

CORVETTE

Owner's Manual



Contents

Introduction 1
Keys, Doors, and Windows7
Seats and Restraints 39
Storage 80
Instruments and Controls 83
Lighting 112
Infotainment System 118
Climate Controls 167
Driving and Operating 172
Vehicle Care 233
Service and Maintenance 300
Technical Data 308
Customer Information 312
eCall 319
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, CHEVROLET, the CHEVROLET Emblem, CORVETTE, and the CORVETTE Emblem 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, including changes in standard or optional content. Refer to the purchase documentation relating to your specific vehicle to confirm the features.

Keep this manual in the vehicle for quick reference.

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.

\land Danger

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

\land 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.

(III): Shown when the owner's manual has additional instructions or information.

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

 $\ensuremath{\textcircled{}}$: 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.

: Air Conditioning System

✤: Air Conditioning Refrigerant Oil

🛠 : Airbag Readiness Light

(ABS) : Antilock Brake System (ABS)

(I) : Brake System Warning Light

• : Carbon Monoxide

- Î : Dispose of Used Components Properly
- ▹★★ : Do Not Apply High Pressure Water

E : Engine Coolant Temperature

() : Flame/Fire Prohibited

🛎 : Flammable

 $\vec{\mathbf{a}}$: Fuse Block Cover Lock Location

🕼 : Fuses

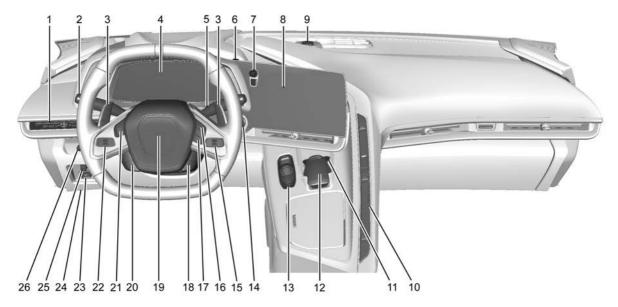
❷ : ISOFIX/LATCH System Child Restraints

: Keep Fuse Block Covers Properly Installed : Lane Keep Assist 비고 : Malfunction Indicator Lamp ℃ · · Oil Pressure P[™] : Park Assist ථ: Power . Rear Cross Traffic Alert Registered Technician $\mathbf{\Omega}$ · Remote Vehicle Start : Risk of Electrical Fire A : Seat Belt Reminders $\mathbb{R}^{\mathbb{Q}^{\square}}$: Side Blind Zone Alert (!) : Tyre Pressure Monitor Stability Control (ESC)

A: Under Pressure

Instrument Panel Overview

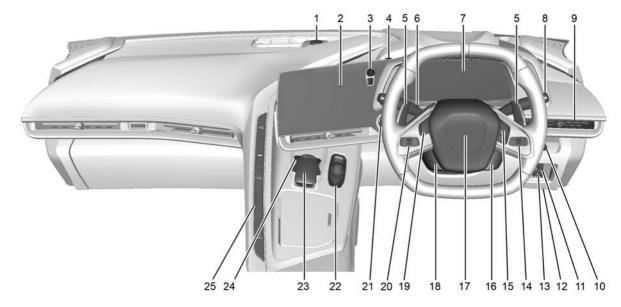
Left-Hand Drive



4 Introduction

1. Air Ven	ts ⇔ 170. or Lever. See <i>Turn and</i>	11.	Traction Control/Electronic Stability Control ⇔ 208.	21.	Z-Mode Control. See <i>Driver Mode Control</i> ⇒ 210.
	nange Signals ⇔ 114.		Curb View Camera (If Equipped). See	22.	Cruise Control ⇔ 221.
Exterio	r Lamp Controls ⇔ 112.		Assistance Systems for Parking or	23.	Electric Parking Brake 🗢 206.
3. Manua <i>⇔ 201</i> .	l Shift Paddles. See Manual Mode		Reversing \Rightarrow 224. Front Lift System Control (If Equipped).	24.	Data Link Connector (DLC) (Out of View). See <i>Malfunction Indicator Lamp (Check</i>
4. Instrum	nent Cluster 🗢 89.	17	See Front Lift System 🗢 216.		Engine Light) ⇔ 96.
5. Windsc	reen Wiper/Washer 🕏 84.	12.	Driver Mode Control 🗢 210.	25.	Instrument Panel Illumination Control
6. Near Fi	eld Communication Antenna	13.	Shift Switches. See Dual Clutch Transmission ⇔ 198.	26	▷ 115.
(NFC). See Bluetooth (Overview) ⇔ 152 or Bluetooth (Pairing and Using a Phone) ⇔ 153.	14.	Keyless Ignition. See Ignition Positions ⇔ 193.	26.	Head-Up Display Controls (If Equipped). See <i>Head-Up Display (HUD) ⇔ 105</i> .	
	e Control Knob and Infotainment Button. See <i>Overview ⇔ 119</i> .	15.	Driver Information Centre (DIC) Controls. See Driver Information Centre (DIC) ⇔ 103.		
8. Infotair ⇒ 122.	nment. See Using the System	16.	→ 103. Heated Steering Wheel ⇒ 84 (If Equipped).		
	System Indicator Light. See <i>Vehicle</i> S <i>ystem ⇔</i> 22.	17.	Bluetooth Controls. See Steering Wheel		
Light So System	ensor. See Automatic Headlamp ⇔ 113.		Voice Recognition Controls. See Steering Wheel Controls \$ 121.		
0. Dual A ⇔ 167.	utomatic Climate Control System	18.	Volume Controls \$\v21. Volume Control Buttons. See Steering Wheel Controls \$\v21.		
	and Passenger Heated and	10			
	ted Seat Controls (If Equipped).		Horn ⇔ 84.		
See <i>He</i> ⇒ 44.	ated and Ventilated Front Seats		Favorites Select Buttons. Steering Wheel Controls ⇔ 121.		

Right-Hand Drive



6 Introduction

 Alarm System Indicator Light. See Vehicle Alarm System ⇔ 22. Light Sensor. See Automatic Headlamp System ⇔ 113. Infotainment. See Introduction ⇔ 118. Volume Control Knob. See Overview ⇔ 119. Infotainment Home Button. See Overview ⇔ 119. Near Field Communication Antenna (NFC). See Bluetooth (Overview) ⇔ 152 or Bluetooth (Pairing and Using a Phone) ⇔ 153. Manual Shift Paddles. See Manual Mode ⇔ 201. Indicator Lever. See Turn and Lane-Change Signals ⇔ 114. Exterior Lamp Controls ⇔ 112. Instrument Cluster ⇔ 89. Windscreen Wiper/Washer ⇔ 84. Air Vents ⇔ 170. Head-Up Display Controls (If Equipped). See Head-Up Display (HUD) ⇔ 105. Instrument Panel Illumination Control ⇔ 115. 	 Data Link Connector (DLC) (Out of View). See Malfunction Indicator Lamp (Check Engine Light) ⇔ 96. Electric Parking Brake ⇔ 206. Driver Information Centre (DIC) Controls. See Driver Information Centre (DIC) ⇔ 103. Heated Steering Wheel ⇔ 84. Bluetooth Controls. See Steering Wheel Controls ⇔ 121. Voice Recognition Controls. See Steering Wheel Controls ⇔ 121. Volume Control Buttons. See Steering Wheel Controls ⇔ 121. Volume Control Buttons. See Steering Wheel Controls ⇔ 121. Horn ⇔ 84. Favorites Select Buttons. See Steering Wheel Controls ⇔ 121. Eavorites Select Buttons. See Steering Wheel Controls ⇔ 121. Keyless Ignition. See Driver Mode Control ⇔ 210. Cruise Control ⇔ 221. Keyless Ignition. See Ignition Positions ⇔ 193. Shift Switches. See Dual Clutch Transmission ⇔ 198. Driver Mode Control ⇔ 210. 	 24. Traction Control/Electronic Stability Control \$ 208. Curb View Camera (If Equipped). See Assistance Systems for Parking or Reversing \$ 224. Front Lift System Control (If Equipped). See Front Lift System \$ 216. 25. Dual Automatic Climate Control System \$ 167. Driver and Passenger Heated and Ventilated Seat Controls (If Equipped). See Heated and Ventilated Front Seats \$ 44.
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7

Keys, Doors, and Windows

Keys and Locks

Keys	7
Remote Key	8
Remote Key Operation	8
Remote Vehicle Start	13
Door Locks	15
Delayed Locking	17
Automatic Door Locks	17
Lockout Protection	17

Doors

Bonnet 18	
Hatch (Boot) 20	

Vehicle Security

Vehicle Security	22
Vehicle Alarm System	
Anti-theft Locking System	
Immobiliser Operation	

Exterior Mirrors

Convex Mirrors 25	5
Power Mirrors 25	5
Folding Mirrors 25	5
Heated Mirrors 26	5
Automatic Dimming Mirror 26	5
Reverse Tilt Mirrors 26	5

nterior Mirrors	
Interior Rearview Mirrors	27
Manual Rearview Mirror	27
Automatic Dimming Rearview Mirror	27
Rear Camera Mirror	27

Windows

Windows	29
Power Windows	29
Rear Windows	31
Sun Visors	31

Roof

Roof Panel 31	
Convertible Top 34	r

Keys and Locks

Keys

▲ Warning

Leaving children in a vehicle with a remote key is dangerous and children or others could be seriously injured or killed. They could operate the power windows or other controls or make the vehicle move. The windows will function with the remote key in the vehicle, and children or others could be caught in the path of a closing window. Do not leave children in a vehicle with a remote key.





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



Convertible Shown, Coupe Similar



Convertible Shown, Coupe Similar

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

This vehicle has a Keyless Access system with pushbutton start. See *Ignition Positions* ⇒ *193* for information on starting the vehicle.

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

Remote Key

If there is a decrease in the remote key operating range:

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

Remote Key Operation

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

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

Other conditions can affect the performance of the remote key. See *Remote Key* \Rightarrow 8.



1 : Press to lock both doors and the fuel door. The indicators may flash and/or the horn may sound on the second press to indicate locking. To view available settings from the infotainment screen, touch Settings > Vehicle > Remote Lock, Unlock, Start.

Pressing $\widehat{\Box}$ may also arm the theft-deterrent system. See *Vehicle Alarm System* \Rightarrow 22.

If equipped with remote folding mirrors, double pressing and holding \square for one second may fold the mirrors. See *Folding Mirrors* \Leftrightarrow 25.

T: Press to unlock the driver door and the fuel door. Press again within five seconds to unlock both doors. When remotely unlocking the vehicle at night, the headlamps and taillamps may come on for about 30 seconds to light your approach to the vehicle depending on the settings. To view available settings from the infotainment screen, touch Settings > Vehicle > Remote Lock, Unlock, Start. The indicators may flash to indicate unlocking.

Pressing $\overrightarrow{\Box}$ will disarm the theft-deterrent system. See *Vehicle Alarm System* \Rightarrow 22.

If equipped with remote window operation, double press and hold for three seconds to remotely open the windows, if enabled. To view available settings from the infotainment screen, touch Settings > Vehicle > Remote Lock, Unlock, Start.

If equipped with remote folding mirrors, double pressing and holding $\widehat{\Box}$ for one second may unfold the mirrors. See Folding Mirrors $\Leftrightarrow 25$.

 drive the vehicle, press the brake pedal, then press ENGINE START/STOP, with the remote key in the vehicle.

9

Press and release to initiate vehicle locater. The exterior lamps flash and the horn chirps three times. Press and hold for approximately three seconds to sound the panic alarm. The horn sounds and the indicators flash for 30 seconds, or until pressed again or the vehicle is started.

: Press twice to release the hatch/ trunk. The vehicle must be in P (Park).

: Press twice and continue holding following the second press for approximately one second to release the hood. The vehicle must be in P (Park).

 \leq : If equipped, press and release $\widehat{\mathbf{n}}$, then immediately press and hold \leq continuously to open the convertible top all the way. Release the button to stop movement. This button will only open the convertible top.

If equipped, press and release $\widehat{\bullet}$ then immediately press and hold $\overleftarrow{\leftarrow}$ to open the engine compartment.

Convertible Top

 Do not try to start the vehicle while using the remote key to open the convertible top. Release both the remote key button and ENGINE START/STOP and wait a few seconds before starting the vehicle normally.

Keyless Access Operation

This Keyless Access system allows you to unlock and unlatch the doors and hatch/ trunk without removing the remote key from your pocket, purse, briefcase, etc. The remote key must be within 1 m (3 ft) of the trunk or door being opened. A touchpad is located on the door handle.

The Keyless Access system can be programmed to unlock both doors on the first door handle touchpad press from the driver door. Keyless Access can also be turned Off. To view available settings from the infotainment screen, touch Settings > Vehicle > Remote Lock, Unlock, Start.

If equipped with memory seats, remote keys 1 and 2 are linked to seating positions of memory 1 or 2. See *Memory Seats* \Rightarrow 42.

Keyless Unlocking

Press the door handle touchpad to unlock and open the doors if the remote key is within 1 m (3 ft). To view available settings from the infotainment screen, touch Settings > Vehicle > Remote Lock, Unlock, Start. See Door Locks \Leftrightarrow 15.

Disable/Enable Keyless Unlocking of Exterior Door Handles and Trunk

If equipped, keyless unlocking of the exterior door handles and trunk can be disabled and enabled.

Disabling Keyless Unlocking:

With the vehicle off, press and hold **a** and **a** on the remote key at the same time for approximately three seconds. The indicator lamps will flash four times quickly to indicate access is disabled. Using any exterior handle to unlock the doors or open the hood or hatch/trunk will cause the turn signal lamps to flash four times quickly, indicating access is disabled. If disabled, disarm the alarm system before starting the vehicle. Disabling Keyless Unlocking may also be configured under Vehicle Personalization.

Enabling Keyless Unlocking:

With the vehicle off, press and hold \bigcirc and

a on the remote key at the same time for approximately three seconds. The indicator lamps will flash twice quickly to indicate access is enabled. Enabling Keyless Unlocking may also be configured under Vehicle Personalization.

Passive Locking

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

The fuel door will also lock.

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

If the vehicle is locked with a remote key inside the vehicle, that remote key will be disabled for starting the vehicle and other keyless access operations. To re-enable that remote key, press any button on that remote key. The remote key will also be

11

re-enabled when the vehicle is started with another known remote key, or when the vehicle is unlocked.

To view available settings from the infotainment screen, touch Settings > Vehicle > Remote Lock, Unlock, Start.

If equipped with remote folding mirrors, passive locking may fold and unfold the mirrors. See *Folding Mirrors* \$⇒ 25.

Temporary Disable of Passive Locking

Temporarily disable passive locking by pressing and holding an 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 the vehicle is turned on.

Remote Left in Vehicle Alert

When the vehicle is turned off and a remote key is left in the vehicle, the horn will chirp three times after both doors are closed. To view available settings from the infotainment screen, touch Settings > Vehicle > Remote Lock, Unlock, Start.

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 remote keys inside. If a remote key is not detected, the Driver Information Center (DIC) will display NO KEY FOUND and the horn will chirp three times. This occurs only once each time the vehicle is driven. To view available settings from the infotainment screen, touch Settings > Vehicle > Remote Lock, Unlock, Start.

Keyless Boot Opening



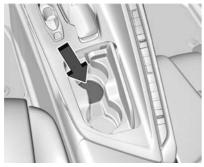
Press the hatch/trunk release touchpad to open the trunk if the remote key is within 1 m (3 ft).

Programming Remote Keys to the Vehicle

Only remote keys programmed to this vehicle will work. If a remote key is lost or stolen, a replacement can be purchased and programmed through your dealer. When the replacement remote key is programmed to this vehicle, all remaining remote keys must also be reprogrammed. Any lost or stolen remote keys will no longer work once the new remote key is programmed.

Starting the Vehicle with a Low Remote Key Battery

For improved vehicle security, the remote key is equipped with a motion sensor. When starting the vehicle, if the remote key has been idle for a while, the DIC may display KEY IN SLEEP MODE, MOVE KEY, THEN START. Move the remote key slightly and try starting the vehicle. If the remote key battery is weak or if there is interference with the signal, the DIC may display NO KEY FOUND, REPLACE BATTERY IN KEY or NO REMOTE KEY WAS DETECTED PLACE KEY IN KEY POCKET, THEN START YOUR VEHICLE. If this occurs, follow these steps:



- 1. Place the remote key in the front cupholder with the mechanical key end facing up.
- 2. With the vehicle in P (Park) or N (Neutral), press the brake pedal and ENGINE START/STOP.

Replace the remote key battery as soon as possible.

Battery Replacement

\land Warning

Never allow children to play with the remote key. The remote key contains a small battery, which can be a choking hazard. If swallowed, internal burns can occur, resulting in severe injury or death. Seek medical attention immediately if a battery is swallowed.

\land Warning

To avoid personal injury, do not touch metal surfaces on the remote key when it has been exposed to extreme heat. These surfaces can be hot to the touch at temperatures above 59 °C (138 °F).

Caution

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

Caution

Always replace the battery with the correct type. Replacing the battery with an incorrect type could potentially create a risk of battery explosion. Dispose of used batteries according to instructions and local laws. Do not attempt to burn, crush, or cut the used battery, and avoid exposing the battery to environments with extremely low air pressures or high temperatures.

Caution

If the remote key is not reassembled properly, liquids could enter the housing and damage the circuitry, resulting in a remote key malfunction and/or failure. To prevent damage, always follow the steps for remote key reassembly in this manual to ensure the remote key is sealed properly whenever the remote key is opened.

Replace the battery if the DIC displays REPLACE BATTERY IN KEY.



 Press the button on the side of the remote key and pull the mechanical key out. Never pull the mechanical key out without pressing the button.



2. Use the mechanical key blade in the slot to remove the battery cover by hand.



- 3. Remove the seal by pulling on the tab to access the battery.
- 4. Remove the old battery. Do not use a metal object.
- 5. Insert the new battery, negative side facing down. Replace with a CR2450 or equivalent battery.
- 6. Replace the seal, pushing it into the groove around the battery compartment.
- 7. Replace the battery cover by snapping it back into the remote key.
- 8. Reinsert the mechanical key.





Batteries in this product must not be disposed of with household waste. Batteries must be recycled at an appropriate facility. Contact local authorities for details on recycling.

Remote Vehicle Start

This feature allows the engine to be started from outside the vehicle.

 $\widehat{f_{x_2}}$: This button on the remote key is for remote start.

The climate control system will use the previous settings during a remote start. The rear window demister may come on during remote start based on cold ambient

conditions. The rear window defogger indicator light does not come on during remote start.

If equipped, the heated and ventilated front seats may also come on when the vehicle personalisation setting is enabled. See Heated and Ventilated Front Seats \Rightarrow 44.

If equipped with a remote start heated steering wheel, it may come on during a remote start. See *Heated Steering Wheel* ⇒ *84*.

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

If your vehicle is low on fuel, do not use the remote start feature. The vehicle may run out of fuel.

The remote key range may be shorter while the vehicle is running.

Other conditions can affect the performance of the remote key. See *Remote Key* \Rightarrow 8.

You have a total of 30 minutes of engine running time. The maximum run time of a single start is 15 minutes, and it will shut off automatically. You could do three 10 minute starts if you manually shut off after 10 minutes. The last 10 minute start would shut off automatically as your total 30 minutes will have been used.

Starting the Engine Using Remote Start

- 1. Press x^2 twice on the remote key. The turn signal lamps will flash. The lamps flash to confirm the request to remote start the vehicle has been received. During the remote start, the parking lights will remain on as long as the engine is running.
- 2. The engine will shut off after 15 minutes or after the remainder of the 30 minute total running time is used, unless you stop the remote start before engine running has completed or the ignition is turned on.
- 3. Press the brake pedal and turn the ignition on to drive the vehicle.

Total Engine Run Time

Remote start can be used for up to 30 minutes of total engine run time.

After two remote starts of 15 minutes, or multiple shorter time starts totaling 30 minutes have been used, the vehicle's ignition must be turned on and then off before the remote start can be used again.

Cancelling a Remote Start

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

- Press \bigcap_{x^2} . The parking lamps will turn off.
- Turn on the hazard warning lights.
- Turn the vehicle on and then back off.

Conditions in Which Remote Start Will Not Work

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

- The ignition is in any mode other than off.
- A remote key is in the vehicle.
- The hatch/trunk is not closed.
- The convertible top is not fully open or closed.
- The tonneau cover is not closed.
- The hazard warning flashers are on.
- There is an emission control system malfunction.

- The engine coolant temperature is too high.
- The oil pressure is low.
- The 30 minutes of engine run time have been used.
- The vehicle is not in P (Park).

Door Locks

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

Warning (Continued)

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

To lock or unlock a door from the outside, press 1 or 1 on the remote key.



For Keyless Access, hold the remote key within 1 m (3 ft) of the door handle. Grip and press the door handle touchpad. See *Remote Key Operation* \Rightarrow 8. This feature can be programmed. To view available settings from the infotainment screen, touch Settings > Vehicle > Remote Lock, Unlock, Start.



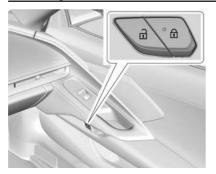
Convertible Shown, Coupe Similar

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

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

1 : Press to unlock the doors.

(Continued)



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

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



Convertible Shown, Coupe Similar

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

Loss of Vehicle Electrical Power

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

From Inside the Vehicle



Pull the driver door release handle.



Pull the passenger door release handle.

From Outside the Vehicle

There is a back up key cylinder to open the left hand door



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

Free-Turning Locks

The key lock cylinder turns freely when either the wrong key is used, or the correct key is not fully inserted. The free-turning lock feature prevents the lock cylinder from being forced open. To reset the lock cylinder, ensure that the correct key is fully inserted into the lock cylinder. Rotate the key until you feel the lock cylinder click back into place. Remove the key and reinsert fully, then rotate the key to unlock the vehicle.

Delayed Locking

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

When $\widehat{\mathbf{r}}$ is pressed on the power door lock switch with the door open, a chime will sound three times indicating that delayed locking is active.

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

Press \bigcirc on the door lock switch again, or press \bigcirc on the remote key, to override this feature and lock the doors immediately.

Delayed locking can be programmed. To view available settings from the infotainment screen, touch Settings > Vehicle > Power Door Locks.

Automatic Door Locks

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

To unlock the doors:

- Press 🖬 on a power door lock switch.
- Shift the gearbox into 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).

Automatic door locking can be programmed. To view available settings for this feature, touch the Settings icon on the infotainment home page. Select "Vehicle" to display the list of available options and select "Power Door Locks".

Lockout Protection

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

If the vehicle is off and locking is requested while a door is open, when all doors are closed the vehicle will check for remote keys inside. If a remote key is detected and the number of remote keys inside has not reduced, the driver door will unlock and the horn will chirp three times.

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

Doors

Bonnet

Bonnet Release

⚠ Warning

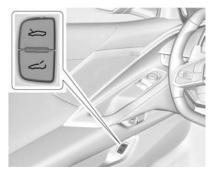
Do not drive the vehicle if the hood is not latched completely. The hood could open fully, block your vision, and cause a crash. You or others could be injured. Always close the hood completely before driving. When the hood is not closed, the vehicle will not exceed 42 km/h (26 mph). Close the hood to drive faster than 42 km/h (26 mph). The hood compartment can be accessed in several ways.

Ensure the hood is clear of any objects before opening.

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

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

Driver Door Hood Latch Release Button



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

Using the Remote Key

Press twice on the remote key to release the hood.

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

Front Fascia TouchPad



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

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

Opening The Hood When There Is No Electrical Power

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

To enter the vehicle in the event electrical power has been lost, see "Loss of Vehicle Electrical Power" under *Door Locks* \Leftrightarrow 15.



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

Emergency Hood Release Button



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

Closing the Hood

▲ Warning

Do not drive the vehicle if the hood is not latched completely. The hood could open fully, block your vision, and cause a crash. You or others could be injured. Always close the hood completely before driving. When the hood is not closed, the vehicle will not exceed 42 km/h (26 mph). Close the hood to drive faster than 42 km/h (26 mph).

The hood is not heavy enough to latch under its own weight. The hood will remain open until the striker is pushed into the latch. Ensure the hood is fully latched before taking the vehicle out of P (Park).

- 1. Before closing the hood, be sure all filler caps are on properly, and all tools are removed.
- 2. Ensure that all cargo is placed away from the emergency hood release button.
- 3. Pull the hood down and set the striker gently into the latch.
- 4. Firmly press down on the front edge of the hood until the latch clicks twice.

5. Check that the hood is flush to the fascia to ensure the hood is fully closed.

Storing Your Vehicle

\land Warning

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

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

Hatch (Boot)

\land Warning

Components under the hatch, hatch vents, and glass can get hot from running the engine. To help avoid the risk of burning unprotected skin, never touch these components until they have cooled, and always use a glove or towel to avoid direct skin contact.

\land Warning

Turn the vehicle off before opening the hatch. If the engine is running with the hatch open, you or others could be injured.

Hatch/Boot Release

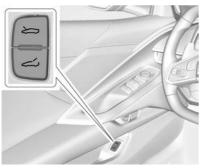
The vehicle must be in P (Park).

\land Warning

When opening or closing the tailgate/ boot, keep hands away from the closure area. You or others could be injured. To release the hatch/boot:

▲ Warning

Vehicles equipped with a rear spoiler have a small amount of space between the hatch/trunk lid and the rear spoiler. To help avoid potential injury from pinching, lift or close the hatch/trunk lid by using only the middle section. If the hatch/trunk lid near the area of the raised portion of the spoiler is used, use one hand to raise/lower the hatch/trunk lid enough to clear the spoiler, and use the other hand to fully open/close the hatch/trunk lid.



Convertible Shown, Coupe Similar

• Press 🧀 on the driver door.



• Press $\overbrace{x_2}^{\checkmark}$ on the remote key two times quickly. See *Remote Key* \Rightarrow 8.



- Keys, Doors, and Windows 21
- Press the hatch/trunk release touchpad while unlocked, or if locked, with the remote key within 1 m (3 ft). See *Keys* ⇒ 7.
- From the rear of the vehicle, lift the hatch/trunk until the gas strut system automatically raises and holds it in the fully open position.

Hatch/Boot Closing

Caution

Do not store heavy or sharp objects in the rear storage compartments located in the hatch/boot area. The objects could damage the underside of the hatch/boot.

Caution

To avoid damage to the tonneau cover, do not store cargo above the weatherstrip in the tailgate (boot). Always store cargo below the weatherstrip.



Use the pull cup to close the hatch/trunk with light force until the power latch feature activates. The hatch/boot will close the rest of the way and latch automatically.

Emergency Hatch/Trunk Release Handle

Caution

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





There is a glow-in-the-dark emergency hatch/trunk release handle on the inside back wall of the storage compartment. This

handle will glow following exposure to light. Pull the release handle to open the hatch/ trunk from the inside.

Vehicle Security

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

Vehicle Alarm System

This vehicle has a theft-deterrent alarm system.



If equipped, 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 bonnet, or the hatch/boot is open.

Slow Flash : Alarm system is armed.

Arming the Alarm System

- 1. Turn off the vehicle.
- 2. Lock the vehicle in one of three ways:
 - Use the remote key.
 - Use the Keyless Access system.
 - With a door open, press **a** on the interior of the door.
- 3. After 30 seconds the alarm system will arm, and the indicator light will begin to slowly flash indicating the alarm system is operating. Pressing **•** on the remote key a second time will bypass the 30-second delay and immediately arm the alarm system.

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

If the driver door is opened without first unlocking with the remote key, 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 $\widehat{\mathbf{a}}$ on the remote key during the 10-second pre-alarm, the alarm will be activated.

The alarm will also be activated if the passenger door, the hatch/boot, or the bonnet 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, do one of the following:

- Press **n** on the remote key.
- 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 left the vehicle and both doors are closed.
- Always unlock a door with the remote key 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 remote key and the horn chirps and the lights flash three times, a previous alarm occurred while the system was armed.

If the alarm has been activated, a message will appear on the DIC.

Inclination Sensor and Intrusion Sensor

In addition to the standard theft-deterrent system features, this system may also have an inclination sensor and intrusion sensor.

The inclination sensor can activate 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 both doors and windows are completely closed.
- Secure any loose items such as sunshades.

• Make sure there are no obstructions blocking the sensors.

Intrusion and Inclination Sensors Disable Switch

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

When the roof panel is off, or the convertible top is down, the intrusion system is turned off.

With the vehicle turned off, press \widetilde{OFF} on the overhead console, next to OnStar. The indicator light will display 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 an anti-theft locking function in addition to the standard door locks.

The anti-theft locking system is engaged whenever you press \bigcirc on the remote key twice within five seconds with all doors closed and the vehicle off. The anti-theft lock can also be engaged using the Keyless Access System. See "Keyless Access Operation" under *Remote Key Operation* \Rightarrow 8.

When the doors are secured with the anti-theft locking system, they cannot be unlocked or opened using the controls or handles inside the vehicle.

Press a on the remote key once to open the anti-theft locking system and unlock the driver door. Pressing the button again within five seconds will unlock all of the doors.

Immobiliser Operation

The vehicle has a passive theft-deterrent system.



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

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

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

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

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

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

If the vehicle does not start and the remote key appears to be undamaged, try another remote key. Or, place the remote key in the cupholder backup location. See *Remote Key Operation* \Rightarrow 8. If the engine still does not start with the other remote key, or with the

remote key in the cupholder backup location, the vehicle needs service. If the engine does start, the first remote key may be faulty. See your dealer or have a new remote key programmed to the vehicle.

The immobilizer system can learn new or replacement remote keys. Up to eight remote keys can be programmed for the vehicle. To program additional remote keys, see "Programming Remote Keys to the Vehicle" under *Remote Key Operation* \Rightarrow 8.

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

Exterior Mirrors

Convex Mirrors

M Warning

A convex mirror can make things, like other vehicles, look farther away than they really are. If you cut too sharply into the right lane, you could hit a vehicle on the right. Check the inside mirror or glance over your shoulder before changing lanes. The passenger side mirror is convex shaped. A convex mirror surface is curved so more can be seen from the driver seat.

Power Mirrors



To adjust each mirror:

- Press □₁ or □□ to select the driver or passenger side mirror. The indicator light will illuminate.
- 2. Press the arrows on the control pad to move the mirror in the desired position.
- 3. Adjust each outside mirror so that a little of the vehicle and the area behind it can be seen.
- 4. Press □₁ or □□ again to deselect the mirror.

Memory Mirrors

The vehicle may have memory mirrors. See *Memory Seats* \Rightarrow 42.

Side Blind Zone Alert (SBZA)

The vehicle may have SBZA. See *Side Blind Zone Alert (SBZA)* ⇔ 227.

Folding Mirrors

Manual Folding Mirrors

If equipped, manually fold the mirrors inward toward the vehicle to prevent damage with tight parking. Push the mirror outward to return it to the original position.

Power Folding Mirrors



If equipped, press ^E₄ to power fold the mirrors. Press ^E₄ again to unfold.

The outside mirrors may automatically unfold when the vehicle is driven above 20 km/h (12 mph), but may be folded with the power folding mirror switch. If the vehicle speed is driven above 40 km/h (25 mph) they may automatically unfold and may not be refolded with the power folding mirror switch.

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

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

Remote Mirror Folding

If equipped with power folding mirrors and the mirrors have not been folded with the power folding mirror switch and the vehicle is in P (Park), they may be automatically folded/unfolded as follows:

- If doors are locked by double pressing on the remote key, the mirrors may fold. If doors are unlocked by double pressing
 on the remote key, the mirrors may unfold. See *Remote Key Operation* ⇔ 8.
- If doors are locked by pressing the door handle button, the mirrors will fold. If doors are unlocked by pressing the driver door handle button, the mirrors may unfold. See "Keyless Unlocking/ Locking from the Driver Door" in *Remote Key Operation* ⇔ 8.
- 3. If passive locking is enabled and doors are locked by that feature, the mirrors may fold. See "Passive Locking" in *Remote Key Operation* ⇔ 8.

If equipped with power folding mirrors, remote mirror folding is on, and the mirrors have been folded with the power folding mirror switch, they may not be automatically unfolded. To view available settings from the infotainment screen, touch Settings > Vehicle > Comfort and Convenience.

Heated Mirrors

: Press to heat the mirrors.

See "Rear Window Demister" under Dual Automatic Climate Control System ⇔ 167.

Automatic Dimming Mirror

If equipped, the driver side mirror automatically adjusts for the glare of headlamps from behind.

Reverse Tilt Mirrors

If equipped with reverse tilt mirrors and 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) may move from their tilted position when:

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

To view available settings from the infotainment screen, touch Settings > Vehicle > Comfort and Convenience.

Interior Mirrors

Interior Rearview Mirrors

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

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

Manual Rearview Mirror

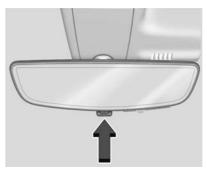
If equipped, push the tab forward for daytime use and pull it rearward for nighttime use to avoid glare of the headlamps from behind.

Automatic Dimming Rearview Mirror

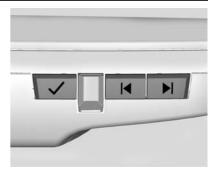
If equipped, automatic dimming reduces the glare of headlamps from behind. The dimming feature comes on when the vehicle is started.

Rear Camera Mirror

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



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



Press \checkmark to scroll through the adjustment options.

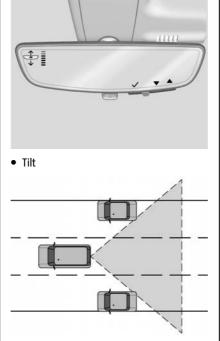
Press \triangleleft and \triangleright to adjust the settings using the indicators on the mirror. The indicators will remain visible for five seconds after the last button activation, and the settings will remain saved.

The adjustment options are:



• Brightness





▲ 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.

Troubleshooting



• Zoom

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

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

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



Coupe Shown, Convertible Similar

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

The Rear Camera Mirror will not work on the convertible with the top down. Use the tab to switch to standard mirror display.

Windows

A 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.

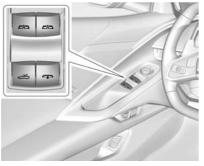


Power Windows

\land Warning

Children could be seriously injured or killed if caught in the path of a closing window. Never leave the remote key 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 7.

Power windows work when the vehicle is on or in accessory mode, or when Retained Accessory Power (RAP) is active. See Retained Accessory Power (RAP) \Rightarrow 195.



Convertible Shown, Coupe Similar

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 Express Movement

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

Pull the window switch up fully and quickly, release to express-close the window.

Briefly press or pull the window switch to stop the window 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.

Programming the Power Windows

Programming may be necessary if the vehicle battery has been disconnected or discharged. If the window will not express-close, program each express-close window:

- 1. Close all doors.
- 2. Turn the ignition on or to accessory mode.
- 3. If equipped, ensure the convertible top is fully closed.
- Partially open the window to be programmed. Then close it and continue to pull the switch briefly after the window has fully closed.
- 5. Open the window and continue to press the switch briefly after the window has fully opened.

Window Operation with Convertible Top

Windows lower when the convertible top is lowered or raised. See *Convertible Top* \Rightarrow 34.

Remote Window Operation

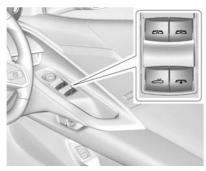
This feature allows the side windows to be opened remotely. If enabled in vehicle personalisation, press twice and hold on the remote key. To view available settings from the infotainment screen, touch Settings > Vehicle > Remote Lock, Unlock, Start.

Window Indexing

When fully closed, indexing automatically lowers the window a small amount when the door is opened. When the door is closed, the window will raise to its previous position. If either window does not index properly, it could be due to loss of power. Before seeing your dealer for service, program the power windows.

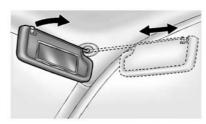
Rear Windows

Midglass (Convertible Only)



Press **T** to lower the midglass. To provide wind block, the midglass will not lower completely. The midglass will also lower automatically when lowering the convertible top.

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

Roof Panel

If equipped with a removable roof panel, use the following procedures to remove or install it.

Caution

If a roof panel is dropped or rested on its edges, the roof panel, paint, and/or weatherstripping may be damaged.

(Continued)

Caution (Continued)

Always place the roof panel in the stowage receivers after removing it from the vehicle.

Caution

Use care when storing and removing the roof panel. The roof panel pins and vehicle finish could be damaged if the roof contacts the rear of the vehicle.

Removing the Roof Panel

▲ Warning

Do not remove a roof panel while the vehicle is moving. The panel could fall into the vehicle and strike an occupant and cause you to lose control. It could also fly off and strike another vehicle. Remove the roof panel only when the vehicle is parked.

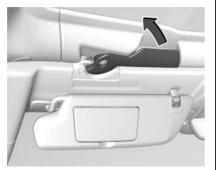
It may be necessary to have help removing the roof panel.

To remove:

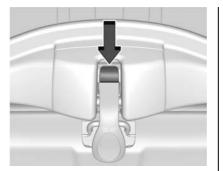
1. Shift transmission into P (Park).

- 2. Turn the ignition off and set the handbrake.
- 3. Lower both sun visors.
- 4. Open the rear tailgate/boot and remove any items that may interfere with proper storage of the roof panel.
- 5. Lower the windows.

There are two release handles on the front and one release handle on the rear of the roof panel.



6. To unlock the front release handles, pull them outward, turning fully.



- 7. Press the button on the front of the rear release handle to unlock it. The catch lever will open.
- Stand on one side of the vehicle and, if necessary, have someone stand on the other side. Together, carefully lift the front edge of the roof panel up and forward. Avoid dropping the rear edge downward.
- 9. When the roof panel is loose, grasp it as close to the centre as possible and lift it away from the vehicle.

Storing the Roof Panel

\land Warning

If a roof panel is not stored properly, it could be thrown about the vehicle in a crash or sudden manoeuvre. People in the vehicle could be injured. Always use the stowage receivers.

1. Position the roof so that the interior is facing away from you and the front of the panel is facing up.



Lower Receivers

2. Insert the roof into the trunk with the rear end first and position the rear pins into the lower receivers. Be careful not to hit the roof on the carpet of the trunk.



Upper Receivers

3. When in place, the roof panel will rest on the upper receivers.



\land Warning

Do not push from the sides of the roof panel when seating the panel into the upper receivers for storage. Pushing from the sides may result in injury from pinched fingers. Only push along the top edge of the roof panel.

4. Place palms along the top edge of the roof panel and push with a quick forward motion until the roof panel locks into the upper receivers. Gently pull rearward on the roof to ensure the roof is secure.

Installing the Roof Panel

▲ Warning

An improperly attached roof panel may fall into or fly off the vehicle. You or others could be injured. After installing the roof panel, always check that it is firmly attached by pushing up on the underside of the panel. Check now and then to be sure the roof panel is firmly in place.

Caution

Installing the roof with the release handles in the closed position could cause damage to the interior trim. Always move handles to the open position when installing the roof.

It is easier if two people install the roof panel.

To install:

- 1. Shift transmission into P (Park).
- 2. Turn the ignition off and set the handbrake.

- 3. Grasp the roof panel and pull toward the rear of the vehicle until it separates from the upper receivers, being careful not to hit the sides of the trunk. Carefully lift the roof panel out of the trunk.
- 4. Carefully place the roof panel over the top of the vehicle.



5. Position the rear edge of the roof panel next to the weatherstrip on the back of the roof opening. Then align and fit the pins at the rear of the roof panel inside the openings in the rear overhead weatherstrip. Gently lower the front edge of the roof panel to the front of the roof opening.

- 6. Check that the weatherstripping on each side of the roof panel is under the panel.
- 7. Make sure the front release handles are in the fully open position.
- 8. Push the roof firmly downward to engage the pins.
- 9. Turn the front release handles inward so that they fully latch in the closed position. It is critical that the handles fully latch.



- 10. Push back and up on the rear release handle to insert the hook in the loop.
- 11. Push and pull the roof panel up and down and side to side to ensure the roof panel is securely installed.

Maintaining the Roof Panel

Caution

Using glass cleaner on a painted roof panel could damage the panel. The repairs would not be covered by the vehicle warranty. Do not use glass cleaner on the painted roof panel.

When cleaning, removing, and/or storing the roof panel:

- Flush with water to remove dust and dirt, then dry the panel.
- Do not use abrasive cleaning materials on the panel.

Convertible Top

If equipped with a convertible top, review the following before operating:

\land Warning

Components under the tonneau, close to the engine, can get hot from running the engine. To help avoid the risk of burning unprotected skin, never touch these components until they have cooled, and always use a glove or towel to avoid direct skin contact.

\land Warning

While opening or closing the convertible top, people can be injured by the moving parts of the tonneau cover or convertible top. Maintain visual contact with the top while it is being operated.

Caution

Follow these guidelines when operating the convertible top or damage can occur:

- Remove all items from the roof, boot lid, or tonneau cover before operating.
- Remove all objects that may contact the convertible top when it is operated.
- Do not leave the vehicle with the convertible top open.
- Do not exceed 50 km/h (31 mph) until the top has completely closed or opened.
- Do not open or close the top while driving in high wind conditions.

(Continued)

Caution (Continued)

- Do not operate the convertible top multiple times in a short period of time without starting the engine to avoid draining the vehicle battery.
- Only store the vehicle with the top fully closed.

Opening the Convertible Top — Driver Door Switch

- 1. Ensure the roof and tonneau cover are clear of any objects.
- 2. The trunk must be closed.
- 3. Start the vehicle or place it in accessory mode.
- 4. When possible, operate the convertible top when the vehicle is stopped. The top can be operated while driving below 50 km/h (31 mph) and will stop if that speed is exceeded. The top operation will take approximately 17 seconds. Make sure the top operation can be completed before that speed is reached.



- 5. Press and hold A. The windows will automatically lower.
- 6. After the convertible top is completely open, a chime sounds and a Driver Information Center (DIC) message displays. Release the switch.

If the radio is on, the sound may be muted for a brief time to automatically adjust the audio after the top is opened.

Opening the Convertible Top - Remote Key

- 1. Make sure the vehicle is in P (Park).
- 2. The trunk must be closed.

36 Keys, Doors, and Windows

 Hold A until the top is completely opened and the exterior lamps flash. A chime will sound.

If the top stops before it has completely opened, press \blacksquare and then press \rightleftharpoons again.

If the top still stops before it is completely open:

- Move closer to the vehicle.
- Hold 📥 until the operation is complete.

If the top still does not open, use the convertible top switch in the vehicle. The convertible top cannot be closed using the remote key.

See Remote Key Operation ⇒ 8.

Closing the Convertible Top

- 1. Make sure the sun visor mirror covers are closed and the sun visors are stored in the center mount position.
- 2. Ensure the roof and tonneau cover are clear of any objects.
- 3. The trunk must be closed.
- 4. Start the vehicle or place it in accessory mode.

5. When possible, operate the convertible top when the vehicle is stopped. The top can be operated while driving below 50 km/h (31 mph) and will stop if that speed is exceeded. The top operation will take approximately 17 seconds. Make sure the top operation can be completed before that speed is reached.



- Pull and hold on the driver door switch. The windows will automatically lower.
- 7. After the convertible top is completely closed, a chime sounds and a DIC message displays. Release the switch. Raise the windows if needed. If the switch is held after the chime sounds, the windows will start to raise.

If the radio is on, the sound may be muted for a brief time to automatically adjust the audio after the top is closed.

Troubleshooting the Convertible Top

Check the following if the convertible top switch $\stackrel{\frown}{\Longrightarrow}$ is not operating:

- The ignition should be on or in accessory mode, or Retained Accessory Power (RAP) should be active.
- The trunk lid must be closed. If it is not, a DIC message will display.
- At cooler outside temperatures, the convertible top may not operate. It is possible to open the top down to temperatures of about 0 °C (32 °F) and close the top down to temperatures of about -10 °C (14 °F). A DIC message will display if the top will not operate due to low temperature. If necessary, move the vehicle to a heated indoor area to operate the top.
- If the top has recently been opened and closed repeatedly, it will be temporarily disabled. A DIC message displays. Normal operation will be restored within 10 minutes after the system has cooled.

- If the vehicle battery is low, the top operation may be disabled. Try to start the vehicle. A DIC message displays.
- If the battery has recently been reconnected or if the vehicle has been jump started, the top may not operate until the power windows have been programmed. Complete the power window programming procedure. See *Power Windows* \$ 29.

Other features may be affected while operating the convertible top:

- If you start the vehicle while using the remote key to open the convertible top, the convertible top will halt the motion. After starting the vehicle, use the convertible top switch inside the vehicle to continue the top motion.
- The windows cannot close while the top is moving.
- When driving with the top not fully secured, chimes can be heard above 50 km/h (31 mph).
- The Rear Camera Mirror will not work with the convertible top down. Use the tab to switch to the standard mirror display.

If the vehicle battery has been disconnected and reconnected, if the fuses were pulled or replaced, or if a jump start was performed, a message indicating the top is not secure may display. Press and release \square and then quickly press and hold $\stackrel{<}{\Longrightarrow}$ on the remote key, or press and hold $\stackrel{<}{\Longrightarrow}$ on the driver door switch to open the top, or pull and hold $\stackrel{<}{\Longrightarrow}$ on the driver door switch to close the top until this message clears.

Partial Top Cycling

If the convertible top operation is stopped before completion, the top will temporarily hold its position. Over time, the tonneau may drift to a near closed position.

Opening the Tonneau Cover — Engine Access

\land Warning

When opening or closing the tonneau cover, people can be injured by the moving parts of the tonneau cover. Maintain visual contact with the tonneau cover when it is in motion and keep hands and objects away from the moving parts. To open the tonneau cover and access the engine:

- 1. Make sure the vehicle is in P (Park).
- 2. Ensure the tonneau cover is clear of any objects.
- 3. The trunk and convertible top must be closed.
- Keep visual contact with the vehicle. Press and release on the remote key and then quickly press and hold منتي. A chime will sound, a DIC message will display, and the turn signals will flash once.

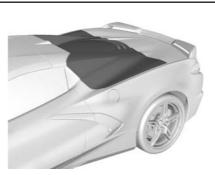


5. Hold عنه until the tonneau cover is completely opened. The turn signals will flash once.

In the event the tonneau cover is partially open, the motion of the tonneau cover will be in the opposite direction upon reactivation.

Closing the Tonneau Cover — Engine Access Function

- 1. Make sure the vehicle is off.
- 2. Remove all objects from the engine compartment.
- 3. The trunk and convertible top must be closed.



 Hold function until the tonneau cover is completely closed. A chime will sound, a DIC message will display, and the turn signals will flash once.

Troubleshooting the Tonneau Cover — Engine Access

Check the following if the tonneau cover is not operating properly:

- The remote key must be used.
- The ignition must be off.
- The convertible top must be fully closed.
- The remote key may need to be closer to the vehicle.
- Press and release and then quickly press and hold again.

Head Restraints

Head Restraints)
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Front Seats

Power Seat Adjustment	40
Reclining Seat Backrests	
Lumbar Adjustment	41
Memory Seats	42
Heated and Ventilated Front Seats	

Seat Belts

Seat Belts (Left-hand Drive Shown,
Right-hand Drive Similar) 45
How to Wear Seat Belts Properly
(Left-hand Drive Shown, Right-hand
Drive Similar) 46
Lap-Shoulder Belt (For Left-hand Drive
Vehicles with a Passenger Sensing
System) 48
Lap-Shoulder Belt (For Right-hand Drive
Vehicles without a Passenger Sensing
System) 51
Seat Belt Use During Pregnancy
(Left-hand Drive Shown, Right-hand
Drive Similar) 54
Safety System Check 54
Seat Belt Care 54

Replacing Seat Belt System Parts after a Crash 55
Airbag System
Airbag System
Shown, Right-hand Drive Similar) 56
When Should an Airbag Inflate? 57
What Makes an Airbag Inflate? 58
How Does an Airbag Restrain? 58
What Will You See after an Airbag
Inflates? 58
Passenger Sensing System (For Left-hand Drive Vehicles with a Passenger
Sensing System) 59 Servicing the Airbag-Equipped
Vehicle
Adding Equipment to the Airbag-Equipped Vehicle (For Left-hand Drive Vehicles with a Passenger
Sensing System)63 Adding Equipment to the Airbag-Equipped Vehicle (For
Right-hand Drive Vehicles without a Passenger Sensing System)
Crash 65

Child Restraints

Older Children (Left-hand Drive Shown,	
Right-hand Drive Similar)	65
Infants and Young Children (Left-hand	
Drive Shown, Right-hand Drive	
Similar)	66
Child Restraint Systems	
Where to Put the Restraint	70
ISOFIX Child Restraint Systems	74
Securing Child Restraints (For Left-hand	
Drive Vehicles with a Passenger	
Sensing System)	75
Securing Child Restraints (For Right-hand	
Drive Vehicles without a Passenger	
Sensing System)	77

Head Restraints

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

The front seat outboard head restraints are not removable.

Front Seats

Power Seat Adjustment

▲ Warning

The power seats will work with the ignition off. Children could operate the power seats and be injured. Never leave children alone in the vehicle.

\land Warning

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



To adjust the seat:

- Move the seat forward or rearward by sliding the control forward or rearward.
- Raise or lower the front part of the seat cushion by moving the front of the control up or down. This adjustment will also change the seatback position. Readjustment of the seatback may be required.
- Raise or lower the seat by moving the rear of the control up or down.

To adjust the seatback, see Reclining Seat Backrests \Rightarrow 40.

To adjust the lumbar support, see *Lumbar Adjustment* ⇔ 41.

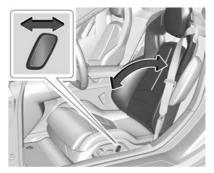
Obstructions

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

Seat Travel Limit

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

Reclining Seat Backrests



To adjust the seatback:

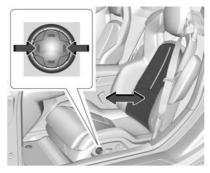
- Tilt the top of the control rearward to recline.
- Tilt the top of the control forward to raise.

\land 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.

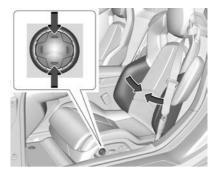
For proper protection when the vehicle is in motion, have the seatback upright. Then sit well back in the seat and wear the seat belt properly.

Lumbar Adjustment



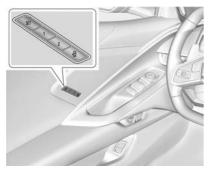
If equipped, press and hold the control forward to increase or rearward to decrease lumbar support.

Bolster Adjustment



If equipped, press and hold the control upward to increase or downward to decrease the side bolster support.

Memory Seats



Overview

If equipped, the memory seat feature allows drivers to save their unique driving positions and a shared exit position. See "Saving Seating Positions" later in this section. The saved positions can be recalled manually by all drivers. See "Manually Recalling Seating Positions" later in this section. Drivers with remote key 1 and 2 can also recall them automatically. See "Auto Seat Entry Memory Recall" or "Auto Seat Exit Memory Recall" later in this section. To enable automatic recalls, turn on Seat Entry Memory and/or Seat Exit Memory. See "Enabling Automatic Recalls" later in this section. The memory recalls may be cancelled at any time during the recall. See "Cancel Memory Seating Recalls" later in this section.

Identifying Driver Number

The vehicle identifies the current driver bu their remote key number 1-8. The current remote key number may be identified by Driver Information Center (DIC) welcome message, "You are driver x for memory recalls." This message is displayed the first few times the vehicle is turned on when a different remote key is used. For Seat Entry Memory to work properly, save positions to the 1 or 2 memory button matching the driver number of this welcome message. To aid in identifying remote key IDs, it is recommended to only carry one remote key when entering the vehicle. Perform the following if the welcome message is not displayed:

- 1. Move all remote keys away from the vehicle.
- Start the vehicle with another remote key. A DIC welcome message should display indicating the driver number of the other remote key. Turn the vehicle off and remove the other remote key from the vehicle.

 Start the vehicle with the initial remote key. The DIC welcome message should display the driver number of the initial remote key.

Saving Seating Positions

Read these instructions completely before saving memory positions.

To save preferred driving positions to 1 and 2:

- Turn the vehicle on. A DIC welcome message may indicate the driver number of the current remote key. See "Identifying Driver Number" previously in this section.
- 2. Adjust all available memory features to the desired driving position.
- 3. Press and release SET; a beep will sound.
- 4. Immediately upon releasing SET, press and hold memory button 1 or 2 matching the current Driver's remote key number until two beeps sound. If too much time passes between releasing SET and pressing 1 or 2, the two beeps will not sound indicating memory positions were not saved. Repeat Steps 3 and 4 to try again.

5. Repeat Steps 1–4 for the other remote key 1 or 2 using the other 1 or 2 memory button.

If you are the only driver, it is recommended to save the preferred driving position to both 1 and 2.

To save the common exit seating position to that is used by all drivers for Manually Recalling Seating Positions and Auto Seat Exit Memory Recall features, repeat Steps 1– 4 using the exit button.

Manually Recalling Seating Positions

Press and hold 1, 2, or D button until the recall is complete, to recall the positions previously saved to that button.

Manual Memory recall movement for 1, 2 or buttons may be initiated and will complete to the saved memory position if the vehicle is in or out of P (Park).

Enabling Automatic Recalls

 Seat Entry Memory moves the driver seat to the selected 1 or 2 position when the vehicle is started. Select Settings > Vehicle > Seating Position > Seat Entry Memory > ON or OFF. See "Auto Seat Entry Memory Recall" later in this section. Seat Exit Memory moves the driver seat to the preferred exit position of the (1) button when the vehicle is turned off and the door is opened. Select Settings > Vehicle > Seating Position > Seat Exit Memory > Select ON or OFF. See "Auto Seat Exit Memory Recall" later in this section.

Auto Seat Entry Memory Recall

Seat Entry Memory will automatically begin movement to the seating positions of the 1 or 2 button corresponding to the driver's remote key number 1 or 2 detected by the vehicle when:

- The vehicle is turned ON.
- Seating positions have been previously saved to the same 1 or 2 button. See "Saving Seating Positions" previously in this section.
- Seat Entry Memory is enabled. See "Enabling Automatic Recalls" previously in this section.
- The vehicle is in P (Park).

Seat Entry Memory Recall will continue if the vehicle is changed out of P (Park) prior to reaching the saved memory position. If the saved memory seat position does not automatically recall, verify the recall is enabled. See "Enabling Automatic Recalls" previously in this section.

If the memory seat recalls to the wrong position, the driver's remote key number 1 or 2 may not match the memory button number positions they were saved to. Try the other remote key or try saving the positions to the other 1 or 2 memory button. See "Saving Seating Positions" previously in this section.

Automatic Seat Entry Memory recalls are only available for driver's remote key numbers 1 and 2. Remote keys 3–8 will not provide Seat Entry Memory recalls.

Auto Seat Exit Memory Recall

Seat Exit Memory will begin movement to the seating position of the Debutton when:

- The vehicle is turned off and the driver door is open or opened within a short time.
- A seating position has been previously been saved to the D memory button. See "Saving Seating Positions" previously in this section.

- Seat Exit Memory is enabled. See "Enabling Automatic Recalls" previously in this section.
- The vehicle is in P (Park).

Seat Exit Memory recall will continue if the vehicle is changed out of P (Park) prior to reaching the saved memory position.

Seat Exit Memory is not linked to the driver's remote key. The seating position saved to is used for all drivers.

Cancel Memory Seating Recalls

- During any memory recall: Press a power seat control Press SET memory button
- During Manual memory recall: Release 1, 2, or in memory button
- During Auto Seat Entry Memory Recall: Turn vehicle off
- Press SET, 1, 2, or memory buttons
 During Auto Seat Exit Memory Recall:
- Press SET, 1, 2, or im memory buttons

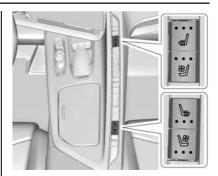
Obstructions

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

Heated and Ventilated Front Seats

▲ Warning

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



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

Press # or # to heat the driver or passenger seat.

Press 20 or 30, if equipped, to ventilate the driver or passenger seat. A ventilated seat has a fan that pulls or pushes air through the seat. The air is not cooled.

Press the button once for the highest setting. With each press of the button, the seat will change to the next lower setting, and then to the off setting. The indicator lights show three for the highest setting and one for the lowest. If the heated seats are on high, the level may automatically be lowered after approximately 30 minutes.

The passenger seat may take longer to heat up.

Auto Heated and Ventilated Seats

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

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

Use the manual heated and ventilated seat buttons on the console to turn auto heated or ventilated seats off. If the passenger seat is unoccupied, the auto heated or ventilated seats feature will not activate that seat. To enable or disable auto heated or ventilated seats, select Settings > Vehicle > Climate and Air Quality > Auto Cooled or Auto Heated Seats > ON or OFF. If equipped with a heated steering wheel, the auto heated steering wheel activation will follow the heated seat auto activation and the heated steering wheel indicator will follow the status of the steering wheel heat.

Remote Start Heated and Ventilated Seats

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

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

To enable or disable remote start heated or ventilated seats, select Settings > Vehicle > Remote Lock, Unlock, and Start > Remote Start Auto Heat Seats or Remote Start Auto Cool Seats > ON or OFF. See *Remote Vehicle Start* \Leftrightarrow 13.

Seat Belts

Seat Belts (Left-hand Drive Shown, Right-hand Drive Similar)

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

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

Warning (Continued)

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 93.

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 force of 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 seat belts?

A: Airbags are supplemental systems only. They work *with* the 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.

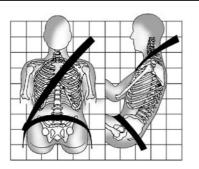
How to Wear Seat Belts Properly (Left-hand Drive Shown, Right-hand Drive Similar)

Follow these rules for everyone's protection.

There are additional things to know about seat belts and children, including smaller children and infants. If a child will be riding in the vehicle, see Older Children (Left-hand Drive Shown, Right-hand Drive Similar) \Leftrightarrow 65 or Infants and Young Children (Left-hand Drive Shown, Right-hand Drive Similar) \Leftrightarrow 66. Review and follow the rules for children in addition to the following rules.

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

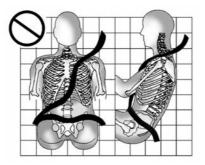
There are important things to know about wearing a seat belt properly.

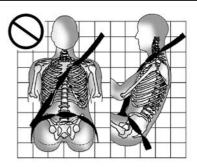


- Sit up straight and always keep your feet on the floor in front of you (if possible).
- Wear the lap part of the belt low and snug on the hips, just touching the thighs. In a crash, this applies force to the strong pelvic bones and you would be less likely to slide under the lap belt. If you slid under it, the belt would apply force on your abdomen. This could cause serious or even fatal injuries.
- Wear the shoulder belt over the shoulder and across the chest. These parts of the body are best able to take belt restraining forces. The shoulder belt locks if there is a sudden stop or crash.

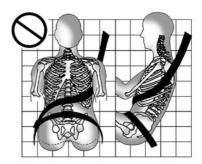
M Warning

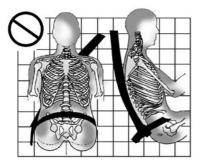
You can be seriously injured, or even killed, by not wearing your seat belt properly.



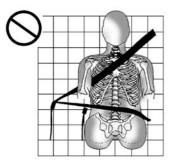


Never allow the lap or shoulder belt to become loose or twisted.

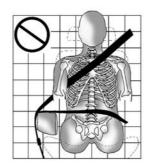




Never wear the shoulder belt under both arms or behind your back.



Always use the correct buckle for your seating position.



Never route the lap or shoulder belt over an armrest.

⚠ Warning

The seat belt can be pinched if it is routed under plastic trim on the seat, such as trim around the rear backrest folding handle or side airbag. In a crash, pinched seat belts might not provide adequate protection. Never allow seat belts to be routed under plastic trim pieces.

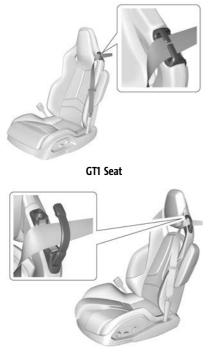
\land Warning

You can be seriously injured or killed if the shoulder belt is worn behind your back, under your legs, or wrapped around your neck. The shoulder belt can tighten but cannot be loosened if it is locked. The shoulder belt locks when it is pulled all the way out of the retractor. It unlocks when the shoulder belt is allowed to go all the way back into the retractor, but it cannot do this if it is wrapped around you. You may have to cut the seat belt if it is locked and tightened around you.

Lap-Shoulder Belt (For Left-hand Drive Vehicles with a Passenger Sensing System)

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

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

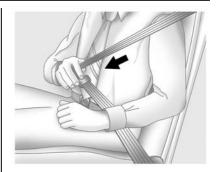


GT2/Competition Seat

- The seat has a seat belt guide. The seat belt must be routed through the guide to properly position the shoulder belt on occupants whose shoulder is below the guide when seated. To use the seat belt guide:
 - GT1 Seat: Slide the edge of the belt webbing through the opening on the guide. Be sure the belt is not twisted. If a child will be riding in the vehicle, see Older Children (Left-hand Drive Shown, Right-hand Drive Similar) \Rightarrow 65 or Infants and Young Children (Left-hand Drive Shown, Right-hand Drive Similar) \Rightarrow 66.

GT2/Competition Seat: Unsnap the guide to open it. Route the seat belt webbing onto the open guide and snap the guide closed. Be sure the belt is not twisted. If a child will be riding in the vehicle, see Older Children (Left-hand Drive Shown, Right-hand Drive Similar) \Leftrightarrow 65 or Infants and Young Children (Left-hand Drive Shown, Right-hand Drive Similar) \Leftrightarrow 66.

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



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

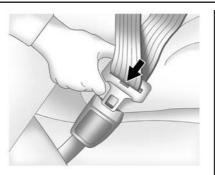
The lap-shoulder belt may lock if you pull the belt across you very quickly. If this happens, let the belt go back slightly to unlock it. Then pull the belt across you more slowly.

If the shoulder portion of a passenger belt is pulled out all the way, the child restraint locking feature may be engaged. See *Child Restraint Systems* ⇔ 68. If this occurs, let the belt go back all the way and start again. If the locking feature stays engaged after letting the belt go back to stowed

position on the seat, move the seat rearward or recline the seat until the shoulder belt retractor lock releases.

Engaging the child restraint locking feature in the front outboard seating position may affect the passenger sensing system. See Passenger Sensing System (For Left-hand Drive Vehicles with a Passenger Sensing System) ⇔ 59.

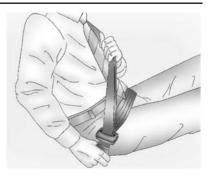
If the shoulder portion of the driver belt is pulled out all the way, the shoulder belt retractor lock feature may be engaged. If this happens, let the belt go back all the way and start again. If the locking feature stays engaged after letting the belt go back to stowed position on the seat, move the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



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

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

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



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



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

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

Seat Belt Pretensioners

This vehicle has seat belt pretensioners for the front outboard occupants. Although the seat belt pretensioners cannot be seen, they are part of the seat belt assembly. They can help tighten the seat belts during the early stages of a moderate to severe frontal, near frontal, or rear crash if the threshold conditions for pretensioner activation are met. Seat belt pretensioners can also help tighten the seat belts in a side crash or a 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 55.

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.

Lap-Shoulder Belt (For Right-hand Drive Vehicles without a Passenger Sensing System)

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

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



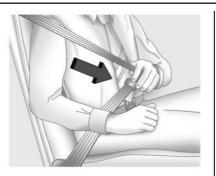


 The seat has a seat belt guide. The seat belt must be routed through the guide to properly position the shoulder belt on occupants whose shoulder is below the guide when seated. To use the seat belt guide:

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GT2/Competition Seat: Unsnap the guide to open it. Route the seat belt webbing onto the open guide and snap the guide closed. Be sure the belt is not twisted. If a child will be riding in the vehicle, see Older Children (Left-hand Drive Shown, Right-hand Drive Similar) \Leftrightarrow 65 or Infants and Young Children (Left-hand Drive Shown, Right-hand Drive Similar) \Leftrightarrow 66.

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



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

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

If the shoulder portion of a passenger belt is pulled out all the way, the child restraint locking feature may be engaged. See *Child Restraint Systems* ⇒ 68. If this occurs, let the belt go back all the way and start again. If the locking feature stays engaged after letting the belt go back to stowed position on the seat, move the seat rearward or recline the seat until the shoulder belt retractor lock releases.

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



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

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

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



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



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

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

Seat Belt Pretensioners

This vehicle has seat belt pretensioners for the front outboard occupants. Although the seat belt pretensioners cannot be seen, they are part of the seat belt assembly. They can help tighten the seat belts during the early stages of a moderate to severe frontal, near frontal, or rear crash if the threshold conditions for pretensioner activation are met. Seat belt pretensioners can also help tighten the seat belts in a side crash or a 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 55.

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

Seat Belt Use During Pregnancy (Left-hand Drive Shown, Right-hand Drive Similar)

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 less likely that the foetus will be hurt in a crash. For pregnant women, as for anyone, the key to making seat belts effective is to wear 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 sustem parts that might keep a seat belt system from performing properly. See your dealer to have it repaired. Torn, frayed or twisted seat belts may not protect you in a crash. Torn or frayed seat belts can rip apart under impact forces. If a belt is torn or frayed, have it replaced immediately. If a belt is twisted, it may be possible to untwist it by reversing the latch plate on the webbing. If the twist cannot be corrected, ask your retailer to fix it

Make sure the seat belt reminder light is working. See *Seat Belt Reminders* \Rightarrow *93*.

Keep seat belts clean and dry. See *Seat Belt Care* ⇔ *54.*

Seat Belt Care

Keep belts clean and dry.

Seat belts should be properly cared for and maintained.

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

\land Warning

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

Replacing Seat Belt System Parts after a Crash

\land 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 and seat belt guides inspected or replaced.

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

Have the seat belt pretensioners checked if the vehicle has been in a crash, or if the airbag readiness light stays on after you start the vehicle or while you are driving. See Airbag Readiness Light (For Left-hand Drive Vehicles with a Passenger Sensing System) ⇔ 94 or

Airbag Readiness Light (For Right-hand Drive Vehicles without a Passenger Sensing System) ⇔ 94.

\land 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.

Airbag System

The vehicle has the following airbags:

- A frontal airbag for the driver
- A frontal airbag for the front outboard passenger
- A seat-mounted side impact airbag for the driver
- A seat-mounted side impact airbag for the front outboard passenger

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

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

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

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

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

\land Warning

You can be severely injured or killed in a crash if you are not wearing your seat belt, even with airbags. Airbags are designed to work with seat belts, not replace them. Also, airbags are not designed to inflate in every crash. In some crashes seat belts are the only restraint. See When Should an Airbag Inflate? \Rightarrow 57.

(Continued)

Warning (Continued)

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

\land Warning

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

Warning (Continued)

most effective when you are sitting well back and upright in the seat with both feet on the floor.

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

⚠ Warning

Children who are up against, or very close to, any airbag when it inflates can be seriously injured or killed. Always secure children properly in the vehicle. To read how, see Older Children (Left-hand Drive Shown, Right-hand Drive Similar) ⇔ 65 or Infants and Young Children (Left-hand Drive Shown, Right-hand Drive Similar) ⇔ 66.



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 (For Left-hand Drive Vehicles with a Passenger Sensing System) \Rightarrow 94 or Airbag Readiness Light (For Right-hand Drive Vehicles without a Passenger Sensing System) \Rightarrow 94.

Where Are the Airbags? (Left-hand Drive Shown, Right-hand Drive Similar)



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.



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.

\land Warning

If something is between an occupant and an airbag, the airbag might not inflate properly or it might force the object into that person causing severe injury or even death. The path of an inflating airbag must be kept clear. Do not put anything between an occupant and an airbag, and (Continued)

Warning (Continued)

do not attach or put anything on the steering wheel hub or on or near any other airbag covering.

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

When Should an Airbag Inflate?

This vehicle is equipped with airbags. See Airbag System \Rightarrow 55. Airbags are designed to inflate if the impact exceeds the specific airbag system's deployment threshold. Deployment thresholds are used to predict how severe a crash is likely to be in time for the airbags to inflate and help restrain the occupants. The vehicle has electronic sensors that help the airbag system determine the severity of the impact. Deployment thresholds can vary with specific vehicle design.

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

Whether the frontal airbags will or should inflate is not based primarily on how fast the vehicle is 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, in rear impacts, or in many side impacts.

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

Seat-mounted side impact airbags are designed to inflate in moderate to severe side crashes depending on the location of the impact. These airbags may also inflate in some moderate to severe frontal impacts. Seat-mounted side impact airbags are not designed to inflate in rollovers or rear impacts. A seat-mounted side impact airbag is designed to inflate on the side of the vehicle that is struck. In any particular crash, no one can say whether an airbag should have inflated simply because of the vehicle damage or repair costs.

What Makes an Airbag Inflate?

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

For airbag locations, see Where Are the Airbags? (Left-hand Drive Shown, Right-hand Drive Similar) ⇔ 56.

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. 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? ⇔ 57.

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

What Will You See after an Airbag Inflates?

After the frontal and seat-mounted side impact airbags inflate, they quickly deflate, so quickly that some people may not even realise the airbags inflated. Some components of the airbag module may be hot for several minutes. For location of the airbags, see Where Are the Airbags? (Left-hand Drive Shown, Right-hand Drive Similar) ⇔ 56.

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.

\land 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 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.

\land 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 ⇔ 317.
- Let only qualified technicians work on the airbag system. Improper service can mean that the airbag system will not work properly. See your dealer for service.

Passenger Sensing System (For Left-hand Drive Vehicles with a Passenger Sensing System)

If the vehicle has the following indicator, then 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 symbols for on and off will be visible during the system check.

When the system check is complete, either the symbol for on or off will be visible. See Passenger Airbag Status Indicator (For Left-hand Drive Vehicles with a Passenger Sensing System) ⇔ 95.

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

The passenger sensing system works with sensors that are part of the front outboard passenger seat and seat belt.

The sensors are designed to detect the presence of a properly-seated occupant and determine if the front outboard passenger frontal airbag should be allowed to inflate or not.

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

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

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

\land Warning

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

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

Never put a rear-facing child restraint in the front seat, even if the airbag is off. If securing a forward-facing child restraint in the front outboard passenger seat, always move the seat as far back as it (Continued)

Warning (Continued)

will go. It is better to secure child restraints in the rear seat. Consider using another vehicle to transport the child when a rear seat is not available.

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

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

When the passenger sensing system has turned off the front outboard passenger frontal airbag, the OFF indicator will light and stay lit as a reminder that the airbag is off. See Passenger Airbag Status Indicator (For Left-hand Drive Vehicles with a Passenger Sensing System) ⇔ 95.

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

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

▲ Warning

If the airbag readiness light ever comes on and stays on, it means that something may be wrong with the airbag system. To help avoid injury to yourself or others, have the vehicle serviced right away. See Airbag Readiness Light (For Left-hand Drive Vehicles with a Passenger Sensing System) \$\$94 or

(Continued)

Warning (Continued)

Airbag Readiness Light (For Right-hand Drive Vehicles without a Passenger Sensing System) ⇔ 94 for more information, including important safety information.

If the On Indicator Is Lit for a Child Restraint

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

1. Turn the vehicle off.

- 2. Remove the child restraint from the vehicle.
- 3. Remove any additional items from the seat such as blankets, cushions, seat covers, seat heaters, or seat massagers.
- 4. Reinstall the child restraint following the directions provided by the child restraint manufacturer and refer to Securing Child Restraints (For Left-hand Drive Vehicles with a Passenger Sensing System) ⇔ 75 or

Securing Child Restraints (For Right-hand Drive Vehicles without a Passenger Sensing Sustem) ⇔ 77.

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

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

The passenger sensing system may or may not turn off the airbag for a child in a child restraint depending upon the child's size. It is better to secure child restraints in a rear seat. Consider using another vehicle to transport the child when a rear seat is not available. Never put a rear-facing child restraint in the front seat, even if the ON indicator is not lit.

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



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

- 1. Turn the vehicle off.
- 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.
- 6. Restart the vehicle and have the person remain in this position for two to three minutes after the ON indicator is lit.

\land Warning

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

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 (For Left-hand Drive Vehicles with a Passenger Sensing System) ⇒ 63 or Adding Equipment to the Airbag-Equipped Vehicle (For Right-hand Drive Vehicles without a Passenger Sensing *Sustem*) \Rightarrow 64 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.

A 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.

A 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 (Continued)

Warning (Continued)

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

\land 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.

Adding Equipment to the Airbag-Equipped Vehicle (For Left-hand Drive Vehicles with a Passenger Sensing System)

Adding accessories that change the vehicle's frame, bumper system, height, front end, or side sheet metal may keep the airbag system from working properly.

The operation of the airbag system can also be affected by changing, including improperly repairing or replacing, any parts of the following:

- Airbag system, including airbag modules, front or side impact sensors, sensing and diagnostic module, or airbag wiring
- Front seats, including stitching, seams or zip fasteners
- Seat belts
- Steering wheel, instrument panel, ceiling trim, or pillar garnish trim
- Inner door seals, including speakers

Your retailer and the service manual have information about the location of the airbag modules and sensors, sensing and diagnostic modules and airbag wiring, along with the proper replacement procedures.

In addition, the vehicle may have a passenger sensing system for the front outboard passenger position, which includes sensors that are part of the passenger seat. The passenger sensing system may not operate properly if the original seat trim is replaced with non-GM covers, upholstery or trim, or with GM covers, upholstery or trim designed for a different vehicle. Any object, such as an aftermarket seat heater or a

comfort-enhancing pad or device, installed under or on top of the seat fabric, could also interfere with the operation of the passenger sensing system. This could either prevent proper deployment of the passenger airbag(s) or prevent the passenger sensing system from properly turning off the passenger airbag(s). See Passenger Sensing System (For Left-hand Drive Vehicles with a Passenger Sensing System) ⇔ 59.

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

Adding Equipment to the Airbag-Equipped Vehicle (For Right-hand Drive Vehicles without a Passenger Sensing System)

Adding accessories that change the vehicle's frame, bumper system, height, front end, or side sheet metal may keep the airbag system from working properly.

The operation of the airbag system can also be affected by changing, including improperly repairing or replacing, any parts of the following:

- Airbag system, including airbag modules, front or side impact sensors, sensing and diagnostic module, or airbag wiring
- Front seats, including stitching, seams or zip fasteners
- Seat belts
- Steering wheel, instrument panel, ceiling trim, or pillar garnish trim
- Inner door seals, including speakers

Your retailer and the service manual have information about the location of the airbag modules and sensors, sensing and diagnostic modules and airbag wiring, along with the proper replacement procedures.

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

Airbag System Check

The airbag system does not need regularly scheduled maintenance or replacement. Make sure the airbag readiness light is working. See Airbag Readiness Light (For Left-hand Drive Vehicles with a Passenger Sensing System) \Rightarrow 94 or Airbag Readiness Light (For Right-hand Drive Vehicles without a Passenger Sensing System) \Rightarrow 94.

Caution

If an airbag covering is damaged, opened, or broken, the airbag may not work properly. Do not open or break the airbag coverings. If there are any opened or broken airbag coverings, have the airbag covering and/or airbag module replaced. For the location of the airbags, see Where Are the Airbags? (Left-hand Drive Shown, Right-hand Drive Similar) ⇔ 56. See your dealer for service. Replacing Airbag System Parts after a Crash

\land 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 (For Left-hand Drive Vehicles with a Passenger Sensing System) \Rightarrow 94 or Airbag Readiness Light (For Right-hand Drive Vehicles without a Passenger Sensing System) \Rightarrow 94.

\land 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 (Left-hand Drive Shown, Right-hand Drive Similar)



Older children who have outgrown booster seats should wear the vehicle's seat belts. Refer to How to Wear Seat Belts Properly (Left-hand Drive Shown, Right-hand Drive Similar) \Rightarrow 46.

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.
- Fasten the lap-shoulder belt. Does the shoulder belt rest on the shoulder? If yes, continue. If no, return to the booster seat.
- Does the lap belt fit low and snug on the hips, touching the thighs? If yes, continue. If no, return to the booster seat.
- Can proper seat belt fit be maintained for the length of the trip? If yes, continue. If no, return to the booster seat.
- Q: What is the proper way to wear seat belts?
- A: An older child should wear a lap-shoulder belt and get the additional restraint a shoulder belt can provide. The shoulder belt should not cross the face or neck.

The lap belt should fit snugly below the hips, just touching the top of the thighs. This applies belt force to the child's pelvic bones in a crash. It should never be worn over the abdomen, which could cause severe or even fatal internal injuries in a crash.

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

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

\land 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.



\land Warning

Never allow a child to wear the shoulder belt of the seat belt under both arms or behind their back. A child can be seriously injured by not wearing the lap-shoulder belt properly. In a crash, the child would not 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 (Left-hand Drive Shown, Right-hand Drive Similar)

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 killed if the shoulder belt is worn behind their back, under their legs, or wrapped around their neck. The shoulder belt can tighten (Continued)

Warning (Continued)

but cannot be loosened if it is locked. The shoulder belt locks when it is pulled all the way out of the retractor. It unlocks when the shoulder belt is allowed to go all the way back into the retractor, but it cannot do this if it is wrapped around the child. Never leave children unattended in a vehicle and never allow children to improperly wear, or play with, the seat belts.

Every time infants and young children ride in vehicles, they should have the protection provided by appropriate child restraints. Neither the vehicle'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. (Continued)

Warning (Continued)

For example, in a crash at only 40 km/h (25 mph), a 5.5 kg (12 lb) infant will suddenly become a 110 kg (240 lb) force on a person's arms. An infant or child should be secured in an appropriate child restraint.



\land 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 (Continued)

Warning (Continued)

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



Child restraints are devices used to restrain, seat, or position children in the vehicle and are sometimes called child seats or car seats.

There are three basic types of child restraints:

- Forward-facing child restraints
- Rear-facing child restraints

• Belt-positioning booster seats

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

For each type of child restraint, there are many different models available. When purchasing a child restraint, be sure it is designed to be used in a motor vehicle.

The instruction manual that is provided with the child restraint states the weight and height limitations for that particular child restraint. In addition, there are many kinds of child restraints available for children with special needs.

A 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.

\land Warning

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

Child Restraint Systems



Rear-Facing Infant Restraint

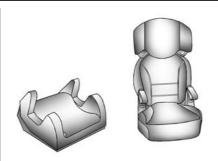
A rear-facing child restraint provides restraint with the seating surface against the back of the infant.

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



Forward-Facing Child Restraint

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



Booster Seats

A belt-positioning booster seat is used for children who have outgrown their forward-facing child restraint. Boosters are designed to improve the fit of the vehicle'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 (Left-hand Drive Shown, Right-hand Drive Similar) \$\$ 65. Securing an Add-On Child Restraint in the Vehicle

▲ Warning

A child can be seriously injured or killed in a crash if the child restraint is not properly secured in the vehicle. Secure the child restraint properly in the vehicle using the vehicle seat belt, following the instructions that came with that child restraint and the instructions in this manual.

To help reduce the chance of injury, the child restraint must be secured in the vehicle. Child restraints must be secured in vehicle seats by lap belts or the lap belt portion of a lap-shoulder belt. A child 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 following:

- 1. Instruction labels provided on the child restraint
- 2. Instruction manual provided with the child restraint
- 3. This vehicle owner's manual

The child restraint instructions are important, so if they are not available, obtain a replacement copy from the manufacturer.

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

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.

\land 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.



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.

EL: ΠΟΤΕ μη χρησιμοποιείτε παιδικό κάθισμα ασφαλείας με φορά προς τα πίσω σε κάθισμα που προστατεύεται από μετωπικό ENEPΓΟ 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 OZBILINJIH 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.

72 Seats and Restraints

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 għat-tfal li jħares lejn in-naħa ta' wara fuq sit protett b'AIRBAG ATTIV quddiemu; dan jista' jikkawż I-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 the front passenger 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. Do not install a child restraint in any rear seating position where it cannot be installed securely.

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.

Child Restraint Suitability

The following table shows permissible options for fastening a child restraint with a lap-shoulder belt.

Seating Position		
Seat Position Number	1	2
Seating Position Suitable for Universal Belted (Yes/No)	No	No
i-Size Seating Position (Yes/No)	No	No
Seating Positions Suitable for Lateral Fixture (L1/L2)	Х	Х
Largest Suitable Rearward Facing Fixture (ISO R1/R2X/R2/R3)	Х	Х
Largest Suitable Forward Facing Fixture (F2X/F2/F3)	Х	Х
Largest Suitable Booster Fixture (B2/B3)	Х	Х
Legend and F	ootnotes	
N/A: This ISOFIX seating position does not exist in this vehicle.		
X: No child restraint permitted in this mass group.		

Seat Number	Position in the Vehicle
1	Driver
2	Passenger

74 Seats and Restraints

ISOFIX Size Class and Seat Device
ISO/F3 : Full-Height Forward Facing toddler CRS
ISO/F2 : Reduced-Height Forward Facing toddler CRS
ISO/F2X : Reduced-Height Forward Facing toddler CRS
ISO/R3 : Full-Size Rearward Facing toddler CRS
ISO/R2 : Reduced-Size Rearward Facing toddler CRS
ISO/R2X : Reduced-Size Rearward Facing toddler CRS
ISO/R1 : Rearward Facing infant CRS
ISO/L1 : Left Lateral Facing position CRS (carry-cot)
ISO/L2 : Right Lateral Facing position CRS (carry-cot)
B2: Booster seat, reduced width 440mm
B3: Booster seat, full width 520mm

ISOFIX Child Restraint Systems

Some child restraints have an ISOFIX system. As part of the ISOFIX system, your child restraint may have lower attachments and/ or a top tether. The ISOFIX system can help hold the child restraint in place during driving or in a crash. Some vehicles have lower and/or top tether anchors designed to secure a child restraint with lower attachments and/or a top tether. Some child restraints with a top tether are designed to be used whether the top tether is anchored or not. Other child restraints require that the top tether be anchored. A national or local law may require that the top tether be anchored.

Your vehicle does not have lower anchors or top tether anchors to secure a child restraint with the ISOFIX system. If a national or local law requires that your top tether be anchored, do not use a child restraint in this vehicle because a top tether cannot be properly anchored. You must use the seat belts to secure your child restraint in this vehicle, unless a national or local law requires that the top tether be anchored. Refer to the child restraint instructions and instructions in this manual for securing a child restraint using the vehicle's seat belts. See Securing Child Restraints (For Left-hand Drive Vehicles with a Passenger Sensing System) ⇔ 75 or Securing Child Restraints (For Right-hand Drive Vehicles without a Passenger Sensing System) ⇔ 77.

Securing Child Restraints (For Left-hand Drive Vehicles with a Passenger Sensing System)

This vehicle has airbags. In addition, the vehicle has a passenger sensing system which is designed to turn off the front outboard passenger frontal airbag under certain conditions. See Passenger Sensing System (For Left-hand Drive Vehicles with a Passenger Sensing System) \Rightarrow 59 and Passenger Airbag Status Indicator (For Left-hand Drive Vehicles with a Passenger Sensing System) \Rightarrow 95 for more information, including important safety information.

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

\land 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.

\land Danger

When using a child restraint 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 restraints are used on the front passenger seat.

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



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

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

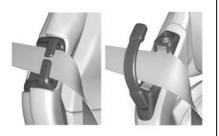
When using the lap-shoulder belt to secure the child restraint in this position, follow the instructions that came with the child restraint and the following instructions:

 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

76 Seats and Restraints

the child restraint. There must be finger clearance between the push button and 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 (For Left-hand Drive Vehicles with a Passenger Sensing System) ⇔ 95.



 Be sure that the shoulder belt is routed through the seat belt guide. See Lap-Shoulder Belt (For Left-hand Drive Vehicles with a Passenger Sensing System) ⇔ 48 or Lap-Shoulder Belt (For Right-hand Drive Vehicles without a Passenger Sensing System) ⇔ 51 for proper belt routing.

- 3. Put the child restraint on the seat.
- 4. Pick up the latch plate and run the lap and shoulder portions of the vehicle seat belt through or around the restraint. Ensure the seat belt webbing is routed as direct as possible and is not caught on seat handles or plastic trim. The child restraint instructions will show you how.

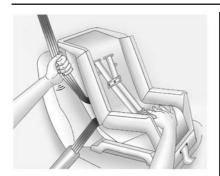


5. Push the latch plate into the buckle until it clicks.

Position the release button on the buckle, away from the child restraint, so that the seat belt can be quickly unbuckled 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.



 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.

There must be finger clearance between the push button and the child restraint. If there is not clearance between the buckle push button and the child restraint, move the seat upward and repeat prior installation steps. Otherwise secure the child restraint in a rear seat.

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 6 and 7.

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

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

If a child restraint has been installed and the on indicator is lit, see "If the On Indicator Is Lit for a Child Restraint" under Passenger Sensing System (For Left-hand Drive Vehicles with a Passenger Sensing System) ⇔ 59.

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

Return the seat belt into the guide by sliding the webbing through the opening on the guide.

Securing Child Restraints (For Right-hand Drive Vehicles without a Passenger Sensing System)

This vehicle has airbags.

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

\land 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.



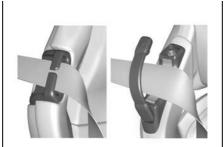
Rear-facing child restraints should not be installed in the vehicle, even if the airbag is off.

78 Seats and Restraints

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 state that the top tether 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. There must be finger clearance between the push button and the child restraint.



2. Be sure that the shoulder belt is routed through the seat belt guide. See Lap-Shoulder Belt (For Left-hand Drive Vehicles with a Passenger Sensing System) ⇔ 48 or

Lap-Shoulder Belt (For Right-hand Drive Vehicles without a Passenger Sensing System) ⇔ 51 for proper belt routing.

- 3. Put the child restraint on the seat.
- 4. Pick up the latch plate and run the lap and shoulder portions of the vehicle seat belt through or around the restraint. Ensure the seat belt webbing is routed as direct as possible and is not caught on seat handles or plastic trim. The child restraint instructions will show you how.

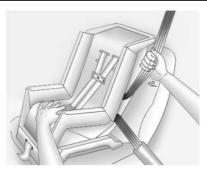


5. Push the latch plate into the buckle until it clicks.

Position the release button on the buckle, away from the child restraint, so that the seat belt can be quickly unbuckled 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.



 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.

There must be finger clearance between the push button and the child restraint. If there is not clearance between the buckle push button and the child restraint, move the seat upward and repeat prior installation steps. Otherwise secure the child restraint in a rear seat.

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 6 and 7.

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

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

Return the seat belt into the guide by sliding the webbing through the opening on the guide.

Storage

Storage Compartments

Storage Compartments	80
Glove Box	80
Cupholders	80
Underbonnet Storage	80
Rear Storage	
Centre Console Storage	82

Additional Storage Features

Cargo Tie-Downs	82
Convenience Net	82
Warning Triangle	82

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.

Glove Box

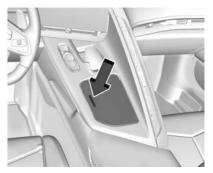


Press the button to open.

The glove box locks when the car alarm is armed. See *Vehicle Alarm System* \Rightarrow 22.

The glove box locks when Valet Mode is enabled. See Vehicle > Valet Mode under *Settings* ⇔ 158.

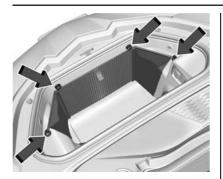
Cupholders



Press the top of the cover to access the cupholders.

Underbonnet Storage

There is storage in the front, under the hood. To access the front storage, open the hood. See *Bonnet* \Rightarrow 18.



If equipped, the vehicle has a convenience net to be used for small loads. Attach the net to the hooks of the storage area. The net should not be used to store heavy loads.

Rear Storage

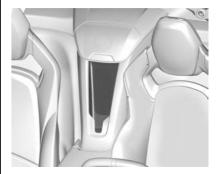
Caution

Do not store sharp objects in the corners of the rear storage compartments in the trunk/hatch area. Trunk carpet and components behind the carpet could be damaged.



If equipped, the vehicle has a convenience net to be used for small loads. Attach the net to the hooks of the storage area. The net should not be used to store heavy loads.

Rear Center Storage



There is storage in the center behind the two front seats.

If equipped, there is a wireless smartphone charger in the pocket.

Centre Console Storage



To open, press the button on the driver side.

Depending on the options, there may be two USB ports and an auxiliary port inside.

The center console locks when the car alarm is armed. See *Vehicle Alarm System* \Rightarrow 22.

The center console locks when Valet Mode is enabled. See Vehicle > Valet Mode under Settings \Rightarrow 158.

Additional Storage Features

Cargo Tie-Downs

The cargo tie-downs can be used to secure small loads under the convenience net inside the trunk.

Convenience Net

If equipped, the vehicle has two convenience nets to be used for small loads. One in the rear trunk area and one in the front storage area. See *Underbonnet Storage* \Rightarrow 80.

Attach the net to the hooks in the storage area. The net should not be used to store heavy loads.

Warning Triangle

The warning triangle is stowed in the rear storage compartment.

Instruments and Controls

Controls

Steering Wheel Adjustment	84
Heated Steering Wheel	84
Horn	84
Windscreen Wiper/Washer	84
Clock	85
Power Sockets	85
Wireless Charging	86

Warning Lights, Gauges, and Indicators

Warning Lights, Gauges, and
Indicators 88
Instrument Cluster 89
Speedometer 92
Mileometer 92
Trip Odometer 92
Rev Counter
Fuel Gauge 92
Engine Coolant Temperature Gauge 93
Transmission Temperature Gauge 93
Seat Belt Reminders 93
Airbag Readiness Light (For Left-hand
Drive Vehicles with a Passenger
Sensing System) 94
Airbag Readiness Light (For Right-hand
Drive Vehicles without a Passenger
Sensing System) 94

Passenger Airbag Status Indicator (For
Left-hand Drive Vehicles with a
Passenger Sensing System)
Charging System Light
Malfunction Indicator Lamp (Check
Engine Light)96
Front Lift System Light
Brake System Warning Light
Electric Parking Brake Light
Service Electric Parking Brake Light 98
Antilock Brake System (ABS) Warning
Light
Gear Shifting Light
Performance Gearbox Active
Traction Off Light
Traction Control System (TCS)/
Electronic Stability Control Light 100
Electronic Stability Control (ESC) Off
Light 100
Engine Coolant Temperature Warning
Light
Driver Mode Control Light 101
Tyre Pressure Light 101
Engine Oil Pressure Light 102
Security Light 102
Main-Beam On Light 102
Rear Fog Lamp Light 103
Lamps On Reminder 103
Cruise Control Light 103
Door Ajar Light 103

Information Displays

Driver Information Centre (DIC)	103
Head-Up Display (HUD)	105

Vehicle Messages

Vehicle Messages	108
Engine Power Messages	
Vehicle Speed Messages	109

Universal Remote System

Universal Remote System Programming 109 Universal Remote System Operation ... 111

Controls

Steering Wheel Adjustment



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

Both the tilt and telescoping steering column positions can be stored with your memory settings, if equipped. See *Memory Seats* \Rightarrow 42.

Do not adjust the steering wheel while driving.

Heated Steering Wheel



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

The steering wheel takes about three minutes to be fully heated.

If equipped with remote start heated seat, the heated steering wheel will follow heated seats in remote start.

Horn

Press \blacktriangleright on the steering wheel pad to sound the horn.

Windscreen Wiper/Washer



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

With the ignition on or in accessory mode, move the windscreen wiper stalk to select the wiper speed.

HI : Use for fast wipes.

LO : Use for slow wipes.



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

OFF : Use to turn the wipers off.

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

 \checkmark : Pull the windscreen wiper lever toward you to spray washer fluid and activate the wipers. The wipers will continue until the lever is released or the maximum wash time is reached. When the stalk is released, additional wipes may occur depending on how long the windscreen washer had been activated. See *Washer Fluid* \Rightarrow 256 for information on filling the windscreen washer fluid reservoir.

Clear snow and ice from the wiper blades and windscreen before using them. If frozen to the windscreen, carefully loosen or thaw them. Damaged blades should be replaced. See *Wiper Blade Replacement* \Rightarrow 262.

Heavy snow or ice can overload the wiper motor.

M 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.

A Warning

Before driving the vehicle, always clear snow and ice from the bonnet, windscreen, washer nozzles, roof, and rear of the vehicle, including all lights and windows. Reduced visibility from snow and ice build-up could lead to a crash.

Wiper Parking

If the ignition is turned off while the wipers are on LO, HI, or INT, they will immediately stop.

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

If the ignition is turned off while the wipers are performing wipes due to windscreen washing, the wipers continue to run until they reach the base of the windscreen.

Clock

Set the time and date using the infotainment system. See "Time/Date" under Settings \Leftrightarrow 158.

Power Sockets

There are two accessory power outlets:

- Under the glove box
- Under the hood

The outlet under the glove box can be used to plug in electrical equipment, such as a cell phone.

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

The power socket under the glove box is powered when the ignition is on or in accessory mode, or until the driver door is opened within 10 minutes of turning off the vehicle. See *Retained Accessory Power (RAP)* ⇒ 195.

The underhood outlet is powered at all times. The vehicle's battery may run down if the power socket is used while the ignition is off. Use this power socket for plugging in the battery maintainer, if equipped.

▲ Warning

Power is always supplied to the underhood outlet. Do not leave electrical equipment plugged in when the 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 20 amp rating.

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

When adding electrical equipment, ensure that you follow the proper installation instructions included with the equipment. See Add-On Electrical Equipment \Rightarrow 231.

It is recommended that a qualified technician or dealer be seen for the proper installation of your equipment.

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.

Wireless Charging

If equipped and enabled, the vehicle has a wireless charging pocket between the driver and passenger seatbacks. The system operates at 145 kHz and wirelessly charges one Qi compatible smartphone. The power output of the system is capable of charging at a rate of up to 3 amps (15 W), as requested by the compatible smartphone.

⚠ Warning

Wireless charging may affect the operation of an implanted pacemaker or other medical devices. If you have one, it is recommended to consult with your doctor before using the wireless charging system. The vehicle must be on, in accessory mode, or Retained Accessory Power (RAP) must be active. The wireless charging feature may not correctly indicate charging when the vehicle is in RAP, during a Bluetooth phone call, or when phone projection (e.g. Apple CarPlay / Android Auto) is active. See Retained Accessory Power (RAP) \Rightarrow 195.

The operating temperature is -40 °C (-40 °F) to 85 °C (185 °F) for the charging system and 0 °C (32 °F) to 35 °C (95 °F) for the phone. A charging stopped alert may be displayed on the infotainment screen, if the wireless charger or smartphone are outside of normal operating temperature. Charging will automatically resume when a normal operating temperature is reached.

\land Warning

Remove all objects from the charger before charging your compatible smartphone. Objects, such as coins, keys, rings, paper clips, or cards, between the smartphone and charger may become very hot.

(Continued)

Warning (Continued)

On the rare occasion that the charging system does not detect an object, and that object becomes wedged between the smartphone and charger, remove the smartphone and allow the object to cool before removing it from the charger, to prevent burns.



To charge a compatible smartphone:

1. Confirm the smartphone is capable of wireless charging.

- 2. Remove all objects from the charging pocket. The system may not charge if there are any objects between the smartphone and charger.
- 3. Place the smartphone face up against the rear of the charger.

To maximise the charge rate, ensure the smartphone is fully seated and centred in the holder with nothing under it.

A thick smartphone case may prevent the charger from working, or reduce the charging performance. See your retailer for additional information.

- If a smartphone is placed on the charger and ∠ turns off or turns yellow, remove the smartphone and any objects from the pocket. Turn the smartphone 180 degrees and wait a few seconds before placing/aligning it on the pocket again.

 If a smartphone is placed on the charger and ∠ turns red, the charger and/or the smartphone have overheated. Remove the smartphone and any objects from the charger in order to cool the system.

The smartphone may become warm during charging. This is normal. In warmer temperatures, the speed of charging may be reduced.

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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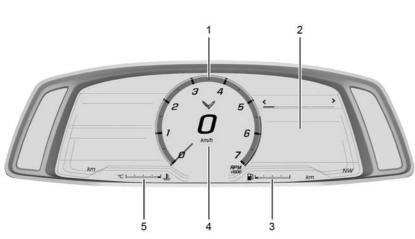
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Warning Lights, Gauges, and Indicators

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



Tour Mode Shown, Other Modes Similar

- 1. Rev Counter ⇔ 92
- 2. Driver Information Centre (DIC) ⇔ 103
- 3. Fuel Gauge ⇒ 92
- 4. Speedometer ⇒ 92
- 5. Engine Coolant Temperature Gauge ⇔ 93

Cluster Menu

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

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



Press \leq or > to access the cluster applications. Use the thumbwheel to scroll

 \land or \lor through the list of available features. Press the thumbwheel to select. Not all applications will be available on all vehicles.

- Info Pages: The selected Driver Information Center (DIC) displays can be viewed. See Driver Information Centre (DIC) ⇔ 103.
- Performance
- Audio
- Maintenance
- Options
- Simplify

Performance

Press the thumbwheel to enter the Performance menu. Scroll through the available items.

G-force: Gives the driver an indication of the vehicle performance in cornering. The G-force gauge will show as an info tile on the left side of the cluster, if selected.

Friction Bubble : A four quadrant visual display, indicative of the four corners of the car, with a "bubble" showing where the most inertia is being exerted on the vehicle.

Launch Control : If equipped, the Launch Control display allows the driver to adjust the parameters of the Launch Control System. See *Track Events and Competitive Driving* ⇔ 176.

Performance Timer : Press the thumbwheel to enter the setup menu, then select Set Start Speed. Scroll to desired Start Speed, then press the thumbwheel to save it. While on this menu, to change the End Speed, scroll to End Speed and use the thumbwheel to scroll to desired End Speed. Press the thumbwheel to save it. On the next acceleration, the performance timer will record the time. Pressing the thumbwheel while the timer is running will cancel the timer if done before reaching the End Speed.

Lap Timer (without PDR) : Press > when Lap Timer is displayed to start, stop, or reset the lap timer. Press the thumbwheel while the Lap Timer page is active to start the timer. If the lap timer is active, pressing the thumbwheel will stop the current lap timer and start a new lap. Pressing the thumbwheel within 10 seconds after completing the last lap (Stop Lap Timer option is displayed), the Lap Timer will stop.

Lap Timer (with PDR) : The lap times recorded with the PDR system will automatically be displayed in this window. This only happens if a track has been selected in the PDR system and a video recording is started. See *Performance Data Recorder (PDR)* \Rightarrow 148.

Oil Temperature : Shows the current oil temperature in either degrees Celsius (°C) or degrees Fahrenheit (°F).

Oil Pressure : Shows the current oil pressure in either kilopascal (kPa) or in pounds per square inch (psi).

Battery Voltage : Shows the current battery voltage.

Transmission Fluid Temperature : Shows the temperature of the transmission fluid in either degrees Celsius (°C) or degrees Fahrenheit (°F).

Tire Status : Shows individual tire pressures and overall temperature as either Cold, Cool, Normal, Warm, or Hot. Normal is typical for normal driving while Warm is typical for aggressive driving. Unknown may be displayed if tyre temperature information is unavailable.

eLSD : If equipped, displays the amount of rear differential coupling when the Electronic Limited-Slip Differential (eLSD) is active and functioning during vehicle operation. A reading of 1% is an open differential and 100% is locked. It is normal for the value to make small or large changes due to driving conditions and driver inputs. See *Limited-Slip Differential* \$ 220.

Front Lift : During a driver requested Front Lift (if equipped), the driver may "remember" using the \leq , or dismiss the display by pressing the thumbwheel. When the Front Lift is Raised due to location, the driver may delete that stored location using the \leq , or dismiss the display by pressing the thumbwheel. See Front Lift System ⇔ 216.

Audio

Use the thumbwheel to scroll through audio presets.

Options

Use the thumbwheel to scroll through items in the Options menu.

Units

Press the thumbwheel while Units is displayed to enter the Units menu. Choose US or metric units by pressing the thumbwheel while the desired item is highlighted. A selected mark will be displayed next to the selected item.

Display Themes

Press the thumbwheel to enter the Display menu. There are six instrument cluster display configurations to choose from. Sport, Tour, Track, Weather, My Mode, Z-Mode, and Stealth. The style of the cluster will change depending on the theme selected.

Default is linked to Driver mode. Other display themes can be set

If in Z-Mode or My Mode then those displays plus HUD (if equipped) can be set.

Stealth Mode is enabled when the Instrument Panel Illumination Control is set to the minimum level. See *Instrument Panel Illumination Control* ⇔ 115.

- Sport/Z-Mode: Displays Coolant Temperature, Fuel Gauge, Compass, Drive Mode Indicator, Odometer, Speed, Tachometer, Electronic Transmission Range, Current Gear, Active Fuel Management (AFM), Peak Performance, Performance Shift Lights, Speed Limit, Info Area, and Interaction Area.
- Tour/Weather/My Mode: Displays Coolant Temperature, Fuel Gauge, Compass, Drive Mode Indicator, Odometer, Speed, Tachometer, Electronic Transmission Range, Current Gear, Active Fuel Management (AFM), Peak Performance, Speed Limit, Info Area, and Interaction Area.
- Track: Displays Coolant Temperature, Fuel Gauge, Performance Traction Management, Drive Mode Indicator, Speed, Tachometer, Electronic Transmission Range, Current Gear, Info Area, and Interactive Area.
- Stealth: Displays Coolant Temperature, Fuel Gauge, and Digital Speed.

Preset info tiles shown on each layout:

Sport : G-Force, Oil Temperature

Track : Oil Pressure, Transmissions Fluid Temperature, Tire Pressure & Tire Temperature, Oil Temperature

Tour : Time & Outside Air Temperature, Oil Pressure

Weather : Time & Outside Air Temperature, Tire Status

Z-Mode : Oil Temperature, G-Force

My Mode : Economy Trend, Oil Pressure

Stealth : None

Head-Up Display (HUD) Rotation

Press the thumbwheel while Adjust Rotation is highlighted to enter Adjust Mode. Scroll to adjust the angle of the HUD display. Press the thumbwheel to confirm and save the setting. This feature may only be available in P (Park).

Speed Warning

The Speed Warning display allows the driver to set a speed that they do not want to exceed. To set the Speed Warning, press the thumbwheel when Speed Warning is displayed, or press the thumbwheel on the main view to set the speed value. Scroll to

adjust the value. Press the thumbwheel to set the speed. Once the speed is set, this feature can be turned off by pressing the thumbwheel while viewing this page. If the selected speed limit is exceeded, a pop-up warning is displayed with a chime.

Software Info

Press > while Software Info is highlighted to display open source software information.

Simplify

Press the thumbwheel to enter the Simplify menu. Simplify mode allows certain features of the instrument cluster to be hidden. These features include info tiles and interactive areas.

Scroll to the desired features with the thumbwheel, and press to toggle them on or off.

Using the thumbwheel, except to acknowledge an alert, will exit Simplify mode.

The selected features will stay hidden even after starting and restarting the vehicle, unless Simplify mode is manually canceled.

Speedometer

The speedometer shows the vehicle speed in kilometres per hour (km/h) or miles per hour (mph).

This vehicle is equipped with an overspeed warning device. When the vehicle's speed reaches 120 km/h (75 mph), a chime will sound. A message also displays in the Driver Information Center (DIC).

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.

The trip odometer is accessed and reset through the Driver Information Centre (DIC). See Driver Information Centre (DIC) \Rightarrow 103.

Rev Counter

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

Shift lights will not appear until the engine is warm.

In Track theme, the tachometer can be set to display a traditional tachometer, or a numerical tachometer with shift lights.

Caution

If the engine is operated with the rpm in the warning area at the high end of the tachometer, the vehicle could be damaged, and the damage would not be covered by the vehicle warranty. Do not operate the engine with the rpm in the warning area.

Fuel Gauge



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.

The fuel gauge may:

- Take a little more, or less fuel to fill up than it indicates. For example, the gauge may have indicated the tank is half full, but it actually will take a little more, or less than half the tank's capacity to fill the tank.
- Moves a little while turning a corner, speeding up, or braking.
- Takes a few seconds to stabilise after the ignition is turned on and goes back to empty when the ignition is turned off.

These are normal conditions, none of which indicate a problem with the fuel gauge.

Engine Coolant Temperature Gauge

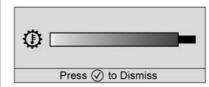


This gauge shows the engine coolant temperature.

If the gauge pointer moves into the red zone, the engine is too hot.

This reading indicates the same thing as the warning light. It means that the engine coolant has overheated. If the vehicle has been operating under normal driving conditions, pull off the road, stop the vehicle, and turn off the engine as soon as possible. See *Engine Overheating* \Rightarrow 255 for more information.

Transmission Temperature Gauge



This gauge will display when the transmission is experiencing abnormal temperatures.

As the transmission begins to overheat, the gauge fills to the right.

The Transmission Temperature Gauge monitors all aspects of the transmission. Elevated transmission temperatures may not be reflected in the Transmission Fluid Temperature cluster display gauge.

Messages will display to indicate the severity of the overheating. As the gauge fills up there will be a reduction in vehicle performance. Once full, the transmission is overheated and a message to stop safely will display. Do not drive the vehicle until the message clears. See *Dual Clutch Transmission* ⇔ 198 for more information.

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 is activated.

Front Passenger Seat Belt Reminder Light

The vehicle may have a front passenger seat belt reminder light near the passenger airbag status indicator.



When the vehicle is started, this light flashes and a chime may sound to remind passengers to fasten their seat belts.

Then the light stays on solid until the belt is buckled. This cycle continues several times if the front passenger remains or becomes unbuckled while the vehicle is moving.

If the front passenger seat belt is fastened, neither the chime nor the light is activated.

The front passenger seat belt reminder light and chime may be activated if an object is left on the seat such as a briefcase, handbag, shopping bag, and 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 (For Left-hand Drive Vehicles with a Passenger Sensing System)

This light shows if there is an electrical problem with the airbag system. It is located in the instrument cluster. The system check includes the airbag sensor(s), the passenger sensing system, the pretensioners, the airbag modules, the wiring, and the crash sensing and diagnostic module. For more information on the airbag system, see *Airbag System* \Rightarrow 55.



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.

\land 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.

Airbag Readiness Light (For Right-hand Drive Vehicles without a Passenger Sensing System)

This light shows if there is an electrical problem with the airbag system.

It is located in the instrument cluster.

The system check includes the airbag sensor(s), the pretensioners, the airbag modules, the wiring, and the crash sensing and diagnostic module. For more information on the airbag system, see *Airbag System* ⇔ 55.



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.

\land 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 (For Left-hand Drive Vehicles with a Passenger Sensing System)

The vehicle has a passenger sensing system. See Passenger Sensing System (For Left-hand Drive Vehicles with a Passenger Sensing System) ⇔ 59 for important safety information. The overhead console has a passenger airbag status indicator.



PASSENGER AIR BAG

When the vehicle is started, the passenger airbag status indicator will light the symbols 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, if there are no lights at all, or if the airbag readiness light is on, there may be a problem with the lights or the passenger sensing system. See your dealer for service right away.

\land Warning

If the airbag readiness light ever comes on and stays on, it means that something may be wrong with the airbag system. To help avoid injury to yourself or others, have the vehicle serviced right away. See Airbag Readiness Light (For Left-hand Drive Vehicles with a Passenger Sensing System) \$\$94 or Airbag Readiness Light (For Right-hand Drive Vehicles without a Passenger Sensing System) \$\$94 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. Find a safe place to stop the vehicle.

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 193.



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 (Continued)

Caution (Continued)

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 \Rightarrow 234.

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 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.

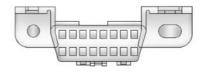
If the light is on continuously : A malfunction has been detected. Diagnosis and service may be required.

Check the following:

- If fuel has been added to the vehicle using the capless funnel adapter, make sure that it has been removed. See "Filling the Tank with a Portable Gas Can" under Filling the Tank ⇔ 229. The diagnostic system can detect if the adapter has been left installed in the vehicle, allowing fuel to evaporate into the atmosphere. A few driving trips with the adapter removed may turn off the light.
- 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 Recommended Fuel \$\dots\$ 229.

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 ⇔ 231. 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.

Instruments and Controls 97

 Critical emission control systems have not been completely diagnosed. If this happens, the vehicle would not be ready for inspection and may 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.

Front Lift System Light



If equipped, this light will flash to indicate when the front of the vehicle is being raised or lowered. An up or down arrow in the light will display, depending on the direction of movement. The light will stay lit while the front is fully raised.

If the light remains on, see your retailer.

Brake System Warning Light



This light comes on briefly when the vehicle is turned on to show that the light is working. If it does not come on then, have it fixed so it will be ready to warn you if there is a problem.

If the light comes on and stays on, there is a brake problem. Have the brake system inspected immediately. This light may come on if the brake fluid is low. See *Brake Fluid* \Rightarrow 260.

If the light comes on while driving, pull off the road and stop carefully. If equipped with electric brake boost, vehicle speed may be limited when the brake system warning light comes on. The brake pedal might be harder to push, or the brake pedal may go closer to the floor. It could take longer to stop. If the light is still on, have the vehicle towed for service. See *Transporting a Disabled Vehicle* \Rightarrow 288. \land Warning

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

Electric Parking Brake Light

This light comes on when the parking brake is applied. If the light continues flashing after the parking brake is released or while driving, there is a problem with the Electric Parking Brake system. 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



This light should illuminate briefly when the vehicle is turned on. If it does not come on, have it fixed so it will be ready to warn if there is a problem.

If this light stays on or comes on while driving, there is a problem with the Electric Parking Brake (EPB). Take the vehicle to a dealer as soon as possible. In addition to the parking brake, other safety functions that utilise the EPB may also be degraded. A message may also display in the Driver Information Centre (DIC). See *Electric Parking Brake* \Rightarrow 206.

Antilock Brake System (ABS) Warning Light



This light comes on briefly when the vehicle is turned on to show that the light is working. If it does not come on then, have it fixed so it will be ready to warn you if there is a problem.

If the ABS warning light remains turned on, or illuminates again while driving, the vehicle needs service. A chime may also sound when the light stays on.

If the ABS warning light is the only light turned on, the vehicle has regular brakes, but ABS is not functioning.

If both the ABS warning light and the brake system warning light are turned on, ABS is not functioning and there is a problem with the regular brakes. See your retailer for service.

See Brake System Warning Light ⇒ 98.

Gear Shifting Light

▲2

If equipped, this light comes on when a gear change is recommended for best fuel economy. When the arrow is pointed up, an upshift is recommended. When the arrow is pointed down, a downshift is recommended. The number displayed with the arrow indicates the recommended gear.

Performance Gearbox Active



This light turns green when:

 The vehicle is being driven in a spirited manner and gearbox shift points have been altered to enhance the vehicle behaviour. See "Gearbox Shift Operation" under Driver Mode Control ⇔ 210.

- For track driving events that require standing starts, Performance Gearbox behaviour can be activated near a standstill by selecting Track Mode > Performance Traction Management (PTM) > Race 1 or Race 2. You can also engage PTM using Z mode, if PTM has been configured to Race 1 or Race 2. See "Performance Traction Management (PTM)" under Driver Mode Control ⇔ 210.
- Manual Launch has been enabled. See "Manual Launch" under Manual Mode ⇔ 201.

Traction Off Light



This light comes on briefly when the vehicle is turned on to show that the light is working. If it does not come on then, have it fixed so it will be ready to warn you if there is a problem.

The traction off light comes on when the Traction Control System (TCS) has been turned off. If Electronic Stability Control (ESC) is turned off, TCS is also turned off. To turn TCS and ESC off and on, see *Traction Control/Electronic Stability Control* \Rightarrow 208.

If TCS is off, wheel slip during acceleration is not limited unless necessary to help protect the driveline from damage. Adjust driving accordingly.

Traction Control System (TCS)/ Electronic Stability Control Light



This light comes on briefly when the vehicle is turned on to show that the light is working. If it does not come on then, have it fixed so it will be ready to warn you if there is a problem.

If the light is on and not flashing, the TCS and potentially the ESC system are not fully operational and may not assist in maintaining control. Adjust driving accordingly. If the condition persists, see your dealer as soon as possible. A Driver Information Centre (DIC) message may display.

The light flashes when the TCS and/or the ESC system is actively working.

See Traction Control/Electronic Stability Control ⇔ 208.

Electronic Stability Control (ESC) Off Light



This light comes on briefly when the vehicle is turned on to show that the light is working. If it does not come on then, have it fixed so it will be ready to warn you if there is a problem.

This light comes on when the Electronic Stability Control (ESC) system is turned off. If ESC is off, the Traction Control System (TCS) is also off. To turn ESC off and on, see *Traction Control/Electronic Stability Control* ⇔ 208. If ESC and TCS are off, the systems do not assist in controlling the vehicle. Adjust driving accordingly.

Engine Coolant Temperature Warning Light



On some vehicles this light comes on briefly while starting the vehicle. If it does not, have the vehicle serviced by the dealer. If the system is working normally the indicator light goes off. For vehicles with the reconfigurable cluster, this light may not come on when starting the vehicle.

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* \Rightarrow 255.

The engine coolant temperature warning light comes on when the engine has overheated.

If this happens pull over and turn off the engine as soon as possible. See *Engine* Overheating \Rightarrow 255.

Driver Mode Control Light

This light comes on when Tour Mode is selected.



This light comes on when Sport Mode is selected.



This light comes on when Track Mode is selected.



This light comes on when Weather Mode is selected.



This light comes on when Z Mode is selected.



This light comes on when My Mode is selected.

See Driver Mode Control ⇔ 210.

Tyre Pressure Light



If equipped with the Tyre Pressure Monitor System (TPMS), this light comes on briefly when the vehicle 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* ⇒ 274.

When the Light Flashes First and Then Is On Steady

If the light flashes for about a minute and then stays on, there may be a problem with the TPMS. If the problem is not corrected, the light will come on every time the vehicle is started. See *Tyre Pressure Monitor Operation* \Leftrightarrow 277.

Engine Oil Pressure Light

Caution

Driving the vehicle with low engine oil pressure can damage the engine and the repairs would not be covered by the vehicle warranty.

If the engine oil pressure light comes on while driving:

1. Stop in a safe location and turn off the engine.

(Continued)

Caution (Continued)

- 2. Check the oil level. See Engine Oil (5.5L LT6 Engine) ⇔ 241 or Engine Oil (6.2L LT2 Engine) ⇔ 245.
- 3. Add oil if the oil level is below the normal operating range.
- 4. Restart the vehicle. If the engine oil pressure light stays on for more than 10 seconds, turn the vehicle back off. Do not restart the vehicle. See your retailer for service.

This light should come on briefly when the engine starts. When the engine is off and the vehicle is on, the light should remain illuminated. If it does not come on under either condition, contact your retailer.

If the light comes on and stays on when the engine is running, it may not have adequate oil pressure. The oil level may be low or

there may be some other oil system problem. Turn the engine off when it is safe to do so and contact your retailer.

Security Light



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

If the light stays on and the engine does not start, there could be a problem with the theft-deterrent system. See *Immobiliser Operation* \Rightarrow 24.

Main-Beam On Light

ΞĐ

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

See Headlamp Main/Dipped-Beam Changer ⇒ 112.

Rear Fog Lamp Light



This light comes on when the rear fog lights are on.

The light goes out when the fog lamps are turned off. See *Rear Fog Lamps* \Rightarrow 115.

Lamps On Reminder



This light illuminates when the exterior lamps are in use, except when only the Daytime Running Lamps (DRL) are active. See *Exterior Lamp Controls* \Rightarrow 112.

Cruise Control Light



For vehicles with cruise control, the cruise control light is white when the cruise control is on and ready, and turns green when the cruise control is set and active.

The light turns off when the cruise control is turned off. See *Cruise Control* \Rightarrow 221.

Door Ajar Light



This light 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 Info application is only available when the ignition is on. The displays show the status of many vehicle systems.



< or > : Press to move left or right between the interactive display zones in the cluster. Press the thumbwheel to select.

 \wedge or \vee : Use the thumbwheel to scroll up or down in a list. Press the thumbwheel to select.

DIC Info Pages

The following is the list of all possible DIC info displays. Depending on the vehicle, some may not be available.

Trip 1 or 2/Average Speed/Average Fuel Economy : Trip displays 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 the thumbwheel while this display is active.

Average Speed displays the average speed of the vehicle in kilometres 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 the thumbwheel while this display is active.

Average Fuel Economy displays 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 by pressing and holding the thumbwheel while this display is active.

Oil Life: Displays an estimate of the oil's remaining useful life. If REMAINING OIL LIFE 99% is displayed, that means 99% of the current oil life remains.

When the remaining oil life is low, the CHANGE ENGINE OIL SOON message will appear on the display. The oil should be changed as soon as possible. See *Engine Oil* (5.5L LT6 Engine) \Rightarrow 241 or *Engine Oil* (6.2L LT2 Engine) \Rightarrow 245. In addition to the engine oil life system monitoring the oil life, additional maintenance is recommended. See *Maintenance Schedule* \Rightarrow 301.

The Oil Life display must be reset after each oil change. It will not reset itself. Do not reset the Oil Life display accidentally at any time other than when the oil has just been changed. It cannot be reset accurately until the next oil change. To reset, see *Engine Oil* Life System \Rightarrow 248.

Tyre Pressure : Displays 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* \Rightarrow 276 and *Tyre Pressure Monitor Operation* \Rightarrow 277.

Transmission Fluid Life : Displays an estimate of the fluid's remaining useful life. If REMAINING FLUID LIFE 99% is displayed, that means 99% of the current fluid life remains.

When the remaining fluid life is low, the CHANGE TRANSMISSION FLUID SOON message will appear on the display. The fluid should be changed as soon as possible. See *Dual Clutch Transmission Fluid Life System* \Rightarrow 249. In addition to the Transmission Fluid Life system monitoring the fluid life, additional maintenance is recommended. See *Maintenance Schedule* \Rightarrow 301.

The Fluid Life display must be reset after each fluid change. It will not reset itself. Do not reset the Fluid Life display accidentally at any time other than when the fluid has just been changed. It cannot be reset accurately until the next fluid change. To reset, see Dual Clutch Transmission Fluid Life System \Rightarrow 249. **Gearbox Filter Life :** Displays an estimate of the filter's remaining useful life. If REMAINING FILTER LIFE 99% is displayed, that means 99% of the current filter life remains.

When the remaining filter life is low, the REPLACE GEARBOX FILTER SOON message will appear on the display. The external canister filter should be replaced as soon as possible. See *Dual Clutch Transmission Fluid Life System* \Rightarrow 249. In addition to the Gearbox Filter Life system monitoring the filter life, additional maintenance is recommended in the Maintenance Schedule. See *Maintenance Schedule* \Rightarrow 301.

The Gearbox Filter Life display must be reset after each filter replacement. It will not reset itself. Do not reset the Gearbox Filter Life display accidentally at any time other than when the filter has just been replaced. It cannot be reset accurately until the next filter change. To reset, see *Dual Clutch Transmission Fluid Life System* \Rightarrow 249.

Fuel Economy : Displays the average fuel economy, the best fuel economy over the selected distance, and a bar graph showing instantaneous fuel economy. Pressing the

thumbwheel will open a menu to change the selected distance or reset the current values.

Timer/Fuel Used : This display can be used as a timer. To start/stop the timer, press the thumbwheel while this display is active and then select the start/stop the timer. The display will show the amount of time that has passed since the timer was last reset. To reset the timer to zero, press the thumbwheel to access the menu while this display is active.

Fuel Used displays the approximate liters (L) or gallons (gal) of fuel that have been used since last reset. The fuel used can be reset by pressing the thumbwheel and selecting Reset Fuel Used in the menu.

Economy Trend : Shows the instantaneous fuel economy and current gas mileage.

Speed Limit: Displays sign information, which comes from a roadway database in the on-board navigation.

Engine Hours/Lifetime Revs: Displays the total number of hours the engine has run. It also shows total engine revolutions divided by 10,000.

Air Filter Life : Shows an estimate of the engine air filter's remaining useful life and the state of the system. Engine Air Filter Life 95% means 95% of the current air filter life remains. Messages are displayed based on the engine air filter life and the state of the system. When the REPLACE AT NEXT OIL CHANGE message displays, the engine air filter should be replaced at the time of the next oil change. When the REPLACE NOW message displays, the engine air filter should be replaced as soon as possible.

Air filter life message states:

- Green OK
- Yellow Replace at Next Oil Change
- Red Replace Now, and Check System

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 HUD 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 are changed through the instrument cluster. See *Settings* \Leftrightarrow *158* and "Options" under *Instrument Cluster* \Leftrightarrow *89*.

The HUD may display different alerts and information for vehicles equipped with these features:

- Speedometer
- Rev Counter
- Manual Paddle Shift Gear Indicator

These displays on the HUD are for use when using the manual paddle shift controls to shift the transmission. See "Manual Paddle Shift" in *Dual Clutch Transmission* \Rightarrow 198.

- G-Force Gauge
- Upcoming Maneuver from On-Board Navigation
- Incoming Call



The HUD control is to the left of the steering wheel on the instrument panel for left hand drive vehicles, and to the right of the steering wheel on the instrument panel for right hand drive vehicles.

To adjust the HUD image so that items are properly displayed:

- 1. Adjust the driver seat.
- 2. Start the engine.
- 3. Adjust the following HUD settings as needed.

Here of the HUD image in the windshield.

INFO : Press to select the display view. Each press will cause the display view to change to the next view. If vehicle messages are displayed, pressing the DIC select button may clear the message. See Driver Information Centre (DIC) \Rightarrow 103.

±☆ : Lift 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.

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

While in the options menu, press \triangle or \bigtriangledown to scroll to the HUD rotation page. Press the thumbwheel while Head-Up Display Rotation is highlighted to enter Adjust Mode.

The vehicle must be in P (Park).

Press \triangle or \bigtriangledown to adjust the angle of the HUD display. Press SEL to save the setting. To cancel the setting, press \triangleleft . See *Instrument Cluster* \Rightarrow *89*.

Display Views

There are several HUD views that can be displayed:



Tour : Displays the vehicle speed, gear position, shift indicator, and speed sign.

Tour view is only available in My Mode or Z-Mode. See *Driver Mode Control* ⇔ 210.



Sport : Displays the vehicle speed, a circular tachometer, gear position, shift indicator, and G-Force meter.

Sport view is only available in My Mode or Z-Mode. See Driver Mode Control \Rightarrow 210.



Track : Displays the vehicle speed, gear position, shift lights, and current/best lap times. This includes Gain/Loss of Current Lap compared to Best Lap.

Track view is only available in My Mode or Z-Mode. See *Driver Mode Control* ⇔ 210.

Interrupts

The interrupt information temporarily displays in any HUD view. Once displayed, HUD returns to the previous HUD view. Interrupts may include:

- Navigation Turn-by-Turn Information
- Incoming Call Information
- Vehicle Alerts
- Audio Selections



Audio : May display when a new source, radio station, or media type is selected.



Navigation : Turn-by-turn navigation information may be displayed when Navigation is active and an upcoming

108 Instruments and Controls

maneuver is pending. It appears until the manoeuvre is complete and then the HUD display returns to the previous view.



Phone : May display when an incoming call is received from a Bluetooth connected phone. It appears momentarily until the call is answered or ignored.

105 km/h Alert Text Line 1

Vehicle Alerts : Alerts can be dismissed in the instrument cluster. All alerts are not displayed in the HUD.

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.

The windscreen is part of the HUD system. See Windscreen Replacement \Rightarrow 263.

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 \checkmark . 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
- Steering
- Ride Control Systems
- Driver Assistance Systems
- Cruise Control
- Front Lift System
- Lighting and Bulb Replacement
- Wiper/Washer Systems
- Doors and Windows
- Seat Belts

- Airbag Systems
- Engine and Transmission
- Tyre Pressure
- Battery

Engine Power Messages

REDUCED ACCELERATION DRIVE WITH CARE

This message displays when the vehicle's propulsion power is reduced. A reduction in 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. Under certain conditions, 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.

Under certain operating conditions, propulsion will be disabled. Try restarting after the ignition has been off for two minutes.

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, brakes, suspension, Teen Driver if equipped, or tires.

Universal Remote System

Universal Remote System Programming



If equipped, these buttons are in the sunshade.

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.

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

Programming involves time-sensitive actions and may time out, requiring the procedure to be repeated. Read these instructions completely before programming the Universal Remote system. It may help to have another person assist with the programming process.

- 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. Press and release one of the three Universal Remote system buttons to be programmed. Press and hold the hand-held transmitter button. Do not release the hand-held transmitter button until the indicator light changes from a slow to a rapid flash or continuous light. Then release the hand-held transmitter button.

Some garage door openers may require substitution of Step 2 with the procedure under "Radio Signals for Some Gate Operators" later in this section.

- 3. Press and hold the newly programmed Universal Remote system button for five seconds while watching the indicator light and garage door activation.
 - If the indicator light stays on continuously or the garage door moves when the button is pressed, then programming is complete. There is no need to complete Steps 4–6.
 - If the indicator light does not come on or the garage door does not move, a second button press may be required. For a second time, press and hold the newly programmed button for five seconds. If the 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 garage door does not move, continue with programming Steps 4–6.



Learn or Smart Button

- After completing Steps 1–3, locate the Learn or Smart button inside garage on the garage door opener receiver. The name and colour of the button may vary by manufacturer.
- 5. Press and release the Learn or Smart button. Step 6 must be completed within 30 seconds of pressing this button.
- 6. Return to the vehicle and firmly press and hold the trained Universal Remote system button for two seconds and release. Repeat the "press/hold/release" sequence up to three times to complete the training process.

The Universal Remote system should now activate the garage door. Repeat the process for programming the remaining two buttons.

For questions or programming help, see www.homelink.com/gm or call 1-800-355-3515. For calls placed outside the U.S., Canada, or Puerto Rico, international rates will apply and may differ based on landline or mobile phone.

Radio Signals for Some Gate Operators

Some gate operators and radio-frequency laws require transmitter signals to time out or quit after several seconds of transmission. This may not be long enough for the Universal Remote system to pick up the signal during programming.

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 change to a rapid flash or continuous solid-light. Proceed with Step 3 under "Programming the Universal Remote System" to complete.

Universal Remote System Operation

Using the Universal Remote System

Press and hold the appropriate Universal Remote system button for at least one-half second. The indicator light will come on while the signal is being transmitted.

Erasing Universal Remote System Buttons

Erase all programmed buttons when vehicle ownership is terminated.

To erase:

1. Press and hold the two outside buttons until the indicator light begins to flash. This should take about 10 seconds.

2. Release both buttons.

Reprogramming a Single Universal Remote System Button

To reprogram any of the system buttons:

1. Press and hold any one of the buttons. Do not release the button. 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 112
Exterior Lamps Off Reminder 112
Headlamp Main/Dipped-Beam
Changer 112
Flash-to-Pass 113
Daytime Running Lamps (DRL) 113
Automatic Headlamp System 113
Headlamp Levelling Control
Hazard Lights 114
Turn and Lane-Change Signals 114
Rear Fog Lamps 115

Interior Lighting

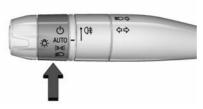
Instrument Panel Illumination

Control 11	5
Courtesy Lamps 11	6
Reading Lamps 11	6
Engine Compartment Lamp 11	6

Lighting Features

Entry Lighting 116	
Exit Lighting 116	
Battery Power Protection 117	
Exterior Lighting Battery Saver 117	

Exterior Lighting Exterior Lamp Controls



There are four positions:

 \bigcirc : Turns the exterior lamps off and deactivates the AUTO mode. Turn to \bigcirc again to reactivate the AUTO mode.

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

To override AUTO mode, turn the control to $\dot{\Box}.$

To reset to AUTO mode, turn the control to \bigcirc and then release back to AUTO. Automatic mode also resets when the vehicle is turned off and then back on again if the control is left in the AUTO position. 305 : Turns on all lights, except the headlights.

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

 \mathbb{I} : Turns on the headlamps together with the parking lamps and instrument panel lights.

Exterior Lamps Off Reminder

A warning chime will sound if the exterior lamp control is left on in either the headlight or parking light position and the driver door is opened with the ignition off.

Headlamp Main/Dipped-Beam Changer

Push the indicator lever away from you and release to turn the main beams on. To return to dipped beams, push the stalk again or pull it toward you and release.

ΞD

This indicator light turns on in the instrument cluster when the high-beam headlamps are on.

Flash-to-Pass

To use the flash-to-pass feature, briefly pull the turn signal lever toward you. The main-beam indicator flashes to indicate to the other driver that you intend to pass.

Daytime Running Lamps (DRL)

DRL can make it easier for others to see the front of your vehicle during the day.

The DRL system makes the dedicated lamps come on when the following conditions are met:

- The ignition is on.
- The exterior lamp control is in the AUTO.
- The light sensor determines it is daytime.

When DRL are on, only the front lamps will be on. The parking lamps, tail lamps, instrument panel lights, or other exterior lamps will not be on when the DRL are being used.

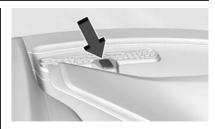
When it is dark enough outside, the front lamps dim to parking lamps and the normal dipped beam headlamps turn on.

The regular headlamp system should be turned on when needed.

To turn off the DRL, turn the exterior lamp control to 5005. The DRL will stay off until the control is toggled again.

Automatic Headlamp System

When the exterior lamp control is set to AUTO and it is dark enough outside, the headlamps and parking lamps come on automatically.



There is a light sensor on top of the instrument panel. Do not cover the sensor; otherwise the headlamps will come on when they are not needed.

The system may also turn on the headlamps and parking lamps when driving through a parking garage or tunnel.

If the vehicle is started in a dark garage, the automatic headlamp system comes on immediately. If it is light outside when the vehicle leaves the garage, there is a slight delay before the automatic headlight system changes to the Daytime Running Lamps (DRL). 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 ⇔ 115.

114 Lighting

When it is bright enough outside, the headlights and parking lights will turn off or may change to DRL.

The automatic headlamp system turns off when the exterior lamp control is turned to or the ignition is off.

To turn automatic headlamp system back on, turn the band to \bigcirc again, then release it.

If the automatic headlamp system has the headlamps turned on and you turn the ignition off, the headlamps will turn off. When the driver door is opened the headlamps and parking lamps will illuminate for a period of time.

The length of the delayed illumination period can be changed. Touch the Setting icon and select Vehicle > Lighting > Exit Lighting.

The regular headlamp system should 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 will come on. The time it takes for the lamps to turn on depends on the wiper speed. When the wipers are turned off, the lamps turn off. To disable, move the exterior lamp control to \bigcirc or $\stackrel{>}{>}00\stackrel{<}{\leq}$.

Headlamp Levelling Control

Automatic Headlamp Levelling Control

If equipped, the level of the headlights is automatically adjusted based on the vehicle load to reduce the glare to other drivers.

Hazard Lights



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

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

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

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

Turn and Lane-Change Signals



An arrow on the instrument cluster flashes in the direction of the turn or lane change.

Move the lever all the way up or down to signal a turn.

Raise or lower the lever until the arrow starts to flash to signal a lane change. Hold it there until the lane change is complete. If the lever is briefly pressed and released, the indicator flashes three times. If more flashes are desired, continue to hold the lever.

The stalk returns to its starting position when it is released.

If after signaling a turn or lane change the arrows flash rapidly or do not come on, a turn signal indicator light failure may have occurred.

If a turn signal has failed, the lamp may need to be replaced. See your dealer.

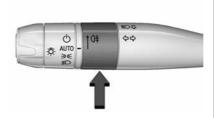
Turn Signal on Chime

A chime sounds if the indicator has been on for more than 1.2 km (0.75 mi) of driving.

If you need to leave the indicator on for more than 1.2 km (0.75 mi), turn off the indicator and then turn it back on.

Rear Fog Lamps

The rear fog lamps make the vehicle more visible from the rear in foggy or misty conditions.



Turn the band to O\$ and release it to turn the rear fog lamps on and off.

When the fog lamps are on, the fog lamp light on the instrument cluster will also be on.

The ignition and parking lamps or headlamps must be on for the rear fog lamps to work.

Some localities have laws that require the headlamps to be on along with the fog lamps.

Do not use the fog lamps when visibility is good because it may bother other drivers. It is also not recommended that rear fog lamps be used in city driving. Rear fog lamps should only be used in foggy or misty conditions to allow the drivers behind you to see your vehicle.

Interior Lighting

Instrument Panel Illumination Control



This feature adjusts the brightness of all illuminated controls. The knob for this feature is on the left side of the instrument panel.

Turn the knob clockwise or anticlockwise to brighten or dim the lights.

The knob is functional at night, or when headlamps or the parking lamps are ON.

Night Mode

At night, when the knob is turned all the way to the off position, the instrument cluster will show minimum feature content (digital speed, gear indication, coolant temperature, and the fuel gauge) with

116 Lighting

muted colors to reduce light emission for better visibility. The Infotainment System display and the interior lighting are off.

Courtesy Lamps

The interior lamps will come on when any door is opened, \blacksquare on the remote key is pressed, or when the ignition is switched off.

The tailgate/boot lamps only come on when the rear compartment is opened.

Reading Lamps



If equipped, the reading lights are in the overhead console. The lamps go on when any door is opened, a on the remote key is pressed, or when the vehicle is turned off. When the doors are closed, press the lamp buttons to turn on each lamp.

To operate, the vehicle must be on, in accessory mode, or using Retained Accessory Power (RAP).

Engine Compartment Lamp

If equipped, the engine compartment light will turn on briefly when:

- a is pressed on the key.
- Keyless Access is used to unlock the door.
- Any door is opened.
- The engine compartment hatch is opened.

The engine compartment light will turn off when:

- All doors and the engine compartment hatch are closed.
- 🖬 is pressed on the key.
- The vehicle begins to move after shifting out of P (Park).
- The vehicle is started, or turned from off to accessory mode.

If any door or the engine compartment hatch/boot remains open, while the vehicle is off, a timer will turn the light off.

Lighting Features

Entry Lighting

The interior lights turn on when pressing $\widehat{\mathbf{n}}$ on the remote key or opening any doors, and the dome light control is in the door position.

Some exterior lamps also turn on when pressing an on the remote key or opening any doors. Dipped Beam lights will only turn on briefly at night, or in areas with limited lighting.

All lights will gradually dim after about 30 seconds.

Entry lighting can be disabled manually by closing all doors, pressing \bigcirc on the remote key, or starting the vehicle.

This feature can be changed. On the infotainment home page, select the Settings icon > Vehicle > Vehicle Locator Lights.

Exit Lighting

Some exterior lights and interior lights turn on when the driver door is opened after the vehicle is turned off. The exterior and interior lights remain on for a set amount of time, then automatically turn off.

The interior lights turn on when the vehicle is turned off.

The exterior lamps turn off immediately by turning the exterior lamp control off.

This feature can be changed. On the infotainment home screen, select the Settings icon > Vehicle > Exit Lighting.

Battery Power Protection

This feature helps prevent the battery from being drained, if the interior courtesy lights or reading lights are accidentally left on. If any of these lights are left on, they automatically turn off after 10 minutes, if the ignition is off. The lights will not come back on again until one of the following occurs:

- The ignition is turned on.
- The doors are closed and then re-opened.

Exterior Lighting Battery Saver

The exterior lights turn off about 10 minutes after the vehicle is turned off, if the parking lights or headlights have been manually left on. This protects against draining the battery. To restart the 10-minute timer, turn the exterior lamp control to the \bigcirc position and then back to the ≥ 005 or $\equiv \bigcirc$ position.

To keep the lights on for more than 10 minutes, the vehicle must be on or in accessory mode.

Introduction

Introduction	118
Overview	119
Steering Wheel Controls	121
Using the System	122
Software Updates	

Radio

AM-FM Radio 124
Digital Audio Broadcast (DAB) Radio 126
Radio Data System (RDS) 127
Radio Reception 127
Diversity Aerial System 128

Audio Players

Avoiding Untrusted Media Devices	128
USB Port	128
Auxiliary Jack	131
Bluetooth Audio	131

Navigation

u i gution	
Using the Navigation System	. 132
Maps	134
Navigation Symbols	. 135
Destination	136
Global Positioning System (GPS)	. 141
Vehicle Positioning	. 141
Problems with Route Guidance	142
If the System Needs Service	142

Map Data Updates
Voice Recognition Voice Recognition142
Performance Data Recorder (PDR) Performance Data Recorder (PDR) 148
Phone Bluetooth (Overview)
Settings Settings
Trademarks and Licence Agreements Trademarks and Licence Agreements 161

Introduction

Read the following pages to become familiar with the functions.

▲ Warning

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

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

Before driving:

• Become familiar with the operation, centre console controls, steering wheel controls, and infotainment display.

- Set up the audio by presetting favourite stations, setting the tone, and adjusting the speakers.
- Set up phone numbers in advance so they can be called easily by pressing a single control or by using a single voice command.

See Distracted Driving ⇒ 173.

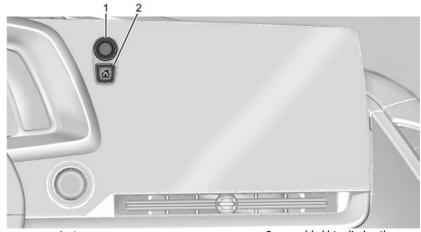
Active Noise Cancellation (ANC)

If equipped, ANC reduces engine noise in the vehicle's interior. ANC requires the factory-installed audio system, radio, speakers, amplifier (if equipped), induction system and exhaust system to work properly. Deactivation is required by your retailer if related aftermarket equipment is installed.

Overview

Infotainment System

The infotainment system is controlled by using the infotainment display, controls on the centre console, steering wheel controls, and voice recognition.



1. Power/Volume

- When off, press to turn the system on.
- When on, press to mute the system. Press again to unmute the system.

- Press and hold to display the power off screen or the option to display the power off screen.
- Turn to increase or decrease the volume.

2. 🏠 (Home Page)

• Press to go to the Home Page. See "Home Page" in this section.

Pressing $\mathbf{\Delta}$ again displays the porch view screen showing audio, phone, and navigation (if equipped) information.

 Press to exit Android Auto or Apple CarPlay. To enter back into Android Auto or Apple CarPlay, press and hold. See Apple CarPlay and Android Auto ⇔ 157.

Home Page

The Home Page is where vehicle application icons are accessed. Some applications are disabled when the vehicle is moving.

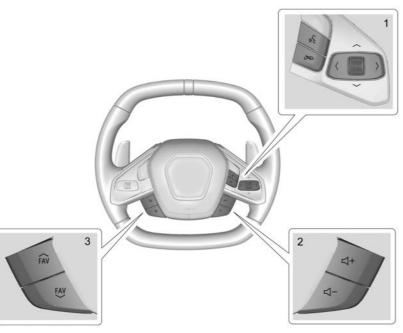
Swipe left or right across the display to access the pages of icons.

At the bottom of the Home page, in the status bar, is the notification icon. This displays the number of notifications. Touching the icon shows the notifications. The notification icon may display for a few seconds and then go away, depending on the number of icons in the status bar.

Managing Home Page Icons

- 1. Touch and hold any of the Home Page icons to enter edit mode.
- 2. Continue holding the icon and drag it to the desired position.
- 3. Release your finger to drop the icon in the desired position.
- 4. To move an application to another page, drag the icon to the edge of the display towards the desired page.
- 5. Continue dragging and dropping application icons as desired.

Steering Wheel Controls



start voice recognition. See Bluetooth (Overview) ⇔ 152 or Bluetooth (Pairing and Using a Phone) ⇔ 153.

₩ (1) : Press to answer an incoming call or

(1): Press to decline an incoming call or end a current call. Press to mute or unmute the infotainment system when not on a call. See *Bluetooth* (*Overview*) \Rightarrow 152 or *Bluetooth* (*Pairing and Using a Phone*) \Rightarrow 153 or *Voice Recognition* \Rightarrow 142.

< or > (1) : Press to move left or right between the interactive display zones in the cluster. Press the thumbwheel to select.

 \land or \lor (1) : Use the thumbwheel to scroll up or down in a list or seek if the audio page is displayed in the cluster. Press the thumbwheel to select.

 \Box + or \Box - (2) : Pull to increase or decrease volume.

✓ FAV or FAV ✓ (3) : Pull to display a list of favorites. Pull again to select the next or previous favorite when listening to the radio.

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

Using the System

Audio

Touch the Audio icon to display the active audio source page. Examples of available sources may include AM, FM, My Media, USB, AUX, and Bluetooth.

Phone

Touch the Phone icon to display the Phone main page. See *Bluetooth (Overview)* ⇔ 152 or *Bluetooth (Pairing and Using a Phone)* ⇔ 153.

Nav

Touch the Nav icon to display the embedded navigation map. See Using the Navigation System \Rightarrow 132.

Users

If equipped, touch the Users icon to sign in or create a new user profile, and follow the on-screen instructions.

Only four user profiles can be active at one time in the vehicle. It may be necessary to remove a profile from the menu before creating or signing into an existing profile. The removed profile can be logged into at a later time.

Settings

Touch the Settings icon to display the Settings menu. See Settings \Rightarrow 158.

Apple CarPlay

Touch the Apple CarPlay icon to activate Apple CarPlay (if equipped) after a supported device is connected. See *Apple CarPlay and Android Auto* ⇔ 157.

Android Auto

Touch the Android Auto icon to activate Android Auto (if equipped) after a supported device is connected. See Apple CarPlay and Android Auto \Rightarrow 157.

Apps

If equipped, in-vehicle apps are available for download. Touch the Apps icon on the Home Page to begin.

Downloading and using in-vehicle apps requires Internet connectivity which can be accessed with a data plan through the vehicle's built-in 4G LTE Wi-Fi hotspot, if equipped, or a compatible mobile device hotspot. On most mobile devices, activation of the Wi-Fi hotspot is in the device's Settings menu under Mobile Network Sharing, Personal Hotspot, Mobile Hotspot, or similar.

Availability of apps and connectivity varies by vehicle, conditions, and location. Data plan rates apply. Features are subject to change. For more information, see your dealer.

Camera

If equipped, touch the Camera icon to access the camera application. See Assistance Systems for Parking or Reversing \Rightarrow 224.

Shortcut Tray

The shortcut tray is near the bottom of the display. It shows up to four applications.

Infotainment Display Features

Infotainment display features show on the display when available. When a feature is unavailable, it may grey out. When a feature is touched, it may highlight.

Infotainment Gestures

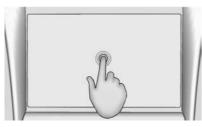
Use the following finger gestures to control the infotainment system.

Touch/Tap



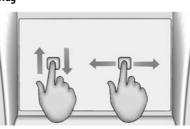
Touch/tap is used to select an icon or option, activate an application or change the location inside a map.

Touch and Hold



Touch and hold can be used to start another gesture, or to move or delete an application.

Drag



Drag is used to move applications on the Home Page, or to pan the map. To drag the item, it must be held and moved along the display to the new location. This can be done up, down, right, or left. This function is only available when the vehicle is parked and not in motion.

Nudge



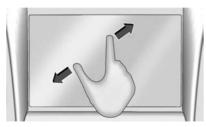
Nudge is used to move items a short distance on a list or a map. To nudge, hold and move the selected item up or down to a new location.

Fling or Swipe



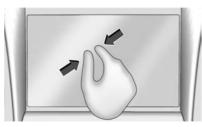
Fling or swipe is used to scroll through a list, pan the map, or change page views. Do this by placing a finger on the display then moving it rapidly up and down or right and left.

Spread



Spread is used to zoom in on a map, certain images, or a web page. Place finger and thumb together on the display, then move them apart.

Pinch



Pinch is used to zoom out on a map, certain images, or a web page. Place finger and thumb apart on the display, then move them together.

Cleaning High Gloss Surfaces and Vehicle Information and Radio Displays

For vehicles with high gloss surfaces or vehicle displays, use a microfibre cloth to wipe surfaces. Before wiping the surface with the microfibre cloth, use a soft bristle brush to remove dirt that could scratch the surface. Then use the microfibre cloth by gently rubbing to clean. 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.

Software Updates

Over-the-Air Software Updates

If equipped, see "Updates" under *Settings* ⇔ *158* for details on software updates.

Radio

AM-FM Radio

Playing the Radio

Press of on the console controls or touch the Audio icon on the Home Page to display the active audio source page. Choose the three most recently used sources listed at the left side of the display. Choose the More option to display a list of available sources. Examples of available sources may include AM, FM, My Media, USB, AUX (if equipped), and Bluetooth.

Infotainment System Sound Menu

From any of the audio source main pages, touch Sound to display the following:

Equaliser : Touch to adjust Bass, Midrange, Treble, and Surround (if equipped) using the options on the infotainment display.

Fade/Balance : Touch to adjust by using the controls on the infotainment display or by tapping/dragging the crosshair.

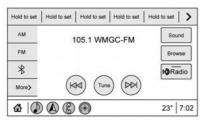
Sound Mode (If Equipped)

- Bose Centerpoint surround sound systems have four sound modes:
 - Normal: Adjusts the audio to provide the best sound for all seating positions.
 - Driver: Adjusts the audio to provide the best sound for the driver.
 - Rear: Adjusts the audio to provide the best sound for the rear seat occupants.
 - Centerpoint: Turns on Bose Centerpoint surround technology. This setting creates a surround sound from nearly

any audio source: existing stereo and MP3 players. For more information on Bose Centerpoint surround technology, see your dealer.

Finding a Station

Seeking a Station

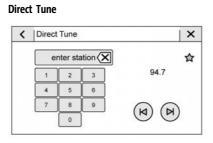


From AM or FM, press ${\ensuremath{\boxtimes}}$ or ${\ensuremath{\boxtimes}}$ on the console controls to search for the previous or next strong station.

Browsing Stations

Touch the Browse option to list all available stations. Navigate up and down through all stations by scrolling the list. Touch the station you want to listen to. Touch \overleftrightarrow to save the station as a favourite.

If equipped, touch Update Station List to update the active stations in your area.



Access Direct Tune by touching the Tune option on the infotainment display to show the keypad. Navigate through all frequencies using the left and right arrows on the Direct Tune display. Directly enter a station using the keypad. When a new station is entered, the information about that station displays on the right side. This information will update with each new valid frequency. Touch \checkmark to save the station as a favourite.

The keypad will grey out entries that do not contribute to a valid frequency and will automatically place a decimal point within the frequency number.

Touch (X) to delete one number at a time. Touch and hold (X) to delete all numbers.

A valid AM or FM station will automatically tune to the new frequency but will not close the Direct Tune display. Press \frown on the console controls, touch the Back icon, or X on the infotainment display to exit Direct Tune.

The tune arrows on the right-hand side of the Direct Tune display will tune through the complete station list one station step at a time per touch. A touch and hold advances through stations quickly.

FM Categories

From the FM stations, touch Categories at the top of the Browse menu to access the categories list. The list contains names associated with FM stations. Touch a category name to display a list of stations for that category. Touching a station from the list will tune the radio to that station.

Storing Radio Station Presets

Favourites are stored in the area at the bottom of the display.

AM and FM Radio Stations : Press and hold a preset to store the current station as a favourite. Touch a saved favourite to recall a favourite station.

Favourites can also be stored by touching $\overleftrightarrow{}$ in a station list. This will highlight indicating that it is now stored as a favourite.

The number of favourites displayed is automatically adjusted by default, but can be manually adjusted in Settings in the System tab under Favourites and then Set Number of Audio Favourites. It can also be adjusted in Settings in the Apps tab under Audio and then Set Number of Audio Favourites.

Digital Audio Broadcast (DAB) Radio

If equipped, Digital Audio Broadcasting (DAB) is a universal broadcast system that shows stations by the radio programme name on the infotainment display. The DAB signal produces a constant volume and is not affected by interference from nearby frequencies. The reception quality of DAB improves if the signal is reflected by natural obstacles or buildings. If the DAB signal is unclear, reception is interrupted completely.

Playing the Radio

From the Home screen, touch the Audio icon to display the Now Playing screen for the active audio source. Touch the DAB source button (e.g., AM, FM, DAB) in the left corner to change the source.

Finding a Station

Seeking a Station

From the DAB screen, touch the back or forward buttons to search for the previous or next strong station.

Tune

Touch IIIIIII on the infotainment display to enter the Tune screen. Enter a DAB station number using the alpha-numeric keypad (e.g., 5A).

Touch the \bigstar to save the station as a favourite.

After entering a valid DAB station, the radio will automatically tune to the new station but not close the Tune screen. Alternatively, touch the Go button or a DAB station in the list to begin playing the station. The tune page will close and return to the Now Playing screen.

DAB Now Playing Screen

While tuned to a DAB station, your display may include relevant information such as station label, text information regarding artist and song, and a station logo. This information is provided by the DAB broadcaster and may not always be available in your listening region.

Storing DAB Radio Station Favourites

Saved favourite stations will show at the bottom of the Now Playing screen.

DAB favourites can be stored by pressing and holding a favourite slot while listening to that station.

DAB Linking

If equipped, your radio may support DAB to DAB Linking and DAB to FM Linking.

DAB to DAB Linking supports the automatic switching of your now playing DAB station to another DAB station with the same content. This happens if the Now Playing DAB station reception weakens and a DAB station with the same content and better reception can be received. DAB to FM Linking supports the automatic switching of your now playing DAB station to another station on the FM band with the same content. This happens if the Now Playing DAB station reception weakens and an alternate FM station with the same content and better reception can be received.

DAB linking settings can be turned on or off in the Settings menu.

DAB Announcements

If equipped, DAB announcements represent a grouping of broadcast announcements defined by category. Examples include news, emergency, weather, sports, finance etc. Desired announcement types can be selected by the user through the DAB Announcement screen. Emergency announcements are always enabled and cannot be disabled.

Selected announcements will be automatically received by the radio, when available. Your radio will provide a pop-up window to notify you that a pending announcement will begin playing. You can choose to listen to or dismiss the announcement.

DAB announcement settings can be managed in the Audio Settings menu.

Radio Data System (RDS)

If equipped, RDS features are available for use only on FM stations that broadcast RDS information. When supported, the radio may:

- Group stations by Category (i.e., Programme Type) such as Rock, Jazz, Classical, etc.
- Display text from radio stations that include station name and messages.

This system relies on receiving specific information from these stations and only works when the information is available. It is possible that a radio station could broadcast incorrect information that causes the radio features to work improperly. If this happens, contact the radio station.

When information is broadcast from an RDS station, the station name or call letters display on the audio screen. Radio text supporting the currently playing broadcast may also appear.

Radio Reception

Unplug electronic devices from the accessory power outlets if there is interference or static in the radio.

FM

FM signals only extend about 16 to 65 km (10 to 40 mi). Although the radio has a built-in electronic circuit that automatically works to reduce interference, some static can occur, especially around tall buildings or hills, causing the sound to fade in and out.

AM

The range for most AM stations is greater than for FM, especially at night. The longer range can cause station frequencies to interfere with each other. Static can also occur when things like storms and power lines interfere with radio reception. When this happens, try reducing the treble on the radio.

Digital Audio Broadcasting (DAB)

If equipped, Digital Audio Broadcasting (DAB) is a universal broadcast system that shows stations by the radio programme name on the infotainment display. The DAB signal produces a constant volume and is not affected by interference from nearby frequencies. The reception quality of DAB improves if the signal is reflected by natural obstacles or buildings. If the DAB signal is unclear, reception is interrupted completely.

Mobile Phone Usage

Mobile phone usage, such as making or receiving phone calls, charging, or just having the phone on may cause static interference in the radio. Unplug the phone or turn it off if this happens.

Diversity Aerial System

The AM-FM antenna is a hidden self-tuning system. It optimises the AM and FM signals relative to the vehicle's position and radio station source. No maintenance or adjustments are needed.

Audio Players

Avoiding Untrusted Media Devices

When using media devices such as USB and mobile devices, consider the source. Untrusted media devices could contain files that affect system operation or performance and should be avoided.

USB Port

Audio stored on a USB device may be listened to.

The vehicle may be equipped with two USB ports in the center console. These ports are for data and charging.

Caution

To avoid vehicle damage, unplug all accessories and disconnect all accessory cables from the vehicle when not in use. Accessory cables left plugged into the vehicle, unconnected to a device, could be damaged or cause a short circuit if the unconnected end comes in contact with liquid or another power source such as the accessory power outlet.

Playing from a USB

A USB mass storage device can be connected to the USB port.

Audio extensions supported by the USB may include:

- MP3
- AAC
- 0GG
- 3GP

Gracenote

When plugging in a USB device, Gracenote service builds voice tags for music. Voice tags allow artists, albums with hard-to-pronounce names, and nicknames to be used to play music through voice recognition, if equipped.

While indexing, infotainment functions may be available.

My Media Library

MyMedia is only available when more than one indexed device is connected. It allows access to content from all indexed media sources. MyMedia will show as an available source in the Source page.

USB MP3 Player and USB Devices

The USB MP3 players and USB devices connected must comply with the USB Mass Storage Class specification (USB MSC).

To play a USB device:

- 1. Connect the USB.
- 2. Touch Audio from the Home Page.
- 3. Touch the More option and then touch the USB device.

Use the following when playing an active USB source:

 \triangleright : Touch to play the current media source.

II : Touch to pause playback of the current media source.

 \mathbb{K} :

- Touch to seek the beginning of the current or previous track.
- Touch and hold to reverse quickly through playback. Release to return to playing speed. Elapsed time displays.

bb:

- Touch to seek the next track.
- Touch and hold to advance quickly through playback. Release to return to playing speed. Elapsed time displays.

Shuffle : Touch the shuffle icon to play music in random order.

USB Sound Menu

See "Infotainment System Sound Menu" under AM-FM Radio ⇔ 124.

USB Browse Menu

When a list of songs, albums, artists, or other types of media displays, the up and down arrows, and A-Z appear on the left-hand side. Select A-Z to view a display that will show all letters of the alphabet and select the letter to go to.

Touch the up and down arrows to move the list up and down.

Touch Browse and the following may display:

Playlists:

- 1. Touch to view the playlists stored on the USB.
- 2. Touch a playlist to view the list of all songs in that playlist.
- 3. Touch a song from the list to begin playback.

Supported playlist extensions are m3u and pls.

Artists:

- 1. Touch to view the list of artists stored on the USB.
- 2. Touch an artist name to view a list of all albums by the artist.
- 3. To select a song, touch All songs or touch an album and then touch a song from the list.

Songs:

- 1. Touch to display a list of all songs on the USB.
- 2. To begin playback, touch a song from the list.

Albums:

- 1. Touch to view the albums on the USB.
- 2. Touch the album to view a list of all songs on the album.
- 3. Touch a song from the list to begin playback.

Genres:

- 1. Touch to view the genres on the USB.
- 2. Touch a genre to view a list of artists.
- 3. Touch an artist to view albums by that artist.
- 4. Touch an album to view songs on the album.
- 5. Touch a song to start playback.

Composers:

- 1. Touch to view the composers on the USB.
- 2. Touch a Composer to view a list of albums by that composer.

- 3. Touch an album or All Songs to view a list of songs.
- 4. Touch a song from the list to begin plauback.

Folders:

- 1. Touch to view the directories on the USB.
- 2. Touch a folder to view a list of all files.
- 3. Touch a file from the list to begin playback.

Podcasts : Touch to view the podcasts on the connected Apple device and get a list of podcast episodes.

Audiobooks:

- 1. Touch to view the audiobooks stored on the Apple device.
- 2. Touch an audiobook to get a list of chapters.
- 3. Touch the chapter from the list to begin playback.

File System and Naming

File systems supported by the USB may include:

- FAT32
- NTES

The songs, artists, albums, and genres are taken from the file's song information and are only displayed if present. The radio displays the file name as the track name if the song information is not available.

Supported Apple Devices

To view supported devices, see your retailer.

Storing and Recalling Media Favourites

To store media favourites, touch Browse to display a list of media types.

Touch one of the following Browse options to save a favourite:

Playlists : Touch 🟠 next to any playlist to store the plaulist as a favourite. Touch a saved favourite to recall a favourite plaulist. The first song in the playlist begins to play.

Artists : Touch 🟠 next to any artist to store the artist as a favourite. Touch a saved favourite to recall a favourite artist. The first song in the artist list begins to play.

Songs : Touch Δ next to any song to store the song as a favourite. Touch a saved favourite to recall a favourite song.

Albums : Touch 🟠 next to any album to store the album as a favourite. Touch a saved favourite to recall a favourite album. The first song in the album list begins to play.

Genres : Touch 🟠 next to any genre to store the genre as a favourite. Touch a saved favourite to recall a favourite genre. The first song of the genre begins to play.

Podcasts : Touch \bigwedge next to any podcast to store the podcast as a favourite. Touch a saved favourite to recall a favourite podcast. The podcast begins to play.

Audiobooks : Touch $\overleftrightarrow{}$ next to any audiobook to store the audiobook as a favourite. Touch a saved favourite to recall a favourite audiobook. The first chapter in the audiobook begins to play.

Media Playback and Mute

USB plauback will be paused if the system is muted. If the steering wheel mute control is pressed again, playback will resume.

If the source is changed while in mute, playback resumes and audio will unmute.

HFS+

Auxiliary Jack

If equipped, this vehicle has an auxiliary input jack in the center console. Possible auxiliary audio sources include:

- Laptop computer
- Audio music player

This jack is not an audio output. Do not plug headphones into the auxiliary input jack. Set up an auxiliary device while the vehicle is in P (Park).

Connect a 3.5 mm (1/8 in) cable from the auxiliary device to the auxiliary input jack. When a device is connected, the system can play audio from the device over the vehicle speakers.

If an auxiliary device has already been connected, but a different source is currently active, touch More and then touch AUX to make the source active.

Shuffle and Browse are not available in the AUX source menu.

Bluetooth Audio

Music may be played from a paired Bluetooth device. See *Bluetooth (Overview)* \Rightarrow 152 or *Bluetooth (Pairing and Using a Phone*) \Rightarrow 153 for help pairing a device. Volume and song selection may be controlled by using the infotainment controls or the mobile device. If Bluetooth is selected and no volume is present, check the volume setting on the infotainment system.

Music can be launched by touching Bluetooth from the recent sources list on the left of the display or by touching the More option and then touching the Bluetooth device.

To play music via Bluetooth:

- 1. Power on the device, and pair to connect the device.
- Once paired, touch Audio from the Home Page, then touch Bluetooth from the recent sources list on the left of the display.

Bluetooth Sound Menu

See "Infotainment System Sound Menu" under AM-FM Radio ⇔ 124.

Manage Bluetooth Devices

From the Home Page:

- 1. Touch Audio.
- 2. Touch Devices to add or delete devices.

When touching Bluetooth, the radio may not be able to launch the audio player on the connected device to start playing. When the vehicle is not moving, use the mobile device to begin playback.

All devices launch audio differently. When selecting Bluetooth as a source, the radio may show as paused on the display. Press play on the device or touch \triangleright on the vehicle display to begin playback.

Browse functionality will be provided where supported by the Bluetooth device. This media content will not be part of the MyMedia source mode.

Some smartphones support sending Bluetooth music information to display on the radio. When the radio receives this information, it will check to see if any is available and display it. For more information about supported Bluetooth features, see your dealer.

Navigation

Using the Navigation System

If equipped, launch the Nav application by touching the Nav icon on the Home Page or on the shortcut tray near the bottom of the infotainment display.

When the Nav application is launched for the first time, a product walk-through is available. Use of the feature requires the Terms and Conditions and the Privacy statement to be confirmed. If available and signed into a profile, it is also suggested to enable and confirm Predictive Navigation.

Predictive Navigation (If Equipped)

If Predictive Navigation is available and confirmed, this feature learns preferences by remembering where the vehicle has been. It uses the locations and navigation history to personalise routes and results.

Predictive Navigation may learn elements such as:

- Personalised routes based on preferred streets.
- Search results that provide best matches at the top of the list.
- Predictive traffic.

• Local map content updating.

Predictive Navigation can also be enabled or disabled at a later time by touching (Options). While in Options, touch Settings, then Map and Navigation Settings, and then Predictive Navigation.

Navigation Map View



After opening the Nav application for the first time, the application will always open in full map view displaying the vehicle's current location. When the vehicle is stopped, the search bar will appear along the top of the navigation map view. Manually close the search bar by touching X. When the vehicle is moving, the \mathcal{P} (Search) icon will replace the search bar to maximise the full map view.

Destination Card Preferences

From the Nav application, set up Home and Work addresses to enable one-touch navigation. To set up Home and Work addresses, touch and select Settings, then Map and Navigation Settings, and then Destination Card Preferences. Show My Places on Map should be on by default. Select and enter Home and/or Work address and save.

C Destination Card Preferences	Done
Show Destination Card on Map	
Home	
Address	
Work 🔻	
Keyword or Address	

If the vehicle's system is not signed into a customised profile, the current location icon uses a generic symbol. Once signed into a customised profile, the current location symbol will show a customised icon. See Navigation Symbols \Leftrightarrow 135.

Map and Navigation Settings

Touch **...** while in the map view to display options. The following may display:

• Show on Map

- Traffic Events (available with Connected Navigation)
- Settings
- Edit Destination (if a route has been set)
- Avoid on Route (if a route has been set)

Touch Settings to view Map and Navigation Settings. The following may display:

- Destination Card Preferences
- Map Preferences
- Route Preferences
- Navigation Voice Control
- Traffic Preferences
- Alert Preferences
- Fuel Grade Preferences
- Manage History
- Predictive Navigation: See "Predictive Navigation (If Equipped)" previously in this section.
- About

To exit a list, touch X in the top right corner to return to the main map view.

Make sure to set up preferences before setting a destination and starting active guidance.

Map Preferences

Touch to choose between basic map feature configurations:

Map Colours

- Auto Touch to automatically change modes based on lighting conditions.
- Day (Light)
- Night (Dark)

3D Landmark (Default is On) : Touch On or Off. When turned on, the system will display all 3D Landmarks on the map depending on the zoom level.

3D Building (Default is Off) : Touch On or Off. When turned on, the system will display all of the possible 3D building shapes on the map depending on the zoom level.

Show Terrain in 3D (Default is Off) : If equipped, touch On or Off. When turned on, the system will display terrain information on the map in 3D view.

Auto-Zoom (Default is On) : Touch On or Off. When turned on, the system will automatically adjust the zoom level when the vehicle is approaching a turn. After the turn is completed, the system automatically brings the zoom back to the originally set level. If the vehicle is approaching a turn with the next turn occurring shortly after, the Auto-Zoom will remain on until both turns are completed.

Route Preferences

Touch to access the Route Preferences. The choices are:

- Preferred Route Choose from two different route options: Fastest or Eco-Friendly.
 - Fastest would be the route with the shortest drive time.
 - Eco-Friendly would be the most fuel-efficient route.
- Avoid on Current Route Choose any of the road features to avoid while on route:
 - Motorways
 - Unpaved Roads
 - Ferries
 - Carpool Lanes
 - Toll Roads
 - Tunnels
 - Country Borders

Navigation Voice Control

Touch to access the voice control setting display.

- Navigation Volume To adjust the volume level, touch the up and down arrows. If the voice guidance prompt is playing, volume can also be adjusted using the knob on the centre console or the volume switch on the steering wheel.
- Navigation Voice Prompt Level during a Call. Options available are:
 - Full Prompt (Selected by default)
 - Tone Only
 - None

Traffic Events (If Equipped)

This feature provides a list of events that are on the route or nearby. Touch and then select Traffic Events. A connected Navigation service plan is required.

Traffic Preferences (If Equipped)

While in Map View, touch . then Settings and then Map and Navigation Settings to access Traffic Preferences. When Show Traffic on Map is turned on, the feature provides an overview of the traffic flow using different coded colours. The following options are available for rerouting:

- Auto Reroute to Better Route The system will automatically reroute if the system detects there is a traffic issue ahead.
- Ask Before Rerouting (Default) If the system detects there is a traffic issue ahead, it will display a pop-up with details about the issue. Choose to reroute or cancel the alert.
- Never Search for Better Route The system will not check for a better route until one of the above options is selected.

Alert Preferences

Set alerts on or off during both inactive and active guidance views. The following alerts may be available:

- Road Safety Alerts Touch to display upcoming School Zones.
- Traffic Camera Alerts

Manage History

Touch Manage History to access the History options:

- Clear Recent Destinations Touch ⊠ to clear the recent destinations.

About

Touch to display software information, such as:

- Telenav Terms and Conditions
- Telenav Privacy Statement
- Navigation Version

Maps

The Nav application requires a map database to run. It is stored on an SD card that is connected to the infotainment system. If the map database is not available, a missing SD card error message will be displayed.

SD Card Error Messages

The SD card only works for one unique vehicle. The SD card must pass authentication verification to be used for that specific vehicle. If the SD card has a switch that can be set to read-only mode, ensure that it is in the upward position and not in read-only.

Potential error scenarios and messages include:

- The SD card has initialised for the first time: "Once initialised, this SD card can only be used for navigation in this vehicle." Make sure the SD card switch is in an upward position.
- The SD card is not working properly: "SD card is not functioning properly. (Error Code)."
- The SD card is not paired with the existing system: "This SD card is not valid in this vehicle for navigation. See Owner's Manual for more details or visit your dealer. (Error Code)."
- The SD card has been removed from the slot: "SD card has been removed. (Error Code)." Make sure the Nav SD card is in the slot.

Touch Confirm to resume after the initialization error message. For the other messages, touch OK to return to the Home Page.

If any errors continue, see your dealer.

Navigation Symbols

Following are the most common symbols that may appear in the Nav application.



This indicates the vehicle's current location and direction on the map.



This is the vehicle's current location icon during inactive guidance mode. Once a user profile is created, the current location icon can be customised.

This icon indicates the vehicle's current location and direction on the map.



The destination pin marks the location of the final destination. Touch the pin to view the destination address or to add it or remove it from the Favourites list. Hide the information by touching the pin one more time. It will automatically time out if no action is taken.



If equipped, smart Points of Interest (POIs) are places of interest for parking and gas stations.



The progress bar provides an overview of the route progress and may show traffic and incidents along the way. As the route proceeds, the vehicle icon moves up the bar.

Touch the icon to zoom out on the map and view the entire route. Touch it again to return to the previous view.

View the drive time by touching the estimated time of arrival (ETA).

Current Location

When the vehicle is parked and not in a Navigation session, the user icon is centred on the map view, highlighting the current location.

Destination

Receiving Destination Directions from Different Sources

Destinations can be received or transferred from different sources to the Nav application for route guidance. If equipped, some of these sources may include:

- Navigation from search results.
- An address from the Contacts list.
- An application on the smartphone that can send destinations to the vehicle.

Waypoints

Add up to five waypoints, which are additional destinations, along the route. To add an additional stop or waypoint:

1. From active guidance, touch \mathcal{P} .

- 2. Search for the destination using One-Box, Voice search, or the Quick Category icons.
- 3. Choose search results Along Route, Nearby, or Near Destination.
- 4. Choose the desired waypoint and touch Add to Trip or replace the current destination by touching New Destination.

Route options are not available for waypoints.

Arriving at a Waypoint

When approaching a waypoint, the system will display a Destination Arrival view. To continue on to the next destination touch the Drive to message on the infotainment display.

If the vehicle passes the waypoint or gets out of the current route, the system will automatically reroute back to this waypoint. At the same time, it will show a Drive to icon along with the next waypoint address so the current waypoint can be skipped and guidance can resume to the next waypoint or destination.

Editing a Waypoint

When waypoints are added during active guidance, the system allows a stop to be deleted or the order to be changed. To edit a waypoint:

- 1. Touch ….
- 2. Touch Edit Destinations.
 - Modify destination order by touching and holding the arrow until it is highlighted. Drag to move the waypoint up or down the list.
 - Delete a waypoint by touching [®]. A pop-up will appear to confirm waypoint removal. Once the request is confirmed, the system will remove the address from the destinations list. Touch X on the top right corner so the system can recalculate the route.

If there is only one address in the destinations list, the system will disable the move and delete functions. The system will not allow the final destination to be deleted.

Map Information

Road network attributes are contained in the map database for map information. Attributes include information such as street

names, street addresses, and turn restrictions. A detailed area includes all major motorways, service roads, and residential roads. The detailed areas include Places of Interest (POIs) such as restaurants, airports, banks, hospitals, police stations, petrol stations, tourist attractions, and historical monuments.

If the vehicle does not have an applicable service plan, the map database may not include data for newly constructed areas, or map database corrections that are completed after production. The navigation system provides full route guidance in the detailed map areas.

Zoom Control

The zoom control display is shown on the map view. A few ways to zoom in or out are:

- Touch + or to zoom in or out on the map.
- Double tap with one finger to zoom in or single tap with two fingers to zoom out on the map.
- Use the index finger and thumb to zoom out by pinching and then zoom in by spreading those two fingers on the map.

Map Gestures and Map Scale

Use the following gestures on the infotainment display to adjust the map scale and display options.

- Pinch to zoom in or out.
- Pan the map.
- Use two fingers to tilt down and change from 2D to 3D. Tilt up to change back to 2D.
- Rotate the map.

See Using the System ⇒ 122.

Mute

When in active guidance, the audio prompts while using navigation can be muted. Touch the speaker icon on the right-hand side of the upper bar. A slash will appear on the speaker to indicate voice guidance is muted.

Active Guidance View

When a destination is chosen and a navigation session is active, the navigation system enters into an Active Guidance View (AGV).

Map Orientation

Touch **under** on the map to access map orientation settings. Map orientation is 3D Heading Up by default.

Available settings are:

- 3D Heading Up (Default): 3D map with the vehicle pointing up. In this mode, the current location icon will always head up and the map will rotate around it.
- 2D Heading Up: 2D map with the vehicle pointing up. In this mode, the current location icon will always head up and the map will rotate around it.
- 2D North Up: 2D map with North pointing up. In this mode, the current location icon will shift as the vehicle turns left and right.

Touch the icon to change the map type. The icon and label will also update accordingly.

Depending on the zoom level of the 2D Heading Up and 3D Heading Up maps, the system may automatically switch to the 2D North Up map.

When in AGV, the entire route can be viewed in 2D North Up by touching the traffic bar. The map will zoom out and readjust to display the full route. When in

2D North Up Route View, the Recentre icon will appear in the middle of the display. Touch either the Recentre icon or the traffic bar again to return to the previous view, either 2D or 3D.

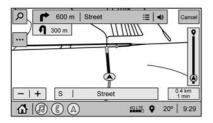
Lane Guidance

The map will display the lane information for the upcoming manoeuvre if it is available.

Junction View

When a vehicle is on the motorway and approaching the exit, an image displays the lane that the vehicle must stay in to complete the next manoeuvre.

Quick-Turn View



When the vehicle is approaching a turn with the next turn following in quick succession, a quick-turn list appears below the primary turn indicator. An audio prompt will announce the quick turn.

Auto-Zoom

When approaching a manoeuvre, the map will automatically zoom in to show both the vehicle icon and the upcoming manoeuvre to give a better view of the manoeuvre. Once the manoeuvre is complete, the system will zoom back to the previous zoom level. Touch **•••** on the map to access Settings, then touch Map Preferences to access Auto-Zoom. This feature can be enabled or disabled.

Directions

Touch the menu option next to the next turn street name to display Directions.

Directions displays the turns and directions from the current location to the final destination.

Editing Directions

Directions can be edited by choosing \checkmark , which expands the list to fill the display and enters the Edit Mode. While in Edit Mode, an unwanted route segment can be

removed from the route by touching $\hat{\mathbf{I\!I}}$ next to the segment. A pop-up appears to confirm segment removal.

When the route segment has been removed, all segments are replaced by an activity indicator while the new route is recalculated. When the recalculation is complete, the activity indicator is replaced with the new route segments.

Highway Exits List



Touch \mathbf{k} to open the Exit list. This icon displays next to the current street name near the bottom of the display. The icon only appears when on a motorway with defined exits.

While travelling on roads with designated exits, an Exit list may be available. The Exit list displays the exit number, distance to the exit from the current vehicle position, and convenience stops that may be available, such as gas, coffee, food, and lodging.

Next Manoeuvre Menu

When in Active Guidance, the Next Manoeuvre Turn Arrow, Street Name, and Manoeuvre Distance are shown in the Next Manoeuvre at the top of the display overlaying the map. ETA, Distance to Destination, and Traffic Indicator are displayed in a panel pinned on the right of the display.

Navigation Next Turn Manoeuvre Alert

If the Navigation application is not open when a near Manoeuvre prompt is given, it is shown as an alert. Touch the alert to go to the main navigation view or touch X to dismiss the alert.

Repeat Voice Guidance



This symbol indicates the next guidance manoeuvre. Touch it to repeat the last spoken guidance instruction.

Incident Alert (If Equipped)

During active guidance, if the system determines that there is an incident ahead but there is not a better route, the system will play a tone and show a Quick Notice. This will only show once per incident.

Incident Reports (If Equipped)

Incident report icons, along with traffic flow data, display on the map during both active and inactive guidance.

End Route

Touch Cancel at the top right corner to end active guidance and return to inactive guidance. If active guidance is cancelled before the destination has been reached, a pop-up option to Resume Trip will appear.

Resume Trip

The trip can be resumed if it was cancelled by touching the Resume Trip pop-up option. If the system has determined that the destination has been reached, either because the arrival view displayed or the destination has been passed, the Resume Trip option will not appear.

Favourites

The navigation favourites can have contacts, addresses, or POIs that have been saved through the favourite icon on the details view.

Accessing Favourites

In the Nav application, view the Favourites list by touching \bigwedge in the search bar along the top of the Nav map view. If the search bar is closed, touch \wp and select \bigwedge .

Saving Favourites

Favourites can be added from a number of the system's applications. Touch the favourites icon to save content as a favourite.

Renaming Navigation Favourites

- 1. Touch the Settings icon on the Home Page and touch the System tab.
- 2. Touch Favourites to access the Manage Favourites option.

- 3. Touch a saved Navigation favourite to access the edit icon. Touch the edit icon to rename the favourite.
- 4. Touch Save to store the renamed favourite.

Recents

Touch \bigcirc to access a list of recent destinations.

Recentre Position Icon

Touch the Recentre Position arrow in the middle of the map view to reset the map to the current location.

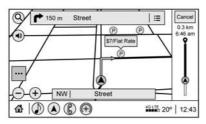
Last Parked Location

The Last Parked Location is the last location the vehicle engine was turned off. That location is displayed in the first row of the Recents list. Touching the last Parked Location shows the Address Details view to either save the address or drive to it. The Last Parked Location can be deleted by entering the Edit display. Once the Last Parked Location is deleted, it no longer appears in the Recents list, unless the vehicle is started at that location again.

Show POI Icons

To see the POI categories, touch Options, then touch Show on Map. Up to eight categories of icons can be selected.

Smart POI Icons on Map (If Equipped)



The smart POI icons such as fuel stations and parking may appear based on time, location, driver search behavior, driving conditions, and vehicle conditions.

Touch a smart POI icon to open the corresponding details:

- Left side: Name and address of the POI.
- Right-hand side: 🚘 + ETE (Estimated Time Enroute.)

Smart Fuel Station Icons

Fuel station prices are shown if available for nearby stations when the vehicle is low on fuel.

Smart Parking Icons

When reaching a densely populated destination and the system determines that parking may be limited, the system will attempt to display nearby parking destinations with pricing information, if available.

Report an Issue Using POI Details (If Equipped)

In the POI details page, a POI issue can be reported if the data is not accurate or the address is incorrect. Touch Report an Issue near the bottom of the display to access the issue selection page. Touch one of the predefined issues on the selection page, then touch Send. The system will send the information for analysis.

Search

Touch Search on the infotainment display to open the search display. It has a search field entry box, quick category icon shortcuts, recents icon, favourites icon, and keyboard.

Auto Complete

Enter a partial location in the field entry box on the search display. Auto complete will attempt to complete the destination based on what is being entered. Touch the suggested item to search.

Search While in Motion with No Front Seat Passenger Present

The search display will not allow changes or text input with the keyboard when the vehicle is in motion. As a result, a display showing three rows of the most commonly used categories appears. Touching the search box will activate speech recognition.

Search While in Motion with Front Seat Passenger Present

If the system detects that the front seat passenger is present with both driver and passenger seat belts fastened, touching the search icon will display an alert message that allows the passenger to search for a destination as if the vehicle were stopped.

Global Positioning System (GPS)

If equipped, the position of the vehicle is determined by using satellite signals, various vehicle signals, and map data.

At times, other interference such as the satellite condition, road configuration, condition of the vehicle, and/or other circumstances can affect the navigation system's ability to determine the accurate position of the vehicle.

The GPS shows the current position of the vehicle using signals sent by GPS satellites. When the vehicle is not receiving signals from the satellites, a symbol appears in the status bar.

This system might not be available or interference can occur if any of the following are true:

- Signals are obstructed by tall buildings, trees, large trucks, or a tunnel.
- Satellites are being repaired or improved.

For more information if the GPS is not functioning properly, see *Problems with Route Guidance* ⇔ 142 and *If the System Needs Service* ⇔ 142.

Vehicle Positioning

At times, the position of the vehicle on the map could be inaccurate due to one or more of the following reasons:

• The road system has changed.

- The vehicle is driving on slippery road surfaces such as sand, gravel, or snow.
- The vehicle is travelling on winding roads or long, straight roads.
- The vehicle is approaching a tall building or a large vehicle.
- The surface streets run parallel to a freeway.
- The vehicle has been transferred by a vehicle carrier or a ferry.
- The current position calibration is set incorrectly.
- The vehicle is travelling at high speed.
- The vehicle changes directions more than once, or the vehicle is turning on a turn table in a car park.
- The vehicle is entering and/or exiting a car park, garage, or a car park with a roof.
- The GPS signal is not received.
- A roof carrier is installed on the vehicle.
- Tire chains are installed on the vehicle.
- The tyres are replaced or worn.
- The tyre pressure is incorrect.
- This is the first navigation use after the map data is updated.

- The 12-volt battery has been disconnected for several days.
- The vehicle is driving in heavy traffic where driving is at low speeds, and the vehicle is stopped and started repeatedly.

Problems with Route Guidance

Inappropriate route guidance can occur under one or more of the following conditions:

- The turn was not made on the road indicated.
- Route guidance might not be available when using automatic rerouting for the next right or left turn.
- The route might not be changed when using automatic rerouting.
- There is no route guidance when turning at an intersection.
- Plural names of places might be announced occasionally.
- It could take a long time to operate automatic rerouting during high-speed driving.
- Automatic rerouting might display a route returning to the set waypoint if heading for a destination without passing through a set waypoint.

- The route prohibits the entry of a vehicle due to a regulation by time or season or any other regulation which may be given.
- Some routes might not be searched.
- The route to the destination might not be shown if there are new roads, if roads have recently changed, or if certain roads are not listed in the map data. See Maps ⇔ 134.

To recalibrate the vehicle's position on the map, park with the vehicle running for two to five minutes, until the vehicle position updates. Make sure the vehicle is parked in a location that is safe and has a clear view of the sky and away from large obstructions.

If the System Needs Service

If the navigation system needs service, see your dealer.

Map Data Updates

The map data in the vehicle is the most up-to-date information available when the vehicle was produced. The map data is updated periodically, provided that the map information has changed and the vehicle has a relevant service plan. See your retailer for details on ordering, purchasing, and installing a new or replacement SD card. Features are subject to change.

If the vehicle is equipped with Connected Navigation, which is a subscription service that enables certain features of the navigation system, such as Traffic, Smart Search/Routing, and Predictive Navigation, then the system will download the latest map data from the cloud.

Database Coverage Explanations

Coverage areas vary with respect to the level of map detail available for any given area. Some areas feature greater levels of detail than others. If this happens, it does not mean there is a problem with the system. As the map data is updated, more detail can become available for areas that previously had limited detail. See *Map Data Updates* \Rightarrow 142.

Voice Recognition

If equipped, voice recognition allows for hands-free operation within the navigation, audio, phone, and weather applications. This feature can be started by pressing either $\mathbb{W}_{\Sigma}^{\zeta}$ on the steering wheel or touching $\mathbb{W}_{\Sigma}^{\zeta}$ on the infotainment display.

However, not all features within these areas are supported by voice commands. Generally, only complex tasks that require multiple manual interactions to complete are supported by voice commands.

For example, tasks that take more than one or two touches such as selecting a song or artist to play from a media device would be supported by voice commands. Other tasks, like adjusting the volume or seeking up or down are audio features that are easily performed by pressing one or two controls are not supported by voice commands.

In general there are flexible ways to speak commands for completing the tasks. Most of them, except destination entry and voice keypad, can be completed in a single command. If the task takes more than one command to complete, the first command should be to indicate the kind of task to be performed, like "Navigation Destination Entry." The system replies with prompts that lead you through a dialogue to enter the necessary information. For example, if a destination for route guidance is needed, say "Navigation" or "Destination Entry." Try stating a One-Shot command, such as "Navigate to Address <number, street, city, country>." Another example of a One-Shot Destination Entry command is, "Navigate to Place of Interest – Hotels." If these commands don't work, try saying, "Navigate to Place of Interest" or "Navigate to Address" and the system will do the rest.

Voice recognition can be used when the ignition is on or when Retained Accessory Power (RAP) is active. See *Retained Accessory Power* (*RAP*) ⇔ 195.

Using Voice Recognition

Voice recognition becomes available once the system has been initialised. This begins when the ignition is turned on. Initialisation may take a few moments.

- Press ^ωξ['] on the steering wheel controls to activate voice recognition, or touch ^ωξ['] on the infotainment display.
- 2. The audio system mutes and the system plays a prompt.
- 3. Clearly speak one of the commands described in this section.

Press \bigstar^{\leq} to interrupt any voice recognition system prompt. For example, if the prompt seems to be taking too long to finish, press \bigstar^{\leq} again.

There are two voice prompt modes supported:

- Long verbal prompts: The longer prompts provide more information regarding the supported actions.
- Short prompts: The short prompts provide simple instructions about what can be stated.

If a command is not spoken, the voice recognition system says a help prompt.

Prompts and Screen Displays

While a voice recognition session is active, there will be corresponding options displayed. Manual interaction in the voice recognition session is permitted. Interaction during a voice session may be completed entirely using voice commands, or some selections may expedite a session. If a selection is made using a manual control, the dialogue will progress in the same way as if the selection was made through a voice command. Once the system is able to

complete the task, or the session is terminated, the voice recognition dialogue stops.

An example of this type of manual intervention is touching on an entry of a displayed number list instead of speaking the number associated with the entry desired.

Cancelling Voice Recognition

- Touch the voice icon. Touching this icon will terminate a voice recognition session that was initiated by touching the icon on the infotainment display.
- Touch or say "Cancel" or "Exit" to terminate the voice recognition session and show the display from which voice recognition was initiated.
- Press so or so on the steering wheel controls to terminate the voice session and show the display from which voice recognition was initiated.

Helpful Hints for Speaking Commands

Voice recognition can understand commands that are either naturally stated in sentence form, or direct commands that state the application and the task. Most languages do not support natural language commands in sentence form. For those languages, use direct commands like the examples shown on the display.

For best results:

- Listen for the prompt before saying a command or reply.
- Say "Help" or look at the screen display for example commands.
- A voice recognition system prompt can be interrupted while it is playing by pressing ⊮≨.

For example, if the prompt seems to be taking too long to finish, to speak the command without waiting for the prompt to complete, press $w \xi$.

- Speak the command naturally, not too fast, not too slow. Use direct commands without a lot of extra words.
- Usually Phone and Audio commands can be spoken in a single command.

For example say, "Call <name> at work," "Play" followed by the artist or song name, or "Tune" followed by the radio station number.

• Navigation destinations are too complex for a single command. First, say a command that explains the type of destination needed, such as I want directions to an "Address," "Navigate to an Intersection," "I need to find a Place of Interest or POI," or "Directions to a Contact." The system responds by requesting more details. For other POIs, say the name of a category like "Restaurants," "Shopping Malls," or "Hospitals."

Most languages do not support natural language commands in sentence form. For those languages, use direct commands like the examples shown on the display.

There is no need to memorise specific command words. Direct commands might be more clearly understood by the system. An example of a direct command would be "Call <number>." Examples of these direct commands are displayed on most of the displays while a voice session is active. If "Phone" or "Phone Commands," is stated, the system understands that a phone call is requested and will respond with questions until enough details are gathered.

If the phone number has been saved with a name and a place, the direct command should include both, for example "Call <name> at work."

Using Voice Recognition for List Options

When a list is displayed, a voice prompt will ask to confirm or select an option from that list. A selection can be made by manually selecting the item, or by speaking the line number for the item to select.

When a display contains a list, there may be options that are available but not displayed. The list on a voice recognition display functions the same as a list on other displays. Scrolling or flinging can be used to help display other entries from the list.

Manually scrolling or paging the list on a display during a voice recognition session suspends the current voice recognition event and plays the prompt "Make your selection from the list using the manual controls or touch the Back icon on the infotainment display to try again."

If manual selection takes more than 15 seconds, the session terminates and prompts that it has timed out. The display returns back to where voice recognition was initiated.

The Back Command

Say "Back" or touch the Back icon on the infotainment display to go to the previous menu.

When in voice recognition and you state "Back" all the way through to the initial display, and then you state "Back" once more, the voice recognition session will cancel.

Help

Say "Help" on any voice recognition display and the help prompt for the display is played. Additionally, a pop-up displays a text version of the help prompt. Depending on how voice recognition was initiated, the Help pop-up will either display on the instrument cluster or the infotainment display. Touch Dismiss to make the pop-up go away.

Pressing $\bowtie \xi$ while the help prompt is playing will terminate the prompt. Doing this will stop the help prompt so that a voice command can be used.

Voice Recognition for the Radio

Some audio displays have a voice recognition icon ($w_2^{(c)}$) to launch audio voice recognition. If browsing the audio sources when voice is touched, the voice recognition commands for AM, FM, and DAB (if equipped) are available.

"Switch to AM" : Switch bands to AM and tune to the last AM radio station.

"Switch to FM" : Switch bands to FM and tune to the last FM radio station.

"Switch to DAB" : Switch bands to DAB and tune to the last DAB radio station.

"Tune to <AM frequency> AM" : Tune to the radio station whose frequency is identified in the command (like "nine fifty").

"Tune to <FM frequency> FM" : Tune to the radio station whose frequency is identified in the command (like "one o one point one").

"Tune to <DAB station name> DAB" : Tune to the radio station name.

Voice Recognition for Audio My Media

If browsing MyMedia when the voice icon is selected, the voice recognition commands for MyMedia features are available.

"Play Artist" : Begin a dialogue to enter a specific artist name.

"Play Artist <artist name>" : Begin playback of the media selection identified in the command.

"Play Album" : Begin a dialogue to enter a specific album name.

"Play Album <album name>" : Begin playback of the identified album name in the command.

"Play Song" : Begin a dialogue to enter a specific song name.

"Play Song <song name>" : Begin playback of the identified song name in the command.

"Play Genre" : Begin a dialogue to enter a specific genre.

"Play Genre <genre name>" : Begin playback of the media selection identified in the command.

"Play Playlist" : Begin a dialogue to enter a specific playlist name.

"Play Playlist <playlist name>" : Begin playback of the identified playlist in the command.

"Play <device name>" : Play music from a specific device identified by name. The device name is the name shown on the display when the device is first selected as an audio source.

"Play Chapter" : Begin a dialogue to enter a specific name.

"Play Chapter <chapter name>" : Begin playback of the media selection identified in the command.

"Play Audiobook" : Begin a dialogue to enter a specific name.

"Play Audiobook <audiobook name>" : Begin playback of the media selection identified in the command.

"Play Episode" : Begin a dialogue to enter a specific name.

"Play Episode <episode name>" : Begin playback of the media selection identified in the command.

"Play Podcast" : Begin a dialogue to enter a specific name.

"Play Podcast podcast name>" : Begin
playback of the media selection identified in
the command.

"My Media" : Begin a dialogue to enter the desired media content.

Handling Large Amounts of Media Content

It is expected that large amounts of media content will be brought into the vehicle. It may be necessary to handle large amounts of media content in a different way than smaller amounts of media. The system may limit the options of voice recognition by not allowing selection of song titles by voice at the highest level if the number of songs exceeds the maximum limit.

Voice command option changes through media content limits are:

- Song files including other individual files of all media types such as audiobook chapters, podcast episodes, and videos.
- Album type folders including types such as albums and audiobooks.

There are no restrictions if the number of song files and albums is less than 4,000. When the number of song files connected to the system is between 4,000 and 8,000, the content cannot be accessed directly with one command like "Play <song name>."

The restriction is that the command "Play Song" must be spoken first; the system will then ask for the song name. The reply command would be to say the name of the song to play.

Similar limits exist for album content. If there are more than 4,000 albums, but less than 8,000, the content cannot be accessed directly with one command like, "Play <album name>." The command "Play Album" must first be spoken; the system will then ask for the album name. The reply would be to say the name of the album to play.

Once the number of songs has exceeded approximately 8,000, there is no support for accessing the songs directly through voice commands. There will still be access to the media content by using commands for playlists, artists, and genres.

The access commands for playlists, artists, and genres are prohibited after the number of this type of media exceeds 4,000.

The system will provide feedback the first time voice recognition is initiated if it has become apparent that any of these limits are reached during a device initialising process.

Voice Recognition for Navigation (If Equipped)

"Navigation" : Begin a dialogue to enter specific destination information.

"Navigation Commands" : Begin a dialogue to enter specific destination information.

"Destination Address" : Begin a dialogue to enter a specific destination address, which includes the entire address consisting of the house number, street name, and city and country.

"Destination Intersection" : Begin a dialogue to enter a specific destination intersection.

"Destination Place of Interest" : Begin a dialogue to enter a destination Place of Interest category or major brand name (if equipped).

Not all brand names of businesses are available for voice entry. Most major chains, such as chains with more than 20 locations, should be available to search for by name, but the name must be precisely spoken. Nicknames or short names for the businesses will not likely be found. Lesser known businesses might have to be located by category, such as fast food, hotels, or banks.

"Destination Contact" : Begin a dialogue to enter a specific destination contact name.

"Cancel Route" : End route guidance.

Voice Recognition for the Phone

"Call <contact name>" : Initiate a call to an entered contact. The command may include location if the contact has location numbers stored.

"Call <contact name> At Home," "At Work," "On Mobile," or "On Other" : Initiate a call to an entered contact and location at home, at work, on mobile device, or on another phone.

"Call <phone number>" : Initiate a call to a standard phone number or emergency number.

Say "Call <phone number>," then after the system reads back the number, repeat the "Call" command to initiate the call. If the number is not correct, "Delete" will delete the number and allow it to be entered again. If the number is not complete, speak the remaining digits.

"Pair Phone": Begin the Bluetooth pairing process. Follow instructions on the radio display.

"Switch Phone" : Select a different phone for outgoing calls.

"Voice Keypad" : Begins a dialogue to enter special numbers like international numbers. The numbers can be entered in groups of digits with each group of digits being repeated back by the system. If the group of digits is not correct, the command "Delete" will remove the last group of digits and allow them to be re-entered. Once the entire number has been entered, the command "Call" will start dialling the number.

"Voice Mail" : Initiate a call to voice mail numbers.

Phone Assistant Voice Recognition

Press and hold ⊮ 5 on the steering wheel controls to pass through and launch Google phone assistant or Siri.

For the low radio, whether connected by Bluetooth or phone projection, the only available voice recognition is either Siri (iPhone) or the Google Assistant (Android).

Performance Data Recorder (PDR)

If equipped, the PDR icon displays on the Home Page.

Caution

For the movie and sound recorded by Performance Data Recorder (PDR), carefully handle these because there is possibility they could result in invasion of privacy depending on its purpose and usage. Do not use PDR for mischievous purpose. Our company assumes no responsibility for that.

If equipped, the PDR icon displays on the Home Page.

The PDR records video, audio, and vehicle data. The forward facing video and cabin audio are captured by a camera and microphone located behind the rear view mirror. The PDR video and data is stored on a removable SD card located in the SD card reader in the glove box. The video (MP4) can be played back in the vehicle or the SD card can be removed and played in a PC or on a mobile device or the file can be viewed and analyzed within Toolbox. See Toolbox later in this section.

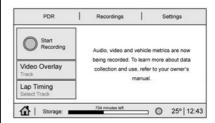
The recorded data is not stored anywhere else and is only accessible from the SD card.

To begin, insert a exFAT formatted SD card, Class 10 required, 16 GB or larger recommended, into the glove box SD card reader.

If a system error code is seen on the display, such as "System Error Code ####", please check the health of the SD card. It may need to be reformatted or replaced. If the issue persists, please see your dealer.

Touch the PDR icon to access the PDR menu. The options displayed are:

Start Recording



If the system is unable to begin recording, the Start Recording button is greyed out.

Touch Start Recording to begin recording. After recording begins, this button changes to Stop Recording. Touch to stop the recording session.

The recording must be stopped and the file closed before removing the SD card, or the recording cannot be reviewed.

PDR	Recordings Settings
Stop Recording 01:23:45	Audio, video and vehicle metrics are now being recorded. To learn more about data
Video Overlay Track	collection and use, refer to your owner's manual.
Lap Timing Select Track	The second

The elapsed time will show when recording.

The following errors or warnings may be displayed while recording:

- Storage Full
- No Storage Available
- System Error
- SD Card Error
- SD Card Speed Insufficient
- GPS Accuracy Warning
- SD Card Write Protected

÷	Video Overlay	×
None	۲	[Overlay Description Text]
Sport	0	10.00 A
Track	0	
Timing	0	
^		Preview

Touch Video Overlay to display the menu screen.

Touching preview provides a live preview of the overlay selected.

Select one:

Video Overlau

- None
- Sport
- Track
- Timing

None:

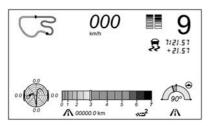
No vehicle data displays on top of the recorded video. Vehicle data is still available with the video when accessed in the toolbox software. See www.chevrolet.com/ performance-data-recorder to download Toolbox Software.

000 ^{km/h}	A 00000.0 km	9
1.25 0.00 Gs	1.25 0 1 2 3 4	

Displays these vehicle metrics:

- Vehicle Speed: Up to three digits are displayed in km/h or MPH depending on vehicle settings.
- Engine Revolutions Per Minute (rpm): The vertical line and triangle show current rpm's. As the rpm's increase, the backfill follows.
- Transmission State (Current Gear): Transmissions display 1, 2, etc.
- Lateral G-Force Graphic: Left and Right G-Forces are displayed. The graphic fills to the left or the right depending on the measure value. The measured G-Force displays as a number at the top of the graphic.
- Event Odometer: This displays the distance driven since the recording began.

Track:

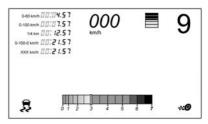


Displays these vehicle metrics:

- Vehicle Speed: Same as Sport.
- GPS Tracking Map: Shows the vehicle's current position relative to a known route.
- Engine Revolutions Per Minute (rpm): The vertical line and triangle show current rpm's. As the rpm's increase, the backfill follows.
- Transmission State (Current Gear): Same as Sport.
- Friction Bubble Graphic: Lateral and longitudinal G-Forces are displayed as a dot within a bubble. A red dot displays when the vehicle starts braking and turns green when the vehicle accelerates. The dot is white when the vehicle is not moving. A white dot is the default.

- Brake and Throttle Graphic: Displays the percentage value of brake and throttle pedal position from 0–100%.
- Steering Angle: The graphic fills from the centre to the left or right depending on the direction of steering. The numerical steering angle displays below the graphic.
- Active Handling Active Indicator: The graphic only displays if the active handling systems are activated.
- Performance Traction Management (PTM) Mode: Displays the current PTM mode. The options are Wet, Dry, Sport 1, Sport 2, or Race.
- Current Lap Time: Displays the elapsed lap time if the finish line is defined and the vehicle has crossed the defined finish line at least once.
- Event Odometer: This displays the distance driven since the recording began.
- Drive Mode: Displays the vehicle's current drive mode.

Timing:



Displays these vehicle metrics:

- Vehicle Speed: Same as Sport.
- Engine Revolutions Per Minute (rpm): Same as Sport.
- Transmission State (Current Gear): Same as Sport.
- Throttle Position: Displays the percentage of throttle applied from 0–100%.
- Active Handling Active Indicator: The graphic only displays if the active handling systems are activated.

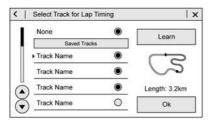
Once the Timing Overlay is selected, touch Configure in the lower right corner to choose which performance timing metrics you would like to display on the Timing Video Overlay.

- 0-100 km/h (0-60 mph)
- 0-200 km/h (0-100 mph)

- 0-200-0 km/h (0-100-0 mph)
- 400 m (1/4 th mi)
- Custom Speed Timer

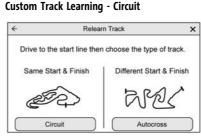
The timer starts recording as soon as the vehicle accelerates. As the vehicle passes each speed and distance milestone, it is displayed on the overlay.

Lap Timing



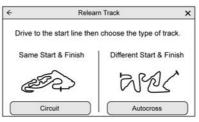
Touch Lap Timing on the PDR tab to display the track selection screen.

- Select Custom Track, then Learn to create a new custom track for lap timing.
- Select Custom Track, then Relearn if a custom track has already been defined and is available on the storage device.
- Only one track can be learned during each recording session. To learn a new track, end the current recording and start a new one.



- Select Circuit as the track type.
- Touch Learn when at the starting line.
- Circuit track learning will complete automatically when the vehicle crosses the start/finish line.
- Touch Cancel to stop the learning process.

Custom Track Learning - Autocross



- Select Autocross as the track type.
- Touch Learn when at the starting line.

- Drive along the course and press Finish when the vehicle has reached the Finish Line.
- Touch Cancel to stop the learning process.

Lap Timing - Saved Tracks

- Saved tracks will be named by the PDR as custom.gpx.
- Saved tracks can be renamed by placing the SD card in a computer and overwriting the time/date name to a user-friendly name. Do not change or delete the file extension (.gpx).

Select Track for Lap	Timing	>
None	۲	Learn
Saved Trac	ks	Lean
Frack Name	۲	
Track Name	۲	\sim
Track Name	۲	Length: 3.2km
Track Name	0	Ok

To begin timing an existing track, scroll to the desired track and select OK. The PDR tab will be displayed.

Infotainment System 151

Recordings

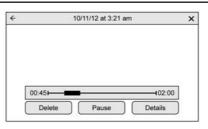
	PDR	1	Recordings	1	Settings
Т	10/1	1/12 a	at 3:21am		۲
	09/0)1/12 a	at 4:30am		۲
	Vale	et 08/1	3/12 at 2:56p	m	٦
۲	07/1	0/12 a	at 10:05am		(
\odot	06/2	4/12 a	at 7:37pm		۲
山	Storage:	_	704 minutes left		0 12:43

Touch the Recordings tab. The recordings will be displayed with the most recent on top. Select the recording to start playback.

Recordings may be deleted by selecting the trash can. Select yes to delete or no to cancel.

Video Playback is not allowed while the vehicle is moving.

Tap on the screen while the video is playing to display the video playback controls.



Video Scrubber : Changes the position and playback. The length of the bar corresponds to the time of the video. Advance or rewind the video by dragging along the bar.

Settings

	PDR	1	Recordings	1	Settings
Т	Audio F	Record	ing		0 1
	Automa	tic Re	cording		
	Video R Highest -		ing Quality		
\overline{ullet}	Softwar	re Info	rmation		
۵I	Storage:	_	704 minutes left		0 12:43

Touch the Settings tab to view the Settings menu.

• Audio Recording - Select on or off to record audio with the recorded video.

- Automatic Recording When on, the PDR will automatically begin recording whenever the vehicle is in the Run Power Mode. Configurations include:
 - Automatic Recording Video Quality
 - While in Valet Mode only
 - Whether to allow recording overwrite when the storage is full
- Video Quality Low (480p), or High (1080p). Higher quality will result in larger recording files.
- Software Information Displays PDR Software Information and Version numbers.
- SD Card Information Size, Remaining Memory, Format, and Speed.

Toolbox

See www.chevrolet.com/ performance-data-recorder to download Toolbox Software.

Phone

Bluetooth (Overview)

The Bluetooth-capable system can interact with many mobile devices, allowing:

- Placement and receipt of calls in a hands-free mode.
- Sharing of the device's address book or contact list with the vehicle.

To minimise driver distraction, before driving and with the vehicle parked:

- Become familiar with the features of the mobile device. Organise the phone book and contact lists clearly and delete duplicate or rarely used entries. If possible, program speed dial or other shortcuts.
- Review the controls and operation of the infotainment system.
- Pair mobile device(s) to the vehicle. The system may not work with all mobile devices. See "Pairing" later in this section.

Vehicles with a Bluetooth system can use a Bluetooth-capable mobile device with a Hands-Free Profile to make and receive phone calls. The infotainment system and voice recognition are used to control the system. The system can be used while the ignition is on or in accessory mode. The range of the Bluetooth system can be up to 9.1 m (30 ft). Not all mobile devices support all functions and not all mobile devices work with the Bluetooth system. See your retailer for more information about compatible mobile devices.

Controls

Use the controls on the centre console and the steering wheel to operate the Bluetooth system.

Steering Wheel Controls

 ${\tt w} \dot{\varsigma}$: Press to answer incoming calls and start voice recognition on your connected Bluetooth mobile device.

 ∞ : Press to end a call, decline a call, or cancel an operation. Press to mute or unmute the infotainment system when not on a call.

Infotainment System Controls

For information about how to navigate the menu system using the infotainment controls, see *Overview* ⇔ *119*.

Audio System

When using the Bluetooth mobile device system, sound comes through the vehicle's front audio system speakers and overrides the audio system. The volume level while on a mobile device call can be adjusted by pressing the steering wheel controls or the volume control on the centre console. The adjusted volume level remains in memory for later calls. The volume cannot be lowered beyond a certain level.

Bluetooth (Pairing and Using a Phone)

Pairing

A Bluetooth-enabled mobile device must be paired to the Bluetooth system and then connected to the vehicle before it can be used. See the mobile device manufacturer's user guide for Bluetooth functions before pairing the device.

Pairing Information

- If no mobile device has been connected, the Phone main page on the infotainment display will show the Connect Phone option. Touch this option to connect. Another way to connect is to touch the Phones tab at the top right of the display and then touch Add Phone.
- A Bluetooth smartphone with music capability can be paired to the vehicle as a smartphone and a music player at the same time.
- Up to 10 devices can be paired to the Bluetooth system.

- The pairing process is disabled when the vehicle is moving.
- Pairing only needs to be completed once, unless the pairing information on the mobile phone changes or the mobile phone is deleted from the system.
- If multiple paired mobile phones are within range of the system, the system connects to the paired mobile phone that is set to First to Connect. If there is no mobile phone set to First to Connect, it will link to the mobile phone which was used last. To link to a different paired mobile phone, see "Linking to a Different Phone" later in this section.

Near Field Communication (NFC)

If equipped, Near Field Communication (NFC) allows compatible smartphones to be paired with the infotainment system. To begin the pairing process:

- 1. Refer to the smartphone's user manual to verify whether is NFC compatible.
- 2. Unlock the smartphone.
- 3. Enable NFC on the smartphone if it is disabled. The NFC icon should be in the status bar of the smartphone.

- 4. Hold the smartphone 2.54 cm (1 in) or less from the NFC sensor located above the infotainment screen. See *Instrument Panel Overview* ⇔ 3.
- Once pairing begins, a pop-up message with a six-digit code will appear on the smartphone and the infotainment display.
- 6. Select Yes on the smartphone to confirm the pairing process. A chime will sound when pairing begins.

Multiple smartphones can be paired using this technology.

Functionality varies by model and region. Full functionality requires compatible Bluetooth and smartphone, as well as USB connectivity for some devices.

Pairing a Phone

- 1. Make sure Bluetooth has been enabled on the mobile phone before the pairing process is started.
- 2. Touch the Phone icon on the Home Page or the phone icon on the shortcut tray near the bottom of the display.

- 3. Touch Phones at the top of the infotainment display. There is also a Connect Phones option in the middle of the Phone display which will shortcut to the Phone List menu.
- 4. Touch Add Phone.
- 5. Select the vehicle name shown on the infotainment display from your mobile phone's Bluetooth Settings list.
- 6. Follow the instructions on the mobile phone to confirm the six-digit code showing on the infotainment display and touch Pair. The code on the mobile phone and infotainment display will need to be acknowledged for a successful pairing.
- Start the pairing process on the mobile phone to be paired to the vehicle. See the mobile phone manufacturer's user guide for information on this process. Once the mobile phone is paired, it will show under Connected.
- 8. If the vehicle name does not appear on your mobile phone, there are a few ways to restart the pairing process:
 - Turn the mobile phone off and then back on.

- Go back to the beginning of the Phone menus on the infotainment display and restart the pairing process.
- Reset the mobile phone, but this step should be done as a last effort.
- If the mobile phone prompts to accept connection or allow phone book download, touch Always Accept and Allow. The phone book may not be available if not accepted.
- 10. Repeat Steps 1–8 to pair additional mobile phones.

First to Connect Paired Phones

If multiple paired mobile phones are within range of the system, the system connects to the paired mobile phone that is set as First to Connect. To enable a paired mobile phone as the First to Connect phone:

- 1. Make sure the mobile phone is turned on.
- 2. Touch Settings, then touch System.
- 3. Touch Phones to access all paired and all connected mobile phones and mobile devices.
- 4. Touch the information icon or pencil icon to the right of the mobile phone to open the mobile phone's settings menu.

5. Touch the First to Connect option, to enable the setting for that device.

Mobile phones and mobile devices can be added, removed, connected, and disconnected. A sub-menu will display whenever a request is made to add or manage mobile phones and mobile devices.

Secondary Phone

A mobile phone can be enabled as a Secondary Phone by touching the information icon to the right of the paired mobile phone name to open the phone settings menu. If a mobile phone is enabled as a Secondary Phone, it can connect simultaneously alongside another Bluetooth mobile device. In doing so, the Secondary Phone will be labelled as Incoming Calls. This means the mobile device can only receive calls. The Address Book of a Secondary Phone will not be available and hands-free outgoing calls cannot be placed using this mobile phone.

If needed, touch the Secondary Phone while in the Phones list to swap it into the Outgoing and Incoming role. This role makes it possible to place outgoing calls from the Contacts and Recents list.

Listing All Paired and Connected Phones

- 1. Touch the Phone icon on the Home Page or the phone icon on the shortcut tray near the bottom of the display.
- 2. Touch Phones.

Disconnecting a Connected Phone

- 1. Touch the Phone icon on the Home Page.
- 2. Touch Phones.
- Touch the information icon or the pencil icon next to the connected mobile phone or mobile device to show the mobile phone's or mobile device's information display.
- 4. Touch Disconnect.

Deleting a Paired Phone

- 1. Touch the Phone icon on the Home Page or the phone icon on the shortcut tray near the bottom of the display.
- 2. Touch Phones.
- 3. Touch the information icon or the pencil icon next to the connected mobile phone to display the mobile phone's or mobile device's information display.
- 4. Touch Forget Device.

Linking to a Different Phone

To link to a different mobile phone, the new mobile phone must be in the vehicle and paired to the Bluetooth system.

- 1. Touch the Phone icon on the Home Page or the phone icon on the shortcut tray near the bottom of the display.
- 2. Touch Phones.
- 3. Touch the new mobile phone to link to from the not connected phone list. See "First to Connect Paired Phones" and "Secondary Phone" earlier in this section.

Switching to Handset or Hands-free Mode

To switch between handset or handsfree mode:

• While the active call is hands-free, touch the Handset option to switch to the handset mode.

The mute icon will not be available or functional while Handset mode is active.

 While the active call is on the handset, touch the Handset option to switch to the hands-free mode.

Making a Call Using Contacts and Recent Calls

Calls can be made through the Bluetooth system using personal mobile phone contact information for all mobile phones that support the Phone Book feature. Become familiar with the mobile phone settings and operation. Verify the mobile phone supports this feature.

The Contacts menu accesses the phone book stored in the mobile phone.

The Recent menu accesses the recents call list from your mobile phone.

To make a call using the Contacts menu:

- 1. Touch the Phone icon on the Home Page.
- 2. Touch Contacts.
- 3. The Contacts list can be searched by using the first character. Touch A-Z on the infotainment display to scroll through the list of names.

Touch the name to call.

4. Touch the desired contact number to call.

To make a call using the Recent menu:

- 1. Touch Phone on the Home Page.
- 2. Touch Recent.
- 3. Touch the name or number to call.

Making a Call Using the Keypad

To make a call by dialling the numbers:

- 1. Touch the Phone icon on the Home Page.
- 2. Touch Keypad and enter a phone number.
- 3. Touch % on the infotainment display to start dialling the number.

Searching Contacts Using the Keypad

To search for contacts using the keypad:

- 1. Touch the Phone icon on the Home Page.
- 2. Touch Keypad and enter partial phone numbers or contact names using the digits on the keypad to search.

Results will show on the right side of the display. Touch one to place a call.

Accepting or Declining a Call

When an incoming call is received, the infotainment system mutes and a ring tone is heard in the vehicle.

Accepting a Call

There are two ways to accept a call:

- Press \mathbb{W}^{c} on the steering wheel controls.
- Touch Answer on the infotainment display.

Declining a Call

There are two ways to decline a call:

- Press 🕫 on the steering wheel controls.
- Touch Ignore on the infotainment display.

Call Waiting

Call waiting must be supported on the Bluetooth mobile phone and enabled by the wireless service carrier to work.

Accepting a Call

Declining a Call

Press \checkmark to decline, then touch Ignore on the infotainment display

Switching Between Calls (Call Waiting Calls Only)

To switch between calls, touch Phone on the Home Page to display Call View. While in Call View, touch the call information of the call on hold to change calls.

Three-Way Calling

Three-way calling must be supported on the Bluetooth mobile phone and enabled by the wireless service carrier to work.

To start a three-way call while in a current call:

- 1. In the Call View, touch Add Call to add another call.
- 2. Initiate the second call by selecting from Recent, Contacts, or Keypad.
- When the second call is active, touch the merge icon to conference the three-way call together.

Ending a Call

- Press 🕫 on the steering wheel controls.
- Touch % on the infotainment display, next to a call, to end only that call.

Dual Tone Multi-Frequency (DTMF) Tones

The in-vehicle Bluetooth system can send numbers during a call. This is used when calling a menu-driven phone system. Use the Keypad to enter the number.

Apple CarPlay and Android Auto

If equipped, Android Auto and/or Apple CarPlay capability may be available through a compatible smartphone. If available, the Android Auto and Apple CarPlay icons will change from grey to colour on the Home Page of the infotainment display. To use Android Auto and/or Apple CarPlay:

For Wired Phone Projection

- 1. Download the Android Auto app to your smartphone from the Google Play store. There is no app required for Apple CarPlay.
- 2. Connect your Android phone or Apple iPhone by using the factory-provided phone USB cable and plugging into a USB data port. For best performance, it is highly recommended to use the device's factory-provided USB cable, which should be replaced after significant wear to maintain connection quality. Aftermarket or third-party cables may not work.
- 3. When the phone is first connected to activate Apple CarPlay or Android Auto, accept the terms and conditions on both the infotainment system and the phone.
- 4. Follow the instructions on the phone.

The Android Auto and Apple CarPlay icons on the Home Page will illuminate depending on the smartphone. Android Auto and/or Apple CarPlay may automatically launch upon USB connection. If not, touch the Android Auto or Apple CarPlay icon on the Home Page to launch.

Press ${\bf \hat {\Delta}}$ on the centre console to return to the Home Page.

Features are subject to change. For further information on how to set up Android Auto and Apple CarPlay in the vehicle, see your dealer.

Android Auto is provided by Google and is subject to Google's terms and privacy policy. Apple CarPlay is provided by Apple and is subject to Apple's terms and privacy policy. Data plan rates apply. For Android Auto support and to see if your phone is compatible, see https://support.google.com/ androidauto. For Apple CarPlay support and to see if your phone is compatible, see www.apple.com/ios/carplay/. Apple or Google may change or suspend availability at any time. Android Auto, Android, Google, Google Play, and other marks are trademarks of Google Inc.; Apple CarPlay is a trademark of Apple Inc.

Press $\mathbf{\hat{\omega}}$ on the centre console to exit Android Auto or Apple CarPlay. To enter back into Android Auto or Apple CarPlay, press and hold $\mathbf{\hat{\omega}}$ on the centre console.

Apple CarPlay and Android Auto can be disabled from the infotainment system. To do this, touch Home, Settings, and then

touch the Apps tab along the top of the display. Use the On/Off toggled to turn off Apple CarPlay or Android Auto.

Settings

Certain settings can be managed in the Owner Centre sites when an account is established, and may be modified if other users have accessed the vehicle or created accounts. This may result in changes to the security or functionality of the infotainment system. Some settings may also be transferred to a new vehicle, if equipped. For instructions, see your retailer.

Refer to the User Terms and Privacy Statement for important details. To view, touch the Settings icon on the Home Page of the infotainment display.

The settings menu may be organised into four categories. Select the desired category by touching System, Apps, Vehicle, or Personal.

To access the personalisation menus:

- 1. Touch Settings on the Home Page on the infotainment display.
- 2. Touch the desired category to display a list of available options.

- 3. Touch to select the desired feature setting.
- 4. Touch the options on the infotainment display to disable or enable a feature.
- 5. Touch \mathbf{X} to go to the top level of the Settings menu.

System

The menu may contain the following:

Time / Date

Allows setting of the clock.

Language

Sets the display language used on the infotainment display. It may also use the selected language for voice recognition and audio feedback.

Phones

Allows connecting to a different mobile phone or mobile device source, disconnect a mobile phone or media device, or delete a mobile phone or media device.

Wi-Fi Networks

Shows connected and available Wi-Fi networks.

If a 4G LTE data package is not active on the vehicle, the infotainment system can be connected to an external protected Wi-Fi network, such as a mobile device or home hotspot, to utilise connected services.

Privacy

Allows adjustment of the infotainment privacy settings.

Display

Allows adjustment of the infotainment display.

Sounds

Allows adjustment of the infotainment system sounds.

Voice

Allows adjustment of the infotainment voice recognition features.

Favourites

Allows adjustment of the infotainment favourite settings.

Updates

If equipped, the vehicle can download and install select software updates over a wireless connection. The system will prompt for certain updates to be downloaded and installed. There is also an option to check for updates manually.

To manually check for updates, touch Settings on the Home Page and select the System tab. Go to the Vehicle Software section and touch Updates. Follow the on-screen prompts. The steps to check for, download, and install updates may vary by vehicle.

The vehicle can be used normally during the software download. Once the download is complete, there may be a prompt to accept the installation of the update upon the next ignition cycle or the next time the vehicle is shifted into P (Park). For most updates, the vehicle will be disabled and cannot be driven during the installation. The system will deliver messages indicating success or error during and after the download and installation processes.

Downloading Over-the-Air vehicle software updates requires Internet connectivity, which can be accessed through the vehicle's built-in 4G LTE connection, if equipped and active. If required, data plans are provided by a third party. Optionally, a secure Wi-Fi hotspot such as a compatible mobile device hotspot, home hotspot, or public hotspot can be used. Applicable data rates may apply.

To connect the infotainment system to a secured mobile device hotspot, home hotspot, or public hotspot, touch Settings on the Home Page, select the System tab, followed by Wi-Fi Networks. Select the appropriate Wi-Fi network, and follow the on-screen prompts. Download speeds may vary.

On most compatible mobile devices, activation of the Wi-Fi hotspot is in the Settings menu under Mobile Network Sharing, Personal Hotspot, Mobile Hotspot, or similar.

Availability of Over-the-Air software updates varies by vehicle and country. Features are subject to change. For more information on this feature, see your dealer.

Preferences

Allows the infotainment system to disable or enable the download of new updates in the background.

About

Shows the infotainment system software information.

Running Applications

Shows a complete list of applications that are currently running on the infotainment system.

Return to Factory Settings

Allows resetting the infotainment system settings in the vehicle.

Apps

The menu may contain the following:

Android Auto

Allows interacting directly with a mobile device on the infotainment display. See *Apple CarPlay and Android Auto* ⇒ 157.

Apple CarPlay

This feature allows you to interact directly with your mobile device on the infotainment display. See *Apple CarPlay and Android Auto* ⇔ 157.

Apps

Shows app settings and information.

Audio

Adjusts different audio settings.

Climate

Adjusts different climate settings.

Navigation

Adjusts different navigation settings. See Using the Navigation System \Rightarrow 132.

Phone

Adjusts different phone settings.

Vehicle

The menu may contain the following:

Driver Mode Customization

See "Driver Mode Customisation" in *Driver Mode Control* ⇔ 210.

Climate and Air Quality

Adjusts different climate settings.

Collision/Detection Systems

Adjusts different driver assistance system settings.

Comfort and Convenience

Adjusts different comfort and convenience settings.

Lighting

Adjusts different lighting settings.

Power Door Locks

Adjusts different door lock settings.

Remote Lock, Unlock, and Start

Adjusts different remote lock settings.

Ride Height

See Front Lift System ⇒ 216.

Seating Position

Adjusts different seat settings.

Valet Mode

This will lock the infotainment system and steering wheel controls. It may also limit access to vehicle storage locations, if equipped.

To enable valet mode:

- 1. Enter a four-digit code on the keypad.
- 2. Select Enter to go to the confirmation screen.
- 3. Re-enter the four-digit code.

Touch Lock or Unlock to lock or unlock the system. Touch Back to go back to the previous menu.

To configure the Performance Data Recorder (PDR) to automatically record in Valet mode, see "Settings" in *Performance Data Recorder* (*PDR*) ⇔ 148.

Personal

If equipped, this menu allows adjustment of different user profile settings. See "Users" in Using the System \Rightarrow 122 for information on setting up user profiles.

The menu may contain the following:

Name

Touch to edit your user name that will be displayed in the vehicle.

Vehicle account information

Touch to view the vehicle account information and to change the account password.

An "unverified user account" pop-up will display until the account information verification process has been completed on the Internet. Check your registered e-mail account for an activation e-mail to complete the verification process.

Profile Picture

Touch to choose or change your profile picture.

Profile Identifiers

Touch to have the vehicle recognise the identifier you choose.

Touch Vehicle Key 1 and/or Vehicle Key 2.

If the remote key is lost or stolen, see your dealer.

Security

Touch to have your profile secured with a PIN.

Touch No or Yes.

Vehicle Name

Touch to edit your vehicle name.

Vehicle Account

Touch to view the vehicle account information and to change the account password.

Delete Profile

Touch to remove the profile from the vehicle.

Touch Remove or Cancel.

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Climate Controls

Climate Control Systems

Dual Automatic Climate Control	
System	167

Air Vents

Air Vents		170
-----------	--	-----

Maintenance

Passenger Compartment Air Filter	170
Service	

Climate Control Systems

Dual Automatic Climate Control System

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

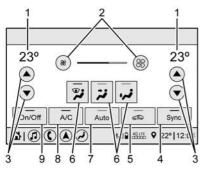


- 1. Driver Temperature Control
- 2. Driver and Passenger Heated and Ventilated Seats (If Equipped)
- 3. SYNC (Synchronised Temperature)
- 4. AUTO (Automatic Operation)

168 Climate Controls

- 5. Air Delivery Mode Controls
- 6. Fan Control
- 7. Ů (Power)
- 8. A/C (Air Conditioning)
- 9. Recirculation
- 10. Defrost
- 11. Rear Window Demister
- 12. Passenger Temperature Control

Climate Control Display

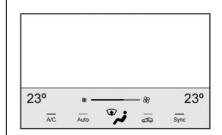


- 1. Driver and Passenger Temperature Settings
- 2. Fan Control
- 3. Driver and Passenger Temperature Controls

- 4. Sync (Synchronised Temperature)
- 5. Recirculation
- 6. Air Delivery Mode Controls
- 7. Auto (Automatic Operation)
- 8. A/C (Air Conditioning)
- 9. On/Off (Power)

The fan, air delivery mode, air conditioning, driver and passenger temperatures, and Sync settings can be controlled by touching CLIMATE on the infotainment Home Page or the climate button in the climate control 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 center stack climate controls are adjusted.

Automatic Operation

The system automatically controls the fan speed, air delivery, air conditioning, and recirculation to heat or cool the vehicle to the desired temperature:

When AUTO is pressed, all four functions operate automatically. Each function can also be manually set and the setting is displayed. Functions not manually set will continue to be automatically controlled, even if the AUTO indicator is not lit. For automatic operation:

- 1. Press AUTO.
- 2. Set the temperature. Allow the system time to stabilise. Adjust the temperature as needed for best comfort.

Manual Operation

 ${\scriptstyle \bigcirc}$: Press to turn the fan off or on.

 $\widehat{\mathfrak{s}}$ or $\overset{\mathfrak{B}}{\Rightarrow}$: Press to increase or decrease the fan speed.

Driver and Passenger Temperature

Controls : The temperature can be adjusted separately for the driver and passenger.

SYNC : Press to link the passenger temperature setting to the driver setting. The SYNC indicator light will turn on. When the passenger setting is adjusted, the SYNC indicator light will turn off.

Air Delivery Mode Control : Press $\vec{*}$, $\vec{*}$, or $\vec{*}$ to change the direction of the airflow. Any combination of the three controls can be selected. An indicator light comes on in the selected mode button.

Changing the mode cancels the automatic operation and the system goes into manual mode. Press AUTO to return to automatic operation.

To change the current mode, select one or more of the following:

 \overleftrightarrow : Air is directed to the A/C outlets.

✓ : Air is directed to the floor outlets, with some air directed to the windshield, and side window outlets.

 \mathfrak{P} : Air is directed to the windshield and side window outlets.

MAX : Air is directed to the windshield and the fan runs at a higher speed if not already above a medium fan speed. This mode overrides the previous mode selected and clears fog or frost from the windshield more quickly. When the control is pressed again, the system returns to the previous mode setting and fan speed.

For best results, clear all snow and ice from the windscreen before defrosting.

 $\langle \mathfrak{S} \rangle$: Press to turn on recirculation. An indicator light comes on. Air is recirculated to quickly cool the inside of the vehicle. It can also be used to help reduce outside air and odors that enter the vehicle.

Avoid using recirculation for long periods of time in cold or damp conditions. Using recirculation in cold or damp conditions can result in window fogging.

A/C: Press to turn the air conditioning on or off. An indicator light comes on to show that the air conditioning is enabled. If the fan is turned off, the air conditioner will not run. The A/C light will stay on even if the outside temperatures are below freezing. If the A/C is turned off, the air temperature coming through the climate control system may be warmer than the ambient temperature. It is recommended to use auto climate control to maintain comfort.

Rear Window Demister

WPREAR : If equipped, press to turn the rear window defogger on or off. An indicator light on the button comes on to show that the rear window demister is on.

The rear window defogger only works when the engine is running. The demister can be turned off by turning the vehicle off or to accessory mode.

If equipped with heated outside mirrors, press REAR to turn them on or off. See *Heated Mirrors* \Leftrightarrow 26.

170 Climate Controls

Caution

Using a razor blade or sharp object to clear the inside rear window can damage the rear window defogger. Repairs would not be covered by the vehicle warranty. Do not clear the inside rear window with sharp objects.

Remote Start Climate Control Operation :

If equipped with remote start, the climate control system may run when the vehicle is started remotely. If equipped with heated or ventilated seats or a heated steering wheel, these functions may be activate during a remote start. See *Remote Vehicle Start* \Leftrightarrow 13, *Heated and Ventilated Front Seats* \Leftrightarrow 44, and *Heated Steering Wheel* \Leftrightarrow 84.

Afterblow Feature

If equipped, under certain conditions, the fan may stay on or may turn on and off several times after you turn off and lock the vehicle. This is normal.

Air Vents

Use the tab on the air outlets to change the direction of the airflow or shut the outlet.

Operation Tips

- Clear away any ice, snow, or leaves from the air inlets at the base of the windscreen that may block the flow of air into the vehicle.
- Clear snow off the bonnet to improve visibility and help decrease moisture drawn into the vehicle.
- Use of non-GM approved hood deflectors may adversely affect the performance of the system.
- Keep the areas around the base of the infotainment display and under the seats clear to optimize air circulation.

Maintenance

Passenger Compartment Air Filter

The passenger compartment air filter reduces dust, pollen, and other airborne irritants from outside air that are pulled into the vehicle. Reductions in airflow, which may occur more often in dusty areas, indicate that the filter may need to be replaced. See *Maintenance Schedule* \Rightarrow 301.

Caution

Driving without a passenger compartment air filter in place can cause water and small particles, like paper and leaves, to be pulled into your climate control system which may cause damage to it. Make sure you always replace the old filter with a new one.

The passenger compartment air filter is located under the hood between the battery and windshield. See Underhood Compartment Overview ⇔ 236.

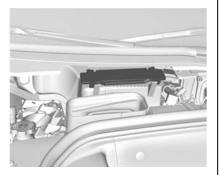
To check or replace the air filter:



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



2. Release the five clips and remove the outer cover.



- 3. Press two push tabs on the top and on the bottom of the cabin air filter cover and remove the cover.
- 4. Remove the air filter.
- 5. Install the new air filter and cover.
- 6. Install the outer cover.
- 7. Install the right and left outer covers.

Service

All vehicles have a label underbonnet 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.

The air conditioning system requires periodic maintenance. See *Maintenance Schedule* ⇒ 301.

172 Driving and Operating

Driving and Operating

Driving Information

Driving for Better Fuel Economy 173
Distracted Driving 173
Defensive Driving 174
Control of a Vehicle 174
Braking 174
Steering 174
Off-Road Recovery 175
Loss of Control
Track Events and Competitive
Driving 176
Driving on Wet Roads 186
Hill and Mountain Roads 187
Winter Driving 187
If the Vehicle Is Stuck 188
Vehicle Load Limits 189

Starting and Operating

New Vehicle Run-In	191
Front Air Dam (and Splitter)	192
Composite Materials	192
Ignition Positions	
Starting the Engine	
Retained Accessory Power (RAP)	195
Shifting Into Park	195
Shifting out of Park	196
Parking over Things That Burn	
Active Fuel Management	

Extended Parking 197
Engine Exhaust Engine Exhaust197 Running the Vehicle While Parked198
Dual Clutch Transmission Dual Clutch Transmission
BrakesElectric Brake Boost205Antilock Brake System (ABS)206Electric Parking Brake206Brake Assist207Hill Start Assist (HSA)208
Ride Control SystemsTraction Control/Electronic StabilityControl208Hill Rollback ControlDriver Mode Control210Front Lift SystemCompetitive Driving Mode217Limited-Slip Differential220
Cruise Control Cruise Control
Driver Assistance Systems Driver Assistance Systems

Assistance Systems for Parking or	
Reversing	224
Rear Vision Camera (RVC)	224
Curb View Camera	226
Park Assist	226
Rear Cross Traffic Alert (RCTA)	
System	227
Side Blind Zone Alert (SBZA)	

Fuel

Top Tier Fuel 228
Recommended Fuel 229
Prohibited Fuels 229
Fuel Additives 229
Filling the Tank 229
Filling a Portable Fuel Container 23

Trailer Towing

General Towing	Information		231
----------------	-------------	--	-----

Conversions and Add-Ons

Add-On Electrical Equipment 231

Driving Information

Driving for Better Fuel Economy

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

- Set the climate controls to the desired temperature after the engine is started, or turn them off when not required.
- 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.

- Using Tour mode rather than Sport or Track modes, will result in better Active Fuel Management operation. See Active Fuel Management ⇔ 196.
- For recommended shift speeds, see Dual Clutch Transmission ⇔ 198.

Premium Fuel

Use the recommended fuel. See *Recommended Fuel* \Rightarrow 229.

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 your 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.

174 Driving and Operating

Refer to the infotainment section for more information on using that system and 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 (Left-hand Drive Shown, Right-hand Drive Similar) ⇔ 45.

- Assume that other road users (pedestrians, bicyclists, and other drivers) are going to be careless and make mistakes. Anticipate what they may 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 or a brake fault occurs, the brakes may lose power assist. More effort will be required to stop the vehicle. It may take longer to stop.

Steering

Caution

To avoid damage to the steering system, do not drive over kerbs, parking barriers, or similar objects at speeds greater than (Continued)

Caution (Continued)

3 km/h (1 mph). Use care when driving over other objects such as lane dividers and speed bumps. Damage caused by misuse of the vehicle is not covered by the vehicle warranty.



Electric Power Steering

The vehicle is equipped with an electric power steering system, which reduces the amount of effort needed to steer the vehicle. It does not have power steering fluid. Regular maintenance is not required. If the vehicle experiences a system malfunction and loses power steering, greater steering effort may be required. Power steering assist also may be reduced if you turn the steering wheel as far as it can turn and hold it there with force for an extended period of time.

See your dealer if there is a problem.

Dynamic Rack Travel

Dynamic Rack Travel (DRT) is a steering system feature of Magnetic Ride Control. If equipped, this feature provides additional maximum steering wheel rotation to allow for tighter turns when driving a low speeds. As the vehicle speed increases or if the suspension encounters significant wheel travel, such as a driveway, while at maximum steering rotation, DRT may gently push the steering back a small amount to prevent the front tyres from contacting the vehicle. This is normal operation. There is no customer interface or display for this feature. DRT is not available when in Track Mode.

Bend Tips

- Take bends at a reasonable speed.
- Reduce speed before entering a bend.
- Maintain a reasonable and steady speed through the curve.
- 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 an obstacle may be more effective than braking.
- Holding both sides of the steering wheel allows you to turn 180 degrees without removing a hand.
- The Antilock Brake System (ABS) allows steering while braking.

Off-Road Recovery



The vehicle's right wheels can drop off the edge of a road onto the shoulder while driving. Follow these tips:

- 1. Ease off the accelerator and then, if there is nothing in the way, steer the vehicle so that it straddles the edge of the pavement.
- 2. Turn the steering wheel about one-eighth of a turn, until the right front tyre contacts the pavement edge.
- 3. Turn the steering wheel to go straight down the roadway.

176 Driving and Operating

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.

Track Events and Competitive Driving

All Z06 models or Stingray models equipped with Z51 performance package can be used for track events and competitive driving. For additional details on vehicle track preparation, see Chevrolet.com > Corvette Experience > Guides > Track Prep Guide.

\land Danger

High-performance features are intended for use only on closed tracks by experienced and qualified drivers and should not be used on public roads. High-speed driving, aggressive cornering, (Continued)

Danger (Continued)

hard braking, and other high-performance driving can be dangerous. Improper driver inputs for the conditions may result in loss of control of the vehicle, which could injure or kill you or others. Always drive safely.

Participating in track events or other competitive driving without following the instructions provided may affect the vehicle warranty. See the warranty manual before using the vehicle for racing or other competitive driving. See *Competitive Driving Mode* ⇔ 217.

▲ Warning

Some of the adjustments and procedures specified in this section may require specialized skill, training, and equipment. Failure to perform these procedures properly could cause malfunction, potentially resulting in death, personal injury, or damage to the vehicle or property. Do not attempt to perform these adjustments or procedures unless properly qualified. Be sure to follow all service procedures before driving the vehicle at track events or competitively. See New Vehicle Run-In \Rightarrow 191.

\land Warning

Prior to each track event and again before returning to public roads, tighten the wheel nuts with a torque wrench to the proper torque specification. Wheel nuts that are improperly or incorrectly tightened can cause the wheels to become loose or come off, resulting in a crash. See *Capacities and Specifications* ⇔ 309 for wheel nut torque specifications.



For Z06 vehicles only, remove the front number plate and bracket (if installed) and remove the front aero covers before track use. See your retailer for complete procedure.

Engine Sound Management Setting

Caution

Do not place the vehicle in Engine Sound Management – Stealth mode. Damage could result to exhaust valve actuators.

Engine Oil

Caution

If the vehicle is used for track events and competitive driving, the engine may use more oil than it would with normal use. Low oil levels can damage the engine. Check the oil level often and maintain the proper level. See *Engine Oil (5.5L LT6 Engine)* \Rightarrow 241 or *Engine Oil (6.2L LT2 Engine)* \Rightarrow 245.

Check the oil level often during track events and competitive driving. See "Checking the Engine Oil" in *Engine Oil (5.5L LT6 Engine)* ⇔ 241 or *Engine Oil (6.2L LT2 Engine)* ⇔ 245.

Engine Cooling

If reduced performance is experienced during track events or competitive driving, turning off the A/C will help to improve engine performance.

Maintain a mixture of 40% DEX-COOL coolant and 60% clean, drinkable water to optimise engine performance.

Fuel

95 RON (or higher) unleaded gasoline is required.

Caution

Some high octane fuels contain additives and compounds that may damage the vehicle and void the vehicle warranty. See *Prohibited Fuels* ⇔ 229.

Dual Clutch Gearbox (DCT) Fluid

The gearbox fluid and external canister filter should be changed after every 24 hours of track use. Change the fluid and external canister filter as soon as possible if prompted by the gearbox fluid life monitor that remaining fluid life is low.

178 Driving and Operating

Stingray

Add an additional 2 L (2 qt) of DCT gearbox fluid before track use. It is not required to remove the additional 2 L (2 qt) of DCT fluid after the track event.

Any transmission level set or change should be performed at your retailer.

Z06

Additional gearbox fluid is not required for the Z06. The Z06 comes track ready from the factory.

Brakes

Battery Disconnect

Disconnect the battery before servicing the hydraulic brake system. It is critical to disconnect the battery before bleeding the system, replacing the pads, or any other work. The battery must be disconnected to prevent the brake master cylinder from pressurising the hydraulic system during its automated self diagnostic tests that can occur when a door is opened or the remote key is present.

\land Warning

To avoid personal injury and/or vehicle damage, always disconnect the battery before performing service work on the hydraulic brake system. Bleeding the brake system with the battery connected can lead to the system diagnosing a leak or air in the braking system. A Diagnostic Trouble Code (DTC) may set and vehicle speed may be limited.

Brake Fluid

Replace existing brake fluid with a qualified high performance brake fluid from a sealed container. Brake fluid with a dry boiling point >310 °C (590 °F) is qualified. If high performance brake fluid is used, replace it with GM approved brake fluid before driving on public roads. If high performance brake fluid is in the vehicle and the age of the brake fluid is over a month old or unknown, replace the brake fluid before track events and competitive driving. Do not use silicone or DOT-5 brake fluids.

Check the fluid level before each competitive driving event.

Brake System Flushing and Bleeding

The J55 J56, and J57 brake system requires specific processes for bleeding and fluid flushing. These can be found in the service manual.

Properly bleeding the brake system is required for proper operation of the hydraulic brake system.

Brake Leak Detection

The hydraulic braking system has advanced diagnostic capability to help detect hydraulic leaks, trapped air, and other performance issues. These diagnostics are active when the hydraulic system is powered. To avoid inadvertently setting a leak DTC, disconnect the battery before servicing the brake system.

If the vehicle sets a DTC related to a brake system leak, the Brake System Warning Light will come on and vehicle speed may be limited to 100 kph (62 mph). Any time a leak DTC is set, the vehicle should be inspected carefully for evidence of a leak and should be repaired immediately. See your dealer.

Brake Fade Warning Assist

The Brake Fade Warning Assist system monitors brake system performance. If the system detects brake fade, or if the brake fluid is near the boiling point, the driver will be alerted.

The Brake Fade Warning Assist system is designed for use with the factory-installed brake pads or GM approved replacement pads. If the brake pads on the vehicle need to be replaced, use GM approved brake pads. If this is not done, the brake fade warning system may not function properly.

Stage 1 : The Driver Information Centre (DIC) displays a "Reduce Braking to Avoid Overheating" message, a chime sounds, and brake pedal effort and travel is increased. When the message displays, the driver should back up braking points and reduce brake usage in order to reduce brake temperature. This will allow for continued lapping with no speed limitations.

Stage 2 : The Driver Information Centre (DIC) displays a "Brakes Overheated Service Now" message, a chime sounds, and brake pedal effort and travel is further increased. This code indicates that the brake fluid temperature is excessive and is about to boil. The system limits vehicle speed to 100 km/h (62 mph). The driver should immediately start a cool down lap if on the track. If this message displays, the vehicle needs to be serviced. The brake system needs to cool down, and the brake fluid must be immediately flushed with DOT4 for street use, or to a qualified DOT4 race fluid for track use. Boiled brake fluid is compromised and must be replaced.

Brake Burnishing

Caution

Performing the brake burnish procedure on a base brake system can result in brake damage.

Caution

The new vehicle break-in period should be completed before performing the brake burnish procedure, otherwise damage may occur to the powertrain/engine. See *New Vehicle Run-In* \Leftrightarrow 191.

Caution

Brake fade will occur during this track burnish procedure and can cause brake pedal travel and force to increase. This could extend stopping distance until the brakes are fully burnished.

New brake pads must be burnished before racing or other competitive driving.

When this procedure is performed as instructed, it will not damage the brakes. The brake pads will smoke and produce an odour. The braking force and pedal travel may increase. After the procedure, the brake pads may appear white at the rotor contact.

Perform this procedure only on dry pavement, in a safe manner, and in compliance with all local and state ordinances/laws regarding motor vehicle operation.

Brake Burnishing Procedure for J55 (Stingray with Z51) and J56 (Z06 Standard) Brakes

This brake burnish procedure should only be performed on vehicles with the ZO6 with J56, or Z51 with J55 factory equipped brake systems.

- Using the friction bubble in the Cluster Performance menu, apply the brakes 25 times starting at 100 km/h (60 mph) to 50 km/h (30 mph) while decelerating at 0.4 g. See Instrument Cluster \$\$ 89. This is a medium brake application. Drive for at least 1 km (0.6 mi) between applying the brakes. This first step may be skipped if there are more than 320 km (200 mi) on the brake pads.
- 2. Apply the brakes 25 times starting at 100 km/h (60 mph) to 25 km/h (15 mph) while decelerating at 0.8 g. This is a hard brake application without activating the Antilock Brake System (ABS). Drive for at least 1 km (0.6 mi) between applications. Depending on conditions, some increase in brake pedal travel and brake pedal force may be experienced.
- 3. Cool down: Drive at 100 km/h (60 mph) for approximately 15 km (10 mi) without using the brakes.
- 4. Apply the brakes 25 times from 100 km/h (60 mph) to 50 km/h (30 mph) while decelerating at 0.4 g. This is a medium brake application. Drive for at least 1 km (0.6 mi) between applications.

As with all high performance brake systems, some amount of brake squeal is normal.

Brake Burnishing Procedure for ZO6 with Available J57 Carbon Ceramic Brakes

This brake burnish procedure should only be run on ZO6 vehicles with J57 factory equipped brake systems.

Perform this procedure only on dry tarmac, in a safe manner, and in compliance with all local and state ordinances regarding motor vehicle operation.

- Using the friction bubble in the Cluster Performance menu, apply the brakes 25 times starting at 100 km/h (60 mph) to 50 km/h (30 mph) while decelerating at 0.4 g. This is a medium brake application. Drive for at least 1.6 km (1.0 mi) between applications. This first step may be skipped if there are more than 320 km (200 mi) on the brake pads.
- Apply the brakes 20 times starting at 100 km/h (60 mph) to 25 km/h (15 mph) while decelerating at 0.8 g. This is a hard brake application. Drive for at least 1.6 km (1.0 mi) between applications.
- 3. Apply the brakes 12 times starting at 100 km/h (60 mph) to 8 km/h (5 mph) while decelerating at 0.8 g. This is a

hard brake application. Accelerate as rapidly as possible without activating traction control between applications.

4. Cool down: Drive at 100 km/h (60 mph) for approximately 15 km (10 mi) without using the brakes.

As with all high performance brake systems, some amount of brake squeal is normal.

Alternative Closed Course Brake Burnishing Procedure for J55 (Stingray with Z51), J56 (Z06 Standard), and J57 (Z06 Carbon Ceramic) Brakes

This brake burnish procedure should be run on vehicles with the Z51 with J55, Z06 with J56, or Z06 with J57 factory equipped brake systems.

This procedure should only be run on a track and only on dry pavement. Brake pedal fade will occur during this track burnish procedure and can cause brake pedal travel and force to increase. This could extend stopping distance until the brakes are fully burnished.

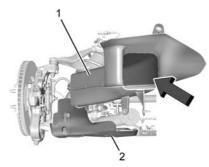
1. Start track lapping at lower speeds and lower braking efforts for three minutes of driving. Allow for increased braking distances due to reduced brake output.

- 2. After Step 1, increase speed and braking effort for the next six minutes of lapping, gradually ending up at 90% effort. Continue to allow for increased braking distance due to reduced brake output.
- 3. Cool the brakes by lapping with minimal light braking for six minutes.

Brake Cooling Kit

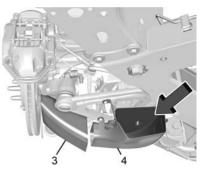
Before any track event, high speed driving event, or competitive driving, the following should be completed:

- Ensure all brake cooling parts are correctly and securely installed.
- Install the rear lower control arm cooling ducts per the instructions included with the kit. After any track event or competitive driving, remove the rear lower control arm cooling ducts. These parts are for track use only.
- Inspect for and remove any blockage in the ducts.
- Inspect and replace any duct that has damage.



Right Side Front Shown, Left Side Front Similar

- 1. Front Brake Cooling Duct
- 2. Front Lower Control Arm Deflector

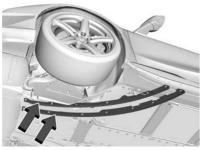


Right Side Rear Shown, Left Side Rear Similar

- 3. Rear Knuckle Mounted Cooling Duct
- 4. Rear Lower Control Arm Cooling Duct

Aerodynamics

Underbody Strake Inspection (For ZOG Vehicles With Spoiler Regular Production Options (RPO) TOF or TOG)



Left Side Shown, Right Side Similar

For optimal aero performance, ensure the front strakes are solidly attached to the underbody and damage free. If not, replace with service parts.

Corvette ZO6 Recommended Aerodynamic Configurations



Rear Spoiler With Tall Wickers Shown, Short Wickers Similar



Front Underwing Stall Gurney Flaps

Refer to the following table for setting up the Z06 for optimised aerodynamic performance. Street Driving targets the lowest aerodynamic drag, whereas Track Driving targets optimal downforce balance. Setup will vary based on the vehicle's front splitter, front underwing, and rear spoiler/ wing configuration.

RPO Code	Street Driving - Recommended Aerodynamic Configuration		Track Driving - Recommended Aerodynamic Configuration		
	Front Rear		Front	Rear	
Z06	Front underwing stall Gurney flaps installed. Front fascia aero cover installed.	Short rear spoiler wickers installed. No rear lower control arm brake duct.	Remove front underwing stall Gurney flaps. Remove front fascia aero cover.	Install tall rear spoiler wickers. Install rear lower control arm brake duct.	
ZO6 and CFV/CFZ	Front underwing stall Gurney flaps installed. Front fascia aero cover installed.	Short rear spoiler wickers installed. No rear lower control arm brake duct.	Front underwing stall Gurney flaps installed. Remove front fascia aero cover.	Install tall rear spoiler wickers. Install rear lower control arm brake duct.	
Z06 and CFV/CFZ and TOG/TOF	No front underwing stall Gurney flaps. Front fascia aero cover installed.	No rear lower control arm brake duct.	No underwing stall Gurney flaps. Remove front fascia aero cover. Install four underbody strakes.	Install rear lower control arm brake duct.	
Z06 and Z07	No front underwing stall Gurney flaps. Front fascia aero cover installed.	No rear lower control arm brake duct.	No underwing stall Gurney flaps. Remove front fascia aero cover. Install four underbody strakes.	Install rear lower control arm brake duct.	
ZO6 and 5V5	Front underwing stall Gurney flaps installed. Front fascia aero cover installed.	No rear lower control arm brake duct.	Front underwing stall Gurney flaps installed. Remove front fascia aero cover.	Install rear lower control arm brake duct.	

Shock Spring Seat Adjustment

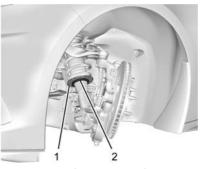
The front shocks, on vehicles without hydraulic front lift and rear shocks, have threaded spring seats that allow adjustment of the preload on the coil springs. The vehicle corner weights can be adjusted for track use. If the vehicle trim height is modified, it should be returned to normal trim height before street use.

The spring seat can be adjusted approximately 20 mm (0.8 in) up or down from the nominal position. Each complete turn of the spring seat will change the vehicle height approximately 1.5 mm (0.06 in). When adjusting the seat to the upper limit, lift the dust boot and ensure the seat does not thread off the center support tube (stop adjustment when threads no longer visible). When adjusting the seat to the lower limit, leave approximately 10 mm (0.4 in) of thread visible for the lower lock nut to have full thread engagement.

The following procedure can be complex and should only be performed by trained personnel. See your dealer.

To adjust the lower spring seat:

1. Raise the vehicle so the tires are completely off the ground.



Front Shown, Rear Similar

- 2. Loosen the lower spring seat lock nut (2).
- 3. Thread the lower spring seat lock nut (2) downward off of the threads to its resting location on the shoulder of the center support tube.
- 4. While holding the center support tube holes, turn the spring seat (1) upward to increase spring preload, or downward to decrease spring preload.
- Thread the lower lock nut (2) back on to the center support tube and torque it against the spring seat (1) to 25 N•m (18.4 lb ft).

Load Limit (Stingray Z51)

Limit vehicle load to the driver only, with no other cargo. Inflate the front tires to 160 kPa (23 psi) and the rear tires to 165 kPa (24 psi). Drive at a maximum speed of 296 km/h (184 mph).

Road Course target hot pressures are 220– 240 kPa (32–35 psi). Value will vary based on driving style, track, temperature, and weather conditions. See *Tyre Pressure for High-Speed Operation* ⇔ 275 for high speed non-track use.

Load Limit (ZO6)

Tracks with Combined High-Speed and High-Load Corners

(e.g., Nurburgring Nordschliefe, Spa Francorchamps, or similar)

Limit the vehicle to the driver and one passenger, with no additional cargo.

Cold Tyre Pressure Requirement: Inflate tyres to no less than 210 kPa (30 psi) front and rear, cold.

Hot Tyre Pressure Target Range: 220 – 240 kPa (32-35 psi).

Road/Street Courses

(e.g., Virginia International Raceway, Road Atlanta, or similar)

Limit the vehicle to the driver and one passenger, with no additional cargo.

Cold Tyre Pressure Requirement: Inflate tyres to no less than 165 kPa (24 psi) front and rear, cold.

Hot Tyre Pressure Target Range: 220 – 240 kPa (32-35 psi).

See Tyre Pressure for High-Speed Operation \Rightarrow 275 for high speed non-track use.

Wheel Alignment

Caution

Using these wheel alignment settings may cause excessive tyre wear. Only use these wheel alignment settings for racing or competitive driving. Excessive tyre wear is not covered under the vehicle warranty.

Caution

Do not use power tools when removing or installing the fasteners. Damage to the threads may occur. Use hand tools only, and do not overtighten. Hand start the fasteners to ensure that the threads do not bind or cross thread.

The racing and competitive driving wheel alignment settings should be set as described here.

Stingray Z51

To achieve the track alignment specified settings:

- 1. The upper control arm to body washers on all four corners must be moved from between the body and the control arm and relocated between the head of the bolt and the control arm.
- 2. Adjust the lower control arm cam bolt position to achieve the following specifications:

Front (per corner)

- Caster: +8.0 degrees
- Camber: -3.0 degrees
- Toe (total): 0.1 degrees toe in

Rear (per corner)

- Caster: 0 degrees
- Camber: -2.5 degrees
- Toe (total): 0.1 degrees toe in
- Thrust Angle: 0 degrees

After track use, reinstall washers between the body and the control arms. Reset to factory alignment settings. See your dealer.

Z06

- 1. The upper control arm washers do not need to be removed for Z06.
- 2. Adjust the lower control arm cam bolt position to achieve the following specifications:

Front (per corner)

- Caster: +8.0 degrees
- Camber: -2.0 degrees
- Toe (total): 0.1 degrees toe in

Rear (per corner)

- Caster: 0 degrees
- Camber: -2.0 degrees
- Toe (total): 0.1 degrees toe in
- Thrust Angle: 0 degrees

Z06 with Z07 Performance Package Equipped with Carbon Fibre Wheels (RPOs ROY and ROZ)

When participating in Track Events or Competitive Driving with these wheels, a proper cool down without hot soaking the wheels is critical.

- On a typical road course 3.2–6.5 km (2-4 miles) long per lap, one cool down lap without using the brakes will suffice. If the track being driven is shorter than 3.2 km (2 mi), perform two cool down laps without using the brakes.
- If adequate cool down without using the brakes cannot be achieved (i.e., red flag on track, have to stop unexpectedly etc.), the key is to not have one area of the wheels exposed to the "chimney effect" of the heat that rises off of a stationary hot brake disc. This can be prevented by very low speed driving of the car such that the entire circumference of the wheel is exposed to the heat. Rolling the car back and forth in a small space is better than sitting stationary with hot brakes.

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.

\land Warning

Wet brakes can cause crashes. They might not work as well in a quick stop and could cause pulling to one side. You could lose control of the vehicle.

After driving through a large puddle of water or a car/vehicle wash, lightly apply the brake pedal until the brakes work normally.

Flowing or rushing water creates strong forces. Driving through flowing water could cause the vehicle to be carried away. If this happens, you and other vehicle occupants could drown. Do not ignore police warnings and be very cautious about trying to drive through flowing water.

Caution

Driving through deep puddles or standing water can cause water to come in through the engine air intake and damage the engine. If deep puddles or standing water cannot be avoided, proceed with caution and do not exceed 8 km/h (5 mph). Do not drive through water that may come close to or cover the vehicle's underbody.

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* ⇔ 271.
- 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:

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

▲ Warning

Using the brakes to slow the vehicle on a long downhill slope can cause brake overheating, can reduce brake performance, and could result in a loss of braking. Shift the transmission to a lower gear to let the engine assist the brakes on a steep downhill slope.

\land Warning

- Coasting downhill in N (Neutral) or with the ignition off is dangerous. This can cause overheating of the brakes and loss of steering assist. Always have the engine running and the vehicle in gear.
- Drive at speeds that keep the vehicle in its own lane. Do not swing wide or cross the centre line.
- Be alert on top of hills; something could be in your lane (e.g. stalled car, crash).
- Pay attention to special road signs (e.g., falling rocks area, winding roads, long gradients, overtaking or no-overtaking zones) and take appropriate action.

Winter Driving

Driving on Snow or Ice

Caution

To avoid damage to the wheels and brake components, always clear snow and ice from inside the wheels and underneath the vehicle before driving. 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* ⇔ 208.
- 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) ⇔ 206.
- Turn on Weather Mode. See Driver Mode Control 🗘 210.
- Turn off cruise control.
- 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.

Cold Weather Mode

In very low temperatures, a cold weather message may display on the Driver Information Centre (DIC). The engine speed, gearbox shift patterns, and cabin fan speed may operate differently to enable the vehicle to warm up quicker. You can manually override the cabin fan speed in cold weather mode.

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.

⚠ Warning

Snow can trap engine exhaust under the vehicle. This may cause exhaust gases to get inside. Engine exhaust contains carbon monoxide (CO), which cannot be seen or smelled. It can cause unconsciousness and even death.

(Continued)

Warning (Continued)

If the vehicle is stuck in 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 fan speed to the highest setting. See "Climate Control Systems."

For more information about CO, see *Engine Exhaust* ⇔ 197.

To save fuel, run the engine for short periods to warm the vehicle and then shut the engine off and partially close the window. Moving about to keep warm also helps.

If it takes time for help to arrive, when running the engine, push the accelerator pedal slightly so the engine runs faster than the idle speed. This keeps the battery charged to restart the vehicle and to signal for help with the headlamps. Do this as little as possible, to save fuel.

If the Vehicle Is Stuck

Slowly and cautiously spin the wheels to free the vehicle when stuck in sand, mud, ice, or snow.

If stuck too severely for the traction system to free the vehicle, turn the traction system off and use the rocking method. See *Traction Control/Electronic Stability Control* ⇔ 208.

▲ 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).

Rocking the Vehicle to Get it Out

Turn the steering wheel left and right to clear the area around the front wheels. Turn off any traction system. Shift back and forth between R (Reverse) and a low forward gear, spinning the wheels as little as possible. To prevent transmission wear, wait until the wheels stop spinning before shifting gears. Release the accelerator pedal while shifting, and press lightly on the accelerator pedal when the transmission is in gear. Slowly spinning the wheels in the forward and reverse directions causes a rocking motion that could free the vehicle. If that does not get the vehicle out after a few tries, it might need to be towed out.

If the vehicle does need to be towed out, see Transporting a Disabled Vehicle \Rightarrow 288.

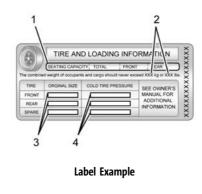
Vehicle Load Limits

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 may properly carry: the Tyre and Loading Information label and the Certification label.

\land Warning

Do not load the vehicle any heavier than the Gross Vehicle Weight Rating (GVWR), or either the maximum front or rear Gross Axle Weight Rating (GAWR). This can cause systems to break and change the way the vehicle handles. This could cause loss of control and a crash. Overloading can also reduce stopping performance, damage the tyres, and shorten the life of the vehicle.

Tyre and Loading Information Label



A vehicle-specific Tyre and Loading Information label is attached to the centre pillar (B-pillar). This label shows the number of occupant seating positions (1), and the maximum vehicle capacity weight (2) in kilograms and pounds.

The 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 271 and *Tyre Pressure* \Rightarrow 274.

There is also important loading information on the vehicle Certification label. It may show the Gross Vehicle Weight Rating (GVWR) and the Gross Axle Weight Rating (GAWR) for the front and rear axle. See "Certification Label" later in this section.

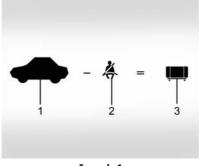
Steps for Determining Correct Load Limit-

1. Locate the statement "The combined weight of occupants and cargo should never exceed XXX kg or XXX lbs." on your vehicle's placard.

- 2. Determine the combined weight of the driver and passengers that will be riding in your vehicle.
- 3. Subtract the combined weight of the driver and passengers from XXX kg or XXX lbs.
- 4. The resulting figure equals the available amount of cargo and luggage load capacity. For example, if the "XXX" amount equals 1400 lbs. and there will be five 150 lb passengers in your vehicle, the amount of available cargo and luggage load capacity is 650 lbs. (1400-750 (5 x 150) = 650 lbs.)
- 5. Determine the combined weight of luggage and cargo being loaded on the vehicle. That weight may not safely exceed the available cargo and luggage load capacity calculated in Step 4.
- 6. If your vehicle will be towing a trailer, load from your trailer will be transferred to your vehicle. Consult this manual to determine how this

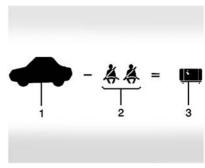
reduces the available cargo and luggage load capacity of your vehicle."

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



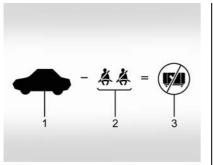
Example 1

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



Example 2

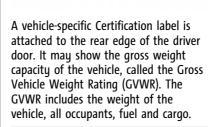
- 1. Vehicle Capacity Weight for Example 2 = 181 kg (400 lbs)
- 2. Subtract Occupant Weight @ 68 kg (150 lbs) × 2 = 136 kg (300 lbs)
- 3. Available Cargo Weight = 45 kg (100 lbs)



Example 3

- 1. Vehicle Capacity Weight for Example 3 = 181 kg (400 lbs)
- 2. Subtract Occupant Weight @ 91 kg (200 lbs) × 2 = 181 kg (400 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.



KG

TYPE

MODEL

KG

Certification Label

Caution

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

\land Warning

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

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

Starting and Operating

New Vehicle Run-In

Follow these recommended guidelines during the first 2.414 km (1.500 mi) of driving this vehicle. Parts have a running-in period and performance will be better in the long run.

During the first 800 km (500 mi), engine torque will be limited in low gears.

For the first 322 km (200 mi):

- To run-in new tyres, drive at moderate speeds and avoid hard cornering.
- New brake linings also need a running-in period. Avoid braking hard. This is recommended every time brake linings are replaced.

For the first 800 km (500 mi):

- Avoid full throttle starts and abrupt stops.
- Do not exceed 4000 rpm.
- Avoid driving at any one constant speed, fast or slow, including the use of cruise control.
- Avoid downshifting to brake or slow the vehicle when the engine speed will exceed 4000 rpm.
- Do not let the engine labour. Never lug the engine. This rule applies at all times, not just during the running-in period.

For the first 2.414 km (1.500 mi):

- Do not participate in track events, sport driving schools, or similar activities.
- Check engine oil with every refuelling and add if necessary. Oil and fuel consumption may be higher than normal.

Front Air Dam (and Splitter)

If equipped, the front air dam and splitter have minimal ground clearance.

Under normal operation, the components will occasionally contact some road surfaces (speed bumps, driveway ramps, etc.). This can be heard inside the vehicle as a scraping noise. This is normal and does not indicate a problem.

Use care when approaching bumps or objects on road surfaces and avoid them when possible.

If equipped, the Front Lift System may be used to increase front air dam or splitter clearance. See Front Lift System \Rightarrow 216.

Composite Materials

This vehicle may be equipped with parts containing carbon fibre, sheet-moulding compound, or other composite materials. Dealer-installed accessories may also contain composite materials. These parts and accessories may include the splitter or rocker extensions.



Exposed edges of parts containing carbon fiber and other composite materials can be sharp. Contact with these parts could result in injury. Use caution to avoid contacting these parts, including when washing the vehicle. If the parts are damaged, replace the parts promptly with replacements from your dealer.

\land Warning

Rocker extensions may break under pressure, resulting in property damage or injury. Do not stand on the rocker extension or use it as a step.

Ignition Positions



The vehicle has an electronic keyless ignition with pushbutton start.

The remote key must be in the vehicle for the system to operate. If the pushbutton start is not working, the vehicle may be near a strong radio antenna signal causing interference to the Keyless Access system. See *Remote Key Operation* $\Rightarrow 8$.

To shift out of P (Park), the vehicle must be turned on and the brake pedal must be applied. Stopping the Engine/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*) ⇔ 195.

If the vehicle is in R (Reverse), D (Drive), or M (Manual Mode), the vehicle will shift to P (Park), the ignition will turn off, and RAP will remain active.

If the vehicle is in N (Neutral), the ignition will return to 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.

If the vehicle must be turned 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 into N (Neutral). This can be done while the vehicle is moving. After shifting into N (Neutral), firmly apply the brakes and steer the vehicle to a safe location.
- 3. Come to a complete stop. Shift into P (Park).
- 4. Apply the parking brake. See *Electric Parking Brake* ⇔ 206. Press ENGINE START/STOP to turn the vehicle off.

▲ 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 turned off while driving, press and hold ENGINE START/STOP for more than two seconds, or press twice within five seconds.

Accessory (Amber Indicator Light) : This mode allows the use of some electrical accessories when the engine is off.

With the ignition off, pressing the button one time without the brake pedal applied will place the ignition system in accessory.

The ignition will switch from accessory to OFF after five minutes to prevent battery rundown.

ON/RUN/START (Green Indicator Light) : This mode is for driving and starting. With the ignition off and the brake pedal applied, pressing the button once will place the ignition in ON/RUN/START. Once engine cranking begins, release the button. Engine cranking will continue until the engine starts. See *Starting the Engine* \$ 194. The ignition will then remain in ON/RUN.

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 ENGINE START/STOP for more than five seconds will place the vehicle in Service Mode. The instruments and audio systems will operate as they do in ON/RUN, but the vehicle will not be able to be driven. The engine will not start in Service Mode. Press ENGINE START/STOP again to turn the vehicle off.

Starting the Engine

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* ⇔ 231.

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.

Place the transmission in P (Park) or N (Neutral). To restart the vehicle when it is already moving, use N (Neutral) only.

Starting the Vehicle

The remote key must be inside the vehicle for the ignition to work.

Cell phone chargers can interfere with the operation of the Keyless Access system. Battery chargers should not be plugged in when starting or turning off the engine.

1. Press the brake pedal, then press ENGINE START/STOP on the instrument panel.

If there is no remote key in the vehicle or if there is something causing interference with it, the Driver Information Center (DIC) will display a message.

2. When the engine begins cranking, let go of the button and the engine cranks automatically until it starts.

If the battery in the remote key is weak, the DIC will display a message. The vehicle can still be driven.

See "Starting the Vehicle with a Low Remote Key Battery" under *Remote Key Operation* \Rightarrow 8. If the remote key battery is dead, insert it into the cupholder remote key pocket to enable engine starting.

3. Do not race the engine immediately after starting it. Operate the engine and transmission gently until the oil warms up and lubricates all moving parts. 4. If the engine does not start and no DIC message is displayed, wait 15 seconds before trying again to let the cranking motor cool down.

If the engine does not start after five to 10 seconds, especially in very cold weather (below -18 °C or 0 °F), it could be flooded with too much petrol. Try pushing the accelerator pedal all the way to the floor while cranking for up to 15 seconds maximum. Wait at least 15 seconds between each try, to allow the cranking motor to cool down. When the engine starts, let go of the accelerator. If the vehicle starts briefly but then stops again, repeat these steps. This clears the extra petrol from the engine.

Caution

Cranking the engine for long periods of time, by pressing ENGINE START/STOP immediately after cranking has ended, can overheat and damage the cranking motor, and drain the battery. Wait at least 15 seconds between each try, to let the cranking motor cool down.

Stopping the Engine

Shift to P (Park) and press and hold ENGINE START/STOP on the instrument panel, until the engine shuts off. If the transmission is not in P (Park), the engine shuts off and the vehicle goes into the accessory mode. The DIC displays SHIFT TO PARK. When shifted to P (Park) the vehicle turns off.

If the remote key is not detected inside the vehicle when it is turned off, the DIC displays a message.

Retained Accessory Power (RAP)

When the vehicle is turned from on to off, the following features (if equipped) will continue to function for up to 10 minutes, or until the driver door is opened. These features will also work when the vehicle is on or in accessory mode:

- Infotainment System
- Power Windows (during RAP this functionality will be lost when any door is opened)
- Sunroof (during RAP this functionality will be lost when any door is opened)
- Auxiliary Power Socket
- Audio System
- OnStar System

Shifting Into Park

▲ Warning

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

Do not leave the vehicle when the engine is running. If you have left the engine running, the vehicle can move suddenly. You or others could be injured. To be sure the vehicle will not move, even when you are on fairly level ground, always apply the parking brake and shift to P (Park).

To shift into P (Park):

- 1. Hold the brake pedal down and set the parking brake. See *Electric Parking Brake* ⇔ 206.
- Press the P (Park) switch on the center console. See Dual Clutch Transmission ⇔ 198.
- 3. Press ENGINE START/STOP to turn the engine off.

If the vehicle is shifted into P (Park) on a hill, the Electric Parking Brake (EPB) may apply automatically. The EPB may not

release when the EPB switch is used. The EPB should automatically release when the vehicle is shifted out of P (Park).

Leaving the Vehicle with the Engine Running

▲ Warning

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

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

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

Shifting out of Park

This vehicle is equipped with an electronically controlled transmission.

If the vehicle has a battery with low voltage, try charging or jump starting the battery. See *Jump Starting* ⇔ *285*.

To shift out of P (Park):

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

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

If the vehicle cannot shift from P (Park), a Driver Information Center (DIC) message will display. See your dealer for service.

Parking over Things That Burn

▲ Warning

Things that can burn could touch hot exhaust parts under the vehicle and ignite. Do not park over papers, leaves, dry grass, or other things that can burn.

Active Fuel Management

This vehicle's engine may be equipped with Active Fuel Management, which 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, passing, or merging onto a highway, the system will maintain full-cylinder operation.

If the vehicle has an Active Fuel Management indicator, see Driver Information Centre (DIC) for more information about using this display.

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 \Rightarrow 195 and Engine Exhaust \Rightarrow 197.

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

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

The vehicle could turn off sooner if it is parked on a hill, due to lack of available fuel.

The timer will reset if the vehicle is taken out of P (Park) while it is running.

Engine Exhaust

⚠ Warning

Engine exhaust contains carbon monoxide (CO), which cannot be seen or smelled. Exposure to CO can cause unconsciousness and even death.

Exhaust may enter the vehicle if:

- The vehicle idles in areas with poor ventilation (parking garages, tunnels, deep snow that may block underbody airflow or 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.
- There are holes or openings in the vehicle body from damage or aftermarket modifications that are not completely sealed.

(Continued)

Warning (Continued)

If unusual fumes are detected or if it is suspected that exhaust is coming into the vehicle:

- Drive it only with the windows completely down.
- Have the vehicle repaired immediately.

Never park the vehicle with the engine running in an enclosed area such as a garage or a building that has no fresh air ventilation.

\land Warning

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

The vehicle is equipped with an advanced exhaust filtering system that cleans the exhaust and lowers vehicle emissions. This system requires certain conditions to maintain peak operation. Normally, the

system will not require any additional effort, but in certain driving modes the vehicle may request a regeneration of this system.

If the DIC displays ACTIVE REGEN IN PROCESS, attempt to maintain the current driving conditions. If this process is interrupted, it may be repeated when the conditions are resumed.

The exhaust filter operation is best maintained by following these criteria:

- Drive cycles with speeds greater than 100 km/h for periods longer than 15 minutes are best for the exhaust filter operation.
- Short duration travel of less than 10 minutes can diminish effectiveness.
- Peak operation requires a lively driving style at speeds above typical urban driving.
- Idle conditions or mild mannered, low speed driving do not promote peak operation.

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* ⇔ 195 and *Engine Exhaust* ⇔ 197.

Dual Clutch Transmission



This vehicle is equipped with a dual clutch transmission that contains an integrated rear differential. The dual clutch transmission provides an extremely connected feel due to the direct connection between the engine and gear box. This arrangement provides very fast shift times for maximum performance. Automatic driving mode is selected by pulling D on the transmission range selection panel and provides fully automatic shifting operation which can be further refined using driver mode control. Upshifts may be delayed regardless of mode selection or ambient temperature until the engine is warmed up. Manual operation can also be selected. See Manual Mode later in this section.

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

The transmission does not operate when the vehicle is off.

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

If ENGINE START/STOP is pressed twice while at a relatively high speed, the engine will turn off and the transmission will automatically shift into N (Neutral). Once the vehicle is stopped, P (Park) can be selected. **P** : This position locks the drive wheels. Use P (Park) when starting the vehicle to ensure the vehicle does not move.

\land Warning

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

Do not leave the vehicle when the engine is running. If you have left the engine running, the vehicle can move suddenly. You or others could be injured. To be sure the vehicle will not move, even when you are on fairly level ground, always apply the parking brake and shift to P (Park). See Shifting Into Park \Rightarrow 195.

When the vehicle is stopped, press ENGINE START/STOP to turn off the vehicle. The transmission will shift into P (Park) automatically unless N (Neutral) is selected.

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

To shift into and out of P (Park), see Shifting Into Park \Rightarrow 195 and Shifting out of Park \Rightarrow 196.

R : Use this gear to reverse.

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

To shift into R (Reverse):

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

To shift out of R (Reverse):

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

At low vehicle speeds, R (Reverse) can be used to rock the vehicle back and forth to get out of snow, ice, or sand without damaging the transmission. See *If the Vehicle Is Stuck* \Rightarrow *188*.

 ${\bf N}$: 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.

\land 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 (Continued)

Warning (Continued)

very rapidly. You could lose control and hit people or objects. Do not shift into a drive gear while the engine is running at high speed.

Caution

Shifting out of P (Park) or N (Neutral) with the engine running at high speed may damage the transmission. The repairs would not be covered by the vehicle warranty. Be sure the engine is not running at high speed when shifting the vehicle.

Caution

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

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

To shift out of N (Neutral):

1. Bring the vehicle to a complete stop.

5 The indicator should continue to show N

If it does not, start the engine and

6. The vehicle will now remain in

repeat Steps 2-4.

N (Neutral).

2. Shift into the desired gear. Driver Leaves Vehicle : To place the vehicle **D** : This position is for normal driving. in N (Neutral) with the engine off and the If more power is needed for passing, press Maintaining N (Neutral) with Engine Off vehicle unoccupied: the accelerator pedal. This vehicle includes a method of keeping 1. Ensure the vehicle is on level ground, the If the vehicle is shifted into D (Drive) while the vehicle in N (Neutral) while the engine engine is running and the vehicle is in the speed is too high, the transmission will is off. P (Park). get ready to engage D (Drive). Reduce the This method is not to be used for vehicle vehicle speed, then the transmission will 2. Apply the brake pedal. towing. If the vehicle needs to be towed. engage D (Drive). 3. Open the door. see Transporting a Disabled Vehicle ⇒ 288. To shift into D (Drive): 4. Shift to N (Neutral). Driver Remains in Vehicle : To place the 1. Bring the vehicle to a complete stop. 5. Turn off the engine and release the vehicle in N (Neutral) with the engine off 2. Pull the D (Drive) switch on the center brake pedal. and the vehicle occupied: console. 6. The indicator should continue to show N. 1. Ensure the vehicle is on level ground, the If it does not, start the engine and engine is running and the vehicle is in To shift out of D (Drive): repeat Steps 2-5. P (Park). 1. Bring the vehicle to a complete stop. 7. Exit the vehicle and close the door. 2. Apply the brake pedal. 2. Shift to the desired gear. 8. The vehicle may automatically shift to 3. Shift to N (Neutral). Downshifting the transmission in slippery P (Park) upon re-entry. road conditions could result in skidding. See 4. Turn off the engine and release the brake pedal. "Skidding" under Loss of Control 🖒 176. Caution

A transmission hot message may display

Driving under this condition can damage

the vehicle. Stop and idle the engine to

cool the transmission fluid. This message clears when the transmission fluid has

if the transmission fluid is too hot.

cooled sufficiently.

The transmission can be shifted like a manual transmission using the paddle shift controls while in D (Drive). See *Manual Mode* \Rightarrow 201.

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.

Manual Mode

Manual Paddle Shift



With the transmission in D (Drive), press the M (Manual Mode) switch on the center console to enter Manual Mode. Use the

paddles on the steering wheel to manually upshift or downshift the transmission. The right + (plus) paddle upshifts, and the left – (minus) paddle downshifts.

When using the Manual Paddle Shift system, the current gear will be displayed in the instrument cluster or the Head-Up Display (HUD), if equipped. See *Head-Up Display (HUD)* \Rightarrow 105.

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

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

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

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

- Hold the + paddle for more than one second.
- Drive at a continuous speed without manual shifts or aggressive cornering for several seconds.

• Lower vehicle speed to 6 km/h (4 mph) or less.

While the Manual Paddle Shift system is active, the gearbox will automatically downshift through the gears as the vehicle slows. The transmission will select 1 (First) gear as the vehicle stops. From a stop, the vehicle will start from and hold 1 (First) gear unless Manual Paddle Shifts are used to shift into a different gear, or D (Drive) is selected.

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

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

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

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

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

Manual Paddle Shift can be used with cruise control. See *Cruise Control* ⇔ 221.

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

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

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

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

Stingray (LT2) with an Electronic Limited-Slip Differential (Z51)				
Unshift Allowed (into soor)	At Appro	At Approximately		
Upshift Allowed (into gear)	km/h	mph		
2nd	15	9		
3rd	25	16		
4th	36	22		
5th	47	29		
6th	60	37		
7th	76	47		
8th	92	57		
Maximum Downshift Inhibit (nood /into goar)	At Approximately			
Maximum Downshift Inhibit Speed (into gear)	km/h	mph		
1st	30	19		
2nd	63	39		
3rd	104	65		
4th	164	102		
5th	232	144		
6th	Aero Limited	Aero Limited		
7th	Aero Limited	Aero Limited		

Stingray (LT2) with an Mechanical Limited-Slip Differential (Without Z51)				
	At Appro	At Approximately		
Upshift Allowed (into gear)	km/h	mph		
2nd	16	10		
3rd	26	16		
4th	37	23		
5th	49	30		
6th	63	39		
7th	80	50		
8th	97	60		
Maximum Daumshift Inhibit (mood (into acce)	At Approximately			
Maximum Downshift Inhibit Speed (into gear)	km/h	mph		
1st	30	19		
2nd	63	39		
3rd	113	70		
4th	174	108		
5th	245	152		
6th	Aero Limited	Aero Limited		
7th	Aero Limited	Aero Limited		

Z06 (LT6)				
Unchift Allowed (intersect)	At Appro	At Approximately		
Upshift Allowed (into gear)	km/h 14 24 35 47 60 77 93 At Appr km/h 66 113 162 225 303	mph		
2nd	14	9		
3rd	24	15		
4th	35	22		
5th	47	29		
6th	60	37		
7th	77	48		
8th	93	58		
	At Appro	At Approximately		
Maximum Downshift Inhibit Speed (into gear)	93 At Approxi km/h	mph		
1st	66	41		
2nd	113	69		
3rd	162	101		
4th	225	140		
5th	303	188		
6th	Aero Limited	Aero Limited		
7th	Aero Limited	Aero Limited		

Double Paddle Declutch

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

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

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

• Paddles are released separately

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

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

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

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

Manual Launch (ZO6 model only) : While the vehicle is in Double Paddle Declutch. Manual Launch can be activated to gain more precise control over the engine speed to prepare for a Standard or Rapid Exit. To activate this feature, first enter Double Paddle Declutch, then release and repull either the + paddle or - paddle while keeping the opposite paddle held. The Performance Gearbox Active Light will illuminate in the gauge cluster to indicate that Manual Launch has been activated. See *Performance Gearbox Active ♀* 99. When Manual Launch is active, the engine will respond differently when the accelerator pedal is pressed compared to normal Double Paddle Declutch. The accelerator pedal must be pressed further to increase the engine rpm and a lower engine rpm limit will be applied. This feature also provides faster engine response during a Rapid Exit if any of the Performance Traction Management (PTM) modes or Electronic Stability Control (ESC) Off has been selected. To exit Manual Launch, release both the + paddle and -

paddle. The vehicle will also exit Double Paddle Declutch and the engine will reconnect to the wheels. A Standard Exit or Rapid Exit will be performed based on the same conditions listed previously.

\land Warning

When exiting Double Paddle Declutch, the vehicle may move rapidly. You could lose control and cause a crash with nearby people or objects. Be ready to release the accelerator pedal or apply the brakes immediately if the vehicle moves too quickly. Do not use the Double Paddle Declutch when people or objects are near.

Brakes

Electric Brake Boost

Vehicles equipped with electric brake boost have hydraulic brake circuits that are electronically controlled when the brake pedal is applied during normal operation. The system performs routine tests and turns off within a few minutes after the vehicle is turned off. Noise may be heard during this time. If the brake pedal is depressed during

the tests or when the electric brake boost system is off, a noticeable change in pedal force and travel may be felt. This is normal.

Antilock Brake System (ABS)

The Antilock Brake System (ABS) helps prevent a braking skid and maintain steering while braking hard.



If there is a problem with ABS, this warning light stays on. See Antilock Brake System (ABS) Warning Light \Rightarrow 99.

ABS does not change the time needed to put your foot on the brake pedal and does not always decrease stopping distance. If you get too close to the vehicle ahead, there will not be enough time to apply the brakes if it suddenly slows or stops. Always leave enough room ahead to stop, even with ABS.

Using ABS

Do not pump the brakes. Just hold the brake pedal down firmly. Hearing and feeling ABS operate is normal.

Braking in Emergencies

ABS allows steering and braking at the same time. In many emergencies, steering can help even more than braking.

Electric Parking Brake



The Electric Parking Brake (EPB) can always be applied, even if the vehicle is switched off. In case of insufficient electrical power, the EPB cannot be applied or released. To prevent draining the battery, avoid unnecessary repeated cycles of the EPB.

The system has a red parking brake status light, and an amber parking brake service warning light. See *Electric Parking Brake Light* ⇔ *98* and

Service Electric Parking Brake Light ⇔ 98. There are also handbrake-related Driver Information Centre (DIC) messages.

Before leaving the vehicle, check the red handbrake status light to ensure that the handbrake is applied.

EPB Apply

To apply the EPB:

1. Be sure the vehicle is at a complete stop.

2. Press the EPB switch momentarily.

The red handbrake status light will flash and then stay on once the EPB is fully applied. If the red handbrake status light flashes continuously, then the EPB is only partially applied or there is a problem with the EPB. A DIC message will display. Release the EPB and try to apply it again. If the light does not come on, or keeps flashing, have the

vehicle serviced. Do not drive the vehicle if the red handbrake status light is flashing. See your dealer.

If the amber parking brake service warning light is illuminated, press the EPB switch. Continue to hold the switch until the red handbrake status light remains on. If the amber parking brake service warning light is illuminated, 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 takes place to periodically check the correct operation of the EPB system, or at the request of other safety functions that utilise the EPB.

If the EPB fails to apply, block the rear wheels to prevent vehicle movement.

EPB Release

To release the EPB:

- 1. Turn the ignition on or to accessory mode.
- 2. Apply and hold the brake pedal.
- 3. Press the EPB switch momentarily.

The EPB is released when the red handbrake status light is off.

If the amber parking brake service warning light is illuminated, release the EPB by pressing and holding the EPB switch. Continue to hold the switch until the red handbrake status light is off. If either light stays on after release is attempted, see your dealer.

Caution

Driving with the parking brake on can overheat the brake system and cause premature wear or damage to brake system parts. Make sure that the parking brake is fully released and the brake warning light is off before driving.

Automatic EPB Release

The EPB will automatically release if the vehicle is running, placed into gear and an attempt is made to drive away. Avoid rapid acceleration when the EPB is applied, to preserve parking brake lining life.

Brake Assist

Brake Assist detects rapid brake pedal applications due to emergency braking situations and provides additional braking to activate the Antilock Brake System (ABS) if the brake pedal is not pushed hard enough to activate ABS normally. Minor noise, brake pedal pulsation, and/or pedal movement during this time may occur. Continue to apply the brake pedal as the driving situation dictates. Brake Assist disengages when the brake pedal is released.

Hill Start Assist (HSA)

⚠ Warning

Do not rely on the HSA feature. HSA does not replace the need to pay attention and drive safely. You may not hear or feel alerts or warnings provided by this system. Failure to use proper care when driving may result in injury, death, or vehicle damage. See *Defensive Driving* ⇔ 174.

When the vehicle is stopped on a grade, Hill Start Assist (HSA) prevents the vehicle from rolling in an unintended direction during the transition from brake pedal release to accelerator pedal apply. The brakes release when the accelerator pedal is applied. If the accelerator pedal is not applied within a few minutes, the Electric Parking Brake will apply. The brakes may also release under other conditions. Do not rely on HSA to hold the vehicle. HSA is available when the vehicle is facing uphill in a forward gear, or when facing downhill in R (Reverse). The vehicle must come to a complete stop on a grade for HSA to activate.

Ride Control Systems

Traction Control/Electronic Stability Control

The vehicle has a Traction Control System (TCS) and a StabiliTrak/Electronic Stability Control (ESC) system. These systems help limit wheel spin and assist the driver in maintaining control, especially on slippery road conditions.

TCS activates if it senses that the rear wheels are spinning too much or are beginning to lose traction. When this happens, TCS applies the brakes to the spinning wheel and reduces engine power (by closing the throttle and managing engine spark) to limit wheel spin. StabiliTrak/ESC activates when the vehicle senses a difference between the intended path and the direction the vehicle is actually travelling. StabiliTrak/ESC selectively applies braking pressure to any one of the vehicle wheel brakes to assist the driver in keeping the vehicle on the intended path.

If cruise control is being used when TCS begins to limit wheel spin, the cruise control will automatically disengage. Cruise control may be reengaged when road conditions allow. See *Cruise Control* \Leftrightarrow 221.

If the driver disables TCS, cruise control will disengage. Cruise control will also be disabled if Performance Traction Management (PTM) is selected, or if StabiliTrak is turned off.

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* \Leftrightarrow *188* and "Turning the Systems Off and On" later in this section.



The indicator light for both systems is in the instrument cluster. This light will:

- Flash when TCS is limiting wheel spin
- Flash when StabiliTrak/ESC is activated
- Flash when ABS is active
- Turn on and stay on when either system is not working

If either system fails to turn on or to activate, a message displays in the Driver Information Centre (DIC), and \clubsuit comes on and stays on to indicate that the system is inactive and is not assisting the driver in maintaining control. The vehicle is safe to drive, but driving should be adjusted accordingly.

- If 🛱 comes on and stays on:
- 1. Stop the vehicle.
- 2. Turn the engine off and wait 15 seconds.
- 3. Start the engine.

Drive the vehicle. If 🚝 comes on and stays on, the vehicle may need more time to diagnose the problem. If the condition persists, see your dealer.

Turning the Systems Off and On



The TCS/StabiliTrak/ESC button is on the centre console.

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 $\frac{2}{37}$. The Traction Off light $\textcircled{}{}$ illuminates in the instrument cluster. To turn TCS on again, press and release $\frac{2}{37}$. The Traction Off light $\textcircled{}{}$ displayed in the instrument cluster will turn off.

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

To turn off both TCS and StabiliTrak/ESC, press and hold $\frac{2}{67}$ until the Traction Off light $\frac{1}{60}$ and StabiliTrak/ESC OFF light $\frac{2}{67}$ illuminate and stay on in the instrument cluster.

To turn TCS and StabiliTrak/ESC on again, press and release \clubsuit . The Traction Off light and StabiliTrak/ESC OFF light \clubsuit in the instrument cluster turn off.

If the Tire Pressure Monitor System (TPMS) system is malfunctioning and the DIC displays SERVICE TYRE MONITOR SYSTEM, StabiliTrak/ESC will be affected as follows:

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

Adding accessories can affect the vehicle performance. See Accessories and Modifications ⇔ 234.

For ZO6 Models Only

When the convertible top is down or the removable hard top is removed from the vehicle and ESC is in Competitive Mode, Performance Traction Management (PTM) mode, or if it has been turned off, the ESC Off light will turn off when the vehicle exceeds 160 km/h (100 mph), indicating that StabiliTrak/ESC is fully enabled.

Hill Rollback Control

If the vehicle is in gear and inadvertently rolls backwards, Hill Rollback Control helps limit the rollback to a very low speed. A noise may be heard while the vehicle speed is actively being controlled. A Driver Information Center (DIC) message displays when active.

Driver Mode Control

Driver Mode Control (DMC) allows the driver to adjust the overall driving experience to better suit preference by selecting different modes.

Drive mode availability and affected driver systems are dependent upon vehicle trim level, region, and optional features. Driver modes may include: Weather, Tour, Sport, and Track, along with two customizable modes: My Mode and Z-Mode.

When each mode is selected, an indicator will come on in the instrument cluster and stay on.

Mode Activation



To activate My Mode, Weather, Tour, Sport and Track Mode, turn the Driver Mode Control (DMC) knob on the center console to make a mode selection. When a mode is selected, an indicator will illuminate in the instrument cluster and remain illuminated.



To activate Z-Mode, press the Z-Mode button on the steering wheel. To deactivate, select a different mode through the DMC knob, or press the Z-Mode button on the steering wheel.

Mode Description

Weather: Used for slippery surfaces to help control wheel speed. This can compromise the acceleration on dry asphalt.

This feature is not intended for use when the vehicle is stuck in sand, mud, ice, snow, or gravel. If the vehicle becomes stuck, see *If the Vehicle Is Stuck* \Rightarrow *188.* See "Driver Mode Attributes," later in this section. **Tour**: Use for normal city and highway driving to provide a smooth, soft ride. This setting provides a balanced setting between comfort and handling. This is the standard mode. See "Driver Mode Attributes," later in this section.

Sport : Use when road conditions or personal preference demand a more controlled response. When this mode is selected, the vehicle will immediately downshift. The steering will change to provide more precise control. If the vehicle has Magnetic Ride Control, the suspension will change to provide better cornering performance.

Competitive Mode can be accessed through this mode. See *Competitive Driving Mode* ⇔ 217.

Strack: Use for closed race tracks. Use when maximum vehicle handling is desired. When in Track Mode, the dual clutch transmission and steering will adjust to track settings. In this mode the vehicle also monitors driving behaviours and automatically enables Performance Shift features when spirited driving is detected. These features maintain lower transmission gears to increase available engine braking and improve acceleration response. The vehicle will exit this feature and return to normal operation after a short time when spirited driving is no longer detected. If equipped, this mode also modifies real time damping, exhaust valve tuning, engine sound, brake pedal feel, Electronic Stability Control (ESC) performance and Traction Control System (TCS) performance.

Performance Traction Management (PTM) can be accessed through this mode. See "Performance Traction Management," later in this section.

Any Mode : Use to personalise everyday driving. This mode allows the driver to configure the driver systems to their driving preferences. This mode modifies the suspension, steering, brake feel, and engine sound. My Mode will remain active across ignition cycles.

Through the centre display, the following vehicle subsystems may be available for customisation in this mode:

Engine Sound: Stealth, Tour, Sport, Track

Steering: Tour, Sport, Track

Suspension: Tour, Sport, Track

Brake Feel: Tour, Sport, Track

For a more detailed description on how each driver system is changed, see "Drive Mode Customization," later in this section. Additionally the cluster theme can be set up using the display menu in the cluster.

Z-Mode : Use to personalise dynamic driving. This mode allows the driver to configure the driver systems to their own preference for maximum handling. Z-Mode further enhances the experience by adding powertrain customization. This mode modifies Engine/Shift, Brake Feel, Steering, Suspension, Engine Sound, and, Performance Traction Management, if equipped. Through the center display, the driver can customize multiple settings. The following vehicle subsystems may be available for customisation in this mode:

Engine Sound: Stealth, Tour, Sport, Track

Steering: Tour, Sport, Track

Suspension: Tour, Sport, Track

Engine/Shift: Weather, Tour, Sport, Track

Brake Feel: Tour, Sport, Track

PTM: Off, Wet, Dry, Sport, Race 1, Race 2

For a more detailed description on how each driver system is changed, see "Drive Mode Customization," later in this section. For more information on PTM, see "Performance Traction Management," later in this section. Additionally, the cluster theme can be set up using the display menu in the cluster.

Driver Mode Attributes

Modes:	MY MODE	WEATHER	TOUR	SPORT	TRACK	Z-MODE
Cluster Display	Tour (Default), Sport, Track, Weather (with any info tile set up)	Weather	Tour	Sport	Track	Tour, Sport, Track, Weather (with any info tile set up)
Throttle Progression	Tour	Weather	Tour	Sport	Track	Tour, Sport, Track, Weather
Trans Shift Mode (if equipped)	Tour	Weather	Tour	Sport	Track	Tour, Sport, Track, Weather
Active Fuel Management	Enabled (In 4th – 8th gear for mLSD vehicles)	Enabled (In 4th – 8th gear for mLSD vehicles)	Enabled (In 4th – 8th gear)	Enabled (In 5th – 8th gear)	Disable	Tour, Sport, Track, Weather
Performance Traction or Competitive Driving Mode Availability	Unavailable	Unavailable	Unavailable	Comp Mode (available)	PTM (available)	PTM (available)
Engine Sound	Stealth, Tour, Sport, Track	Stealth	Tour	Sport	Track	Stealth, Tour, Sport, Track
Steering	Tour, Sport, Track	Tour	Tour	Sport	Track	Tour, Sport, Track
Suspension (if equipped with Magnetic Ride)	Tour, Sport, Track	Tour	Tour	Sport	Track	Tour, Sport, Track
Brake Response	Tour, Sport, Track	Tour	Tour	Sport	Track	Tour, Sport, Track

Cluster Display

For more information on the display themes of the Drive modes on the instrument cluster, see *Instrument Cluster* \Rightarrow 89 > Options > Display themes.

Throttle Progression

Adjusts throttle sensitivity by selecting how quickly or slowly the throttle reacts to input.

Throttle Progression is a preset of Powertrain and cannot be modified or changed independently.

Transmission Shift Operation

Basic:

 Transmission upshifts and downshifts are selected based on vehicle speed and accelerator position to optimize comfort and fuel economy during mild driving conditions.

Driver Influenced Gear Selection:

 Aggressive driving will influence both the upshift and downshift points in all modes. When engaged, the Performance Gearbox Active light displays. See *Performance Gearbox Active* ⇔ *99*. When Performance Gearbox is activated from a standstill, by selecting PTM Race 1 or Race 2, the gearbox shift map is in the most aggressive state where upshifts are only achieved at high revolutions per minute (rpm), downshifts happen early, and the lowest gear is selected for cornering. Gearbox behaviour will transition to a level appropriate to the current driving behaviour after a short period of time. If PTM Race 1 or Race 2 are not selected, the Performance Gearbox Active behaviour still activates automatically after a sustained period of performance driving is detected. See "Performance Traction Management (PTM)" later on in this section.

- Criteria which have influence are: driving mode, accelerator, brakes, lateral, and longitudinal loading.
- Changes in gear selection behavior due to aggressive driving can include:
 - Downshifting early with higher rpm's during aggressive braking (i.e. entering a corner)
 - Altering upshifts while experiencing lateral acceleration
 - Not upshifting when the accelerator is released to avoid unnecessary shifts if the accelerator is re-applied

- Recognizing sporty driving and anticipate upcoming corners with the appropriate gear selection entering and exiting
- Driver Modes
 - Driver influenced changes are effective in all driving modes, however the aggressiveness of the transmission response will increase between Tour, Sport, and Track Modes respectively.

Active Fuel Management (Engine Cylinder Shuts Off)

• Normal with Dual Clutch Transmission: The engine uses 8-cylinder mode when accelerating, but changes to 4-cylinder mode when coasting.

Active Fuel Management is a preset of Powertrain and cannot be modified or changed independently.

Engine Sound

Caution

Using a stealth engine sound setting during spirited driving will cause the exhaust system to overheat and damage (Continued)

Caution (Continued)

the variable exhaust valves. Do not use this setting when auto-crossing or driving on high speed tracks.

If available, engine sound settings change when the variable exhaust valves open.

Steering (Assist Effort)

Adjusts from a lighter steering feel to reduced assist for more steering feel.

Magnetic Ride Control

If equipped, this feature adjusts the shock dampening firmness based on driving conditions to improve comfort and performance.

Drive Mode Customization

The vehicle is equipped to modify the following vehicle settings base on vehicle content. Through the infotainment home screen, select Settings > Vehicle > "Drive Mode Customisation" to customise and personalise My Mode and/or Z-Mode.

Engine Sound

Engine Sound adjusts the volume of engine noise. Setting range from quietest to loudest volume as you move from Stealth through Track.

• Stealth, Tour, Sport, Track

Steering

This setting adjusts the effort required to turn the steering wheel. The steering wheel offers better feedback but requires more effort as you move from Tour to Track.

• Tour, Sport, Track

Suspension

This setting adjusts the firmness of the suspension in the vehicle. Suspension adjust stiffness of the shocks and / or springs. The ride is more comfortable at lower settings and is stiffer at higher settings for better control.

• Tour, Sport, Track

Engine/Shift

This setting adjusts the throttle response, gear shifting and engine performance. An increased throttle response enhances the acceleration feel as you move toward Track, but with a comfort trade-off due to more aggressive gear shifting. • Weather, Tour, Sport, Track

Brake Feel

This setting adjusts the brake pedal response. Settings range from a slower response for more comfortable driving to the quickest response for quicker deceleration. Track allows for improved pedal precision at higher decelerations for high performance driving.

• Tour, Sport, Track

Performance Traction Management (PTM)

To activate PTM through Z-Mode, configure Z-Mode to the desired PTM state in the centre stack (Settings > Vehicle > Drive Mode Customisation > Z-Mode). Press the Z-Mode button once to activate Z-Mode. When PTM is configured on, a message will appear in the Driver Information Centre (DIC) "Z-Mode Active — Press Again for PTM On — ESC May be Disabled."

To confirm, and enter PTM, press the Z-Mode button again. The PTM state can now be modified using the mode knob or changing the Z-Mode setting in the centre stack. Both the Z-Mode and PTM indicators will be displayed.

216 Driving and Operating

To cancel, press the centre dismiss button on the steering wheel (Z-Mode remains active). Selecting PTM states may modify other Z-Mode customisation options.

• Off, Wet, Dry, Sport, Race 1, Race 2

Front Lift System

A two-position lift actuator (one per damper) with 35 mm (1.5 in) of stroke will hydraulically raise the front of the vehicle to provide approximately 50 mm (2 in) of increased clearance in approximately three seconds (height and time will vary by vehicle). The Front Lift System will allow you to lift the front of the vehicle to enter a driveway, driving over curbs, speed bumps or onto ramps or a trailer.



To use the Front Lift System, press the button on the center console to raise or lower the vehicle. This feature can be operated at speeds up to 38 km/h (24 mph) when the engine is running. The system functions based on the vehicle's state or operating mode:

- The system will not raise up when the doors or underbonnet storage compartment is open.
- The system can be raised or lowered by the pushbutton, when the vehicle is in RUN or in accessory mode.
- If the vehicle is in the raised position and is driven at speeds above 38 km/h (24 mph), it will automatically lower.

- If the vehicle is turned off, it will automatically lower.
- If a vehicle door is opened during lowering, the movement will pause for 15 seconds then continue to lower, but at a slower rate.

If equipped, the front height can be raised automatically using GPS navigation in the vehicle. The vehicle will automatically lift in up to 1,000 programmable locations. Once the button is pushed, a notification will appear on the Driver Information Centre (DIC) and prompt the driver if they would like to "Remember" the location. The driver can select this function through the steering wheel controls, see *Steering Wheel Controls* ⇔ 121.

The driver can also delete stored locations for the automatic lift.

If the vehicle is raised automatically using GPS, it will automatically lower once the vehicle is located about 60 meters (197 feet) from the programmed location. To disable this function, turn off the GPS location via the vehicle Customisation Settings. The Front Lift System will now only operate using the pushbutton command, and the "Auto Lift Location Remembered" confirmation message will not display. The Front Lift System can also be used in accessory mode. Put the vehicle in accessory mode and press and hold the button on the centre console for 10 consecutive seconds to automatically raise the vehicle.

The Driver Information Centre (DIC) may display the message "Lift System Unavailable" if:

- any doors are ajar
- the bonnet is open
- the vehicle is moving over 38 km/h (24 mph)
- too many lift requests within a short period

The Front Lift System should not be used to service the vehicle. Do not place anything or body parts under the vehicle while lifted. See *Recommended Fluids and Lubricants* \Rightarrow 305.

Competitive Driving Mode

If equipped, Competitive Driving Mode, Performance Traction Management (PTM), and Launch Control are systems designed to allow increased performance while accelerating and/or cornering. This is accomplished by regulating and optimising the engine, brakes and suspension performance. These modes are for use at a closed course race track and are not intended for use on public roads. They will not compensate for driver inexperience or lack of familiarity with a race track. Drivers who prefer to allow the system to have more control of the engine, brakes, and suspension are advised to turn on the normal traction control and StabiliTrak/ Electronic Stability Control (ESC) systems on.

Competitive Driving Mode

Competitive Driving Mode allows full engine power while StabiliTrak/ESC helps maintain directional control of the vehicle by selective brake application. In this mode, the Traction Control System (TCS) is off and Launch Control is available.

Adjust your driving style to account for the available engine power. See "Launch Control" later in this section.





These lights are on when the vehicle is in the Competitive Driving Mode.

To select this optional handling mode, the vehicle mode must be Sport or Track (if equipped with PTM, then Competitive Driving Mode is only available in Sport). Then quickly press and on the center console two times. ESC COMPETITIVE MODE displays in the Driver Information Center (DIC).

When $\frac{2}{67}$ is pressed again, the traction off light a and StabiliTrak/ESC OFF light $\frac{2}{67}$ will go out.

Performance Traction Management (PTM)

If equipped, PTM integrates the TCS, StabiliTrak/ESC, and Magnetic Ride Control systems to provide improved and consistent performance when cornering. The amount of available engine power is based on the mode selected, track conditions, driver skill, and the radius of each corner.



This light is on when the vehicle is in the $\ensuremath{\mathsf{PTM}}$ Mode.

To select PTM mode, the vehicle mode must be in Track Mode. Then quickly press $\frac{2}{87}$ on the center console two times. Performance Traction Wet — ESC On displays in the DIC.

PTM is activated in two different methods. For more information on how to activate PTM through Z Mode, see *Driver Mode Control* \Rightarrow 210.

To experience the performance benefit of this system, after entering a curve and at the point where normal acceleration occurs, fully press the accelerator pedal. The PTM system modifies the level of engine power for a smooth and consistent corner exit.

The PTM system contains five modes. These modes are selected by turning the MODE switch on the center console. Scroll through modes by turning the mode control dial.

The following is a DIC display description and the recommended usage of each mode:

Performance Traction – Wet

- Intended for all driver skill levels
- Wet or damp conditions only not intended for use in heavy rain or standing water
- StabiliTrak/ESC is on and engine power is reduced based on conditions

Performance Traction – Dry

- For use by less experienced drivers or while learning a new track
- Dry conditions only
- StabiliTrak/ESC is on and engine power is slightly reduced

Performance Traction – Sport

- For use by drivers who are familiar with the track
- Dry conditions only
- Requires more driving skill than Performance Traction – Dry
- StabiliTrak/ESC is on and more engine power is available than in Performance Traction – Dry

Performance Traction - Race 1

- For use by drivers who are familiar with the track
- Dry conditions only
- Requires more driving skill than Performance Traction – Dry or Performance Traction – Sport
- StabiliTrak/ESC is off and available engine power is the same as Performance Traction – Sport

Performance Traction – Race 2

- For use by experienced drivers who are familiar with the track
- Dry conditions only
- Requires more driving skill than in other modes
- StabiliTrak/ESC is off and engine power is available for maximum cornering speed

Press and release 🛱 to turn off PTM and return to the TCS and StabiliTrak/ESC systems. The traction off light 🇀 and StabiliTrak Off light 🧱 will go out.

Launch Control (Sport and Track Mode Only)

A Launch Control feature is available, within Competitive Driving Mode or PTM, on all vehicles to allow the driver to achieve high levels of vehicle acceleration in a straight line. Launch Control is a form of TCS that manages tire spin, and transmissions clutch, while launching the vehicle. This feature is intended for use during closed course race events where consistent zero to 60 and quarter mile times are desirable.

Caution

The new vehicle break-in period should be completed before using the launch control feature, otherwise performance will be limited and damage may occur to the powertrain/engine. See *New Vehicle Run-In* \Rightarrow 191.

Launch Control is only available when the following criteria are met:

- Competitive Driving Mode or any of the PTM Modes are selected (if equipped). See Driver Mode Control ⇔ 210.
- The steering wheel must be straight.
- The driver door must be closed.

- The vehicle must be in D (Drive) or M (Manual Mode).
- The parking brake must not be engaged.

Launching the Vehicle

- Ensure the vehicle is in Competitive Driving Mode or any of the PTM modes.
- The brake pedal must be firmly pressed to the floor, equivalent to a panic brake event.
- While maintaining the brake pedal, the accelerator pedal is rapidly applied to wide open throttle. If the vehicle rolls due to wide open throttle or engine speed does not exceed 3,000 Revolutions Per Minute (RPM), release the throttle, press the brake pedal more firmly, and reapply the accelerator to wide open throttle.
 - If the engine is cold, the vehicle may be limited to 3000 rpm until conditions are suitable for acceleration.

The Launch Control feature initially limits engine speed as the driver rapidly applies the accelerator pedal to wide open throttle. Allow the engine RPMs to stabilize. A smooth, quick release of the brake pedal, while maintaining the fully pressed accelerator pedal, will manage tire slip and transmissions clutch. After the vehicle is launched, the system continues in Competitive Driving Mode or PTM.

Custom Launch Control

If equipped, Custom Launch Control allows the following parameters for Launch Control to be modified:

- Launch RPM
- Slip Target (5%-15%)

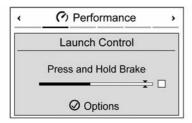
Adjusting the Launch RPM will also change the behaviour of the gearbox during the start of the launch. The higher the Launch RPM, the faster the clutch will be applied resulting in greater acceleration. This parameter can be used to match the launch behaviour to the available tyre traction. If the driving wheels spin excessively during the launch, reduce the Launch RPM.

To adjust the Launch RPM, all of these conditions must be met:

- Competitive Driving Mode or any of the PTM Modes are selected (if equipped). See Driver Mode Control ⇔ 210.
- The steering wheel must be straight.
- The driver door must be closed.
- The vehicle must be in D (Drive) or M (Manual Mode).

220 Driving and Operating

• The parking brake must not be engaged.



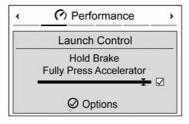
- 1. Using the DIC buttons on the right side of the steering wheel, navigate to the performance menu. See *Instrument Cluster* ⇔ 89.
- 2. Select Launch Control > Custom.



3. Scroll down to Launch RPM.



- 4. Adjust the desired RPM: 3500, 4000, 4500, 4750, 5000
- 5. Set Slip Target to custom desired setting.



6. Return to the landing page of Launch Control. Firmly press and hold the brake pedal to activate Launch Control.



7. Fully press the accelerator. Release the brake pedal to launch the vehicle.

Limited-Slip Differential

The Electrical Limited-Slip Differential (eLSD) is a hydraulically actuated clutch system inside the transaxle. It can infinitely vary the clutch engagement between 0 and 2250 N*m (1659 lb-ft) of breakaway torque between the rear wheels. When necessary it responds from open to full engagement in fractions of a second. Smaller clutch adjustments happen even faster.

The eLSD:

• Uses the vehicle sensors and driver inputs to determine the optimum amount of clutch engagement for the conditions.

- Improves traction while cornering by changing the engagement to achieve a balance between directional control and acceleration.
- Provides optimal engagement for high-speed control and stability without affecting precise steering and turn-in.
- Improves vehicle stability during spirited driving and evasive maneuvers. It is fully integrated with the Active Handling and Performance Traction Management (PTM) systems (if equipped).

There are unique calibrations based on the Traction Control System (TCS) setting. eLSD modes change automatically when the traction control button is pressed. No unique input from the driver is required.

- Mode 1 is the standard mode when the vehicle is started. It provides a touring calibration with an emphasis on vehicle stability. Mode 1 is also used in PTM Wet mode.
- Mode 2 is engaged when both TCS and StabiliTrak are turned off. This calibration provides more nimble corner turn-in, and is biased for better traction out of corners.

- Mode 3 is engaged when PTM is engaged in Dry, Sport 1 & 2, and Race modes. This is a nimble calibration with similar functionality as eLSD Mode 2, however, it is integrated to work with PTM.
- Mode 4 is engaged when TCS is selected off, but StabiliTrak remains on. Vehicle stability is still the priority, while allowing for optimized traction out of corners.

Cruise Control

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).

A 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

(Continued)

Warning (Continued)

excessive wheel slip, and you could lose control. Do not use cruise control on slippery roads.

If the Traction Control System (TCS) begins to limit wheel spin while you are using cruise control, the cruise control automatically disengages. See *Traction Control/Electronic Stability Control* ⇔ 208. When road conditions allow for using safely again, cruise control can be turned back on.

If the brakes are applied, cruise control disengages.

Cruise control will disengage if either TCS or StabiliTrak/Electronic Stability Control (ESC) is turned off.



A white indicator comes on in the instrument cluster when cruise is turned on.

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

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

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

The speedometer reading can be displayed in either English or metric units. See *Instrument Cluster* ⇔ 89. The increment value used depends on the units displayed.

Setting Cruise Control

If 态 is on when not in use, SET- or +RES could get pressed and go into cruise when not desired. Keep 态 off when cruise is not being used.

- 1. Press in to turn the cruise system on.
- 2. Get up to the desired speed.
- 3. Press and release SET- on the steering wheel.
- 4. Remove foot from the accelerator.

The cruise control indicator on the instrument cluster turns green after cruise control has been set to the desired speed. See *Instrument Cluster* \Rightarrow 89.

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 reaches about 40 km/h (25 mph) or more, briefly press +RES. The vehicle returns to the previous set speed.

Increasing Speed While Using Cruise Control

Do one of the following:

- Press and hold +RES until the desired speed is reached, then release it.
- To increase vehicle speed in small increments, briefly press +RES. For each press, the vehicle goes about 1 km/h (1 mph) faster.

Reducing Speed While Using Cruise Control

Do one of the following:

- Press and hold SET- until the desired lower speed is reached, then release it.
- To decrease the vehicle speed in small increments, briefly press SET–. For each press, the vehicle goes about 1 km/h (1 mph) slower.

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 previously set cruise speed.

While pressing the accelerator pedal or shortly following the release to override cruise control, briefly pressing SET- will result in cruise set to the current vehicle speed.

Using Cruise Control on Hills

How well the cruise control works on hills depends upon the vehicle speed, load and the steepness of the hills. When going up steep hills, you may have to step on the accelerator pedal to maintain your speed. When going downhill, you may have to brake or shift to a lower gear to keep your speed down. If the brake pedal is applied, cruise control will disengage.

Cruise Control in Manual Paddle Shift Gear Selection

When the vehicle is in M (Manual Mode) and the manual paddle shift controls are not being used, cruise control operates in the same manner as D (Drive).

When the vehicle is in M (Manual Mode) and the manual paddle shift controls are being used, cruise control operates as follows:

 If cruise control is active and a gear is selected with the manual paddle shift controls, the vehicle speed is maintained in the driver selected gear and will not automatically upshift or downshift the gearbox while the driver gear selection is active. If driving in hilly terrain, cruise control may not be able to maintain vehicle speed if an upshift or downshift is not selected by the driver. While driving on hilly terrain and cruise control is active with a manual paddle shift gear selection, the driver must select the proper gear for the terrain or select D (Drive) on the shifter for full automatic transmission operation.

Ending Cruise Control

- Step lightly on the brake pedal.
- Shift the transmission to N (Neutral).
- Press 🕅.
- To turn off cruise control, press 🗞.

Erasing Speed Memory

The cruise control set speed is erased from memory if $\mathfrak{F}_{\mathfrak{P}}$ is pressed or if the ignition is turned off.

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.

\land Warning

Do not rely on the Driver Assistance Systems. These systems do not replace the need for paying attention and driving safely. You may not hear or see alerts or warnings provided by these systems. Failure to use proper care when driving may result in injury, death, or vehicle damage. See *Defensive Driving* ⇔ 174.

Under many conditions, these systems will not:

- Detect children, pedestrians, bicyclists, or animals.
- Detect vehicles or objects outside the area monitored by the system.
- Work at all driving speeds.
- Warn you or provide you with enough time to avoid a crash.
- Work under poor visibility or bad weather conditions.
- Work if the detection sensor is not cleaned or is covered by ice, snow, mud, or dirt.

(Continued)

224 Driving and Operating

Warning (Continued)

- 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 Alert

Some driver assistance features alert the driver of obstacles by beeping. To view available settings from the infotainment screen, touch Settings > Vehicle > Comfort and Convenience.

Cleaning

Depending on vehicle options, keep these areas of the vehicle clean to ensure the best driver assistance feature performance. Driver Information Centre (DIC) messages may display when the systems are unavailable or blocked.



- Front and rear bumpers and the area below the bumpers
- Front grille and headlights
- Front camera lenses in the front grille or near the front emblem

- Front side and rear side panels
- Outside of the windscreen in front of the rearview mirror
- Rear side corner bumpers
- Rear Vision Camera above the license plate

Assistance Systems for Parking or Reversing

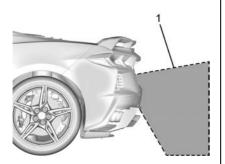
If equipped, the Rear Vision Camera (RVC), Rear Park Assist (RPA), and Curb View Camera may help the driver park or avoid objects. Always check around the vehicle when parking or backing.

Rear Vision Camera (RVC)

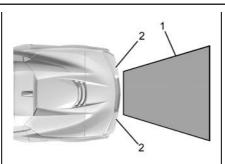
When the vehicle is shifted into R (Reverse), the RVC displays an image of the area behind the vehicle in the infotainment display. The previous screen displays when the vehicle is shifted out of R (Reverse) after a short delay. To return to the previous screen sooner, press Home or Back on the infotainment system, shift into P (Park), or reach a vehicle speed of approximately 12 km/h (8 mph) while in D (Drive).



The camera is above the number plate.



1. View displayed by the camera.



- 1. View displayed by the camera.
- 2. Corner 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.

\land 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 (Continued)

Warning (Continued)

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.

Turning the Features On or Off

To turn off the guidance lines:

- 1. On the infotainment system, touch SETTINGS.
- 2. Select Rear Camera.
- 3. Select Guidance Lines and then select Off or On.

When the System Does Not Seem to Work Properly

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

- It is dark.
- The sun or the beam of headlamps is shining directly into the camera lens.
- Ice, snow, mud, or anything else builds up on the camera lens. Clean the lens, rinse it with water, and wipe it with a soft cloth.

226 Driving and Operating

• The back of the vehicle is damaged. The position and mounting angle of the camera can change or the camera can be affected. Be sure to have the camera and its position and mounting angle checked at your dealer.

Curb View Camera



If equipped, a view of the area in front of the vehicle displays in the infotainment display. The display shows a front, top down view at the top and left and right front camera images on the bottom. The front view shows after shifting from R (Reverse) to a forward gear, or by pressing the camera button on the center console, and when the vehicle is moving forward slower than 12 km/h (8 mph).

The front cameras are on both sides of the front fascia.

Rear Junction View

Displays a rear cross traffic view that shows objects directly to the left and right of the back of the vehicle. Touch Junction View on the infotainment display when a camera view is active.

M 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.

Park Assist

With RPA, as the vehicle reverses at speeds of less than 8 km/h (5 mph), the sensors on the rear bumper may detect objects up to 2.5 m (8 ft) behind the vehicle within a zone 25 cm (10 in) high off the ground and below bumper level. These detection distances may be shorter during warmer or humid weather.

Blocked sensors will not detect objects and can also cause false detections. Keep the sensors clean of mud, dirt, snow, ice, and slush; and clean sensors after a car wash in freezing temperatures.

A Warning

The Park Assist system does not detect children, pedestrians, cyclists, 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 damage, even with Park Assist, always check the area around the vehicle and check all mirrors before moving forward or reversing.



The instrument cluster may have a Park Assist display with bars that show "distance to object" and object location information for RPA. As the object gets closer, more bars light up and the bars change color from yellow to amber to red.

When an object is first detected in the rear, one beep will be heard from the rear. When an object is very close (<0.6 m (2 ft) in the vehicle rear), five beeps will sound from the rear.

Rear Cross Traffic Alert (RCTA) System

If equipped, RCTA displays a red warning triangle with a left or right pointing arrow on the RVC screen to warn of traffic coming from the left or right. This system detects objects coming from up to 20 m (65 ft) from the left or right side of the rear of the vehicle. When an object is detected, three beeps sound from the left or right, depending on the direction of the detected vehicle.

RCTA can be turned on or off through vehicle settings. To view available settings from the infotainment screen, touch Settings > Vehicle > Collision/Detection Systems.

Side Blind Zone Alert (SBZA)

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

\land Warning

SBZA does not alert the driver to vehicles rapidly approaching outside of the side blind zones, pedestrians, bicyclists, or animals. It may not provide alerts when changing lanes under all driving conditions. Failure to use proper care when changing lanes may result in injury, (Continued)

Warning (Continued)

death, or vehicle damage. Before making a lane change, always check mirrors, glance over your shoulder, and use the indicators.

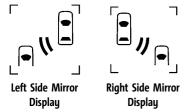
SBZA Detection Zones



The SBZA sensor covers a zone approximately one lane over from both sides of the vehicle, or approximately 3.5 m (11 ft). The height of the zone is approximately between 0.5 m (1.5 ft) and 2 m (6 ft) off the ground. This zone starts at approximately the middle of the vehicle and goes back 5 m (16 ft).

How the System Works

The SBZA symbol lights up in the side mirrors when the system detects a moving vehicle in the next lane over that is in the side blind zone. This indicates it may be unsafe to change lanes. Before making a lane change, check the SBZA display, check mirrors, glance over your shoulder, and use the indicators.



When the vehicle is started, both outside mirror SBZA 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 that blind zone. If the indicator is activated in the same direction as a detected vehicle, this display will flash as an extra warning not to change lanes. SBZA can be disabled through vehicle personalisation. To view available settings from the infotainment screen, touch Settings > Vehicle > Collision/Detection Systems. If SBZA is disabled by the driver, the SBZA mirror displays will not light up.

When the System Does Not Seem to Work Properly

SBZA displays may not come on when passing a vehicle quickly, for a stopped vehicle. SBZA may alert to objects attached to the vehicle, such as a bicycle, or object extending out to either side of the vehicle. This is normal system operation; the vehicle does not need service.

SBZA may not always alert the driver to vehicles in the side blind zone, especially in wet conditions. The system does not need to be serviced. The system may light up due to guardrails, signs, trees, shrubs, and other non-moving objects. This is normal system operation; the vehicle does not need service.

SBZA may not operate when the SBZA sensors in the left or right corners of the rear bumper are covered with mud, dirt, snow, ice, or slush, or in heavy rainstorms. For cleaning instructions, see "Washing the Vehicle" under *Exterior Care* \Rightarrow 291. If the DIC

still displays the system unavailable message after cleaning both sides of the vehicle toward the rear corners of the vehicle, see your dealer.

If the SBZA displays do not light up when vehicles are in the blind zone and the system is clean, the system may need service. Take the vehicle to your dealer.

When SBZA is disabled for any reason other than the driver turning it off, the Side Blind Zone Alert On option will not be available on the personalisation menu.

Fuel

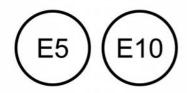
Top Tier Fuel

GM recommends the use of TOP TIER Detergent Gasoline to keep the engine clean, reduce engine deposits, and maintain optimal vehicle performance. Look for the TOP TIER Logo or see www.toptiergas.com for a list of TOP TIER Detergent Gasoline resellers and applicable countries.





Recommended Fuel





Use the recommended fuel for proper vehicle maintenance.

Use unleaded petrol with a posted octane rating of 95 RON or higher and with ethanol up to 10% by volume. If the octane is less than 95 RON, repairs would not be covered by the vehicle warranty. If heavy knocking is heard when using petrol rated at 95 RON octane, the engine needs service.

Prohibited Fuels

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, ferrocene and aniline. These fuels can 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.

(Continued)

Caution (Continued)

 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

TOP TIER Detergent Gasoline is highly recommended for use with your vehicle. If your country does not have TOP TIER Detergent Petrol, add ACDelco Fuel System Treatment Plus-Petrol to the vehicle's petrol fuel tank at every oil change or 15 000 km (9,000 mi), whichever occurs first. TOP TIER Detergent Petrol and ACDelco Fuel System Treatment Plus-Petrol will help keep your vehicle's engine fuel deposit free and performing optimally. If you are unable to obtain ACDelco Fuel System Treatment Plus -Gasoline, consult your retailer for the GM-approved additive available in your country.

Filling the Tank

An arrow on the fuel gauge indicates which side of the vehicle the fuel door is on. See *Fuel Gauge* \Rightarrow *92*.

230 Driving and Operating

⚠ Warning

Fuel vapours and fuel fires burn violently and can cause injury or death.

Follow these guidelines to help avoid injuries to you and others:

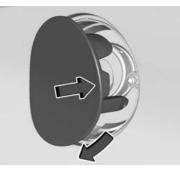
- Read and follow all the instructions on the fuel pump island.
- Turn off the engine when refuelling.
- Keep sparks, flames, and smoking materials away from fuel.
- Do not leave the fuel pump unattended.
- Avoid using electronic devices while refuelling.
- Do not re-enter the vehicle while pumping fuel.
- Keep children away from the fuel pump and never let children pump fuel.
- Before touching the fill nozzle, touch a metallic object to discharge static electricity from your body.

(Continued)

Warning (Continued)

• Fuel may spray out if the filler nozzle is inserted too quickly. This spray can happen if the tank is nearly full, and is more likely in hot weather. Insert the filler nozzle slowly and wait for any hissing noise to stop before starting to fill fuel.

The fuel door unlocks when the vehicle doors are unlocked. See *Remote Key Operation* \Rightarrow 8.



To open the fuel filler flap, push and release the rearward centre edge of the flap.

The capless refuelling system does not have a fuel cap. Fully insert and latch the fill nozzle, begin refuelling.

\land Warning

Overfilling the fuel tank by more than three clicks of a standard fill nozzle may cause:

- Vehicle performance issues, including engine stalling and damage to the fuel system.
- Fuel spills.
- Under certain conditions, fuel ignites.

Be careful not to spill fuel. Wait five seconds after you have finished refuelling before removing the filler nozzle. Clean fuel from painted surfaces as soon as possible. See *Exterior Care* \Rightarrow 291. Push the fuel door closed until it latches.

A Warning

If a fire starts while you are refuelling, do not remove the fill nozzle. Shut off the flow of fuel by shutting off the pump or by notifying the station attendant. Leave the area immediately.

Filling the Tank with a Portable Fuel Container

If the vehicle runs out of fuel and must be filled from a portable fuel container:



- 1. Locate the capless funnel adapter.
- 2. Insert and latch the funnel into the capless fuel system.

M Warning

Attempting to refuel from a portable fuel container without using the funnel adapter may cause fuel spillage and may damage the capless fuel system. This could cause a fire. You or others could be badly burned and the vehicle could be damaged.

3. Remove and clean the funnel adapter and return it to the storage location.

Filling a Portable Fuel Container

\land Warning

Never fill a portable fuel container while it is in the vehicle. Static electricity discharge from the container can ignite the fuel vapour. You or others could be badly burned and the vehicle could be damaged. To help avoid injury to you and others:

- Dispense fuel only into approved containers.
- Do not fill a container while it is inside a vehicle, in a vehicle's boot, on a pickup platform, or on any surface other than the ground.
- Bring the fill nozzle in contact with the inside of the fill opening before operating the nozzle. Maintain contact until filling is complete.
- Keep sparks, flames, and smoking materials away from fuel.
- Avoid using electronic devices while filling fuel.

Trailer Towing

General Towing Information

\land Warning

Never tow a trailer with your vehicle. It was not designed or intended to tow a trailer.

Conversions and Add-Ons

Add-On Electrical Equipment

\land Warning

The Data Link Connector (DLC) is used for vehicle service and Emission Inspection/ Maintenance testing. See *Malfunction Indicator Lamp (Check Engine Light)* \Rightarrow 96. 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.

232 Driving and Operating

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 ⇔ 63 and Adding Equipment to the Airbag-Equipped Vehicle (For Left-hand Drive Vehicles with a Passenger Sensing System) ⇔ 63 or Adding Equipment to the Airbag-Equipped Vehicle (For Right-hand Drive Vehicles without a Passenger Sensing System) ⇔ 64.

Vehicle Care 233

Vehicle Care

General Information

General Information	234
Accessories and Modifications	234
Lifting the Vehicle	234

Vehicle Checks

Doing Your Own Service Work	236
Underhood Compartment Overview	236
Engine Compartment Overview	237
Engine Oil (5.5L LT6 Engine)	241
Engine Oil (6.2L LT2 Engine)	245
Engine Oil Life System	
Dual Clutch Transmission Fluid	249
Dual Clutch Transmission Fluid Life	
System	
Engine Air Filter Life System	250
Engine Air Cleaner/Filter	. 251
Cooling System	
Engine Overheating	
Washer Fluid	256
Brakes	
Brake Pad Life System (If Equipped)	259
Brake Fluid	260
Battery	261
Park Brake and P (Park) Mechanism	
Check	
Wiper Blade Replacement	
Windscreen Replacement	263

Gas Strut(s) 263
Headlamp Aiming Front Headlight Aiming
Bulb Replacement LED Lighting
Electrical SystemElectrical System Overload264Fuses and Circuit Breakers265Instrument Panel Fuse Block265Rear Compartment Fuse Block268
Wheels and TyresTyres271Winter Tyres271Run-Flat Tyres272Low-Profile Tyres272Competition Oriented Tires273Summer Tyres273Tyre Pressure274Tyre Pressure for High-SpeedOperationOperation275Tyre Pressure Monitor System276Tyre Pressure Monitor Constraint276
Tyre Pressure Monitor Operation277Tyre Inspection279Tyre Rotation280When It Is Time for New Tyres281Buying New Tyres281Different Size Tyres and Wheels283Wheel Alignment and Tyre Balance283

Wheel Replacement Tyre Chains If a Tyre Goes Flat	284
Jump Starting	
Jump Starting	285
Towing the Vehicle	
Transporting a Disabled Vehicle	288
Appearance Care	
Exterior Care	291
Interior Care	295
Floor Mats	298

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-retailer 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, Driver Assistance Systems, and electronic systems like antilock brakes, traction control, and stability control. These accessories or modifications could even cause malfunction or damage not covered by the vehicle warranty.

Damage to suspension components caused by modifying vehicle height outside of factory settings will not be covered by the vehicle warranty.

Damage to vehicle components resulting from modifications or the installation or use of non-GM certified parts, including control module or software modifications, is not covered under the terms of the vehicle warranty and may affect remaining warranty coverage for affected parts. GM Accessories are designed to complement and function with other systems on the vehicle. See your dealer to accessorise the vehicle using genuine GM Accessories installed by a dealer technician.

Also, see Adding Equipment to the Airbag-Equipped Vehicle (For Left-hand Drive Vehicles with a Passenger Sensing System) ⇔ 63 or Adding Equipment to the Airbag-Equipped Vehicle (For Right-hand Drive Vehicles without a Passenger Sensing System) ⇔ 64.

Lifting the Vehicle

▲ Warning

Lifting a vehicle can cause an injury. The vehicle can slip off the jack and roll over you or other people. You and they could be badly injured. Find a level place to lift your vehicle. To help prevent the vehicle from moving:

- 1. Apply the parking brake firmly.
- 2. Put the transmission in P (Park).

(Continued)

3. Turn off the engine.

Warning (Continued)

To be even more certain the vehicle will not move, put chocks in front of and behind the wheels.

\land 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.

\land Warning

Raising the vehicle with the jack improperly positioned can damage the vehicle or the vehicle may fall and cause injury to you or others.

If a jack is used to lift the vehicle, follow the instructions that came with the jack, and be sure to use the correct lifting points to avoid damaging the vehicle.

Vehicle Care 235

Caution

Lifting the vehicle improperly can damage it and result in costly repairs not covered by the vehicle warranty. To lift the vehicle properly and prevent vehicle damage:

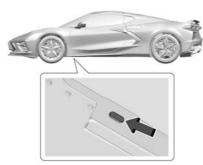
- Be sure to place a block or pad between the jack and the vehicle.
- Lift only in the areas shown in the following illustrations.

For additional information, see your dealer and the service manual.

Caution

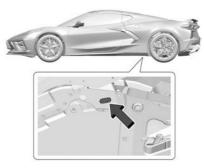
The front jack pads must not contact the rocker panels, the front fenders, or the floor pan. If they do, damage may occur.

Lifting from the Front – Frame



Use only a service jack with a lifting pad diameter of 64 mm (2.5 in) or smaller, and thick enough to make sure the jack does not contact the vehicle body.

Position the service jack and lifting pad under the frame rail shipping slot reinforcement. Lifting from the Rear - Frame



Use only a service jack with a lifting pad diameter of 64 mm (2.5 in) or smaller, and thick enough to make sure the jack does not contact the vehicle body.

Position the service jack and lifting pad under the frame rail shipping slot reinforcement.

For more information, see *Doing Your Own Service Work* ⇔ 236.

Vehicle Checks

Doing Your Own Service Work

▲ Warning

It can be dangerous to work on your vehicle if you do not have the proper knowledge, service manual, tools, or parts. Always follow owner's manual procedures and consult the service manual for your vehicle before doing any service work.

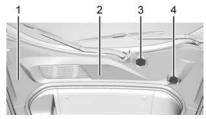
If doing some of your own service work, use the proper service manual. It tells you much more about how to service the vehicle than this manual can. This vehicle has an airbag system. Before attempting to do your own service work, see *Servicing the Airbag-Equipped Vehicle* ⇔ 63.

Keep a record with all parts receipts and list the mileage and the date of any service work performed.

Caution

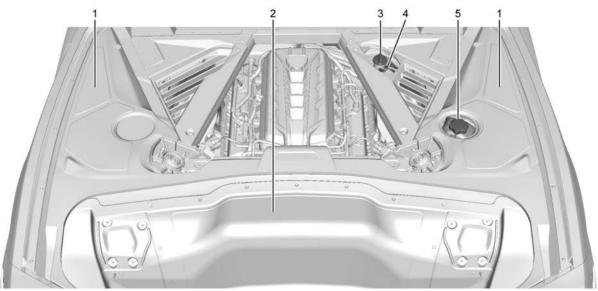
Even small amounts of contamination can cause damage to vehicle systems. Do not allow contaminants to contact the fluids, reservoir caps, or dipsticks.

Underhood Compartment Overview



- 1. Front Lift System Reservoir (under cover, if equipped). See Front Lift System ⇔ 216.
- 2. Battery (under cover, if equipped). See *Battery* ⇔ 261.
- 3. Brake Fluid Reservoir. See *Brake Fluid* ⇒ 260.
- 4. Windscreen Washer Fluid Reservoir. See *Washer Fluid* ⇔ 256.

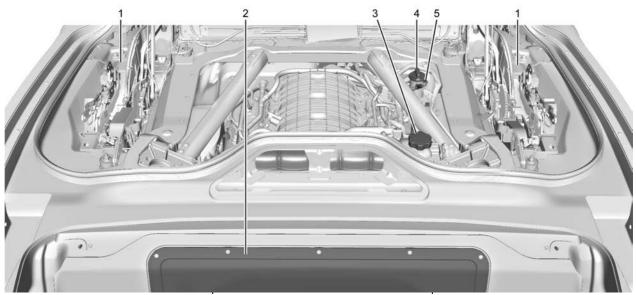
Engine Compartment Overview



LT2 6.2L V8 Engine (Stingray Coupe)

238 Vehicle Care

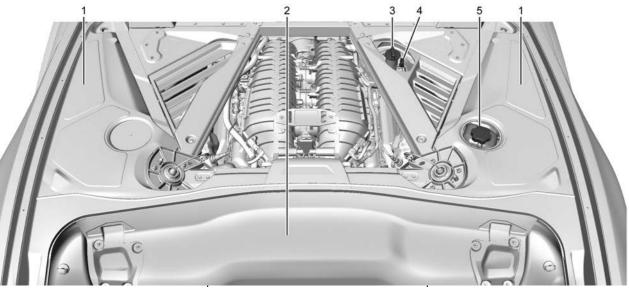
- 1. Engine Cooling Fan (Out of View). See *Cooling System* ⇔ 252.
- 2. Engine Air Cleaner/Filter (Under Access Panel). See Engine Air Cleaner/Filter ⇔ 251.
- 3. Dry Sump Engine Oil Tank and Fill Cap. See Engine Oil (5.5L LT6 Engine) ⇔ 241 or Engine Oil (6.2L LT2 Engine) ⇔ 245.
- 4. Engine Oil Dipstick. See Engine Oil (5.5L LT6 Engine) ⇔ 241 or Engine Oil (6.2L LT2 Engine) ⇔ 245.
- 5. Coolant Surge Tank and Pressure Cap. See *Cooling System* ⇔ 252.



- 1. Engine Cooling Fan (Out of View). See *Cooling System* ⇔ 252.
- 2. Engine Air Cleaner/Filter (Under Access Panel). See *Engine Air Cleaner/Filter* ⇔ 251.

LT2 6.2L V8 Engine (Stingray Convertible)

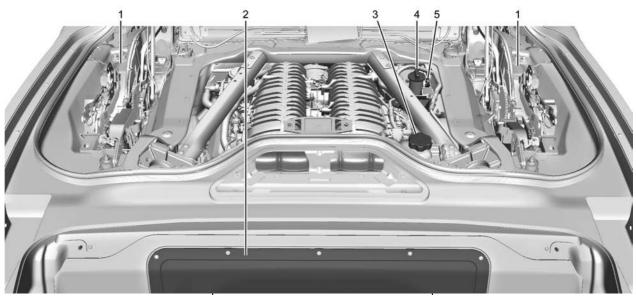
- 3. Coolant Surge Tank and Pressure Cap. See *Cooling System* ⇔ 252.
- 4. Dry Sump Engine Oil Tank and Fill Cap. See Engine Oil (5.5L LT6 Engine) ⇔ 241 or Engine Oil (6.2L LT2 Engine) ⇔ 245.
- 5. Engine Oil Dipstick. See Engine Oil (5.5L LT6 Engine) ⇔ 241 or Engine Oil (6.2L LT2 Engine) ⇔ 245.



- 1. Engine Cooling Fan (Out of View). See *Cooling System* ⇔ 252.
- 2. Engine Air Cleaner/Filter (Under Access Panel). See Engine Air Cleaner/Filter ⇔ 251.

LT6 5.5L V8 Engine (Z06 Coupe)

- 3. Dry Sump Engine Oil Tank and Fill Cap. See Engine Oil (5.5L LT6 Engine) ⇔ 241 or Engine Oil (6.2L LT2 Engine) ⇔ 245.
- 4. Engine Oil Dipstick. See Engine Oil (5.5L LT6 Engine) ⇔ 241 or Engine Oil (6.2L LT2 Engine) ⇔ 245.
- 5. Coolant Surge Tank and Pressure Cap. See *Cooling System* ⇔ 252.



- 1. Engine Cooling Fan (Out of View). See *Cooling System* ⇔ 252.
- 2. Engine Air Cleaner/Filter (Under Access Panel). See *Engine Air Cleaner/Filter* ⇔ 251.

LT6 5.5L V8 Engine (Z06 Convertible)

- 3. Dry Sump Engine Oil Tank and Fill Cap. See Engine Oil (5.5L LT6 Engine) ⇔ 241 or Engine Oil (6.2L LT2 Engine) ⇔ 245.
- 4. Engine Oil Dipstick. See Engine Oil (5.5L LT6 Engine) ⇔ 241 or Engine Oil (6.2L LT2 Engine) ⇔ 245.
- 5. Coolant Surge Tank and Pressure Cap. See *Cooling System* ⇔ 252.

Engine Oil (5.5L LT6 Engine)

To ensure proper engine performance and long life, pay careful attention to engine oil. Follow these important steps:

242 Vehicle Care

- Use engine oil approved to the proper specification and of the proper viscosity grade. See "Selecting the Right Engine Oil" later 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" later in this section.
- Change the engine oil at the appropriate time. See *Engine Oil Life System* ▷ 248.
- Always dispose of engine oil properly. See "What to Do with Used Oil" in this section.

Checking the Engine Oil



Engine Oil Dipstick
 Engine Oil Fill Cap

Check the engine oil level regularly, every 650 km (400 mi), especially prior to a long trip. To get an accurate reading, the vehicle must be parked on a level ground.

The engine oil dipstick handle is a loop. See *Engine Compartment Overview* \Rightarrow 237 for the location.

The vehicle has a racetrack-ready dry sump engine lubrication system. This high performance system operates differently than a standard engine lubrication system and requires a special procedure when checking the engine oil level. Follow this procedure closely.

The engine oil level must be checked when the engine is warm. Cold oil level in the dry sump tank may not indicate the actual amount of oil in the system. Engine oil is contained in an external tank, separate from the engine. Under normal operating conditions, the oil pan under the engine does not store any oil. If the vehicle has been parked for an extended period without the engine being started, some oil will seep back into the oil pan. This will reduce the amount of oil held in the dry sump tank and there could be no engine oil on the dipstick. This is normal since the dipstick is designed to read the engine oil level only after the engine has run long enough to reach normal operating temperature. Do not add engine oil based on cold engine dipstick readings. The engine oil level on the dipstick must be checked while the engine is running at idle.

To check the engine oil:

- 1. Turn the engine on and let it warm up to at least 80 $^\circ C$ (175 $^\circ F).$
- 2. Once the engine is warm, check the oil while the engine is running at idle.

\land Warning

The engine oil dipstick handle may be hot; it could burn you. Use a towel or glove to touch the dipstick handle.

- 3. Remove the dipstick and wipe it with a clean lint-free paper towel or a cloth. Re-insert the dipstick and push it all the way in until it stops.
- 4. Remove the dipstick again and read the level on the cross-hatched area. Re-insert the dipstick and push it all the way in until it stops.
- 5. Turn the engine off.

When to Add Engine Oil



If the oil is below the cross-hatched area at the tip of the dipstick, add 1 L (1 qt) of the recommended oil through the oil fill cap opening in the oil tank fill tube and then recheck the level. See "Selecting the Right Engine Oil" later in this section for the type of oil to use. For engine oil crankcase capacity, see *Capacities and Specifications* \Rightarrow 309.

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 the oil level is above the operating range (i.e. the engine has so much oil that the oil level rises above the cross-hatched area that shows the correct operating range), the engine could be damaged. Drain the excess oil or limit (Continued)

Caution (Continued)

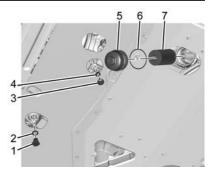
driving the vehicle, and seek help from a service professional to remove the excess oil.

See Engine Compartment Overview \Rightarrow 237 for the location of the external engine oil tank dipstick and fill cap.

Add enough oil to put the level somewhere in the proper operating range. Push the dipstick all the way back into the oil tank tube when finished.

Changing the Engine Oil and Filter

The vehicle requires a special procedure when changing the engine oil and filter. Follow this procedure closely.



- 1. Engine Oil Drain Plug
- 2. Drain Plug O-ring Seal
- 3. Engine Oil Drain Plug
- 4. Drain Plug O-ring Seal
- 5. Engine Oil Filter Cap
- 6. Engine Oil Filter Cap O-ring Seal
- 7. Engine Oil Filter Element

To change the engine oil and filter:

- 1. Run the engine at idle for about 20 seconds to return all of the oil back into the dry sump oil tank.
- 2. Turn the engine off prior to draining the oil and remove the oil fill cap so the oil tank can breathe while it's draining.

244 Vehicle Care

- 3. Remove the engine oil drain plug (1) from the bottom of the engine oil tank. Drain plug removal will let the oil drain from the external oil tank. Allow the oil to drain.
- 4. Inspect the drain plug O-ring seal (2) and replace if it is damaged. Reinstall the drain plug into the oil tank by rotating it to a stop.
- 5. Remove the engine oil drain plug (3) from the bottom of the engine crankcase. Drain plug removal will let the residual oil drain from crankcase sump. Allow the oil to drain.
- Inspect the drain plug O-ring seal (4) and replace if it is damaged. Reinstall the drain plug into the crankcase sump and tighten them to 25 N•m (18 lb ft).
- 7. Remove the engine oil filter cap (5) and filter (7) and allow the oil to drain.
- Install the engine oil filter cap (5) with a new engine oil filter cap seal ring (6) and the new oil filter element (7) and hand tighten. See *Maintenance Replacement Parts* ⇔ 306 for the correct filter.

Tighten the engine oil filter cap (5) to 25 N•m (18 lb ft).

- 9. Add oil to the oil tank through the opening in the oil tank. See *Capacities* and *Specifications* ⇔ 309.
- 10. Install the oil fill cap and insert the dipstick until fully seated to a stop, if removed.

\land Warning

To help avoid personal injury and/or engine damage, always install the engine oil dipstick and oil fill cap until fully seated to a stop. If not fully seated, oil could escape on to hot exhaust parts and cause a fire.

11. Start the engine and check the oil level as described under "Checking the Engine Oil." previously in this section.

Selecting the Right Engine Oil

Selecting the right engine oil depends on both the proper oil specification and the viscosity grade. See *Recommended Fluids* and Lubricants ⇔ 305.

Specification

Use engine oils that meet the dexosR Performance Engine Oil specification.



Engine oils that have been approved by GM as meeting the dexosR specification are marked with the dexosR approved logo. See www.gmdexos.com.

GM recommends Mobil 1 engine oils that show the dexosR 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 5W-50 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" previously in this section.

Engine Oil Additives/Engine Oil Flushes

Do not add anything to the oil. The recommended oils meeting the dexos specification are all that is needed for good performance and engine protection.

Engine oil system flushes are not recommended and could cause engine damage not covered by the vehicle warranty.

What to Do with Used Oil

Used engine oil contains certain elements that can be unhealthy for your skin and could even cause cancer. Do not let used oil stay on your skin for very long. Clean your skin and nails with soap and water, or a good hand cleaner. Wash or properly dispose of clothing or rags containing used engine oil. See the manufacturer's warnings about the use and disposal of oil products.

Used oil can be a threat to the environment. If you change your own oil, 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 (6.2L LT2 Engine)

To ensure proper engine performance and long life, pay careful attention to engine oil. Follow these important steps:

- Use engine oil approved to the proper specification and of the proper viscosity grade. See "Selecting the Right Engine Oil" later 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" later in this section.
- Change the engine oil at the appropriate time. See *Engine Oil Life System* ⇔ 248.
- Always dispose of engine oil properly. See "What to Do with Used Oil" in this section.

Checking the Engine Oil



- . Engine Oil Dipstick
- 2. Engine Oil Fill Cap

Check the engine oil level regularly, every 650 km (400 mi), especially prior to a long trip. To get an accurate reading, the vehicle must be parked on a level ground.

The engine oil dipstick handle is a loop. See *Engine Compartment Overview* \Rightarrow 237 for the location.

The vehicle has a racetrack-ready dry sump engine lubrication system. This high performance system operates differently than a standard engine lubrication system and requires a special procedure when checking the engine oil level. Follow this procedure closely.

The engine oil level must be checked when the engine is warm. Cold oil level in the dry sump tank may not indicate the actual amount of oil in the system. Engine oil is contained in an external tank, separate from the engine. Under normal operating conditions, the oil pan under the engine does not store any oil. If the vehicle has been parked for an extended period without the engine being started, some oil will seep back into the oil pan. This will reduce the amount of oil held in the dry sump tank

246 Vehicle Care

and there could be no engine oil on the dipstick. This is normal since the dipstick is designed to read the engine oil level only after the engine has run long enough to reach normal operating temperature. Do not add engine oil based on cold engine dipstick readings. The engine oil level on the dipstick must be checked while the engine is running at idle.

To check the engine oil:

- 1. Turn the engine on and let it warm up to at least 80 $^\circ C$ (175 $^\circ F).$
- 2. Once the engine is warm, check the oil while the engine is running at idle.

▲ Warning

The engine oil dipstick handle may be hot; it could burn you. Use a towel or glove to touch the dipstick handle.

- 3. Remove the dipstick and wipe it with a clean lint-free paper towel or a cloth. Re-insert the dipstick and push it all the way in until it stops.
- 4. Remove the dipstick again and read the level on the cross-hatched area. Re-insert the dipstick and push it all the way in until it stops.

5. Turn the engine off.

When to Add Engine Oil



If the oil is below the cross-hatched area at the tip of the dipstick, add 1 L (1 qt) of the recommended oil through the oil fill cap opening in the oil tank fill tube and then recheck the level. See "Selecting the Right Engine Oil" later in this section for the type of oil to use. For engine oil crankcase capacity, see *Capacities and Specifications* \Rightarrow 309.

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 the oil level is above the operating range (i.e. the engine has so much oil that the oil level rises above the cross-hatched area that shows the correct operating range), the engine could be (Continued)

Caution (Continued)

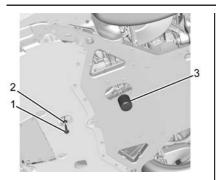
damaged. Drain the excess oil or limit driving the vehicle, and seek help from a service professional to remove the excess oil.

See Engine Compartment Overview \Rightarrow 237 for the location of the external engine oil tank dipstick and fill cap.

Add enough oil to put the level somewhere in the proper operating range. Push the dipstick all the way back into the oil tank tube when finished.

Changing the Engine Oil and Filter

The vehicle requires a special procedure when changing the engine oil and filter. Follow this procedure closely.



- 1. Engine Oil Drain Plug
- 2. O-ring Seal
- 3. Engine Oil Filter

To change the engine oil and filter:

- 1. Run the engine at idle for about 20 seconds to return all of the oil back into the dry sump oil tank.
- 2. Turn the engine off prior to draining the oil.
- 3. Remove the engine oil drain plug from the bottom of the engine oil pan. Drain plug removal will let the oil drain from the external oil tank and residual oil from the crankcase sump. Allow the oil to drain.

- 4. Remove the engine oil filter and allow the oil to drain.
- 5. Inspect the drain plug O-ring seal and replace if it is damaged. Reinstall the drain plug into the oil pan and tighten it to 25 N.m (18 lb ft).
- 6. Replace the oil filter and tighten it three-quarters to one turn after the gasket makes contact. See *Maintenance Replacement Parts* ⇔ *306* for the correct filter.
- 7. Remove the oil fill cap from the external engine oil tank.

Add oil to the oil tank through the opening in the fill tube. See *Capacities* and *Specifications* \Rightarrow 309.

8. Install the oil fill cap and insert the dipstick, if removed.

\land Warning

To help avoid personal injury and/or engine damage, always install the engine oil dipstick and oil fill cap until fully seated to a stop. If not fully seated, oil could escape on to hot exhaust parts and cause a fire. 9. Start the engine and check the oil level as described under "Checking the Engine Oil." previously in this section.

Selecting the Right Engine Oil

Selecting the right engine oil depends on both the proper oil specification and the viscosity grade. See *Recommended Fluids* and Lubricants ⇔ 305.

Specification

Use engine oils that meet the dexosR specification.



Engine oils that have been approved by GM as meeting the dexosR specification are marked with the dexosR approved logo. See www.gmdexos.com.

GM recommends Mobil 1 engine oils that show the dexosR 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-40 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" previously in this section.

Engine Oil Additives/Engine Oil Flushes

Do not add anything to the oil. The recommended oils meeting the dexos specification are all that is needed for good performance and engine protection.

Engine oil system flushes are not recommended and could cause engine damage not covered by the vehicle warranty.

What to Do with Used Oil

Used engine oil contains certain elements that can be unhealthy for your skin and could even cause cancer. Do not let used oil stay on your skin for very long. Clean your skin and nails with soap and water, or a good hand cleaner. Wash or properly dispose of clothing or rags containing used engine oil. See the manufacturer's warnings about the use and disposal of oil products.

Used oil can be a threat to the environment. If you change your own oil, 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 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.

This vehicle has a racetrack-ready dry sump engine lubrication system. This high performance system operates differently than a standard engine lubrication system and requires a special procedure when changing the engine oil and filter. See Engine Oil (5.5L LT6 Engine) ⇔ 241 or Engine Oil (6.2L LT2 Engine) ⇔ 245.

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 may not indicate that an oil change is necessary for up to a year. The engine oil and filter must be changed at least once a year and, at this time, the system must be reset. Your dealer has trained service people who will perform this work and reset the system. It is also important to check the oil regularly over the course of an oil drain interval and keep it at the proper level.

If the system is ever reset accidentally, the oil must be changed at 5 000 km (3,000 mi) since the last oil change. Remember to reset the oil life system whenever the oil is changed.

How to Reset the Engine Oil Life System

Reset the system whenever the engine oil is changed so that the system can calculate the next engine oil change. To reset the system:

- 1. Scroll through the DIC Info Pages menu until the remaining Engine Oil percentage is displayed. See Driver Information Centre (DIC) ⇔ 103.
- Press and hold the thumbwheel on the DIC while the Oil Life display is active. When prompted, confirm reset. The oil life will change to 100%.

If the CHANGE ENGINE OIL SOON message comes back on when the vehicle is started, the engine oil life system has not reset. Repeat the procedure.

Dual Clutch Transmission Fluid

How to Check Dual Clutch Transmission Fluid

It is not necessary to check the transmission fluid level. A transmission fluid leak is the only reason for fluid loss. If a leak occurs, take the vehicle to the dealer and have it repaired as soon as possible. The vehicle is not equipped with a transmission fluid level dipstick. There is a special procedure for checking and changing the transmission fluid. Because this procedure is difficult, this should be done at the dealer. Contact the dealer for additional information.

Caution

Use of the incorrect transmission fluid may damage the vehicle, and the damage may not be covered by the vehicle warranty. Always use the correct transmission fluid. See *Recommended Fluids and Lubricants* \Rightarrow 305.

Change the fluid and external canister filter at the proper intervals. See *Maintenance Schedule* \Rightarrow 301. Be sure to use the correct fluid. See *Recommended Fluids and Lubricants* \Rightarrow 305.

Dual Clutch Transmission Fluid Life System

When to Change the Dual Clutch Transmission Fluid

This vehicle has a computer that indicates when to change the transmission fluid. This is based on a combination of factors which include temperature and miles driven. Based on driving conditions, the mileage at which a fluid change is indicated can varu considerably. For the fluid life system to work properly, the system must be reset every time the fluid is changed. When the system has calculated that fluid life has been diminished, it indicates that a fluid change is necessary. A CHANGE TRANSMISSION FLUID SOON message comes on. Change the fluid as soon as possible within the next 1 000 km (600 mi). Failure to change transmission fluid at required intervals could lead to suboptimal transmission performance. Your dealer has trained service technicians who will change the fluid and reset the system. If the system is ever reset accidentally, the fluid must be changed 72,000 km (45,000 mi) after the last fluid change.

When to Replace the Dual Clutch Gearbox Fluid Filter

This vehicle has a computer that indicates when to change the gearbox external canister fluid filter. This is based on the number of miles driven as outlined in the Service and Maintenance section. For the fluid filter life system to work properly, the system must be reset every time the filter is replaced. When the system has calculated that the external canister filter is near the mileage interval, a REPLACE GEARBOX OIL FILTER SOON message comes on. Replace the external canister filter before the indicator reaches 0%.

Failure to replace the gearbox filter at required intervals could lead to suboptimal gearbox performance. Your retailer has trained service technicians who will replace the external canister filter and reset the system. If the system is ever reset accidentally, the filter should be replaced according to the service intervals indicated in the Service and Maintenance section until the next filter change. If the next filter change is the first, follow the service interval until the second filter change, resetting the filter life system at each filter change.

How to Reset the Dual Clutch Gearbox Fluid and Filter Life System

Reset the respective system whenever the gearbox fluid or external canister filter is replaced so that the system can calculate the next service interval.

To reset:

- 1. Place the vehicle in P (Park).
- 2. Select Gearbox Fluid Life or Gearbox Oil Filter Life on the DIC menu. See *Driver Information Centre (DIC)* ⇔ 103.
- 3. Press the thumbwheel to move to the Reset submenu. Select Reset Gearbox Fluid or Reset Gearbox Oil Filter. A confirmation page will be displayed, press the thumbwheel again to confirm the reset.
- 4. When the Gearbox Fluid/Filter Life System is successfully reset, 100% remaining life will be displayed.

Engine Air Filter Life System

If equipped, this feature provides the engine air filter's remaining life and best timing for a change. The timing to change an engine air filter depends on driving and environmental conditions.

When to Change Engine Air Filter

When the Driver Information Centre (DIC) displays a message to replace the engine air filter at the next oil change, follow this timing.

When the DIC displays a message to replace the engine air filter soon, replace the engine air filter at the earliest convenience.

The system must be reset after the engine air filter has been changed.

If the DIC displays a message to check the engine air filter system, see your dealer.

How to Reset Engine Air Filter Life System

Reset the system whenever the engine air filter is replaced so that the system can calculate the next engine air filter change.

To reset:

- 1. Place the vehicle in P (Park).
- 2. Display the Air Filter Life on the DIC. See Driver Information Centre (DIC) ⇔ 103.
- 3. Press the thumbwheel on the steering wheel to move to the Reset/Disable display area. Select Reset and press the thumbwheel for several seconds.
- 4. Press the thumbwheel to confirm reset.

Engine Air Cleaner/Filter

See Engine Compartment Overview \Rightarrow 237 for the location of the engine air cleaner/filter.

Caution

If water is sprayed and enters the engine air cleaner/filter intake and housing, the engine could be damaged. The repairs would not be covered by the vehicle warranty.

When to Inspect the Engine Air Cleaner/Filter

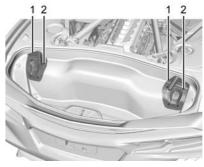
For intervals on changing and inspecting the engine air cleaner/filter, see *Maintenance Schedule* ⇔ *301*.

How to Inspect/Replace the Engine Air Cleaner/Filter

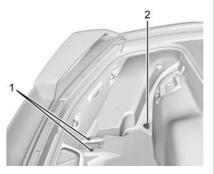
Do not start the engine or have the engine running with the engine air cleaner/filter housing open. Before removing the engine air cleaner/filter, make sure that the engine air cleaner/filter housing and nearby components are free of dirt and debris. Do not clean the engine air cleaner/filter or components with water or compressed air.

To inspect or replace the air cleaner/filter:

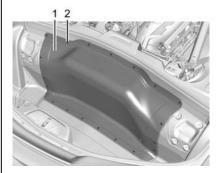
1. Remove the convenience net, if equipped.



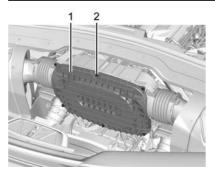
2. Remove the four lift off bracket bolts (2) to remove the brackets (1).



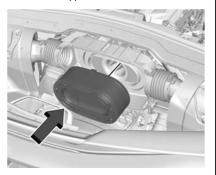
- 3. Remove the convenience net hooks (2) and plastic retainers (1).
- 4. Remove the carpet.



5. Remove the rear compartment access panel screws (2) and panel (1).



6. Remove the air cleaner cover screws (2) and cover (1).





 Remove the air cleaner/filter(s) (top image LT2 engine) (bottom image LT6 engine).

⚠ Warning

If part replacement is necessary, the part must be replaced with one of the same part number or with an equivalent part. Use of a replacement part without the same fit, form, and function may result in personal injury or damage to the vehicle.

- 8. Inspect or replace the air cleaner/filter.
- 9. Reverse Steps 2–7 to replace the air cleaner/filter.

\land Warning

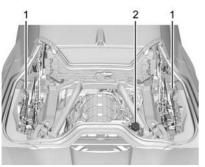
Operating the engine with the air cleaner/filter off can cause you or others to be burned. Use caution when working on the engine. Do not start the engine or drive the vehicle with the air cleaner/ filter off, as flames may be present if the engine backfires.

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.

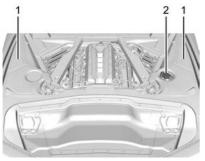
Cooling System

The cooling system allows the engine to maintain the correct working temperature.



Convertible

- 1. Engine Cooling Fans (Out of View)
- 2. Coolant Surge Tank with Pressure Cap



1. Engine Cooling Fans (Out of View)

2. Coolant Surge Tank with Pressure Cap

\land Warning

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.

\land 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. See *Recommended Fluids and Lubricants* \Rightarrow 305. The fluid requires changing at certain intervals. See *Maintenance Schedule* \Rightarrow 301. 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 255.

What to Use

\land 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 mixture of 40% DEX-COOL coolant and 60% clean, drinkable water. If using this mixture, nothing else needs to be added. This mixture:

- Gives freezing protection down to -28 °C (-18 °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.

Coupe

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 refuse, 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.

If ambient temperatures are anticipated below -28 $^{\circ}$ C (-18 $^{\circ}$ F), make sure a proper mixture ratio of 50% DEX-COOL coolant and 50% clean, drinkable water is used.

Checking Coolant

Be sure the cooling system is cool and that the vehicle is on a level surface.

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 cold fill line, add a mixture of 40% DEX-COOL coolant and 60% clean, drinkable water at the coolant recovery tank, but be sure the cooling system is cool before this is done. See *Engine Overheating* \Rightarrow 255.

The surge tank is in the engine compartment. See *Engine Compartment Overview* ⇔ 237.



When the engine is cold, the coolant level should be at the COLD FILL indicator in the coolant surge tank.

When the engine is hot, the level could be higher than the COLD FILL indicator. If the coolant is below the COLD FILL indicator when the engine is hot, there could be a leak in the cooling system.

If the coolant is low, add the coolant or take the vehicle to your dealer for service.

How to Add Coolant to the Coolant Surge Tank

\land Warning

Spilling coolant on hot engine parts can burn you. Coolant contains ethylene glycol and it will burn if the engine parts are hot enough.

\land 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 coolant is needed, be sure the cooling system is cool, then add the proper DEX-COOL coolant mixture directly to the surge tank.

1. Open the Hatch/Trunk. See *Hatch (Boot)* ⇔ 20.



 When the cooling system, including the coolant surge tank pressure cap and engine, is no longer hot, remove the pressure cap.

Turn the pressure cap slowly anticlockwise about one-quarter turn and then stop.

If a hiss is heard, wait for that to stop. A hiss means there is still some pressure left.

3. Keep turning the pressure cap slowly and remove it.



- 4. Fill the coolant surge tank with the proper mixture until the level inside stabilizes at the COLD FILL indicator in the surge tank.
- 5. With the coolant surge tank pressure cap off, start the engine and let it run until the engine is hot.

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 stabilizes at the COLD FILL indicator in the coolant surge tank.

6. 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 3–7.

If the coolant still is not at the proper level when the system cools down again, see your dealer.

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

The vehicle has several indicators to warn of engine overheating.

There is an engine coolant temperature gauge on the instrument cluster. See *Engine Coolant Temperature Gauge* \Rightarrow 93. The vehicle may also display a message on the Driver Information Centre (DIC).

If the decision is made not to lift the hatch but to get service help right away. See your dealer.

If the decision is made to lift the hatch, make sure the vehicle is parked on a level surface. Then check to see if the engine

cooling fans are running. There are two cooling fans located in the front (one at each corner) and two cooling fans in the rear (one on each side of the engine). 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.

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.

If Steam Is Coming from the Engine

▲ 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 Steam Is Coming from the Engine Compartment with no Overheat Warning

Water from rain and car washes could enter the engine compartment and contact hot surfaces. If steam is coming from the engine compartment with no accompanying overheat warning, no service is needed.

If No Steam Is Coming from the Engine

If an engine overheat warning is displayed but no steam can be seen or heard, the problem may not be too serious. Sometimes the engine can get a little too hot when the vehicle:

- Climbs a long hill on a hot day.
- Stops after high-speed driving.
- Idles for long periods in traffic.

If the overheat warning is displayed with no sign of steam:

- 1. Turn the air conditioning off.
- 2. Turn the heater on to the highest temperature and to the highest fan speed. Open the windows as necessary.
- 3. When it is safe to do so, pull off the road, shift to P (Park) or N (Neutral), and let the engine idle.

If the engine coolant temperature gauge is no longer in the shaded area 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 safely, and park the vehicle right away. Have the vehicle serviced.

If there is no sign of steam, idle the engine for three minutes while parked. If the warning is still displayed, turn off the engine until it cools down.

Washer Fluid

What to Use

When the vehicle needs windscreen washer fluid, be sure to read the manufacturer instructions before use. If the vehicle will be operating in an area where the temperature may fall below freezing, use a fluid that has sufficient protection against freezing.

Adding Washer Fluid

1. Open the bonnet. See *Bonnet* \Rightarrow 18.



2. Open the cap with the washer symbol on it. Add washer fluid until the tank is full.

Caution

- Do not use washer fluid that contains any type of water repellent coating. This can cause the wiper blades to chatter or skip.
- Do not use engine coolant (antifreeze) in the 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.

(Continued)

Caution (Continued)

- When using concentrated washer fluid, follow the manufacturer instructions for adding water.
- Fill the washer fluid tank only three-quarters full when it is very cold. This allows for fluid expansion if freezing occurs, which could damage the tank if it is completely full.

Brakes

Disc brake linings have built-in wear indicators that make a high-pitched warning sound when the brake linings are worn and new linings 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.

\land Warning

The brake wear warning sound means that soon the brakes will not work well. That could lead to a crash. When the brake wear warning sound is heard, have the vehicle serviced. Caution

Continuing to drive with worn-out brake linings could result in expensive brake repairs.

Properly torqued wheel nuts are necessary to help prevent brake pulsation. When tyres are rotated, inspect the brake linings for wear and evenly tighten wheel nuts in the correct sequence to torque specifications. See *Capacities and Specifications* \Rightarrow 309.

Brake linings should be replaced as complete axle sets.

Brake Squeal and Brake Dust

Some driving conditions or climates can cause a brake squeal when the brakes are first applied. To resolve this, several of the following apply. This does not mean something is wrong with the brakes.

Vehicles equipped with high performance brake systems provide superior fade resistance but will produce increased brake squeal and brake dust on the wheels and calipers as compared to standard brake linings. This is normal. To help reduce squeal, the brake pads are treated with an anti-squeal paste that may need to be reapplied periodically as part of normal vehicle maintenance. The anti-squeal paste will dissipate over time. Also, the use of wheel cleaners or power washers directly on the brake calipers may remove the anti-squeal paste from the brake pads. It may be necessary to reapply the anti-squeal paste if it is removed during cleaning.

If brake squeal is excessive, the anti-squeal paste should be reapplied. The anti-squeal paste should always be reapplied whenever the brake pads are removed or replaced. See your dealer for service.

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 can change in many ways if the wrong brake parts are installed or if parts are improperly installed.

The Brake Fade Warning Assist system is designed for use with the factory-installed brake pads or GM-approved replacement pads. If the brake pads on the vehicle need to be replaced, use GM-approved brake pads. If this is not done, the brake fade warning system may not function properly.

High Performance Brake Lining Car Wash and Extended Parking Care

If equipped with high performance brake components, binding or clunking may be noticeable after extended parking or in cold weather when the brakes have been wet, such as when driving in the rain or after a car wash. The clunking is normal for brakes with high performance brake linings and does not affect the operation of the brakes. When driving, normal braking will allow for the brakes to feel smooth and the clunking to go away. If the vehicle is washed before overnight parking or long term storage, drive it and apply the brakes

Brake Disc Wear (Z06/Z07 with J57 Carbon Ceramic Discs)

Vehicles with J57 have carbon ceramic brake discs. The discs should be visually inspected whenever the brake pads are replaced. Carbon ceramic brake discs also need to be weighed before brake pads are replaced to confirm that the disc mass is greater than the wear-out mass printed on the disc. The rotor can be reused if the weight of the rotor is above the mass limit. Carbon ceramic brake discs inspection and weighing methods can be found in the service manual.

Z51/Z06 Cast Iron Disc System Brake Burnish Procedure for Corrosion Cleanup

Corrosion spotting and grooving on the brake rotor surface may appear after the vehicle sits for an extended period of time, especially in high humidity. This corrosion may result in brake pulsation and noise. To help restore optimal braking performance and reduce noise, complete the following procedure:

Caution

Performing the brake burnish procedure on a base brake system can result in brake damage.

Perform this procedure only on dry pavement, in a safe manner, and in compliance with all local and state ordinances/laws regarding motor vehicle operation.

Caution

The new vehicle running-in period should be completed before performing the brake burnishing procedure or damage may occur to the powertrain/engine. See New Vehicle Run-In \Rightarrow 191.

Caution

Brake fade can occur during this burnish procedure and can cause brake pedal travel and force to increase. This could extend stopping distance until the brakes are fully burnished.

Completing the following procedure as instructed will not damage the brakes. The brake pads may smoke and produce an

odor. The braking force and pedal travel may increase. After the procedure, the brake pads may appear white at the rotor contact.

- 1. Using the Friction Bubble gauge, apply the brakes 10 times starting at 100 km/h (60 mph) to 50 km/h (30 mph) while decelerating at 0.4g. This is a medium brake application. Drive for at lest 0.5 km (0.3 mi) between applying the brakes.
- 2. If further cleanup of the brake discs is needed, repeat this procedure with 0.7g applications.

As with all high performance brake systems, some amount of brake squeal is normal.

Brake Pad Life System (If Equipped)

When to Change Brake Pads

If equipped, this system estimates the remaining life of the front and rear brake pads. Brake Pad Life is displayed in the Driver Information Centre (DIC), along with a percentage for each axle. The system must be reset every time the brake pads are changed. When the system has determined that the brake pads need to be replaced, a message displays, which may include mileage remaining.

Brake pads should always be replaced as complete axle sets.

How to Reset the Brake Pad Life System

The system will automatically detect when significantly worn brake pads are replaced. When the ignition is turned on after new pads and wear sensors are installed, a message will display. Follow the prompts to reset the system.

The brake pad life system can also be manually reset:

- 1. Display Brake Pad Life on the DIC. See Driver Information Centre (DIC) ⇒ 103.
- 2. Select the Brake Pad Life menu.
- 3. Select front or rear pads as appropriate.
- 4. Select YES on the confirmation message. Repeat for the pads on the other axle if they were also replaced.

How to Disable the Brake Pad Life System

The brake pad life system can be turned off. This may be necessary if aftermarket brake pads without wear sensors are installed. When the system is turned off, the front and rear brake pad life percentages will not display. However, the built-in wear indicators that make a high-pitched warning sound when the brake pads are worn can still determine when the pads should be replaced. See *Brakes* \Leftrightarrow 257.

To turn off the brake pad life system:

- 1. Display Brake Pad Life on the DIC. See Driver Information Centre (DIC) ⇒ 103.
- 2. Select the Brake Pad Life menu.
- 3. Select DISABLE.

To turn the brake pad life system back on, follow the above steps but select ENABLE in Step 2.

Electronic Brake Pad Sensor System (ZO6/ZO7 with J57 Carbon Ceramic Brake Discs)

The brake pads have electronic brake pad wear sensors, when the brake pads need to be replaced, a message displays in the Driver Information Centre (DIC) which says "Service Brakes Worn".

When the message displays, install new brake pads and brake pad wear sensors on the vehicle.

When the ignition is turned on after new brake pads and brake pad wear sensors are installed, the message should no longer display.

The brake pad sensor system can only be reset by replacing the brake pads and brake pad wear sensors.

Brake Fluid



The brake master cylinder reservoir is filled with GM approved DOT 4 brake fluid as indicated on the reservoir cap. See Underhood Compartment Overview \Rightarrow 236 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.

Caution

If too much brake fluid is added, the brake fluid can spill and cause vehicle damage, including damage to electrical components and surfaces. Add brake fluid only when work is done on the brake hydraulic system.

When the brake fluid falls to a low level, the brake warning light comes on. See *Brake System Warning Light* \Rightarrow *98*.

Brake fluid absorbs water over time which degrades the effectiveness of the brake fluid. Replace brake fluid at the specified intervals to prevent increased stopping distance. See *Maintenance Schedule* \Rightarrow 301.

What to Add

Use only GM approved DOT 4 brake fluid from a clean, sealed container. See *Recommended Fluids and Lubricants* \Rightarrow 305.

A 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. For battery replacement, see your dealer.



\land 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.

\land 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.

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.

See "Window Indexing" under Power Windows ⇔ 29.

Extended Storage: Remove the black, negative (-) cable from the battery. All vehicle memory settings will need to be reset when battery power is restored.

Park Brake and P (Park) Mechanism Check

\land 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.

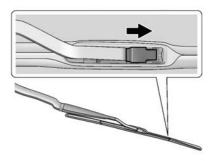
Wiper Blade Replacement

Windscreen wiper blades should be inspected for wear and cracking.

Replacement blades come in different types and are removed in different ways. For proper type and length, see *Maintenance Replacement Parts* ⇔ 306.

To replace the windscreen wiper blade:

1. Pull the windscreen wiper assembly away from the windscreen.



2. Lift up on the latch in the middle of the wiper blade where the wiper arm attaches.

- 3. 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.

Windscreen Replacement

HUD System

The windscreen is part of the HUD system. If the windscreen needs to be replaced, make sure you get one that is designed for HUD or the HUD image may look out of focus.

Driver Assistance Systems

If the windshield needs to be replaced and the vehicle is equipped with a front camera sensor for the Driver Assistance Systems, a GM replacement windshield is recommended. The replacement windshield must be installed according to GM specifications for proper alignment. If it is not, these systems may not work properly, they may display messages, or they may not work at all. See your dealer for proper windshield replacement.

Acoustic Windscreen

The vehicle is equipped with an acoustic windscreen. If the windscreen needs to be replaced be sure to get an acoustic windscreen so you will continue to have the benefits an acoustic windscreen can provide.

Gas Strut(s)

Your vehicle may be equipped with gas strut(s) to provide assistance in lifting and holding open the bonnet/trunk/tailgate system in the fully open position.

\land 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.

See Maintenance Schedule ⇒ 301.



Bonnet



Boot



Tailgate

Headlamp Aiming

Front Headlight 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

LED Lighting

This vehicle has all LED lamps. For replacement of any LED lighting assembly, contact your dealer.

Electrical System

Electrical System Overload

The vehicle has fuses to protect against an electrical system overload.

When the current electrical load is too heavy, the circuit breaker opens and closes, protecting the circuit until the current load returns to normal or the problem is fixed. This greatly reduces the chance of circuit overload and fire caused by electrical problems.

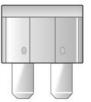
Fuses protect the wires that provide the power to the devices in your vehicle.

If there is a problem on the road and a fuse needs to be replaced, the same amperage fuse can be borrowed. Choose some feature of the vehicle that is not needed to use and replace it as soon as possible.

To check a fuse, look at the band inside the fuse. If the band is broken or melted, replace the fuse. Be sure to replace a bad fuse with a fuse of the identical size and rating.











Replacing a Blown Fuse

At the next opportunity, see your dealer to replace the blown fuse.

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.

\land 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.



\land Warning

Installation or use of fuses that do not meet GM's original fuse specifications is dangerous. The fuses could fail, and result in a fire. You or others could be injured or killed, and the vehicle could be damaged.

See Accessories and Modifications \Rightarrow 234 and General Information \Rightarrow 234.

To check or replace a blown fuse, see *Electrical System Overload* ⇔ 264.

Instrument Panel Fuse Block

The instrument panel fuse block is behind the glove box. The glove box can be accessed by unlatching the door damper and squeezing the pivot to release the damper ring. Pull the glove box bin side walls in to release the door stops. Then turn the door until the hinge hooks release from hinge pin.



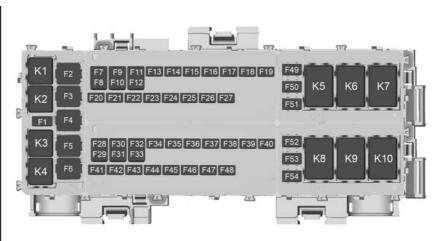
To Access:

- 1. Open the top cover.
- 2. Remove the top cover by pushing inward on the latch.
- 3. Pull the cover upward.

To Install:

- 1. Insert the tabs on the back of the cover into the slots in the instrument panel.
- 2. Align the clip with the slots in the instrument panel.
- 3. Press the cover into place.

See your dealer if additional assistance is needed.



The vehicle may not be equipped with all of the fuses and relays shown.

Fuses	Usage
F1	-
F2	Front Wiper
F3	Cooling Fan 1
F4	-
F5	Cooling Fan 2
F6	Front Blower

Fuses	Usage
F7	Automatic Level Control
F8	Shifter Interface Board Module
F9	Display IP Cluster/HVAC/ Center Stack Module
F10	-
F11	USB
F12	-

Fuses	Usage	Fuses	Usage	Fuses	Usage
F13		F29	-	F44	Exterior Lighting Module 2
F14 F15	Glove Box -	F30	Sensing and Diagnostic Module/Automatic Occupant Sensing	F45	Power Steering Column Module
F16	-	F31	Body Control Module 1	F46	Body Control Module 3
F17 F18	Remote Function Actuator Front Trunk Release	F32 F33	- Data Link Connection/	F47	Exterior Lighting Module 5
F19	Intelligent Battery Sensor	155	Wireless Charging Module	F48	Exterior Lighting
F20	Exterior Lighting Module 1	F34	Telematics/Head Up Display	F49	Module 7 Body Control Module 4
F21	Exterior Lighting	F35	Horn	F50	Front Auxiliary Power
	Module 3	F36	-		Outlet
F22	Exterior Lighting Module 4	F37		F51	-
F23	Body Control Module 2	F38	Front Wash Pump	F52	Steering Wheel Control Switch
F24	Exterior Lighting Module 6	F39	Rear Auxiliary Power Outlet	F53	Heated Steering Wheel
F25	Amplifier	F40	Performance Data Recorder/Center Stack	F54	-
F26	Automatic Occupant		Module	Relays	Usage
	Sensing/Electric Park Brake	F41	-	К1	
F27	Video Processing Module	F42	Theft Deterrent	K2	Glove Box Relay
F28	Right Headlamp	F43	Left Headlamp	К3	Horn Relay

Relays	Usage
K4	Front Wash Relay
K5	Retained Accessory Power/Accessory Relay
K6	Front Trunk Release Relay 1
K7	-
K8	-
K9	Front Trunk Release Relay 2
К10	Wiper Relay

Rear Compartment Fuse Block

The rear compartment fuse block is in the rear of the vehicle in between the seats.



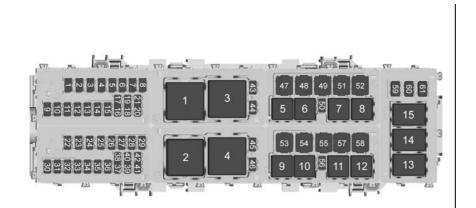
To Access:

- 1. Open top cover.
- 2. Remove the top cover by pushing inward on the latch.
- 3. Pull the cover upward.

To Install:

- 1. Insert the tabs on the back of the cover into the slots in the rear compartment.
- 2. Align the clip with the slots in the instrument panel.
- 3. Press the cover into place.

See your dealer if additional assistance is needed.



The vehicle may not be equipped with all of the fuses, relays, and features shown.

Fuses	Usage
1	Driver Memory Seat Module/Power Seat
2	Driver Heated Seat
3	Passenger Memory Seat Module/Power Seat
4	Passenger Heated Seat

Fuses	Usage
5	Transmission Control Module
6	-
7	Power Sounder Module/ Pedestrian Friendly Alert Function
8	Side Blind Zone Alert/ Rear Park Assist
9	-

Fuses	Usage
10	Engine Control Module/ Air Conditioning
11	-
12	Lithium Ion Battery Module
13	Active Fuel Management
14	Seat Fan
15	-
16	Exterior Lighting Module
17	Instrument Panel Cluster/Shifter Interface Board/Transmission Control Module/ Electronic Brake Control Module
18	Engine Control Module
19	-
20	Sensing and Diagnostic Module/Inside Rear View Mirror
21	Exhaust Valve Solenoid

Fuses	Usage	Fuses	Usage	Fuses	Usage
22	Fuel Pump/Fuel Tank	36		53	Starter Solenoid
	Zone Module	37	Canister Vent	54	Auxiliary Cooling
23	Tonneau Left	38	Latch Control Module		Fan Left
24	Tonneau Right	39	Right Window Switch/	55	Automatic Leveling
25	Convertible Top Right		Door Lock	54	Control
26	Convertible Top Left	40	Left Window Switch/	56	•
27	Electronic Suspension		Door Lock	57	Rear Window Demister
	Control	41	-	58	-
28	-	42	Engine Control	59	Left/Right Window
29	CGM		Module 2	60	Passenger Power Seat
30	O2 Sensor	43	-	61	Driver Power Seat
31	O2 Sensor/Engine Oil/	44	Air Conditioning Clutch		
	Canister Purge/Active	45	-	Relays	Usage
~~	Fuel Management	46	-	1	-
32	Ignition Even	47	-	2	Powertrain Relay
33	Ignition Odd	48	-	3	Run/Crank Relay
34	Engine Control Module 1	49	Auxiliary Cooling Fan	4	Rear Defogger Relay
25			Right	5	Air Conditioning Clutch
35	Engine Control Module/ Mass Air Flow Sensor/	50	-		Relay
	O2 Sensor/Air	51	-	6	-
	Conditioning	52		7	-

Relays	Usage
8	-
9	-
10	-
11	-
12	-
13	-
14	Starter Solenoid Relay
15	-

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.

A 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 ⇔ 189.
- 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 your dealer or an authorised tyre service centre should repair, replace, remove, and reinstall 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 ⇔ 275 for inflation pressure adjustment for high-speed driving.

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* ⇔ 281.

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.

Run-Flat Tyres

This vehicle, when new, may have had run-flat tyres. There is no spare tyre, no tyre changing equipment and no place to store a tyre in the vehicle. \land Warning

While driving with run-flat tires at a reduced inflation pressure, avoid making sudden stops or severe maneuvers as the handling capabilities of the tires will be reduced. Driving too fast could cause loss of control and you or others could be injured. Do not drive over 80 km/h (50 mph) with the tire operating at low pressure. Drive cautiously and check the tire pressure as soon as possible.

Run-flat tires can be driven up to 80 km (50 mi) at speeds less than 80 km/h (50 mph) after a loss of inflation pressure has occurred. There is no need to stop on the side of the road to change the tyre. The possible driving range after a pressure loss will vary based on the vehicle load and driving conditions. As soon as possible, contact the nearest authorised GM or run-flat servicing facility for inspection and repair or replacement.

When driving on a deflated run-flat tyre, avoid potholes and other road hazards that could damage the tyre and/or wheel beyond repair. When a tyre has been damaged, or if driven any distance while deflated, check with an authorised run-flat tyre service centre to determine whether the tyre can be repaired or should be replaced. To maintain the run-flat feature, all replacement tyres must be run-flat tyres.

To locate the nearest GM or run-flat servicing facility, call Customer Assistance.

Low-Profile Tyres

If the vehicle has 245/35ZR19, 305/ 30ZR20, 275/30ZR20, or 345/25ZR21 size tyres, they are classified as low-profile tyres.

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.

Competition Oriented Tires

This vehicle may come with 275/30ZR20 and 345/25ZR21, Michelin Pilot Sport Cup 2 R ZP, competition oriented tures that are DOT approved for street use. Competition oriented tires use a special tread pattern and compound that provide more grip than normal road tires. The minimum tread depth will be reached earlier than typical tyres, resulting in reduced tyre life. This special tread pattern and compound will have decreased performance in cold climates, heavy rain, and standing water. It is recommended that winter tires be installed on the vehicle when driving at temperatures below approximately 10 °C (50 °F) or on ice or snow covered roads.

M Warning

Driving on wet roads, in heavy rain, or through standing water with competition oriented tires may cause hydroplaning and loss of control. Use extreme caution and drive slowly on wet roads.

A Warning

Driving with competition-oriented tyres on snow, ice or cold road surfaces can cause loss of control or a crash. Competition oriented tires are summer season tires and are not intended to be driven on snow, ice, or road surfaces below 10 °C (50 °F). Do not drive a vehicle with competition oriented tires in these conditions.

Caution

Competition oriented tires have rubber compounds that lose flexibility and may develop surface cracks in the tread area at temperatures below -7 °C (20 °F). Always store competition oriented tires indoors and at temperatures above -7 °C (20 °F) when not in use. If the tires have been subjected to -7 °C (20 °F) or less, let them warm up in a heated space to at least 10 °C (50 °F) for 24 hours or more before being installed or driving a vehicle on which they are installed. Do not apply (Continued)

Caution (Continued)

heat or blow heated air directly on the tyres. Always inspect tyres before use. See *Tyre Inspection* \Rightarrow 279.

Summer Tyres

High Performance Summer Tyres

This vehicle may come with 245/35ZR19 and 305/30ZR20 Michelin Pilot Sport 4 S ZP or 275/30ZR20 and 345/25ZR21 Michelin Pilot Sport 4 S ZP high performance summer tyres. These tyres have a special tread and compound that are optimised for maximum dry and wet road performance. This special tread and compound will have decreased performance in cold climates, and on ice and snow. It is recommended that winter tyres be installed on the vehicle if frequent driving at temperatures below approximately 5 °C (40 °F) or on ice or snow covered roads is expected. See *Winter Tyres* \Rightarrow 271.

Caution

High performance summer tires have rubber compounds that lose flexibility and may develop surface cracks in the (Continued)

Caution (Continued)

tread area at temperatures below -7 °C (20 °F). Always store high performance summer tires indoors and at temperatures above -7 °C (20 °F) when not in use. If the tires have been subjected to -7 °C (20 °F) or less, let them warm up in a heated space to at least 5 °C (40 °F) for 24 hours or more before being installed or driving a vehicle on which they are installed. Do not apply heat or blow heated air directly on the tyres. Always inspect tyres before use. See *Tyre Inspection* \Leftrightarrow 279.

Tyre Pressure

Tyres need the correct amount of air pressure to operate effectively.

\land Warning

Neither tyre underinflation nor overinflation is good. Underinflated tyres, or tyres that do not have enough air, can result in:

(Continued)

Warning (Continued)

- Tyre overloading and overheating, which could lead to a blowout
- Premature or irregular wear
- Poor handling
- Reduced fuel economy for internal combustion engine vehicles
- Reduced range for electric vehicles

Overinflated tyres, or tyres that have too much air, can result in:

- Unusual wear
- Poor handling
- 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. See *Vehicle Load Limits* ⇔ 189.

How the vehicle is loaded affects vehicle handling and ride comfort. Never load the vehicle with more weight than it was designed to carry.

When to Check

Check the pressure of the tyres once a month or more.

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.

Recheck the tyre pressure with the tyre gauge.

Refit the valve caps on the valve stems to keep out dirt and moisture. Use only valve caps designed for the vehicle by GM. TPMS sensors could be damaged and would not be covered by the vehicle warranty.

Tyre Pressure for High-Speed Operation

▲ Warning

Driving at high speeds, 225 km/h (140 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. Vehicles with tyre sizes listed in the High Speed Operation Inflation Pressures table require inflation pressure adjustment when driving the vehicle at speeds of 160 km/h (100 mph) or higher. Set the cold tyre inflation pressure to the corresponding value in the table for the tyre size on the vehicle.

High Speed Operation Inflation Pressures		
Tyre Size	Cold Inflation Pressure kPa (psi)	
245/35ZR19	260 kPa (38 psi)	
305/30ZR20	260 kPa (38 psi)	
275/30ZR20	260 kPa (38 psi)	
345/25ZR21	290 kPa (42 psi)	

See Track Events and Competitive Driving ⇒ 176 for track use.

Return the tyres to the recommended cold tyre inflation pressure when high-speed driving has ended. See Vehicle Load Limits ⇔ 189 and Ture Pressure ⇔ 274.

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 energy 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 ⇔ 277 for additional information.

See Declaration of Conformity \Rightarrow 312.

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* \Rightarrow 189.

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)* \Rightarrow 103.

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* \Rightarrow 189 for an example of the Tyre and Loading Information label and its location. Also see *Tyre Pressure* \Rightarrow 274.

The TPMS can warn about a low tyre pressure condition but it does not replace normal tyre maintenance. See *Tyre Inspection* \Rightarrow *279, Tyre Rotation* \Rightarrow *280,* and *Tyres* \Rightarrow *271.*

Caution

Tyre sealant materials are not all the same. A non-approved tyre sealant could damage the TPMS 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 ⇔ 281.
- 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.
- 2. Apply the parking brake firmly.
- 3. Place the vehicle in P (Park).
- 4. 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.

\land Warning

Overinflating a tyre could cause the tyre to rupture and you or others could be injured. Do not exceed the maximum pressure listed on the tyre sidewall.

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 several 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 — Auto Learn Function

Each TPMS sensor has a unique identification code. The identification code needs to be matched to a new tyre/wheel position after rotating the tyres or replacing one or more of the TPMS sensors. When a tyre is installed, the vehicle must be stationary for about 20 minutes before the system recalculates. The following relearn process takes up to 10 minutes, driving at a minimum speed of 20 km/h (12 mph). A dash (-) or pressure value will display in the DIC. See Driver Information Centre (DIC) \Rightarrow 103. A warning message displays in the DIC if a problem occurs during the relearn process.

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.

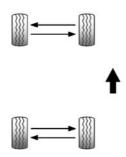
Tyre Rotation

Tyres should be rotated according to the interval listed in the maintenance schedule. See *Maintenance Schedule* ⇒ 301.

Tyres are rotated to achieve 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 \Rightarrow 281 and Wheel Replacement \Rightarrow 283.

Different tyre sizes should not be rotated front to rear.



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

Caution

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

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* \Rightarrow 274 and *Vehicle Load Limits* \Rightarrow 189.

Reset the Tyre Pressure Monitor System. See *Tyre Pressure Monitor Operation* ⇔ 277.

Check that all wheel nuts are properly tightened. See "Wheel Nut Torque" under *Capacities and Specifications* ⇒ 309.

\land Warning

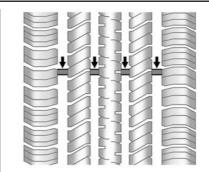
Rust or dirt on a wheel, or on the parts to which it is fastened, can cause wheel nuts to become loose over time. The wheel could come off and cause a crash. When changing a wheel, remove any rust or dirt from places where the wheel attaches to the vehicle. In an emergency, a cloth or paper towel can be used; however, use a scraper or wire brush afterwards to remove all rust or dirt. Lightly coat the inner diameter of the wheel hub opening with wheel bearing grease after a wheel change or tyre rotation to prevent corrosion or rust build-up.

▲ Warning

Do not apply grease to the wheel mounting surface, wheel conical seats, or the wheel nuts or bolts. Grease applied to these areas could cause a wheel to become loose or detach, resulting in a collision.

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. See Tyre Inspection \Rightarrow 279 and Tyre Rotation \Rightarrow 280.

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. To identify the age of a tyre, use the tyre manufacture date, which consists of the last four digits of the DOT Tyre Identification Number (TIN) moulded into one side of the tyre sidewall. The last four digits of the TIN indicate the tyre manufacture date. The first two digits indicate the week and the last two digits, the year. For example, the third week of the year 2020 would have a 4-digit DOT date of 0320. Week 01 is the first full week (Sunday to Saturday inclusive) of each year.

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. However, if it is necessary to replace only one axle set of worn tyres, place the new tyres on the rear axle. See *Tyre Rotation* \Rightarrow 280.

\land 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

Mixing tyres of different sizes (other than those originally installed on the vehicle), brands, tread patterns 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 tyre on all wheels.

⚠ 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 tyres' 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.

The Tyre and Loading Information label indicates the original equipment tyres on the vehicle. See *Vehicle Load Limits* ⇒ *189*.

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, or electronic stability control, the performance of these systems can also be affected.

▲ Warning

If different sized wheels are used, there may not be an acceptable level of performance and safety if 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 ⇔ 281 and Accessories and Modifications ⇔ 234.

Wheel Alignment and Tyre Balance

The tyres and wheels were aligned and balanced at the factory to provide the longest ture life and best overall performance. Adjustments to wheel alignment and ture balancing are not necessary on a regular basis. Consider an alianment 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.

Road Imperfections/Crown Effects

The vehicle's precise steering and handling make it very responsive to road surface feedback. A slight pull may be felt in the steering depending on the crown of the road and/or other road surface variations such as troughs or ruts. This is normal and the vehicle does not require service.

Tyre Chatter/Hop

When driving at slow speeds and in very tight turns, the vehicle may have tyre chatter/hop. This is normal and the vehicle does not require service.

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 wheel studs can cause wheel nuts to not engage the stud threads and/or wheel. The wheel could come off and cause personal injury and/ or death. Carbon fibre wheels require a longer stud than aluminium wheels due to a thicker hub. When changing the wheel type between aluminium and carbon fibre, the studs must match the wheel type. Incorrect studs will not have the correct thread engagement. Use the correct wheel studs for your wheel assembly.

▲ Warning

Installing wheel nuts on carbon fibre wheels when temperatures are below freezing can result in a damaged assembly. Once temperatures rise, the wheel nut removal torque can be very high making it difficult to remove wheels nuts. This can result in damaged wheel nuts and/or wheel nut inserts. Use of damaged parts could cause the wheel to (Continued)

Warning (Continued)

come off and cause personal injury, and/ or death. Do not install wheel nuts when temperatures are below freezing.

\land Warning

Using the wrong replacement wheels, wheel bolts, or wheel nuts can be dangerous. It could affect the braking and handling of the vehicle. Tires can lose air and cause loss of control, resulting in a crash. Always use the correct wheel, wheel bolts, and wheel nuts for replacement.

\land 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.

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.

Tyre Chains

Caution

If the vehicle is equipped with tyre size 305/30ZR20 or 345/25ZR21, use tyre chains only where legal and only when necessary. Use low profile chains that add no more than 6–7 mm (0.2–0.3 in) thickness to the tire tread and inner sidewall. Use chains that are the proper size for the tures. Do not use chains on the tires of the front axle. Install them on the tires of the rear axle. Tighten them as tightly as possible with the ends securely fastened. Drive slowly and follow the chain manufacturer's instructions. If the chains contact the vehicle, stop and retighten them. If the contact continues, (Continued)

Caution (Continued)

slow down until it stops. Driving too fast or spinning the wheels with chains on will damage the vehicle.

If a Tyre Goes Flat

It is unusual for a tyre to blow out while driving, especially if the tyres are maintained properly. See *Tyres* \Rightarrow 271. 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. The vehicle has no spare tyre, no tyre changing equipment and no place to store a tyre.

If the vehicle has run-flat tyres, there is no need to stop on the side of the road to change a flat tyre. See *Run-Flat Tyres* \Rightarrow 272.

\land 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 underinflated or flat. Have your dealer or an authorised tyre service centre repair or replace the flat tyre as soon as possible.

⚠ Warning

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

Jump Starting

For more information about the vehicle battery, see *Battery* \Rightarrow 261.

If the battery has run down, use another vehicle and some jumper cables to start the vehicle. Be sure to use the following steps to do it safely.

\land 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.

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

Caution

Ignoring these steps could result in costly damage to the vehicle that would not be covered by the vehicle warranty. Trying to start the vehicle by pushing or pulling it will not work, and it could damage the vehicle.

The battery is under a battery cover in the underhood compartment.

To access the battery under the hood, the right hand and left hand sight shields need to be removed to be able to remove the second cover assembly to access the battery.

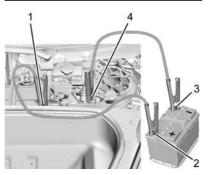
Before you connect the cables, here are some basic things you should know. Positive (+) will go to the positive (+) terminal. Negative (-) will go the remote jump starting negative (-) pole.

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 (Continued)

Caution (Continued)

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



Connection Points and Sequence

- 1. Discharged Battery Positive (+) Terminal
- 2. Good Battery Positive (+) Terminal
- 3. Good Battery Negative (-) Terminal
- 4. Remote Jump Starting Negative (-) Pole
- 1. Check the other vehicle. It must have a 12-volt battery with a negative ground system.

Caution

If the other vehicle does not have a 12-volt system with a negative ground, both vehicles can be damaged. Only use a vehicle that has a 12-volt system with a negative ground for jump starting.

 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 a ground connection you do not want. You would not be able to start the vehicle, and the bad grounding could damage the electrical systems.

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

Caution

If any accessories are left on or plugged in during the jump starting procedure, they could be damaged. The repairs (Continued)

Caution (Continued)

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 outlet. Turn off the radio and all lamps that are not needed. This will avoid sparks and help save both batteries. And it could save the radio!
- 4. Open the bonnet. See *Bonnet* ⇒ 18.



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



- 6. Release the five clips and remove the outer cover to access the battery.
- Locate the battery positive (+) terminal and remote jump starting negative (-) pole.
- 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.
- 9. Open the discharged battery positive (+) terminal trim cover and connect one end of the positive (+) cable.
- Do not let the other end of the positive (+) cable to touch metal. Connect it to the good battery positive (+) terminal.

 Connect one end of the negative (-) cable to the good battery negative (-) terminal.

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

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

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.

288 Vehicle Care

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.

The power windows may need to be initialised. See "Window Indexing" under *Power Windows* ⇔ 29.

Towing the Vehicle

Transporting a Disabled Vehicle

Caution

Transporting a disabled vehicle incorrectly may cause damage to the vehicle. Use proper tyre straps to secure the vehicle to the flatbed tow truck. Do not strap or hook to any frame, underbody, or suspension component not specified below. Do not move vehicles with drive axle tyres on the ground. Damage is not covered by the vehicle warranty.

Caution

The vehicle may be equipped with an electric parking brake and/or an electronic gearchange. In the event of a loss of 12-volt battery power, the electric parking brake cannot be released, and the vehicle cannot be changed to N (Neutral). Tyre skates or dollies must be used under the non-rolling tyres to prevent damage while loading/unloading the vehicle. Dragging the vehicle will cause damage not covered by the vehicle warranty.

Caution

The vehicle may be equipped with a towing eye. Improper use of the towing eye may cause damage to the vehicle and is not covered by the vehicle warranty. If equipped, use the towing eye to load the vehicle onto a flatbed tow truck from a flat road surface, or to move the vehicle a very short distance at a walking pace. The towing eye is not designed for off-road recovery. The (continued)

Caution (Continued)

vehicle must be in N (Neutral) with the electric parking brake released when using the towing eye.

Contact a professional towing service if the disabled vehicle must be transported. GM recommends a flatbed tow truck to transport a disabled vehicle. Use ramps to help reduce approach angles, if necessary.

If equipped, a towing eye may be located near the spare tyre or emergency jack. Do not use the towing eye to pull the vehicle from the snow, mud, sand, or ditch. Towing eye threads may have right or left-hand threads. Use caution when installing or removing the towing eye.

The vehicle must be in N (Neutral) and the electric parking brake must be released when loading the vehicle onto a flatbed tow truck.

If equipped, the Front Lift System can be raised with the engine off. With the vehicle in accessory mode and the doors closed, press and hold the Front Lift System button for 10 seconds. See *Front Lift System* \Rightarrow 216.

After the vehicle is loaded, the front can be lowered by pressing the Front Lift System button again with the doors closed.

After the vehicle is loaded, the front can be lowered by pressing the Front Lift System button again with the doors closed.

- If the 12-volt battery is dead and/or the engine will not start, the vehicle will not move. Try to jump start the vehicle. Refer to Jump Starting ⇔ 285. If the jump start is successful, retry the "Maintaining N (Neutral) with Engine Off" procedure.
- If jump starting is unsuccessful, the vehicle will not move. Tyre skates or dollies must be used under the non-rolling tyres to prevent vehicle damage.

Front Tow Eye



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



Install the tow eye into the socket and turn it until it is fully tightened.

When the tow eye is removed, reinstall the cover with the notch in the original position.

290 Vehicle Care

Rear Tow Eye



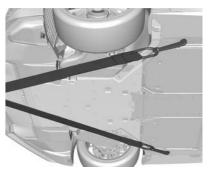
Carefully open the cover by using the small notch that conceals the front tow eye socket.



Install the tow eye into the socket and turn it until it is fully tightened.

When the tow eye is removed, reinstall the cover with the notch in the original position.

Front Attachment Points



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

Appearance Care

Exterior Care

Locks

Locks are lubricated at the factory. Use a de-icing agent only when absolutely necessary, and have the locks greased after using. See *Recommended Fluids and Lubricants* \Rightarrow 305.

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 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.

Cleaning Underbonnet Components

Caution

Do not power wash any component under the bonnet that has this \gg symbol.

This could cause damage that would not be covered by the vehicle warranty.

Solvents or aggressive cleaners may harm underbonnet components. The usages of these chemicals should be avoided. Recommend water only.

A pressure washer may be used, but care must be taken. The following criteria must be followed:

- Water pressure must be kept below 14,000 KPa (2,000 PSI).
- Water temperature must be below 80 °C (180 °F).

- Spray nozzle with a 40-degree wide angle spray pattern or wider must be used.
- Nozzle must be kept at least 30 cm (1 ft) away from all surfaces.

Automatic Car Wash

Caution

Automatic car washes can cause damage to the vehicle, wheels, ground effects, and convertible top (if equipped).

Do not use automatic car washes due to lack of clearance for the undercarriage, wide rear tires, and wheels.

Hand Wash

Rinse the vehicle well, before washing and after, to remove all cleaning agents completely. If they dry on the surface staining could occur.

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

292 Vehicle Care

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 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, flat paint, or metal mesh grilles 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, and 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 and 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.

Convertible Top Care

Only lower the top when it is completely dry and avoid leaving the top lowered for extended periods of time to prevent excessive interior weathering.

Carbon Fiber Care

Carbon fiber composite parts can be washed and waxed like any other parts. Use a clear or black pigmented wax. See *Composite Materials* ⇔ 192.

Cleaning Exterior Lamps/Lenses, Emblems, Decals, and Stripes

Use only lukewarm or cold water, a soft cloth, and a car washing soap to clean exterior lamps, lenses, emblems, decals, and stripes. Follow instructions under "Washing the Vehicle" previously in this section.

Lamp covers are made of plastic, and some have a UV protective coating. Do not clean or wipe them while they are dry.

Do not use any of the following on lamp covers:

- Abrasive or caustic agents
- Washer fluids and other cleaning agents in higher concentrations than suggested by the manufacturer

- Solvents, alcohols, fuels, or other harsh cleaners
- Ice scrapers or other hard items
- Aftermarket appearance caps or covers while the lamps are illuminated, due to excessive heat generated

Caution

Failure to clean lamps properly can cause damage to the lamp cover that would not be covered by the vehicle warranty.

Caution

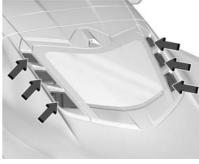
Using wax on low gloss black finish stripes can increase the gloss level and create a non-uniform finish. Clean low gloss stripes with soap and water only.

Air Intakes - Mesh Grilles

Keep the rear and hood mesh grilles clear of debris. The metal mesh grilles may be hot to the touch after vehicle operation.



Rear Mesh Grille



Coupe Mesh Grille



Convertible Mesh Grille

Do not apply wax to the mesh grilles.

Windscreen and Wiper Blades

Clean the outside of the windscreen with glass cleaner.

Clean rubber blades using 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.

294 Vehicle Care

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 weatherstrip lubricant on weatherstrips to make them last longer, seal better, and not stick or squeak. Lubricate weatherstrips at least once a year. Hot, dry climates 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* \Rightarrow 305.

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 Wheel Trim

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

To avoid surface damage on wheels and wheel trims, do not use strong soaps, chemicals, abrasive polishes, cleaners or brushes. Use only GM approved cleaners. Do not drive the vehicle through an automatic car wash that uses silicon carbide tyre/wheel cleaning brushes. Damage could occur and the repairs would not be covered by the vehicle warranty.

Carbon Fibre Wheels

If equipped, carbon fibre wheels have a high performance white thermal coating on the rim and back of the spoke. The thermal coating provides a functional purpose and performs best when clean. See "Wheels and Wheel Trim" section above for cleaning instructions. However, even with regular cleaning, it is expected that brake dust and road grime will darken the high performance thermal coating over time.

\land Warning

Altering, removing, or painting over the white thermal coating on carbon fibre wheels can cause the wheels to overheat and become damaged. Damaged wheels could cause a crash. To prevent property damage, personal injury, and/or death, do not change the coating on the carbon fibre wheels.

Caution

Carbon fibre wheels may be damaged if the vehicle is not washed after driving on roads that have been sprayed with magnesium chloride or calcium chloride. These are used on roads for conditions such as dust and ice. Always wash the carbon fibre with soap and water after exposure.

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 other brake parts, including drums, wheel cylinders, callipers, parking brake, master cylinder, brake fluid reservoir, vacuum pipes, electric vacuum pump including bracket and vent hose, if equipped.

If equipped with Z51, inspect brake cooling components. See *Track Events and Competitive Driving* ⇔ 176.

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 hook-up, binding, leaks, cracks, chafing, etc.

Visually check constant velocity joint boots and axle seals for leaks.

Body Component Lubrication

Lubricate all key lock cylinders, hood hinges, and liftgate hinges, unless the components are plastic. Applying silicone grease on weatherstrips with a clean cloth will make them last longer, seal better, and not stick or squeak.

Underbody Maintenance

At least twice a year, spring and fall, use plain water to flush any corrosive materials from the underbody. Take care to thoroughly clean any areas where mud and other debris can collect.

Do not directly power wash the transfer case and/or front/rear axle output seals. High pressure water can overcome the seals and contaminate the fluid. Contaminated fluid will decrease the life of the transfer case and/or axles and should be replaced.

Body 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. 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. 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. Newspapers or dark garments can transfer colour to the vehicle's interior.

Caution

Immediately remove cleaners, hand lotions, sunscreen, and insect repellent from all interior surfaces or permanent damage may result.

Caution

Use cleaners specifically designed for the surfaces being cleaned to prevent permanent damage to the vehicle. Apply all cleaners directly to a cleaning cloth. Do not spray cleaners on any switches or controls.

When using liquid soap cleaners, follow the directions on the specific cleaner or soap solution for dilution instructions.

Caution

To prevent damage:

- Never use a razor or any other sharp object to remove soil from any interior surface
- Never use a brush with stiff bristles. (Continued)

Caution (Continued)

- Never rub any surface aggressively or with too much pressure.
- Do not get any exposed electrical components wet.
- Do not use laundry detergents or dishwashing soaps with degreasers. 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.
- Do not use disinfectant wipes that are scented or contain bleach. Do not use wipes or cleaners that show a colour transfer to the wipe or change the appearance of the interior surface when used.
- Do not use scented or gel-type hand sanitisers. If hand sanitiser comes into contact with interior surfaces of the vehicle, blot immediately and clean with a soft cloth dampened with a mild soap and water solution.

Interior Glass

To clean, use a microfibre 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.

Vinyl/Rubber

If equipped with vinyl floor and rubber floor mats, use a soft cloth and/or brush dampened with water to remove dust and loose dirt. For more thorough cleaning, use a mild soap and water solution.

⚠ Warning

Do not use cleaners that contain silicone, wax-based products, or cleaners that increase gloss on vinyl/rubber floor and mats. These cleaners can permanently change the appearance and feel of the vinyl/rubber and can make the floor slippery. Your foot could slip while operating the vehicle, and you could lose control, resulting in a collision. You or others could be injured.

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:

- 1. Saturate a clean, lint-free colour-fast cloth with water. Microfiber cloth is recommended to prevent lint transfer to the fabric or carpet.
- 2. Remove excess moisture by gently wringing until water does not drip from the cleaning cloth.
- 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 into the fabric.
- 4. Continue gently rubbing the soiled area until there is no longer any colour transfer from the soil to the cleaning cloth.
- 5. If the soil is not completely removed, use a mild soap solution followed only by plain water.

If the soil is not completely removed, it may be necessary to use a commercial upholstery cleaner or spot lifter. Test a small hidden area for 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 bristle brush to remove dust from knobs and crevices on the instrument cluster. Use a soft microfiber cloth dampened with water to remove dust and loose dirt. For a more thorough cleaning, use a soft microfibre cloth dampened with a mild soap and water solution.

Caution

Soaking or saturating leather, especially perforated leather, as well as other interior surfaces, may cause permanent damage. Wipe excess moisture from these surfaces after cleaning and allow them to dry naturally. Never use heat, steam, or spot removers. Do not use liquids that contain alcohol or solvents on leather seats. 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 soap solution. Damage caused by air fresheners would not be covered by the vehicle warranty.

Cargo Cover and Convenience Net

If equipped, 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

A Warning

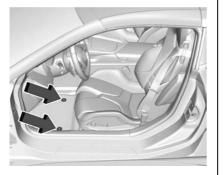
If a floor mat is the wrong size or is not properly installed, it can interfere with the pedals. Interference with the pedals can cause unintended acceleration and/or increased stopping distance which can cause a crash and injury. Make sure the floor mat does not interfere with the pedals.

Use the following guidelines for proper floor mat use:

• The original equipment floor mats are designed for your vehicle. If the floor mats need to be replaced, it is recommended that GM-certified floor

mats are 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.



The floor mats are held in place by two retainers.

Installing and Replacing the Floor Mats

- 1. Pull up on the rear of the floor mat to remove it from the retainers.
- 2. Reinstall by lining up the openings in the floor mat over the retainers and push down into position.
- Make sure the floor mat is properly secured in place. Verify the floor mat does not interfere with the pedals.

Cleaning Rubber Floor Mats (All-Weather Mats and Floor Liners)

See "Vinyl/Rubber" under *Interior Care* ⇔ 295 for important cleaning information.

Service and Maintenance

General Information

General Information	. 300
Maintenance Schedule Maintenance Schedule	301
Multi-Point Vehicle Inspection (MPV Multi-Point Vehicle Inspection (MPVI)	
Recommended Fluids, Lubricants, an Parts	d
Recommended Fluids and	205

Lubricants	305
Maintenance Replacement Parts	306

General Information

Your vehicle is an important investment. This section describes the required maintenance for the vehicle. Follow this schedule to help protect against major repair expenses resulting from neglect or inadequate maintenance. It may also help to maintain the value of the vehicle if it is sold. It is the responsibility of the owner to have all required maintenance performed.

Your retailer has trained technicians who can perform required maintenance using genuine replacement parts. They have up-to-date tools and equipment for fast and accurate diagnostics. Many dealers have extended evening and Saturday hours, courtesy transportation, and online scheduling to assist with service needs.

Your retailer recognises the importance of providing competitively priced maintenance and repair services. With trained technicians, the dealer is the place for routine maintenance such as oil changes, tire rotations, and additional maintenance items like tires, brakes, batteries, and wiper blades. Caution

Damage caused by improper maintenance can lead to costly repairs and may not be covered by the vehicle warranty. Maintenance intervals, checks, inspections, recommended fluids, and lubricants are important to keep the vehicle in good working condition.

Do not have chemical flushes that are not approved by GM performed on the vehicle. The use of flushes, solvents, cleaners, or lubricants that are not approved by GM could damage the vehicle, requiring expensive repairs that are not covered by the vehicle warranty.

The Tyre Rotation and Required Services are the responsibility of the vehicle owner. It is recommended to have your dealer perform these services every 12 000 km (7,500 mi). Proper vehicle maintenance helps to keep the vehicle in good working condition, improves fuel economy, and reduces vehicle emissions. Because of the way people use vehicles, maintenance needs vary. There may need to be more frequent checks and services. The Additional Required Services - Normal are for vehicles that:

- Carry passengers and cargo within recommended limits on the Tyre and Loading Information label. See *Vehicle Load Limits* ⇔ 189.
- Are driven on reasonable road surfaces within legal driving limits.
- Use the recommended fuel. See *Recommended Fuel* ⇔ 229.

Refer to the information in the Maintenance Schedule Additional Required Services -Normal chart.

The Additional Required Services - Severe are for vehicles that are:

- Mainly driven in heavy city traffic in hot weather.
- Mainly driven in hilly or mountainous terrain.
- Used for high speed or competitive driving.
- Used for taxi, police, or delivery service.

Refer to the information in the Maintenance Schedule Additional Required Services -Severe chart.

A Warning

Performing maintenance work can be dangerous and can cause serious injury. Perform maintenance work only if the required information, proper tools, and equipment are available. If they are not, visit your retailer for a trained technician to do the work. See *Doing Your Own Service Work* \Rightarrow 236.

Maintenance Schedule

Tyre Rotation and Required Services Every 12,000 km (7,500 mi)

Tyres are rotated to achieve a more 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* \Rightarrow 281 and *Wheel Replacement* \Rightarrow 283.

- Perform Multi-Point Vehicle Inspection. See Multi-Point Vehicle Inspection (MPVI) ⇒ 303.
- Lubricate body components. See *Exterior Care* ⇔ 291.

Additional Required Services — Normal Service

Every 12,000 km (7,500 mi)

• Check engine oil level and oil life percentage. If needed, change engine oil and filter, and reset oil life system. Or when the CHANGE ENGINE OIL SOON message displays, have the engine oil and filter changed within the next 1 000 km (600 mi). If driven under the best conditions, the engine oil life sustem mau not indicate the need for vehicle service for up to a year. The engine oil and filter must be changed at least once a year and the oil life system must be reset. Your trained dealer technician can perform this work. If the engine oil life system is reset accidentally, service the vehicle within 5 000 km (3,000 mi) since the last service. Reset the oil life system when the oil is changed. See Engine Oil Life System ⇒ 248.

302 Service and Maintenance

- When the REPLACE AT NEXT OIL CHANGE message displays, the engine air filter should be replaced at the next engine oil change. When the REPLACE ENGINE AIR FILTER SOON message displays, the engine air filter should be replaced at the earliest convenience. Reset the engine air filter life system after the engine air filter is replaced. See Engine Air Filter Life System ⇔ 250.
- The initial gearbox external canister filter change must be performed at 12 000 km (7,500 mi). This service can be complex. See your dealer.

Caution

The gearbox external canister filter must be changed at 12 000 km (7,500 mile) during the running-in period. Failure to replace the external canister filter can cause damage to the gearbox and potentially void any warranty.

Every 36 000 km (22,500 mi)

- Replace the passenger compartment air filter. Or every 24 months, whichever comes first. More frequent passenger compartment air filter replacement may be needed if driving in areas with heavy traffic, poor air quality, high dust levels, or environmental allergens. Passenger compartment air filter replacement may also be needed if there is reduced airflow, window misting, or odours. Your GM retailer can help determine when to replace the filter.
- Change the dual clutch gearbox external canister filter. Check the transmission fluid life percentage. If the percentage is less than 10%, replace the fluid and external canister filter. Change the external canister filter every 36 000 km (22,500 mi) thereafter. This service can be complex. See your dealer.

Every 72 000 km (45,000 mi)

• Change the gearbox fluid and external canister filter. Change the external canister filter every 36 000 km (22,500 mi) thereafter. This service can be complex. See your dealer.

Or when the CHANGE TRANSMISSION FLUID SOON message displays, change the fluid and external canister filter within the next 1 000 km (620 mi). Failure to change the transmission fluid at required intervals can lead to reduced transmission performance. The transmission fluid must be changed at least every three years and the Fluid Life System must be reset. Your dealer has trained service technicians who will change the fluid and reset the system. If the system is ever reset accidentallu, the fluid must be changed at 72 000 km (45,000 mi) since the last fluid change. See Dual Clutch Transmission Fluid Life System 🗘 249.

Every 144 000 km (90,000 mi)

Every 156 000 km (97,500 mi)

• Replace spark plugs. Inspect spark plug wires and/or boots.

Every 240 000 km (150,000 mi)

 Drain and fill the engine cooling system. Or every six years, whichever comes first. See Cooling System ⇔ 252.

Additional Required Services — Severe Service

There are no additional required services for severe service for this vehicle. Follow the requirements under normal service.

Owner Checks and Services

Every Two Years

• Replace brake fluid. See *Brake Fluid* ⇒ 260.

Every Five Years

• Replace front lift system fluid (if equipped). See *Recommended Fluids and Lubricants* ⇔ 305.

Every Seven Years

• Replace Air Conditioning Desiccant every seven years. The air conditioning system requires maintenance every seven years. This service requires replacement of the desiccant to help the longevity and efficient operation of the air conditioning system. This service can be complex. See your dealer.

Multi-Point Vehicle Inspection (MPVI)

A Multi Point Vehicle Inspection (MPVI) completed by a GM retailer technician is a maintenance assessment of your vehicle. The benefit of the MPVI is to identify and inform the customer of service items that require immediate attention and those that may require attention in the future.

The technician will perform the following checks on your vehicle. For a complete list of checks, inspections, and services, see your retailer.

Some items may not apply to your vehicle and/or region.

Diagnostics

• Service history/recall check

Engine Oil and Filter

- Engine oil
- Oil life monitor
- Reset oil life monitor

Exterior Lights

• Visual inspection

Windscreen and Wipers

• Visual inspection

Battery

- Battery visual inspection
- Battery test results
- Battery cables and connections

Systems, Fluids, and Visible Leak Inspection

- Engine oil
- Gearbox
- Drive axle
- Transfer case
- Engine cooling system
- Power steering, if equipped
- Fuel system
- Windscreen washer fluid

304 Service and Maintenance

Tyre Inspection

- Tyre pressure, tread depth, and wear
- Rotation, if applicable
- Alignment check, optional
- Reset tyre pressure monitor
- Check the tyre sealant expiration date, if equipped
- Check spare tyre, if equipped

Brakes

• Check brake system

Visible and Functional Inspections

- Seat belt components
- Exhaust system
- Accelerator pedal
- Passenger compartment air filter, if equipped
- Engine air filter
- Hoses
- Belts
- Shocks and struts

- Steering components
- Axle boots or driveshaft and u-joints
- Compartment lift struts, if equipped
- Floor mats secured, no interference with pedals
- Horn
- Ignition lock, if equipped
- Starter switch
- Evaporative control system

Lubricate

• Chassis components

Recommended Fluids, Lubricants, and Parts

Recommended Fluids and Lubricants

Fluids and lubricants identified below by name or specification, including fluids or lubricants not listed here, can be obtained from your retailer.

Usage	Fluid/Lubricant
Chassis Lubrication	Chassis lubricant meeting requirements of NLGI #2, Category LB or GC-LB.
Dual Clutch Transmission	See your dealer.
Engine Coolant	40/60 coolant/water mixture of clean, drinkable water and use only DEX-COOL Coolant. See Cooling System \Rightarrow 252.
Engine Oil	Engine oil meeting the dexosR specification of the proper SAE viscosity grade. Mobil 1 dexosR full synthetic is recommended. See <i>Engine Oil (5.5L LT6 Engine)</i> \Rightarrow 241 or <i>Engine Oil (6.2L LT2 Engine)</i> \Rightarrow 245.
Front Lift System (If Equipped)	GM Approved DOT 4 Hydraulic Brake Fluid. See Front Lift System 🗢 216.
Hydraulic Brake System	GM Approved DOT 4 Hydraulic Brake Fluid.
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	·	
	84378662	A3249C
5.5L V8 Engine (LT6)*		
	84321605	A3239C
6.2L V8 Engine (LT2)		
Engine Oil Filter		
	12694318	PF2269G
5.5L V8 Engine (LT6)		
	12706595	PF64
6.2L V8 Engine (LT2)		
Passenger Compartment Air Filter Element	13508023	CF185
Spark Plug	•	
	12672174	41-155-IP
5.5L V8 Engine (LT6)		
	12622442	41-149
6.2L V8 Engine (LT2)		
External Transmission Filter Kit	24045729	-

Part	GM Part Number	ACDelco Part Number
Wiper Blades		
	84050758	-
Driver Side (RHD) – 600 mm (23.6 in)		
	84566977	-
Driver Side (LHD) – 600 mm (23.6 in)		
	84050757	-
Passenger Side (RHD) – 525 mm (20.7 in)		
	84566978	-
Passenger Side (LHD) – 525 mm (20.7 in)		

* Quantity of two required per vehicle.

Technical Data

Vehicle Identification

Vehicle Identification Number (VIN)	308
Service Parts Identification	308

Vehicle Data

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 label 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 309 for the vehicle's engine code.

Service Parts Identification

There will be a large barcode on the certification label located on the driver door or door frame that you can scan for the following information:

- Vehicle Identification Number (VIN)
- Model designation
- Paint information
- Production options

Vehicle Data Capacities and Specifications

The following approximate capacities are given in metric and English conversions.

See Recommended Fluids and Lubricants ⇒ 305.

Amlination	Capacities	
Application	Metric	English
Air Conditioning Refrigerant	For the air conditioning system refrigerant charge type and amount, see the refrigerant label under the bonnet. See your dealer for more information.	
5.5L V8 Engine (LT6) Engine Cooling System* – Z06	23.5 L	24.8 qt
6.2L V8 Engine (LT2) Engine Cooling System with Performance Package* – Stingray	21.5 L	22.7 qt
6.2L V8 Engine (LT2) Engine Cooling System without Performance Package* – Stingray	20.5 L	21.7 qt
Engine Oil with Filter		
5.5L V8 Engine (LT6) – Z06	7.6 L	8.0 qt
6.2L V8 Engine (LT2) – Stingray	7.1 L	7.5 qt
Fuel Tank	70.0 L	18.5 gal

310 Technical Data

Amplication	Capacities		
Application	Metric	English	
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 cooling system capacity values are based on the entire cooling system and its components.			

Engine Specifications

Engine	VIN Code	Gearbox	Spark Plug Gap	Firing Order
5.5L V8 Engine (LT6) – Z06	3	Dual Clutch Transmission	0.65-0.75 mm (0.026- 0.030 in)	1-4-3-8-7-6-5-2
6.2L V8 Engine (LT2) – Stingray	4	Dual Clutch Transmission	0.95–1.10 mm (0.037– 0.043 in)	1-8-7-2-6-5-4-3
Spark plug gaps are preset by the manufacturer. Re-gapping the spark plug is not recommended and can damage the spark plug.				

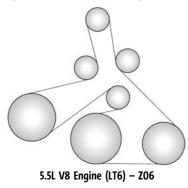
Engine Data

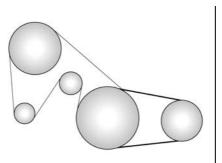
Engine	Horsepower	Torque	Displacement	Compression Ratio
5.5L V8 Engine (LT6) – Z06	499.6 kW (670 hp) @ 8400 rpm	623.7 N•m (460 lb ft) @ 6300 rpm	5.5 L	12.5:1
6.2L V8 Engine (LT2) with Performance Exhaust – Stingray	354.2 kW (475 hp) @ 6450 rpm	612.8 N•m (452 lb ft) @ 4500 rpm	6.2 L	11.5:1

Fuel Consumption and Emissions Information

For the values specific for your vehicle, refer to the EC Certificate of Conformity provided with your vehicle, other national registration documents, or your local dealership.

Engine Drive Belt Routing





6.2L V8 Engine (LT2) – Stingray

Customer Information

Customer Information

Radio Frequency
Identification (RFID) 312
Declaration of Conformity

Vehicle Data Recording and Privacy

Vehicle Data Recording and Privacy	317
Cybersecurity	
Infotainment System	318

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.

Declaration of Conformity

Radio Frequency Devices

Nigeria

Connection and use of this communications equipment is permitted by the Nigerian Communications Commission.

Near Field Communication (NFC)

Oman

OMAN TRA TA-R/9651/20 D090024

United Arab Emirates



BCM VIP Denso B1NAO, B1NA5

Bahrain

Reference No: 3596000

Qatar

CRA/SM/2021/S-0007007

Lebanon

Reference No : 9190/E&M/2018

Rear Cross Traffic Alert and Side Blind Zone Alert

Jordan

TRC/31/7918/2020

Oman



United Arab Emirates (UAE)

TRA Registered No: ER53878/17 Dealer No: DA44932/15

Remote Key

Jordan

TRC/SS/2018/373

Oman	Tyre Pressure Monitoring Sensor	
OMAN - TRA	Japan	
R/6218/18 D172338	Tyre Pressure Sensors are compliant with the Radio Act certification (grant ID 201-190091).	
Remote Key (Philippines)	This device should not be modified (otherwise the granted designation number will become invalid).	
	Jordan	
NTC	Ref No. T/4/11/11/3816	
NIC NIC	Oman	
Type Approved	OMAN TRA	
No. ESD-1817953C	R/7742/19 D090258	
	United Arab Emirates	
United Arab Emirates TRA REGISTERED No: ER66704/18 DEALER No: DA36976/14	TRA REGISTERED No: ER70116/19 DEALER No: DA0047074/10	

2014/53/EU Radio Equipment Directive (RED) Declaration of Conformity

This vehicle has systems that transmit and/ or receive radio waves subject to 2014/53/ EU. The manufacturers of the systems listed below declare conformity with Directive 2014/53/EU. The full text of the EU declaration of conformity for each system is available at the following Internet address: www.chevroleteurope.com.

This vehicle has systems that transmit and/ or receive radio waves subject to Radio Equipment Regulations of the United Kingdom. The manufacturers of the systems listed below declare conformity with Radio Equipment Regulations of the United Kingdom. The full text of the United Kingdom declaration of conformity for each system is available at the following Internet address: www.chevroleteurope.com.

UK CA

EU Importer GM Mobility Europe GmbH

Bethmannstraße 50-54 Ort 60311 Frankfurt am Main Hessen Germany **UK Importer** GM Specialty Vehicles UK Limited 100 New Bridge Street London, EC4V 6JA, UK BCM VIP Denso B1NAO, B1NA5 **DENSO Manufacturing Tennessee 203** 1420 Middlesettlements Road Maryville, TN 37801 Operating Frequency: 125 kHz Maximum Output Power: 1.58 mW (EIRP). 2.01 dBm (EIRP) RFR Huf Huf Hülsbeck and Fürst and Co. KG Steeger Str. 17 42251 Velbert Germany Operation frequency: 433.92 MHz Receiver Remote Key Huf Hülsbeck & Fürst GmbH & Co. KG

Steeger Str. 17, 42551 Velbert, Germany Operating Frequency: 433 MHz Maximum Transmit Power: 0.3 mW EIRP **Ture Pressure Monitoring System** Schrader Electronics Ltd. 11 Technology Park Belfast Road Antrim Bt41 10S Northern Ireland United Kingdom Operating frequency: 433.92 MHz Maximum transmit power: 10 dBm **Universal Garage Door Opener Gentex Corporation** 600 North Centennial Street Zeeland, MI 49464 USA Operating frequency: 433.05 MHz -434.79 MHz Maximum transmit power: 0.138 mW E.R.P.

Customer Information 315

Harman International Industries, Incorporated 30001 Cabot Drive

Novi, MI 48377 USA

Operating frequency ranges: 2402 - 2480 MHz, 5150 - 5775 MHz

Infotainment 3.5 Centre Console Module

Maximum transmit power: 17 mW, 12 mW

Side Blind Zone Alert/ Rear Cross Traffic Alert

Hella KGaA Hueck & Co.

Rixbecker Straße 75

59552 Lippstadt

Frequency: 24.050 - 24.250 GHz

Power Output: 20 dBm (100mW)

Wireless Charging Module

LG Electronics European Shared Service Centre B.V.

Krijgsman 1

1186 DM Amstelveen

The Netherlands

Wireless Charging Module – GB	
HLDS (Hitachi LG Data Storage)	
42nd Huifeng 4Road, Zhongkai Hi-Tech Industry Development Zone,	
Huizhou, Guangdong Province, China	
Operation frequency: 145kHz	
Maximum output power: 21w	
eCall Module	
European Shared Service Center B.V. Krijgsman 1 1186 DM Amstelveen The Netherlands	
Operating Maximum Transmit Frequency (MHz) Power (dBm)	
880 – 915 33.00	
1710 – 1785 30.00	
1920 – 1980 22.41	
880 – 915 22.88	
1920 – 1980 22.60	

Operating Frequency (MHz)	Maximum Transmit Power (dBm)
1710 – 1785	22.60
2500 – 2570	23.90
880 - 915	22.40
832 – 862	22.20
2570 – 2620	22.18
2402 – 2472	12.62
1559 – 1610	

Tyre Jack

Control to the section of Conformity Control to the section of Conformity Declaration of Conformity Control to the section of Conformity Declaration of Conformity Control to the section of Conformity Declaration of Conformity Control to the section of Conformity We hereby declare that the product: Events the section of Conformity We hereby declare that the product: Events the section of Conformity with Machinery Directive 2006/42/EC We hereby declare that the product: Events the section of Conformity with Machinery Directive 2006/42/EC We hereby declare that the product: Events the section of Conformity with Machinery Directive 2006/42/EC Technical standards applied: Events the section of Conformity with Machinery Directive 2006/42/EC Standards applied: Events the section of Conformity with Machinery Directive 2006/42/EC Control to complete the technical file: Events the section of Conformity with Machinery Section of Conformity with Machinery Section of Conformity with Machinery Section of Conformity Section of Conformity Section of Conformity Section of Conformity Section of Conformity Section of Conformity Section of Conformity Section of Conformity Section of Conformity USA
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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: 13508400 Base 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 complete the technical file:

Lisa Pennick-Taylor

General Motors Company

GMNA, USA

Signed by:

Phillip Hubler

Engineering Group Manager Tyre/Wheel Systems

GMNA, USA

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 these technical data related to other information (crash report, damage to the vehicle, witness statements, etc.) may be associated with a specific person — possibly, with the assistance of an expert.

In an emergency, your vehicle location and other data may be transmitted to emergency services in accordance with Directive (EU) 2015/758. See *eCall Overview* ⇒ 319.

Cybersecurity

GM collects information about the use of your vehicle including operational and safety related information. We collect this information to provide, evaluate, improve, and troubleshoot our products and services and to develop new products and services. The protection of vehicle electronics systems and customer data from unauthorised outside electronic access or control is important to GM. GM maintains appropriate security standards, practices, guidelines and controls aimed at defending the vehicle and the vehicle service ecosystem against unauthorised electronic access, detecting possible malicious activity in related networks, and responding to suspected cubersecurity incidents in a timely, coordinated and effective manner. Security incidents could impact your safety or compromise your private data. To minimise security risks, please do not connect your vehicle electronic systems to unauthorised devices or connect your vehicle to any unknown or untrusted networks (such as Bluetooth, Wi-Fi or similar technology). In the event you suspect any security incident impacting your data or the safe operation of your vehicle, please stop operating your vehicle and contact your retailer.

Infotainment System

If the vehicle is equipped with a navigation system as part of the infotainment system, use of the system may result in the storage of destinations, addresses, telephone numbers, and other trip information. See the infotainment section for information on stored data and for deletion instructions.

eCall

eCall Overview

eCall Overview

319

This vehicle is equipped with a 112 based eCall system that is free of charge.

In the event of a crash, an eCall-equipped vehicle may automatically call the nearest 112 emergency centre. If built-in sensors detect a crash, an emergency call is placed automatically. An advisor will determine whether help is needed. The exact location of the crash site is sent to the emergency centre even if the occupants of the vehicle are unable to communicate with emergency personnel.



The eCall system can also be activated manually. Press $_{SOS}$ on the overhead console to contact the nearest 112 emergency centre. Press **X** within two seconds to cancel the manually activated eCall.

A problem with the system may be indicated by the following:

- Red light near the phone button displays
- Light near the phone button does not display with vehicle on
- Driver Information Centre message may appear

Contact your retailer for service.

When the system is active, the green light near the phone button is illuminated.

Usage of personal data is strictly limited to the purpose of forwarding the emergency call to the emergency number 112.

The eCall system may collect and process the following data:

- Vehicle Identification Number
- Vehicle type, such as passenger vehicle or light commercial vehicle
- Vehicle propulsion storage type, such as petrol, diesel, CNG, LPG, electric, or hydrogen
- Last three vehicle locations and direction of travel
- Automatic activation log file for the system and its time stamp

Data collected by the eCall system is shared only with the 112 emergency centre when a connection is made.

320 eCall

Data collected by the system is:

- Temporarily stored in the system memory, but it is not available outside of the system before an eCall is triggered.
- Not traceable and not subject to constant tracking during normal system operation.
- Stored in the system's memory but is automatically and continuously deleted.

Vehicle location data is continuously overwritten and limited to the last three locations for normal operation of the system.

The system activity log is kept for the duration of the emergency call, or a maximum of 13 hours after the call was initiated.

The data subject, or vehicle owner, has the right to access the data and as appropriate, to request the rectification, erasure or blocking of personal data when processing of the data does not comply with local regulations. Any third parties who received the data must be notified of any rectification, erasure, or blocking done to comply with local regulations unless it proves impossible or involves a disproportionate effort. The data subject, or vehicle owner, has the right to complain to the competent data protection authority if he or she feels that his or her rights have been infringed as a result of the processing of his or her personal data.

Index

Α	
Accessories and Modifications	
Accessory Power 195	
Active	
Fuel Management 196	
Add-On Electrical Equipment231	
Adjustments	
Lumbar, Front Seats 41	
Agreements	
Trademarks and License161	
Air	
Cleaner/Filter, Engine 251	
Conditioning 167	
Dam, Front 192	
Filter Life System 250	
Filter, Passenger Compartment 170	
Vents 170	
Airbag System55	
Check 64	
How Does an Airbag Restrain? 58	
Passenger Sensing System 59	
What Makes an Airbag Inflate? 58	
What Will You See after an Airbag	
Inflates? 58	
When Should an Airbag Inflate? 57	
Where Are the Airbags? 56	

Airbags
Adding Equipment to the
Vehicle 63, 64
Passenger Status Indicator
Readiness Light94
Replacing System Parts after a
Crash 6!
Servicing Airbag-Equipped Vehicles 6
Alarm
Vehicle Security 22
Alert
Rear Cross Traffic 22
Side Blind Zone (SBZA) 22
AM-FM Radio124
Antenna
Diversity System 128
Anti-theft
Locking System 24
Antilock Brake System (ABS)206
Warning Light99
Appearance Care
Exterior 29
Interior 29
Apple CarPlay and Android Auto15
Assistance Systems
Parking and Reversing 224
Audio
Bluetooth 13

322 Index

Automatic	
Dimming Mirrors 26	
Door Locks	
Headlamp System113	
Auxiliary	
Jack	
Avoiding Untrusted Media Devices	

В

Braking174	
Bulb Replacement	
Headlamp Aiming 264	
Buying New Tyres281	
C	
Camera	
Curb View 226	
Rear Vision (RVC) 224	
Capacities and Specifications	
Carbon Monoxide	
Engine Exhaust 197	
Hatch	
Winter Driving 187	
Cargo	
Tie-Downs	
Caution, Danger, and Warning1	
Centre Console	
Storage 82	
Chains, Tyre	
Charging	
System Light96	
Wireless	
Check Engine Light (Malfunction	
Indicator)96	
Child Restraints	
Infants and Young Children	
ISOFIX	

Child Restraints (cont'd)
Older Children 65
Securing
Systems 68
Circuit Breakers
Cleaning
Exterior Care 291
Interior Care 295
Climate Control Systems
Dual Automatic 167
Clock
Cluster, Instrument89
Compartment
Underhood 236
Compartments
Storage 80
Competition Oriented Tires 273
Competitive Driving Mode217
Composite Materials 192
Conformity
Declaration of 312
Control
Hill Rollback 210
Traction and Electronic Stability 208
Control of a Vehicle174
Controls
Steering Wheel 121
Convenience Net 82

Index	323
-------	-----

Convertible Top 34
Convex Mirrors25
Coolant
Engine Temperature Gauge
Engine Temperature Warning Light 100
Cooling 167
Cooling System 252
Courtesy Lamps116
Coverage Explanations142
Cruise Control
Light 103
Cupholders
Curb View Camera
Cybersecurity
D
-
Danger, Warning, and Caution1
Dashboard
Data Collection
Infotainment System 318
Data Recorder
Performance 148
Database Coverage Explanations142
Daytime Running Lamps (DRL)113
Declaration of Conformity
Certification Information 312

Defensive Driving174 Delayed Locking17

Destination	
Digital	
Audio Broadcast (DAB) Radio 126	
Disabled Vehicle	
Transporting	
Distracted Driving	
Diversity Antenna System128	
Door	
Ajar Light 103	
Delayed Locking17	
Locks	
Drive Belt Routing, Engine	
Driver	
Assistance Systems 223	
Information Centre (DIC) 103	
Mode Control 210	
Mode Control Light 101	
Driving	
Better Fuel Economy173	
Competitive	
Defensive 174	
Distracted173	
Hill and Mountain Roads 187	
If the Vehicle is Stuck 188	
Loss of Control 176	
Off-Road Recovery175	
Track Events and Competitive 176	

Driving (cont'd)
Vehicle Load Limits 189
Wet Roads 186
Winter 187
Dual
Automatic Climate Control System 167
Clutch Gearbox 198
Clutch Gearbox Fluid 249
Clutch Gearbox Fluid Life System 249
Dual Clutch Transmission
Manual Mode 201
F
eCall
Overview
Flectric
Brake Boost 205
Parking Brake
Parking Brake Light
Electrical
Equipment, Add-On 231
System Overload
Electrical System
Fuses and Circuit Breakers 265
Instrument Panel Fuse Block 265
Rear Compartment Fuse Block
Electronic Stability Control (ESC) Off
Light

324 Index Engine Air Cleaner/Filter 251 Air Filter Life System 250 Check Light (Malfunction Indicator) 96 Compartment Overview 237

eneck Light (Manufaction maleator) 50	
Compartment Overview 237	
Coolant Temperature Gauge	
Coolant Temperature Warning	
Light 100	
Cooling System 252	
Drive Belt Routing	
Exhaust 197	
Oil Life System248	
Oil Pressure Light 102	
Overheating	
Power Messages 109	
Running While Parked 198	
Starting 194	
Engine Compartment Lamp116	
Entry Lighting116	
Exit Lighting116	
Extended Parking 197	
Exterior	
Light Controls 112	
Lighting Battery Saver 117	
Lights Off Reminder 112	

F
Filter
Engine Air Cleaner 251
Flash-to-Pass113
Flat Tyre 285
Floor Mats
Fluid
Brakes
Dual Clutch Transmission
Dual Clutch Transmission Life
System 249
Washer 256
Fog Lamp Light
Rear 103
Fog Lamps
Rear 115
Folding Mirrors25
Front
Air Dam 192
Heated and Ventilated Seats
Lift System 216
Lift System Light 97
Fuel
Additives 229
Economy, Driving for Better173
Filling a Portable Fuel Container 231
Filling the Tank 229
Gauge 92

Fuel (cont'd)
Management, Active 196
Prohibited Fuels 229
Recommended 229
Top Tier
Fuses
Fuses and Circuit Breakers
Instrument Panel Fuse Block 265
Rear Compartment Fuse Block
G
Garage Door Opener
Programming 109
Gas Strut(s) 263
Gauges
Engine Coolant Temperature
Fuel
Mileometer 92
Rev Counter 92
Speedometer 92
Transmission Temperature
Trip Odometer
Warning Lights and Indicators
Gear Shifting Light
General Information
Service and Maintenance
Towing 231
Vehicle Care 234

Global Positioning System (GPS)141	Hill Start Assist (HSA)	K
Glove Box	Horn	Keys7
Guidance	How to Wear Seat Belts Properly46	Remote
Problems with the Route 142	HVAC 167	Remote Operation 8
н	1	L
Hatch	If the System Needs Service142	Lamps
Hazard Warning Flashers114	Ignition Positions 193	Courtesy
Head Restraints40	Indicator and Lane-Change Signals114	Daytime Running (DRL)
Head-Up Display (HUD) 105	Indicators	Engine Compartment116
Headlamps	Warning Lights and Gauges	Exterior Controls 112
Aiming	Infants and Young Children, Restraints 66	Exterior Lamps Off Reminder
Automatic 113	Infotainment	Exterior Lighting Battery Saver 117
Daytime Running Lamps (DRL) 113	Using the System 122	Flash-to-Pass
Flash-to-Pass 113	Infotainment System	Main/Dipped Beam Changer 112
Lamps On Reminder 103	Inspection	Malfunction Indicator (Check
Levelling Control114	Multi-Point Vehicle	Engine)
Main-Beam On Light 102	Instrument Cluster 89	On Reminder 103
Main/Dipped Beam Changer 112	Instrument Panel Overview	Reading
Heated	Interior Rearview Mirrors	Rear Fog 115
Mirrors	Introduction1, 118	Lap-Shoulder Belt48, 51
Steering Wheel 84	ISOFIX Child Restraint Systems	LED Lighting264
Ventilated Front Seats 44	J	Levelling Control
Heating 167	Jack	Headlamp114
High-Speed Operation	Auxiliary	Lifting the Vehicle, Tyres
Hill	Jump	Lighting
Rollback Control 210	Starting	Entry
Hill and Mountain Roads187	Starting	Exit

326IndexLighting (cont'd)

Illumination Control 115	
LED	
lights	
Airbag Readiness	
Antilock Brake System (ABS)	
Warning	
Brake System Warning	
Charging System	
Check Engine (Malfunction	
Indicator)	
Cruise Control Light 103	
Door Ajar 103	
Driver Mode Control 101	
Electric Parking Brake	
Electronic Stability Control	
(ESC), Off 100	
Engine Coolant Temperature	
Warning	
Engine Oil Pressure 102	
Front Lift System 97	
Gauges and Indicators 88	
Gear Shifting	
Main-Beam On 102	
Rear Fog Lamp 103	
Seat Belt Reminders	
Security	
Service Electric Parking Brake 98	

Lights (cont'd)
Traction Control System
(TCS)/Electronic Stability Control
Light 100
Traction Off 99
Tyre Pressure 101
Lights, Hazard114
Limited-Slip Differential 220
Locking Systems, Anti-theft 24
Locks
Automatic Door 17
Delayed Locking17
Door15
Lockout Protection17
Loss of Control 176
Low-Profile Tyres 272
Lumbar Adjustment41
Front Seats 41
Μ
Main-Beam On Light 102
Maintenance Schedule 301
Recommended Fluids and
Lubricants 305
Malfunction Indicator Lamp96
Manual
Mode 201
Map Data Updates142

Maps134 Media
Avoiding Untrusted Devices 128
Memory Seats
Messages
Engine Power 109
Vehicle
Vehicle Speed 109
Mileometer
Trip
Mirrors
Automatic Dimming
Automatic Dimming Rear View 27
Convex 25
Folding 25
Heated
Interior Rearview27
Manual Rearview
Power
Rear Camera 27
Tilt in Reverse
Mode
Driver Control 210
Monitor System, Tyre Pressure 276
Multi-Point Vehicle Inspection (MPVI) 303

		Index 327
N	Parking	Pregnancy, Using Seat Belts
Navigation Destination	Brake and P (Park) Mechanism Check	Privacy Vehicle Data Recording
Symbols 135	Extended 197	Problems with Route Guidance142
Using the System 132	Over Things That Burn 196	Prohibited Fuels 229
Net, Convenience 82 New Vehicle Running-In 191	Parking or Reversing Assistance Systems	R
5	Passenger	Radiator
O Off-Road	Airbag Status Indicator	Radio AM-FM Radio
Recovery	Compartment Air Filter	Data System (RDS)127
Oil	Sensing System 59 Performance	Digital Audio Broadcast (DAB) 126
Engine	Data Recorder (PDR) 148	Frequency Identification (RFID) 312 Reception127
Engine Oil Life System	Gearbox Active	Reading Lamps116
Older Children, Restraints	Phone Apple CarPlay and Android Auto157	Rear
Outlets	Bluetooth 157	Camera Mirror
Power	Port	Cross Traffic Alert (RCTA) System 227 Fog Lamps115
Overview	USB	Storage
Instrument Panel 3	Positioning Vehicle141	Vision Camera (RVC) 224
Р	Power	Windows
Panel, Roof31	Mirrors 25	Rear View Mirrors
Park	Outlets	Reclining Seat Backrests
Assist	Protection, Battery 117 Retained Accessory (RAP) 195	Recognition
Shifting Out of 196	Seat Adjustment	Voice 142
-	Windows 29	

Index 328

Recommended
Fuel 229
Recommended Fluids and Lubricants 305
Remote
Key 8
Key Operation8
Vehicle Start13
Replacement Parts
Airbags 65
Maintenance 306
Replacing
Airbag System 65
Seat Belt System Parts after a Crash 55
Restraints
Where to Put 70
Retained Accessory Power (RAP) 195
Rev Counter
Reverse Tilt Mirrors
Ride Control Systems
Enhanced Traction System (ETS) 220
Roads
Driving, Wet 186
Roof
Panel
Rotation, Tyres
Routing, Engine Drive Belt
Run-Flat Tyres 272

Running-In, New Vehicle191
S
Safety System Check 54
Seat Belts 45
Care 54
How to Wear Seat Belts Properly 46
Lap-Shoulder Belt48, 51
Reminders 93
Replacing after a Crash 55
Use During Pregnancy 54
Seats
Head Restraints 40
Heated and Ventilated, Front
Lumbar Adjustment, Front 41
Memory 42
Power Adjustment, Front
Reclining Seat Backrests
Securing Child Restraints75, 77
Security
Light 102
Vehicle 22
Vehicle Alarm 22
Service
Accessories and Modifications 234
Doing Your Own Work 236
Electric Parking Brake Light
Maintenance, General Information 300

Service (cont'd)	
Parts Identification	308
Servicing System	142
Servicing the Airbag	63
Settings	
Shifting	
Into Park	195
Out of Park	196
Side Blind Zone Alert (SBZA)	227
Signals, Turn and Lane-Change	
Software Updates	
Specifications and Capacities	
Speedometer	
Start Assist, Hill	
Start Vehicle, Remote	13
Starting the Engine	
Steering	
Heated Wheel	
Wheel Adjustment	
Wheel Controls	
Storage	
Centre Console	82
Compartments	
Convenience Net	82
Cupholders	
Glove Box	
Rear	

Storage Areas	Traction	Tyres (cont'd)
Underhood	Control System (TCS)/Electronic	Pressure Monitor Operation 277
Struts	Stability Control Light	Pressure Monitor System 276
Gas	Control/Electronic Stability Control 208	Rotation
Stuck Vehicle	Limited-Slip Differential	Run-Flat 272
Summer Tyres 273	Off Light	Wheel Alignment and Tyre Balance 283
Sun Visors	Trademarks and Licence Agreements161	Wheel Replacement
Symbols2	Transmission	When It is Time for New Tyres 281
Navigation 135	Dual Clutch 198	Winter
System	Dual Clutch Fluid249	u
Airbag 55	Dual Clutch Fluid Life System	Underhood
Brake Pad Life 259	Performance, Active	
Driver Assistance 223	Temperature Gauge	Compartment Overview
Engine Air Filter Life 250	Transporting	Storage
Front Lift	a Disabled Vehicle	Universal Remote System
Global Positioning141	Triangle, Warning 82	Operation 111
Infotainment	Trip Odometer	Programming 109
Rear Cross Traffic Alert 227	Tyres	Updates
	Buying New Tyres 281	Map Data 142
	Chains	Software 124
heft-Deterrent Systems	Competition Oriented 273	USB Port
lime	Different Size	Using
Гор Tier Fuel 228	If a Tyre Goes Flat	Infotainment System 122
lowing	Inspection	Navigation System 132
General Information 231	•	v
Frack Events and Competitive Driving 176	Lifting the Vehicle	Vehicle
	Low-Profile	
	Pressure 274, 275	Alarm System 22
	Pressure Light 101	Control 174

renicie				
Alarm System	 	 	 	22
Control	 	 	 [.]	174

Index

329

330 Index

Vehicle (cont'd)
Data Recording and Privacy
Identification Number (VIN)
Load Limits 189
Messages 108
Positioning141
Remote Start13
Security
Speed Messages 109
Symbols
Vehicle Care
Tyre Pressure 274
Ventilation, Air 170
Visors
Voice Recognition142

W

Warning	
Brake System Light	
Caution and Danger	1
Hazard Lights	
Lights, Gauges, and Indicators	88
Triangle	82
Washer Fluid	
Wheels	
Alignment and Tyre Balance	
Different Size	283

Wheels (cont'd)	
Replacement	283
When It Is Time for New Tyres	281
Where to Put the Restraint	70
Windows	29
Power	29
Rear	
Windshield	
Replacement	263
Wiper/Washer	84
Winter	
Driving	187
Tyres	271
Wiper	
Blade Replacement	262
Wireless Charging	86



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