This light comes on when Snow/Ice mode is selected. See *Magnetic Ride Control* ⇒ 224.

Lane Keep Assist (LKA) Light



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 indicator 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) \Rightarrow 248.

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 \$ 242.

Traction Off Light



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

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

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

If the TCS is off, wheel spin is not limited. Adjust driving accordingly.

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.

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 Centre (DIC) message may display. Check the DIC messages to determine which feature(s) is no longer functioning and whether the vehicle requires service.

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

Engine Coolant Temperature Warning Light



This light comes on briefly while starting the vehicle.

If it does not, have the vehicle serviced by your dealer. If the system is working normally the indicator light goes off.

Caution

The engine coolant temperature warning light indicates that the vehicle has overheated. Driving with this light on can damage the engine and it may not be covered by the vehicle warranty. See *Engine Overheating* ♀ 277.

The engine coolant temperature warning light comes on when the engine has overheated.

Tyre Pressure Light



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

When the Light Is On Steady

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

A Driver Information Centre (DIC) tyre pressure message may also display. Stop as soon as possible, and inflate

the tyres to the pressure value shown on the Tyre and Loading Information label. See *Tyre Pressure* \Rightarrow 303.

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 *Tyre Pressure Monitor Operation* ♀ 306.

Engine Oil Pressure Light

Caution

Lack of proper engine oil maintenance can damage the engine. Driving with the engine oil low can also damage the engine. The repairs would not be covered by the vehicle warranty. Check the oil level as soon as possible. Add oil if required, but if the oil level is within the operating range and the oil pressure is still low, have the

(Continued)

Caution (Continued)

vehicle serviced. Always follow the maintenance schedule for changing engine oil.



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

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

Low Fuel Warning Light



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

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

Security Light



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

High-Beam On Light



This light comes on when the high-beam headlamps are in use. See *Headlamp Main/Dipped-Beam Changer*

⇒ 169.

IntelliBeam[®] Light



This light comes on when the IntelliBeam system, if equipped, is enabled. See *Exterior Lamp Controls* ⇒ 167.

Lamps On Reminder



This light comes on when the exterior lamps are in use. See *Exterior Lamp Controls* \Rightarrow 167.

Cruise Control Light



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.

Adaptive Cruise Control Light



This light is white when the Adaptive Cruise Control (ACC, if equipped) is on and ready, and turns green when the ACC is set and active. See *Adaptive* Cruise Control ⇒ 228.

Door Ajar Light



For vehicles equipped with this light, it comes on when a door is open or not securely latched. Before driving, check that all doors are properly closed.

Information Displays

Driver Information Centre (DIC)

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



∧ or ∨: Move SEL up or down to go to the previous or next selection.
 < or >: Press to move between the interactive display zones in the cluster. Press < to go back to the previous menu.

SEL: Press to open a menu or select a menu item. Press and hold to reset values on certain screens.

DIC Information Display Options

The info displays on the DIC can be turned on or off through the Settings menu.

- Press SEL while viewing the Settings page in one of the interactive display zones on the cluster.
- 2. Scroll to Info Pages and press SEL.
- 3. Press \wedge or \vee to move through the list of possible info displays.
- Press SEL while an item is highlighted to select or deselect that item. When an item is selected, a checkmark will appear next to it.

DIC Information Displays

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

Trip 1 or Trip 2 and Average Fuel Economy: The Trip display shows the current distance travelled, in either kilometres (km) or miles (mi), since the trip odometer was last reset. The trip odometer can be reset by pressing and holding SEL while this display is active.

The Average Fuel Economy display shows the approximate average litres per 100 kilometres (L/100 km) or miles per gallon (mpg). This number is calculated based on the number of L/100 km (mpg) recorded since the last time this menu item was reset. This number reflects only the approximate average fuel economy that the vehicle has right now, and will change as driving conditions change. The Average Fuel Economy can be reset along with the trip odometer by pressing and holding SEL while this display is active.

Fuel Range: Shows the approximate distance the vehicle can be driven without refuelling. LOW will be displayed when the vehicle is low on fuel. The fuel range estimate is based on an average of the vehicle's fuel economy over recent driving history and the amount of fuel remaining in the fuel tank.

Instantaneous Fuel Economy: Shows the current fuel economy in either litres 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.

Average Speed: Shows the average speed of the vehicle in kilometers per hour (km/h) or miles per hour (mph). This average is calculated based on the various vehicle speeds recorded since the last reset of this value. The average speed can be reset by pressing and holding SEL while this display is active.

Timer: This display can be used as a timer. To start the timer, press SEL 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 SEL briefly while this display is active and the timer is running. To reset the timer to zero, press and hold SEL while this display is active.

Turn Arrow : Shows the next manoeuvre when using route guidance.

Estimated Time to Arrival : Shows the estimated time until arrival at your destination.

Distance to Destination : Shows the distance to the destination when using route guidance.

Speed Warning: Allows the driver to set a speed that they do not want to exceed. To set the Speed Warning, press SEL when Speed Warning is displayed. Press ∧ or ∨ to adjust the value. This feature can be turned off by pressing and holding SEL while viewing this page. If the selected speed limit is exceeded, a pop-up warning is displayed and a chime may sound.

Cruise Set Speed : Shows the speed the cruise control or Adaptive Cruise Control is set to.

Gap Setting: When ACC has been engaged, this page shows the current gap setting along with the vehicle ahead indicator.

Battery Voltage : Shows the current battery voltage.

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. 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. See *Scheduled Maintenance* ⇒ *343*.

The Oil Life display must be reset after each oil change. It will not reset itself. Do not reset the Oil Life display accidentally at any time other than when the oil has just been changed.

It cannot be reset accurately until the next oil change. See *Engine Oil Life System ⇔ 272*.

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

Engine Hours : Shows the total number of hours the engine has run.

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

Tyre Pressure: Shows the approximate pressures of all four tyres. Tyre pressure is displayed in either kilopascal (kPa) or in pounds per square inch (psi). If the pressure is low, the value for that tyre is shown in amber.

See Tyre Pressure Monitor System

⇒ 305 and Tyre Pressure Monitor Operation

⇒ 306.

Blank Page : Allows for no information to be displayed in the cluster info display areas.

Head-Up Display (HUD)

⚠ Warning

If the HUD image is too bright or too high in your field of view, it may take you more time to see things you need to see when it is dark outside. Be sure to keep the HUD image dim and placed low in your field of view.

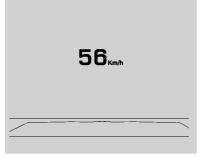
If equipped with HUD, some information concerning the operation of the vehicle is projected onto the windscreen. The image is projected through the HUD lens on top of the instrument panel. The information appears as an image focused out toward the front of the vehicle.

Caution

If you try to use the HUD image as a parking aid, you may misjudge the distance and damage your vehicle. Do not use the HUD image as a parking aid.

The HUD information can be displayed in various languages. The speedometer reading and other numerical values can be displayed in either English or metric units.

The language selection is changed through the radio and the units of measurement is changed through the instrument cluster. See *Vehicle Personalisation* \Rightarrow 156 and "Cluster Settings Menu" under *Instrument Cluster* \Rightarrow 135.



HUD Display on the Vehicle Windscreen

The HUD may display some of the following vehicle information and vehicle messages or alerts:

- Speed
- Rev Counter
- Audio
- Phone
- Navigation
- Collision Alert
- Cruise Control
- Lane Departure
- Low Fuel

Some vehicle messages or alerts displayed in the HUD may be cleared by using the steering wheel controls. See *Vehicle Messages* ⇔ *155*.

Some information shown may not be available on your vehicle if it is not equipped with these features.



The HUD control is to the left of the steering wheel.

To adjust the HUD image:

- . Adjust the driver seat.
- 2. Start the engine.
- 3. Use the following settings to adjust the HUD.

: Press down or lift up to centre the HUD image. The HUD image can only be adjusted up and down, not side to side.

INFO: Press to select the display view. Each press will change the display view.

±♥: Lift up and hold to brighten the display. Press down and hold to dim the display. Hold down to turn the display off.

The HUD image will automatically dim and brighten to compensate for outside lighting. The HUD brightness control can also be adjusted as needed.

The HUD image can temporarily light up depending on the angle and position of the sunlight on the HUD display. This is normal.

Polarised sunglasses could make the HUD image harder to see.

Head-Up Display (HUD) Rotation Option

This feature allows for adjusting the angle of the HUD image.

Press SEL on the steering wheel controls while Head-up Display Rotation is highlighted to enter Adjust Mode. Press ∧ or ∨ to adjust the angle of the HUD display. Press < or > to highlight OK, then press SEL to save the setting. CANCEL can also be selected to cancel the setting. The vehicle must be in P (Park). See *Instrument Cluster* ⇔ 135.

Press SEL on the steering wheel controls while Head-up Display Rotation is highlighted to enter Adjust Mode. Press ∧ or ∨ to adjust the angle of the HUD display. Press < or > to highlight OK, then press SEL to save the setting. CANCEL can also be selected to cancel the setting. The vehicle must be in P (Park). See Instrument Cluster ⇒ 135.

HUD Views

There are four views in the HUD. Some vehicle information and vehicle messages or alerts may be displayed in any view.



Speed View: This display gives the speedometer reading (in English or metric units), speed limit, Adaptive Cruise Control speed, Lane Departure Warning, and vehicle ahead indicator.

Some information only appears on vehicles that have these features, and when they are active.



Audio/Phone View: This displays the speed view along with audio/phone information. The current radio station, media type, and incoming calls will be displayed.

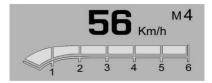
All HUD views may briefly display audio information when the driver uses the steering wheel controls to adjust the audio settings appearing in the instrument cluster.

Incoming phone calls appearing in the instrument cluster may also display in any HUD view.



Navigation View: This displays the speed view along with Turn-by-Turn Navigation information. The compass heading is displayed when navigation routing is not active.

Navigation Turn-by-Turn Alerts shown in the instrument cluster may also be displayed in any HUD view.



Performance View: This displays the speedometer reading, rpm reading, transmission positions, and gear shift indicator.

Care of the HUD

Clean the inside of the windscreen to remove any dirt or film that could reduce the sharpness or clarity of the HUD image.

Clean the HUD lens with a soft cloth sprayed with glass cleaner. Wipe the lens gently, then dry it.

HUD Troubleshooting

Check that:

- Nothing is covering the HUD lens.
- HUD brightness setting is not too dim or too bright.
- HUD is adjusted to the proper height.
- Polarised sunglasses are not worn.
- Windscreen and HUD lens are clean.

If the HUD image is not correct, contact your dealer.

Vehicle Messages

Messages displayed on the DIC indicate the status of the vehicle or some action that may be needed to correct a condition. Multiple messages may appear one after another.

The messages that do not require immediate action can be acknowledged and cleared by pressing SEL. The messages that require immediate action cannot be cleared until that action is performed.

All messages should be taken seriously; clearing the message does not correct the problem.

If a SERVICE message appears, see your retailer.

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

- Service Messages
- Fluid Levels
- Vehicle Security
- Brakes

- Ride Control Systems
- Driver Assistance Systems
- Cruise Control
- Lighting and Bulb Replacement
- Wiper/Washer Systems
- Doors and Windows
- Seat Belts
- Airbag Systems
- Engine and Transmission
- Tyre Pressure
- Battery

Engine Power Messages ENGINE POWER IS REDUCED

This message displays when the vehicle's propulsion power is reduced. Reduced propulsion power can affect the vehicle's ability to accelerate. If this message is on, but there is no observed reduction in performance, proceed to your destination. The performance may be reduced the next time the vehicle is driven. The vehicle may be driven while this message is

on, but maximum acceleration and speed may be reduced. Anytime this message stays on, or displays repeatedly, the vehicle should be taken to your dealer for service as soon as possible.

Vehicle Speed Messages SPEED LIMITED TO XXX KM/H (MPH)

This message shows that the vehicle speed has been limited to the speed displayed. The limited speed is a protection for various propulsion and vehicle systems, such as lubrication, thermal, suspension, Teen Driver if equipped, or tyres.

Vehicle Personalisation

Use the audio system controls to access the personalisation menus for customising vehicle features.

The following are all possible personalisation features. Depending on the vehicle, some may not be available.

Audio System Controls

- Touch the desired feature to display a list of available options.
- 2. Touch to select the desired feature setting.
- 3. Touch ≤ Back to return to the previous menu or exit.

To access the Settings menu, select SETTINGS from the Home page on the infotainment display.

Personalisation Menus

The following list of menu items may be available:

- Time and Date
- Rear Seat Reminder
- Language

- Valet Mode
- Radio
- Vehicle
- Bluetooth
- Apple CarPlay
- Android Auto
- Voice
- Display
- Rear Camera
- Return to Factory Settings
- Software Information

Detailed information for each menu follows:

Time and Date

Manually set the time and date. See $Clock \Leftrightarrow 129$.

Rear Seat Reminder

This allows for a chime and a message when the rear door has been opened before or during the operation of the vehicle.

Select Off or On.

Language

Select Language, then select from the available language(s).

The selected language will display on the system.

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.
- Select Enter to go to the confirmation screen.
- Re-enter the four-digit code.

Touch LOCK or UNLOCK to lock or unlock the system. Touch Back to go back to the previous menu.

Radio

Select to display the Radio Menu and the following may display:

- Manage Favourites
- Number of Favourites Pages

- Audible Touch Feedback
- Auto Volume
- Maximum Start-Up Volume
- Audio Cue Volume

Manage Favourites

This allows favourites to be edited. See "Manage Favourites" in "Settings" under "Radio" in the infotainment manual.

Number of Favourites Pages

Touch to set the number of favourites to display.

Select the desired number or select Auto and the infotainment system will automatically adjust the number of favourites shown.

Audible Touch Feedback

This allows Audible Touch Feedback to be turned on or off.

Select Off or On.

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 Start-Up 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 start-up volume, touch + or - to increase or decrease.

Audio Cue Volume

This feature sets the volume of audio files played at system start-up and shut-down.

Select On, then touch + 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

- Auto Fan Speed
- Auto Cooled Seats
- Auto Heated Seats
- Auto Demist

Auto Fan Speed

This feature will set the auto fan speed.

Select Low, Medium, or High.

Auto Cooled Seats

When enabled, this feature will automatically activate the cooled seats at the level required by the interior temperature. See *Heated and Cooled Front Seats* ⇔ 65.

Select Off or On.

Auto Heated Seats

Select Off or On.

Auto Demist

When set to on, the auto demist comes on when the climate control detects a humidity risk based on outside temp, windscreen temp, and interior humidity. Air will be directed on to windscreen.

Select Off or On.

Collision / Detection Systems

Select the Collision / Detection Systems menu and the following may display:

- Alert Type
- Forward Collision System
- Rear Cross Traffic Alert
- Adaptive Cruise Go Notifier
- Park Assist
- Lane Change Alert

Alert Type

This feature will set crash alerts to beeps or seat vibrations. This setting affects all crash alerts including Forward Collision Alert, Lane Departure Warning, and Park Assist alerts. See *Driver Assistance Systems*

⇒ 236.

Select Beeps or Safety Alert Seat.

Forward Collision System

This feature will turn on or off Forward Collision Alert (FCA) and Forward Automatic Braking (FAB). The Off setting disables all FCA and FAB functions. With the Alert and Brake setting, both FCA and FAB are available. The Alert setting disables FAB. See *Forward Automatic Braking* (FAB) ⇒ 244.

Select Off, Alert and Brake, or Alert.

Rear Cross Traffic Alert

Select Off or On.

Adaptive Cruise Go Notifier

This feature will give a reminder that Adaptive Cruise Control provides when it has brought the vehicle to a complete stop behind another stopping vehicle, and then that vehicle drives on.

Select Off or On.

Park Assist

If equipped, this allows the feature to be turned on or off. See *Assistance Systems for Parking or Reversing* ⇒ 237.

Select Off, On, or On with Tow Bar Attached.

Lane Change Alert

This allows the feature to be turned on or off. See *Lane Change Alert (LCA)* ⇒ 246.

Select Off or On.

Comfort and Convenience

Select and the following may display:

- Auto Running Boards
- Auto Memory Recall
- Easy Exit Options
- Chime Volume
- Hands Free Liftgate Control
- Reverse Tilt Mirror

- Auto Mirror Folding
- Auto Wipe in Reverse Gear

Auto Running Boards

This allows the feature to be turned on or off. See *Power Assist Steps* \Rightarrow 43.

Select Off, On, or Extended.

Auto Memory Recall

This feature automatically recalls the current driver's previously stored 1 or 2 button positions when the ignition is changed from off to on or ACC/ ACCESSORY. See *Memory Seats* \Rightarrow 61.

Select Off or On. **Easy Exit Options**

This feature automatically recalls the previously stored exit button position when exiting the vehicle. See *Memory Seats* \Rightarrow 61.

Select Off or On.

Chime Volume

This allows the selection of the chime volume level.

Touch + or - to adjust the volume.

Hands Free Liftgate Control

The tailgate may be operated with a kicking motion under the rear bumper. See *Tailgate* \Rightarrow 38.

Select Off, On-Open and Close, or On-Open Only.

Reverse Tilt Mirror

When on, the driver and/or passenger mirrors will tilt downward when the vehicle is shifted to R (Reverse) to improve visibility of the ground near the rear wheels. See *Reverse Tilt Mirrors* ⇔ 49.

Select Off, On - Driver and Passenger, On - Driver, or On - Passenger.

Auto Mirror Folding

When on, the outside mirrors will automatically fold or unfold when the Remote Keyless Entry (RKE) transmitter \bigcirc or \bigcirc button is pressed and held. See *Folding Mirrors* \Rightarrow 48. Select Off or On.

Auto Wipe in Reverse Gear

When on, the rear wiper will automatically activate when the vehicle is shifted to R (Reverse). See Rear Window Wiper/Washer \Rightarrow 128.

Select Off or On.

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 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-Lockout
- Auto Door Lock
- Delayed Door Lock

Unlocked Door Anti-Lockout

When on, this feature will keep the driver door from locking when the vehicle is off, the driver door is open, and locking is requested. All the doors will lock and only the driver door will unlock. See *Lockout Protection*

⇒ 37.

If Off is selected, the Delayed Door Lock menu will be available.

Select Off or On.

Auto Door Lock

When this feature is turned on, all doors will automatically lock when the vehicle is shifted out of P (Park). The doors will automatically unlock when the vehicle is shifted into P (Park).

Select Off or On.

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 Cool Seats
- Remote Start Auto Heat Seats
- Remote Window Operation
- 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 Cool Seats

If equipped and turned on, this feature will turn the cooled seats on when using remote start on warm days.

Select Off or On.

Remote Start Auto Heat Seats

If equipped and turned on, this feature will turn the heated seats on when using remote start on cold days. Select Off or On.

Remote Window Operation

This allows the window to be opened when pressing \blacksquare on the RKE transmitter. See *Remote Keyless Entry (RKE) System Operation* \Rightarrow 28.

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's Door Only.

Passive Door Lock

This feature can be turned on or off, or can be used to select feedback when using the button on the driver door to lock the vehicle. See *Remote Keyless Entry (RKE) System Operation*

⇒ 28.

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. This menu also enables Remote No Longer in Vehicle Alert.

Select Off or On.

Bluetooth

Select and the following may display:

- Pair New Device
- Device Management
- Ringtones
- Voice Mail Numbers

Pair New Device

Select to pair a new device. See "Pairing" under "Bluetooth (Infotainment Controls)" in the infotainment manual.

Device Management

Select to connect to a different phone source, disconnect a phone, or delete a phone.

Ringtones

Select to change the ring tone for the specific phone. The phone does not need to be connected to change the ring.

Voice Mail Numbers

This feature displays the voice mail number for all connected phones. To change the voice mail number, select EDIT. Type a new number, then select SAVE.

Apple CarPlay

Select and the following may display:

- Apple CarPlay
- Manage Apple CarPlay Devices

Apple CarPlay

This feature allows Apple devices to be connected to the infotainment system through a USB port.

Select Off or On.

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.

Voice

Select and the following may display:

- Confidence Threshold
- Prompt Length
- Audio Feedback Speed

Confidence Threshold

This feature allows the adjustment of the sensitivity of the speech recognition system.

Select Short or Long.

Prompt Length

This feature adjusts the voice prompt length.

Select Short or Long.

Audio Feedback Speed

This feature adjusts the audio feedback speed.

Select Slow, Medium, or Fast.

Display

Select and the following may display:

- Theme
- Proximity Sensing
- Calibrate Touchscreen
- Turn Display Off

Theme

Select to change the display of the infotainment system.

Select Contemporary, Mainstreet, Urban, or Velocity.

Proximity Sensing

This allows the feature to be turned on or off.

Select Off, On, or On-Map Only.

Calibrate Touchscreen

Select to calibrate the touchscreen, then follow the prompts.

Turn Display Off

Select to turn the display off. Touch anywhere on the infotainment display area or press any controls on the radio centre console to turn the display on.

Rear Camera

Select and the following may display:

- Guidance Lines
- Rear Park Assist Symbols

Guidance Lines

Rear Park Assist Symbols

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.

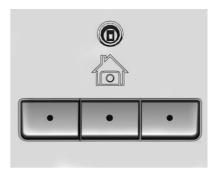
Software Information

Select to view the infotainment system current software information.

Universal Remote System

See *Declaration of Conformity* \Rightarrow 355.

Universal Remote System Programming



If equipped, these buttons are in the overhead console.

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

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

Read the instructions completely before programming the Universal Remote system. It may help to have another person assist with programming process.

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

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

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

Programming the Universal Remote System

The Universal Remote system is compatible with radio frequency devices operating at 433.92 MHz. If the system being programmed does not operate within this frequency range then a Universal Receiver may be required.

For questions or programming help, see www.homelink.com/gm or call 1-800-355-3515.

Programming involves time-sensitive actions, and may time out causing the procedure to be repeated.

To program up to three devices:

 Hold the end of the hand-held transmitter about 3 to 8 cm (1 to 3 in) away from the Universal Remote system buttons with the indicator light in view. The

- hand-held transmitter was supplied by the manufacturer of the garage door opener receiver.
- 2. At the same time, press and hold both the hand-held transmitter button and one of the three Universal Remote system buttons to be used to operate the garage door. Do not release either button until the indicator light goes from a slow to a rapid flash light. Then release both buttons.

Some entry gates and garage door openers may require substitution of Step 2 with the procedure under "Programming for Some Gate Operators" later in this section.

- Press and hold the newly programmed Universal Remote system button for five seconds while watching the indicator light and garage door activation.
 - If the indicator light stays on continuously or the garage door moves when the button

- is pressed, then programming is complete. There is no need to complete Steps 4–6.
- If the indicator light does not come on or the garage door does not move, a second button press may be required. For a second time, press and hold the newly programmed button for five seconds. If the light stays on or the garage door moves, programming is complete.
- If the indicator light blinks rapidly for two seconds, then changes to a solid light and the garage door does not move, continue with programming Steps 4-6.



Learn or Smart Button

- 4. After completing Steps 1–3, locate the Learn or Smart button inside the garage on the garage door opener receiver. The name and colour of the button may vary by manufacturer.
- Press and release the Learn or Smart button. Step 6 must be completed within 30 seconds of pressing this button.
- 6. Inside the vehicle, press and hold the newly programmed Universal Remote system button for two seconds and then release it. If the garage door does not move or the lamp on the garage door opener receiver does not flash, press and hold the same button a second time for two seconds,

then release it. Again, if the door does not move or the garage door lamp does not flash, press and hold the same button a third time for two seconds, then release it.

The Universal Remote system should now activate the garage door.

Repeat the process for programming the two remaining buttons.

Programming for Some Gate Operators

For questions or programming help, see www.homelink.com/gm or call 1-800-355-3515.

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

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

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

Universal Remote System Operation

Using the Universal Remote System

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

Erasing Universal Remote System Buttons

Erase all programmed buttons when vehicle ownership is terminated.

To erase:

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

Reprogramming a Single Universal Remote System Button

To reprogram any of the system buttons:

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

Lighting

Exterior Lighting
Exterior Lamp Controls 167
Exterior Lamps Off Reminder 169
Headlamp Main/Dipped-Beam
Changer 169
Flash-to-Pass 169
Daytime Running
Lamps (DRL) 169
Automatic Headlamp System 170
Hazard Warning Flashers 171
Indicator and Lane-Change
Signals 171
Fog Lamps 172
Cornering Lights 172
nterior Lighting
Instrument Panel Illumination
Control 173
Dome Lamps 173
Reading Lamps 173

Lighting Features

Entry Lighting	174
Exit Lighting	174
Battery Load Management	
Battery Power Protection	175
Exterior Lighting Battery	
Saver	175

Exterior Lighting

Exterior Lamp Controls



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

Turn the control to the following positions:

U: Turns off the automatic headlights and Daytime Running Lamps (DRL). Turning the headlight control to U again will turn the automatic headlights or DRL back on.

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

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

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

When the headlamps are turned on while the vehicle is on, the headlamps will turn off automatically 10 minutes after the ignition is turned off. When the headlamps are turned on while the vehicle is off, the headlamps will stay on for 10 minutes before automatically turning off to prevent the battery from being drained. Turn the headlamp control to off and then back to the headlamp on position to make the headlamps stay on for an additional 10 minutes.

IntelliBeam[®] System

If equipped, this system turns the vehicle's main beam headlamps on and off according to surrounding traffic conditions.

The system turns the main beam headlamps on when it is dark enough and there is no other traffic present.

This **A** lamp comes on in the instrument cluster when the IntelliBeam system is enabled.

Turning On and Enabling IntelliBeam

To enable the IntelliBeam system, with the indicator lever in the neutral position, turn the exterior lamp control to AUTO. The blue main beam on light appears on the instrument cluster when the main beams are on.

Driving with IntelliBeam

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

There is a sensor near the top centre of the windscreen, which automatically controls the system. Keep this area of the windscreen clear of debris to allow for best system performance.

The main beam headlamps remain on, under the automatic control, until one of the following situations occurs:

The system detects an approaching vehicle's headlamps.

- The system detects a preceding vehicle's tail lamps.
- The outside light is bright enough that main beam headlamps are not required.
- The vehicle's speed drops below 20 km/h (12 mph).
- The IntelliBeam system can be disabled by the main/dipped beam changer or the flash-to-overtake feature. If this happens, the main/dipped beam changer must be activated on then off within two seconds to reactivate the IntelliBeam system. The instrument cluster light will come on to indicate the IntelliBeam is reactivated.

See Headlamp Main/Dipped-Beam Changer \$\dip 169\$ and Flash-to-Pass \$\dip 169\$.

The main beams may not turn off automatically if the system cannot detect other vehicle's lamps because of any of the following:

 The other vehicle's lamps are missing, damaged, obstructed from view, or otherwise undetected.

- The other vehicle's lamps are covered with dirt, snow, and/or road spray.
- The other vehicle's lamps cannot be detected due to dense exhaust, smoke, fog, snow, road spray, mist, or other airborne obstructions.
- The vehicle's windscreen 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 tail lamps.
- The vehicle is being driven on winding or hilly roads.

The automatic main beam headlights may need to be disabled if any of the above conditions exist.

Exterior Lamps Off Reminder

If a door is open, a reminder chime sounds when the headlights or parking lights are manually turned on and the ignition is off. To turn off the chime, turn the exterior lamp control to off or AUTO and then back on, or close and re-open the door. In the AUTO mode, the headlights turn off once the ignition is off or remain on until the headlight delay ends (if enabled in the DIC). See "Exit Lighting" under *Vehicle Personalisation* \Rightarrow 156.

Headlamp Main/ Dipped-Beam Changer

Push the indicator lever toward the instrument panel to change the headlights from dipped to main beam.

Pull the indicator lever toward you and release it to return to dipped beam headlights.



When the main beam headlights are on, this indicator light on the instrument cluster will also be on.

Flash-to-Pass

This feature lets you use the main-beam headlamps to signal a driver in front of you that you want to pass. It works even if the headlamps are in the automatic position.

To use it, pull the indicator stalk toward you, then release it.

If the headlamps are in the automatic position or on dipped beam, the main-beam headlamps will turn on. They will stay on as long as you hold the stalk toward you. The main-beam indicator on the instrument cluster will come on. Release the stalk to return to normal operation.

Daytime Running Lamps (DRL)

DRL can make it easier for others to see the front of the vehicle during the day.

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

- The ignition is on.
- The exterior lamp control is in AUTO.
- The transmission is not in P (Park).
- The light sensor determines it is daytime.

When the DRL system is on, only the DRL are on. The tail lamps, sidemarker lamps, instrument panel lights, and other lamps will not be on.

When it begins to get dark, the automatic headlight system switches from DRL to the headlights.

To turn the DRL off turn the exterior lamps control to 30%. To turn the DRL back on turn the control to 0%.

Automatic Headlamp System

When it is dark enough outside, the automatic headlamp system turns on the headlamps at the normal

brightness, along with the tail lamps, sidemarker, parking lamps, and the instrument panel lights. The radio lights will also be dim.

To turn off the automatic headlight system, turn the exterior light control to $\overset{\bullet}{U}$ and then release it.



The vehicle has a light sensor on the top of the instrument panel that controls the automatic headlamp system. Do not cover the sensor, otherwise the headlamps may come on when they are not needed.

The system may also turn on the headlamps when driving through a parking garage, heavy overcast weather, or a tunnel. This is normal.

There is a delay in the transition between the daytime and nighttime operation of the automatic headlamp system so that driving under bridges or bright overhead street lights does not affect the system. The automatic headlamp system is only affected when the light sensor detects a change in lighting lasting longer than the delay.

If the vehicle is started in a dark garage, the automatic headlamp system will come on immediately. Once the vehicle leaves the garage, it takes approximately one minute for the automatic headlamp system to change if it is bright enough outside. During that delay, the instrument cluster may not be as bright as usual. Make sure the instrument panel brightness control is in the full bright position. See *Instrument Panel Illumination Control* \Rightarrow 173.

To idle the vehicle with the automatic headlamp system off, turn the control to the off position.

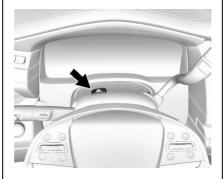
The headlamps will also stay on after you exit the vehicle.

The regular headlamp system can be turned on when needed.

Lights On with Wipers

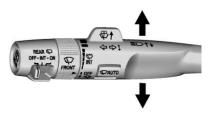
If the windscreen wipers are activated in daylight with the engine on, and the exterior lamp control is in AUTO, the headlamps, parking lamps, and other exterior lamps come on. The transition time for the lamps coming on varies based on wiper speed. When the wipers are not operating, these lamps turn off. Move the exterior lamp control to 0 or 0 to disable this feature.

Hazard Warning Flashers



When the hazard warning indicators are on, the vehicle's indicators will not work.

Indicator and Lane-Change Signals



An arrow on the instrument cluster flashes in the direction of the turn or lane change.

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

Raise or lower the stalk for less than one second until the arrow starts to flash to signal a lane change. This causes the indicators to automatically flash three times. It will flash six times if Tow/Haul Mode is active. Holding the indicator lever for more than one second will cause the indicators to flash until the lever is released.

The stalk returns to its starting position whenever it is released.

If after signalling a turn or a lane change the arrows flash rapidly or do not come on, a signal bulb could be burned out.

Replace any burned out bulbs. If a bulb is not burned out, check the fuse. See *Fuses and Circuit Breakers* \$\dip 290\$.

Indicator On Chime

If the indicator is left on for more than 1.2 km (0.75 mi), a chime sounds at each flash of the indicator. The message INDICATOR ON will also appear in the Driver Information Centre (DIC). To turn the chime and message off, move the indicator stalk to the off position.

Fog Lamps



The rear fog lamps make the vehicle more visible from the rear in foggy or misty conditions.

D: Press to turn the rear fog lamps on or off.

The parking lights or headlights must be on for the rear fog lamps to work.

Cornering Lights

If equipped with cornering lamps, they automatically come on when all of the following occur:

- The dipped beam headlights are on.
- The indicators are activated or the steering wheel is at a calibrated angle.
- The vehicle speed is below the calibrated speed.

Interior Lighting

Instrument Panel Illumination Control



This feature controls the brightness of the instrument panel lights and is next to the exterior light control.

Move the thumbwheel up or down to brighten or dim the lights.

The brightness of the displays automatically adjusts based on outdoor lighting. The instrument panel illumination control will set the lowest level to which the displays will be automatically adjusted.

Dome Lamps



There are interior lights in the overhead console and the headliner, if equipped.

To change the dome lamp settings, press the following:

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

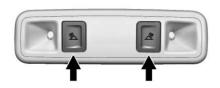
DOOR: The lamps come on automatically when a door is opened.

ON: Turns all dome lamps on.

Reading Lamps



There are reading lamps in the overhead console and the headliner, if equipped. To operate, the ignition must be on or in ACC/ACCESSORY, or using Retained Accessory Power (RAP).



Press or next to each reading lamp to turn it on or off.

Lighting Features

Entry Lighting

Some exterior lamps and the interior lamps turn on briefly at night, or in areas with limited lighting, when is pressed on the Remote Keyless Entry (RKE) transmitter. When a door is opened, the interior lamps come on if the dome lamp control is in the DOOR position. After about 30 seconds the exterior lights turn 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 Locator Lights" under *Vehicle Personalisation* ♀ 156.

Exit Lighting

Some exterior lamps and interior lamps come on at night, or in areas with limited lighting, when the driver door is opened after the ignition is turned off and the indicator lever is pulled briefly toward you and

released. The exterior lamps and interior lamps remain on after the door is closed for a set amount of time, then automatically turn off.

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

This feature can be changed. See *Vehicle Personalisation* \Rightarrow 156.

Battery Load Management

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

When the battery's state of charge is low, the voltage is raised slightly to quickly bring the charge back up. When the state of charge is high, the voltage is lowered slightly to prevent overcharging. The voltmeter gauge or the voltage display on the Driver Information Centre (DIC), if equipped, may show the voltage moving up or down. This is normal. If there is a problem, an alert will be displayed.

The battery can be discharged at idle if the electrical loads are very high. This is true for all vehicles. This is because the generator (alternator) may not be spinning fast enough at idle to produce all the power that is needed for very high electrical loads.

A high electrical load occurs when several of the following are on, such as: headlamps, high beams, fog lamps, rear window defogger, climate control fan at high speed, heated seats, engine cooling fans, trailer loads, and loads plugged into accessory power outlets.

EPM works to prevent excessive discharge of the battery. It does this by balancing the generator's output and the vehicle's electrical needs. It can increase engine idle speed to generate more power, whenever needed. It can temporarily reduce the power demands of some accessories.

Normally, these actions occur in steps or levels, without being noticeable. In rare cases at the highest levels of corrective action, this action may be noticeable to the driver. If so, a DIC message might be displayed and it is

recommended that the driver reduce the electrical loads as much as possible.

Battery Power Protection

This feature shuts off the interior and reading lights if they are left on for more than 10 minutes when the ignition is off. This will keep the battery from running down.

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 \circlearrowleft position and then back to the $\stackrel{\smile}{>}00\stackrel{\smile}{>}$ or $\stackrel{\smile}{\gg}$ position.

To keep the lamps on for more than 10 minutes, the ignition must be on or in ACC/ACCESSORY.

Infotainment System

Introduction

Infotainment

See the infotainment manual for information on the radio, audio players, phone, navigation system, Rear Seat Entertainment (RSE), and voice or speech recognition. It also includes information on settings.

Climate Controls

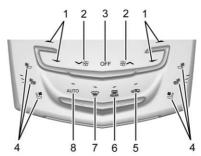
Climate Control Systems	
Dual Automatic Climate Control	
System 177	
Rear Climate Control System 182	
Air Vents	
Air Vents	
Maintenance	
Passenger Compartment Air	

Service

Climate Control Systems

Dual Automatic Climate Control System

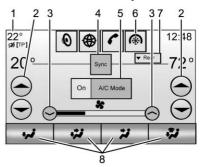
The climate control buttons on the centre console and on the climate control display are used to adjust the heating, cooling, and ventilation.



Centre Console Climate Controls

- Driver and Passenger Temperature Controls
- 2. Fan Control
- 3. OFF (Fan)

- 4. Driver and Passenger Heated and Cooled Seats
- Recirculation
- . Rear Window Demister
- 7. Defrost
- 8. AUTO (Automatic Operation)



Climate Control Display

- 1. Outside Temperature Display
- 2. Driver and Passenger Temperature Controls
- . Fan Control
- 4. SYNC (Synchronised Temperature)
- 5. A/C Mode (Air Conditioning)

- 6. Climate Control Selection (Application Tray Button)
- 7. Rear (Rear Climate Control Touch Screen)
- 8. Air Delivery Mode Control

Climate Control Display

The fan, air delivery mode, air conditioning, driver and passenger temperatures, and SYNC settings can be controlled by pressing CLIMATE on the infotainment home screen or the climate button on the infotainment display application tray. A selection can then be made on the front climate control page displayed. See the infotainment manual.

Climate Control Status Display



The climate control status display appears briefly when the climate control buttons on the centre console are adjusted. The air delivery mode can be adjusted on the climate control display.

Automatic Operation

The system automatically controls the fan speed, air delivery, air conditioning, and recirculation in order to heat or cool the vehicle to the desired temperature.

When the indicator light is on or AUTO is displayed on the touch screen, the system is in full automatic operation. If the air delivery mode or fan setting is manually adjusted, the auto indicator turns off and the display will show the selected settings. Auto operation can be turned off individually for climate settings.

For automatic operation:

- Press AUTO.
- Set the temperature. Allow the system time to stabilise. 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.

English units can be changed to metric units through the instrument cluster. See "Cluster Settings Menu" under *Instrument Cluster* ⇔ *135*.

OFF: Press OFF to turn the fan on or off. When OFF is selected, the system will stop air from flowing into the cabin. If ON is selected, any other buttons are pressed, or any knobs are turned, the climate control system will turn on and operate at the current setting.

 \triangle / ∇ : The temperature can be adjusted separately for the driver and the passenger. Press to increase or decrease the temperature. Press and hold to rapidly increase or decrease the temperature.

The driver and passenger temperatures can also be adjusted by pressing the controls on the touch screen.

SYNC: Touch SYNC on the climate control display to link all climate zone settings to the driver settings. Adjust the driver side temperature control to change the linked temperature. When the passenger settings are adjusted, the SYNC button is displayed when the temperatures are unlinked.

Rear: If equipped, touch Rear on the front climate control display to open the rear climate control screen. The rear climate control settings can now be adjusted from the front passenger area.

Manual Operation

V ♣ ↑: Touch the fan controls on the climate control display or press the fan control buttons in order to increase or decrease the fan speed. Touch or press and hold the fan controls to adjust speed more quickly. The fan speed setting displays. Any adjustment of the fan speed cancels automatic fan control and the fan can be controlled manually. Press AUTO to return to automatic operation.

To turn off the fan and climate control system, press OFF on the centre console climate controls. The airflow will be blocked from entering in all air delivery modes, except defrost.

The maximum automatic fan speed can be set to low, medium, or high. To adjust Auto Fan Max Speed, see "Climate and Air Quality" under Vehicle Personalisation

156.

Air Delivery Mode Control: When the climate information is displayed, press the desired air delivery mode on the climate control display to change the direction of the airflow. The selected air delivery mode button is lit. Pressing any of the air delivery buttons cancels automatic air delivery control and the direction of the airflow can be controlled manually. 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 mist or moisture. Air is directed to the windscreen and floor outlets.

: Clears the windscreen of mist or frost more quickly. Air is directed to the windscreen. Press the button to turn on or off. Changing the air delivery mode also turns the defrost off.

A/C Mode: Touch AC Mode on the climate control display to turn the automatic air conditioning on or off. If the fan is turned off or the outside temperature falls below freezing, the air conditioner will not run.

Press AUTO to return to automatic operation and the air conditioner runs as needed.

Automatic Air Recirculation: When the AUTO indicator light is on, the air is automatically recirculated as needed to help quickly cool the inside of the vehicle.

The climate control system may have a sensor to detect air pollution. When using automatic air recirculation, the air quality control system may operate. To adjust the sensitivity of the air quality sensor, see "Climate and Air Quality" under *Vehicle Personalisation* \Rightarrow 156.

recirculating air inside the vehicle or pulling in outside air. The indicator light on the button is lit when recirculation mode is active. This helps to quickly cool the air inside the vehicle and reduce the entry of outside air and odours.

Pressing this button cancels automatic recirculation. Press AUTO to return to automatic operation; recirculation runs automatically as needed.

Manual recirculation mode is not available when in Defrost or Defog modes.

Auto Defog: The climate control system uses 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, turn on the air conditioner, and direct more air to the windscreen. If the climate control system does not

Rear Window Demister

THE REAR: Press to turn the rear window demister on or off. An indicator light on the button comes on to show that the rear window demister is on.

The rear window demister only works when the ignition is on. The demister turns off if the ignition is turned off or to ACC/ACCESSORY.

The rear window demister can be set to automatic operation. When Auto Rear Demist is selected, the rear window demister turns on automatically when the vehicle is first started in cold weather and turns off when the vehicle is warmed. To turn Auto Rear Demist on or off, see "Climate and Air Quality" under Vehicle Personalisation

156.

The heated outside rearview mirrors turn on when the rear window demister button is on and help to clear mist or frost from the surface of the mirrors

Caution

Do not try to clear frost or other material from the inside of the front windscreen and rear window with a razor blade or anything else that is sharp. This may damage the rear window demister grid and affect the radio's ability to pick up stations clearly. The repairs would not be covered by the vehicle warranty.

Driver and Passenger Heated and Cooled Seats : Press ♣ or ♣ to heat the driver or passenger backrest only.

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

Press ♥ or ♥ to cool the driver or passenger seat.

There are also auto heated and cooled seats, for more information see *Heated* and Cooled Front Seats \Rightarrow 65.

Remote Start Climate Control
Operation: The climate control
system may run when the vehicle is
started remotely. The system uses the
driver's previous settings to heat or
cool the inside of the vehicle. The rear
demist may come on during remote
start based on cold ambient
conditions. The rear demist indicator
light does not come on during a
remote start. If equipped with heated
or cooled seats, they may come on
during a remote start.
See Remote Vehicle Start ⇒ 34 and

See Remote Vehicle Start \Rightarrow 34 and Heated and Cooled Front Seats \Rightarrow 65.

Sensor



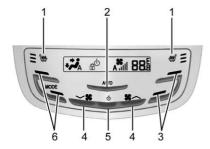
The solar sensor, on top of the instrument panel near the windscreen, monitors the solar heat.

The climate control system uses the sensor information to adjust the temperature, fan speed, recirculation, and air delivery mode for best comfort.

If the sensor is covered, the automatic climate control system may not work properly.

Rear Climate Control System

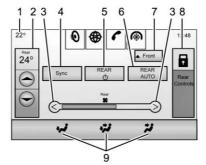
If equipped, the rear climate control system is on the rear of the centre console. The settings can be adjusted with the rear climate controls and the rear climate display.



Rear Climate Controls

- 1. Heated Rear Seats
- 2. AUTO (Automatic Operation)
- 3. Temperature Control
- 4. Fan Control
- 5. Ů (On/Off)

6. Air Delivery Mode Control



Rear Climate Display

- 1. Outside Temperature Display
- 2. Rear Climate Temperature Control
- 3. Fan Control
- 4. SYNC (Synchronised Temperatures)
- 5. REAR ((On/Off)
- 6. Rear AUTO (Automatic Operation)
- 7. Front (Front Climate Control Touch Screen)
- 8. Rear Control Lockout

9. Air Delivery Mode Control

Rear: Touch Rear on the front climate control display to open the rear climate control screen. The rear climate control settings can now be adjusted from the front passenger area.

Ů: Press Ů or REAR Ů to turn the rear climate control system on or off. If the rear climate control system is turned off using REAR Ů on the rear climate display, the Ů button and the temperature or air delivery mode buttons on the rear climate controls must be pressed within five seconds to turn it back on.

SYNC: Touch SYNC on the rear climate display to match the rear climate control temperature to the front climate control driver temperature. The SYNC button will be lit. Press the temperature, MODE, or AUTO button twice to unlink the set driver and rear temperatures. The SYNC button turns off.

Rear Control Lockout : Touch Rear Control Lockout on the rear climate display to lock or unlock control of

the rear climate control system from the front climate control display. When locked, the rear climate control system cannot be adjusted from the rear climate controls on the rear of the centre console.

Automatic Operation

Rear AUTO: Touch to turn on or off. The air delivery and fan speed are controlled automatically. The AUTO indicator appears on the display on the rear of the centre console. If the Mode or fan control buttons are manually adjusted, this cancels the automatic operation.

Manual Operation

fan controls on the rear climate display or on the rear of the centre console to increase or decrease the airflow. Pressing \(\text{\text{N}} \) when the system is off will turn the system on. The air delivery mode remains in its previous setting.

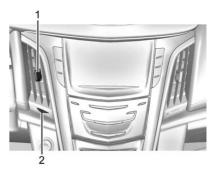
 \triangle / ∇ : Touch or press and hold the rear temperature controls on the rear climate display or on the rear of the centre console to adjust the rear passenger temperature. Press \triangle for warmer air and press ∇ for cooler air.

on the rear climate display or the MODE button on the rear of the centre console to change the direction of the airflow in the rear seating area.

₩ or ₩: Press **₩** or **₩** to heat the left or right outboard seat cushion and seatback. See *Heated Rear Seats* \$\dip 66.

Air Vents

Adjustable air vents are in the centre and on the side of the instrument panel.



- I. Slider Knob
- 2. Thumbwheel

Move the slider knobs (1) to change the direction of the airflow.

Use the thumbwheels (2) near the air vents to open or close off the airflow.

Operation Tips

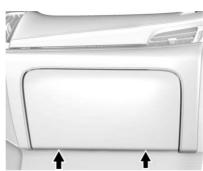
- Clear away any ice, snow, or leaves from the air inlets at the base of the windscreen that could block the flow of air into the vehicle.
- Clear snow off the bonnet to improve visibility and help decrease moisture drawn into the vehicle.
- When you enter a vehicle in cold weather, press the fan up button to the maximum fan level before driving. This helps clear the intake ducts of snow and moisture, and reduces the chance of misting the inside of the window.
- Keep the air path under the front seats clear of objects to help circulate the air inside of the vehicle more effectively.
- Use of non-GM approved bonnet air flow deflectors can adversely affect the performance of the system. Check with your dealer before adding equipment to the outside of the vehicle.

Maintenance

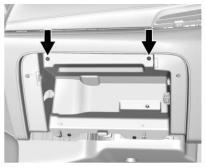
Passenger Compartment Air Filter

The filter reduces the dust, pollen and other airborne irritants from outside air that are drawn into the vehicle.

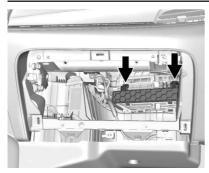
The filter should be replaced as part of routine scheduled maintenance. See *Scheduled Maintenance ⇔* 343. To find out what type of filter to use, see *Maintenance Replacement Parts ⇔* 347.



 Before opening the glove box, remove the two lower screws (out of view).



- Open the glove box completely and remove the two upper screws.
- 3. Disconnect the electrical plug and remove the entire glove box.



- Release the two tabs holding the service door. Open the service door and remove the old filter.
- 5. Install the new air filter.
- 6. Close the service door and secure the tabs.
- 7. Reverse the steps to reinstall the glove box.

See your dealer if additional assistance is needed.

Service

This vehicle has the new environmentally friendly refrigerant, R1234yf. This refrigerant has a

significantly reduced global warming impact on the environment, compared to the traditional automotive refrigerant, R-134a. All vehicles have a label under the bonnet that identifies the refrigerant used in the vehicle.

The refrigerant system should only be serviced by trained and certified technicians. The air conditioning evaporator should never be repaired or replaced by one from a salvage vehicle. It should only be replaced by a new evaporator to ensure proper and safe operation.

During service, all refrigerants should be reclaimed with proper equipment. Venting refrigerants directly to the atmosphere is harmful to the environment and may also create unsafe conditions based on inhalation, combustion, frostbite, or other health-based concerns.

Driving and Operating

Driving Information	
Distracted Driving 187	7
Defensive Driving 188	
Control of a Vehicle 188	
Braking 188	3
Steering 188	3
Off-Road Recovery 189)
Loss of Control 189)
Off-Road Driving 190)
Driving on Wet Roads 194	1
Hill and Mountain Roads 195	5
Winter Driving 196	ó
If the Vehicle Is Stuck 197	7
Vehicle Load Limits 197	7
Starting and Operating	
New Vehicle Run-In 202	2
Adjustable Throttle and Brake	
Pedal 202	2
Ignition Positions 203	3
Starting the Engine 204	
Retained Accessory	
Power (RAP)	5
Shifting Into Park 205	5
Shifting out of Park 207	7

Parking over Things	
That Burn	207
Active Fuel Management	207
Extended Parking	
Engine Exhaust	
Engine Exhaust	208
Running the Vehicle While	
Parked	209
Automatic Transmission	
Automatic Transmission	209
Manual Mode	212
Tow/Haul Mode	213
Drive Systems Four-Wheel Drive	214
Brakes	
Antilock Brake System (ABS)	218
Parking Brake	218
Electric Parking Brake	219
Brake Assist	220
Hill Start Assist (HSA)	221
Ride Control Systems	
Traction Control/Electronic	
Stability Control	22
Driver Mode Control	223
Magnetic Ride Control	
Locking Rear Axle	
Automatic Level Control	225

Cruise Control	
Cruise Control	226
Adaptive Cruise Control	228
Driver Assistance Systems	
Driver Assistance Systems	236
Assistance Systems for Parking	
or Reversing	237
Assistance Systems for	
Driving	242
Forward Collision Alert (FCA)	
System	242
Forward Automatic	
Braking (FAB)	244
Side Blind Zone Alert (SBZA)	246
Lane Change Alert (LCA)	246
Lane Departure	
Warning (LDW)	248
Lane Keep Assist (LKA)	248
Fuel	
Fuel	250
Fuel Additives	250
Filling the Tank	251
Filling a Portable Fuel	
Container	252
Trailer Towing	
General Towing Information	253
Driving Characteristics and	
Towing Tips	253

Trailer Towing	256
Towing Equipment	259
Trailer Sway Control (TSC)	263
Conversions and Add-Ons	
Add-On Electrical Equipment	265

Driving Information

Distracted Driving

Distraction comes in many forms and can take your focus from the task of driving. Exercise good judgement 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 vour area.

To avoid distracted driving, keep your eyes on the road, keep your hands on the steering wheel, and focus your attention on driving.

- Do not use a phone in demanding driving situations. Use a hands-free method to place or receive necessary phone calls.
- Watch the road. Do not read, take notes, or look up information on phones or other electronic devices.
- Designate a front seat passenger to handle potential distractions.

- Become familiar with vehicle features before driving, such as programming favourite 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 mobile 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.

See the infotainment manual for information on that system or the navigation system, if equipped, including pairing and using a mobile phone.

Defensive Driving

Defensive driving means "always expect the unexpected." The first step in driving defensively is to wear the seat belt. See *Seat Belts* \Rightarrow 73.

- 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.

Control of a Vehicle

Braking, steering, and accelerating are important factors in helping to control a vehicle while driving.

Braking

Braking action involves perception time and reaction time. Deciding to push the brake pedal is perception time. Actually doing it is reaction time.

Average driver reaction time is about three-quarters of a second. In that time, a vehicle moving at 100 km/h (60 mph) travels 20 m (66 ft), which could be a lot of distance in an emergency.

Helpful braking tips to keep in mind include:

- Keep enough distance between you and the vehicle in front of you.
- Avoid needless heavy braking.
- Keep pace with traffic.

If the engine ever stops while the vehicle is being driven, brake normally but do not pump the brakes. Doing so could make the pedal harder to push down. If the engine stops, there will be some power brake assist but it will be used when the brake is applied.

Once the power assist is used up, it can take longer to stop and the brake pedal will be harder to push.

Steering

Electric Power Steering

This 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 assist is used for an extended period of time while the vehicle is not moving, power assist may be reduced.

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.

Normal use of the power steering assist should return when the system cools down.

See your dealer if there is a problem.

Bend Tips

- Take bends at a reasonable speed.
- Reduce speed before entering a bend.
- Maintain a reasonable steady speed through the bend.
- Wait until the vehicle is out of the bend before accelerating gently into the straight.

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:

- 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.
- Turn the steering wheel about one-eighth of a turn, until the right front tyre contacts the pavement edge.
- 3. Turn the steering wheel to go straight down the roadway.

Loss of Control

Skidding

There are three types of skids that correspond to the vehicle's three control systems:

- Braking Skid wheels are not rolling.
- Steering or Cornering Skid too much speed or steering in a bend causes tyres 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 recognise 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 tyres to slide.

Remember: Antilock brakes help avoid only the braking skid.

Off-Road Driving

Four-wheel-drive vehicles can be used for off-road driving. Vehicles without four-wheel drive and vehicles not equipped with All Terrain (AT) or On-Off Road (OOR) tires must not be driven off-road except on a level, solid

surface. For contact information about the original equipment tyres, see the warranty manual.

One of the best ways for successful off-road driving is to control the speed.

⚠ Warning

When driving off-road, bouncing and quick changes in direction can easily throw you out of position. This could cause you to lose control and crash. You and your passengers should always wear seat belts.

Before Driving Off-Road

- Have all necessary maintenance and service work completed.
- Fuel the vehicle, fill fluid levels. and check inflation pressure in all tyres, including the spare, if equipped.
- Read all the information about four-wheel-drive vehicles in this manual.

- Remove any underbody air deflector, if equipped. Re-attach the air deflector after off-road driving.
- Know the local laws that apply to off-road driving.

To gain more ground clearance if needed, it may be necessary to remove the front fascia lower spoiler, if equipped. However, driving without the front spoiler reduces fuel economy.

Caution

Operating the vehicle for extended periods without the front fascia lower air dam installed can cause improper airflow to the engine. Reattach the front fascia air dam after off-road driving.

Loading the Vehicle for Off-Road Driving

⚠ Warning

- Unsecured cargo on the load floor can be tossed about when driving over rough terrain. You or your passengers can be struck by flying objects. Secure the cargo properly.
- Keep cargo in the cargo area as far forward and as low as possible. The heaviest things should be on the floor, forward of the rear axle.
- Heavy loads on the roof raise the vehicle's centre of gravity, making it more likely to roll over. You can be seriously or fatally injured if the vehicle rolls over. Put heavy loads inside the cargo area, not on the roof.

For more information about loading the vehicle, see *Vehicle Load Limits* \Rightarrow 197 and *Tyres* \Rightarrow 301.

Environmental Concerns

- Always use established trails, roads, and areas that have been set aside for public off-road recreational driving and obey all posted regulations.
- Do not damage shrubs, flowers, trees, or grasses or disturb wildlife.
- Do not park over things that burn. See *Parking over Things That Burn*⇒ 207.

Driving on Hills

Driving safely on hills requires good judgement and an understanding of what the vehicle can and cannot do.

⚠ Warning

Many hills are simply too steep for any vehicle. Driving up hills can cause the vehicle to stall. Driving down hills can cause loss of control.

(Continued)

Warning (Continued)

Driving across hills can cause a rollover. You could be injured or killed. Do not drive on steep hills.

Before driving on a hill, assess the steepness, traction, and obstructions. If the terrain ahead cannot be seen, get out of the vehicle and walk the hill before driving further.

When driving on hills:

- Use a low gear and keep a firm grip on the steering wheel.
- Maintain a slow speed.
- When possible, drive straight up or down the hill.
- Slow down when approaching the top of the hill.
- Use headlamps even during the day to make the vehicle more visible.

⚠ Warning

Driving to the top of a hill at high speed can cause an accident. There could be a drop-off, embankment, cliff, or even another vehicle. You could be seriously injured or killed. As you near the top of a hill, slow down and stay alert.

 Never go downhill forward or backward with either the transmission or transfer case in N (Neutral). The brakes could overheat and you could lose control.

⚠ Warning

If the vehicle has the two-speed automatic or electronic transfer case, shifting the transfer case to N (Neutral) can cause your vehicle to roll even if the transmission is in P (Park). This is because the N (Neutral) position on the transfer (Continued)

Warning (Continued)

case overrides the transmission. You or someone else could be injured. If leaving the vehicle, set the parking brake and shift the transmission to P (Park). Shift the transfer case to any position but N (Neutral).

 When driving down a hill, keep the vehicle headed straight down.
 Use a low gear because the engine will work with the brakes to slow the vehicle and help keep the vehicle under control.

⚠ Warning

Heavy braking when going down a hill can cause your brakes to overheat and fade. This could cause loss of control and you or others could be injured or killed. Apply the brakes lightly when descending a hill and use a low gear to keep vehicle speed under control.

If the vehicle stalls on a hill:

- Apply the brakes to stop the vehicle, and then apply the parking brake.
- 2. Shift into P (Park) and then restart the engine.
 - If driving uphill when the vehicle stalls, shift to R (Reverse), release the parking brake, and reverse straight down.
 - Never try to turn the vehicle around. If the hill is steep enough to stall the vehicle, it is steep enough to cause it to roll over
 - If you cannot make it up the hill, back straight down the hill
 - Never reverse down a hill in N (Neutral) using only the brake. The vehicle can roll backward quickly and you could lose control.

- If driving downhill when the vehicle stalls, shift to a lower gear, release the parking brake, and drive straight down the hill.
- 3. If the vehicle cannot be restarted after stalling, apply the parking brake, shift into P (Park), and turn the vehicle off
 - 3.1. Leave the vehicle and seek help.
 - 3.2. Stay clear of the path the vehicle would take if it rolled downhill.
- Avoid turns that take the vehicle across the incline of the hill. A hill that can be driven straight up or down might be too steep to drive across. Driving across an incline puts more weight on the downhill wheels, which could cause a downhill slide or a roll-over.
- Surface conditions can be a problem. Loose gravel, muddy spots, or even wet grass can cause the tyres to slip sideways, downhill. If the vehicle slips

- sideways, it can hit something that will trip it a rock, a rut, etc. and roll over.
- Hidden obstacles can make the steepness of the incline more severe. If a rock is driven across with the uphill wheels, or if the downhill wheels drop into a rut or depression, the vehicle can tilt even more.
- If an incline must be driven across, and the vehicle starts to slide, turn downhill. This should help straighten out the vehicle and prevent the side slipping.

⚠ Warning

Getting out of the vehicle on the downhill side when stopped across an incline is dangerous. If the vehicle rolls over, you could be crushed or killed. Always get out on the uphill side of the vehicle and stay well clear of the rollover path.

Driving in Mud, Sand, Snow, or Ice

Use a low gear when driving in mud – the deeper the mud, the lower the gear. Keep the vehicle moving to avoid getting stuck.

Traction changes when driving on sand. On loose sand, such as on beaches or sand dunes, the tyres tend to sink into the sand. This affects steering, accelerating, and braking. Drive at a reduced speed and avoid sharp turns or abrupt manoeuvres.

Traction is reduced on hard packed snow and ice and it is easy to lose control. Reduce vehicle speed when driving on hard packed snow and ice.

⚠ Warning

Driving on frozen lakes, ponds, or rivers can be dangerous. Ice conditions vary greatly and the vehicle could fall through the ice; you and your passengers could drown. Drive your vehicle on safe surfaces only.

Driving in Water



Driving through rushing water can be dangerous. Deep water can sweep your vehicle downstream and you and your passengers could drown. If it is only shallow water, it can still wash away the ground from under your tyres. Traction could be lost, and the vehicle could roll over. Do not drive through rushing water.

Caution

Do not drive through standing water if it is deep enough to cover the wheel hubs, axles, or exhaust pipe. Deep water can damage the axle and other vehicle parts.

If the standing water is not too deep, drive through it slowly. At faster speeds, water can get into the engine and cause it to stall. Stalling can occur if the exhaust pipe is under water. Do not turn off the ignition when driving through water. If the exhaust pipe is under water, the engine will not start. When going through water, the brakes get wet and it may take longer to stop. See "Driving on Wet Roads" later in this section.

After Off-Road Driving

Remove any brush or debris that has collected on the underbody or chassis, or under the bonnet. These accumulations can be a fire hazard.

After operation in mud or sand, have the brake linings cleaned and checked. These substances can cause glazing and uneven braking. Check the body structure, driveline, steering, suspension, wheels, tyres, and exhaust system for damage and check the fuel lines and cooling system for any leakage.

More frequent maintenance service is required.

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.

riangle 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

(Continued)

Warning (Continued)

ignore police warnings and be very cautious about trying to drive through flowing water.

Aquaplaning

Aquaplaning is dangerous. Water can build up under the vehicle's tyres 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 aquaplaning, it has little or no contact with the road.

There is no hard and fast rule about aquaplaning. 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.
- Overtake with caution.
- Keep windscreen wiping equipment in good condition.

- Keep the windscreen washer fluid reservoir filled.
- Have good tyres with proper tread depth. See *Tyres* \$ 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, tyres, 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

(Continued)

Warning (Continued)

transmission to a lower gear to let the engine assist the brakes on a steep downhill slope.



Coasting downhill in N (Neutral) or with the ignition off is dangerous. This can cause overheating of the brakes and loss of steering assist. Always have the engine running and the vehicle in gear.

- Drive at speeds that keep the vehicle in its own lane. Do not swing wide or cross the centre 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 gradients, overtaking or no-overtaking zones) and take appropriate action.

Winter Driving

Driving on Snow or Ice

Snow or ice between the tyres and the road creates less traction or grip, so drive carefully. Wet ice can occur at about 0 $^{\circ}$ C (32 $^{\circ}$ 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 tyres slick.
- Turn on Traction Control. See
 Traction Control/Electronic Stability Control ⇒ 221.
- 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)* \Rightarrow 218.
- 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 manoeuvres 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. To get help and keep everyone in the vehicle safe:

- Turn on the hazard warning lights.
- Tie a red cloth to an outside mirror.

Marning

Snow can trap engine exhaust under the vehicle. This may cause exhaust gases to get inside. Engine exhaust contains carbon monoxide (CO), which cannot be seen or smelled. It can cause unconsciousness and even death.

If the vehicle is stuck in snow:

- Clear snow from the base of the vehicle, especially any blocking the exhaust pipe.
- Open a window about 5 cm
 (2 in) on the vehicle side that
 is away from the wind, to
 bring in fresh air.
- Fully open the air outlets on or under the instrument panel.
- Adjust the climate control system to circulate the air inside the vehicle and set the

(Continued)

Warning (Continued)

fan speed to the highest setting. See "Climate Control Systems."

For more information about CO, see *Engine Exhaust* \Rightarrow 208.

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. See "Rocking the Vehicle to Get It Out" later in this section.

The Traction Control System (TCS) can often help to free a stuck vehicle. See *Traction Control/Electronic Stability Control* \Rightarrow 221. If TCS cannot free the vehicle, see "Rocking the Vehicle to Get it Out" following.

⚠ Warning

If the vehicle's tyres 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).

For information about using tyre chains on the vehicle, see *Tyre Chains*

⇒ 314.

Rocking the Vehicle to Get It Out

Turn the steering wheel left and right to clear the area around the front wheels. For four-wheel-drive vehicles, shift into Four-Wheel Drive High. Turn the TCS off. Shift back and forth between R (Reverse) and a forward gear, spinning the wheels as little as possible. To prevent transmission wear, wait until the wheels stop spinning before shifting gears. 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. See Towing the

Vehicle Load Limits

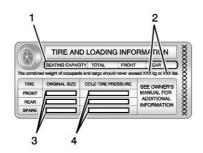
It is very important to know how much weight the vehicle can carry. This weight is called the vehicle capacity weight and includes the weight of all occupants, cargo, and all non-factory-installed options. Two labels on the vehicle may show how much weight it was

designed to carry, the Tyre and Loading Information label and the Certification/Tyre label.

Marning

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 tyres, and shorten the life of the vehicle.

Tyre and Loading Information Label



Label Example

A vehicle specific Tyre and Loading Information label is attached to the centre pillar (B-pillar). The tyre and loading information label shows the number of occupant seating positions (1), and the maximum vehicle capacity weight (2) in kilograms and pounds.

The Tyre and Loading Information label also shows the size of the original equipment tyres (3) and the recommended cold tyre

inflation pressures (4). For more information on tyres and inflation see *Tyres* \Rightarrow 301 and *Tyre Pressure* \Rightarrow 303.

There is also important loading information on the vehicle Certification/Tyre label. It may show the Gross Vehicle Weight Rating (GVWR) and the Gross Axle Weight Rating (GAWR) for the front and rear axles. See "Certification/Tyre Label" later in this section.

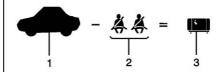
"Steps for Determining Correct Load Limit-

- Locate the statement "The combined weight of occupants and cargo should never exceed XXX kg or XXX lbs." on your vehicle's placard.
- Determine the combined weight of the driver and passengers that will be riding in your vehicle.

- 3. Subtract the combined weight of the driver and passengers from XXX kg or XXX lbs.
- 4. The resulting figure equals the available amount of cargo and luggage load capacity. For example, if the "XXX" amount equals 1400 lbs. and there will be five 150 lb passengers in your vehicle, the amount of available cargo and luggage load capacity is 650 lbs. (1400-750 (5 x 150) = 650 lbs.)
- 5. Determine the combined weight of luggage and cargo being loaded on the vehicle. That weight may not safely exceed the available cargo and luggage load capacity calculated in Step 4.
- 6. If your vehicle will be towing a trailer, load from your trailer will be transferred to your vehicle. Consult this manual to determine how

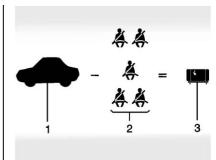
this reduces the available cargo and luggage load capacity of your vehicle."

See Trailer Towing \Leftrightarrow 256 for important information on towing a trailer, towing safety rules, and trailering tips.



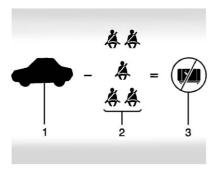
Example 1

- Maximum Vehicle Capacity Weight for Example 1 = 453 kg (1,000 lbs)
- Subtract Occupant Weight @ 68 kg (150 lbs) × 2 = 136 kg (300 lbs)
- 3. Available Occupant and Cargo Weight = 317 kg (700 lbs)



Example 2

- Vehicle Capacity Weight for Example 2 = 453 kg (1,000 lbs)
- Subtract Occupant Weight @ 68 kg (150 lbs) × 5 = 136 kg (750 lbs)
- 3. Available Cargo Weight = 113 kg (250 lbs)

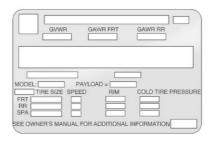


Example 3

- Maximum Vehicle Capacity Weight for Example 3 = 453 kg (1,000 lbs)
- 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 Tyre 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/Tyre Label



Label Example

A vehicle specific Certification/ Tyre label is attached to the B-pillar. The label may show the size of the vehicle's original tyres and the inflation pressures needed to obtain the gross weight capacity of the vehicle. This is called Gross Vehicle Weight Rating (GVWR). The GVWR includes the weight of the vehicle, all occupants, fuel, and cargo.

The Certification/Tyre label may also show the maximum weights for the front and rear axles, called Gross Axle Weight Rating (GAWR). To find out the actual loads on the front and rear axles, weigh the vehicle at a weigh station. Your dealer can help with this. Be sure to spread the load equally on both sides of the centre line.

The warranty does not cover parts or components that fail because of overloading.

The label will help determine how much cargo and installed equipment the vehicle can carry.

Using heavier suspension components to get added durability might not change the weight ratings. Ask your dealer to help load the vehicle properly.

⚠ Warning

Things you put 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. 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.
- When you carry something inside the vehicle, secure it whenever you can.
- Do not leave a seat folded down unless you need to.

There is also important loading information for off-road driving in this manual. See "Loading the Vehicle for Off-Road Driving" under *Off-Road Driving* ⇒ 190.

Add-On Equipment

There may be a limit on how many people can be inside the vehicle when carrying removable items. Be sure to weigh the vehicle before buying and installing the new equipment.

Caution

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

Remember not to exceed the Gross Axle Weight Rating (GAWR) of the front or rear axle.

Automatic Level Control

If a weight-distributing hitch is being used, it is recommended to allow the shocks to inflate, thereby levelling the vehicle prior to adjusting the height. See "Hitches" under *Towing Equipment*

⇒ 259.

Starting and Operating

New Vehicle Run-In

Caution

The vehicle does not need an elaborate run-in. But it will perform better in the long run if you follow these guidelines:

- Keep the vehicle speed at 88 km/h (55 mph) or less for the first 805 km (500 mi).
- 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 (Continued)

Caution (Continued)

replacement. Follow this breaking-in guideline every time you get new brake linings.

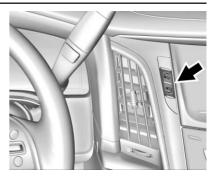
 Do not tow a trailer during run-in. See *Trailer Towing* \$\phi\$ 256 for the trailer towing capabilities of the vehicle and more information.

Following run-in, engine speed and load can be gradually increased.

Adjustable Throttle and Brake Pedal

If equipped, the position of the throttle and brake pedals can be changed.

The pedals can only be adjusted when the vehicle is in P (Park).



Press the top of the switch to move the pedals closer to your body. Press the bottom of the switch to move the pedals away.

Before you start driving, fully press the brake pedal to confirm the adjustment is right for you.

Ignition Positions



The vehicle is equipped with Keyless Access and has pushbutton start.

To shift out of P (Park), the vehicle must be on or in ACC/ACCESSORY, and the brake pedal must be applied. Stopping the Engine/LOCK/OFF (No Indicator Lights): 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) \Rightarrow 205.

If the vehicle is not in P (Park), the ignition will return to ACC/ACCESSORY and display the message SHIFT TO PARK in the Driver Information Centre (DIC). When the vehicle is shifted into P (Park), the ignition will turn 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.

The vehicle may have an electric steering column lock. The lock is activated when the ignition is turned off and either front door is opened. A sound may be heard as the lock actuates or releases. The steering column lock may not release with the

wheels turned off centre. If this happens, the vehicle may not start. Move the steering wheel from left to right while attempting to start the vehicle. If this does not work, the vehicle needs service.

If the vehicle must be shut off in an emergency:

- Brake using a firm and steady pressure. Do not pump the brakes repeatedly. This may deplete power assist, requiring increased brake pedal force.
- Shift the vehicle to N (Neutral).
 This can be done while the vehicle is moving. After shifting to N (Neutral), firmly apply the brakes and steer the vehicle to a safe location.
- 3. Come to a complete stop, shift to P (Park), and turn the ignition off. On vehicles with an automatic transmission, the gear lever must be in P (Park) to turn the ignition off.
- 4. Apply the parking brake. See Parking Brake \$\dip 218\$ or Electric Parking Brake \$\dip 219\$.

⚠ Warning

Turning off the vehicle while moving may cause loss of power assistance 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.

ACC/ACCESSORY (Amber Indicator Light): This mode allows some electrical accessories to be used when the engine is off.

With the ignition off, pressing the button once without the brake pedal applied will place the ignition system in ACC/ACCESSORY.

The ignition will switch from ACC/ACCESSORY to off after five minutes to prevent battery rundown.

ON/RUN/START (Green Indicator

Light): This mode is for driving and starting. With the ignition off, and the brake pedal applied, pressing the button once will turn the ignition on. Once engine cranking begins, release the button. Engine cranking will continue until the engine starts. See *Starting the Engine* ⇒ *204*. The ignition will then remain on.

Service Mode

This power mode is available for service and diagnostics, and to verify the proper operation of the malfunction indicator lamp as may be required for emission inspection purposes. With the vehicle off, and the brake pedal not applied, pressing and holding the button for more than five seconds will place the vehicle in Service Mode. The instruments and audio systems will operate as they do when the ignition is on, but the vehicle will not be able to be driven. The engine will not start in Service Mode. Press the button again to turn the ignition off.

Starting the Engine

Move the gear lever to P (Park) or N (Neutral). The engine will not start in any other position. To restart the engine when the vehicle is already moving, use N (Neutral) only.

Caution

Do not try to shift to P (Park) if the vehicle is moving. If you do, you could damage the transmission. Shift to P (Park) only when the vehicle is stopped.

Caution

If you add electrical parts or accessories, you could change the way the engine operates. Any resulting damage would not be covered by the vehicle warranty. See Add-On Electrical Equipment

265.

Starting Procedure

 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.

If the RKE transmitter is not in the vehicle, if there is interference, or if the RKE battery is low, the Driver Information Centre (DIC) will display a message.

Caution

Cranking the engine for long periods of time, by returning the ignition to the START position immediately after cranking has ended, can overheat and damage the cranking motor, and drain the (Continued)

Caution (Continued)

battery. Wait at least 15 seconds between each try, to let the cranking motor cool down.

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 petrol. 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 petrol 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.

Retained Accessory Power (RAP)

Some vehicle accessories may be used after the ignition is turned off.

The power windows and sunroof, if equipped, will continue to work for up to 10 minutes or until any door is opened.

The infotainment system will continue to work for 10 minutes, until the driver door is opened, or until the ignition is turned on or placed in ACC/ACCESSORY.

Shifting Into Park

⚠ Warning

It can be dangerous to get out of the vehicle if the shift lever is not fully in P (Park) with the parking brake firmly set. The vehicle can roll. If you have left the engine running, the vehicle can move suddenly. You or others could be injured. To be sure the vehicle will

(Continued)

Warning (Continued)

not move, even when you are on fairly level ground, use the steps that follow. If the vehicle has a four-wheel-drive transfer case with a N (Neutral) position, and the transfer case is in N (Neutral), the vehicle will be free to roll, even if the gear lever is in P (Park). Be sure the transfer case is in a drive gear. If towing a trailer, see Driving Characteristics and Towing Tips \$ 253

- 1. Hold the brake pedal down, then set the parking brake. See Parking Brake \$ 218.
- 2. Move the shift lever into the P (Park) position by pulling the shift lever toward you and moving it up as far as it will go.
- 3. Be sure the transfer case is in a drive gear – not in N (Neutral).
- Turn the ignition off.

Leaving the Vehicle with the **Engine Running**

∠ Warning

It can be dangerous to leave the vehicle with the engine running. The vehicle could move suddenly if the shift lever is not fully in P (Park) with the parking brake firmly set.

If you have four-wheel drive and the transfer case is in N (Neutral), the vehicle will be free to roll, even if the shift lever is in P (Park). So be sure the transfer case is in a drive gear - not in N (Neutral).

And, if you leave the vehicle with the engine running, it could overheat and even catch fire. You or others could be injured. Do not leave the vehicle with the engine running unless you have to.

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

brake is firmly applied before you leave it. After you move the shift lever into P (Park), hold the regular brake pedal down. Then, see if you can move the shift lever away from P (Park) without first pulling it toward vou. If you can, it means that the shift lever was not fully locked into P (Park).

Torque Lock

If you are parking on a hill and you do not shift the transmission into P (Park) properly, the weight of the vehicle may put too much force on the parking pawl in the transmission. You may find it difficult to pull the shift lever out of P (Park). This is called torque lock. To prevent torque lock, apply the parking brake and then shift into P (Park) properly before you leave the driver seat

When you are ready to drive, move the shift lever out of P (Park) before you release the parking brake.

If torque lock does occur, you may need to have another vehicle push yours a little uphill to take some of the pressure from the parking pawl in the transmission. You will then be able to pull the gear lever out of P (Park).

Shifting out of Park

This vehicle is equipped with an electronic shift lock release system. The shift lock release system is designed to prevent movement of the gear lever out of P (Park), unless the ignition is on 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* \Rightarrow 325.

To shift out of P (Park):

- 1. Apply the brake pedal.
- Move the shift lever to the desired position.

If you still are unable to shift out of P (Park):

- 1. Ease the pressure on the shift lever.
- While holding down the brake pedal, push the gear lever all the way into P (Park).
- 3. Move the shift lever to the desired position.

If you are still having a problem shifting, then have the vehicle serviced soon.

Parking over Things That Burn



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.

Active Fuel Management

This system allows the engine to operate on either all or half of its cylinders, depending on the driving conditions.

When less power is required, such as cruising at a constant vehicle speed, the system will operate in the half cylinder mode, allowing the vehicle to achieve better fuel economy. When greater power demands are required, such as accelerating from a stop, overtaking, or merging onto a freeway, the system will maintain full-cylinder operation.

Extended Parking

It is best not to park with the vehicle running. If the vehicle is left running, be sure it will not move and there is adequate ventilation.

See Shifting Into Park \Leftrightarrow 205 and Engine Exhaust \Leftrightarrow 208.

If the vehicle is left parked and running with the RKE transmitter outside the vehicle, it will turn off after one hour.

If the vehicle is left parked and running with the RKE transmitter inside the vehicle, it will turn off after two hours.

The vehicle could turn off sooner if it is parked on a hill, due to lack of available fuel.

The timer will reset if the vehicle is taken out of P (Park) while it is running.

Engine Exhaust

⚠ Warning

Engine exhaust contains carbon monoxide (CO), which cannot be seen or smelled. Exposure to CO can cause unconsciousness and even death.

Exhaust may enter the vehicle if:

- The vehicle idles in areas with poor ventilation (parking garages, tunnels, deep snow that may block underbody airflow or exhaust 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 205 and *Engine Exhaust* \Rightarrow 208.

If parking on a hill and pulling a trailer, see *Driving Characteristics and Towing Tips* \Rightarrow 253.

Automatic Transmission

If equipped, there is an electronic gear lever position indicator within the instrument cluster. This display comes on when the ignition is turned on.

There are several different positions for the shift lever.

PRNDL

See "Range Selection Mode" under *Manual Mode* \Leftrightarrow 212.

P: This position locks the drive wheels. Use P (Park) when starting the engine because the vehicle cannot move easily. When parked on a hill, especially when the vehicle has a heavy load, you might notice an increase in the effort to shift out of P (Park). See "Torque Lock" under Shifting Into Park ⇒ 205.

⚠ 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 applied. 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 205 and Driving Characteristics and Towing Tips \Rightarrow 253.

⚠ Warning

If you have four-wheel drive, the vehicle will be free to roll — even if the gear lever is in P (Park) — if the transfer case is in N (Neutral). So,

(Continued)

Warning (Continued)

be sure the transfer case is in a drive gear, Two-Wheel Drive High or Four-Wheel Drive High or Four-Wheel Drive Low — not in N (Neutral). See Shifting Into Park ⇒ 20.5.

R: Use this gear to reverse.

Caution

Shifting to R (Reverse) while the vehicle is moving forward could damage the transmission. The repairs would not be covered by the vehicle warranty. Shift to R (Reverse) only after the vehicle is stopped.

To rock the vehicle back and forth to get out of snow, ice, or sand without damaging the transmission, see If the Vehicle Is Stuck \$\Display 197.

N: In this position, the engine does not connect with the wheels. To restart the engine when the vehicle is already moving, use N (Neutral) only.



🗥 Warning

Shifting into a drive gear while the engine is running at high speed is dangerous. Unless your foot is firmly on the brake pedal, the vehicle could move very rapidly. You could lose control and hit people or objects. Do not shift into a drive gear while the engine is running at high speed.

Caution

Shifting out of P (Park) or N (Neutral) with the engine running at high speed may damage the transmission. The repairs would not be covered by the vehicle warranty. Be sure the engine is not running at high speed when shifting the vehicle.

Caution

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

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

Use D (Drive) and Tow/Haul Mode when towing a trailer, carrying a heavy load, driving on steep hills, or driving off-road. Shift the transmission to a lower gear selection if the transmission shifts too often.

Downshifting the transmission in slippery road conditions could result in skidding. See "Skidding" under Loss of Control \Rightarrow 189.

The vehicle has a shift stabilisation feature that adjusts the transmission shifting to the current driving conditions in order to reduce rapid upshifts and downshifts. This shift stabilisation feature is designed to determine, before making an upshift, if the engine is able to maintain vehicle speed by analysing things such as vehicle speed, throttle position, and vehicle load. If the shift stabilisation feature determines that a current vehicle speed cannot be maintained, the transmission does not upshift and instead holds the current gear. In some cases, this could appear to be a delayed shift, however the transmission is operating normally.

The transmission uses adaptive shift controls. The adaptive shift control process continually compares key shift parameters to pre-programmed ideal shifts stored in the transmission's computer. The transmission constantly makes adjustments to improve vehicle performance according to how the vehicle is being used, such as with a heavy load or when the temperature changes. During this adaptive shift control

process, shifting might feel different as the transmission determines the best settings.

When temperatures are very cold, the transmission's gear shifting could be delayed providing more stable shifts until the engine warms up. Shifts could be more noticeable with a cold transmission. This difference in shifting is normal.

L: This position allows selection of a range of gears appropriate for current driving conditions. If equipped, see "Range Selection Mode" under *Manual Mode* \Rightarrow 212.

Caution

Spinning the tyres or holding the vehicle in one place on a hill using only the accelerator pedal may damage the transmission. The repair will not be covered by the vehicle warranty. If the vehicle is stuck, do not spin the tyres. When stopping on a hill, use the brakes to hold the vehicle in place.

Normal Mode Grade Braking

This mode is enabled when the vehicle is started, but is not enabled in Range Selection Mode. It assists in maintaining desired vehicle speeds when driving on downhill grades by using the engine and transmission to slow the vehicle. The first time the system engages for each ignition cycle, a DIC message will be displayed.

To disable or enable Normal Mode Grade Braking within the current ignition cycle, press and hold the Tow/Haul button for five seconds. When the button is released, the requested mode change is made. A DIC message displays.

For other forms of grade braking, see *Tow/Haul Mode* \$\dip 213\$ and *Cruise Control* \$\dip 226\$.

Kickdown Mode

The accelerator pedal provides an additional downshift after pressing through the kickdown feature.

It requires extra pedal pressure near the end of its travel to engage.

Manual Mode

Range Selection Mode



Range Selection Mode helps control the vehicle's transmission and vehicle speed while driving downhill or towing a trailer by letting you select a desired range of gears.

To use this feature:

- Move the gear lever to L (Manual Mode).
- Press the plus/minus buttons on the gear lever to select the desired range of gears for current driving conditions.

Hold the plus/minus buttons on the gear lever to select the highest or lowest range available for the current vehicle speed.

When the gear lever is moved from D (Drive) to L (Manual Mode), a number displays next to the L, indicating the current transmission range.

This number is the highest gear that the transmission will command while operating in L (Manual Mode). All gears below that number are available. As driving conditions change, the transmission can automatically shift to lower gears. For example, when 5 (Fifth) is selected, 1 (First) through 5 (Fifth) gears are automatically shifted by the transmission, but 6 (Sixth) cannot be used until the plus/minus button on the gear lever is used to change to the range.

When the gear lever is moved from D (Drive) to L (Manual Mode), a downshift may occur. The gear that the transmission is operating in when the gear lever is moved from D (Drive) to L (Manual Mode) determines if a downshift occurs. See the following charts.

Gear before shifting from D (Drive) to L (Manual Mode)	8th	7th	6th	5th	4th	3rd	2nd	1 st
Range after shifting from D (Drive) to L (Manual Mode) – Tow/Haul not engaged	L6	L6	L5	L4	L3	L3	L2	Ll
Range after shifting from D (Drive) to L (Manual Mode) – Tow/Haul engaged	L6	L5	L4	L3	L3	L3	L2	L1

Grade Braking is not available when Range Selection Mode is active. See *Tow/Haul Mode*

⇒ 213.

While using Range Selection Mode, cruise control and the Tow/Haul Mode can be used.

Caution

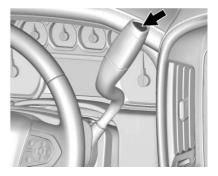
Spinning the tyres or holding the vehicle in one place on a hill using only the accelerator pedal may

[Continued]

Caution (Continued)

damage the transmission. The repair will not be covered by the vehicle warranty. If the vehicle is stuck, do not spin the tyres. When stopping on a hill, use the brakes to hold the vehicle in place.

Tow/Haul Mode



The Tow/Haul Mode adjusts the transmission shift pattern to reduce shift cycling. This provides increased performance, vehicle control, and enhanced transmission and engine cooling when driving down steep hills or mountain grades, towing, or hauling heavy loads.

The selector button is on the end of the gear lever. Turn the Tow/Haul Mode on and off by pressing the button. When the Tow/Haul Mode is enabled, a light on the instrument cluster will come on. See *Tow/Haul Mode Light* \Rightarrow *145* and *Hill and Mountain Roads* \Rightarrow *195*.

Also see "Tow/Haul Mode" under Driver Mode Control \Rightarrow 223.

Tow/Haul Mode Grade Braking

Tow/Haul Mode Grade Braking is only enabled while the Tow/Haul Mode is selected and the vehicle is not in the Range Selection Mode. See "Tow/Haul Mode" listed previously and *Manual Mode*

⇒ 212. Tow/Haul Mode Grade Braking assists in maintaining desired vehicle speeds when driving on downhill grades by using the engine and transmission to slow the vehicle.

To disable or enable Tow/Haul Grade Braking within the current ignition cycle, press and hold the Tow/Haul button for five seconds. When the button is released, the requested mode change is made. A DIC message is displayed.

See Towing Equipment \Rightarrow 259.

For other forms of grade braking, see *Automatic Transmission* \Rightarrow 209 and *Cruise Control* \Rightarrow 226.

Drive Systems

Four-Wheel Drive

Four-wheel drive engages the front axle for extra traction.

Caution

Do not drive on clean, dry pavement in $4 \uparrow$ and $4 \downarrow$ (if equipped) for an extended period of time. These conditions may cause premature wear on the vehicle's powertrain.

Driving on clean, dry tarmac in $4 \uparrow$ or $4 \downarrow$ may:

- Cause a vibration to be felt in the steering system.
- Cause tyres to wear faster.
- Make the transfer case harder to shift, and cause it to run noisier.

⚠ Warning

With four-wheel drive, the vehicle will be free to roll if the transfer case is in N (Neutral), even when the gear lever is in P (Park). Be sure the transfer case is in a drive gear $-2\uparrow$, $4\uparrow$, or $4\downarrow$ — not in N (Neutral). See *Shifting Into Park* $\Rightarrow 205$.

Caution

Extended high-speed operation in 4 ↓ may damage or shorten the life of the drivetrain.

Engagement noise and bump when shifting between $4 \downarrow$ and $4 \uparrow$ or from N (Neutral), with the engine running, is normal.

Shifting into 4 ↓ will turn Traction Control and StabiliTrak off. See *Traction Control/Electronic Stability Control* ⇒ 221.

Automatic Transfer Case



If equipped, use the transfer case knob next to the steering wheel to shift into and out of four-wheel drive.

All of the lights will flash on then off momentarily when the ignition is turned on. The light that remains on will indicate the state of the transfer case.

If the indicator mark on the switch does not match up with the light then that likely means the switch was moved when the ignition was off. The indicator mark on the switch must line up with the indicator light before a shift can be commanded. To command a shift rotate the transfer case switch to the new desired position. The light will blink meaning that the shift is in progress. When the shift is completed the new position will be illuminated. If the transfer case cannot complete a shift command, it will go back to its last chosen setting.

The settings are:

N (Neutral) : Use only when the vehicle needs to be towed. See *Towing* the Vehicle \Rightarrow 328.

2 \(^1\) (Two-Wheel Drive High): Use for driving on most streets and motorways. The front axle is not engaged. This setting provides the best fuel economy.

AUTO (Automatic Four-Wheel Drive): Use when road surface traction conditions are variable. When driving in AUTO, the front axle is engaged, and the vehicle's power is sent to the front and rear wheels

automatically based on driving conditions. This setting provides slightly lower fuel economy than 2 \uparrow .

Do not use AUTO mode, if equipped, to park on a steep gradient with poor traction such as ice, snow, mud, or gravel. In AUTO mode only the rear wheels will hold the vehicle from sliding when parked. If parking on a steep gradient, use 4 \(^{\dagger}\) to keep all four wheels engaged.

- **4** ↑ **(Four-Wheel Drive High)**: Use this position when extra traction is needed, such as when driving on snowy or icy roads, when off-roading, or when ploughing snow.
- **4** ↓ **(Four-Wheel Drive Low)**: This setting engages the front axle and delivers extra torque. Choose 4 ↓ when driving off-road in deep sand, deep mud, or deep snow, and while climbing or descending steep hills.

Shifting into 4 ↓ will turn Traction Control and StabiliTrak off. See *Traction Control/Electronic Stability Control* ⇔ 221.

Shifting Into 4 1 or AUTO

Turn the knob to the $4 \uparrow$ or AUTO position at any speed, except from $4 \downarrow$. The indicator light will flash while shifting and will remain on when the shift is completed.

Shifting Into 2 1

Turn the knob to $2 \uparrow$ at any speed, except when shifting from $4 \downarrow$. The indicator light will flash while shifting and will remain on when the shift is completed.

Shifting Into 4 ↓

When $4 \downarrow$ is engaged, keep vehicle speed below 72 km/h (45 mph).

To shift:

The ignition must be on and the vehicle must be stopped or moving less than 5 km/h (3 mph) with the transmission in N (Neutral). It is best for the vehicle to be moving 1.6 to 3.2 km/h (1 to 2 mph).

 Turn the knob to 4 ↓. Wait for the 4 ↓ indicator light to stop flashing before shifting the transmission into gear.

Caution

Shifting the transmission into gear before the requested mode indicator light has stopped flashing could damage the transfer case.

If the transmission is in gear and/or moving more than 5 km/h (3 mph), the $4\downarrow$ indicator light will flash for 30 seconds and not complete the shift. After 30 seconds the transfer case will shift to $4\uparrow$. Turn the knob to $4\uparrow$ to display the indicator. With the vehicle moving less than 5 km/h (3 mph), and the transmission in N (Neutral), attempt the shift again.

Shifting Out of 4 ↓

To shift:

- The vehicle must be stopped or moving less than 5 km/h (3 mph) with the transmission in N (Neutral) and the ignition on. It is best for the vehicle to be moving 1.6 to 3.2 km/h (1 to 2 mph).
- Turn the knob to 4 [↑], AUTO, or 2
 Wait for the 4 [↑], AUTO, or 2 [↑] indicator light to stop flashing before shifting the transmission into gear.

Caution

Shifting the transmission into gear before the requested mode indicator light has stopped flashing could damage the transfer case.

If the transmission is in gear and/or moving more than 5 km/h (3 mph), the 4 ↑, AUTO, or 2 ↑ indicator light will flash for 30 seconds but will not complete the shift. With the vehicle

moving less than 5 km/h (3 mph), and the transmission in N (Neutral), attempt the shift again.

Shifting Into N (Neutral)

To shift into N (Neutral):

- Park the vehicle on a level surface.
- 2. Apply the parking brake and press and hold the brake pedal. See *Parking Brake* \$\phi\$ 218 or *Electric Parking Brake* \$\phi\$ 219.
- 3. Start the vehicle or turn the ignition on.
- 4. Shift the transmission to N (Neutral).
- 5. Shift the transfer case to 2 [↑].
- 6. Turn the transfer case knob clockwise to N (Neutral) until it stops and hold it there until the N (Neutral) light starts blinking. This will take at least 10 seconds. Then slowly release the knob to the 4 ↓ position. The N (Neutral) light will come on when the transfer case shift to N (Neutral) is complete.

- With the engine running, verify that the transfer case is in N (Neutral) by shifting the transmission to R (Reverse), then shift the transmission to D (Drive). There should be no movement of the vehicle while shifting the transmission.
- 8. Turn the engine off, and the ignition to ACC/ACCESSORY.
- Place the transmission shift lever in P (Park).
- 10. Turn the ignition off.

Shifting Out of N (Neutral)

To shift out of N (Neutral):

- 1. Apply the parking brake.
- Press and hold START/STOP for 5 seconds with your foot off the brake to place the vehicle in Service Mode.
- 3. Shift the transmission to N (Neutral).

- 4. Turn the transfer case knob to the desired setting.
 - After the transfer case has shifted out of N (Neutral), the N (Neutral) light will go out.
- Release the parking brake.
- Start the engine and shift the transmission to the desired gear.

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 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.

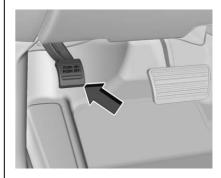
Using ABS

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.

Parking Brake



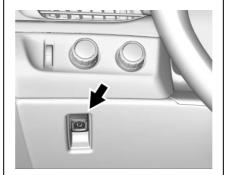
Apply the parking brake by holding the regular brake pedal down, then pushing down the parking brake pedal.

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.

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, a DIC message will appear and a chime will sound warning you that the parking brake is still on.

Electric Parking Brake



The vehicle has an Electric Parking Brake (EPB). The EPB can always be activated, even if the ignition is off. To prevent draining the battery, avoid repeated cycles of the EPB system when the engine is not running.

The system has a DE Electric Parking Brake light, and a DE Service Parking Brake light.

See Electric Parking Brake Light

↑ 144
and Service Electric Parking Brake Light

↑ 144.

Before leaving the vehicle, check for the (P) light to ensure that the parking brake is applied.

EPB Apply

To apply the EPB:

- Be sure the vehicle is at a complete stop.
- 2. Lift up the EPB switch momentarily.

The (P) light will flash and then stay on once the EPB is fully applied. If the (P) light flashes continuously, then the EPB is only partially applied or there is a problem with the EPB. A DIC message will display. Release the EPB and try to apply it again. If the light does not come on, or keeps flashing, have the vehicle serviced. Do not drive the vehicle if the (P) light is flashing. See your dealer. See *Electric Parking Brake Light* ⇔ 144.

If the Plight is on, press the EPB switch and hold it. Continue to hold the switch until the Plight remains on. If the Plight remains on, see your retailer.

If the EPB is applied while the vehicle is moving, the vehicle will decelerate as long as the switch is pressed. If the switch is pressed until the vehicle comes to a stop, the EPB will remain applied.

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

If the EPB fails to apply, block the rear wheels to prevent vehicle movement.

EPB Release

To release the EPB:

- Turn the ignition on or to ACC/ ACCESSORY.
- 2. Apply and hold the brake pedal.
- 3. Press the EPB switch momentarily.

The EPB is released when the light is off.

If the Plight is on, release the EPB by pressing and holding the EPB switch. Continue to hold the switch until the Plight is off. If either light stays on after release is attempted, see your dealer.

Caution

Driving with the parking brake on can overheat the brake system and cause premature wear or damage to brake system parts. Make sure that the parking brake is fully released and the brake warning light is off before driving.

Automatic EPB Release

The EPB will automatically release if the vehicle is running, placed into gear and an attempt is made to drive away. Avoid rapid acceleration when the EPB is applied, to preserve parking brake lining life.

Brake Assist

The 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

Hill Start Assist (HSA)

This vehicle has a Hill Start Assist (HSA) feature, which may be useful when the vehicle is stopped on a grade. This feature is designed to prevent the vehicle from rolling, either forward or rearward, during vehicle drive off. After you completely stop and hold the vehicle at a complete standstill on an incline, HSA will automatically activate. During the transition period between when you release the brake pedal and start to accelerate to drive off on an incline. HSA holds the brake pressure for a maximum of two seconds to ensure that there is no rolling. The brakes will automatically release when the accelerator pedal is applied within the two-second window. If the vehicle is equipped with the Integrated Trailer Brake Control (ITBC) system, HSA may also apply the trailer brakes. It will not activate if the vehicle is in a drive gear and facing downhill or if the vehicle is facing uphill and in R (Reverse). There may be situations

on minor hills (less than 5% gradient) with a loaded vehicle or while pulling a trailer where HSA may activate.

If you release the brake pedal and then reapply the brake pedal while HSA is activated, the brake pedal typically feels firmer with less pedal travel.

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 spin and assist the driver in maintaining control, especially on slippery road conditions.

TCS activates if it senses 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 travelling. 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. Trailer Sway Control (TSC) is

also on automatically when the vehicle is started. See *Trailer Sway Control (TSC)* ⇔ *263*.

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* ▷ 197 and "Turning the Systems Off and On" later in this section.

When the transfer case (if equipped) is in Four-Wheel Drive Low, the stability system is automatically disabled, are comes on, and the

appropriate message will appear on the DIC. Both traction control and StabiliTrak are automatically disabled in this condition.



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 Centre (DIC), and comes on and stays on to indicate that the system is inactive and is not assisting the driver in maintaining

control. The vehicle is safe to drive, but driving should be adjusted accordingly.

If \$\bar{\bar{z}}\$ 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 $\stackrel{>}{\sim}$ 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 centre stack.

Caution

Do not repeatedly brake or accelerate heavily when TCS is off. The vehicle driveline could be damaged.

To turn off only TCS, press and release . The traction off light displays in the instrument cluster. The appropriate message may display in the DIC. 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 $\frac{1}{67}$ is pressed, the system will not turn off until the wheels stop spinning.

To turn off both TCS and StabiliTrak, press and hold if until the traction off light if and the StabiliTrak OFF light come on and stay on in the instrument cluster, then release. The appropriate message may display in the DIC.

To turn TCS and StabiliTrak on again, press and release \$\frac{1}{6}\$. The traction off light \$\frac{1}{6}\$ and the StabiliTrak OFF light \$\frac{1}{6}\$ in the instrument cluster turn off.

StabiliTrak will automatically turn on if the vehicle exceeds 56 km/h (35 mph). Traction control will remain off.

The vehicle has a Trailer Sway Control (TSC) feature and a Hill Start Assist (HSA) feature.

See Trailer Sway Control (TSC) \Rightarrow 263 or Hill Start Assist (HSA) \Rightarrow 221.

Adding accessories can affect the vehicle performance. See *Accessories* and *Modifications* \Rightarrow 267.

Driver Mode Control

Driver Mode Control attempts to add a sportier feel, provide a more comfortable ride, or assist in different weather conditions or terrain. This system simultaneously changes the software settings of various sub-systems. Depending on the option package, available features and mode selected, the suspension, steering and powertrain will change settings in order to achieve the desired mode characteristics. If the vehicle is equipped with Magnetic Ride Control, selecting the various Driver Modes adjusts the ride of the vehicle to enhance the ride performance for the road conditions and the selected mode.

The Driver Mode Control has four modes: Tour, Sport, Snow/Ice, and Tow/Haul.

Press the Tow/Haul button to activate and deactivate the Tow/Haul Mode.

Press the MODE switch on the centre console to select Tour, Sport, or Snow/ Ice. Pressing the switch will display a graphic of all available ride modes and change to the next mode. The Tour and Sport Modes will feel similar on a smooth road. Select a new setting whenever driving conditions change.

Tour Mode

Use for normal city and highway driving to provide a smooth, soft ride.

When selected, there will be no indication in the DIC.

Sport Mode

Use where road conditions or personal preference demand a more controlled response.

The steering will change to provide more precise control. The Magnetic Ride Control will change to provide better cornering performance.

When selected, the Sport Mode indicator will display in the DIC.

Snow/Ice Mode

Use when more traction is needed during slippery conditions.

The vehicle will upshift normally when the vehicle is moving. The acceleration will adjust to help provide a smoother launch.

When selected, the Snow/Ice Mode indicator will display in the DIC.

Tow/Haul Mode

Tow/Haul is a feature that assists when pulling a heavy trailer or a large or heavy load. See *Tow/Haul Mode*

⇒ 213.

Tow/Haul is designed to be most effective when the vehicle and trailer combined weight is at least 75 percent of the vehicle's Gross Combined Weight Rating (GCWR). See "Weight of the Trailer" under *Trailer Towing*

⇒ 256.

Tow/Haul is most useful under the following conditions:

- When pulling a heavy trailer or a large or heavy load through rolling terrain
- When pulling a heavy trailer or a large or heavy load in stop-and-go traffic
- When pulling a heavy trailer or a large or heavy load in busy parking lots where improved low speed control of the vehicle is desired

Operating the vehicle in Tow/Haul when lightly loaded or with no trailer at all will not cause damage. However, there is no benefit to the selection of Tow/Haul when the vehicle is unloaded. Such a selection when unloaded may result in unpleasant engine and transmission driving

characteristics and reduced fuel economy. Tow/Haul is recommended only when pulling a heavy trailer or a large or heavy load.

When selected, the Tow/Haul indicator will display in the instrument cluster.

Magnetic Ride Control

The Magnetic Ride Control monitors the suspension system.

Based on road conditions, steering wheel angle, and vehicle speed, the system automatically adjusts to provide the best handling while providing a smooth ride. The Tour and Sport Modes will feel similar on a smooth road.

Tour : Use for normal city and highway driving. This setting provides a smooth, soft ride.

Sport: Use where road conditions or personal preference demand more control. This setting provides more "feel," or response to road conditions.

** Snow/Ice: Use when more traction is needed during slippery conditions.



The vehicle is normally in Tour Mode. Sport Mode and Snow/Ice Mode are engaged when the Magnetic Ride Control MODE button on the centre console is pressed. Press the button to select the desired mode.

The Driver Information Centre (DIC) briefly displays the appropriate message on vehicle startup or when a new mode is selected..

Locking Rear Axle

Vehicles with a locking rear axle can give more traction on snow, mud, ice, sand, or gravel. It works like a standard axle most of the time, but when traction is low, this feature will allow the rear wheel with the most traction to move the vehicle.

Automatic Level Control

The automatic level control rear suspension comes as a part of the Magnetic Ride Control system.

This type of level control is fully automatic and will provide a better levelled riding position as well as better handling under a variety of passenger and loading conditions. An air compressor connected to the rear shocks will raise or lower the rear of the vehicle to maintain proper vehicle height. The system is activated when the ignition is on and will automatically adjust vehicle height thereafter. The system may exhaust (lower vehicle height) for up to 10 minutes after the ignition has been

turned off. You may hear the air compressor operating when the height is being adjusted.

If a weight-distributing hitch is being used, it is recommended to allow the shocks to inflate, levelling the vehicle prior to adjusting the hitch.

Cruise Control

⚠ 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 tyre traction can cause excessive wheel slip, and you could lose control. Do not use cruise control on slippery roads.

If equipped with cruise control, a speed of about 40 km/h (25 mph) or more can be maintained without keeping your foot on the accelerator. Cruise control does not work at speeds below about 40 km/h (25 mph).

If the Traction Control/Electronic Stability Control system begins to limit wheel spin while using cruise control, the cruise control automatically disengages. See *Traction Control/Electronic Stability Control*⇒ 221. If a collision alert occurs when cruise control is activated, cruise control is disengaged. See *Forward Collision Alert (FCA) System* ⇒ 242. When road conditions allow you to safely use it again, the cruise control can be turned back on.

If the brakes are applied, cruise control disengages.



(S): Press to turn the system on and off. A white indicator appears in the instrument cluster when cruise is turned on.

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

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

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

Setting Cruise Control

If (5) is on when not in use, SET- or +RES could get pressed and go into cruise when not desired. Keep (5) off when cruise is not being used.

To set cruise control:

- 1. Press (5).
- 2. Get up to the desired speed.
- 3. Press and release SET-.
- 4. Remove your foot from the accelerator.

When the cruise control has been set to the desired speed, a green cruise control indicator appears on the instrument cluster and a cruise set speed message appears on the Driver Information Centre (DIC) and Head-Up Display (HUD), if equipped.

Resuming a Set Speed

If the cruise control is set at a desired speed and then the brakes are applied or \bigotimes 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, press +RES up briefly. The vehicle returns to the previous set speed.

Increasing Speed While Cruise Control is at a Set Speed

If the cruise control system is already activated:

 Press and hold +RES up until the vehicle accelerates to the desired speed, then release it. To increase vehicle speed in small increments, press +RES up briefly.
 For each press, the vehicle goes about 1.6 km/h (1 mph) faster.

The speedometer reading can be displayed in either English or metric units. See *Instrument Cluster* ⇒ 135. The increment value used depends on the units displayed.

Reducing Speed While Cruise Control is at a Set Speed

If the cruise control system is already activated:

- Press and hold SET- down until the desired lower speed is reached, then release it.
- To decrease the vehicle speed in small increments, press SETdown briefly. For each press, the vehicle goes about 1.6 km/h (1 mph) slower.

The speedometer reading can be displayed in either English or metric units. See *Instrument Cluster* ⇔ *135*. The increment value used depends on the units displayed.

Overtaking 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, briefly applying the SET- control will result in cruise set to the current vehicle speed.

Using Cruise Control on Hills

How well the cruise control will work on hills depends upon the vehicle speed, load, and the steepness of the hills. When going up steep hills, you might have to step on the accelerator pedal to maintain the vehicle speed.

While going downhill vehicles with a six-speed automatic transmission have Cruise Grade Braking to help maintain driver selected speed. Cruise Grade Braking is enabled when the vehicle is started and cruise control is active. It is not enabled in Range Selection Mode. It assists in maintaining driver

selected speed when driving on downhill grades by using the engine and transmission to slow the vehicle.

To disable and enable Cruise Grade Braking for the current ignition key cycle, press and hold the Tow/Haul button for five seconds. A Driver Information Centre (DIC) message displays.

For other forms of Grade Braking, see *Tow/Haul Mode* \Rightarrow 213.

Ending Cruise Control

There are four ways to end cruise control:

- Step lightly on the brake pedal.
- Press 🔯.
- Shift the transmission to N (Neutral).
- To turn off cruise control. press (8).

Erasing Speed Memory

The cruise control set speed is erased from memory if (S) is pressed or if the ignition is turned off.

Adaptive Cruise Control

If equipped with Adaptive Cruise Control (ACC), it allows for selecting the cruise control set speed and following gap. Read this entire section before using this system. ACC uses a camera and radar sensors to detect other vehicles. See Declaration of Conformity \Rightarrow 355. The following gap is the following time (or distance) between your vehicle and a vehicle detected directly ahead in your path, moving in the same direction. If no vehicle is detected in your path, ACC works like regular cruise control.

If a vehicle is detected in your path, ACC can speed up the vehicle or apply limited, moderate braking to maintain the selected following gap. To disengage ACC, apply the brake. If the Traction Control System (TCS) or electronic stability control system activates while ACC is engaged, ACC may automatically disengage. See Traction Control/Electronic Stability Control \Rightarrow 221. When road conditions allow ACC to be safely used, the ACC can be turned back on.

ACC will not engage if the TCS or StabiliTrak electronic stability control system is disabled.



⚠ Warning

ACC has limited braking ability and may not have time to slow the vehicle down enough to avoid a collision with another vehicle you are following. This can occur when vehicles suddenly slow or stop ahead, or enter your lane. Also see "Alerting the Driver" in this section. Complete attention is always required while driving and you should be ready to take action and apply the brakes. See Defensive *Driving* \$ 188.



⚠ Warning

ACC will not detect or brake for children, pedestrians, animals, or other objects.

(Continued)

Warning (Continued)

Do not use ACC when:

- On winding and hilly roads or when the sensors are blocked by snow, ice, or dirt. The system may not detect a vehicle ahead. Keep the entire front of the vehicle clean.
- Visibility is low, such as in mist, rain, or snow conditions.
 ACC performance is limited under these conditions.
- On slippery roads where fast changes in tyre traction can cause excessive wheel slip.



- (S): Press to turn the system on or off. The indicator turns white on the instrument cluster when ACC is turned on.
- **+RES**: Press the control up briefly to resume the previous set speed or hold upwards to accelerate. If ACC is already engaged, use to increase vehicle speed.
- **SET-:** Press the control down briefly to set the speed and activate ACC. If ACC is already engaged, use to decrease vehicle speed.
- \bowtie : Press to disengage ACC without erasing the selected set speed.

: Press to select a following gap time (or distance) setting for ACC of Far, Medium, or Near.

The speedometer reading can be displayed in either English or metric units. See *Instrument Cluster* ▷ 135. The increment value used depends on the units displayed.

Switching Between ACC and Regular Cruise Control

If equipped, to switch between ACC and regular cruise control, press and hold ፟

A Driver Information Display (DIC) message displays. See *Vehicle Messages*

155.





ACC Indicator

Regular Cruise Control Indicator

When ACC is engaged, a green similarity indicator will be lit on the instrument cluster and the following gap will be displayed. When the regular cruise

control is engaged, a green (s) indicator will be lit on the instrument cluster; the following gap will not display.

When the vehicle is turned on, the cruise control mode will be set to the last mode used before the vehicle was turned off.

⚠ Warning

Always check the cruise control indicator on the instrument cluster to determine which mode cruise control is in before using the feature. If ACC is not active, the vehicle will not automatically brake for other vehicles, which could cause an accident if the brakes are not applied manually. You and others could be seriously injured or killed.

Setting Adaptive Cruise Control

If (5) is on when not in use, it could get pressed and go into ACC when not desired. Keep (5) off when cruise is not being used.

Select the set speed desired for cruise. This is the vehicle speed when no vehicle is detected in its path.

ACC will not set at a speed less than 25 km/h (15 mph), although it can be resumed when driving at lower speeds.

To set ACC while moving:

- 1. Press (5).
- 2. Get up to the desired speed.
- 3. Press and release SET-.
- 4. Remove your foot from the accelerator.

After ACC is set, it may immediately apply the brakes if a vehicle ahead is detected closer than the selected following gap.

ACC can also be set while the vehicle is stopped if ACC is on and the brake pedal is applied.



The ACC indicator displays on the instrument cluster and Head-Up Display (HUD). When ACC is active, the indicator will be lit green.

Be mindful of speed limits, surrounding traffic speeds, and weather conditions when selecting the set speed.

Resuming a Set Speed

If ACC is set at a desired speed and then the brakes are applied, ACC is disengaged without erasing the set speed from memory.

To begin using ACC again, press RES+ up briefly.

If the vehicle is moving, it returns to the previous set speed.

 If the vehicle is stopped with the brake pedal applied, press RES+ and release the brake pedal. ACC will hold the vehicle until RES+ or the accelerator pedal is pressed.

A green ACC indicator and the set speed display on the instrument cluster. The vehicle ahead indicator may be flashing if a vehicle ahead was present and moved. See "Approaching and Following a Vehicle" later in this section.

Once ACC has resumed, if there is no vehicle ahead, if the vehicle ahead is beyond the selected following gap, or if the vehicle has exited a sharp curve, then the vehicle speed will increase to the set speed.

Increasing Speed While ACC is at a Set Speed

Do one of the following:

 Use the accelerator to get to the higher speed. Press SET- down.
 Release the control and the accelerator pedal. The vehicle will now cruise at the higher speed. When the accelerator pedal is pressed, ACC will not brake because it is overridden. The ACC indicator will turn blue on the instrument cluster.

- Press and hold +RES up until the desired set speed appears on the display, then release it.
- To increase speed in small increments, briefly press +RES up.
 For each press, the vehicle speed increases by 1 km/h (1 mph).
- To increase speed in larger increments, press and briefly hold ±RES up. For each press, the vehicle speed increases by 5 km/h (5 mph).

When it is determined there is no vehicle ahead or the vehicle ahead is beyond the selected following gap, the vehicle speed will increase to the set speed.

The set speed can also be increased while the vehicle is stopped.

 If stopped with the brake applied, press RES+ until the desired set speed is displayed. If ACC is holding the vehicle at a stop and there is another vehicle directly ahead, pressing RES+ will increase the set speed. Pressing RES+ when there is no longer a vehicle ahead will cause ACC to resume.

Reducing Speed While ACC is at a Set Speed

Do one of the following:

- Use the brake to get to the desired lower speed. Release the brake and press SET - . The vehicle will now cruise at the lower speed.
- Press and hold SET- down until the desired lower speed is reached, then release it.
- To decrease speed in smaller increments, briefly press SETdown. For each press, the vehicle speed increases by 1 km/h (1 mph).
- To decrease speed in larger increments, press and briefly hold SET- down. For each press, the vehicle speed decreases by 5 km/h (5 mph).

 To decrease speed while the vehicle is stopped, press SETuntil the desired set speed is displayed.

Selecting the Follow Distance Gap

When a slower moving vehicle is detected ahead within the selected following gap, ACC will adjust the vehicle's speed and attempt to maintain the follow distance gap selected.

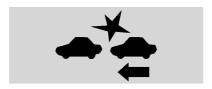
Press on the steering wheel to adjust the following gap. Each press cycles the gap button through three settings: Far, Medium, or Near.

When pressed, the current gap setting displays briefly on the DIC and HUD. The gap setting will be maintained until it is changed.

Since each gap setting corresponds to a following time (Far, Medium, or Near), the following distance will vary based on vehicle speed. The faster the vehicle speed, the further back your vehicle will follow a vehicle detected ahead. Consider traffic and weather conditions when selecting the following gap. The range of selectable gaps may not be appropriate for all drivers and driving conditions.

Changing the gap setting automatically changes the alert timing sensitivity (Far, Medium, or Near) for the Forward Collision Alert (FCA) feature. See Forward Collision Alert (FCA) System \Rightarrow 242.

Alerting the Driver



If ACC is engaged, driver action may be required when ACC cannot apply sufficient braking when approaching a vehicle too rapidly.

When this condition occurs, the collision alert symbol on the HUD will flash on the windscreen. Either eight beeps will sound from the front, or both sides of the Safety Alert Seat

will pulse five times. See "Collision/ Detection Systems" under *Vehicle Personalisation* ⇔ 156.

Approaching and Following a Vehicle



The vehicle ahead indicator is in the instrument cluster and HUD display.

This indicator only displays when a vehicle is detected in your vehicle's path moving in the same direction.

If this indicator is not displaying, ACC will not respond to or brake to vehicles ahead.

ACC automatically slows the vehicle down and adjusts vehicle speed to follow the vehicle in front at the selected following gap. The vehicle speed increases or decreases to follow the vehicle in front of you, but will not exceed the set speed. It may apply limited braking, if necessary. When braking is active, the brake lights will come on. The automatic braking may feel or sound different than if the brakes were applied manually. This is normal.

Stationary or Very Slow-Moving Objects

riangle Warning

ACC may not detect and react to stopped or slow-moving vehicles ahead of you. For example, the system may not brake for a vehicle it has never detected moving. This can occur in stop-and-go traffic or when a vehicle suddenly appears due to a vehicle ahead changing lanes. Your vehicle may not stop and could cause a crash. Use caution when using ACC. Your complete attention is always required while driving and you should be ready to take action and apply the brakes.

ACC Automatically Disengages

ACC may automatically disengage and the driver will need to manually apply the brakes to slow the vehicle when:

- The sensors are blocked.
- The Traction Control System (TCS) or electronic stability control system has activated or been disabled.
- There is a fault in the system.
- The radar falsely reports blockage when driving in a desert or remote area with no other vehicles or roadside objects. A DIC message may display to indicate that ACC is temporarily unavailable.

The ACC active symbol turns white when ACC is no longer active.

In some cases, when ACC will not activate, regular Cruise Control may be used. See "Switching Between ACC and Regular Cruise Control" previously in this section. Always consider driving conditions before using either cruise control system.

Notification to Resume ACC

ACC will maintain a following gap behind a detected vehicle and slow your vehicle to a stop behind the detected vehicle.

If the stopped vehicle ahead has driven away and ACC has not resumed, the vehicle ahead indicator will flash as a reminder to check traffic ahead before proceeding. In addition, the left and right sides of the Safety Alert Seat will pulse three times, or three beeps will sound. See "Alert Type" and "Go Notifier" in "Collision/Detection Systems" under Vehicle Personalisation

156.

When the vehicle ahead drives away, press +RES or the accelerator pedal to resume cruise control. If stopped for more than two minutes or if the driver door is opened and the driver seat belt is unfastened, the ACC automatically applies the Electric Parking Brake (EPB) to hold the vehicle. The EPB status light will turn on. See *Parking Brake* ⇒ 218. To resume ACC and release the EPB, press the accelerator pedal.

A DIC warning message may display indicating to shift to P (Park) before exiting the vehicle. See *Vehicle*Messages

155.



If ACC has stopped the vehicle, and if ACC is disengaged, turned off, or cancelled, the vehicle will no longer be held at a stop. The vehicle can move. When ACC is holding the vehicle at a stop, always be prepared to manually apply the brakes.

⚠ Warning

Leaving the vehicle without placing it in P (Park) can be dangerous. Do not leave the vehicle while it is being held at a stop by ACC. Always place the vehicle in P (Park) and turn off the ignition before leaving the vehicle.

ACC Override

If using the accelerator pedal while ACC is active, the ACC indicator turns blue on the instrument cluster. ACC will resume operation when the accelerator pedal is not being pressed.

⚠ Warning

The ACC will not automatically apply the brakes if your foot is resting on the accelerator pedal. You could crash into a vehicle ahead of you.

Bends in the Road

⚠ Warning

On bends, ACC may not detect a vehicle ahead in your lane. You could be startled if the vehicle accelerates up to the set speed, especially when following a vehicle exiting or entering exit ramps. You could lose control of the vehicle or crash. Do not use ACC while driving [Continued]

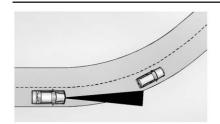
Warning (Continued)

on an entrance or exit ramp. Always be ready to use the brakes if necessary.

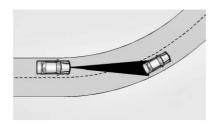
⚠ Warning

On bends, ACC may respond to a vehicle in another lane, or may not have time to react to a vehicle in your lane. You could crash into a vehicle ahead of you, or lose control of your vehicle. Give extra attention in bends and be ready to use the brakes if necessary. Select an appropriate speed while driving in bends.

ACC may operate differently in a sharp bend. It may reduce the vehicle speed if the bend is too sharp.



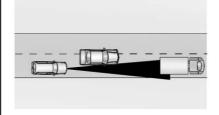
When following a vehicle and entering a bend, ACC may not detect the vehicle ahead and accelerate to the set speed. When this happens, the vehicle ahead indicator will not appear.



ACC may detect a vehicle that is not in your lane and apply the brakes.

ACC may occasionally provide an alert and/or braking that is considered unnecessary. It could respond to vehicles in different lanes, signs, guardrails, and other stationary objects when entering or exiting a bend. This is normal operation. The vehicle does not need service.

Other Vehicle Lane Changes



ACC will not detect a vehicle ahead until it is completely in the lane. The brakes may need to be manually applied.

Do Not Use ACC on Hills and When Towing a Trailer



Do not use ACC when driving on steep hills or when towing a trailer. ACC will not detect a vehicle in the lane while driving on steep hills. The driver will often need to take over acceleration and braking on steep hills, especially when towing a trailer. If the brakes are applied, the ACC disengages.

Disengaging ACC

There are three ways to disengage ACC:

- Step lightly on the brake pedal.
- ▶ Press 🥸.
- Press (8).

Erasing Speed Memory

The cruise control set speed is erased from memory if (6) is pressed or if the ignition is turned off.

Cleaning the Sensing System

The camera sensor on the windscreen ahead of the rearview mirror and the radar sensors on the front of the vehicle can become blocked by snow, ice, dirt, or mud. These areas need to be cleaned for ACC to operate properly.

If ACC will not operate, regular Cruise Control may be available. See "Switching Between ACC and Regular Cruise Control" previously in this section. Always consider driving conditions before using either cruise control system.

For cleaning instructions, see "Washing the Vehicle" under Exterior *Care* \$ 333.

System operation may also be limited under snow, heavy rain, or road spray conditions.

Driver Assistance Systems

This vehicle may have features that work together to help avoid crashes or reduce crash damage while driving, reversing, and parking. Read this entire section before using these systems.

🗥 Warning

Do not rely on the Driver Assistance Systems. These systems do not replace the need for paying attention and driving safely. You may not hear or feel alerts or warnings provided by these systems. Failure to use proper care when driving may result in injury, death, or vehicle damage. See

Under many conditions, these systems will not:

Detect children, pedestrians, bicyclists, or animals.

(Continued)

Warning (Continued)

- Detect vehicles or objects outside the area monitored by the system.
- Work at all driving speeds.
- Warn you or provide you with enough time to avoid a crash.
- Work under poor visibility or had weather conditions.
- Work if the detection sensor is not cleaned or is covered by ice, snow, mud, or dirt.
- Work if the detection sensor is covered up, such as with a sticker, magnet, or metal plate.
- Work if the area surrounding the detection sensor is damaged or not properly repaired.

Complete attention is always required while driving, and you should be ready to take action and apply the brakes and/or steer the vehicle to avoid crashes.

Audible or Safety Alert Seat

If equipped with the Safety Alert Seat, the driver seat cushion may provide a vibrating pulse alert instead of beeping. To change this, see "Collision/Detection Systems" under Vehicle Personalisation

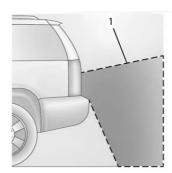
156.

Assistance Systems for Parking or Reversing

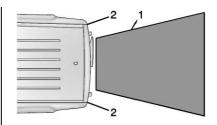
If equipped, the Rear Vision Camera (RVC), Rear Parking Assist (RPA), Front Parking Assist (FPA), Surround Vision, Front Vision Camera, Rear Cross Traffic Alert (RCTA), and Automatic Parking Assist (APA) may help the driver park or avoid objects. Always check around the vehicle when parking or backing.

Rear Vision Camera (RVC)

When the vehicle is shifted into R (Reverse), the RVC displays an image of the area behind the vehicle in the infotainment display. The previous screen displays when the vehicle is shifted out of R (Reverse) after a short delay. To return to the previous screen sooner, press any button on the infotainment system, shift into P (Park), or reach a vehicle speed of approximately 12 km/h (8 mph). The rear vision camera is above the number plate.



1. View Displayed by the Rear Vision Camera



- 1. View Displayed by the Rear Vision Camera
- 2. Corners of the Rear Bumper

Displayed images may be farther or closer than they appear. The area displayed is limited and objects that are close to either corner of the bumper or under the bumper do not display.

A warning triangle may display to show that Rear Parking Assist (RPA) has detected an object. This triangle changes from amber to red and increases in size the closer the object.

Surround Vision

If equipped, Surround Vision displays an image of the area surrounding the vehicle, along with the front or rear camera views in the infotainment display. The front camera is in the grille or near the front emblem, the side cameras are on the bottom of the outside rearview mirrors, and the rear camera is above the number plate.

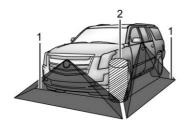
⚠ Warning

The Surround Vision cameras have blind spots and will not display all objects near the corners of the vehicle. Folding side mirrors that are out of position will not display surround view correctly. Always check around the vehicle when parking or backing.



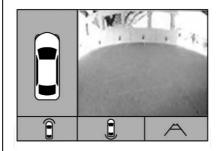
1. Views Displayed by the Surround Vision Cameras

2. Area Not Shown



- 1. Views Displayed by the Surround Vision Cameras
- 2. Area Not Shown

Front Vision Camera



If equipped, a view of the area in front of the vehicle shows in the infotainment display. The view displays after shifting from R (Reverse) to a forward gear, or by pressing CAMERA in the centre stack, and when the vehicle is moving forward slower than 8 km/h (5 mph). If equipped, the front view camera also displays when the Front Parking Assist system detects an object ahead within 30 cm (12 in).

⚠ 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 Front and Rear Parking Assist, as the vehicle moves at speeds of less than 8 km/h (5 mph) the sensors on the bumpers may detect objects up to 1.2 m (4 ft) in front and 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 or vehicle

(Continued)

Warning (Continued)

damage, even with Parking Assist, always check the area around the vehicle and check all mirrors before moving forward or reversing.



The instrument cluster may have a parking assist display with bars that show "distance to object" and object location information for the Front and Rear Parking Assist system. As the object gets closer, more bars light up and the bars change colour from yellow to amber to red.

When an object is first detected in the rear, one beep will be heard from the rear, or both sides of the Safety Alert Seat will pulse two times. When an

object is very close (<0.6 m (2 ft) in the vehicle rear, or <0.3 m (1 ft) in the vehicle front), a continuous beep will sound from the front or rear depending on object location, or both sides of the Safety Alert Seat will pulse five times. Beeps for FPA are higher pitched than for RPA.

Rear Cross Traffic Alert (RCTA)

If equipped, when the vehicle is shifted into R (Reverse), RCTA displays a red warning triangle with a left or right pointing arrow 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-hand side of the vehicle. When an object is detected, either three beeps sound from the left or right or three Safety Alert Seat pulses occur on the left or right side, depending on the direction of the detected vehicle.

Use caution while reversing 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



Press PM on the centre console to turn on or off the Front and Rear Parking Assist, and Rear Cross Traffic Alert at the same time. The indicator light next to the button comes on when the features are on and turns off when the features have been disabled.

Front and Rear Parking Assist can be turned off, on, or on with towbar through vehicle personalisation. See "Park Assist" under *Vehicle**Personalisation \(\phi \) 156. If the parking assist is turned off through vehicle personalisation, the park assist button will be disabled. To turn the parking assist on again, select On in the vehicle personalisation menu. The On with Towbar setting allows for the parking assist to work properly with a trailer hitch.

Turn off parking assist when towing a trailer.

On some vehicles the RCTA setting can be turned off through "Collision/ Detection Systems" under *Vehicle Personalisation*

⇒ 156.

Automatic Parking Assist (APA)

If equipped, APA searches for and steers the vehicle into parallel and perpendicular parking spots. When using APA, you must still change gears, and control the brakes and accelerator. A display and audible beeps help to guide parking maneuvers.

⚠ Warning

APA does not apply the brakes. APA may not detect objects in the parking space, objects that are soft or narrow, objects high off the ground such as flat-bed trucks, or objects below ground level such as large potholes. Always verify that the parking space is appropriate for parking a vehicle. APA does not respond to changes in the parking space, such as movement of an adjacent vehicle, or a person or object entering the parking space. APA does not detect or avoid traffic that is behind or alongside of the vehicle. Always be prepared to stop the vehicle during the parking manoeuvre.

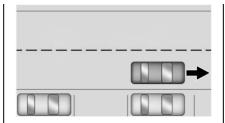
Press Pon on the centre console to enable the system to search for a parking space that is large enough and within 1.5 m (5 ft) of the vehicle. The

vehicle speed must be below 30 km/h (18 mph). APA does not work in 4^{\uparrow} or 4^{\downarrow} .

The system cannot:

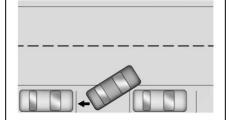
- Detect whether it is a legal parking space.
- Park exactly lined up with the vehicle next to it if the spot is approached at an angle or if the parking space is angled.
- Park exactly centred in a spot that is marked too large.
- Always detect short curbs.

When enabled, APA searches for parallel parking spaces to the right of the vehicle. To search for a parking space to the left, turn on the left indicator or, if available, change the side selection in the infotainment display. To switch the parking mode between parallel and perpendicular, press and hold Pod during the search process or, if available, change the parking mode in the infotainment display.



After completely passing a large enough space, an audible beep occurs and a red stop symbol is displayed.

If the vehicle is in R (Reverse), but does not steer into the expected space, this may be because the system is manoeuvring the vehicle into a previously detected space. The APA system does not need service.



APA will instruct the vehicle to stop once a large enough space is found. Follow the displayed instructions. When instructed to drive in reverse, shift to R (Reverse) to engage automatic steering. The steering wheel will briefly vibrate as a reminder to remove hands from the steering wheel. Check surroundings and continue braking or accelerating as needed, and be prepared to stop to avoid vehicles, pedestrians, or objects.

If the vehicle exceeds 10 km/h (6 mph), APA is automatically disengaged and automatic steering will turn off. A progress arrow displays the status of the parking maneuver. Depending on the space size, additional manoeuvres may be required, and there will be additional instructions. When changing gears, allow the automatic steering to complete before continuing the parking manoeuvre. Upon successful completion of a manoeuvre, APA will beep and display a PARKING COMPLETE message. Place the vehicle in P (Park).

APA may automatically disengage if:

- The steering wheel is used by the driver.
- The maximum allowed speed is exceeded.
- There is a failure with the APA system.
- Electronic stability control or antilock brakes are activated.
- A high priority vehicle message is displayed in the DIC.

To cancel APA, press P again.

When the System Does Not Seem to Work Properly

The APA system may require a short period of driving along bends to calibrate.

Assistance Systems for Driving

If equipped, when driving the vehicle in a forward gear, Forward Collision Alert (FCA), Lane Departure Warning (LDW), Lane Keep Assist (LKA), Side Blind Zone Alert (SBZA), Lane Change Alert (LCA), and/or Forward Automatic Braking (FAB) can help to avoid a crash or reduce crash damage.

Forward Collision Alert (FCA) System

If equipped, the FCA system may help to avoid or reduce the harm caused by front-end crashes. When approaching a vehicle ahead too quickly, FCA provides a red flashing alert on the windscreen and rapidly beeps or pulses the driver seat. FCA also lights an amber visual alert if following another vehicle much too closely.

FCA detects vehicles within a distance of approximately 60 m (197 ft) and operates at speeds above 8 km/h (5 mph). If the vehicle has Adaptive Cruise Control (ACC), it can detect vehicles to distances of approximately 110 m (360 ft) and operates at all speeds. See *Adaptive Cruise Control*

⇒ 228.

Marning

FCA is a warning system and does not apply the brakes. When approaching a slower-moving or stopped vehicle ahead too rapidly, or when following a vehicle too closely, FCA may not provide a warning with enough time to help avoid a crash. It also may not provide any warning at all. FCA does not warn of pedestrians, animals, signs, crash barriers, bridges, construction barrels, or other objects. Be ready to take action and apply the brakes. See Defensive Driving ⇔ 188.

FCA can be disabled with either the FCA steering wheel control or, if equipped, through vehicle personalisation. See "Collision/ Detection Systems" under *Vehicle Personalisation* \$\phi\$ 1.56.

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 bends, motorway 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.

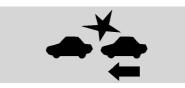
⚠ Warning

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 [Continued]

Warning (Continued)

the windscreen 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 windscreen are not cleaned or in proper condition. Keep the windscreen, headlamps, and FCA sensors clean and in good repair.

Collision Alert



When your vehicle approaches another detected vehicle too rapidly, the red FCA display will flash on the windscreen. Also, eight rapid high-pitched beeps will sound from the front, or both sides of the Safety Alert Seat will pulse five times. When this Collision Alert occurs, the brake

system may prepare for driver braking to occur more rapidly which can cause a brief, mild deceleration. Continue to apply the brake pedal as needed. Cruise control may be disengaged when the Collision Alert occurs.

Tailgating Alert



The vehicle ahead indicator will display amber when you are following a vehicle ahead much too closely.

Selecting the Alert Timing



The Collision Alert control is on the steering wheel. Press to set the FCA timing to Far, Medium, Near, or on some vehicles, Off. The first button press shows the current setting on the Driver Information Centre (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.

If your vehicle is equipped with Adaptive Cruise Control (ACC), changing the FCA timing setting automatically changes the ACC following gap setting (Far, Medium, or Near).

Unnecessary Alerts

FCA may provide unnecessary alerts for turning vehicles, vehicles in other lanes, objects that are not vehicles, or shadows. These alerts are normal operation and the vehicle does not need service.

Cleaning the System

If the FCA system does not seem to operate properly, this may correct the issue:

- Clean the outside of the windscreen in front of the rearview mirror.
- Clean the entire front of the vehicle.

• Clean the headlights.

For cleaning instructions, see "Washing the Vehicle" under *Exterior Care* ⇔ 333.

System operation may also be limited under snow, heavy rain, or road spray conditions.

Forward Automatic Braking (FAB)

If the vehicle has Forward Collision Alert (FCA), it also has FAB, which includes Intelligent Brake Assist (IBA). When the system detects a vehicle ahead in your path that is travelling in the same direction that you may be about to crash into, it can provide a boost to braking or automatically brake the vehicle. This can help avoid or lessen the severity of crashes when driving in a forward gear. Depending on the situation, the vehicle may automatically brake moderately or hard. This forward automatic braking can only occur if a vehicle is detected. This is shown by the FCA vehicle ahead indicator being lit. See Forward Collision Alert (FCA) System \Rightarrow 242.

The system works when driving in a forward gear between 8 km/h (5 mph) and 80 km/h (50 mph), or on vehicles with Adaptive Cruise Control (ACC), above 4 km/h (2 mph). It can detect vehicles up to approximately 60 m (197 ft).



FAB is an emergency crash preparation feature and is not designed to avoid crashes. Do not rely on FAB to brake the vehicle. FAB will not brake outside of its operating speed range and only responds to detected vehicles.

FAB may not:

- Detect a vehicle ahead on winding or hilly roads.
- Detect all vehicles, especially vehicles with a trailer, tractors, muddy vehicles, etc.
- Detect a vehicle when weather limits visibility, such as in fog, rain, or snow.

(Continued)

Warning (Continued)

 Detect a vehicle ahead if it is partially blocked by pedestrians or other objects.

Complete attention is always required while driving, and you should be ready to take action and apply the brakes and/or steer the vehicle to avoid crashes.

FAB may slow the vehicle to a complete stop to try to avoid a potential crash. If this happens, FAB may engage the Electric Parking Brake (EPB) to hold the vehicle at a stop. Release the EPB or firmly press the accelerator pedal.

⚠ Warning

FAB may automatically brake the vehicle suddenly in situations where it is unexpected and undesired. It could respond to a turning vehicle ahead, guardrails,

(Continued)

Warning (Continued)

signs, and other non-moving objects. To override FAB, firmly press the accelerator pedal, if it is safe to do so.

Intelligent Brake Assist (IBA)

IBA may activate when the brake pedal is applied quickly by providing a boost to braking based on the speed of approach and distance to a vehicle ahead.

Minor brake pedal pulsations or pedal movement during this time is normal and the brake pedal should continue to be applied as needed. IBA will automatically disengage only when the brake pedal is released.



IBA may increase vehicle braking in situations when it may not be necessary. You could block the flow (Continued)

Warning (Continued)

of traffic. If this occurs, take your foot off the brake pedal and then apply the brakes as needed.

FAB and IBA can be disabled through vehicle personalisation. See "Collision/Detection Systems" under *Vehicle Personalisation* \$\phi\$ 156.



Using FAB or IBA while towing a trailer could cause you to lose control of the vehicle and crash. Turn the system to Alert, or if the vehicle has ACC to Off, when towing a trailer.

A system unavailable message may display if:

- The front of the vehicle or windscreen is not clean.
- Heavy rain or snow is interfering with object detection.

• There is a problem with the StabiliTrak system.

The FAB system does not need service.

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 indicator 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)

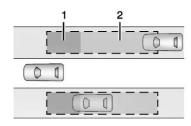
If equipped, the LCA system is a lane-changing aid that assists drivers with avoiding lane change crashes that occur with moving vehicles in the

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 indicator is on.



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 indicators.

LCA Detection Zones



- 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 this area up to approximately 70 m (230 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 from behind. This 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 indicators.





Left Side Mirror Display Right Side Mirror Display

When the vehicle is started, both outside mirror LCA displays will briefly come on to indicate the system is operating. When the vehicle is in a forward gear, the left or right side mirror display will light up if a moving vehicle is detected in the next lane over in that blind zone or rapidly approaching that zone. If the indicator is activated in the same direction of a

detected vehicle, this display will flash as an extra warning not to change lanes.

LCA can be disabled. See "Collision/ Detection Systems" under Vehicle Personalisation ⇒ 156. 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 motorway with traffic and roadside objects (e.g., guardrails, barriers).

LCA displays may not come on when passing a vehicle quickly, for a stopped vehicle, or when towing a trailer. The LCA detection zones that extend back from the side of the vehicle do not move further back when a trailer is towed. Use caution while changing lanes when towing a trailer. LCA may alert to objects attached to the vehicle, such as a trailer, bicycle, or object extending out

to either side of the vehicle. Attached objects may also interfere with the detection of vehicles. This is normal system operation; the vehicle does not need service.

LCA may not always alert the driver to vehicles in the next lane over, especially in wet conditions or when driving on sharp curves. The system does not need to be serviced. The system may light up due to guardrails, signs, trees, shrubs, and other non-moving objects. This is normal system operation; the vehicle does not need service.

LCA may not operate when the LCA sensors in the left or right corners of the rear bumper are covered with mud, dirt, snow, ice, or slush, or in heavy rainstorms. For cleaning instructions, see "Washing the Vehicle" under Exterior Care

⇒ 333. 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 blind zone or are rapidly approaching that zone and the system is clean, the system may need service. Take the vehicle to your dealer.

Lane Departure Warning (LDW)

If equipped, LDW may help avoid crashes due to unintentional lane departures. It may provide a warning if the vehicle is crossing a detected lane marking without using a indicator in the lane departure direction. Since this system is part of the Lane Keep Assist (LKA) system, read the entire LKA section before using this feature.

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 indicator 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 lane or give a Lane Departure Warning (LDW) alert, even if a lane marking is detected.

The LKA and LDW systems may not:

- Provide an alert or enough steering assist to avoid a lane departure or crash.
- Detect lane markings under poor weather or visibility conditions. This can occur if the windscreen or headlights

(Continued)

Warning (Continued)

are blocked by dirt, snow, or ice, if they are not in proper condition, or if the sun shines directly into the camera.

- Detect road edges.
- Detect lanes on winding or hilly roads.

If LKA only detects lane markings on one side of the road, it will only assist or provide an LDW alert when approaching the lane on the side where it has detected 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 windscreen, 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 windscreen ahead of the rear-view mirror.

To turn LKA on and off, press



LKA Indicator Light

When on, the LKA indicator is green if LKA is available to assist and provide LDW alerts. It may assist by gently turning the steering wheel and display amber if the vehicle approaches a detected lane marking without indicating in that direction. It may

also provide an LDW alert by flashing amber as the lane marking is crossed. Additionally, there may be three beeps, or the driver seat may pulse three times, on the right or left, depending on the lane departure direction.

Take Steering

The LKA system does not continuously steer the vehicle. If LKA does not detect active driver steering, an alert, chime, or DIC message may be provided. Steer the vehicle 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 windscreen may help.

A camera blocked message may display if the camera is blocked. Cleaning the outside of the windscreen behind the rearview mirror may correct the issue. Some driver assistance systems may have reduced performance or not work at all. An LKA or LDW unavailable message may display if the systems are temporarily unavailable. This message could be due to a blocked camera. The LKA system does not need service. Clean the outside of the windscreen behind the rearview mirror

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

Use the recommended fuel for proper vehicle maintenance.

Use unleaded petrol with a posted octane rating of 95 RON or higher. Unleaded petrol rated at 91 RON can be used, but acceleration and fuel economy will be reduced, and an audible knocking noise may be heard. If this occurs, use petrol rated at 95 RON as soon as possible, otherwise the engine could be damaged. If heavy knocking is heard when using unleaded petrol rated at 95 RON, the engine needs service.

Caution

Do not use fuels with any of the following conditions; doing so may damage the vehicle and void its warranty:

 Fuel with any amount of methanol, methylal, and aniline. These fuels can

(Continued)

Caution (Continued)

- corrode metal fuel system parts or damage plastic and rubber parts.
- Fuel containing metals such as methylcyclopentadienyl manganese tricarbonyl (MMT), which can damage the emissions control system and spark plugs.
- 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.

Fuel Additives

Petrol should contain detergent additives that help prevent engine and fuel system deposits from forming. Clean fuel injectors and intake valves will allow the emission control system to work properly. Some petrol does not contain sufficient quantities of additives to keep fuel injectors and intake valves clean. To make up for this lack of detergency, consult your retailer for the GM approved additive treatment. Add this additive to the fuel tank at every engine oil change or every 15,000 km (9,000 mi), whichever occurs first.

Filling the Tank

⚠ Warning

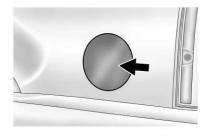
Fuel vapours and fuel fires burn violently and can cause injury or death.

- To help avoid injuries to you and others, read and follow all the instructions on the fuel pump island.
- Turn off the engine when refuelling.
- Keep sparks, flames, and smoking materials away from fuel.

(Continued)

Warning (Continued)

- Do not leave the fuel pump unattended.
- Do not use a mobile phone while refuelling.
- Do not reenter the vehicle while pumping fuel.
- Keep children away from the fuel pump and never let children pump fuel.
- Fuel can spray out if the refuelling nozzle is inserted too quickly. This spray can happen if the tank is nearly full, and is more likely in hot weather. Insert the refuelling nozzle slowly and wait for any hiss noise to stop prior to beginning to flow fuel.



Locate the fuel door. The fuel gauge has an arrow to indicate the side of the vehicle the fuel door is on. If equipped, the fuel door is locked when the vehicle doors are locked.

Press on the RKE transmitter to

Press on the RKE transmitter to unlock. To open the fuel filler flap, push and release the rearward centre edge of the flap.

The vehicle has a capless refuelling system and does not have a fuel cap. The filling nozzle must be fully inserted and latched prior to starting fuel flow

⚠ 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* $\Rightarrow 333$.

⚠ Warning

If a fire starts while you are refuelling, 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.

Filling the Tank With a Portable Gas Can

If the vehicle runs out of fuel and must be filled from a portable petrol can:



- Locate the capless funnel adapter from inside the vehicle.
- 2. Insert and latch the funnel into the capless fuel system.

⚠ Warning

Attempting to refuel without using the funnel adapter may cause fuel spillage and damage the capless fuel system. This could cause a fire and you or others could be badly burned and the vehicle could be damaged.

 Remove and clean the funnel adapter and return to the storage location.

Filling a Portable Fuel Container

⚠ Warning

Filling a portable fuel container while it is in the vehicle can cause fuel vapours 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, boot, or pickup bed before filling.
- Place the container on the ground.
- Place the nozzle inside the fill opening of the container before dispensing fuel, and

(Continued)

Warning (Continued)

keep it in contact with the fill opening until filling is complete.

- Fill the container no more than 95% full to allow for expansion.
- Do not smoke, light matches, or use lighters while pumping fuel.
- Avoid using mobile phones or other electronic devices.

Trailer Towing

General Towing Information

Only use towing equipment that has been designed for the vehicle. Contact your dealer or trailering dealer for assistance with preparing the vehicle for towing a trailer. Read the entire section before towing a trailer.

For towing a disabled vehicle, see *Towing the Vehicle* \Rightarrow 328. For towing the vehicle behind another vehicle such as a motor home, see *Recreational Vehicle Towing* \Rightarrow 329.

Driving Characteristics and Towing Tips

Driving with a Trailer

When towing a trailer:

- Become familiar with the state and local laws that apply to trailer towing.
- The trailer must be equipped with brakes adequate for the intended use. A loaded trailer weighing

more than 900 kg (2,000 lb) must be equipped with its own brake system, with brakes working on all axles. Trailer braking equipment conforming to Canadian Standards Association (CSA) requirement CAN3-D313, or its equivalent, is recommended.

- Do not tow a trailer during the first 800 km (500 mi) to prevent damage to the engine, axle, or other parts.
- Then during the first 800 km (500 mi) of trailer towing, do not drive over 80 km/h (50 mph) and do not make starts at full throttle.
- Vehicles can tow in D (Drive).
 Shift the transmission to a lower gear if the transmission shifts too often under heavy loads and/or hilly conditions.
- Do not use Adaptive Cruise Control when towing.
- Turn off Parking Assist when towing.

• The Forward Automatic Braking System should be set to Off when towing. See *Forward Automatic* Braking (FAB) ⇒ 244.

⚠ Warning

When towing a trailer, exhaust gases may collect at the rear of the vehicle and enter if the tailgate, boot/hatch, or rear-most window is open.

When towing a trailer:

- Do not drive with the tailgate, boot/hatch, or rear-most window open.
- Fully open the air outlets on or under the instrument panel.
- Also adjust the climate control system to a setting that brings in only outside air. See "Climate Control Systems" in the Index.

For more information about carbon monoxide, see *Engine Exhaust* ⇒ *208*.

Towing a trailer requires a certain amount of experience. The combination you are driving is longer and not as responsive as the vehicle itself. Get acquainted with the handling and braking of the rig before setting out for the open road.

The structure, tyres, and brakes of the trailer must be rated to carry the load. Inadequate trailer equipment can cause the combination to operate in an unexpected or unsafe manner.

Before starting, check all trailer hitch parts and attachments, safety chains, electrical connectors, lamps, tyres, and mirrors. Get familiar with the handling and braking of the rig. If the trailer has electric brakes, start the combination moving and then apply the trailer brake controller by hand to be sure the brakes work.

During the trip, check occasionally to be sure that the load is secure and the lamps and any trailer brakes still work.

Following Distance

Stay at least twice as far behind the vehicle ahead as you would when driving the vehicle without a trailer. This can help to avoid heavy braking and sudden turns.

Overtaking

More overtaking distance is needed when towing a trailer. The combination will not accelerate as quickly and is longer so it is necessary to go much farther beyond the passed vehicle before returning to the lane.

Reversing

Hold the bottom of the steering wheel with one hand. To move the trailer to the left, move that hand to the left. To move the trailer to the right, move your hand to the right. Always reverse slowly and, if possible, have someone guide you.

Making Turns

Caution

Making very sharp turns while trailering could cause the trailer to come in contact with the vehicle. The vehicle could be damaged. Avoid making very sharp turns while trailering.

When turning with a trailer, make wider turns than normal. Do this so the trailer will not strike soft shoulders, curbs, road signs, trees, or other objects. Avoid jerky or sudden manoeuvres. Signal well in advance.

If the trailer indicator bulbs burn out. the arrows on the instrument cluster will still flash for turns. It is important to check occasionally to be sure the trailer bulbs are still working.

Driving on Grades

Reduce speed and shift to a lower gear before starting down a long or steep downgrade. If the transmission is not shifted down, the brakes might get hot and no longer work well.

Vehicles can tow in D (Drive). Shift the transmission to a lower gear if the transmission shifts too often under heavy loads and/or hilly conditions.

When towing, use the Tow/Haul Mode to prevent damage to the engine or transmission. See Tow/Haul Mode \$ 213.

When towing at high altitude on steep uphill grades, consider the following: Engine coolant will boil at a lower temperature than at normal altitudes. If the engine is turned off immediately after towing at high altitude on steep uphill grades, the vehicle may show signs similar to engine overheating. To avoid this, let the engine run while parked, preferably on level ground, with the transmission in P (Park) for a few minutes before turning the engine off. If the overheat warning comes on, see *Engine Overheating* \$\dip\$ 277.

Parking on Hills

🗥 Warning

Parking the vehicle on a hill with the trailer attached can be dangerous. If something goes wrong, the rig could start to move. People can be injured, and both the vehicle and the trailer can be damaged. When possible, always park the rig on a flat surface.

If parking the rig on a hill:

- 1. Press the brake pedal, but do not shift into P (Park) yet. Turn the wheels into the curb if facing downhill or into traffic if facing uphill.
- 2. Have someone place chocks under the trailer wheels.
- 3. When the wheel chocks are in place, release the regular brakes until the chocks absorb the load.
- 4. Reapply the brake pedal. Then apply the parking brake and shift into P (Park).

5. Release the brake pedal.

Leaving After Parking on a Hill

- 1. Apply and hold the brake pedal.
- 2. Start the engine.
- 3. Shift into a gear.
- 4. Release the parking brake.
- 5. Release the brake pedal.
- 6. Drive slowly until the trailer is clear of the chocks.
- 7. Stop and have someone pick up and store the chocks.

Maintenance when Trailer Towing

The vehicle needs service more often when pulling a trailer. See *Scheduled Maintenance* ⇒ 343. Things that are especially important in trailer operation are automatic transmission fluid, engine oil, axle lubricant, belts, cooling system and brake system. It is a good idea to inspect these before and during the trip.

Check periodically to see that all hitch nuts and bolts are tight.

Trailer Towing

Eight passenger vehicles are not intended to tow a trailer.

Do not tow a trailer during running-in. See *New Vehicle Run-In* \Leftrightarrow 202.

Before towing a trailer, see "Hands-Free Operation" under *Tailgate* \Rightarrow 38.

⚠ Warning

The driver can lose control when pulling a trailer if the correct equipment is not used or the vehicle is not driven properly. For example, if the trailer is too heavy or the trailer brakes are inadequate for the load, the vehicle may not stop as expected. The driver and passengers could be seriously injured. The vehicle may also be damaged; the resulting repairs would not be covered by the vehicle warranty. Pull a trailer only if all the steps in this section have been

(Continued)

Warning (Continued)

followed. Ask your dealer for advice and information about towing a trailer with the vehicle.

Caution

Pulling a trailer improperly can damage the vehicle and result in costly repairs not covered by the vehicle warranty. To pull a trailer correctly, follow the advice in this section and see your dealer for important information about towing a trailer with the vehicle.

To identify the trailering capacity of the vehicle, see "Weight of the Trailer" following.

Trailering is different than just driving the vehicle by itself. Trailering means changes in handling, acceleration, braking, durability and fuel economy. Successful, safe trailering takes correct equipment, and it has to be used properly.

The following information has many time-tested, important trailering tips and safety rules. Many of these are important for your safety and that of your passengers. Read this section carefully before pulling a trailer.

Weight of the Trailer

Safe trailering requires monitoring the weight, speed, altitude, road gradients, outside temperature, and how frequently the vehicle is used to pull a trailer. Take into consideration any special equipment on the vehicle, and the amount of tongue weight the

vehicle can carry. See "Weight of the Trailer Tongue" later in this section for more information.

For vehicles that can tow, the Trailer Weight Rating (TWR) is calculated as if the vehicle has a driver, all available passenger seats occupied, all vehicle features, and all required trailering equipment.

Ask your dealer for trailering information or advice.

Weight of the Trailer Tongue

The tongue load of any trailer is very important because it is also part of the vehicle weight. The Gross Vehicle Weight (GVW) includes the curb

Vehicle Series	Hitch Type	Maximum Tongue Weight
Short Wheelbase 7 Passenger, 20 inch Wheels, Stationary Assist Steps	Weight-Carrying	122 kg (269 lb)
Short Wheelbase 7 Passenger, 22 inch Wheels, Power Assist Steps	Weight-Carrying	100 kg (220 lb)
Short Wheelbase 8 Passenger	*	*
Long Wheelbase 7 Passenger, 20 inch Wheels, Stationary Assist Steps	Weight-Carrying	118 kg (260 lb)
Long Wheelbase 7 Passenger, 22 inch Wheels, Power Assist Steps	Weight-Carrying	100 kg (220 lb)
Long Wheelbase 8 Passenger	*	*
*Trailer Towing not allowed.		

The maximum vertical tongue load is also shown on the vehicle documents. Load to the maximum capacity if possible, especially when towing a heavy trailer. The load on the trailer tongue must not be too light or too heavy. Do not load the trailer tongue to less than 4% of the maximum allowable trailer weight or less than

25 kg (55 lb). Do not load the trailer tongue to more than 10% of the maximum allowable trailer weight.

Trailer rating may be limited by the vehicle's ability to carry tongue weight. Tongue or kingpin weight cannot cause the vehicle to exceed the GVWR (Gross Vehicle Weight Rating)

or the RGAWR (Rear Gross Axle Weight Rating). See "Total Weight on the Vehicle's Tyres" following.

After loading the trailer, weigh the trailer and then the tongue, separately, to see if the weights are proper. If they are not, adjustments might be made by moving some items around in the trailer.

If a cargo carrier is used in the trailer hitch receiver, choose a carrier that positions the load as close to the vehicle as possible. Make sure the total weight, including the carrier, is no more than half of the maximum allowable tongue weight for the vehicle or 227 kg (500 lb), whichever is less.

Total Weight on the Vehicle's Tyres

Be sure the vehicle's tyres are inflated to the inflation pressures found on the Certification label on the driver's side rear door or see *Vehicle Load Limits* \Rightarrow 197. Make sure not to exceed the GVWR limit for the vehicle, or the RGAWR, with the tow vehicle and trailer fully loaded for the trip including the weight of the trailer tongue.

Weight of the Trailering Combination

It is important that the combination of the tow vehicle and trailer does not exceed any of its weight ratings — GCWR, GVWR, RGAWR, Trailer Weight Rating, or Tongue Weight. The

only way to be sure it is not exceeding any of these ratings is to weigh the tow vehicle and trailer combination, fully loaded for the trip, getting individual weights for each of these items.

Towing Equipment

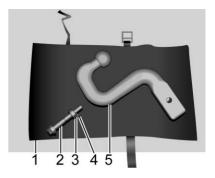
Hitches

The correct hitch equipment helps maintain combination control. Most small-to-medium trailers can be towed with a weight-carrying hitch which features a coupler latched to the hitch ball. Larger trailers may require a weight-distributing hitch that uses spring bars to distribute the trailer tongue weight among the two vehicle and trailer axles. See "Weight of the Trailer Tongue" in *Trailer Towing* ♀ 256 for rating limits.

Consider using mechanical sway controls with any trailer. Ask a trailering professional about sway controls or refer to the trailer manufacturer's recommendations and instructions.

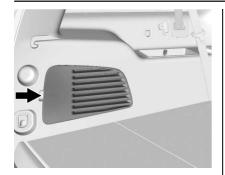
Installing the Tow ball

A trailer ball is provided for vehicles designed to tow a trailer. If equipped, trailering information is provided with the vehicle documents.

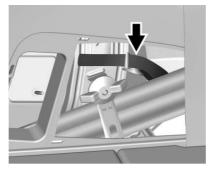


- Storage Bag
- 2. Pin
- 3. Spacer
- 4. Clip
- 5. Tow ball

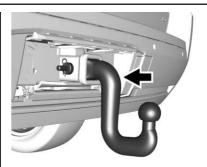
The tow ball is stored in the rear of the vehicle, on the driver side, behind a door in the trim panel.



- Pull to open the trim panel door.
 The third row driver side seat may need to be folded to access the trim panel door.
- 2. Lift the acoustic pad to access the storage bag (1).



- 3. Release the strap.
- 4. Remove the storage bag (1).
- 5. Remove the pin (2) and trailer ball (5) from the storage bag (1).



- 6. Install the trailer ball (5) into the hitch.
- 7. Remove the clip (4) and spacer (3) from the pin (2).
- 8. Install the pin (2) through the hole in the hitch and trailer ball (5).
- 9. Install the spacer (3) and clip (4) onto the pin (2).

Removing and Storing the Tow ball



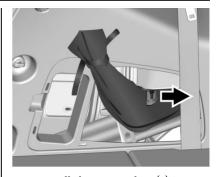
An unsecured tow ball could be thrown about the vehicle during a crash or sudden manoeuvre.

Someone could be injured. Always properly secure the tow ball in its storage bag in the rear driver side jack storage compartment when not in use.

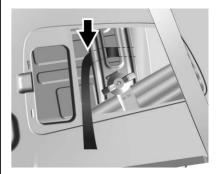
- 1. Remove the clip (4) and spacer (3) from the pin (2).
- 2. Remove the pin (2) from the hitch and the trailer ball (5).
- 3. Remove the trailer ball (5) from the hitch.



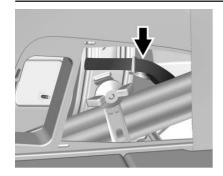
- 4. Install the trailer ball (5) into the storage bag (1) as shown.
- 5. Install the spacer (3) and clip (4) onto the pin (2).
- 6. Place the assembled pin onto the bag (1) and tie.



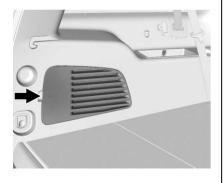
Install the storage bag (1) into the compartment with the buckle forward.



8. Pull the strap behind the bracket.



- 9. Pull the strap through the buckle and pull tight.
- 10. Lower the acoustic pad.



11. Reinstall the trim panel door.

Safety Chains

Always attach chains between the vehicle and the trailer. Cross the safety chains under the tongue of the trailer to help prevent the tongue from contacting the road if it becomes separated from the hitch. Instructions about safety chains may be provided by the hitch manufacturer or by the trailer manufacturer. If the trailer being towed weighs up to 2,271 kg (5,000 lb) with a factory-installed step bumper, safety chains may be attached to the attaching points on the bumper, otherwise, safety chains should be attached to holes on the trailer hitch platform. Always leave just enough slack so the combination can turn. Never allow safety chains to drag on the ground.

Trailer Brakes

A loaded trailer that weighs more than 900 kg (2,000 lb) must be equipped with its own brake system, with brakes working on all axles. Trailer braking equipment conforming to

Canadian Standards Association (CSA) requirement CAN3-D313, or its equivalent, is recommended.

State and local regulations may also require the trailer to have its own braking system if loaded above a certain threshold.

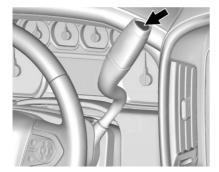
Read and follow the instructions for the trailer brakes so they are installed, adjusted, and maintained properly.

Do not tap into the vehicle's hydraulic brake system.

Trailer Wiring Harness

The 13-pin trailer connector is mounted in the bumper.

Tow/Haul Mode



Pressing this button at the end of the gear lever turns on and off the Tow/ Haul Mode.



This indicator light on the instrument cluster comes on when the Tow/Haul Mode is on.

Tow/Haul is a feature that assists when pulling a heavy trailer or a large or heavy load. See *Tow/Haul Mode*

⇒ 21.3.

Tow/Haul is designed to be most effective when the vehicle and trailer combined weight is at least 75% of the vehicle's Gross Combined Weight Rating (GCWR). See "Weight of the Trailer" under *Trailer Towing* \$≥ 256. Tow/Haul is most useful under the following driving conditions:

- When pulling a heavy trailer or a large or heavy load through rolling terrain.
- When pulling a heavy trailer or a large or heavy load in stop-and-go traffic.
- When pulling a heavy trailer or a large or heavy load in busy parking lots where improved low speed control of the vehicle is desired.

Operating the vehicle in Tow/Haul when lightly loaded or with no trailer at all will not cause damage. However, there is no benefit to the selection of Tow/Haul when the vehicle is

unloaded. Such a selection when unloaded may result in unpleasant engine and transmission driving characteristics and reduced fuel economy. Tow/Haul is recommended only when pulling a heavy trailer or a large or heavy load.

Trailer Sway Control (TSC)

Vehicles with StabiliTrak have a Trailer Sway Control (TSC) feature. Trailer sway is unintended side-to-side motion of a trailer while being towed. If the vehicle is towing a trailer and the TSC detects that sway is increasing, the vehicle brakes are selectively applied at each wheel, to help reduce excessive trailer sway.

⚠ Warning

Even if the vehicle is equipped with TSC, trailer sway could result in loss of control and the vehicle could crash. If excessive trailer sway is detected, slow down to a safe speed. Check the trailer and vehicle to help correct possible causes. These could include an improperly or overloaded trailer, unrestrained cargo, improper trailer hitch configuration, excessive vehicle-trailer speed, or improperly inflated or incorrect vehicle or trailer tyres. See *Towing Equipment* ⇒ 259 for trailer ratings and hitch setup recommendations.

Adding non-dealer accessories can affect the vehicle performance. See Accessories and Modifications

267.

Electronic Trailer Sway Control Devices

Some trailers may come equipped with an electronic device designed to reduce or control trailer sway.

Aftermarket equipment manufacturers

also offer similar devices that connect to the wiring between the trailer and the vehicle. These devices may interfere with the vehicle's trailer brake or other systems, including integrated anti-sway systems, if equipped. Messages related to trailer connections or trailer brakes could appear on the Driver Information Centre (DIC). The effect that these devices may have on vehicle handling or trailer brake performance is unknown.

⚠ Warning

Use of electronic trailer sway control devices could result in reduced trailer brake performance, loss of trailer brakes, or other malfunctions, and could cause a crash. You or others could be injured or killed. Before using one of these devices:

 Ask the device or trailer manufacturer if the device has been thoroughly tested (Continued)

Warning (Continued)

for compatibility with the make, model, and year of the vehicle as well as optional equipment installed on the vehicle.

- Before driving on the open roads, check that the trailer brakes are working properly.
 Drive the vehicle with the trailer attached on a level road surface that is free of traffic at about 32-40 km/h (20-25 mph) and fully apply the manual trailer brake apply lever. Also check that the trailer brake lamps and other lamps are functioning correctly.
- If the trailer brakes are not operating properly at any time, or if a DIC message indicates problems with the trailer connections or trailer brakes, carefully pull the

(Continued)

Warning (Continued)

vehicle over to the side of the road when traffic conditions allow.

Conversions and Add-Ons

Add-On Electrical Equipment



The Data Link Connector (DLC) is used for vehicle service and Emission Inspection/Maintenance testing. See *Malfunction Indicator Lamp (Check Engine Light)* ⇒ 141. A device connected to the DLC — such as an aftermarket fleet or driver-behaviour 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 not to 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 \Rightarrow 92 and Adding Equipment to the Airbag-Equipped Vehicle \Rightarrow 92.

Vehicle Care

General Information	
General Information	26
Accessories and	
Modifications	26
Vehicle Checks	
Doing Your Own	
Service Work	26
Bonnet	268
Engine Compartment	
Overview	269
Engine Oil	
Engine Oil Life System	27
Automatic Transmission	
Fluid	
Engine Air Cleaner/Filter	27.
Cooling System	
Engine Overheating	
Engine Fan	
Washer Fluid	
Brakes	
Brake Fluid	
Battery	
Four-Wheel Drive	
Front Axle	
Rear Axle	
Starter Switch Check	284

Automatic Transmission Shift
Lock Control Function
Check 285
Park Brake and P (Park)
Mechanism Check 285
Wiper Blade Replacement 285
Glass Replacement 286
Windshield Replacement 286
Gas Strut(s)
Haadlama Aimina
Headlamp Aiming
Headlamp Aiming 288
Bulb Replacement
Bulb Replacement 288
LED Lighting
Front Indicator Lamps 288
Number Plate Lamp 289
· · · · · · · · · · · · · · · · · · ·
Electrical System
Electrical System Overload 289
Fuses and Circuit Breakers 290
Engine Compartment Fuse
Block 290
Instrument Panel Fuse Block
(Right) 295
Instrument Panel Fuse
Block (Left) 297
Rear Compartment Fuse
Block 300

328
329
333
337
340

Tauring the Vehicle

General Information

For service and parts needs, visit your dealer. You will receive genuine parts and trained and supported service people.

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 anti-lock 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 accessorise the vehicle using genuine GM Accessories installed by a dealer technician.

Also, see Adding Equipment to the Airbag-Equipped Vehicle \$ 92.

Vehicle Checks

Doing Your Own Service Work



It can be dangerous to work on your vehicle if you do not have the proper knowledge, service manual, tools, or parts. Always follow owner's manual procedures and consult the service manual for your vehicle before doing any service work.

If doing some of your own service work, use the proper service manual. It tells you much more about how to service the vehicle than this manual can.

This vehicle has an airbag system. Before attempting to do your own service work, see *Servicing the Airbag-Equipped Vehicle* \$ 92.

Keep a record with all parts receipts and list the mileage and the date of any service work performed.

Caution

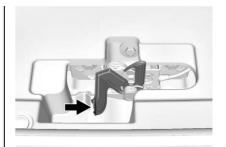
Even small amounts of contamination can cause damage to vehicle systems. Do not allow contaminants to contact the fluids, reservoir caps, or dipsticks.

Bonnet

To open the bonnet:



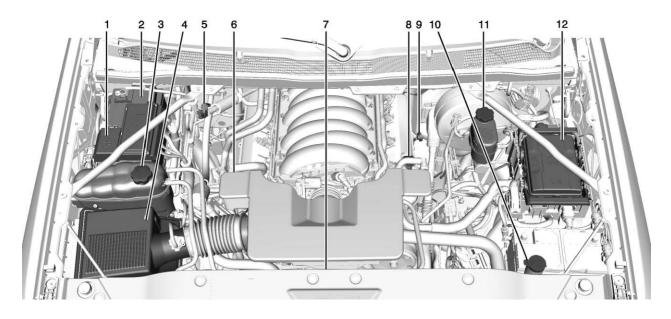
 Pull the handle with this symbol on it. It is inside the vehicle under the steering wheel.



 Go to the front of the vehicle to find the secondary bonnet release. The handle is under the front edge of the bonnet near the centre. Push the handle to the right and at the same time raise the bonnet.

Before closing the bonnet, be sure all the filler caps are on properly. Then bring the bonnet from full open to within 15 cm (6 in) from the closed position, pause, and push the front centre of the bonnet with a swift, firm motion to fully close the bonnet.

Engine Compartment Overview



- 1. Positive (+) Terminal. See *Jump* Starting \Rightarrow 325.
- Coolant Surge Tank and Pressure
- 5. Automatic Transmission Dipstick. See "How to Check the Automatic Transmission Fluid" under Automatic Transmission *Fluid* \$\dip 273.
- 6. Remote Negative (-) Location. See Jump Starting \Rightarrow 325.
- 7. Engine Cooling Fans (Out of View). See Cooling System \$ 274.
- 8. Engine Oil Fill Cap. See "When to Add Engine Oil" under Engine Oil *⇒* 270.
- 9. Engine Oil Dipstick. See "Checking Engine Oil" under Engine Oil \$ 270.
- 10. Windscreen Washer Fluid Reservoir. See "Adding Washer Fluid" under Washer Fluid \$ 279.
- 11. Brake Fluid Reservoir, See Brake *Fluid* \$ 281.

Engine Compartment Fuse Block ⇒ 290.

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* \$\rightrightarrow\$ 272.
- 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* \$ 269 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 Centre (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 gradients 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

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*

⇒ 269 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 done.

Selecting the Right Engine Oil

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.



Caution

Failure to use the recommended engine oil or equivalent can result in engine damage not covered by the vehicle warranty.

Viscosity Grade

Use SAE 0W-20 viscosity grade engine oil.

When selecting an oil of the appropriate viscosity grade, it is recommended to select an oil of the correct specification. See "Specification" earlier in this section.

Engine Oil Additives/Engine Oil Flushes

Do not add anything to the oil. The recommended oils meeting the dexos2 specification are all that is needed for good performance and engine protection.

Engine oil system flushes are not recommended and could cause engine damage not covered by the vehicle warranty.

What to Do with Used Oil

Used engine oil contains certain elements that can be unhealthy for your skin and could even cause cancer. Do not let used oil stay on your skin for very long. Clean your skin and nails with soap and water, or a good hand cleaner. Wash or properly dispose of clothing or rags containing used engine oil. See the manufacturer's warnings about the use and disposal of oil products.

Used oil can be a threat to the environment. If you change your own oil, be sure to drain all the oil from the filter before disposal. Never dispose of oil by putting it in the trash or pouring it on the ground, into sewers, or into streams or bodies of water. Recycle it by taking it to a place that collects used oil.

Engine Oil Life System When to Change Engine Oil

This vehicle has a computer system that indicates when to change the engine oil and filter. This is based on a combination of factors which include engine revolutions, engine temperature, and miles driven. Based on driving conditions, the mileage at which an oil change is indicated can vary considerably. For the oil life system to work properly, the system must be reset every time the oil is changed.

When the system has calculated that oil life has been diminished, it indicates that an oil change is necessary. A CHANGE ENGINE OIL SOON message comes on. Change the oil as soon as possible within the next 1 000 km (600 mi). It is possible that, if driving under the best conditions, the oil life system might indicate that an oil change is not necessary for up to a year. The engine oil and filter must be changed at least once a year and, at this time, the system must be reset. Your dealer has trained service people who will perform this work and reset the system. It is also important to check the oil regularly over the course of an oil drain interval and keep it at the proper level.

If the system is ever reset accidentally, the oil must be changed at 5 000 km (3,000 mi) since the last oil change. Remember to reset the oil life system whenever the oil is changed.

After you change the oil, the oil life system will need to be reset. See your dealer for service.

See OIL LIFE REMAINING under Driver Information Centre (DIC) \Rightarrow 150 for information on the engine oil life system.

Automatic Transmission Fluid

When to Check and Change Automatic Transmission Fluid

It is usually not necessary to check the transmission fluid level. The only reason for fluid loss is a transmission leak or overheated transmission. This vehicle is not equipped with a gearbox fluid level dipstick. There is a special procedure for checking and changing the gearbox fluid in these vehicles. Because this procedure is difficult, this should be done at the dealer. Contact the dealer for additional information.

Caution

Change the fluid and filter at the scheduled maintenance intervals listed in *Scheduled Maintenance* ⇔ *343*. Be sure to use the transmission fluid listed in *Recommended Fluids and Lubricants* ⇔ *346*.

Engine Air Cleaner/Filter

See *Engine Compartment Overview*

⇒ *269* for the location of the engine air cleaner/filter.

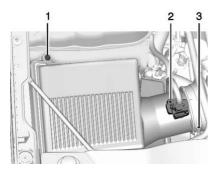
When to Inspect the Engine Air Cleaner/Filter

How to Inspect the Engine Air Cleaner/Filter

Do not start the engine or have the engine running with the engine air cleaner/filter housing open. Before removing the engine air cleaner/filter, make sure that the engine air cleaner/ filter housing and nearby components are free of dirt and debris. 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:

Replacing the Engine Air Cleaner/ Filter



- 1. Screws
- 2. Electrical Connector
- 3. Air Duct Clamp
- 2. Disconnect the outlet duct by loosening the air duct clamp (3).

- Disconnect the electrical connector (2) and the connector harness from the cover.
- Remove the four screws (1) on top of the cover of the housing and lift up the cover.
- Remove the engine air cleaner/ filter from the housing. Take care to dislodge as little dirt as possible.
- Clean the engine air cleaner/filter sealing surfaces and the housing.
- 7. Inspect or replace the engine air cleaner/filter.
- 8. Reverse Steps 2–4 to reinstall the filter cover housing.

🗥 Warning

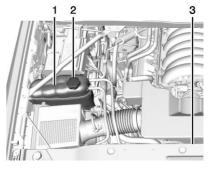
Operating the engine with the air cleaner/filter off can cause you or others to be burned. The air cleaner not only cleans the air; it helps to stop flames if the engine backfires. Use caution when working on the engine and do not drive with the air cleaner/filter off.

Caution

If the air cleaner/filter is off, dirt can easily get into the engine, which could damage it. Always have the air cleaner/filter in place when driving.

Cooling System

The cooling system allows the engine to maintain the correct working temperature.



1. Coolant Surge Tank

- 2. Coolant Surge Tank Pressure Cap
- 3. Engine Cooling Fan



An underbonnet electric fan can start up even when the engine is not running and can cause injury. Keep hands, clothing, and tools away from any underbonnet electric fan.

⚠ Warning

Do not touch heater or radiator hoses, or other engine parts. They can be very hot and can burn you. Do not run the engine if there is a leak; all coolant could leak out. That could cause an engine fire and can burn you. Fix any leak before driving the vehicle.

Engine Coolant

The cooling system in the vehicle is filled with DEX-COOL engine coolant. This coolant is designed to remain in the vehicle for 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* \Rightarrow 277.

What to Use

⚠ Warning

Plain water, or other liquids such as alcohol, may boil before the proper coolant mixture does. With plain water or the wrong mixture, the engine could get too hot but there would not be an overheat warning. The engine could catch fire and you or others could be burned.

Use a 50/50 mixture of clean, drinkable water and DEX-COOL coolant. This mixture:

- Gives freezing protection down to -37 °C (-34 °F), outside temperature
- Gives boiling protection up to 129
 °C (265 °F), engine temperature
- Protects against rust and corrosion
- Will not damage aluminium parts
- Helps keep the proper engine temperature

Caution

Do not use anything other than a mix of DEX-COOL coolant that meets GM Standard GMW3420 and clean, drinkable water. Anything else can cause damage to the engine cooling system and the vehicle, which would not be covered by the vehicle warranty.

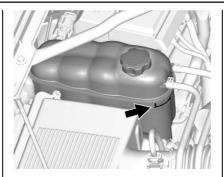
Never dispose of engine coolant by putting it in the waste bin, or by pouring it on the ground or into sewers, streams, or bodies of water. Have the coolant changed by an authorised service centre, familiar with legal requirements regarding used coolant disposal. This will help protect the environment and your health.

Checking Coolant

The coolant surge tank is in the engine compartment on the passenger side of the vehicle. See *Engine Compartment Overview* \Rightarrow 269.

The vehicle must be on a level surface when checking the coolant level.

Check to see if coolant is visible in the coolant surge tank. If the coolant inside the coolant surge tank is boiling, do not do anything else until it cools down. If coolant is visible but the coolant level is not at or above the full cold 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.



The coolant level should be at or above the full cold mark. If it is not, there may be a leak in the cooling system.

How to Add Coolant to the Coolant Surge Tank for Petrol Engines



Spilling coolant on hot engine parts can burn you. Coolant contains ethylene glycol and it will burn if the engine parts are hot enough.

riangle Warning

Plain water, or other liquids such as alcohol, may boil before the proper coolant mixture does. With plain water or the wrong mixture, the engine could get too hot but there would not be an overheat warning. The engine could catch fire and you or others could be burned.

⚠ Warning

Steam and scalding liquids from a hot cooling system are under pressure. Turning the pressure cap, even a little, can cause them to jet out at high speed and you could be burned. Never turn the cap when the cooling system, including the pressure cap itself, is hot. Wait for the cooling system and pressure cap to cool.

Caution

Failure to follow the specific coolant fill procedure could cause the engine to overheat and could cause system damage. If coolant is not visible in the surge tank, contact your retailer.

If no coolant is visible in the surge tank, add coolant:



 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 anticlockwise about one full turn. If a hiss is heard, wait for that to stop. A hiss means there is still some pressure left.

- 2. Keep turning the pressure cap slowly and remove it.
- Fill the coolant surge tank with the proper mixture to the full cold mark.
- With the coolant surge tank pressure cap off, start the engine and let it run until the engine coolant temperature gauge indicates approximately 90 °C (195 °F).

By this time, the coolant level inside the coolant surge tank may be lower. If the level is lower, add more of the proper mixture to the coolant surge tank until the level reaches the full cold mark.

5. Replace the pressure cap tightly.

 Verify coolant level after the engine is shut off and the coolant is cold. If necessary, repeat coolant fill procedure Steps 1-6.

Caution

If the pressure cap is not tightly installed, coolant loss and engine damage may occur. Be sure the cap is properly and tightly secured.

Engine Overheating

Caution

Do not run the engine if there is a leak in the engine cooling system. This can cause a loss of all coolant and can damage the system and vehicle. Have any leaks fixed right away.

The vehicle has several indicators to warn of engine overheating.

There is a coolant temperature gauge in the vehicle's instrument cluster. See Engine Coolant Temperature Gauge ⇒ 139.

In addition, there are ENGINE OVERHEATED STOP ENGINE. ENGINE OVERHEATED IDLE ENGINE. and ENGINE POWER IS REDUCED messages in the Driver Information Centre (DIC).

If the decision is made not to lift the bonnet when this warning appears, get service help right away.

If the decision is made to lift the bonnet, make sure the vehicle is parked on a level surface.

Check to see if the engine cooling fan(s) are running. If the engine is overheating, the fans should be running. If they are not, do not continue to run the engine, and have the vehicle serviced.

If Steam is Coming from the **Engine Compartment**



∠ Warning

Steam and scalding liquids from a hot cooling system are under pressure. Turning the pressure cap, even a little, can cause them to jet out at high speed and you could be burned. Never turn the cap when the cooling system, including the pressure cap itself, is hot. Wait for the cooling system and pressure cap to cool.

If No Steam is Coming from the **Engine Compartment**

The ENGINE OVERHEATED STOP ENGINE or the ENGINE OVERHEATED IDLE ENGINE message, along with a low coolant condition, can indicate a serious problem.

If there is an engine overheat warning, but no steam is seen or heard, the problem may not be too serious. Sometimes the engine can get a little too hot when the vehicle:

- Climbs a long hill on a hot day.
- Stops after high-speed driving.
- Idles for long periods in traffic.
- Tows a trailer; see *Trailer Towing* ⇒ 256.

If the ENGINE OVERHEATED STOP ENGINE or the ENGINE OVERHEATED IDLE ENGINE message appears with no sign of steam, try this for a minute or so:

- Turn the air conditioning off.
- 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 or an overheat warning no longer displays, the vehicle can be driven. Continue to drive the vehicle slowly for about 10 minutes. Keep a safe vehicle distance from the vehicle in front. If the warning does not come

back on, continue to drive normally and have the cooling system checked for proper fill and function.

If the warning continues, pull over, stop, and park the vehicle right away.

If there is still no sign of steam and the vehicle is equipped with an engine driven cooling fan, push down the accelerator until the engine speed is about twice as fast as normal idle speed for at least five minutes while the vehicle is parked. If the warning is still there, turn off the engine and get everyone out of the vehicle until it cools down.

If there is no sign of steam, idle the engine for five minutes while parked. If the warning is still displayed, turn off the engine until it cools down.

Engine Fan

If the vehicle has electric cooling fans, the fans may be heard spinning at low speed during most everyday driving. The fans may turn off if no cooling is required. Under heavy vehicle load, during trailer towing, in high outside temperatures, or during operation of the air conditioning system, the fans may change to high speed and an increase in fan noise may be heard. This is normal and indicates that the cooling system is functioning properly. The fans will change to low speed when additional cooling is no longer required.

The electric engine cooling fans may run after the engine has been turned off. This is normal and no service is required.

Washer Fluid

What to Use

When windscreen washer fluid needs to be added, be sure to read the manufacturer's instructions before use. Use a fluid that has sufficient protection against freezing in an area where the temperature may fall below freezing.

Adding Washer Fluid

The vehicle has a low washer fluid message on the DIC that comes on when the washer fluid is low. The message is displayed for 15 seconds at

the start of each ignition cycle. When the WASHER FLUID LOW ADD FLUID message displays, washer fluid will need to be added to the windscreen washer fluid reservoir.



Open the cap with the washer symbol on it. Add washer fluid until the tank is full. See *Engine Compartment*Overview \$\times 269\$ 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.

(Continued)

Caution (Continued)

- Do not use engine coolant (antifreeze) in the windscreen washer. It can damage the windscreen washer system and paint.
- Do not mix water with ready-to-use washer fluid.
 Water can cause the solution to freeze and damage the washer fluid tank and other parts of the washer system.
- When using concentrated washer fluid, follow the manufacturer instructions for adding water.
- Fill the washer fluid tank only three-quarters full when it is very cold. This allows for fluid expansion if freezing occurs, which could damage the tank if it is completely full.

Brakes

Disc brake 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 can be heard all the time when the vehicle is moving, except when applying the brake pedal firmly.



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 tyres are rotated, inspect brake pads for wear and evenly tighten wheel nuts in the proper sequence to torque specifications. See *Capacities and Specifications*

⇒ 349.

Brake pads should be replaced as complete 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 if parts are improperly installed.

Brake Fluid



The brake master cylinder reservoir is filled with GM approved DOT 3 brake fluid as indicated on the reservoir cap. See *Engine Compartment Overview*

⇒ 269 for the location of the reservoir.

Checking Brake Fluid

With the vehicle in P (Park) on a level surface, the brake fluid level should be between the minimum and maximum marks on the brake fluid reservoir.

There are only two reasons why the brake fluid level in the reservoir may go down:

 Normal brake lining wear. When new linings are installed, the fluid level goes back up. A fluid leak in the brake hydraulic system. Have the brake hydraulic system fixed. With a leak, the brakes will not work well.

Always clean the brake fluid reservoir cap and the area around the cap before removing it.

Do not top off the brake fluid. Adding fluid does not correct a leak. If fluid is added when the linings are worn, there will be too much fluid when new brake linings are installed. Add or remove fluid, as necessary, only when work is done on the brake hydraulic system.

⚠ Warning

If too much brake fluid is added, it can spill on the engine and burn, if the engine is hot enough. You or others could be burned, and the vehicle could be damaged. Add brake fluid only when work is done on the brake hydraulic system.

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 *Scheduled Maintenance* ♀ 343.

What to Add

⚠ 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

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. See *Engine Compartment Overview* \Rightarrow 269 for battery location.

⚠ Warning

Batteries should not be disposed of with regular refuse. Make sure that you dispose of old batteries in accordance with environmental protection regulations to help protect the environment and your health.

⚠ Warning

Do not use a match or flame near a vehicle's battery. If you need more light, use a torch.

Do not smoke near a vehicle's battery.

When working around a vehicle's battery, shield your eyes with protective glasses.

Keep children away from vehicle batteries

⚠ Warning

Batteries have acid that can burn you and gas that can explode. You can be hurt badly if you are not careful.

Follow instructions carefully when working around a battery.

(Continued)

Warning (Continued)

Battery posts, terminals and related accessories contain lead and lead compounds which can cause cancer and reproductive harm. Wash hands after handling.

Vehicle Storage

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.

Four-Wheel Drive

Transfer Case

The vehicle is equipped with Four-Wheel Drive, make sure you perform the lubricant checks described in this section.

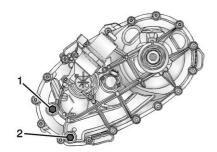
When to Check Lubricant

Refer to the to *Scheduled Maintenance*

⇒ *343* to determine how often to check the lubricant.

How to Check Lubricant

To get an accurate reading, the vehicle should be on a level surface.



- 1. Fill Plug
- 2. Drain Plug

If the level is below the bottom of the fill plug (1) hole, located on the transfer case, some lubricant will need to be added. Add enough lubricant to

raise the level to the bottom of the fill plug (1) hole. Use care not to over-tighten the plug.

What to Use

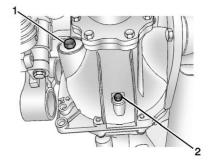
Front Axle

When to Check and Change Lubricant

It is not necessary to regularly check front axle fluid unless a leak is suspected, or an unusual noise is heard. A fluid loss could indicate a problem. Have it inspected and repaired.

How to Check Lubricant

To get an accurate reading, the vehicle should be on a level surface.



- 1. Fill Plug
- 2. Drain Plug
- When the differential is cold, add enough lubricant to raise the level from 0 mm (0 in) to 3.2 mm (1/8 in) below the fill plug (1) hole.
- When the differential is at operating temperature (warm), add enough lubricant to raise the level to the bottom of the fill plug (1) hole.

What to Use

Rear Axle

When to Check Lubricant

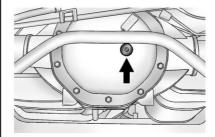
It is not necessary to regularly check rear axle fluid unless a leak is suspected or an unusual noise is heard. A fluid loss could indicate a problem. Have it inspected and repaired.

All axle assemblies are filled by volume of fluid during production. They are not filled to reach a certain level. When checking the fluid level on any axle, variations in the readings can be caused by factory fill differences between the minimum and the maximum fluid volume. Also, if a vehicle has just been driven before checking the fluid level, it may appear lower than normal because fluid has travelled out along the axle tubes and has not drained back to the sump area. Therefore, a reading taken five minutes after the vehicle has been driven will appear to have a lower fluid level than a vehicle that has been stationary for an hour or two.

The rear axle assembly must be supported on a flat, level surface to get a true reading.

How to Check Lubricant

To get an accurate reading, the vehicle should be on a level surface.



The proper level is 1.0 mm to 19.0 mm (0.04 in to 0.7 in) below the bottom of the fill hole, located on the rear axle. Add only enough fluid to reach the proper level.

What to Use

Refer to *Recommended Fluids and Lubricants* \$\dip 346\$ to determine what kind of lubricant to use

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.

- Before starting this check, be sure there is enough room around the vehicle.
- 2. Apply both the parking brake and the regular brake.
 - Do not use the accelerator pedal, and be ready to turn off the engine immediately if it starts.
- 3. Try to start the engine in each gear. The vehicle should start only in P (Park) or N (Neutral).

If the vehicle starts in any other position, contact your dealer for service.

Automatic Transmission Shift Lock Control Function Check



When you are doing this inspection, the vehicle could move suddenly. If the vehicle moves, you or others could be injured.

- Before starting this check, be sure there is enough room around the vehicle. It should be parked on a level surface.
- 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 gear lever out of P (Park) with

normal effort. If the shift lever moves out of P (Park), contact your dealer for service.

Park Brake and P (Park) Mechanism Check

⚠ Warning

When you are doing this check, the vehicle could begin to move. You or others could be injured and property could be damaged. Make sure there is room in front of the vehicle in case it begins to roll. Be ready to apply the regular brake at once should the vehicle begin to move.

Park on a fairly steep hill, with the vehicle facing downhill. Keeping your foot on the regular brake, apply the parking brake.

 To check the parking brake's holding ability: With the engine running and the transmission in N (Neutral), slowly remove foot pressure from the regular brake pedal. Do this until the vehicle is held by the parking brake only.

 To check the P (Park) mechanism's holding ability: With the engine running, shift to P (Park). Then release the parking brake followed by the regular brake.

Contact your dealer if service is required.

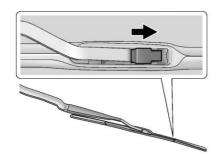
Wiper Blade Replacement

Windscreen wiper blades should be inspected for wear or cracking.

Front Wiper Blade Replacement

To replace the wiper blade assembly:

 Pull the windscreen wiper assembly away from the windscreen.



- Lift up on the latch in the middle of the wiper blade where the wiper arm attaches.
- With the catch open, pull the wiper blade down towards the windscreen far enough to release it from the J-hooked end of the wiper arm.
- 4. Remove the wiper blade.

Allowing the wiper blade arm to touch the windscreen when no wiper blade is installed could damage the windscreen. Any damage that occurs would not be

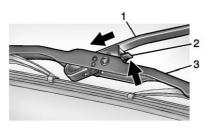
- covered by the vehicle warranty. Do not allow the wiper blade arm to touch the windscreen.
- 5. Reverse Steps 1–3 for wiper blade replacement.

Rear Wiper Blade Replacement

To replace the rear wiper blade:

 With the rear wiper in the off position, open the liftglass to access the rear wiper arm/blade.

The rear wiper blade will not lock in a vertical position so care should be used when pulling it away from the vehicle.



- Push the release lever (2) to disengage the hook and push the wiper arm (1) out of the blade assembly (3).
- 3. Push the new blade assembly securely in the wiper arm hook until the release lever clicks into place.
- Return the wiper arm and blade assembly to the rest position on the glass.

Glass Replacement

If the windscreen or front side glass must be replaced, see your dealer to determine the correct replacement glass.

Windshield Replacement HUD System

The windscreen is part of the HUD system. If the windscreen must be replaced, get one that is designed for HUD or the HUD image may look out of focus.

Driver Assistance Systems

When a windscreen replacement is needed and the vehicle is equipped with a front-looking camera sensor for the Driver Assistance Systems, the windscreen must be installed according to GM specifications for these systems to work properly. If it is not, there may be unexpected behaviour and/or messages from these systems.

Gas Strut(s)

The vehicle may be equipped with gas strut(s) to provide assistance in lifting and holding open the bonnet/boot/ tailgate system in full open position.

🗥 Warning

If the gas struts that hold open the bonnet, boot, and/or tailgate fail, you or others could be seriously injured. Take the vehicle to your retailer for service immediately. Visually inspect the gas struts for signs of wear, cracks, or other

(Continued)

Warning (Continued)

damage periodically. Check to make sure the bonnet/boot/tailgate is held open with enough force. If struts are failing to hold the bonnet/boot/tailgate, do not operate. Have the vehicle serviced.

Caution

Do not apply tape or hang any objects from gas struts. Also do not push down or pull on gas struts. This may cause damage to the vehicle.





Boot



Tailgate

Headlamp Aiming

Headlamp alignment has been preset and should need no further adjustment.

If the vehicle is damaged in a crash, the headlamp alignment may be affected. If adjustment to the headlamps is necessary, see your dealer.

Bulb Replacement

For the proper type of replacement bulbs, or any bulb changing procedure not listed in this section, contact your retailer.

LED Lighting

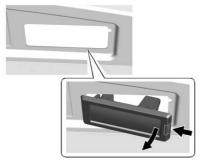
This vehicle has several LED lamps. For replacement of any LED lighting assembly, contact your dealer.

Front Indicator Lamps

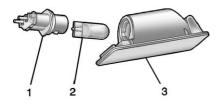
To replace the front indicator bulb:

- 1. Locate the front indicator lamp under the front bumper.
- Turn the bulb socket anti-clockwise to remove it from the front indicator assembly and pull it straight out
- 3. Pull the bulb straight out of the bulb socket.

Number Plate Lamp



Passenger Side Shown, Driver Side Similar



- 1. Bulb Socket
- 2. Bulb
- 3. Lamp Assembly

To replace one of these bulbs:

- 1. Push the lamp assembly (3) toward the centre of the vehicle.
- 2. Pull the lamp assembly down to remove.
- Turn the bulb socket (1) anticlockwise to remove it from the lamp assembly (3).
- 4. Pull the bulb (2) straight out of the bulb socket (1).
- Push the replacement bulb straight into the bulb socket and turn the bulb socket clockwise to install it into the lamp assembly.
- Push the lamp assembly back into position until the release tab locks into place.

Electrical System

Electrical System Overload

The vehicle has fuses to protect against an electrical system overload. Fuses also 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, there are some spare fuses and a fuse puller in the left instrument panel fuse block. The same amperage fuse can also 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.

Windscreen Wipers

If the wiper motor overheats due to heavy snow or ice, the windscreen wipers will stop until the motor cools and will then restart.

Although the circuit is protected from electrical overload, overload due to heavy snow or ice may cause wiper linkage damage. Always clear ice and heavy snow from the windscreen before using the windscreen wipers.

If the overload is caused by an electrical problem and not snow or ice, be sure to get it fixed.

Fuses and Circuit Breakers

The wiring circuits in the vehicle are protected from short circuits by a combination of fuses and circuit breakers. This greatly reduces the chance of damage caused by electrical problems.

⚠ Danger

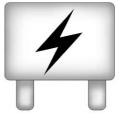
Fuses and circuit breakers are marked with their ampere rating. Do not exceed the specified amperage rating when replacing fuses and circuit breakers. Use of an oversized fuse or circuit breaker can result in a vehicle fire. You and others could be seriously injured or killed.

To check a fuse, look at the silver-coloured 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.

Engine Compartment Fuse Block

The engine compartment fuse block is in the engine compartment, on the driver side of the vehicle.

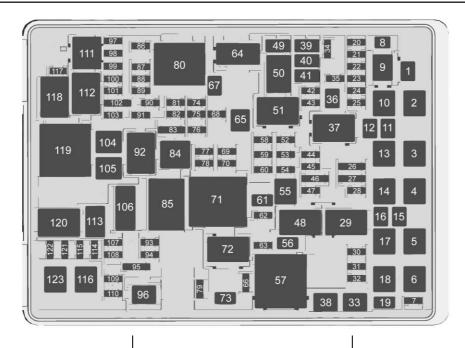


Lift the cover to access the fuse block.

Caution

Spilling liquid on any electrical component on the vehicle may damage it. Always keep the covers on any electrical component.

A fuse puller is available in the left instrument panel fuse block.



Fuses	Usage	Fuses	Usage	Fuses	Usage
1	Electric running	2	Anti-lock brake	3	Interior BEC LT1
	boards		system pump		

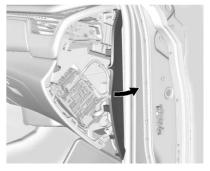
Fuses	Usage	Fuses	Usage	Fuses	Usage
4	Passenger motorised	21	Automatic headlight	36	Trailer brakes
	seat belt		levelling/Exhaust solenoid	38	-
5	Suspension levelling compressor	22	Fuel pump	39	Right trailer brake lamp/Indicator lamp
6	4WD transfer case electronic control	23	Integrated chassis control module	40	Left trailer brake lamp/Indicator lamp
7 8	-	24	Real time dampening	41	Trailer parking lamps
10	Electric parking brake/–	25	Fuel pump power module	42	Right parking lamps
1.1	Diake/-	26	–/Battery regulated	43	Left parking lamps
11	-	-	voltage control	44	Upfitter 3
12	-	27	-	45	Automatic level
13	Interior BEC LT2	28	Upfitter 2		control/Run/Crank
14	Rear BEC 1	30	Wiper	46	=
15	-	31	Trailer interface	47	Upfitter 4
16	-	31	module	49	Reversing lamps
17	Driver motorised	32	-	50	-
	seat belt	33	-	52	-
18	-	34	Reversing lamps	53	-
19	-	35	Anti-lock brake	54	-
20	-	33	system valve	55	-

Fuses	Usage	Fuses	Usage	Fuses	Usage
56	-	74	Engine control	91	Throttle control
57	-		module/Ignition	93	Horn
58	-	75	Miscellaneous/	94	Fog lamps
59 60	Euro trailer Air conditioning	76	Ignition/– Transmission/	95	Main beam headlamps
	control	77	Ignition RC upfitter 1 and 2	96	-
61 62	-	78	VBAT upfitter 1 and 2	97 98	-
63	Upfitter 1	79	-	99	-
64	-	80	-	100	O2 sensor A
65	-	81	-	101	Engine control
66	-	82	-		module
67	Trailer battery	83	Euro trailer/RC	102	Engine control module/
68	Secondary	85	-		Transmission
	fuel pump	86	-		control module
69 70	RC upfitter 3 and 4 VBAT upfitter	87	MAF/IAT/Humidity/ TIAP sensor	103	Auxiliary interior heater
	3 and 4	88	Injector A – odd	104	Starter
71	-	89	Injector B – even	105	-
73	-	90	O2 sensor B	106	-
				107	Aeroshutter

Fuses	Usage
108	-
109	Police upfitter
110	-
111	-
113	-
114	Front windscreen washer
115	Rear window washer
116	Left cooling fan
117	Fuel pump prime
118	-
119	-
120	Fuel pump prime
121	Right HID headlamp
122	Left HID headlamp
123	Right cooling fan
Relays	Usage
9	Fuel pump
29	Upfitter 2

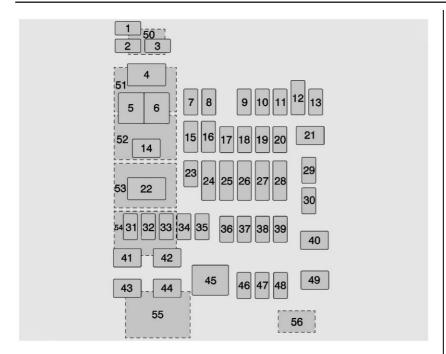
Relays	Usage
37	Upfitter 3
48	Upfitter 4
51	Parking light
64	Secondary fuel pump
72	Upfitter 1
84	Run/Crank
92	Engine control module
112	Starter

Instrument Panel Fuse Block (Right)



The right instrument panel fuse block access door is on the passenger side edge of the instrument panel.

Pull off the cover to access the fuse block.



The vehicle may not be equipped with
all of the fuses, relays, and features
shown.

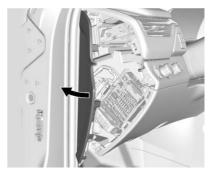
Fuses		Usage
1	-	
2	-	

Fuses	Usage	
3	-	
4	Accessory power socket 4	
5	-	
6	-	
7	-	
8	Glove box	
9	-	
10	-	
11	-	
12	Steering wheel controls	
13	Body control module 8	
14	-	
15	-	
16	-	
17	-	
18	-	
19	Body control module 4	
20	Rear seat entertainment	

Fuses	Usage	Fuses	Usage
21	Sunroof	39	DC to AC inverter
22	-	40	-
23	-	41	-
24	-	42	-
25	-	43	-
26	Infotainment/Airbag	44	Right door window
27	-/RF window switch/		motor
	Rain sensor	45	Front blower
28	Obstacle detection/USB	46	Body control module 6
29	Radio	47	Body control module 7
30	-	48	Amplifier
31	-	49	Right front seat
32	-	50	Accessory power
33	-		socket 3
34	-	51	-
35	-	53	-
36	Special equipment	54	-
	option B2	55	-
37	Special equipment option	56	-
38	Body control module 2		

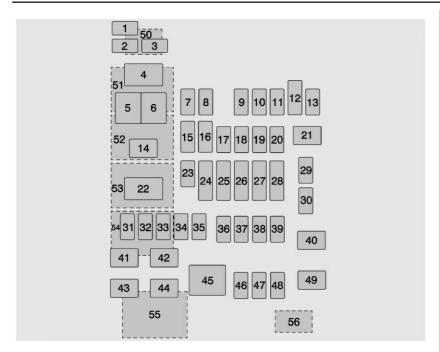
Relays	Usage
52	Retained accessory
	power

Instrument Panel Fuse Block (Left)



The left instrument panel fuse block access door is on the driver side edge of the instrument panel.

Pull off the cover to access the fuse block.



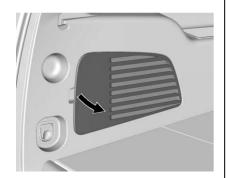
The vehicle may not be equipped with all of the fuses, relays, and features shown.

Fuses		Usage
1	-	
2	_	

Fuses	Usage	
3	-	
4	Accessory power socket 1	
5	Accessory power socket from retained accessory power	
6	Accessory power socket from battery power	
7	Universal garage door opener/Interior rearview mirror	
8	SEO/Retained accessory power	
9	-	
10	Body control module 3	
11	Body control module 5	
12	Steering wheel control backlighting	
13	=	
14	-	
15	-	

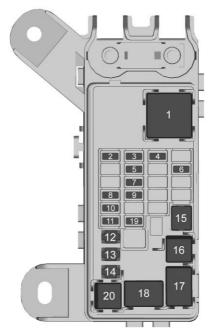
Fuses	Usage	Fuses	Usage	Fuses	Usage
16	Discrete logic ignition sensor	29	Content theft deterrent	43	Left doors
		30	-	44	Driver power seat
17	Video processing module	31	-	45	-
18	Mirror window module	32	-	46	Right heated, cooled, or ventilated seat (if
19	Body control module 1	33	SEO/Automatic level control/ Left heated		equipped)
20	Front bolster (if equipped)		second row seat	47	Left heated, cooled,
21		34	Park enable/Electric adjustable pedal (if		or ventilated seat (if equipped)
22	-		equipped)	48	-
23	=	35	-	49	-
24	HVAC ignition/ AUX HVAC ignition	36	Miscellaneous run/ crank	50	Accessory power socket 2
25	Instrument cluster/	37	Heated steering wheel	51	-
-0	Ignition sensing diagnostic module	38	Steering column lock 2 (if equipped)	Relays	Usage
26	ignition Tilt column/SEO/Tilt	39	Instrument cluster battery	52	Retained accessory power relay
	column lock 1/SEO	40	-	53	Run/Crank relay
27	Data link connector/ Driver seat module	41	-	54	-
28	Passive entry/Passive start/HVAC battery	42	Euro trailer (if	55	-
			equipped)	56	-

Rear Compartment Fuse Block



The rear compartment fuse block is behind the access panel on the left side of the compartment.

Pull the panel out by grabbing the finger access slot at the rear edge.



The vehicle may not be equipped with all of the fuses, relays, and features shown.

Fuses	Usage		
2	-		
3	Right heated second row seat		
4	Heated mirrors		
5	Tailgate		
6	Glass breakage		
7	Liftglass		
8	Tailgate module logic		
9	Rear wiper		
10	Rear heating, ventilation, and air conditioning blower		
11	Second row seat		
12	Tailgate module		
13	Third row seat		
14	Rear accessory power socket		
15	Rear window demister		
19	Rear fog lamp (if equipped)		

Relays	Usage			
1	Rear window demister			
16	Tailgate			
17	Liftglass			
18	Rear fog lamp			
20	Heated mirror			

Wheels and Tyres

Tyres

Every new GM vehicle has high-quality tyres made by a leading tyre manufacturer. See the warranty manual for information regarding the tyre warranty and where to get service. For additional information refer to the tyre manufacturer.

⚠ Warning

- Poorly maintained and improperly used tyres are dangerous.
- Overloading the tyres can cause overheating as a result of too much flexing. There could be a blowout and a serious crash. See Vehicle Load Limits \$\Display\$ 197.

(Continued)

Warning (Continued)

- Underinflated tyres pose the same danger as overloaded tyres. The resulting crash could cause serious injury. Check all tyres frequently to maintain the recommended pressure. Tyre pressure should be checked when the tyres are cold.
- Overinflated tyres are more likely to be cut. punctured, or broken by a sudden impact - such as when hitting a pothole. Keep tyres at the recommended pressure.
- Worn or old tyres can cause a crash. If the tread is badly worn, replace them.

(Continued)

Warning (Continued)

- Replace any tyres that have been damaged by impacts with potholes, curbs, etc.
- Improperly repaired tyres can cause a crash. Only the dealer or an authorised tyre service centre should repair, replace, dismount, and mount the tyres.
- Do not spin the tyres in excess of 56 km/h (35 mph) on slippery surfaces such as snow, mud, ice, etc. Excessive spinning may cause the tyres to explode.

See *Tyre Pressure for High-Speed Operation ⇔ 304* for inflation pressure adjustment for high-speed driving.

All-Season Tyres

This vehicle may come with all-season tyres. These tyres are designed to provide good overall performance on most road surfaces and weather conditions. Original equipment tyres designed to GM's specific tyre performance criteria have a TPC specification code moulded onto the sidewall. Original equipment all-season tyres can be identified by the last two characters of this TPC code, which will be "MS."

Consider installing winter tyres on the vehicle if frequent driving on snow or ice-covered roads is expected.
All-season tyres provide adequate performance for most winter driving conditions, but they may not offer the same level of traction or performance as winter tyres on snow or ice-covered roads. See *Winter Tyres* ⇔ 302.

Winter Tyres

This vehicle was not originally equipped with winter tyres. Winter tyres are designed for increased traction on snow and ice-covered roads. Consider installing winter tyres on the vehicle if frequent driving on ice or snow covered roads is expected. See your dealer for details regarding winter tyre availability and proper tyre selection. Also, see *Buying New Tyres* ⇒ 311.

With winter tyres, there may be decreased dry road traction, increased road noise and shorter tread life. After changing to winter tyres, be alert for changes in the vehicle handling and braking.

If using winter tyres:

- Use tyres of the same brand and tread type on all four wheel positions.
- Use only radial ply tyres of the same size, load range and speed rating as the original equipment tyres.

Winter tyres with the same speed rating as the original equipment tyres may not be available for H, V, W, Y and ZR speed rated tyres. If winter tyres with a lower speed rating are chosen, never exceed the tyre's maximum speed capability.

Low-Profile Tyres

The vehicle has low profile tyres that are classified as touring tyres and are designed for on road use. The low-profile, wide tread design is not recommended for off-road driving. See *Off-Road Driving* ⇒ 190, for additional information.

Caution

Low-profile tyres are more susceptible to damage from road hazards or curb impact than standard profile tyres. Tyre 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 kerb. The warranty does not cover this type of damage. Keep tyres set to the correct inflation pressure and when possible, avoid contact with kerbs, potholes, and other road hazards.

Tyre Pressure

Tyres need the correct amount of air pressure to operate effectively.

Caution

Neither tyre underinflation nor overinflation is good. Underinflated tyres, or tyres that do not have enough air, can result in:

- Tyre overloading and overheating which could lead to a blowout.
- Premature or irregular wear.
- Poor handling.
- Reduced fuel economy.

Overinflated tyres, or tyres that have too much air, can result in:

- Unusual wear.
- Poor handling.

(Continued)

Caution (Continued)

- Rough ride.
- Needless damage from road hazards.

The Tyre and Loading Information label on the vehicle indicates the original equipment tyres and the correct cold tyre inflation pressures. The recommended pressure is the minimum air pressure needed to support the vehicle's maximum load carrying capacity.

For additional information regarding how much weight the vehicle can carry, and an example of the Tyre and Loading Information label, see *Vehicle Load Limits* \Rightarrow 197. 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 tyres once a month or more.

Do not forget the spare tyre, if the vehicle has one. See Full-Size Spare *Tyre* \$ 324 for additional information.

How to Check

Use a good quality pocket-type gauge to check tyre pressure. Proper tyre inflation cannot be determined by looking at the tyre. Check the tyre inflation pressure when the tyres 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 tyre valve stem. Press the tyre gauge firmly onto the valve to get a pressure measurement. If the cold tyre inflation pressure matches the recommended pressure on the Tyre 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 centre of the tyre valve to release air

Re-check the tyre pressure with the tyre 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.

Tyre Pressure for **High-Speed Operation**

⚠ Warning

Driving at high speeds, 160 km/h (100 mph) or higher, puts additional strain on tyres. Sustained high-speed driving causes excessive heat build-up and can cause sudden tyre failure. This could cause a crash, and you or others could be killed. Some high-speed rated tyres 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 tyres are rated for high-speed operation, are in excellent condition, and are set to the correct cold tyre inflation pressure for the vehicle load.

When driving the vehicle at speeds of 160 km/h (100 mph) or higher, set the cold inflation pressure to 20 kPa (3 psi) above the recommended tyre

pressure shown on the Tyre and Loading Information label. Return the tyres to the recommended cold tyre inflation pressure when high-speed driving has ended.

See *Vehicle Load Limits* \Leftrightarrow 197 and *Tyre Pressure* \Leftrightarrow 303.

Tyre Pressure Monitor System

Caution

Modifications made to the Tyre Pressure Monitor System (TPMS) by anyone other than an authorised service facility may void authorisation to use the system.

The Tyre Pressure Monitor System (TPMS) uses radio and sensor technology to check tyre pressure levels. The TPMS sensors monitor the air pressure in your vehicle's tyres and transmit tyre pressure readings to a receiver located in the vehicle.

Each tyre, 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 tyre inflation pressure label. (If your vehicle has tyres of a different size than the size indicated on the vehicle placard or tyre inflation pressure label, you should determine the proper tyre inflation pressure for those tyres.)

As an added safety feature, your vehicle has been equipped with a tyre pressure monitoring system (TPMS) that illuminates a low tyre pressure telltale when one or more of your tyres is significantly under-inflated.

Accordingly, when the low tyre pressure telltale illuminates, you should stop and check your tyres as soon as possible, and inflate them to the proper pressure. Driving on a significantly under-inflated tyre causes the tyre to overheat and can lead to tyre failure. Under-inflation also reduces fuel efficiency and tyre tread life, and may affect the vehicle's handling and stopping ability.

Please note that the TPMS is not a substitute for proper tyre maintenance, and it is the driver's responsibility to maintain correct tyre pressure, even if under-inflation has not reached the level to trigger illumination of the TPMS low tyre 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 tyre pressure telltale. When the system detects a malfunction, the telltale will flash for approximately one minute and then remain continuously illuminated. This sequence will continue upon subsequent vehicle start-ups as long as the malfunction exists.

When the malfunction indicator is illuminated, the system may not be able to detect or signal low tyre pressure as intended. TPMS malfunctions may occur for a variety of reasons, including the installation of replacement or alternate tyres or wheels on the vehicle that prevent the

TPMS from functioning properly. Always check the TPMS malfunction telltale after replacing one or more tyres or wheels on your vehicle to ensure that the replacement or alternate tyres and wheels allow the TPMS to continue to function properly.

See *Tyre Pressure Monitor Operation*

⇒ 306 for additional information.

See *Declaration of Conformity* \Rightarrow 355.

Tyre Pressure Monitor Operation

This vehicle may have a Tyre Pressure Monitor System (TPMS). The TPMS is designed to warn the driver when a low tyre pressure condition exists. TPMS sensors are mounted onto each tyre and wheel assembly, excluding the spare tyre and wheel assembly. The TPMS sensors monitor the air pressure in the tyres and transmit the tyre pressure readings to a receiver located in the vehicle.



When a low tyre pressure condition is detected, the TPMS illuminates the low tyre pressure warning light on the instrument cluster. If the warning light comes on, stop as soon as possible and inflate the tyres to the recommended pressure shown on the Tyre and Loading Information label. See *Vehicle Load Limits* \$\displays 197.

A message to check the pressure in a specific tyre displays in the Driver Information Centre (DIC). The low tyre pressure warning light and the DIC warning message come on at each ignition cycle until the tyres are inflated to the correct inflation pressure. Using the DIC, tyre pressure levels can be viewed. For additional information and details about the DIC operation and displays see *Driver Information Centre (DIC)* ⇔ 150.

The low tyre 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 Tyre and Loading Information label, attached to your vehicle, shows the size of the original equipment tyres and the correct inflation pressure for the tyres when they are cold. See *Vehicle Load Limits* ⇔ *197* for an example of the Tyre and Loading Information label and its location. Also see *Tyre Pressure* ⇔ *303*.

The TPMS can warn about a low tyre pressure condition but it does not replace normal tyre maintenance. See *Tyre Inspection* \Rightarrow 309, *Tyre Rotation* \Rightarrow 310, and *Tyres* \Rightarrow 301.

Caution

Tyre sealant materials are not all the same. A non-approved tyre sealant could damage the TPMS

(Continued)

Caution (Continued)

sensors. TPMS sensor damage caused by using an incorrect tyre sealant is not covered by the vehicle warranty. Always use only the GM approved tyre sealant available through your dealer or included in the vehicle.

TPMS Malfunction Light and Message

The TPMS will not function properly if one or more of the TPMS sensors are missing or inoperable. When the system detects a malfunction, the low tyre pressure warning light flashes for about one minute and then stays on for the remainder of the ignition cycle. A DIC warning message also displays. The malfunction light and DIC warning message come on at each ignition cycle until the problem is corrected. Some of the conditions that can cause these to come on are:

 One of the road tyres has been replaced with the spare tyre. The spare tyre does not have a TPMS

- sensor. The malfunction light and DIC message should go off after the road tyre is replaced and the sensor matching process is performed successfully. See "TPMS Sensor Matching Process" following.
- The TPMS sensor matching process was not done or not completed successfully after rotating the tyres. The malfunction light and the DIC message should go off after successfully completing the sensor matching process. See "TPMS Sensor Matching Process" following.
- 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 tyres or wheels do not match the original equipment tyres or wheels. Tyres and wheels other than those recommended

- could prevent the TPMS from functioning properly. See *Buying New Tyres ⇒* 311.
- 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 tyre pressure condition. See your dealer for service if the TPMS malfunction light and DIC message come on and stay on.

Tyre Fill Alert (If Equipped)

This feature provides visual and audible alerts outside the vehicle to help when inflating an underinflated tyre to the recommended cold tyre pressure.

When the low tyre pressure warning light comes on:

- 1. Park the vehicle in a safe, level place.
- . Apply the parking brake firmly.
- 3. Place the vehicle in P (Park).

 Add air to the tyre that is underinflated. The indicator lamp will flash.

When the recommended pressure is reached, the horn sounds once and the indicator lamp will stop flashing and briefly turn solid.

Repeat these steps for all underinflated tyres that have illuminated the low tyre pressure warning light.

If the tyre is overinflated by more than 35 kPa (5 psi), the horn will sound multiple times and the indicator lamp will continue to flash for eight seconds after filling stops. To release and correct the pressure, while the indicator lamp is still flashing, briefly press the centre of the valve stem. When the recommended pressure is reached, the horn sounds once.

If the indicator lamp does not flash within 15 seconds after starting to inflate the tyre, the tyre fill alert has not been activated or is not working.

If the hazard warning flashers are on, the tyre fill alert visual feedback will not work properly.

The TPMS will not activate the tyre fill alert properly under the following conditions:

- There is interference from an external device or transmitter.
- The air pressure from the inflation device is not sufficient to inflate the tyre.
- There is a malfunction in the TPMS.
- There is a malfunction in the horn or indicator lamps.
- The identification code of the TPMS sensor is not registered to the system.
- The battery of the TPMS sensor is low.

If the tyre fill alert does not operate due to TPMS interference, move the vehicle about 1 m (3 ft) back or forward and try again. If the tyre fill alert feature is not working, use a tyre pressure gauge.

TPMS Sensor Matching Process

Each TPMS sensor has a unique identification code. The identification code needs to be matched to a new tyre/wheel position after rotating the vehicle's tyres or replacing one or more of the TPMS sensors. The TPMS sensor matching process should also be performed after replacing a spare tyre with a road tyre 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 tyre/wheel positions, using a TPMS relearn tool, in the following order: driver side front tyre, passenger side front tyre, passenger side rear tyre, and driver side rear tyre. See your dealer for service or to purchase a relearn tool.

You have two minutes to match the first tyre/wheel position, and five minutes overall to match all four tyre/wheel positions. If it takes longer, the matching process stops and must be restarted.

The TPMS sensor matching process is outlined below:

- 1. Apply the parking brake.
- Place the vehicle in Service Mode. See *Ignition Positions* ⇒ 203.
- 3. Make sure the Tyre Pressure info display option is turned on. The info displays on the DIC can be turned on and off through the Settings menu. See *Driver Information Centre (DIC)*

 ⇒ 150.
- 4. Use the five-way DIC control on the right side of the steering wheel to scroll to the Tyre Pressure screen under the DIC info page. See *Driver Information Centre (DIC)* ⇒ 150.
- of the five-way DIC control.

 The horn sounds twice to signal the receiver is in relearn mode and the TYRE LEARNING ACTIVE message displays on the DIC screen

5. Press and hold SEL in the centre

6. Start with the driver side front tyre.

- 7. Place the relearn tool against the tyre 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 tyre and wheel position.
- Proceed to the passenger side front tyre, and repeat the procedure in Step 7.
- Proceed to the passenger side rear tyre, and repeat the procedure in Step 7.
- 10. Proceed to the driver side rear tyre, 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 tyre, and the TPMS sensor matching process is no longer active. The TYRE LEARNING ACTIVE message on the DIC display screen goes off.
- 11. Turn the vehicle off.

 Set all four tyres to the recommended air pressure level as indicated on the Tyre and Loading Information label.

Tyre Inspection

We recommend that the tyres, including the spare tyre, if the vehicle has one, be inspected for signs of wear or damage at least once a month.

Replace the tyre if:

- The indicators at three or more places around the tyre can be seen.
- There is cord or fabric showing through the tyre's rubber.
- The tread or sidewall is cracked, cut, or snagged deep enough to show cord or fabric.
- The tyre has a bump, bulge, or split.

 The tyre has a puncture, cut, or other damage that cannot be repaired well because of the size or location of the damage.

Tyre Rotation

Tyres should be rotated at the intervals specified in the Maintenance Schedule. See Scheduled Maintenance

⇒ 343.

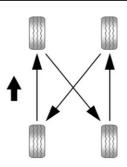
Tyres are rotated to achieve a uniform wear for all tyres. The first rotation is the most important.

Anytime unusual wear is noticed, rotate the tyres as soon as possible, check for proper tyre inflation pressure, and check for damaged tyres or wheels. If the unusual wear continues after the rotation, check the wheel alignment.

See When It Is Time for New Tyres

⇒ 311 and Wheel Replacement

⇒ 314.



Use this rotation pattern when rotating the tyres.

Do not include the spare tyre in the tyre rotation.

Adjust the front and rear tyres to the recommended inflation pressure on the Tyre and Loading Information label after the tyres have been rotated.
See *Tyre Pressure* ♀ 303 and

See Tyre Pressure \$ 303 and Vehicle Load Limits \$ 197.

Reset the Tyre Pressure Monitor System. See *Tyre Pressure Monitor Operation ⇒ 306*.

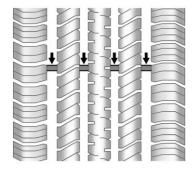
⚠ Warning

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 centre of the wheel hub with wheel bearing grease after a wheel change or tyre 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 Tyres

Factors, such as maintenance, temperatures, driving speeds, vehicle loading, and road conditions affect the wear rate of the tyres.



Tread wear indicators are one way to tell when it is time for new tyres. Tread wear indicators appear when the tyres have only 1.6 mm (1/16 in) or less of tread remaining. Some commercial truck tyres may not have tread wear indicators.

See *Tyre Inspection* \Rightarrow 309 and *Tyre Rotation* \Rightarrow 310 for additional information.

The rubber in tyres ages over time. This also applies to the spare tyre, if the vehicle has one, even if it is never used. Multiple factors including temperatures, loading conditions, and inflation pressure maintenance affect how fast ageing takes place. GM recommends that tyres, including the spare if equipped, be replaced after six years, regardless of tread wear. The tyre manufacture date is the last four digits of the DOT Tyre Identification Number (TIN) which is moulded into one side of the tyre 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

Tyres 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

ageing. This area should be free of grease, petrol, or other substances that can deteriorate rubber.

Parking for an extended period can cause flat spots on the tyres that may result in vibrations while driving. When storing a vehicle for at least a month, remove the tyres or raise the vehicle to reduce the weight from the tyres.

Buying New Tyres

GM has developed and matched specific tyres for the vehicle. The original equipment tyres installed were designed to meet General Motors Tyre Performance Criteria Specification (TPC Spec) system rating. When replacement tyres are needed, GM strongly recommends buying tyres 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 tyre pressure monitoring performance. GM's TPC Spec number is moulded onto the tyre's sidewall near the tyre size. If the tyres have an all-season tread design, the TPC Spec number will be followed by MS for mud and snow.

GM recommends replacing worn tyres in complete sets of four. Uniform tread depth on all tyres will help to maintain the performance of the vehicle. Braking and handling performance may be adversely affected if all the tyres are not replaced at the same time. If proper rotation and maintenance have been done, all four tyres should wear out at about the same time. See Tyre Rotation \Rightarrow 310 for information on proper tyre rotation. However, if it is necessary to replace only one axle set of worn tyres, place the new tyres on the rear axle.

⚠ Warning

Tyres could explode during improper service. Attempting to mount or dismount a tyre could cause injury or death. Only your dealer or authorised tyre service centre should mount or dismount the tyres.

⚠ Warning

Never drive faster than the speed the tyres are rated, regardless of the legal speed limit. When frequently driving the vehicle at high speeds and/or for prolonged periods of time, check with your vehicle/tyre dealer for the proper type of tyres to use for the specific driving and weather conditions.

⚠ Warning

Mixing tyres 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 tyres on all wheels.

This vehicle may have a different size spare than the road tyres originally installed on the vehicle. When new, the vehicle included a spare tyre and wheel assembly with a similar overall diameter as the road tyres and wheels, so it is all right to drive on it. The spare tyre was developed for use on this vehicle and will not affect vehicle handling.

⚠ Warning

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

Winter tyres with the same speed rating as the original equipment tyres may not be available for H, V, W, Y and ZR speed rated tyres. Never exceed the winter tyre's maximum speed capability when using winter tyres with a lower speed rating.

If the vehicle tyres must be replaced with a tyre 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 tyres.

Vehicles that have a tyre pressure monitoring system could give an inaccurate low-pressure warning if non-TPC Spec rated tyres are installed. See *Tyre Pressure*Monitor Sustem ⇒ 305.

The Tyre and Loading Information label indicates the original equipment tyres on the vehicle. See *Vehicle Load Limits* ⇒ 197, for the label location and more information about the Tyre and Loading Information label.

Different Size Tyres and Wheels

If wheels or tyres are installed that are a different size than the original equipment wheels and tyres, vehicle performance, including its braking, ride and handling characteristics, stability, and resistance to rollover may be affected. If the vehicle has electronic systems such as antilock brakes, rollover airbags, traction

control, electronic stability control, or All-Wheel Drive, the performance of these systems can also be affected.

⚠ Warning

If different sized wheels are used, there may not be an acceptable level of performance and safety if tyres not recommended for those wheels are selected. This increases the chance of a crash and serious injury. Only use GM specific wheel and tyre systems developed for the vehicle, and have them properly installed by a GM certified technician.

See Buying New Tyres \Rightarrow 311 and Accessories and Modifications \Rightarrow 267.

Wheel Alignment and Tyre Balance

The tyres and wheels were aligned and balanced at the factory to provide the longest tyre life and best overall performance. Adjustments to wheel alignment and tyre balancing are not necessary on a regular basis. Consider an alignment check if there is unusual tyre 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 tyres and wheels may need to be rebalanced. See your dealer for proper diagnosis.

Wheel Replacement

Replace any wheel that is bent, cracked, or badly rusted or corroded. If wheel nuts keep coming loose, the wheel, wheel bolts, and wheel nuts should be replaced. If the wheel leaks air, replace it. Some aluminium 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 Tyre 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. Tyres can lose air, and cause loss of control, causing a crash. Always use the correct wheel, wheel bolts, and wheel nuts for replacement.

Caution

The wrong wheel can also cause problems with bearing life, brake cooling, speedometer or odometer calibration, headlamp aim, bumper height, vehicle ground clearance, and tyre or tyre chain clearance to the body and chassis.

Used Replacement Wheels



⚠ Warning

Replacing a wheel with a used one is dangerous. How it has been used or how far it has been driven may be unknown. It could fail suddenly and cause a crash. When replacing wheels, use a new GM original equipment wheel.

Tyre Chains

Use tyre chains only where legal and only when you must.

Before using tyre chains, check with the tyre manufacturer to make sure tyre chains are compatible with the tyres on the vehicle.

It is recommended that tyre chains be used only on P265/70R17 size tyres.

Install them on the rear tyres, as tightly as possible, with the ends securely fastened.

Caution

Do not install traction devices on the front tyres.

Drive slowly and follow the cable manufacturer's instructions. If you hear the cables contacting the vehicle, stop and retighten them. If the contact continues, slow down until it stops.

Caution

To help avoid damage to the vehicle, drive slowly, do not spin the wheels, and readjust or remove the device if it contacts the vehicle.

If a Tyre Goes Flat

It is unusual for a tyre to blowout while driving, especially if the tyres are maintained properly. If air goes out of a tyre, 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 tyre fails, the flat tyre 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 tyre will cause permanent damage to the tyre. Re-inflating a tyre 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 tyre that has been driven on while severely

(Continued)

Warning (Continued)

underinflated or flat. Have your dealer or an authorised tyre service centre repair or replace the flat tyre 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 tyre. 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 tyre.

If a tyre goes flat, avoid further tyre and wheel damage by driving slowly to a level place, well off the road,

⚠ Warning

Changing a tyre 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 tyre. To help prevent the vehicle from moving:

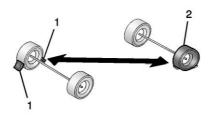
- 1. Apply the parking brake firmly.
- 2. Put the shift lever in P (Park).
- For vehicles with four-wheel drive with an N (Neutral) transfer case position, be sure the transfer case is in a drive gear — not in N (Neutral).
- Turn off the engine and do not restart while the vehicle is raised.
- 5. Do not allow passengers to remain in the vehicle.

(Continued)

Warning (Continued)

6. Place wheel chocks, if equipped, on both sides of the tyre at the opposite corner of the tyre being changed.

When the vehicle has a flat tyre (2), use the following example as a guide to assist in the placement of the wheel blocks (1), if equipped.



- 1. Wheel Chock (If Equipped)
- 2. Flat Tyre

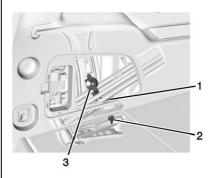
The following information explains how to use the jack and change a tyre.

Tyre Changing

Before changing a flat tyre, see "Hands-Free Operation" under *Tailgate* ⇒ 38.

Removing the Spare Tyre and Tools

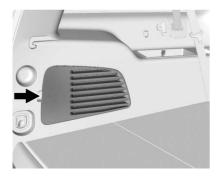
The equipment needed to change a flat tyre is stored in the rear of the vehicle, on the driver side, behind a door in the trim panel.



- Jack Knob
- Wing Nut Retaining the Wheel Blocks

3. Wing Nut Retaining the Tool Bag

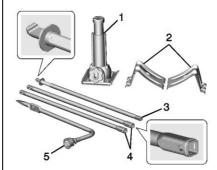
If equipped, the tow eye bolt will be in a bag secured to the tool bag.



- Pull to open the trim panel door.
 The third row driver side seat may need to be folded to access the trim panel door.
- 2. Lift the acoustic pad to access the jack and tools.
- 3. Turn the wing nut retaining the tool bag (3) anti-clockwise to remove it.

- Pull the tool bag toward the front of the vehicle and lift the rear portion of the bag upward to remove it.
- Turn the jack knob (1)
 anti-clockwise to release the jack and wheel blocks from the bracket.
- 5. Turn the wing nut retaining the wheel blocks (2) anti-clockwise to remove the wheel blocks and the wheel block retainer.

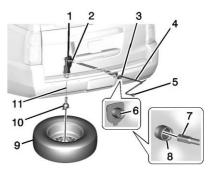
Use the following tools:



- I. Jack
- 2. Wheel Blocks

- 3. Jack Handle
- 1. Jack Handle Extensions
- 5. Wheel Wrench

To access the spare tyre, refer to the following graphics and instructions:



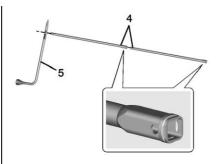
- 1. Hoist Assembly
- 2. Hoist Shaft
- 3. Hoist Shaft Access Cover/Hole
- 4. Jack Handle Extensions
- 5. Wheel Wrench
- 6. Spare Tyre Lock
- 7. Hoist End of Extension Tool
- 3. Hoist Shaft Access Hole

- 9. Spare Tyre (Valve Stem Pointed Down)
- 10. Tyre/Wheel Retainer
- 11. Hoist Cable
- 1. Open the hoist shaft access door (3) on the bumper to access the spare tyre lock (6).

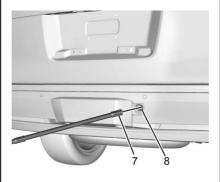


If equipped with a hitch cover, turn the hitch cover retainers anti-clockwise and pull the cover downward to remove it before removing the hoist shaft access door.

2. To remove the spare tyre lock (6), insert the key located inside the remote, turn it clockwise, and then pull it straight out.



Assemble the two jack handle extensions (4) and wheel wrench (5), as shown.



- 4. Insert the open end of the extension (7) through the hole in the rear bumper (8) (hoist shaft access hole).
 - Be sure the hoist end of the extension (7) connects to the hoist shaft. The ribbed square end of the extension is used to lower the spare tyre.
- Turn the wheel wrench anti-clockwise to lower the spare tyre to the ground. Continue to turn the wheel wrench until the spare tyre can be pulled out from under the vehicle.



Use the wheel wrench hook to pull the hoist cable closer to assist in reaching the spare tyre.

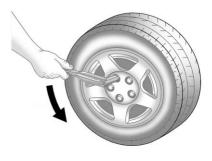


- Tilt the tyre toward the vehicle with some slack in the cable to access the tyre/wheel retainer.
 Tilt the retainer and pull it and the cable and spring through the centre of the wheel.
 - Once the retainer is separated from the guide pin, tilt the retainer and pull it through the centre of the wheel along with the cable and latch
- 8. Put the spare tyre near the flat tyre.

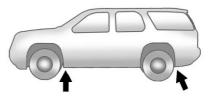
Removing the Flat Tyre and Installing the Spare Tyre



If the vehicle has a centre cap that covers the wheel fasteners, place the chisel end of the wheel wrench in the slot on the wheel and gently pry the cap out.

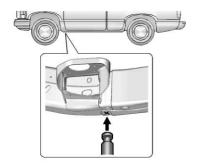


 Use the wheel wrench to loosen all the wheel nuts. Turn the wheel wrench anticlockwise to loosen the wheel nuts. Do not remove the wheel nuts yet.



Jacking Locations (Overall View)

4. Position the jack under the vehicle, as shown.



Left Front Shown, Right Front Similar

Front Tyre Flat: If the flat tyre is on a front tyre of the vehicle, use the jack handle and only one jack handle extension. Attach the wheel wrench to the jack handle extension. Attach the jack handle to the jack. Position the jack on the frame behind the flat tyre where the frame sections overlap. Turn the wheel wrench clockwise to raise the vehicle. Raise the vehicle far enough off the ground so there is enough room for the spare tyre to clear the ground.



Rear Position

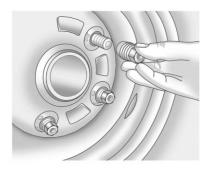
Rear Tyre Flat: If the flat tyre is on a rear tyre of the vehicle, use the jack handle (2) and both jack handle extensions (3). Attach the wheel wrench (4) to the jack handle extensions (3). Attach the jack handle (2) to the jack (1). Use the jacking pad (5) provided on the rear axle. Turn the wheel wrench (4) clockwise to raise the vehicle. Raise the vehicle far enough off the ground so there is enough room for the spare tyre to clear the ground.

⚠ Warning

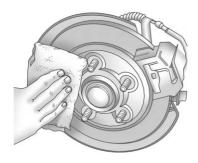
Getting under a vehicle when it is lifted on a jack is dangerous. If the vehicle slips off the jack, you could be badly injured or killed. Never get under a vehicle when it is supported only by a jack.

⚠ 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.



- 5. Remove all of the wheel nuts.
- Take off the flat tyre.



Remove any rust or dirt from the wheel bolts, mounting surfaces, and spare wheel.

⚠ 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.

 Put the wheel nuts back on with the rounded end of the nuts toward the wheel after mounting the spare tyre.

⚠ Warning

Never use oil or grease on bolts or nuts because the nuts might come loose. The vehicle's wheel could fall off, causing a crash.

- Tighten each wheel nut by hand. Then use the wheel wrench to tighten the nuts until the wheel is held against the hub.
- Turn the wheel wrench anticlockwise to lower the vehicle. Lower the jack completely.



 Tighten the nuts firmly in a crisscross sequence as shown by turning the wheel wrench clockwise.



Wheel nuts that are improperly or incorrectly tightened can cause the wheels to become loose or come off. The wheel nuts should be tightened with a torque wrench to the proper torque specification after replacing. Follow the torque specification supplied by the aftermarket manufacturer when using accessory locking wheel nuts. See *Capacities and Specifications*

⇒ 349 for original equipment wheel nut torque specifications.

Caution

Improperly tightened wheel nuts can lead to brake pulsation and disc damage. To avoid expensive brake (Continued)

Caution (Continued)

repairs, evenly tighten the wheel nuts in the proper sequence and to the proper torque specification. See *Capacities and Specifications* ⇔ *349* for the wheel nut torque specification.

When reinstalling the regular wheel and tyre, also reinstall the centre cap, if equipped. Line up the tab on the centre cap with the slot in the wheel. The cap only goes in one way. Place the cap on the wheel and press until it snaps into place.

Storing a Flat or Spare Tyre and Tools

⚠ Warning

Storing a jack, a tyre, or other equipment in the passenger compartment of the vehicle could cause injury. In a sudden stop or (Continued)

Warning (Continued)

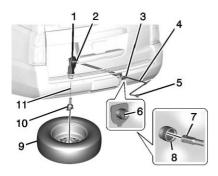
collision, loose equipment could strike someone. Store all these in the proper place.

Caution

Storing an aluminium wheel with a flat tyre under your vehicle for an extended period of time or with the valve stem pointing up can damage the wheel. Always stow the wheel with the valve stem pointing down and have the wheel/tyre repaired as soon as possible.

Caution

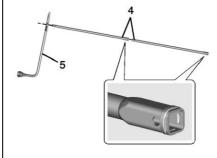
The tyre hoist can be damaged if there is no tension on the cable when using it. To have the necessary tension, the spare or road tyre and wheel assembly must be installed on the tyre hoist to use it. Store the tyre under the rear of the vehicle in the spare tyre carrier. Refer to the following graphics and instructions:



- 1. Hoist Assembly
- 2. Hoist Shaft
- 3. Hoist Shaft Access Cover/Hole
- 4. Jack Handle Extensions
- 5. Wheel Wrench
- 6. Spare Tyre Lock
- 7. Hoist End of Extension Tool
- 8. Hoist Shaft Access Hole
- 9. Spare Tyre (Valve Stem Pointed Down)

- 10. Tyre/Wheel Retainer
- 11. Hoist Cable
- Put the tyre (9) on the ground at the rear of the vehicle with the valve stem pointed down, and to the rear.
- Tilt the tyre toward the vehicle. Separate the tyre/wheel retainer from the guide pin. Pull the pin through the centre of the wheel. Tilt the retainer down through the centre wheel opening.

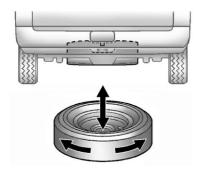
Make sure the retainer is fully seated across the underside of the wheel.



 Assemble the two jack handle extensions (4) and wheel wrench (5).



- 4. Insert the open end of the extension (7) through the hole in the rear bumper (8) (hoist shaft access hole).
- Raise the tyre part way upward. Make sure the retainer is seated in the wheel opening.
- Raise the tyre fully against the underside of the vehicle by turning the wheel wrench clockwise until you hear two clicks or feel it skip twice. The cable cannot be overtightened.



- Make sure the tyre is stored securely. Push, pull, and then try to turn the tyre. If the tyre moves, use the wheel wrench to tighten the cable.
- 8. Reinstall the spare tyre lock.
- Reinstall the hoist shaft access cover.

If equipped, reinstall the hitch cover and turn the retainers clockwise.

To store the tools:

 Return the tools (wheel wrench, jack handle, and jack handle extensions) to the tool bag.

- 2. Assemble the wheel blocks and jack together with the wing nut.
- Position the jack and wheel blocks in the driver side trim panel over the wheelhouse.
- Turn the jack knob clockwise until the jack is secured tight in the mounting bracket. Be sure to position the holes in the base of the jack onto the pin in the mounting bracket.
- Use the retaining bracket to fasten the tool bag on the stud and turn the wing nut clockwise to secure.
- Close the trim panel door.

Full-Size Spare Tyre

If this vehicle came with a full-size spare tyre, it was fully inflated when new, however, it can lose air over time. Check the inflation pressure regularly.

See *Tyre Pressure* \Rightarrow 303 and *Vehicle Load Limits* \Rightarrow 197. For instructions on how to remove, install, or store a spare tyre, see *Tyre Changing* \Rightarrow 316.

If equipped with a temporary use full-size spare tyre, it is indicated on the tyre sidewall. This spare tyre should not be driven on over 112 km/h (70 mph), or 88 km/h (55 mph) when pulling a trailer, at the proper inflation pressure. Repair and replace the road tyre as soon as it is convenient, and stow the spare tyre for future use.

Caution

If the vehicle has four-wheel drive and a different size spare tyre is installed, do not drive in four-wheel drive until the flat tyre is repaired and/or replaced. The vehicle could be damaged and the repairs would not be covered by the warranty. Never use four-wheel drive when a different size spare tyre is installed on the vehicle.

The vehicle may have a different size spare tyre than the road tyres originally installed on the vehicle. This spare tyre was developed for use on this vehicle, so it is all right to drive on it. If the vehicle has four-wheel drive and a different size spare tyre is installed, only drive in two-wheel drive.

After installing the spare tyre on the vehicle, stop as soon as possible and check that the spare tyre is correctly inflated.

Have the damaged or flat road tyre repaired or replaced and installed back onto the vehicle as soon as possible so the spare tyre will be available in case it is needed again.

Do not mix tyres and wheels of different sizes, because they will not fit. Keep your spare tyre and its wheel together. If the vehicle has a spare tyre that does not match the original road tyres and wheels in size and type, do not include the spare in the tyre rotation.

Jump Starting

For more information about the vehicle battery, see *Battery* \Rightarrow 282.

If the vehicle's battery (or batteries) has run down, you may want to use another vehicle and some jumper cables to start your vehicle. Be sure to use the following steps to do it safely.

⚠ Warning

Batteries can hurt you. They can be dangerous because:

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

If you do not follow these steps exactly, some or all of these things can hurt you.

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.

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. If the vehicle is equipped with dual batteries, using the battery that is closer to the starter will reduce electrical resistance. This

is located on the passenger side, in the rear of the engine compartment.

3. Get the vehicles close enough so the jump leads can reach, but be sure the vehicles are not touching each other. If they are, it could cause an unwanted ground connection. You would not be able to start your vehicle, and the bad grounding could damage the electrical systems.

To avoid the possibility of the vehicles rolling, apply the parking brake firmly on both vehicles involved in the jump start procedure. Put the automatic transmission in P (Park) or a manual gearbox in Neutral before setting the parking brake. For vehicles with four-wheel-drive with a N (Neutral) transfer case position, be sure the transfer case is in a drive gear — not N (Neutral).

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.

- Turn off the ignition on both vehicles. Unplug unnecessary accessories plugged into the accessory power outlets. Turn off the radio and all the lamps that are not needed. This will avoid sparks and help save both batteries. And it could save the radio!
- Open the hood on the other vehicle and locate the positive (+) and negative (-) terminal locations on that vehicle.

The positive (+) terminal is under a red plastic cover at the positive battery post. To uncover the positive (+) terminal, open the red plastic cover.

For more information on the location of the remote positive (+) and remote negative (-) terminals, see *Engine* Compartment Overview \$ 269.



⚠ 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 underbonnet electric fan.



⚠ Warning

Using a match near a battery can cause battery gas to explode. People have been hurt doing this, and some have been blinded. Use a torch if you need more light.

(Continued)

Warning (Continued)

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.

Marning

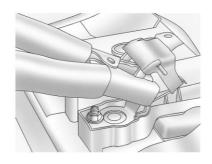
Fans or other moving engine parts can injure you badly. Keep your hands away from moving parts once the engine is running.

 Check that the jump leads do not have loose or missing insulation.
 If they do, you could get a shock.
 The vehicles could be damaged too.

> Before you connect the cables, here are some basic things you should know. Positive (+) will go to positive (+) or to a remote positive (+) terminal if the

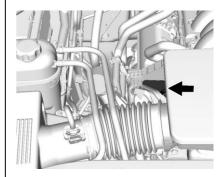
vehicle has one. Negative (-) will go to a heavy, unpainted metal engine part or to a remote negative (-) terminal if the vehicle has one.

Do not connect positive (+) to negative (-) or you will get a short that would damage the battery and maybe other parts too. And do not connect the negative (-) cable to the negative (-) terminal on the dead battery because this can cause sparks.



- Connect the red positive (+) cable to the positive (+) terminal of the vehicle with the dead battery.
- Do not let the other end touch metal. Connect it to the positive (+) terminal of the good battery. Use a remote positive (+) terminal if the vehicle has one.
- Connect the black negative (-)
 cable to the negative (-) terminal
 of the good battery. Use a remote
 negative (-) terminal if the
 vehicle has one.

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



- 10. Connect the other end of the negative (-) cable to the metal bracket that is bolted to the engine and supports the resonator, on the vehicle with the dead battery.
- Start the vehicle with the good battery and run the engine for a while.
- 12. Try to start the vehicle that had the dead battery. If it will not start after a few tries, it probably needs service.

Caution

If the jump leads are connected or removed in the wrong order, electrical shorting may occur and damage the vehicle. The repairs would not be covered by the vehicle warranty. Always connect and remove the jump leads in the correct order, making sure that the cables do not touch each other or other metal.

Jump Lead Removal

Reverse the sequence exactly when removing the jump leads.

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

Towing the Vehicle

Caution

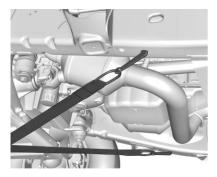
Incorrectly towing a disabled vehicle may cause damage. The damage would not be covered by the vehicle warranty.

Do not lash or hook to suspension components. Use the proper straps around the tyres 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.

Front Attachment Points



The vehicle is equipped with specific attachment points to be used to pull the vehicle onto a flatbed car carrier from a flat road surface. Do not use these attachment points to pull the vehicle from snow, mud or sand.

Recreational Vehicle Towing

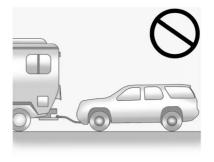
Recreational vehicle towing means towing the vehicle behind another vehicle, such as a motor home. The two most common types of recreational vehicle towing are dinghy and dolly towing. Dinghy towing is towing the vehicle with all four wheels on the ground. Dolly towing is towing the vehicle with two wheels on the ground and two wheels on a dolly.

Follow the tow vehicle manufacturer's instructions. See your dealer or trailering professional for additional advice and equipment recommendations.

Caution

Use of a shield mounted in front of the vehicle grille could restrict airflow and cause damage to the transmission. The repairs would not be covered by the vehicle warranty. If using a shield, only use one that attaches to the towing vehicle.

Dinghy Towing Two-Wheel-Drive Vehicles

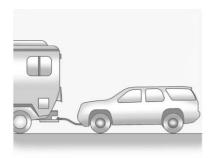


Caution

If the two-wheel-drive 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.

Two-wheel-drive vehicles should not be towed with all four wheels on the ground.

Four-Wheel-Drive Vehicles



Only dinghy tow four-wheel-drive vehicles with a two-speed transfer case that have an N (Neutral) and a Four-Wheel Drive Low (4 \$\frac{1}{2}\$) setting.

⚠ Warning

Shifting a four-wheel-drive vehicle's transfer case into N (Neutral) can cause the vehicle to roll even if the transmission is in P (Park). You or others could be injured. Apply the parking brake before shifting the transfer case to N (Neutral).

To dinghy tow:

- Position the vehicle being towed behind the tow vehicle, facing forward and on a level surface.
- 2. Securely attach the vehicle being towed to the tow vehicle.
- 3. Apply the parking brake and start the engine.

For vehicles with Electric Parking Brakes (EPB), the EPB cannot be applied and the tyres must be chocked.

- 4. Shift the transfer case to N (Neutral). See "Shifting into N (Neutral)" under Four-Wheel Drive

 → 214. Check that the vehicle is in N (Neutral) by shifting the transmission to R (Reverse) and then to D (Drive). There should be no movement of the vehicle while shifting.
- 5. Shift the transmission into D (Drive). Turn the engine off.

Caution

Failure to disconnect the negative battery cable or to have it contact the terminals can cause damage to the vehicle.

- 6. Disconnect the negative battery cable at the battery and secure the nut and bolt. Cover the negative battery post with a non-conductive material to prevent any contact with the negative battery terminal.
- 7. Shift the transmission to P (Park).

Caution

If the steering column is locked, vehicle damage may occur.

- Move the steering wheel to make sure the steering column is unlocked.
- 9. With a foot on the brake pedal, release the parking brake.

10. If equipped with Keyless Access, keep the RKE transmitter outside the vehicle, and manually lock the doors. Access the vehicle as if it has a dead RKE transmitter battery, by using the key in the door lock.

Disconnecting the Towed Vehicle

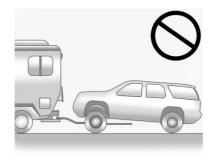
Before disconnecting the towed vehicle:

- 1. Park on a level surface.
- Apply the parking brake, then shift the transmission to P (Park).
- 3. Connect the battery.
- 4. Apply the brake pedal.
- 5. Turn the ignition to ON/RUN with the engine off. Shift the transfer case out of N (Neutral) to 2 ↑. See "Shifting out of N (Neutral)" under Four-Wheel Drive \$\Diffsize 214\$. See your dealer if the transfer case cannot be shifted out of N (Neutral).

- 6. Check that the vehicle is in 2 by starting the engine and shifting the transmission to R (Reverse) and then to D (Drive). There should be movement of the vehicle while shifting.
- 7. Shift the transmission to P (Park) and turn off the ignition.
- 8. Disconnect the vehicle from the tow vehicle.
- 9. Release the parking brake.
- 10. Reset any lost presets.

The outside temperature display will default to 0 °C (32 °F) but will reset with normal usage.

Dolly Towing - Front Towing (Front Wheels Off the Ground)



Caution

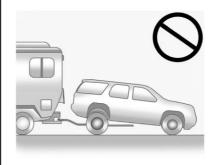
If a two-wheel-drive vehicle is towed with the rear wheels on the ground, the transmission could be damaged. The repairs would not be covered by the vehicle warranty. Never tow the vehicle with the rear wheels on the ground.

Caution

Towing a four-wheel-drive vehicle with all four wheels on the ground, or even with only two of its wheels on the ground, will damage drivetrain components. Do not tow a four-wheel-drive vehicle with any of its wheels on the ground.

This vehicle should not be towed with the rear wheels on the ground.

Dolly Towing – Rear Towing (Rear Wheels Off the Ground) – Four-Wheel-Drive Vehicles



Caution

Towing a four-wheel-drive vehicle with all four wheels on the ground, or even with only two of its wheels on the ground, will damage drivetrain components. Do not tow a four-wheel-drive vehicle with any of its wheels on the ground.

This vehicle should not be towed with any wheels on the ground.

Dolly Towing – Rear Towing (Rear Wheels Off the Ground) – Two-Wheel-Drive Vehicles



To dolly tow the vehicle from the rear:

- Attach the dolly to the tow vehicle following the dolly manufacturer's instructions.
- 2. Drive the rear wheels onto the dolly.
- 3. Firmly apply the parking brake. See *Parking Brake* \$\dip 218\$.
- 4. Put the transmission in P (Park).

- Secure the vehicle to the dolly following the manufacturer's instructions.
- Use an adequate clamping device designed for towing to ensure that the front wheels are locked into the straight position.
- 7. Turn the ignition to LOCK/OFF.

Appearance Care

Exterior Care

Locks

Washing the Vehicle

To preserve the vehicle's finish, wash it often and out of direct sunlight.

Caution

Do not use petroleum-based, acidic, or abrasive cleaning agents as they can damage the vehicle's paint, metal, or plastic parts. If damage occurs, it would not be covered by the vehicle warranty. Approved cleaning products can be obtained from your dealer. Follow all manufacturer directions regarding (Continued)

Caution (Continued)

correct product usage, necessary safety precautions, and appropriate disposal of any vehicle care product.

Caution

Avoid using high-pressure washers closer than 30 cm (12 in) to the surface of the vehicle. Use of power washers exceeding 8,274 kPa (1,200 psi) can result in damage or removal of paint and decals.

Caution

Do not power wash any component under the bonnet that has this symbol.

This could cause damage that would not be covered by the vehicle warranty.

If using an automatic car wash, follow the car wash instructions. The windscreen 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 base coat/clear coat paint finish may damage it. Use only non-abrasive waxes and polishes that are made for a base coat/clear coat paint finish on the vehicle.

To keep the paint finish looking new, keep the vehicle garaged or covered whenever possible.

Protecting Exterior Bright Metal Mouldings

Caution

Failure to clean and protect the bright metal mouldings can result in a hazy white finish or pitting. This damage would not be covered by the vehicle warranty.

The bright metal mouldings on the vehicle are aluminium, chrome or stainless steel. To prevent damage always follow these cleaning instructions:

- Be sure the moulding is cool to the touch before applying any cleaning solution.
- Use only approved cleaning solutions for aluminium, chrome or stainless steel. Some cleaners are highly acidic or contain alkaline substances and can damage the mouldings.
- Always dilute a concentrated cleaner according to the manufacturer's instructions.

- Do not use cleaners that are not intended for automotive use.
- Use a nonabrasive wax on the vehicle after washing to protect and extend the moulding finish.

Cleaning Exterior Lamps/Lenses, Emblems, Decals, and Stripes

Use only lukewarm or cold water, a soft cloth, and a car washing soap to clean exterior lamps, lenses, emblems, decals, and stripes. Follow instructions under "Washing the Vehicle" previously in this section.

Lamp covers are made of plastic, and some have a UV protective coating. Do not clean or wipe them when dry.

Do not use any of the following on lamp covers:

- Abrasive or caustic agents.
- Washer fluids and other cleaning agents in higher concentrations than suggested by the manufacturer.
- Solvents, alcohols, fuels, or other harsh cleaners.
- Ice scrapers or other hard items.

 Aftermarket appearance caps or covers while the lamps are illuminated, due to excessive heat generated.

Caution

Failure to clean lamps properly can cause damage to the lamp cover that would not be covered by the vehicle warranty.

Caution

Using wax on low gloss black finish stripes can increase the gloss level and create a non-uniform finish. Clean low gloss stripes with soap and water only.

Air Intakes

Clear debris from the air intakes, between the bonnet and windscreen, when washing the vehicle.

Windscreen and Wiper Blades

Clean the outside of the windscreen with glass cleaner.

Clean rubber blades using a lint-free cloth or paper towel soaked with windscreen washer fluid or a mild detergent. Wash the windscreen thoroughly when cleaning the blades. Insects, road grime, sap, and a build-up of vehicle wash/wax treatments may cause wiper streaking.

Replace the wiper blades if they are worn or damaged. Damage can be caused by extreme dusty conditions, sand, salt, heat, sun, snow, and ice.

Weatherstrips

Apply 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* \$\times 346\$.

Tyres

Use a stiff brush with tyre cleaner to clean the tyres.

Caution

Using petroleum-based tyre dressing products on the vehicle may damage the paint finish and/or tyres. When applying a tyre dressing, always wipe off any overspray from all painted surfaces on the vehicle.

Wheels and Trim — Aluminium or Chrome

Use a soft, clean cloth with mild soap and water to clean the wheels. After rinsing thoroughly with clean water, dry with a soft, clean towel. A wax may then be applied.

Caution

Chrome wheels and other chrome trim may be damaged if the vehicle is not washed after driving on roads that have been sprayed with magnesium, calcium, or sodium chloride. These chlorides are used on roads for conditions such as ice and dust. Always wash the chrome with soap and water after exposure.

Caution

To avoid surface damage, do not use strong soaps, chemicals, abrasive polishes, cleaners, brushes, or cleaners that contain acid on aluminium or chrome-plated wheels. Use only approved cleaners. Also, never drive a vehicle with aluminium or chrome-plated wheels through an automatic car wash that uses silicone carbide tyre cleaning [Continued]

Caution (Continued)

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 discs 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.

For 1500 Series vehicles, at least every other oil change lubricate the outer track rod ends.

Control arm ball joints on 1500 Series vehicles are maintenance-free.

Caution

Lubrication of applicable steering/ suspension points should not be done unless the temperature is -12 °C (10 °F) or higher, or damage could result.

Body Component Lubrication

Lubricate all key lock cylinders, bonnet hinges, tailgate 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. If equipped with power assist steps, extend them and then use a high pressure wash to clean all joints and gaps.

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 discolourations, 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 soiling. Newspapers or dark garments can transfer colour 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.

Caution

To prevent scratching, never use abrasive cleaners on automotive glass. Abrasive cleaners or aggressive cleaning may damage the rear window defogger.

Cleaning the windscreen with water during the first three to six months of ownership will reduce tendency to fog.

Speaker Covers

Vacuum around a speaker cover gently, so that the speaker will not be damaged. Clean spots with water and mild soap.

Coated Mouldings

Coated mouldings 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 soil, remove as much as possible prior to vacuuming.

To clean:

- Saturate a clean, lint-free colour-fast cloth with water. Microfiber cloth is recommended to prevent lint transfer to the fabric or carpet.
- Remove excess moisture by gently wringing until water does not drip from the cleaning cloth.
- Start on the outside edge of the soil and gently rub toward the centre. Fold the cleaning cloth to a clean area frequently to prevent forcing the soil in to the fabric.
- Continue gently rubbing the soiled area until there is no longer any colour transfer from the soil to the cleaning cloth.
- 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 colourfastness 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 microfibre 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 microfibre cloth. Never use window cleaners or solvents. Periodically hand wash the microfibre 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

Soaking or saturating leather, especially perforated leather, as well as other interior surfaces, may cause permanent damage. Wipe excess moisture from these surfaces after cleaning and allow them to [Continued]

Caution (Continued)

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.

Do not use cleaners that increase gloss, especially on the instrument panel. Reflected glare can decrease visibility through the windscreen under certain conditions.

Caution

Use of air fresheners may cause permanent damage to plastics and painted surfaces. If an air freshener comes in contact with any plastic or painted surface in the vehicle, blot immediately and clean with a soft cloth dampened with a mild (Continued)

Caution (Continued)

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 Seat Belts

Keep belts clean and dry.

⚠ Warning

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

Floor Mats

⚠ Warning

If a floor mat is the wrong size or is not properly installed, it can interfere with the pedals. Interference with the pedals can cause unintended acceleration and/ or increased stopping distance which can cause a crash and injury. Make sure the floor mat does not interfere with the pedals.

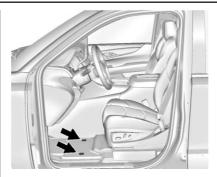
Use the following guidelines for proper floor mat usage:

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 Floor Mats

Pull up on the rear of the floor mat to unlock each retainer and remove.



Reinstall by lining up the floor mat retainer openings over the carpet retainers and snapping into position.

Make sure the floor mat is properly secured in place.

Verify the floor mat does not interfere with the pedals.

Service and Maintenance

General Information General Information	342
Scheduled Maintenance Scheduled Maintenance	. 343
Recommended Fluids, Lubricants, and Parts Recommended Fluids and	
Lubricants	346
Maintenance Replacement Parts	245
Parts	34

General Information

Caution

Damage caused by improper maintenance can lead to costly repairs and may not be covered by the vehicle warranty. Maintenance intervals, checks, inspections, recommended fluids, and lubricants are important to keep the vehicle in good working condition.

Do not have chemical flushes that are not approved by GM performed on the vehicle. The use of flushes, solvents, cleaners, or lubricants that are not approved by GM could damage the vehicle, requiring expensive repairs that are not covered by the vehicle warranty.

It is essential that your vehicle receives the maintenance outlined on the following pages to retain the safety, reliability and performance originally built into your vehicle.

When your odometer reaches the mileage indicated on the following pages, or the corresponding time interval has been reached, take your vehicle, preferably to an authorised dealer and/or repairer, who will provide the proper parts and service.

Once maintenance has been performed, have the authorised dealer and/or repairer fill out and stamp the appropriate box in this booklet to serve as your maintenance record which may be needed for warranty repairs. It will also show future owners how well your vehicle has been maintained.

Scheduled Maintenance

Engine Oil Change

Change engine oil and filter when indicated by the oil life system, at 15 000 km, or at one year, whichever comes first. 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.

Vehicle Inspection

Inspect the following items when indicated by the oil life system, at 15 000 km, or at one year, whichever comes first:

- Change the engine oil and filter.
 Reset the oil life system.
- Engine coolant level check.

- Engine cooling system inspection.
 Visual inspection of hoses, pipes, fittings, and clamps and replacement, if needed.
- Windscreen washer fluid level check.
- Windscreen wiper blade inspection for wear, cracking, or contamination and windscreen and wiper blade cleaning, if contaminated. Worn or damaged wiper blade replacement.
- Tyre inflation pressures check.
- Tyre wear inspection.
- Fluids visual leak check. A leak in any system must be repaired and the fluid level checked.
- Engine air cleaner filter inspection.
- Brake system inspection. See Exterior Care
 ⇒ 333.
- Steering and suspension inspection. Visual inspection for damaged, loose, or missing parts or signs of wear.

- Lubricate the outer track rods at least every other oil change.
 Control arm ball joints are maintenance free.
- Body hinges and latches, key lock cylinders, folding seat hardware, and rear compartment, bonnet, and console door hinges and latches lubrication. More frequent lubrication may be required when the vehicle is exposed to a corrosive environment. Applying silicone grease on weatherstrips with a clean cloth makes them last longer, seal better, and not stick or squeak.
- Restraint system component check.
- Visually inspect fuel system for damage or leaks.
- Exhaust system and nearby heat shields inspection for loose or damaged components.
- Accelerator pedal check for damage, high effort, or binding.

- Visually inspect gas strut for signs of wear, cracks, or other damage. Check the hold open ability of the strut. If the hold open is low, service the gas strut. See Gas Strut(s) ⇒ 287.
- Road Test. Check all systems for correct function/performance.
- To maintain air conditioning efficiency, have an authorised repairer check the system at least once each year.
- Automatic transmission shift lock control function check.
- Parking brake and automatic P (Park) mechanism check.
- Underbody flushing service.
- Tyre sealant and compressor kit (if equipped with tyre sealant and compressor kit), check sealant expiration date.
- Verify spare tyre key lock operation and lubricate as needed.
 See Tyre Changing \$ 316.

Additional Maintenance Every 30 000 km or Two Years

In addition to the items listed under "Inspection every 15 000 km or every year" the following items should be carried out every 30 000 km or two years (whichever occurs first):

- Passenger compartment air filter—replace. More frequent replacement may be needed if the vehicle is driven in areas with heavy traffic, poor air quality, areas with high dust levels or are sensitive to environmental allergens. Filter replacement may also be needed if you notice reduced airflow, windows misting up, or odours. Your local GM Service location can help you determine when it is the right time to replace your filter.
- Engine Air Filter Replacement.
 If driving in dusty conditions, inspect the filter at each oil change or more often as needed.

Replace Every Two Years

Replace brake fluid every two years or every 60 000 km whichever occurs first

Note: All vehicles with rear-wheel drive — change driveline axle oil every 30 000 km, if vehicle is used for towing purposes.

Additional Maintenance Every 50 000 km

 Visually check all fuel and vapour lines and hoses for proper attachment, connection, routing, and condition.

Additional Maintenance Every 150 000 km or if Necessary

Spark plugs — replace

Additional Maintenance Every 156 000 km or if Necessary

 Four-wheel drive only: Transfer case fluid change. During any maintenance, if a power washer is used to clean mud and dirt from the underbody, 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 drive axles and should be replaced.

Check vent hose at transfer case for kinks and proper installation. Check to be sure vent hose is unobstructed, clear, and free of debris.

Additional Maintenance Every 250 000 km or Every Five Years, Whichever Occurs First

 Engine cooling system drain and refill (or every five years, whichever occurs first).

Conditions Requiring More Frequent Maintenance (Severe Service)

Severe Service is described as:

- Extreme temperatures
- Heavy city traffic
- Hilly or mountainous terrain

- Dusty, muddy or off-road conditions
- Commercial use or trailer towing
- Most trips less than 6 km

Every 72 000 km or if Necessary

- Automatic transmission fluid and filter change (severe service) for vehicles mainly driven in heavy city traffic in hot weather, in hilly or mountainous terrain, when frequently towing a trailer, or used for taxi, police, or delivery service.
- Four-wheel drive only: Transfer case fluid change (severe service) for vehicles mainly driven in heavy city traffic in hot weather, in hilly or mountainous terrain, when frequently towing a trailer, or used for taxi, police, or delivery service. During any maintenance, if a power washer is used to clean mud and dirt from the underbody, 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 drive axles and should be replaced.

Check vent hose at transfer case for kinks and proper installation. Check to be sure vent hose is unobstructed, clear, and free of debris.

Recommended Fluids, Lubricants, and Parts

Recommended Fluids and Lubricants

Fluids and lubricants identified below by name, part number or specification can be obtained from your dealer.

Usage	Fluid/Lubricant
Automatic Transmission	DEXRON-HP Automatic Transmission Fluid.
Chassis Lubrication, Parking Brake Cable Guides	Lubricant meeting requirements of NLGI #2, Category LB or GC-LB, see your retailer.
Engine Coolant	50/50 mixture of clean, drinkable water and use only DEX-COOL Coolant. See Cooling System \Rightarrow 274.
Engine Oil	Engine oil meeting the dexos2 specification of the proper SAE viscosity grade. See <i>Engine Oil</i> \Rightarrow 270.
Front Axle (4WD Only)	See your dealer.
Fuel Additive	Fuel System Treatment PLUS or equivalent.
Hydraulic Brake System	DOT 3 Hydraulic Brake Fluid.
Key Lock Cylinders, Bonnet Hinges, Body Door Hinge Pins, Tailgate Hinge and Linkage, Folding Seats, Fuel Door Hinge, and Outer Tailgate Handle Pivot Points	Lubricant meeting requirements of NLGI #2, Category LB or GC-LB, see your retailer.
Rear Axle	See your dealer.
Transfer Case	DEXRON-VI Automatic Transmission Fluid.

Usage	Fluid/Lubricant
Weatherstrip: All	Synthetic Grease with Teflon.
Weatherstrip Conditioning	Weatherstrip Lubricant or Dielectric Silicone Grease, see your retailer.
Windscreen Washer	Automotive windscreen washer fluid that meets regional freeze protection requirements.

Maintenance Replacement Parts

Replacement parts identified below by name, part number, or specification can be obtained from your dealer.

Part	GM Part Number	ACDelco Part Number
Engine Air Cleaner/Filter	22845992	A3181C
Oil Filter	19330000	PF63E
Passenger Compartment Air Filter	23281440	CF188
Spark Plugs	12622441	41-114
Wiper Blades		
Front Driver Side – 55 cm (21.7 in)	22756331	-
Front Passenger Side – 55 cm (21.7 in)	22756331	-
Rear — 33 cm (13.0 in)	22956295	-

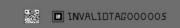
Technical Data

Vehi	icle	lde	ntifi	catior	1

venicle identification	
Number (VIN)	348
Service Parts Identification	
Label	348
Vehicle Data	
Capacities and Specifications	349
Engine Drive Belt Routing	351
	001

Vehicle Identification

Vehicle Identification Number (VIN)



This legal identifier is in the front corner of the instrument panel, on the driver side of the vehicle. It can be seen through the windscreen 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* \Rightarrow 349 for the vehicle's engine code.

Service Parts Identification Label

There may be a label on the inside of the glove box that contains the following information:

- Vehicle Identification Number (VIN)
- Model designation
- Paint information
- Production options and special equipment

If there is no label, there is a barcode on the certification label on the centre (B) pillar to scan for this same information

Vehicle Data

Capacities and Specifications

The following approximate capacities are given in metric and English conversions. See *Recommended Fluids and Lubricants* \Rightarrow 346 for more information.

Amultantiam	Сар	Capacities	
Application	Metric	English	
Air Conditioning Refrigerant	charge amount, see the	For the air conditioning system refrigerant type and charge amount, see the refrigerant label under the bonnet. See your dealer for more information.	
Cooling System	16.8 L	17.8 qt	
Engine Oil with Filter	7.6 L	8.0 qt	
Fuel Tank			
Short Wheelbase	98.4 L	26.0 gal	
Long Wheelbase	119.2 L	31.5 gal	
Transfer Case Fluid	1.5 L	1.6 qt	
Wheel Nut Torque	190 N• m	140 lb ft	

All capacities are approximate. When adding, be sure to fill to the approximate level, as recommended in this manual. Recheck fluid level after filling.

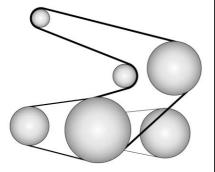
Engine Specifications

Engine	VIN Code	Horsepower	Torque	Spark Plug Gap
6.2L V8	J	313 kW @ 5,600 min ⁻¹	610 N• m @ 4,100 min ⁻¹	0.95–1.10mm (0.037– 0.043 in)

Fuel Consumption and Emissions Information

Fuel Consumption		
Urban	17.1 L/100 km	
Extra-Urban	9.9 L/100 km	
Combined	12.6 L/100 km	
Carbon Dioxide Emissions		
Urban	390 g/km	
Extra-Urban	227 g/km	
Combined	287 g/km	

Engine Drive Belt Routing



Customer Information

Customer Information

Radio Frequency	
Identification (RFID)	352
Libcurl and Unzip	
Acknowledgements	352
Declaration of Conformity	355

Vehicle Data Recording and Privacy

venicle Data Recording and	
Privacy	360
OnStar	361
Infotainment System	361

Customer Information

Radio Frequency Identification (RFID)

RFID technology is used in some vehicles for functions such as tyre pressure monitoring and ignition system security. It is also used in connection with conveniences such as Remote Keyless Entry (RKE) transmitters for remote door locking/unlocking and starting, and in-vehicle transmitters for garage door openers. RFID technology in GM vehicles does not use or record personal information or link with any other GM system containing personal information.

Libcurl and Unzip Acknowledgements

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libcurl:

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Declaration of Conformity

Transmission Systems

This vehicle has systems that transmit and/or receive radio waves subject to Directive 1999/5/EU or Directive 2014/53/EU. The manufacturers of the systems listed below declare conformity with Directive 1999/5/EU

or Directive 2014/53/EU. The full text of the EU declaration of conformity for each system is available at the following Internet address: www.cadillaceurope.com/conformity.

Importer

Opel/Vauxhall Bahnhofsplatz 65423 Rüsselsheim am Main Germany

Aerial Module

Harada Industries Europe Limited Oskar-Schindler-Street 10 50769 Cologne Germany

Aerial Module

Laird Daimlerring 31 31135 Hildesheim Germany

Aerial Module

Yokowo Manufacturing of America, LLC 28221 Beck Road, Unit A-21 Wixom, Michigan 48393 USA

Front Radar Unit

Continental Automotive GmbH ADC Automotive Distance Control Systems GmbH Peter-Dornier-Strasse 10 88131 Lindau Germany

Operating frequency: 76 – 77 GHz

Maximum transmit power: 30 dBm EIRP

Immobiliser

Continental Automotive GmbH Siemensstrasse 12 D-93055 Regensburg Germany

Operating frequency: 125 kHz

Maximum transmit power: 5.1 dBuA/ M @ 10 m

Radio Remote Control Receiver

Continental Automotive GmbH Siemensstrasse 12 D-93055 Regensburg Germany

Electronic Kev Transmitter

Denso Corporation 1-1 Showa-cho Kariya-shi Aichi-ken, 448-8661 Japan

Operating frequency: 433.92 MHz Maximum transmit power: -5.88 dBm

Electronic Key Receiver

Denso Corporation Waldeckerstaße 11 64546 Mörfelden-Walldorf Germany

Operating frequency: 125 kHz

Maximum transmit power: 0.968 mW

Rear Radar Unit

Hella KGaA Hueck & Company Rixbecker Straße 75 59552 Lippstadt Germany

Operating frequency: 24.05 -24.25 GHz

Maximum transmit power: 20

dBm EIRP

Garage Door Opener

Gentex GmbH Georg-Ohm-Strasse 6 D-74235 Erlenbach Germany

Operating frequency: 433.05 -

434.79 MHz

Maximum transmit power: 10 dBm

Rear Seat Infotainment

Mitsubishi Electric Corporation 2-3-33 Miwa Sanda-city, Hyogo 669-1513

Japan

Operating Frequency (MHz)	Maximum Transmit Power (dBm)
2412 – 2472	16.5
5745 – 5825	15.0

Radio

Fujitsu Ten Limited 2-28 Gosho-dori 1-chome Hyogo-ku, Kobe 652-8510 Japan

Operating frequency: 2402 – 2480 MHz

Maximum transmit power: 1.5 mW

Tyre Pressure Sensors

Schrader Electronics Ltd. 11 Technology Park Belfast Road Antrim BT41 1QS, Northern Ireland United Kingdom

Operating frequency: 433.92 MHz Maximum transmit power: 10 dBm

OnStar Module

LG Electronics European Shared Service Center B.V. Krijgsman 1 1186 DM Amstelveen The Netherlands

Operating Frequency (MHz)	Maximum Transmit Power (dBm)
2402 – 2480	4
2412 – 2462	18
880 – 915	33
1710 – 1785	24
1850 – 1910	24

Operating Frequency (MHz)	Maximum Transmit Power (dBm)
1920 – 1980	24
2500 - 2570	23

Rear Seat Infotainment

Hirschmann Car Communication GmbH Stuttgarter Straße 45-51 72654 Neckartenzlingen Germany

Operating frequency: 88 - 108 MHz

Maximum transmit power: -45.380 dBM

Radio Remote Control Transmitter

Continental Automotive GmbH Siemensstrasse 12 D-93055 Regensburg Germany

Operating frequency: 433.92 MHz Maximum transmit power: -5,7 dBm

Infotainment System Navi 900

Robert Bosch Car Multimedia GmbH Robert-Bosch-Straße 200 D-31139 Hildesheim

Germany

Operating Frequency (MHz)	Maximum Transmit Power (dBm)
2400 –2480	10
2400 –2480	20

Tyre Jack

GM

GM North America

General Moturs Company Warren Technicol Center Vobicle Enginearing Center 30001 Van Dyke Amil Code 480-210-V11 Warren, Michigan 48090 U.S.A.

Declaration of Conformity Pursuant to Machinery Directive 2006/42/EC

We hereby declare that the product:

Product Description: Scissor / Screw Automotive Jack Type/Part #: 23237463 Screw Jack

13502709 Scissor Jack

13590427 Scissor Jack 13504504 Scissor Jack Is in conformity with Machinery Directive 2006/42/EC.

Technical standards applied:

GMW15005 Standard Equipment Jack and Spare Tire, Vehicle Test GMW14337 Standard Equipment Jack - Hardware Tests

The person authorized to compile the technical file is:

Hans-Peter Metzger

65423 Russelsheim / Germany Adam Opel AG

Engineering Group Manager Tire / Wheel Systems GMNA, USA Gena Vitale

Translation of the Original Declaration of Conformity

Declaration of Conformity

Pursuant to Machinery Directive 2006/42/EC

We hereby declare that the product:

Product Description: Scissor/Screw Automotive Jack

Type/Part Number: 23237463

Screw Jack

13502709 Scissor Jack

13590427 Scissor Jack

13504504 Scissor Jack

Is in conformity with Machinery Directive 2006/42/EC.

Technical standards applied:

GMW14337 Standard Equipment Jack

– Hardware Tests

GMW15005 Standard Equipment Jack and Spare Tyre, Vehicle Test

The person authorised to compile the technical file is:

Hans-Peter Metzger Adam Opel AG 65423 Rüsselsheim/Germany

Signed by:

GMNA, USA

Gena Vitale Engineering Group Manager Tyre/ Wheel Systems

Vehicle Data Recording and Privacy

Event Data Recorders

Data Storage Modules in the Vehicle

A large number of electronic components of your vehicle contain data storage modules temporarily or permanently storing technical data about the condition of the vehicle, events, and errors. In general, this technical information documents the condition of parts, modules, systems, or the environment:

- Operating conditions of system components (e.g., filling levels).
- Status messages of the vehicle and its single components (e.g., number of wheel revolutions/ rotational speed, deceleration, lateral acceleration).
- Dysfunctions and defects in important system components.
- Vehicle reactions in particular driving situations (e.g., inflation of an airbag, activation of the stability regulation system).

• Environmental concerns (e.g., temperature).

This data is exclusively technical and helps identify and correct errors as well as optimise vehicle functions.

Motion profiles indicating travelled routes cannot be created with this data.

If services are used (e.g., repair works, service processes, warranty cases, quality assurance), employees of the service network (manufacturer included) are able to read out this technical information from the event and error data storage modules applying special diagnostic devices. If required, you will receive further information at these dealers. After an error has been corrected, the data is deleted from the error storage module or constantly overwritten.

When using the vehicle, situations may occur in which this technical data related to other information (accident report, damages on the vehicle, witness statements, etc.) may

be associated with a specific person — possibly, with the assistance of an expert.

Additional functions contractually agreed upon with the client (e.g., vehicle location in emergency cases) allow the transmission of particular vehicle data from the vehicle.

OnStar

If the vehicle is equipped with OnStar and has a service plan, additional data may be collected through the OnStar system. This includes information about the vehicle's operation; collisions involving the vehicle; the use of the vehicle and its features; and, in certain situations, the location and approximate GPS speed of the vehicle. Refer to the OnStar Terms and Conditions and Privacy Statement on the OnStar website.

See OnStar Overview \$ 362.

Infotainment System

Using the navigation 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.

OnStar

unstar	Uverview	
OnStar	Overview	362

OnStar Overview

OnStar system

OnStar is a personal connectivity and service assistant with integrated Wi-Fi hotspot. The OnStar service is available 24 hours a day, seven days a week.

Note: OnStar is not available for all markets. For further information, contact your retailer.

Note: In order to be available and operational, OnStar needs a valid OnStar subscription, functioning vehicle electrics, mobile service and GPS satellite link.

To activate the OnStar services and set up an account, press (3) and speak with an OnStar advisor.

Depending on the equipment of the vehicle, the following services are available:

- Emergency services and support in the case of a vehicle breakdown
- Wi-Fi hotspot
- Smartphone application

- Remote control, e.g. location of the vehicle, activation of horn and lights, control of central locking system
- Stolen vehicle assistance
- Vehicle diagnostics
- Destination download

Note: The OnStar module of the vehicle is deactivated after ten days without an ignition cycle. Functions requiring a data connection will be available again after switching on the ignition.

OnStar buttons









Privacy button

Press and hold wuntil an audio message is heard to activate or deactivate the transmission of the vehicle location.

Press to answer a call or to end a call to an advisor.

Press to access the Wi-Fi settings.

Service button

Press to establish a connection to an advisor.

SOS button

Press so to establish a priority emergency connection to a specially trained emergency advisor.

Status LED

Green: The system is ready.

Green flashing: The system is on a call.

Red: A problem arose.

Off: System is in standby mode.

Red / green flashing for a short period of time: Transmission of the vehicle location has been deactivated.

OnStar services

General services

If you need any information concerning e.g. opening hours, point of interest and destinations or if you need any support e.g. in the case of a vehicle breakdown, a flat tyre and empty fuel tank, press to establish a connection to an advisor.

Emergency services

In the case of an emergency situation, press so and talk to an advisor. The advisor then contacts emergency or assistance service providers and directs them to your vehicle.

In the case of an accident with activation of airbags or belt tensioners, an automatic emergency call is established. The advisor is immediately connected to your vehicle to see whether help is needed.

Wi-Fi hotspot

The Wi-Fi hotspot of the vehicle provides internet connectivity with a maximum speed of 4G/LTE.

Note: The Wi-Fi hotspot functionality is not available for all markets.

Up to seven devices may be connected.

To connect a mobile device with the Wi-Fi hotspot:

- Press and then select Wi-Fi settings on the Info-Display. The settings displayed include the Wi-Fi hotspot name (SSID), password and, if equipped, connection type.
- 2. Start a Wi-Fi network search on your mobile device.
- Select your vehicle hotspot (SSID) when listed.
- 4. When prompted, enter the password on your mobile device.

Note: To change the SSID or password, press and talk to an OnStar advisor or login to your account.

To switch off the Wi-Fi hotspot functionality, press to call an advisor.

Smartphone app

With the smartphone app, some vehicle functions can be operated remotely:

- · Lock or unlock vehicle.
- Honk horn or flash lights.
- Check fuel level, engine oil life, if equipped, and tyre pressure (only with tyre pressure monitoring system).
- Send navigation destination to the vehicle, if equipped with a built-in navigation system.
- Locate vehicle on a map.
- Manage Wi-Fi settings.

To operate these functions, download the app from Apple's App Store or Google Play Store.

Remote control

If desired, use any phone to call an advisor, who can remotely operate specific vehicle functions. Find the respective OnStar phone number on our country-specific website.

The following functions are available:

- Lock or unlock vehicle.
- Provide information on the vehicle location.
- Honk horn or flash lights.

Stolen vehicle assistance

If the vehicle is stolen, report the theft to the authorities and request OnStar stolen vehicle assistance. Use any phone to call an advisor. Find the respective OnStar phone number on our country-specific website.

OnStar can provide support in locating and recovering the vehicle.

Theft alert

When the anti-theft alarm system is triggered, a notification is sent to OnStar. You are then informed about this event by text message or email.

Restart prevention

By sending remote signals, OnStar can prevent the vehicle from restarting once it has been turned off.

On-demand diagnostics

At any time e.g. if the vehicle displays a service message, press to contact an advisor and ask to complete a real-time diagnostic check to directly determine the issue. Depending on the results, the advisor will provide further support.

Diagnostic report

The vehicle automatically transmits diagnostic data to OnStar which sends a monthly email report to you and your preferred retailer.

Note: The retailer notification function can be disabled in your account.

The report contains the status of key operating systems of the vehicle like engine, transmission, airbags, ABS, and other major systems. It also provides information on possible maintenance items and tyre pressure (only with tyre pressure monitoring system).

To look at the information in greater detail, select the link within the email and log into your account.

Destination download

If equipped with this feature, a desired destination can be directly downloaded to the navigation system.

Press of to call an advisor and describe the destination or point of interest.

The advisor can look up any address or point of interest and directly send the destination to the built-in navigation system.

OnStar settings

OnStar PIN

To have full access to all OnStar services, a four-digit PIN is required. The PIN has to be personalised when first talking to an advisor.

To change the PIN, press of to call an advisor

Account data

An OnStar subscriber has an account, where all the data is stored. To request a change of the account information, press and talk to an advisor or login to your account.

If the OnStar service is used on another vehicle, press and request that the account be transferred to the new vehicle.

Note: In any case, if the vehicle is disposed of, sold or otherwise transferred, immediately inform OnStar about the changes and terminate the OnStar service on this vehicle.

Vehicle location

The vehicle location is transmitted to OnStar when service is requested or triggered. A message on the Info-Display informs about this transmission.

To activate or deactivate the transmission of the vehicle location, press and hold until an audio message is heard.

The deactivation is indicated by the status light flashing red and green for a short period of time and each time the vehicle is started.

Note: If the transmission of the vehicle location is deactivated, some services are no longer available.

Note: The vehicle location always remains accessible to OnStar in the case of an emergency.

Find the privacy policy in your account.

Software updates

OnStar may remotely carry out software updates without further notice or consent. These updates are to enhance or maintain safety and security or the operation of the vehicle.

These updates may concern privacy issues. Find the privacy policy in your account.

Index

A
Accessories and Modifications 267
Accessory Power205
Acknowledgements
Libcurl and Unzip 352
Active Fuel Management207
Adaptive Cruise Control228
Add-On Electrical Equipment 265
Adjustable Throttle and Brake
Pedal202
Adjustments
Lumbar, Front Seats59
Air Cleaner/Filter, Engine 273
Air Conditioning177, 182
Air Filter, Passenger
Compartment
Air Vents183
Airbag System
Check93
How Does an Airbag Restrain?86
Passenger Sensing System88
What Makes an Airbag Inflate?86
What Will You See after an
Airbag Inflates?87
When Should an Airbag
Inflate?85
Where Are the Airbags?84

Airbags
Adding Equipment to the
Vehicle92
Passenger Status Indicator 140
Readiness Light 140
Servicing Airbag-Equipped
Vehicles92
System Check82
Alarm
Vehicle Security44
Alert
Lane Change 246
Side Blind Zone (SBZA) 246
All-Season Tyres302
Anti-theft
Locking System46
Antilock Brake System (ABS) 218
Warning Light 144
Appearance Care
Exterior
Interior 337
Armrest Storage 122
Ashtrays 134
Assistance Systems for Driving 242
Assistance Systems for Parking
and Reversing237
Automatic
Door Locks37

Automatic (cont'd)	Brakes (cont'd)	Check
Forward Braking 244	Assist 220	Engine Light (Malfunction
Headlamp System 170	Fluid 281	Indicator) 141
Level Control	Parking 218	Child Restraints
Transmission	Braking188	Infants and Young Children96
Transmission Fluid 273	Automatic Forward 244	ISOFIX 115
Automatic Transmission	Bulb Replacement	Older Children94
Manual Mode 212	Front Indicator Lamps 288	Securing116, 118
Shift Lock Control Function	Headlamp Aiming 288	Systems98
Check 285	Headlamps 288	Child-View Mirror51
Axle, Front	License Plate Lamps 289	Cigarette Lighter134
Axle, Rear284	Buying New Tyres311	Circuit Breakers290
В	C	Cleaning
Battery282	Capacities and Specifications 349	Exterior Care
Exterior Lighting Battery	Carbon Monoxide	Interior Care 337
Saver	Engine Exhaust	Climate Control Systems
Jump Starting	Liftgate38	Dual Automatic 177
Load Management	Winter Driving196	Rear 182
Power Protection	Cargo	Clock129
Blade Replacement, Wiper285	Tie-Downs	Cluster, Instrument135
Bonnet	Caution, Danger, and Warning2	Compartments
Brake	Centre Console Storage	Storage 121
Parking, Electric	Chains, Tyre	Conformity
Pedal and Adjustable Throttle 202	Charging	Declaration of 355
System Warning Light 143	Wireless	Control
Brakes	Charging System Light141	Traction and Electronic
Antilock	Charging System Light141	Stability 221
AIIIIIUUK 210		Control of a Vehicle188

Convenience Net123
Convex Mirrors 47
Coolant
Engine Temperature Gauge 139
Engine Temperature Warning
Light147
Cooling177, 182
Cooling System274
Cornering Lights172
Cruise Control226
Light 149
Cruise Control, Adaptive228
Cupholders122
D
Danger, Warning, and Caution2 Data Collection
Danger, Warning, and Caution2 Data Collection
Danger, Warning, and Caution2
Danger, Warning, and Caution2 Data Collection Infotainment System
Danger, Warning, and Caution2 Data Collection Infotainment System
Danger, Warning, and Caution
Danger, Warning, and Caution 2 Data Collection Infotainment System 361 OnStar 361 Daytime Running Lamps (DRL) 169 Declaration of Conformity 355 Defensive Driving 188 Delayed Locking 37 Distracted Driving 187 Dome Lamps 173
Danger, Warning, and Caution 2 Data Collection Infotainment System 361 OnStar 361 Daytime Running Lamps (DRL) 169 Declaration of Conformity 355 Defensive Driving 188 Delayed Locking 37 Distracted Driving 187 Dome Lamps 173 Door

Door (cont'd)
Locks35
Power Locks37
Drive Belt Routing, Engine351
Driver Assistance Systems236
Driver Information
Centre (DIC)150
Driver Mode Control223
Driving
Assistance Systems 242
Characteristics and
Towing Tips
Defensive
For Better Fuel Economy26
Hill and Mountain Roads 195
If the Vehicle is Stuck 197
Loss of Control
Off-Road 190
Off-Road Recovery 189
Vehicle Load Limits
Wet Roads194
Winter 196
Winter Mode Light 145
Dual Automatic Climate
Control System177

E
Electric Parking Brake219
Electric Parking Brake Light 144
Electrical Equipment, Add-On 265
Electrical System
Engine Compartment Fuse
Block 290
Fuses and Circuit Breakers 290
Instrument Panel Fuse
Block295, 297
Overload 289
Rear Compartment Fuse
Block 300
Engine
Air Cleaner/Filter 273
Check Light (Malfunction
Indicator) 141
Compartment Overview 269
Coolant Temperature Gauge 139
Coolant Temperature
Warning Light 147
Cooling System 274
Drive Belt Routing 351
Exhaust 208
Fan279
Oil Life System 272
Oil Pressure Light 147
Overheating 277

Engine (cont'd)	Fluid (cont'd)	Fuses (cont'd)
Power Messages 155	Washer 279	Rear Compartment F
Running While Parked 209	Fog Lamps172	Block
Starting 204	Folding Mirrors48	G
Entry Lighting174	Forward Automatic Braking244	Garage Door Opener
Equipment, Towing259	Forward Collision Alert (FCA)	Programming
Exit Lighting174	System	Gas Strut(s)
Extended Parking207	Four-Wheel Drive214, 282	Gauges
Exterior Lamp Controls167	Front Axle	Engine Coolant Temp
Exterior Lamps Off Reminder 169	Front Indicator Lamps288	Fuel
Exterior Lighting Battery Saver 175	Front Seats	Mileometer
F	Heated and Cooled65	Rev Counter
- Fan	Fuel	Speedometer
Engine	Additives 250	Trip Odometer
Features	Economy Driving26	Warning Lights and
Memory13	Filling a Portable Fuel	Indicators
Filter.	Container 252	General Information
Engine Air Cleaner	Filling the Tank	Service and Maintena
Flash-to-Pass	Gauge 138	Towing
Flat Tyre	Low Fuel Warning Light 148	Vehicle Care
Changing 316	Management, Active	Glass Replacement
Floor Mats340	Full-Size Spare Tyre324	Glove Box
Fluid	Fuses	н
Automatic Transmission 273	Engine Compartment Fuse	· · · · · · · · · · · · · · · · ·
Brakes 281	Block	Hazard Warning Flash
Four-Wheel Drive	Fuses and Circuit Breakers 290	Head Restraints
Transfer Case 214	Instrument Panel Fuse	Head-up Display

ruses (conta)
Rear Compartment Fuse
Block 300
G
Garage Door Opener163
Programming 163
Gas Strut(s)287
Gauges
Engine Coolant Temperature 139
Fuel 138
Mileometer
Rev Counter 138
Speedometer 137
Trip Odometer 138
Warning Lights and
Indicators 134
General Information
Service and Maintenance 342
Towing
Vehicle Care 267
Glass Replacement286
Glove Box121
H
Hazard Warning Flashers171
Head Restraints 57
Head-up Display152

370 INDEX

Headlamps
Aiming
Automatic 170
Bulb Replacement 288
Daytime Running
Lamps (DRL) 169
Flash-to-Pass 169
Lamps On Reminder 149
Main-Beam On Light 148
Main/Dipped Beam Changer 169
Heated
Rear Seats66
Steering Wheel 126
Heated and Cooled Front Seats 65
Heated Mirrors 49
Heating177, 182
High-Speed Operation304
Hill and Mountain Roads195
Hill Start Assist (HSA)221
Horn126
How to Wear Seat Belts Properly 74
HVAC177, 182
1
Ignition Positions
111111001112c1 40
Immobilizer

Lamps (cont'd)
Exterior Lamps Off Reminder 169
Exterior Lighting Battery
Saver 175
Front Indicator 288
Malfunction Indicator (Check
Engine)141
Number Plate 289
On Reminder
Reading 173
Lane Change Alert (LCA)246
Lane Departure
Warning (LDW)248
Lane Keep Assist (LKA)248
Lane Keep Assist Light145
Lap-Shoulder Belt 75
LED Lighting288
Level Control
Automatic 225
Libcurl and Unzip
Acknowledgements352
Liftgate 38
Lighter, Cigarette134
Lighting
Entry 174
Exit
Illumination Control 173
LED 288

ights	Lights (cont'd)	Manual Mode212
Airbag Readiness 140	Tyre Pressure147	Massage 64
Antilock Brake System (ABS)	Winter Driving Mode 145	Memory Features
Warning 144	Lights, Hazard171	Memory Seats 61
Brake System Warning 143	Locking Rear Axle225	Messages
Charging System 141	Locking Systems, Anti-theft 46	Engine Power 155
Check Engine (Malfunction	Locks	Vehicle155
Indicator) 141	Automatic Door37	Vehicle Speed 156
Cruise Control149	Delayed Locking37	Mileometer 137
Door Ajar 149	Door35	Trip 138
Electric Parking Brake 144	Lockout Protection37	Mirror
Engine Coolant Temperature	Power Door37	Child-View51
Warning 147	Safety38	Rear Camera49
Engine Oil Pressure 147	Loss of Control189	Mirrors
Flash-to-Pass 169	Low Fuel Warning Light148	Automatic Dimming Rear View 49
Lane Keep Assist 145	Low-Profile Tyres303	Convex47
Low Fuel Warning 148	Lumbar Adjustment 59	Folding48
Main-Beam On 148	Front Seats59	Heated49
Main/Dipped Beam Changer 169	м	Power48
Seat Belt Reminders 139		Tilt in Reverse49
Security	Magnetic Ride Control	Mirrors, Interior Rearview 49
Service Electric Parking Brake 144	Main-Beam On Light148 Maintenance Schedule	Mode223
Sport Mode	Recommended Fluids and	Driver Control
StabiliTrak OFF146	Lubricants	Monitor System, Tyre Pressure 305
Tow/Haul Mode 145	Scheduled Maintenance 343	N
Traction Control System	Transfer Case	
(TCS)/StabiliTrak 146		Net, Convenience
Traction Off 146	Malfunction Indicator Lamp 141	New Vehicle Running-In202

372 INDEX

0
Off-Road190
Driving 190
Recovery 189
Oil
Engine 270
Engine Oil Life System 272
Pressure Light 147
Older Children, Restraints 94
OnStar361
OnStar Overview362
Operation
Fog Lamps 172
Outlets
Power 130
Overheating, Engine277
P
Park
Shifting Into
Shifting Out of
Parking
Brake 218
Brake and P (Park)
Mechanism Check 285
Extended 207
Over Things That Burn 207
Parking Assist

Parking or Reversing
Assistance Systems 237
Passenger Airbag Status
Indicator 140
Passenger Compartment Air
Filter 184
Passenger Sensing System 88
Personalisation
Vehicle
Power
Door Locks37
Mirrors48
Outlets
Protection, Battery 175
Retained Accessory (RAP) 205
Seat Adjustment58
Windows52
Power Assist Steps 43
Pregnancy, Using Seat Belts 80
Privacy
Vehicle Data Recording 360
R
Radio Frequency
Identification (RFID)
Reading Lamps173
Rear Axle

Rear Axle (cont'd)
Locking
Rear Camera Mirror 49
Rear Climate Control System 182
Rear Seats 66
Heated66
Rear Storage122
Rear View Mirrors
Automatic Dimming49
Rear Vision Camera (RVC)237
Rear Window Washer/Wiper 128
Reclining Seat Backrests 61
Recommended Fluids and
Lubricants346
Recreational Vehicle Towing 329
Remote Keyless Entry (RKE)
System 28
Remote Vehicle Start 34
Replacement
Glass 286
Replacement Parts
Airbags93
Maintenance 347
Replacing Airbag System 93
Replacing Seat Belt System
Parts after a Crash 81
Restraints
Where to Put 99

Retained Accessory	Seat Belts (cont'd)	Shift Lock Control Function
Power (RAP)205	Use During Pregnancy80	Check, Automatic
Rev Counter	Seats	Transmission
Reverse Tilt Mirrors 49	Head Restraints57	Shifting
Ride Control Systems	Heated, Rear66	Into Park 205
Magnetic 224	Lumbar Adjustment, Front59	Out of Park 207
Roads	Memory61	Side Blind Zone Alert (SBZA) 246
Driving, Wet 194	Power Adjustment, Front58	Signals, Turn and Lane-Change 171
Roof	Rear66	Specifications and Capacities 349
Sunroof54	Reclining Seat Backrests61	Speedometer137
Roof Rack System124	Second Row67	Sport Mode Light145
Rotation, Tyres	Third Row Seat71	StabiliTrak
Routing, Engine Drive Belt351	Second Row Seats 67	OFF Light 146
Running the Vehicle While	Securing Child Restraints116, 118	Start Assist, Hill221
Parked209	Security	Start Vehicle, Remote 34
Running-In, New Vehicle202	Light 148	Starter Switch Check284
S	Vehicle44	Starting the Engine204
Safety Locks	Vehicle Alarm44	Steering188
Safety System Check	Service	Heated Wheel 126
Scheduled Maintenance343	Accessories and	Wheel Adjustment 126
Seat Belts	Modifications 267	Wheel Controls 126
Care81	Doing Your Own Work 268	Steps
How to Wear Seat Belts	Maintenance, General	Power Assist43
Properly74	Information	Storage
Lap-Shoulder Belt75	Parts Identification Label 348	Rear
	Carrigo Floatric Darking Proke	Storage Areas
Reminders	Service Electric Parking Brake	
Reminders	Light144	Armrest 122

374 INDEX

Storage Areas (cont'd)	Tow/Haul Mode Light145	Tyres (cont'd)
Convenience Net 123	Towing	Different Size
Glove Box 121	Driving Characteristics 253	Full-Size Spare 324
Instrument Panel 121	Equipment259	If a Tyre Goes Flat 315
Roof Rack System 124	General Information 253	Inspection 309
Sunglasses	Recreational Vehicle 329	Low Profile 303
Storage Compartments121	Trailer 256	Pressure303, 304
Struts	Trailer Sway Control (TSC) 263	Pressure Light 147
Gas 287	Vehicle328	Pressure Monitor Operation 306
Stuck Vehicle197	Traction	Pressure Monitor System 305
Sun Visors 54	Control System (TCS)/	Rotation 310
Sunglass Storage122	StabiliTrak Light146	Wheel Alignment and Tyre
Sunroof 54	Off Light 146	Balance 313
Symbols	Traction Control/Electronic	Wheel Replacement 314
System	Stability Control221	When It Is Time for New
Forward Collision Alert (FCA) 242	Trailer	Tyres 311
Infotainment176, 361	Sway Control (TSC) 263	Winter 302
Roof Rack 124	Towing	U
Systems	Transfer Case214	Universal Remote System163
Driver Assistance 236	Transmission	Operation
т	Automatic 209	Programming
Theft-Deterrent Systems 46	Fluid, Automatic 273	Using This Manual2
Immobiliser46	Trip Odometer138	
Third-Row Seats	Tyres 301	V
Throttle, Adjustable202	All-Season 302	Vehicle
Time	Buying New Tyres 311	Alarm System44
Tow/Haul Mode	Chains 314	Control 188
10W/11dd1 Wlode	Changing 316	Identification Number (VIN) 348

Vehicle (cont'd)
Load Limits 197
Messages 155
Personalisation 156
Remote Start34
Security44
Speed Messages 156
Towing 328
Vehicle Ahead Indicator145
Vehicle Care
Tyre Pressure 303
Vehicle Data Recording and
Privacy
Ventilation, Air
•
Visors 54
Visors 54
Visors 54 W
Visors
Visors
Visors
Visors
Visors
Visors
Visors
Visors

Wheels (cont'd)
Different Size 313
Replacement 314
When It Is Time for New Tyres 311
Where to Put the Restraint 99
Windows 52
Power52
Windshield
Replacement 286
Wiper/Washer 126
Winter
Driving
Winter Driving Mode Light145
Winter Tyres302
Wiper Blade Replacement 285
Wipers
Rear Washer 128
Wireless Charging132



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