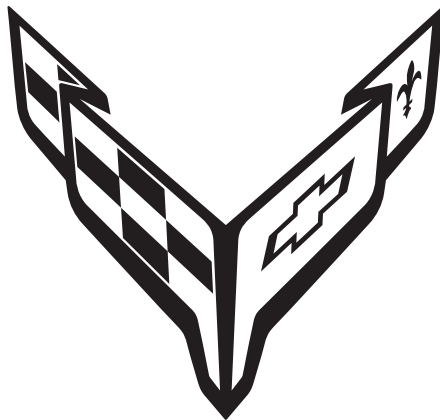




2024



CORVETTE

Owner's Manual

Highlighted For E-RAY



Contents

Introduction	1
Keys, Doors, and Windows	6
Seats and Restraints	38
Storage	70
Instruments and Controls	73
Lighting	109
Infotainment System	116
Climate Controls	149
Driving and Operating	154
Vehicle Care	230
Service and Maintenance	314
Technical Data	324
Customer Information	329
Reporting Safety Defects	337
OnStar	341
Connected Services	346
Index	349

Litho in U.S.A.
Part No. 84948178 A First Printing

Introduction California Proposition 65 Warning



WARNING

Operating, servicing and maintaining a passenger vehicle or off-highway motor vehicle can expose you to chemicals including engine exhaust, carbon monoxide, phthalates, and lead, which are known to the State of California to cause cancer and birth defects or other reproductive harm. To minimize exposure, avoid breathing exhaust, do not idle engine except as necessary, service your vehicle in a well-ventilated area and wear gloves or wash your hands frequently when servicing your vehicle. For more information go to www.P65Warnings.ca.gov/passenger-vehicle.

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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.

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

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

Canadian Vehicle Owners

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

Propriétaires Canadiens

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

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

Using this Manual

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

Danger, Warning, and Caution

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

Danger

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

Warning

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

Caution


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





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

Symbols

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


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


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


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


Vehicle Symbol Chart


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

 : Air Conditioning System


 : Air Conditioning Refrigerant Oil


 : Airbag Readiness Light

 : Antilock Brake System (ABS)

 : Brake System Warning Light

 : Carbon Monoxide

 : Dispose of Used Components Properly

 : Do Not Apply High Pressure Water

eAWD : **Electric All-Wheel Drive**


 : Engine Coolant Temperature

 : Flame/Fire Prohibited

 : Flammable

 : Fuse Block Cover Lock Location

 : Fuses


 : **Hybrid Battery Charging (Charge+)**

 : ISOFIX/LATCH System Child Restraints


 : Keep Fuse Block Covers Properly Installed


 : Lane Keep Assist

 : Malfunction Indicator Lamp

 : Oil Pressure


 : Park Assist

 : Power

 : Rear Cross Traffic Alert

 : Registered Technician


 : Remote Vehicle Start

 : **Risk of Electrical Fire**

 : Seat Belt Reminders

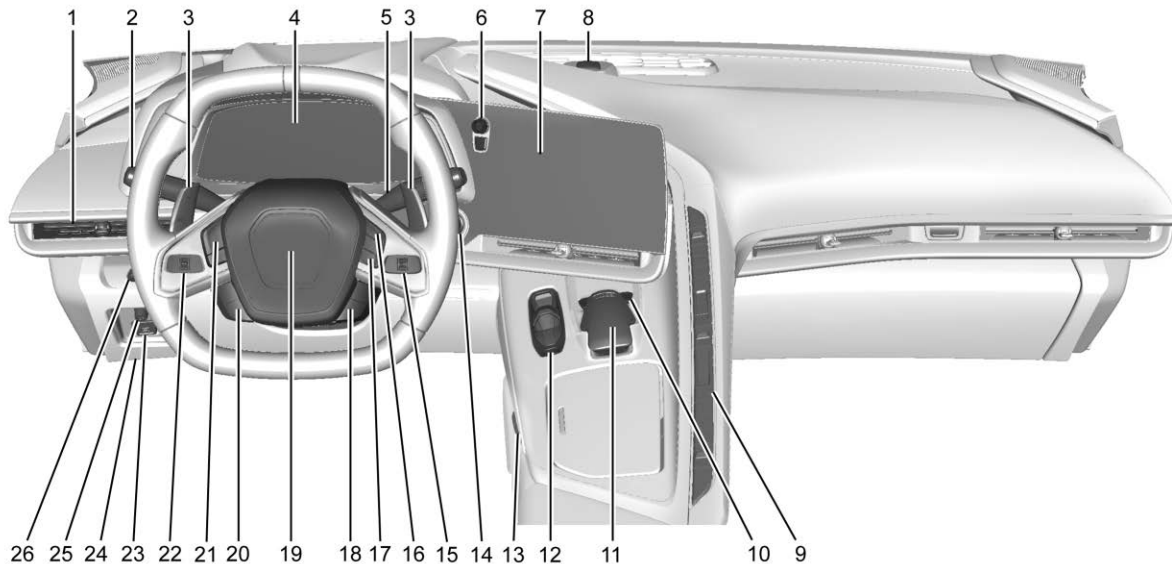
 : Side Blind Zone Alert

 : Tire Pressure Monitor

 : Traction Control/StabiliTrak/Electronic Stability Control (ESC)

 : Under Pressure

Instrument Panel Overview



1. *Air Vents* ⇨ 152.
2. *Turn Signal Lever*. See *Turn and Lane-Change Signals* ⇨ 112.
Exterior Lamp Controls ⇨ 109.
3. *Manual Shift Paddles*. See *Manual Mode* ⇨ 186.
4. *Instrument Cluster* ⇨ 80.
5. *Windshield Wiper/Washer* ⇨ 74.
6. *Volume Control Knob and Infotainment Home Button*. See *Overview* ⇨ 117.
7. *Infotainment Display*. See *Using the System* ⇨ 120.
8. *Alarm System Indicator Light*. See *Vehicle Alarm System* ⇨ 22.
Light Sensor. See *Automatic Headlamp System* ⇨ 111.
9. *Dual Automatic Climate Control System* ⇨ 149.
Driver and Passenger Heated and Ventilated Seat Controls (If Equipped). See *Heated and Ventilated Front Seats* ⇨ 43.
10. *Traction Control/Electronic Stability Control* ⇨ 193.
Curb View Camera (If Equipped). See *Assistance Systems for Parking or Backing* ⇨ 214.
Front Lift System Control (If Equipped). See *Front Lift System* ⇨ 204.
11. *Driver Mode Control* ⇨ 195.
12. *Shift Switches*. See *Dual Clutch Transmission* ⇨ 183.
13. **Hybrid Battery Charging (Charge+)**. See *Driver Mode Control* ⇨ 195.
Auto Stop Disable Switch. See *Stop/Start System* ⇨ 179.
14. *Keyless Ignition*. See *Ignition Positions* ⇨ 177.
15. *Driver Information Center (DIC) Controls*. See *Driver Information Center (DIC)* ⇨ 98.
16. *Heated Steering Wheel* ⇨ 74 (If Equipped).
17. *Bluetooth Controls*. See *Steering Wheel Controls* ⇨ 119.
Voice Recognition Controls. See *Steering Wheel Controls* ⇨ 119.
18. *Volume Control Buttons*. See *Steering Wheel Controls* ⇨ 119.
19. *Horn* ⇨ 74.
20. *Favorites Select Buttons*. *Steering Wheel Controls* ⇨ 119.
21. *Z-Mode Control*. See *Driver Mode Control* ⇨ 195.
Forward Collision Alert (FCA) System ⇨ 217.
22. *Cruise Control* ⇨ 211.
23. *Electric Parking Brake* ⇨ 191.
24. *Data Link Connector (DLC) (Out of View)*. See *Malfunction Indicator Lamp (Check Engine Light)* ⇨ 89.
25. *Instrument Panel Illumination Control* ⇨ 113.
26. *Head-Up Display Controls (If Equipped)*. See *Head-Up Display (HUD)* ⇨ 101.

How Does an Airbag Restrain?

In moderate to severe 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?* ⇨ 54.

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 realize 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?* ⇨ 53.

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 people from leaving the vehicle.

Warning

When an airbag inflates, there may be dust in the air. This dust could cause breathing problems for people with a history of asthma or other breathing trouble. To avoid this, everyone in the vehicle should get out as soon as it is safe to do so. If you have breathing problems but cannot get out of the vehicle after an airbag inflates, then get fresh air by opening a window or a door. If you experience breathing problems following an airbag deployment, you should seek medical attention.

The vehicle has a feature that may automatically unlock the doors, turn on the interior lamps and hazard warning flashers, and shut off the fuel system after the

airbags inflate. The feature may also activate, without airbag inflation, after an event that exceeds a predetermined threshold. After turning the vehicle 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.

In the event of a crash with airbag inflation, a vehicle equipped with a hybrid drive unit (E-Ray) propulsion system will be disabled to prevent the risk of electrical shock. The vehicle will not be drivable and must be towed to a dealership for repair.

Warning

A crash severe enough to inflate the airbags may have also damaged important functions in the vehicle, such as the fuel, electrical, braking and steering systems.

(Continued)

Warning (Continued)

- For vehicles equipped with a hybrid drive unit (E-Ray) propulsion system, do not attempt to drive the vehicle. Always have the vehicle towed to a dealership for repair.
- For other vehicles, even 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 and drive after a crash has occurred.

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

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

- The vehicle has a crash sensing and diagnostic module which records information after a crash. See *Vehicle Data Recording and Privacy* ⇨ 338 and *Event Data Recorders* ⇨ 339.
- 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

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.

PASSENGER AIR BAG**ON****OFF****United States****Canada and Mexico**

The words ON and OFF, or the symbols for on and off, will be visible during the system check.

When the system check is complete, either the word ON or OFF, or the symbol for on or off, will be visible. See *Passenger Airbag Status Indicator* ⇨ 88.

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.

Instruments and Controls

Controls

Steering Wheel Adjustment	74
Heated Steering Wheel	74
Horn	74
Windshield Wiper/Washer	74
Compass	75
Clock	75
Power Outlets	76
Wireless Charging	77

Warning Lights, Gauges, and Indicators

Warning Lights, Gauges, and Indicators	79
Instrument Cluster	80
Speedometer	84
Odometer	84
Trip Odometer	84
Tachometer	84
Battery Gauge (High Voltage)	85
Stealth Drive Mode Capability Gauge	85
Fuel Gauge	85
Hybrid Battery Charging Light (Charge+)	86
Power Indicator Gauge	86
Engine Coolant Temperature Gauge	86
Transmission Temperature Gauge	87
Seat Belt Reminders	87
Airbag Readiness Light	88

Passenger Airbag Status Indicator	88
Charging System Light (12-Volt Battery)	89
Malfunction Indicator Lamp (Check Engine Light)	89
Front Lift System Light	91
Brake System Warning Light	91
Electric Parking Brake Light	91
Service Electric Parking Brake Light	92
Antilock Brake System (ABS) Warning Light	92
Performance Transmission Active	92
All-Wheel-Drive Light	93
Lane Keep Assist (LKA) Light	93
Automatic Emergency Braking (AEB) Disabled Light	93
Vehicle Ahead Indicator	93
Pedestrian Ahead Indicator	94
Traction Off Light	94
Traction Control System (TCS)/Electronic Stability Control Light	94
Electronic Stability Control (ESC) Off Light	94
Engine Coolant Temperature Warning Light	95
Driver Mode Control Light	95
Tire Pressure Light	96
Engine Oil Pressure Light	96
Low Fuel Warning Light	97
Auto Stop Indicator	97

Traffic Sign Indicator	97
Security Light	97
High-Beam On Light	98
Lamps On Reminder	98
Cruise Control Light	98
Door Ajar Light	98

Information Displays

Driver Information Center (DIC)	98
Head-Up Display (HUD)	101

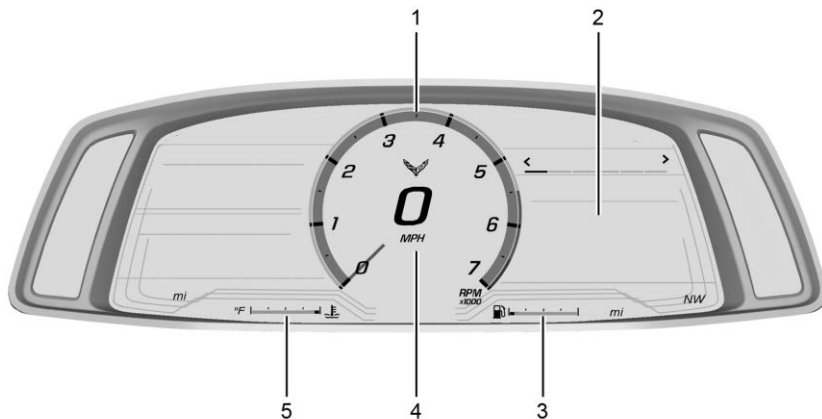
Vehicle Messages

Vehicle Messages	105
Engine Power Messages	105
Vehicle Speed Messages	106

Universal Remote System

Universal Remote System	106
Universal Remote System Programming	106
Universal Remote System Operation	108

Instrument Cluster



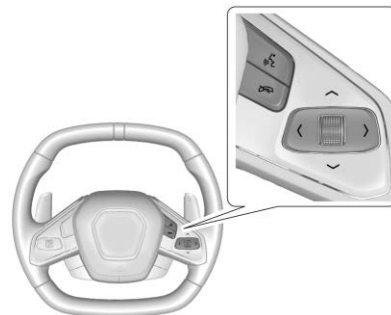
English Tour Mode Shown, Others and Metric Similar

- | | |
|---|--|
| <ol style="list-style-type: none"> 1. Tachometer ⇨ 84
Stealth Drive Mode Capability Gauge
⇨ 85 2. Driver Information Center (DIC) ⇨ 98 3. Fuel Gauge ⇨ 85
Power Indicator Gauge ⇨ 86 | <ol style="list-style-type: none"> 4. Speedometer ⇨ 84 5. Engine Coolant Temperature Gauge
⇨ 86
Battery Gauge (High Voltage) ⇨ 85 |
|---|--|

Cluster Menu

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

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



Press < or > to access the cluster applications. Use the thumbwheel to scroll ^ or v through the list of available features. Press the thumbwheel to select. Not all applications will be available on all vehicles.

- **Trip Computer/Performance/Maintenance:** The selected Driver Information Center (DIC) displays can be viewed. See *Driver Information Center (DIC)* ⇨ 98.
- Audio
- Options
- Simplify

Info Tiles

The following is the list of all possible info tiles that is shown on the left side of the speedometer. Depending on the vehicle, some may not be available. Information displayed here can be customized from the Options menu. See "Options" below.

Time & Temperature : Displays the current time and the current outside air temperature.

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

Shows history of the Average Fuel Economy from the last 100 km (62 mi). Each bar represents about 5 km (3 mi) of driving. When driving, the bars shift to reflect the most recent distance on the right side.

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.

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 12-Volt 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 spirited driving. Unknown may be displayed if tire temperature information is unavailable.

Tire Pressure shows the approximate pressures of all four tires. Tire pressure is displayed in either kilopascal (kPa) or in pounds per square inch (psi). If the pressure is low, the value for that tire is shown in amber. See *Tire Pressure Monitor System* ⇨ 287 and *Tire Pressure Monitor Operation* ⇨ 288.

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* ⇨ 210.

Wheel Slip : Shows the wheel slip percentage of the vehicle.

Front Lift : During a driver requested Front Lift (if equipped), the driver may "remember" using the <, 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 <, or dismiss the display by pressing the thumbwheel.

See *Front Lift System* ⇨ 204.

Brake Temperature : Shows overall temperature as either Normal, Warm, Hot, or Overheated. Normal is typical for normal driving while Warm is typical for spirited driving. Unknown may be displayed if tire temperature information is unavailable.

Lifetime Fuel Economy : Shows the instantaneous fuel economy over the lifetime of the vehicle.

Follow Distance : Shows the current follow time to the vehicle ahead is displayed as a time value.

Hybrid Battery Temperature : If equipped, displays the temperature of the high voltage battery which assists performance of the vehicle in either degrees Celsius (°C) or degrees Fahrenheit (°F).

Electric Power : If equipped, shows the power coming from the high voltage battery. When the power indicator is green, battery power is being charged. When the indicator is amber, the vehicle is using power to assist.

Hybrid Battery : If equipped, displays the high voltage battery charge status of the vehicle.

Hybrid Battery states:

- Red – No eAWD
- Yellow – Electric assist limited
- White – Normal state of charge range
- Blue – Maximum state of charge range

Audio

Use the thumbwheel to scroll through audio presets.

Options

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

Display Options

Press the thumbwheel to enter the Display menu. There are seven instrument cluster display configurations to choose from. Sport, Tour, Track, Weather, My Mode, Z-Mode, and Night. 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.

Night Mode is enabled when the Instrument Panel Illumination Control is set to the minimum level. See *Instrument Panel Illumination Control* ⇨ 113.

Shuttle Mode and Stealth Mode are enabled when either are selected in the Driver Mode Control before the vehicle is turned on. See *Driver Mode Control* ⇨ 195.

- 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.

- **Night:** Displays Coolant Temperature, Fuel Gauge, and Digital Speed.
- **Shuttle:** If equipped, displays Battery Gauge, Power Indicator Gauge, Odometer, and Digital Speed.
- **Stealth:** If equipped, displays Battery Gauge, Fuel Gauge, Electric Capability Gauge, Odometer, Drive Mode Indicator, and Digital Speed.

Preset info tiles shown on each layout:

Sport : G-Force, Oil Pressure

G-Force, Hybrid Battery

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

Hybrid Battery Temperature, Hybrid Battery, Oil Temperature, Tire Pressure & Tire Temperature

Tour : Time & Outside Air Temperature, Tire Pressure & Tire Temperature

Electric Power, Tire Pressure & Tire Temperature

Weather : Tire Pressure & Tire Temperature, Oil Temperature

Tire Pressure & Tire Temperature, Hybrid Battery

Z-Mode : G-Force, Oil Temperature Hybrid Battery, Electric Power

My Mode : Time & Outside Air Temperature, Oil Pressure

Electric Power, Oil Pressure

Night : None

Shuttle : None

Stealth : None

Info Titles Selection

Use the thumbwheel to select the items to be displayed in the display areas. See "Info Tiles" previously in this section.

If the maximum amount of info tiles has been selected, all deselected info tiles appear in an disabled state. If maximum amount of info tiles is not selected, all info tiles appear in an normal state and can be selected. In the default layout, the info tiles will be inserted from top to bottom. In the enhanced layout, the info tiles will be

inserted from top left to top right to bottom left to bottom right. Info tiles that are already occupied will be skipped.

Tachometer

Available in some Drive Modes, press the thumbwheel while Tachometer is displayed to enter the Tachometer menu. Choose Traditional or Numerical by pressing the thumbwheel while the desired item is highlighted. A selected mark will be displayed next to the selected item.

Traditional tachometer shows a linear gauge, and Numerical tachometer shows shift lights with numerical RPM.

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.

Tire Pressure

Use the thumbwheel to select the tire pressure warning thresholds. Choose Light, Eco, or Max by pressing the thumbwheel

while the desired item is highlighted. A selected mark will be displayed next to the selected item.

If the tire pressure readings need to be recalibrated at any time, this option initiates the Tire Pressure Relearn function. The selection of relearn opens a pop-up when the thumbwheel is pressed for five seconds.

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 \triangleright 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 select 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 either kilometers per hour (km/h) or miles per hour (mph).

Odometer

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

Trip Odometer

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

The trip odometer is accessed and reset through the Driver Information Center (DIC). See *Driver Information Center (DIC)* ⇨ 98.

Tachometer

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.

Battery Gauge (High Voltage)

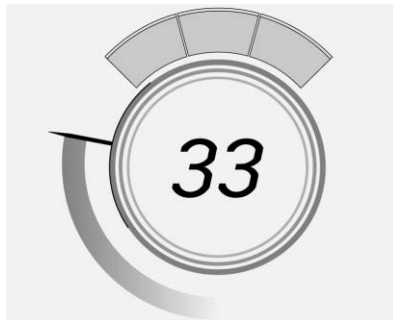


This displays the high voltage battery state of charge, and is shown in the Shuttle and Stealth mode. The value at the left is an estimate of how much high voltage battery state of charge remains.

The fill bars shown inside of the gauge indicate the percentage of state of charge value shown at the left.

When the high voltage battery state of charge level is depleted, the gauge will change color to red. Additional alerts may display at low state of charge.

Stealth Drive Mode Capability Gauge

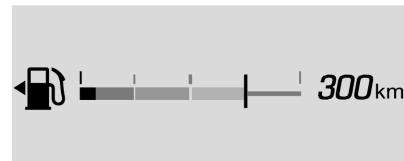


The electric power indicator gauge is in the middle of the display to the left of the speedometer, and is shown in the Stealth mode.

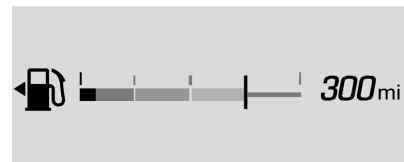
This gauge displays the propulsion capability of the high voltage battery and electric motor. The needle on the gauge moves toward the top of the gauge as the accelerator pedal is pressed and the vehicle speed increases. The engine will automatically start when the electric capability is exceeded or when the vehicle exceeds 73 km/h (45 mph). When the engine starts, a series of red, yellow, and green

messages will appear over the speedometer displaying the progress. The Driver Information Center (DIC) also displays a message. See “Stealth Drive Mode” in *Driver Mode Control* ⇨ 195.

Fuel Gauge



Metric



English

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 refueled 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.
- Take a few seconds to stabilize 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.

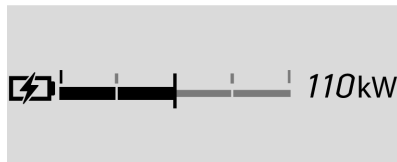
Hybrid Battery Charging Light (Charge+)



If equipped, this light comes on when the Charge+ Switch is pressed and indicates the increase to the high voltage battery charge. The state of charge status is displayed in the HYBRID BATTERY info tile. See "Info Tiles" in *Instrument Cluster* ⇨ 80.

Hybrid Battery Charging (Charge+) will display messages in the Driver Information Center (DIC). See *Driver Mode Control* ⇨ 195.

Power Indicator Gauge



The electric power indicator gauge is in the bottom of the display to the right of the speedometer, and is only shown in the Shuttle mode.

This gauge displays the instantaneous consumption power of the high voltage battery. Maximum power consumption is available when the high voltage battery is fully charged.

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* ⇨ 260 for more information.

- Manual Launch has been enabled. See “Manual Launch” under *Manual Mode* ⇨ 186.

All-Wheel-Drive Light

eAWD

This light is red when the electric all-wheel drive (eAWD) system is unavailable.

If the light comes on and stays on, there may be a malfunction. See your dealer.

See *All-Wheel Drive* ⇨ 190.

Lane Keep Assist (LKA) Light



If equipped, the Lane Keep Assist Light may display the following colors:

- Blank: LKA is disabled.

- White: Appears when the vehicle starts. A steady white light indicates that LKA is not ready to assist.
- Green: Appears when LKA is turned on and ready to assist. LKA will gently turn the steering wheel if the vehicle approaches a detected lane marking.
- Amber: Appears when LKA is active. The light flashes amber as a Lane Departure Warning (LDW) alert to indicate that the lane marking has been unintentionally crossed. If the system detects you are steering intentionally (to pass or change lanes), the LDW alert may not display.

LKA will not assist or alert if the turn signal is active in the direction of lane departure, or if LKA detects that you are accelerating, braking, or actively steering. See *Lane Keep Assist (LKA)* ⇨ 224.

Automatic Emergency Braking (AEB) Disabled Light



This indicator displays when you turn off Automatic Emergency Braking (AEB) or Front Pedestrian Braking (FPB).

This indicator will also display if AEB or FPB is unavailable due to malfunction, weather conditions, or if the windshield is not clean.

See *Automatic Emergency Braking (AEB)* ⇨ 219.

See *Front Pedestrian Braking (FPB) System* ⇨ 220.

Vehicle Ahead Indicator



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

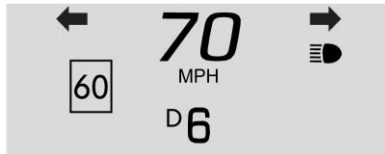
See *Forward Collision Alert (FCA) System* ⇨ 217.

HUD Views

There are five views in the HUD. Some vehicle information and vehicle messages or alerts are available in all views:



Metric



English

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* ⇨ 195.



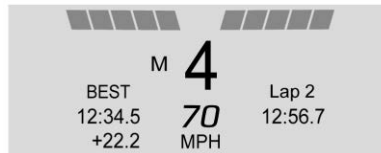
Metric



English

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* ⇨ 195.

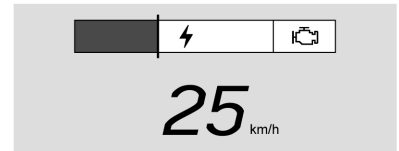


Track : Displays the vehicle speed, gear position, shift lights, and current/best lap times. This includes Gain/Loss of Current Lap compared to Best Lap.

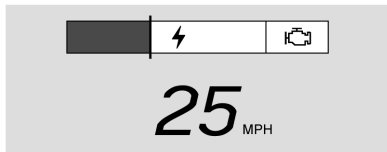
Track view is only available in My Mode or Z-Mode. See *Driver Mode Control* ⇨ 195.



Navigation : If equipped, displays turn-by-turn navigation information when navigation is active and an upcoming maneuver is pending. It appears until the maneuver is complete, then the HUD image returns to the previous view.



Metric



English

Stealth : Displays the vehicle speed and the battery capability gauge. This includes the battery propulsion capability of the vehicle. Stealth view is only available in Stealth Mode. See *Driver Mode Control* ⇨ 195.

Interrupts

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

- Incoming call information
- Vehicle alerts
- Audio selections

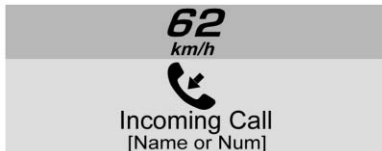


Metric

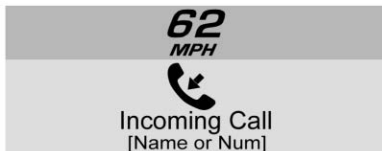


English

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

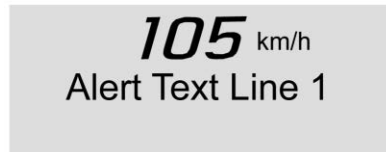


Metric

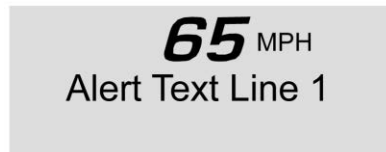


English

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



Metric



English

Vehicle Alerts : You can dismiss alerts in the instrument cluster. All alerts are not displayed in the HUD.

Care of the HUD

Clean the inside of the windshield to remove any dirt or film that could reduce the sharpness or clarity of the HUD image.

the turn signal flashes three times. If more flashes are desired, continue to hold the lever.

The lever 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.

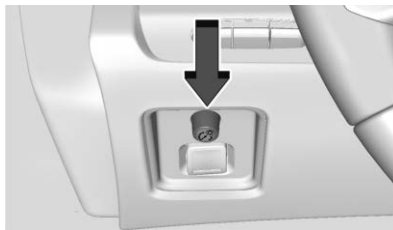
Turn Signal on Chime

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

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

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 counterclockwise to brighten or dim the lights.


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

Lighting Stealth Mode

Stealth mode is only available at night. To enable Stealth mode, turn the knob to the OFF position. In Stealth mode, the only graphics visible on the instrument cluster

are the coolant temperature, energy usage, digital speed, and any active telltales or alerts.


Courtesy Lamps

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

The hatch/trunk lamps only come on when the rear compartment is opened.

Reading Lamps



If equipped, the reading lamps are in the overhead console. The lamps go on when any door is opened,  on the remote key is pressed, or when the vehicle is turned off.

Press the lamp buttons to manually turn on or off each lamp.

E-Ray Stealth and Shuttle Modes Climate Control Operation

Climate controls, including defrost, are not functional while in Stealth and Shuttle modes. Heated seats and steering wheel and ventilated seats will remain functional.

If heat, A/C, or defrost controls are pressed while in Stealth Mode, the engine will automatically start and the climate controls will be active. See *Driver Mode Control* ⇨ 195.

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 windshield that may block the flow of air into the vehicle.
- Clear snow off the hood 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* ⇨ 315.

Caution

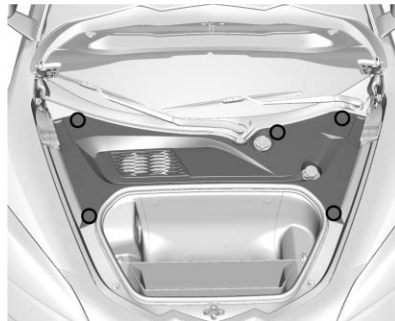
Driving without a passenger compartment air filter in place can cause water and small particles, like paper and leaves, to be pulled into your climate control system which may cause damage to it. Make sure you always replace the old filter with a new one.

The passenger compartment air filter is located under the hood between the battery and windshield. See *Underhood Compartment Overview* ⇨ 234.

To check or replace the air filter:



1. Release the four clips for the left and right outer covers.



Driving and Operating

Driving Information

Driving for Better Fuel Economy	155
Distracted Driving	155
Defensive Driving	156
Impaired Driving	156
Control of a Vehicle	156
Braking	156
Steering	157
Off-Road Recovery	158
Loss of Control	158
Track Events and Competitive Driving	159
Driving on Wet Roads	170
Hill and Mountain Roads	170
Winter Driving	171
If the Vehicle Is Stuck	172
Vehicle Load Limits	173

Starting and Operating

New Vehicle Break-In	176
Front Air Dam (and Splitter)	176
Composite Materials	176
Ignition Positions	177
Starting the Engine	178
Stop/Start System	179

Retained Accessory Power (RAP)	180
Shifting Into Park	180
Shifting out of Park	181
Parking over Things That Burn	181
Active Fuel Management	181
Extended Parking	182

Engine Exhaust

Engine Exhaust	182
Running the Vehicle While Parked	183

Dual Clutch Transmission

Dual Clutch Transmission	183
Manual Mode	186

Drive Systems

All-Wheel Drive	190
-----------------------	-----

Brakes

Electric Brake Boost	191
Antilock Brake System (ABS)	191
Electric Parking Brake	191
Brake Assist	192
Hill Start Assist (HSA)	193
Regenerative Braking	193

Ride Control Systems

Traction Control/Electronic Stability Control	193
Hill Rollback Control	195
Driver Mode Control	195
Front Lift System	204
Performance Driving	205
Limited-Slip Differential	210

Cruise Control

Cruise Control	211
----------------------	-----

Advanced Driver Assistance Systems

Advanced Driver Assistance Systems ...	213
Assistance Systems for Parking or Backing	214
Rear Vision Camera (RVC)	214
Curb View Camera	216
Park Assist	216
Rear Cross Traffic Alert (RCTA) System	217
Assistance Systems for Driving	217
Forward Collision Alert (FCA) System	217
Automatic Emergency Braking (AEB) ...	219
Front Pedestrian Braking (FPB) System	220
Side Blind Zone Alert (SBZA)	222
Lane Keep Assist (LKA)	224

Track Events and Competitive Driving

All Z06 models, E-Ray models equipped with the ZER performance package, and 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.

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, 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 *Performance Driving* ⇨ 205.

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 Break-In* ⇨ 176.

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
(Continued)

Warning (Continued)

tightened can cause the wheels to become loose or come off, resulting in a crash. See *Capacities and Specifications* ⇨ 325 for wheel nut torque specifications.

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)* ⇨ 245 or *Engine Oil (6.2L LT2 Engine)* ⇨ 248.

160 Driving and Operating

Check the oil level often during track events and competitive driving. See "Checking the Engine Oil" in *Engine Oil (5.5L LT6 Engine)* ⇨ 245 or *Engine Oil (6.2L LT2 Engine)* ⇨ 248.

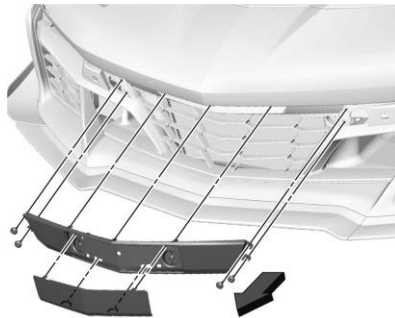
Engine Cooling

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 optimize engine performance.



For vehicles with the optional Grille Screen Guards (VWE), remove them for track events when the ambient temperature reaches 32° C (90° F) or higher. See your dealer for complete procedure.



If equipped, remove the front license plate and bracket (if installed) and remove the front aero covers before track use. See your dealer for complete procedure.

Fuel

Unleaded gasoline, rated at 93 octane or higher, is required.

Caution

Some high octane fuels contain additives and compounds that may damage the vehicle and void the vehicle warranty. See *Prohibited Fuels* ⇨ 226.

Dual Clutch Transmission (DCT) Fluid

The transmission 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 transmission fluid life monitor that remaining fluid life is low.

With the transmission at factory fluid fill, there is no additional fluid needed for track usage. Any transmission level set or change should be performed at your dealer.

Front Hybrid Drive Unit Fluid (E-Ray)

If equipped, the front hybrid drive unit fluid should be changed after every 15 hours of track use. This procedure can be complex, see your dealer.

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 Z06 and E-Ray with Available J57 Carbon Ceramic Brakes

This brake burnish procedure should only be run on Z06 and E-Ray vehicles with J57 factory equipped brake systems.

Perform this procedure only on dry pavement, in a safe manner, and in compliance with all local and state ordinances regarding motor vehicle operation.

1. 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.

2. 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 and E-Ray Carbon Ceramic) Brakes

This brake burnish procedure should be run on vehicles with the Z51 with J55, Z06 with J56, or Z06 and E-Ray 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

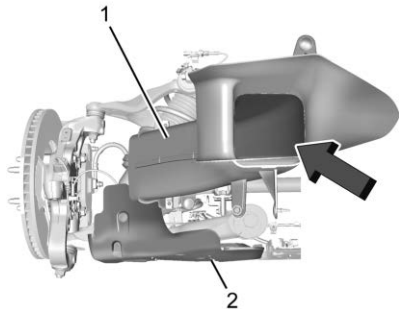
Before any track event, high speed driving event, or competitive driving, the following should be completed:

- 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. Removing the

164 Driving and Operating

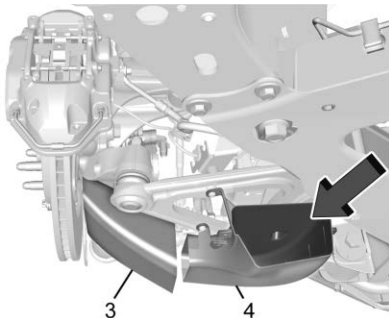
ducts helps prevent debris from being channeled into the rear brakes during regular use of the vehicle.

- 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

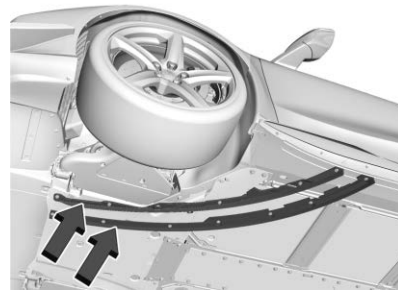


Right Side Rear Shown, Left Side Rear Similar

3. Rear Knuckle Mounted Cooling Duct
4. Rear Lower Control Arm Cooling Duct

Aerodynamics

Underbody Strake Inspection (For Z06 Vehicles With Spoiler Regular Production Options (RPO) TOF or TOG)



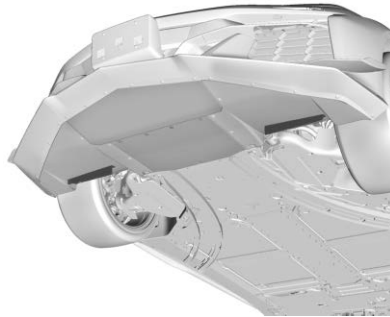
Left Side Shown, Right Side Similar

For optimal aero performance, ensure the front strakes are solidly attached to the underbody and damage free. If not, replace with service parts.

Corvette Z06 and E-Ray 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 optimized 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.

166 Driving and Operating

RPO Code	Street Driving – Recommended Aerodynamic Configuration		Track Driving – Recommended Aerodynamic Configuration	
	Front	Rear	Front	Rear
Z06 and E-Ray with ZER	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.
Z06 and E-Ray with ZER and CFV/CFZ (Carbon Fiber Ground Effects)	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 (Carbon Fiber Ground Effects) and TOG/TOF (Carbon Aero Package)	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.
Z06 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.

RPO Code	Street Driving – Recommended Aerodynamic Configuration		Track Driving – Recommended Aerodynamic Configuration	
	Front	Rear	Front	Rear
E-Ray with ZER and XFR Tire	Front underwing stall Gurney flaps installed. Front fascia aero cover installed.	Short rear spoiler (from factory) installed. No rear lower control arm brake duct.	No change.	Short rear spoiler (from factory) installed. Install 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.

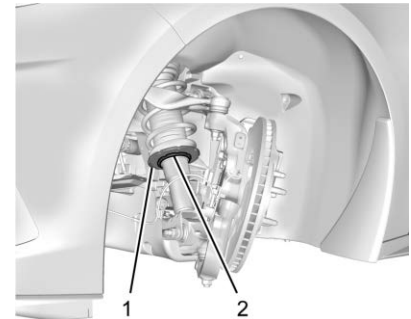
The spring seat can be adjusted approximately 20 mm (0.8 in) up or down from the nominal position. Each complete turn of the spring seat will change the vehicle height approximately 1.5 mm (0.06 in). When adjusting the seat to the upper limit, lift the dust boot and ensure the seat does not thread off 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.
5. 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 *Tire Pressure for High-Speed Operation* ⇨ 286 for high speed non-track use.

Load Limit (Z06 and E-Ray)

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.

Z06 – Cold Tire Pressure Requirement: Inflate tires to no less than 210 kPa (30 psi) front and rear, cold.

E-Ray – Cold Tire Pressure Requirement: Inflate tires to no less than 180 kPa (26 psi) front and rear, cold.

Hot Tire 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 Tire Pressure Requirement: Inflate tires to no less than 165 kPa (24 psi) front and rear, cold.

Hot Tire Pressure Target Range:
220 – 240 kPa (32-35 psi).

See *Tire Pressure for High-Speed Operation* ⇨ 286 for high speed non track use.

Wheel Alignment

Caution

Using these wheel alignment settings may cause excessive tire wear. Only use these wheel alignment settings for racing or competitive driving. Excessive tire 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

E-Ray with ZER and Performance Tire

1. Upper control arm washers should not have to be moved except in rare cases for the front suspension. Only if the camber cannot be fully achieved with the cam bolt positions.
2. Adjust the lower control arm cam bolt position to achieve the following specifications:

Front (per corner)

- Caster: +8.0 degrees
- Camber: -2.75 degrees
- Toe (total): +0.10 degrees toe in

Rear (per corner)

- Caster: 0 degrees
- Camber: -2.0 degrees
- Toe (total): +0.10 degrees toe in
- Thrust Angle: 0.0 degrees

Z06 or E-Ray with Z07 Performance Package Equipped with Carbon Fiber Wheels (RPOs ROY, ROZ, and STZ)

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 rotor. 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 still 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.

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.

(Continued)

Warning (Continued)

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.

Hydroplaning

Hydroplaning is dangerous. Water can build up under the vehicle's tires so they actually ride on the water. This can happen if the road is wet enough and you are going fast enough. When the vehicle is hydroplaning, it has little or no contact with the road.

There is no hard and fast rule about hydroplaning. The best advice is to slow down when the road is wet.

Other Rainy Weather Tips

Besides slowing down, other wet weather driving tips include:

- Allow extra following distance.
- Pass with caution.
- Keep windshield wiping equipment in good shape.
- Keep the windshield washer fluid reservoir filled.
- Have good tires with proper tread depth. See *Tires* ⇨ 278.
- 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.

⚠ 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 center 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 grades, passing or no-passing 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 tires and the road creates less traction or grip, so drive carefully. Wet ice can occur at about 0 °C (32 °F) when freezing rain begins to fall. Avoid driving on wet ice or in freezing rain until roads can be treated.

For Slippery Road Driving:

- Accelerate gently. Accelerating too quickly causes the wheels to spin and makes the surface under the tires slick.
- Turn on Traction Control. On E-Ray, the electric all-wheel drive system (eAWD) automatically engages when wheel slip is detected. See *Traction Control/Electronic Stability Control* ⇨ 193 and *All-Wheel Drive* ⇨ 190.

- The Antilock Brake System (ABS) improves vehicle stability during hard stops, but the brakes should be applied sooner than when on dry pavement. See *Antilock Brake System (ABS)* ⇨ 191.
- Turn off cruise control.
- Turn on Weather Mode. See *Driver Mode Control* ⇨ 195.
- Allow greater following distance and watch for slippery spots. Icy patches can occur on otherwise clear roads in shaded areas. The surface of a curve or an overpass can remain icy when the surrounding roads are clear. Avoid sudden steering maneuvers and braking while on ice.

Cold Weather Mode

In very low temperatures, a cold weather message may display on the Driver Information Center (DIC). The engine speed, transmission 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. If possible, use Roadside Assistance. See *Roadside Assistance Program* ⇨ 332. To get help and keep everyone in the vehicle safe:

- Turn on the hazard warning flashers.
- Tie a red cloth to an outside mirror.

Warning

Snow can trap engine exhaust under the vehicle. This may cause exhaust gases to get inside. Engine exhaust contains carbon monoxide (CO), which cannot be seen or smelled. It can cause unconsciousness and even death.

If the vehicle is stuck in snow:

- Clear snow from the base of the vehicle, especially any blocking the exhaust pipe.
- Open a window about 5 cm (2 in) on the vehicle side that is away from the wind, to bring in fresh air.
- Fully open the air outlets on or under the instrument panel.

(Continued)

Warning (Continued)

- 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* ⇨ 182.

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* ⇨ 193.

Warning

If the vehicle's tires spin at high speed, they can explode, and you or others could be injured. The vehicle can overheat, causing an engine compartment fire or other damage. Spin the wheels as little as possible and avoid going above 56 km/h (35 mph).

Rocking the Vehicle to Get it Out

Turn the steering wheel left and right to clear the area around the front wheels. Turn off any traction system. Shift back and forth between R (Reverse) and a low forward gear, spinning the wheels as little as possible. To prevent transmission wear, wait until the wheels stop spinning before shifting gears. Release the accelerator pedal while shifting, and press lightly on the accelerator pedal when the transmission is in gear. Slowly spinning the wheels in the forward and reverse directions causes a rocking motion that could free the vehicle. If that does not

Starting and Operating

New Vehicle Break-In

Follow these recommended guidelines during the first 2 414 km (1,500 mi) of driving this vehicle. Parts have a break-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.

To remove the engine torque limitation after the initial 500-mile break-in period, turn the vehicle off, and open and close the driver door. Ensure all doors are closed for 15 minutes.

For the first 322 km (200 mi):

- To break in new tires, drive at moderate speeds and avoid hard cornering.
- New brake linings also need a break-in period. Avoid making hard stops. 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 labor. Never lug the engine. This rule applies at all times, not just during the break-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 refueling 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* ⇨ 204.

Composite Materials

This vehicle may be equipped with parts containing carbon fiber, sheet-molding compound, or other composite materials. Dealer-installed accessories may also contain composite materials. These parts and accessories may include the splitter or rocker extensions.

Warning

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.

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.

- The vehicle is shifted out of D (Drive) to any gear other than P (Park).
- Certain driver modes have been selected. See *Driver Mode Control* ⇨ 195.
- The vehicle is on a steep hill or grade.
- The driver door has been opened or the driver seat belt has been unbuckled.
- The hood has been opened.
- The Auto Stop has reached the maximum allowed time.
- If the vehicle was started in Stealth mode, Auto Stop will not be available until the next ignition cycle.

Auto Stop Disable Switch



The automatic engine Stop/Start feature can be disabled and enabled by pressing **(A)**. Auto Stop/Start is enabled each time you start the vehicle.

When the **(A)** indicator is illuminated, the system is enabled.

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 Outlet
- 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 set 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* ⇨ 191.
2. Press the P (Park) switch on the center console. See *Dual Clutch Transmission* ⇨ 183.
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 set. The vehicle can roll.

Do not leave the vehicle when the engine is running. If you have left the engine running, the vehicle can move suddenly. You or others could be injured. To be sure the vehicle will not move, even when you are on fairly level ground, always set the parking brake and shift to P (Park).

If you have to leave the vehicle with the engine running, be 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 - North America* ⇨ 298.

To shift out of P (Park):

1. Ensure the engine is running.
2. Apply the brake pedal.
3. 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 equipped, the Buckle to Drive feature may prevent shifting from P (Park). See *Buckle To Drive* ⇨ 45.

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

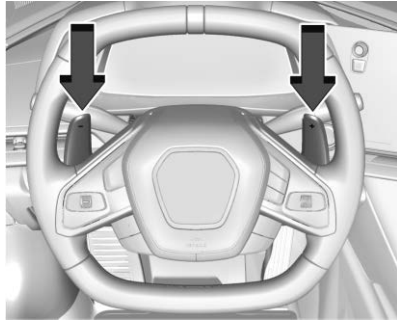
If equipped with Active Fuel Management, the engine may operate on either all or half of its cylinders, depending on driving conditions.

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.

E-Ray models will use electric power to supplement engine power to extend Active Fuel Management operation and improve fuel economy.

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)* ⇨ 101.

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 steady 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 transmission 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* ⇨ 211.

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) and E-Ray		
Upshift Allowed (into gear)	At Approximately	
	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 Speed (into gear)	At Approximately	
	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

Z06 (LT6)		
Upshift Allowed (into gear)	At Approximately	
	km/h	mph
2nd	14	9
3rd	24	15
4th	39	24
5th	52	32
6th	60	37
7th	77	48
8th	93	58
Maximum Downshift Inhibit Speed (into gear)	At Approximately	
	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

Use of Double Paddle Declutch on public roads could result in exhaust noise in excess of local laws.

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 Center (DIC) will 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. Tire 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 : 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 Transmission Active Light will illuminate in the gauge cluster to indicate that Manual Launch has been activated. See *Performance Transmission Active* ⇨ 92. 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.

 **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.

Drive Systems

All-Wheel Drive

If equipped with E-Ray, advanced electric All-Wheel Drive (eAWD) delivers power to all four wheels and adjusts automatically to the driving conditions. The eAWD system continuously varies the drive power to the

front and rear wheels to maximize driving efficiency and improve driving dynamics. Your vehicle has exceptional driving capability, but care must always be taken to adjust driving style to the traffic and road conditions.

The vehicle eAWD settings may be customized for the driver mode selected. See *Driver Mode Control* ⇨ 195 for more information.

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 pressed 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* ⇨ 92.

ABS does not change the time needed to get a 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 that vehicle 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 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.

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* ⇨ 156.

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.

Regenerative Braking

E-Ray models have a regenerative braking system that activates when the brake pedal is applied.

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

The brake system uses regenerative braking, conventional hydraulic braking, or a combination of both as appropriate.

When the brake pedal is applied, a slight sound may be heard. This is normal.

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 traveling. 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* ⇨ 211.

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* ⇨ 172 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 Center (DIC), and  comes on and stays on to indicate that the system is inactive and is not assisting the driver in maintaining control. The vehicle is safe to drive, but driving should be adjusted accordingly.

If  comes on and stays on:

1. Stop the vehicle.
2. Turn the engine off and wait 15 seconds.
3. Start the engine.

Drive the vehicle. If  comes on and stays on, the vehicle may need more time to diagnose the problem. If the condition persists, see your dealer.





Turning the Systems Off and On







The TCS/StabiliTrak/ESC button is on the center 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 . The Traction Off light  illuminates in the instrument cluster. To turn TCS on again, press and release . The Traction Off light  displayed in the instrument cluster will turn off.

If TCS is limiting wheel spin when  is pressed, the system will not turn off until the wheels stop spinning.

To turn off both TCS and StabiliTrak/ESC, press and hold  until the Traction Off light  and StabiliTrak/ESC OFF light  illuminate and stay on in the instrument cluster.

To turn TCS and StabiliTrak/ESC on again, press and release . The Traction Off light  and StabiliTrak/ESC OFF light  in the instrument cluster turn off.

If the Tire Pressure Monitor System (TPMS) system is malfunctioning and the DIC displays SERVICE TIRE 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* ⇨ 231.

For Z06 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.

If equipped with E-Ray, there are two additional EV drive modes and a Hybrid Battery Charging (Charge+) feature. The two EV drive modes, Shuttle and Stealth mode, can be used without turning on the engine. The Charge+ feature affects how each drive mode operates.

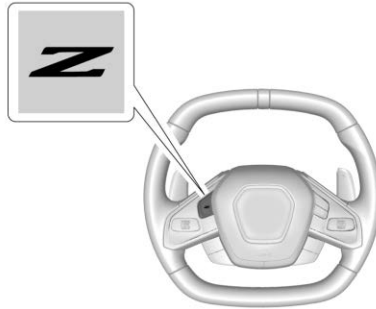
Climate controls are disabled when in EV drive modes, since the engine needs to be running to generate heat or operate the air conditioning system. The engine autostarts when climate controls are turned on. If equipped, the heated and cooled seats, and the heated steering wheel are enabled in EV drive modes.

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 DMC knob on the center console to make a mode selection. When a mode is selected, an indicator will come on in the instrument cluster and stay on. See “E-Ray – EV Drive Mode Activation” later on in this section for details on activating EV drive modes.



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.

E-Ray – EV Drive Mode Activation

To activate Stealth or Shuttle mode:

1. Enter the vehicle and buckle your seat belt.
2. Press and hold your foot on the brake pedal.



3. Turn the DMC knob. The selection menu displays on the instrument cluster with the available EV drive modes. The availability of an EV mode depends on various factors. See “EV Drive Mode Attributes” later on in this section.
4. To select the driver mode, turn the DMC knob to highlight the desired start up mode.
5. Push the start button and place the vehicle into D (Drive) to enter selected EV drive mode.

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* ⇨ 172. See “Driver Mode Attributes,” later in this section.

iTour : 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 *Performance Driving* ⇨ 205.

Track : 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 behaviors 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.

My Mode : Use to personalize 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 center display, the following vehicle subsystems may be available for customization 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 personalize 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 customization 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.

E-Ray Only

Hybrid Battery Charging (Charge+)

The Charge+ feature is used to quickly charge the high voltage battery to near maximum State of Charge (SOC). This feature is useful to prepare for maximum effort at a racetrack or Stealth mode use. By activating the Charge+ feature, it rapidly increases the hybrid battery SOC status into

the blue 100% full zone. See *Power Indicator Gauge* ⇨ 86. When the Charge+ feature is enabled, the battery SOC may still deplete during aggressive driving.

The Charge+ feature can be used in conjunction with any drive mode except Stealth or Shuttle mode.

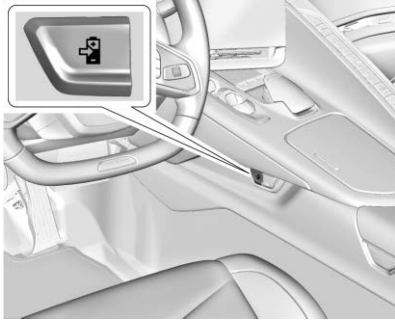
On a racetrack, using the Charge+ feature optimizes the high voltage battery discharge rate for sustaining continuous lapping or to set your fastest lap. When the Charge+ feature is enabled, a strategic discharge rate is activated, which is the best for continuous lapping on the racetrack. When the Charge+ feature is off, a maximum discharge rate occurs, which is best for setting the fastest lap time. For additional details on vehicle track preparation, see Chevrolet.com > Corvette Experience > Guides > Track Prep Guide.

Do not leave the Charge+ feature on longer than needed since extra fuel may be consumed due to aggressive charging. Charge+ draws on engine power to help recharge the battery quickly, rather than charging efficiently through brake or coast regen. When the high voltage battery is full, no additional regen energy of any type can be captured.

When the Charge+ feature is turned off, the high voltage propulsion system efficiently uses battery energy to improve fuel economy or performance. This allows room in the high voltage battery for the next regen charging opportunity. The high voltage battery automatically seeks its nominal SOC in the white zone of the Hybrid Battery Gauge, between 50-80%. The SOC status is displayed in the HYBRID BATTERY info tile, and is shown in the blue Hybrid Battery state. See “Info Tiles” in *Instrument Cluster* ⇨ 80.

The Charge+ feature is only effective when the car is being driven. Optimal high voltage battery charging occurs when the vehicle speed exceeds 56 km/h (35 mph).

Turning On or Off Charge+



Press the Charge+ button on the drive side of the center console. When the Charge+ feature is active, the hybrid battery charging light displays on the DIC. See *Hybrid Battery Charging Light (Charge+)* ⇨ 86. Also, a small pop-up window will also appear showing the exact SOC and electric power input/output. The Hybrid Battery Gauge shows the increasing SOC filling into the blue zone. See *Power Indicator Gauge* ⇨ 86.

EV Drive Mode Attributes

Stealth Mode : Use to silently exit your residence before the engine turns on for maximum performance capability. The typical range in Stealth mode is about three

to four miles depending on the starting SOC, vehicle speed, and other driving conditions. The Stealth Drive Mode Capability Gauge on the instrument cluster informs the driver of when the engine will start, see *Stealth Drive Mode Capability Gauge* ⇨ 85.

Stealth mode automatically deactivates if the following occurs:

- The vehicle speed exceeds 72 km/h (45 mph).
- The outside temperature is lower than 10°C (50°F).
- The high voltage battery SOC is lower than 21%.
- Quickly depressing the accelerator pedal.
- Depressing the accelerator pedal beyond one-third of the way.
- Turning on the climate controls. See *Dual Automatic Climate Control System* ⇨ 149.

If one of the conditions occur, an indicator on the Driver Information Center (DIC) displays explaining Stealth mode was automatically deactivated.


When Stealth mode is deactivated, the vehicle will transition into the default driver mode.

Stealth mode can only be activated one time per ON/OFF cycle. Once the engine auto-starts while in Stealth mode, the only way to re-enter Stealth mode is to put the vehicle in P (Park), turn the vehicle off and repeat the steps above in the “E-Ray – EV Drive Mode Activation” section.

Once the engine starts, the propulsion system transitions from EV propulsion to engine power. A message will display on the EV selection menu to indicate how long the engine power transition will take. This transition may take two to four seconds depending on the engine temperature.

The electric power indicator gauge will indicate a transition from EV propulsion to engine propulsion. The instrument cluster will show two or three phases of the transition (red, yellow, green) and then display the engine tachometer when the transition is complete.

If Stealth Mode was used in the beginning of a drive cycle, the Stop/Start System will be disabled. The vehicle must be turned off and restarted normally to enable the Stop/Start System. See *Stop/Start System* ⇨ 179.

 **Warning**

When exiting Stealth mode, allow sufficient time for the vehicle to automatically start the engine and develop full system propulsion power before merging into traffic. Attempting to merge into traffic before the engine has reached full power could cause a crash resulting in vehicle damage, personal injury, or death. It is best to exit Stealth mode first and allow the engine to reach full capacity before engaging in traffic.

Shuttle Mode : Use to propel the vehicle using only electric power. Shuttle mode is not intended for public roads. The typical range in Shuttle mode is about four to five miles depending on the starting SOC, vehicle speed, terrain, and other driving conditions. While the vehicle is in Shuttle mode, the instrument cluster only displays the vehicle speed, battery gauge, and a electric power indicator gauge.

The infotainment screen will only show the date and time. If equipped, the HUD system will not be functional.

Shuttle mode automatically deactivates if the following occurs:

- The vehicle speed exceeds 24 km/h (15 mph).
- The outside temperature is lower than -10°C (14°F).
- The high voltage battery SOC is 0%.

To deactivate Shuttle mode, put the vehicle in P (Park) and turn off the vehicle. Then, start the vehicle normally.

Shuttle mode will automatically start to reduce propulsion power as the SOC reaches 0%. The message Start Engine to Charge Battery will display on the instrument cluster when the SOC reaches 5%.

If the engine is not started, propulsion power reduces automatically and the vehicle comes to a stop.

The only way to charge your battery is to start and run the vehicle from Normal mode. See "Normal Mode" later on in this section.

Do not store the hybrid battery with a low SOC for an extended period of time. It is best to store the battery in the white eAWD zone.

Normal Mode : Use to have a normal engine start when going through the EV drive mode selection process.

Starting and running the vehicle from Normal mode allows the engine and front electric motor to regenerate power to charge the hybrid battery.

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* ⇨ 80 > 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 Transmission Active light displays. See *Performance Transmission Active* ⇨ 92. When Performance Transmission is activated from a standstill, by selecting

PTM Race 1 or Race 2, the transmission 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. Transmission behavior will transition to a level appropriate to the current driving behavior after a short period of time. If PTM Race 1 or Race 2 are not selected, the Performance Transmission Active behavior 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 anticipating 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)

If equipped with Active Fuel Management (AFM), the engine uses driver demand to deactivate cylinders to improve fuel performance. When accelerating, V8 mode is prevalent. For lighter throttle applications, the system may disable cylinders to run in 4-cylinder mode to save fuel.

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 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 Customization” to customize and personalize 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 center stack (Settings > Vehicle > Drive Mode Customization > 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 Center (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 center stack. Both the Z-Mode and PTM indicators will be displayed.

To cancel, press the center dismiss button on the steering wheel (Z-Mode remains active). Selecting PTM states may modify other Z-Mode customization 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 underhood 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 Center (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* ⇨ 119.

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 Customization 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 center console for 10 consecutive seconds to automatically raise the vehicle.

The Driver Information Center (DIC) may display the message “Lift System Unavailable” if:

- any doors are ajar
- the hood 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* ⇨ 320.

Performance Driving

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 optimizing 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.

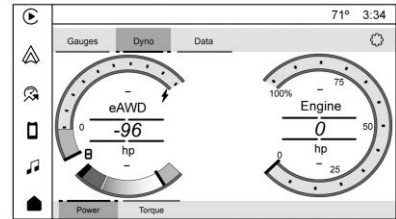
Drivers who prefer to allow the system to have more control of the engine, brakes, and suspension are advised to turn on the normal traction control and StabiliTrak/Electronic Stability Control (ESC) systems on.

If equipped with E-Ray, there is a Performance app on the infotainment screen that shows the vehicle electric and engine power/torque. See “E-Ray Performance App” later in this section for more information.

E-Ray Performance App



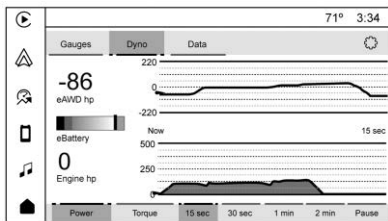
If equipped with E-Ray, to access the Performance App, select the performance app icon on the infotainment screen. The landing screen of the Performance app is the gauges page.



Gauges

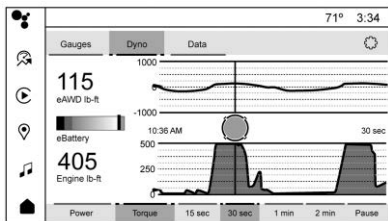
The Gauges page shows the Electric Power/Torque on the left gauge and the engine power/torque on the right gauge. Units of power or torque can be chosen at the bottom of the page. The center of the page is a wireframe view of the vehicle that illuminates the front and/or rear axle as each propulsion system is being used. The brighter the wireframe display the more power/torque is being provided.

Dyno



While Driving

The Dyno page shows both electric and engine power/torque in numeric and script format. This shows the usage over time in intervals of 15 or 30 seconds, or one or two minutes. This is the same data as shown on the gauges page but in a different viewing format.



While in P (Park)

When the car is shifted into P (Park), the viewing cursor appears to allow the driver to analyze the data in the viewing time increment.

The Gauges and Dyno pages include the Hybrid battery gauge indicating how much battery charge is present.

Electric power/torque can be either positive or negative. When electric power is being provided the gauge shows positive values and lights up orange. When electric power is being stored, the gauge shows negative values and lights up green.

Engine power is only positive and lights up white.

Data

There are two available screens for the Data page. Swipe the screen to the left to access the second screen. See *Using the System* ⇨ 120.

The default screen displays the following facts about the vehicle hybrid performance and vehicle efficiency saved since the last reset:

- Charge Gained is the accumulation of brake and coast regen in units of energy.

- Charge Used is how much energy has been used to enhance performance or efficiency.
- Fuel Saved is the charge gained through regen energy and converted to liters of fuel saved.

The second screen displays the hybrid vitals, such as the electric motor power and RPMs, and hybrid battery and electric motor temperature.

Settings

The setting menu allows the display to be shown in preferred unit of metric or English units.

To access the setting menu from any page in the Performance app, touch the setting icon in top right corner.

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  on the center console two times. ESC COMPETITIVE MODE displays in the Driver Information Center (DIC).


When  is pressed again, the traction off light  and StabiliTrak/ESC OFF light  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 PTM mode.

To select PTM mode, the vehicle mode must be in Track mode. Then quickly press  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* ⇨ 195.

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 Break-In* ⇨ 176.

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* ⇨ 195.
- 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

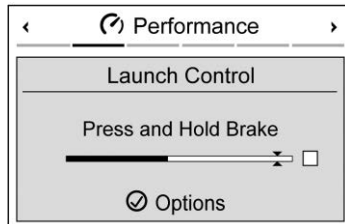
If equipped, Custom Launch Control allows the following parameters for Launch Control to be modified:

- Launch RPM
- Slip Target (5%–15%)

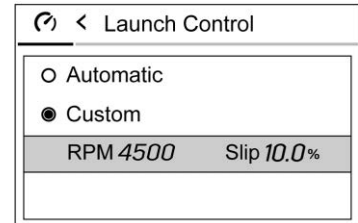
Adjusting the Launch RPM will also change the behavior of the transmission during the start of the launch. The higher the Launch RPM, the faster the clutch will be applied resulting in greater acceleration. This parameter can be used to match the launch behavior to the available tire traction. If the driving wheels spin excessively during the launch, reduce the Launch RPM.

To adjust the Launch RPM, all of these conditions must be met:

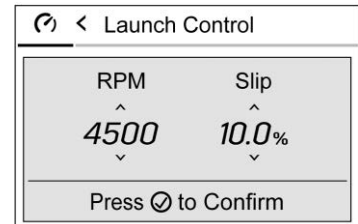
- Competitive Driving mode or any of the PTM modes are selected (if equipped). See *Driver Mode Control* ⇨ 195.
- The steering wheel must be straight.
- The driver door must be closed.
- The vehicle must be in D (Drive) or M (Manual mode).
- The parking brake must not be engaged.



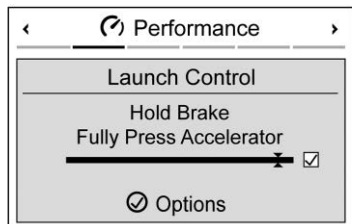
1. Using the DIC buttons on the right side of the steering wheel, navigate to the performance menu. See *Instrument Cluster* ⇨ 80.
2. Select Launch Control > Custom.



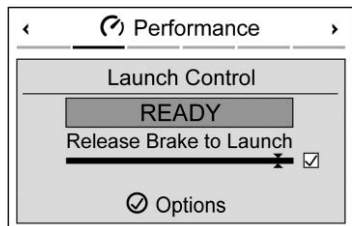
3. Scroll down to Launch RPM.



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 standard mechanical limited-slip differential provides more traction on snow, mud, ice, sand, or gravel. It works like a standard axle most of the time, but when traction is low, this feature allows the drive wheel with the most traction to move the vehicle. See *Performance Driving* ⇨ 205 and *Maintenance Schedule* ⇨ 315.

Stingray, E-Ray, and Z06 Models Only

The Electrical Limited-Slip Differential (eLSD) located on the rear axle is a hydraulically actuated clutch system. 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

Cruise control allows the vehicle to maintain a constant speed without keeping your foot on the accelerator pedal at speeds of about 40 km/h (25 mph) or above. Cruise control does not work at speeds below about 40 km/h (25 mph).

Warning

Cruise control can be dangerous where you cannot drive safely at a steady speed. Do not use cruise control on winding roads or in heavy traffic.

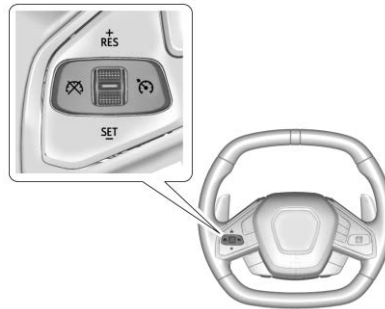
Cruise control can be dangerous on slippery roads. On such roads, fast changes in tire traction can cause excessive wheel slip, and you could lose control. Do not use cruise control on slippery roads.


Cruise control will disengage if:

- The Traction Control System (TCS) or StabiliTrak/Electronic Stability Control (ESC) system activates to limit wheel spin. See *Traction Control/Electronic Stability Control* ⇨ 193.
- TCS or StabiliTrak/ESC is turned off.
- The brakes are applied.

When road conditions allow you to safely use it again, cruise control can be turned back on.


For E-Ray models, cruise control is not available in Shuttle Mode or Stealth Mode. See *Driver Mode Control* ⇨ 195.




 : Press to turn cruise control on or off. A white cruise control indicator light comes on in the instrument cluster when cruise is turned on.

+RES : If there is a set speed in memory, press the thumbwheel up briefly to resume to that speed or press up and hold to accelerate. If cruise control is already engaged, use to increase the vehicle speed.


SET- : If cruise control is already on, press the thumbwheel down briefly to choose the set speed and engage cruise control. If cruise control is already engaged, use to decrease the vehicle speed.

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

Setting Cruise Control

If cruise control is on but is not engaged, the thumbwheel could be pressed to SET- or +RES and engage cruise control when not desired. Keep cruise control off when it is not in use. Press  to turn off cruise control.

To set the cruise speed:

1. Press .
2. Accelerate to the desired cruise speed.

Vehicle Care

General Information

General Information	231
California Perchlorate Materials Requirements	231
Accessories and Modifications	231
Lifting the Vehicle	232
Vehicle Storage	233

Vehicle Checks

Doing Your Own Service Work	233
Underhood Compartment Overview ...	234
Engine Compartment Overview	237
Engine Oil (5.5L LT6 Engine)	245
Engine Oil (6.2L LT2 Engine)	248
Engine Oil Life System	251
Dual Clutch Transmission Fluid	252
Dual Clutch Transmission Fluid Life System	252
Engine Air Filter Life System	253
Engine Air Cleaner/Filter	254
Cooling System (Engine)	256
Cooling System (Electrified Propulsion)	259
Engine Overheating	260
Washer Fluid	261
Brakes	261
Brake Pad Life System (If Equipped) ...	263
Brake Fluid	264

Battery - North America	265
Park Brake and P (Park) Mechanism Check	268
Wiper Blade Replacement	269
Windshield Replacement	269
Gas Strut(s)	269

Headlamp Aiming

Front Headlamp Aiming	270
-----------------------------	-----

Bulb Replacement

LED Lighting	270
--------------------	-----

Electrical System

Electrical System Overload	270
Fuses and Circuit Breakers	271
Instrument Panel Fuse Block	272
Rear Compartment Fuse Block	275

Wheels and Tires

Tires	278
All-Season Tires	279
Winter Tires	279
Run-Flat Tires	279
Low-Profile Tires	280
Competition Oriented Tires	280
Summer Tires	281
Tire Sidewall Labeling	281
Tire Designations	282
Tire Terminology and Definitions	283
Tire Pressure	284

Tire Pressure for High-Speed Operation	286
Tire Pressure Monitor System	287
Tire Pressure Monitor Operation	288
Tire Inspection	290
Tire Rotation	291
When It Is Time for New Tires	292
Buying New Tires	293
Different Size Tires and Wheels	294
Uniform Tire Quality Grading	294
Wheel Alignment and Tire Balance ...	295
Wheel Replacement	296
Tire Chains	297
If a Tire Goes Flat	297

Jump Starting

Jump Starting - North America	298
-------------------------------------	-----

Towing the Vehicle

Transporting a Disabled Vehicle	302
Recreational Vehicle Towing	304

Appearance Care

Exterior Care	304
Interior Care	309
Floor Mats	312

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. Set the parking brake firmly.
2. Put the transmission in P (Park).
3. Turn off the engine.

To be even more certain the vehicle will not move, put blocks in front of and behind the wheels.

Warning

Getting under a vehicle when it is lifted on a jack is dangerous. If the vehicle slips off the jack, you could be badly injured or killed. Never get under a vehicle when it is supported only by a jack.

Warning

Raising the vehicle with the jack improperly positioned can damage the vehicle 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.

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.

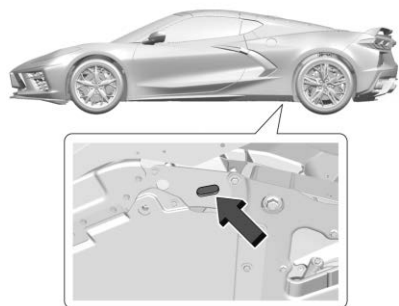
Lifting from the Front – Frame



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* ⇨ 233.

Vehicle Storage

Be sure to inspect the engine air cleaner before storing the Z06 and E-Ray models for any length of time. Clear any leaves, dirt, or debris from the air filter housing to maximize engine performance and air filter life. See *Maintenance Schedule* ⇨ 315 and *Engine Air Cleaner/Filter* ⇨ 254.

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. To order the proper service manual, see *Publication Ordering Information* ⇨ 336.

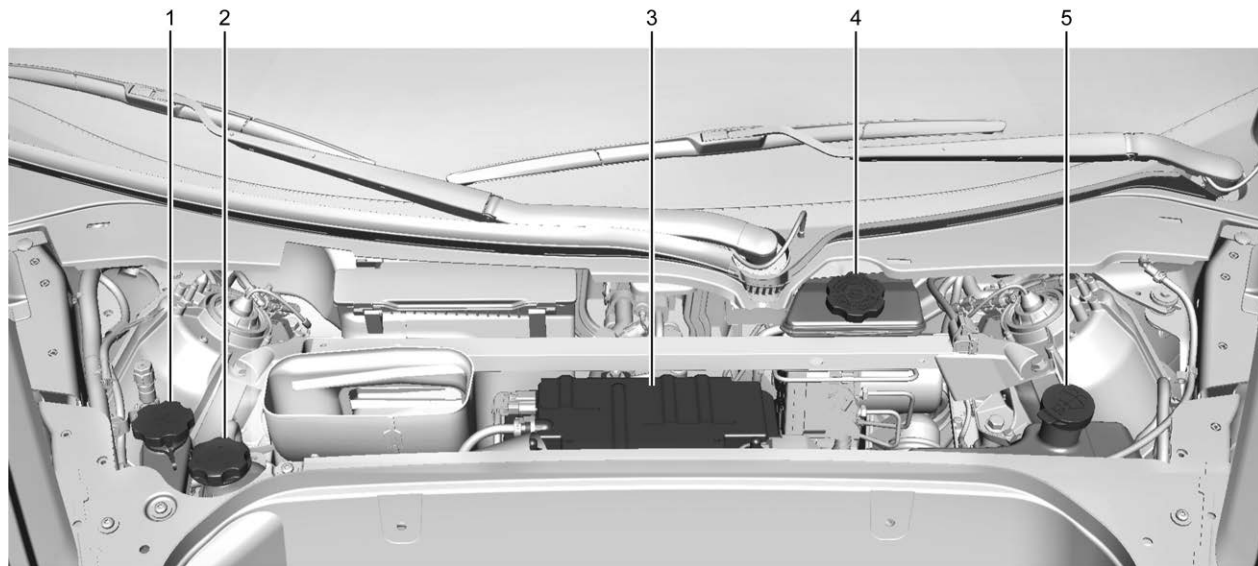
This vehicle has an airbag system. Before attempting to do your own service work, see *Servicing the Airbag-Equipped Vehicle* ⇨ 59.

If equipped with remote vehicle start, open the hatch/trunk before performing any service work to prevent remote starting the vehicle accidentally. See *Remote Vehicle Start* ⇨ 12.

Keep a record with all parts receipts and list the mileage and the date of any service work performed. See *Maintenance Records* ⇨ 323.

Caution

Even small amounts of contamination can cause damage to vehicle systems. Do not allow contaminants to contact the fluids, reservoir caps, or dipsticks.



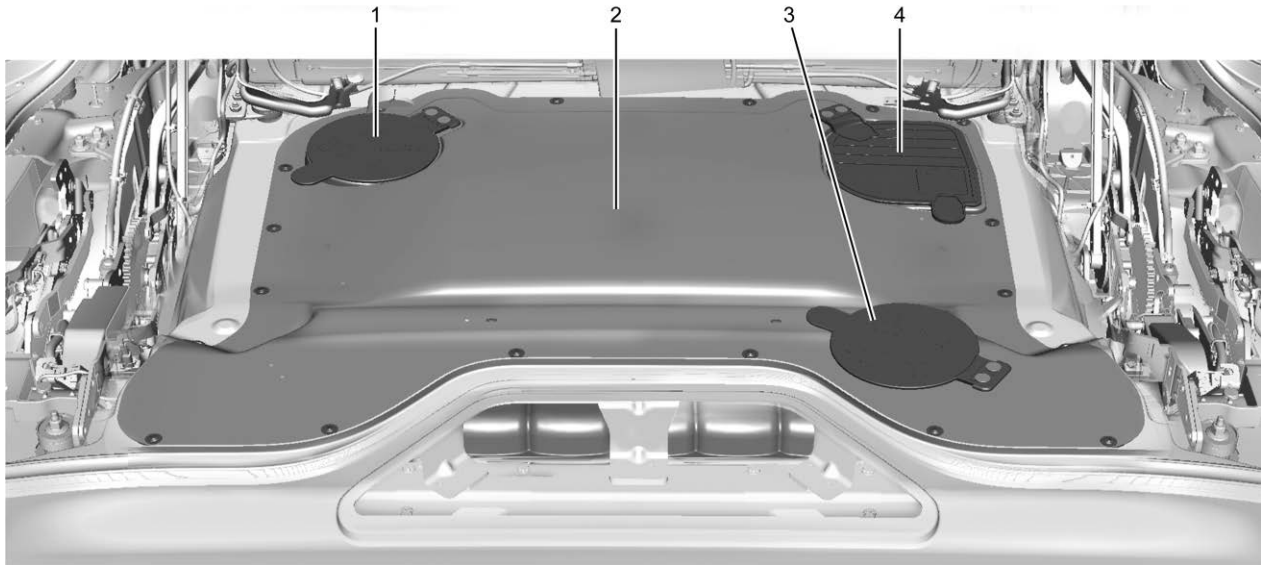
E-Ray Coupe (Convertible Similar)

1. Front Lift System Reservoir (under cover, if equipped). See *Front Lift System* ⇨ 204.
2. Power Electronic Cooling Loop Reservoir. See your dealer for maintenance.
3. Battery (under cover). See *Battery - North America* ⇨ 265.
4. Brake Fluid Reservoir. See *Brake Fluid* ⇨ 264.
5. Windshield Washer Fluid Reservoir. See *Washer Fluid* ⇨ 261.

Engine Compartment Overview

On coupe models, open the rear hatch/trunk to access the engine compartment. See *Hatch* ⇨ 20.

On convertible models, open the rear tonneau cover to access the engine compartment. The rear hatch/trunk and the convertible top must be closed and the vehicle must be in P (Park). See *Convertible Top* ⇨ 34.



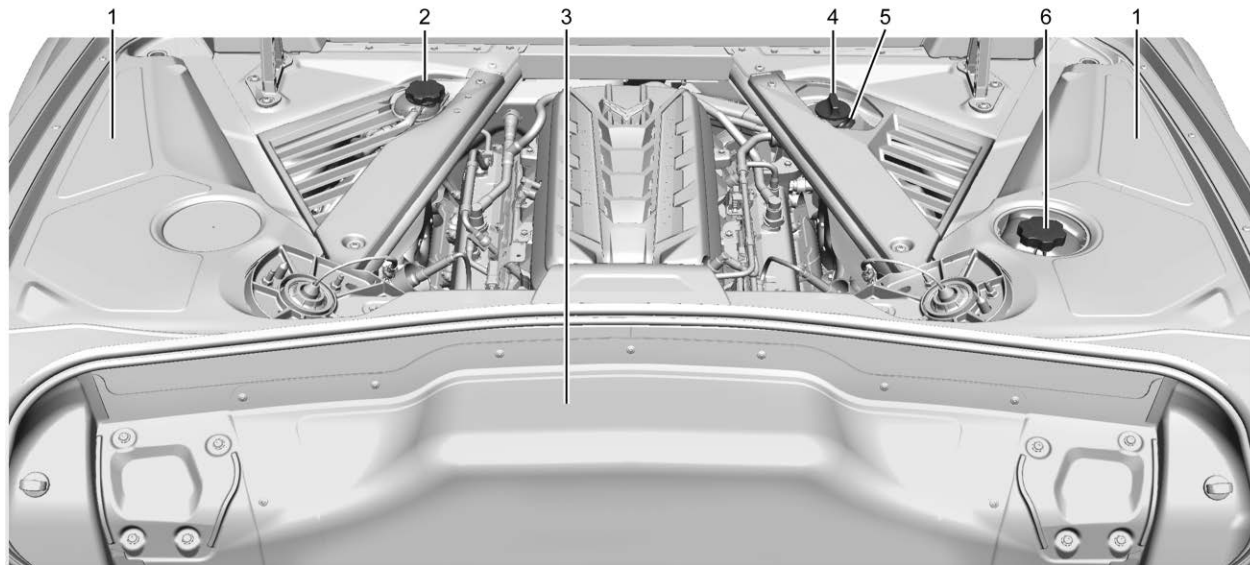
Engine Cover (Convertible Only)

1. High Voltage Battery System Coolant Reservoir. See your dealer for maintenance.
2. Engine Cover.
3. Engine Coolant Surge Tank and Pressure Cap (Under Cover). See *Cooling System (Engine)* ⇨ 256 or *Cooling System (Electrified Propulsion)* ⇨ 259.
4. Engine Oil Dipstick and Dry Sump Engine Oil Tank and Fill Cap (Under Cover). See *Engine Oil (5.5L LT6 Engine)* ⇨ 245 or *Engine Oil (6.2L LT2 Engine)* ⇨ 248.

If equipped, the engine cover protects the folding convertible top system from underhood heat and contamination. The engine cover includes access holes for common maintenance items as shown below. You should not need to remove the entire engine cover for regular maintenance.

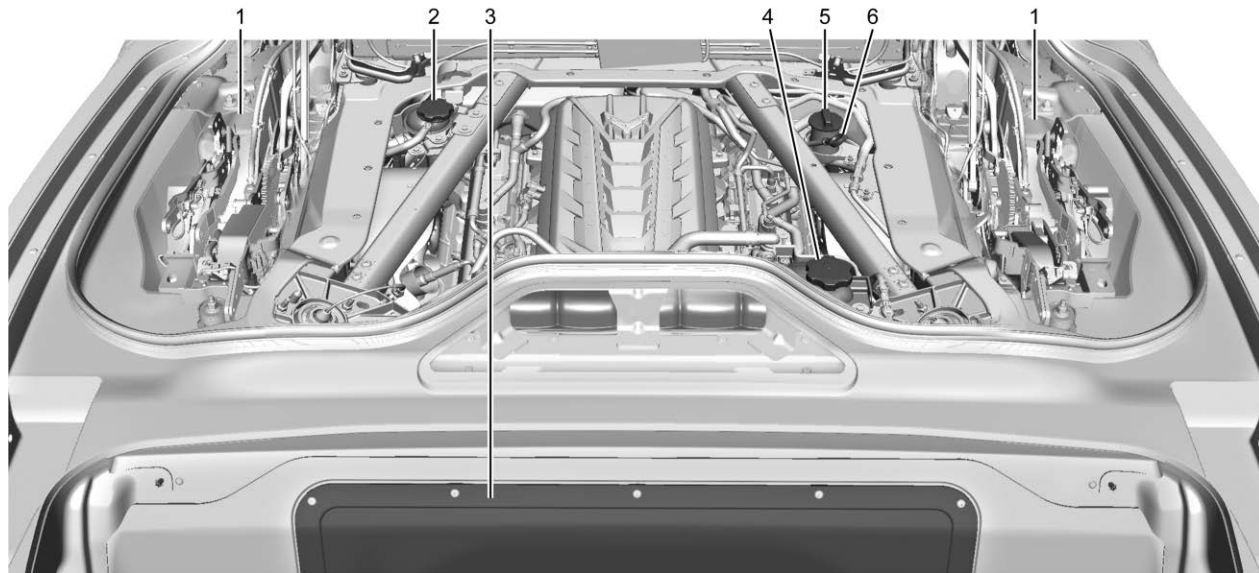
For access to maintenance items, pull up on the tab on the access hole plug, and fold the plug out of the way. The hinges retain the plugs so they will not be misplaced. To close the plug, snap it back into place.

Before closing the rear tonneau cover, confirm that the access hole plugs on the engine cover are closed securely.



E-Ray Coupe — 6.2L V8 Engine (LT2)

- | | | |
|---|--|--|
| <ol style="list-style-type: none"> 1. Engine Cooling Fans (Out of View). 2. High Voltage Battery System Coolant Reservoir. See your dealer for maintenance. 3. Engine Air Cleaner Filter (Under Access Panel). See <i>Engine Air Cleaner/Filter</i> ⇨ 254. | <ol style="list-style-type: none"> 4. Dry Sump Engine Oil Tank and Fill Cap. See <i>Engine Oil (5.5L LT6 Engine)</i> ⇨ 245 or <i>Engine Oil (6.2L LT2 Engine)</i> ⇨ 248. 5. Engine Oil Dipstick. See <i>Engine Oil (5.5L LT6 Engine)</i> ⇨ 245 or <i>Engine Oil (6.2L LT2 Engine)</i> ⇨ 248. | <ol style="list-style-type: none"> 6. Engine Coolant Surge Tank and Pressure Cap. See <i>Cooling System (Engine)</i> ⇨ 256 or <i>Cooling System (Electrified Propulsion)</i> ⇨ 259. |
|---|--|--|



E-Ray Convertible — 6.2L V8 Engine (LT2)

- | | | |
|---|--|--|
| <ul style="list-style-type: none"> 1. Engine Cooling Fans (Out of View). 2. High Voltage Battery System Coolant Reservoir. See your dealer for maintenance. 3. Engine Air Cleaner Filter (Under Access Panel). See <i>Engine Air Cleaner/Filter</i> ⇨ 254. | <ul style="list-style-type: none"> 4. Engine Coolant Surge Tank and Pressure Cap. See <i>Cooling System (Engine)</i> ⇨ 256 or <i>Cooling System (Electrified Propulsion)</i> ⇨ 259. | <ul style="list-style-type: none"> 5. Dry Sump Engine Oil Tank and Fill Cap. See <i>Engine Oil (5.5L LT6 Engine)</i> ⇨ 245 or <i>Engine Oil (6.2L LT2 Engine)</i> ⇨ 248. 6. Engine Oil Dipstick. See <i>Engine Oil (5.5L LT6 Engine)</i> ⇨ 245 or <i>Engine Oil (6.2L LT2 Engine)</i> ⇨ 248. |
|---|--|--|

Engine Air Cleaner/Filter

Regularly clear any leaves, dirt, and debris from the engine air cleaner filter and air filter housing to maximize engine performance and air filter life.

See *Engine Compartment Overview* ⇨ 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* ⇨ 315.

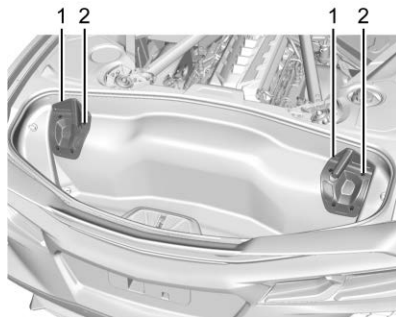
For Z06 or **E-Ray**, additional inspections should occur seasonally, in regions where fallen leaves are common, and before long-term storage of the vehicle. See *Vehicle Storage* ⇨ 233.

How to Inspect/Replace the Engine Air Cleaner Filter

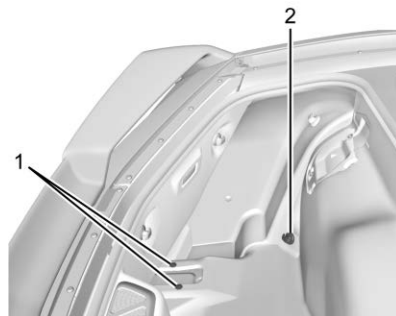
Do not start the engine or have the engine running with the engine air cleaner filter housing open. Before removing the engine air cleaner filter, make sure that the engine air cleaner filter housing and nearby components are free of leaves, dirt, and debris. Do not clean the engine air cleaner filter or components with water or compressed air.

To inspect or replace the air cleaner filter:

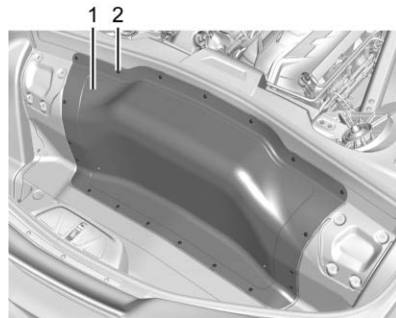
1. Remove the convenience net, if equipped.



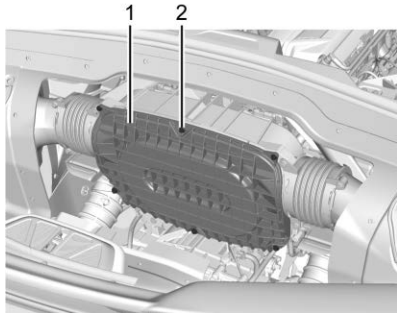
2. Remove the four lift off bracket bolts (2) to remove the brackets (1).



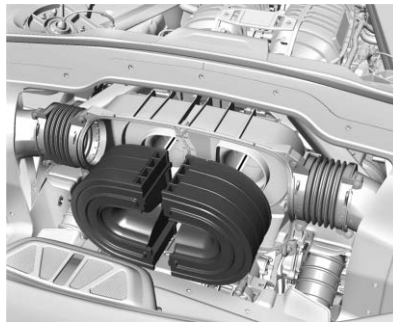
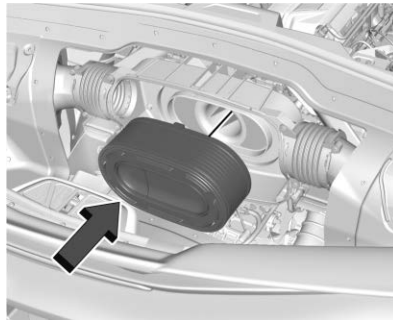
3. Remove the convenience net hooks (2) and plastic retainers (1).
4. Remove the carpet.



- Remove the rear compartment access panel screws (2) and panel (1).



- Remove the air cleaner cover screws (2) and cover (1).
- Remove any leaves, dirt, or debris that may have collected on the air cleaner filter or housing.



- 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.

- Inspect or replace the air cleaner filter.
- Reverse Steps 2–8 to replace the air cleaner filter.

⚠ Warning

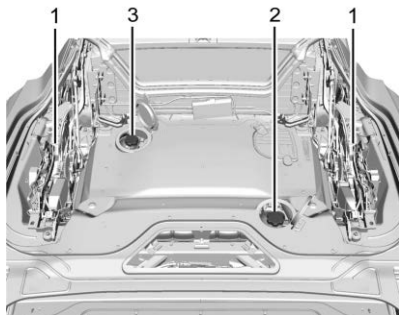
Operating the engine with the air cleaner/filter off can cause you or others to be burned. Use caution when working on the engine. Do not start the engine or drive the vehicle with the air cleaner/filter off, as flames may be present if the engine backfires.

Caution

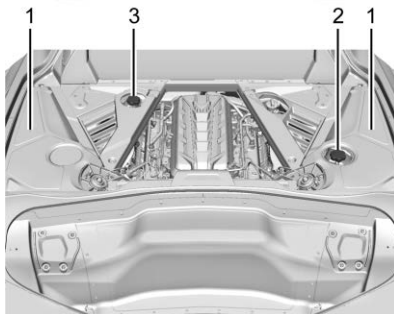
If the air cleaner/filter is off, dirt can easily get into the engine, which could damage it. Always have the air cleaner/filter in place when driving.

Cooling System (Engine)

The engine cooling system allows the engine to maintain the correct working temperature. Vehicles equipped with Electrified Propulsion (E-Ray) have additional cooling systems. See Cooling System (Electrified Propulsion) later in this section.



E-Ray Convertible Shown, Stingray Convertible and Z06 Convertible Similar



E-Ray Coupe Shown, Stingray Coupe and Z06 Coupe Similar

1. Engine Cooling Fans (Out of View)
2. Engine Coolant Surge Tank with Pressure Cap
3. High Voltage Battery Coolant Reservoir (E-Ray Only).

Warning

An underhood electric fan can start up even when the engine is not running and can cause injury. Keep hands, clothing, and tools away from any underhood electric fan.

Warning

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* ⇨ 320. The fluid requires changing at certain intervals. See *Maintenance Schedule* ⇨ 315.

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* ⇨ 260.

What to Use**Warning**

Plain water, or other liquids such as alcohol, can boil before the proper coolant mixture will. With plain water or
(Continued)

Warning (Continued)

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 aluminum parts.
- Helps keep the proper engine temperature.

Caution

Do not use anything other than a mix of DEX-COOL coolant that meets GM Standard GMW3420 and clean, drinkable water. Anything else can cause damage to the engine cooling system and the vehicle, which would not be covered by the vehicle warranty.

Never dispose of engine coolant by putting it in the trash, pouring it on the ground, or into sewers, streams, or bodies of water. Have the coolant changed by an authorized service center, familiar with legal requirements regarding used coolant disposal. This will help protect the environment and your health.

If ambient temperatures are anticipated below -28°C (-18°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* ⇨ 260.

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

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.

Warning

Steam and scalding liquids from a hot cooling system are under pressure. Turning the pressure cap, even a little, can cause them to come out at high speed and you could be burned. Never turn the cap when the cooling system, including the pressure cap, 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* ⇨ 20.



2. 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 counterclockwise 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.

Cooling System (Electrified Propulsion)

The E-Ray is equipped with Electrified Propulsion and cooling systems for the Traction Power Inverter Module (TPIM) and the High Voltage Battery located in the Engine Compartment, see *Engine Compartment Overview* ⇨ 237. The TPIM and the high voltage battery cooling system reservoirs have tamper-resistant pressure caps. The coolant should only be serviced by a qualified technician.


Power Electronic/Traction Power Inverter Module (TPIM) Cooling System

The Power Electronic Cooling System reservoir is located in under the front hood.

Rechargeable Energy Storage System (RESS)/High Voltage Battery Cooling System

The High Voltage Battery Cooling System reservoir is located in the rear hatch.

What to Use

 Warning
Plain water, or other liquids such as alcohol, can boil before the proper coolant mixture will. 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.

For vehicles equipped with Electrified Propulsion (E-Ray), if ambient temperatures are anticipated below -25 °C (-13 °F) for the high voltage coolant systems, make sure to use premix 50/50 DEX-COOL and de-ionized water. Never dispose of engine coolant by putting it in the trash, pouring it on the

ground, or into sewers, streams, or bodies of water. Have the coolant changed by an authorized service center, familiar with legal requirements regarding used coolant disposal. This will help protect the environment and your health.

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 trash, pouring it on the ground, or into sewers, streams, or bodies of water. Have the coolant changed by an authorized service center, familiar with legal requirements regarding used coolant disposal. This will help protect the environment and your health.

Checking Coolant

It is not necessary to regularly check coolant unless a leak is suspected, or an unusual noise is heard. A coolant loss could indicate a problem. Have it inspected and repaired

by your dealer. The high voltage cooling system reservoirs have tamper-resistant pressure caps. The coolant should only be serviced by a qualified technician.

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* ⇨ 86. The vehicle may also display a message on the Driver Information Center (DIC).

If the decision is made not to lift the hatch but to get service help right away, see *Roadside Assistance Program* ⇨ 332.

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 come out at high speed and you could be burned. Never turn the cap when the cooling system, including the pressure cap, 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.

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 windshield 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 hood. See *Hood* ⇨ 17.



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 windshield washer. It can damage the windshield washer system and paint.
- Do not mix water with ready-to-use washer fluid. Water can cause the solution to freeze and damage the washer fluid tank and other parts of the washer system.
- When using concentrated washer fluid, follow the manufacturer instructions for adding water.
- Fill the washer fluid tank only three-quarters full when it is very cold. This allows for fluid expansion if freezing occurs, which could damage the tank if it is completely full.

Brakes

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.

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 costly brake repairs.

Properly torqued wheel nuts are necessary to help prevent brake pulsation. When tires are rotated, inspect brake linings for wear and evenly tighten wheel nuts in the proper sequence to torque specifications. See *Capacities and Specifications* ⇨ 325.

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, clearing up following several applies. 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 several times to thoroughly dry the brakes

Brake Rotor Wear (Z06/Z07/E-Ray with J57 Carbon Ceramic Rotors)

Vehicles with the J57 brake option have carbon ceramic brake rotors. The rotors should be visually inspected whenever the brake pads are replaced. Carbon ceramic brake rotors also need to be weighed before brake pads are replaced to confirm that the rotor mass is greater than the wear-out mass printed on the rotor. The rotor can be reused if the weight of the rotor is above

the mass limit. Carbon ceramic brake rotors inspection and weighing methods can be found in the service manual.

Z51/Z06 Cast Iron Rotor 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 break-in period should be completed before performing the brake burnishing procedure or damage may occur to the powertrain/engine. See *New Vehicle Break-In* ⇨ 176.

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 least 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 Center (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 Center (DIC)* ⇨ 98.
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* ⇨ 261.

To turn off the brake pad life system:

1. Display Brake Pad Life on the DIC. See *Driver Information Center (DIC)* ⇨ 98.
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 (Z06/Z07/E-Ray with J57 Carbon Ceramic Brake Rotors)

The brake pads have electronic brake pad wear sensors, when the brake pads need to be replaced, a message displays in the Driver Information Center (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* ⇨ 234 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* ⇨ 91.

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* ⇨ 315.

What to Add

Use only GM approved DOT 4 brake fluid from a clean, sealed container. See *Recommended Fluids and Lubricants* ⇨ 320.

Warning

The wrong or contaminated brake fluid could result in damage to the brake system. This could result in the loss of braking leading to a possible injury. Always use the proper GM approved brake fluid.

Caution

If brake fluid is spilled on the vehicle's painted surfaces, the paint finish can be damaged. Immediately wash off any painted surface.

Battery - North America

Your vehicle may be equipped with a standard 12-volt lead acid battery, 12-volt lithium-ion battery, and/or a high voltage battery.

See your dealer if the 12-volt lead acid battery, 12-volt lithium-ion battery, or high voltage battery need service.

12-Volt Lead Acid Battery

The original equipment battery is maintenance free. Do not remove the cap and do not add fluid.

Do not disconnect the 12-volt lead acid battery during storage.

Warning

WARNING: Battery posts, terminals and related accessories can expose you to chemicals including lead and lead compounds, which are known to the State of California to cause cancer and birth defects or other reproductive harm. Wash hands after handling. For more information go to www.P65Warnings.ca.gov.

See *California Proposition 65 Warning* ⇨ 1.


12-Volt Lithium-Ion Battery (E-Ray) **Warning**

WARNING: Battery posts, terminals and related accessories can expose you to chemicals including lead and lead compounds, which are known to the State of California to cause cancer and birth defects or other reproductive harm. Wash hands after handling. For more information go to www.P65Warnings.ca.gov.

See *California Proposition 65 Warning* ⇨ 1.

Charging the 12-volt Lithium-ion battery

The 12-volt lithium-ion battery can be charged using a GM approved charger designed for lithium-ion batteries. Follow the instructions that come with the GM approved charger.

 **Warning**

Use only GM approved jump start boxes and charging tools. Use of unapproved jump start boxes, charging tools, a loose battery, or battery charger may cause personal injury, death, or damage to the

(Continued)

Warning (Continued)

vehicle. For GM approved jump start boxes or charging tools, see <https://gmdesolutions.com>.


Use the Battery Voltage info tile to determine if your battery is low and needs to be charged. See *Instrument Cluster* ⇨ 80 under the “Info Tiles” section for more information.

GM recommends charging your 12-volt lithium-ion battery when storing your vehicle for long periods of time. See “Vehicle Storage” later on in this section.

If the vehicle isn’t starting and the 12-volt lithium-ion battery has run down, charging the 12-volt lithium-ion battery may solve the issue. See *Jump Starting - North America* ⇨ 298.

High Voltage Battery (E-Ray)

Only a trained service technician should inspect, test, or replace the high voltage battery. The dealer has information on how to recycle the high voltage battery. There is also information available at <https://www.recyclemybattery.com>.

 **Warning**

Damage to the high voltage battery or high voltage system can create a risk of electric shock, overheating, or fire.

If the vehicle is damaged from a moderate to severe crash, flood, fire, or other event, the vehicle should be inspected as soon as possible. Until the vehicle has been inspected, store it outside at least 15 m (50 ft) from any structure or anything that can burn. Ventilate the vehicle by opening a window or a door.

Contact Customer Assistance as soon as possible to determine whether an inspection is needed. See *Customer Assistance Offices* ⇨ 331.

If the vehicle is in a crash, the sensing system may shut down the high voltage system. When this occurs, the high voltage battery is disconnected and the vehicle will not start. The SERVICE VEHICLE SOON message in the Driver Information Center (DIC) will display. Before the vehicle can operate again, it must be serviced at your

dealer. If a crash occurs or an airbag(s) inflates, see “If a Crash Occurs” under *Collision Damage Repair* ⇨ 335 and *What Will You See after an Airbag Inflates?* ⇨ 55 for additional information.

Propulsion power may be reduced in extremely cold temperatures, or if the high voltage battery is too cold.

See *Radio Frequency Statement* ⇨ 337.

Federal Communications Commission (FCC) Radiation Exposure Statement

This equipment has been evaluated to be installed and operated at a minimum distance of 5.7 cm (2.2 in) between the device and your body. The vehicle design ensures this distance is maintained during normal use. Changes or modifications to any of these systems by other than an authorized service facility could void authorization to use this equipment.

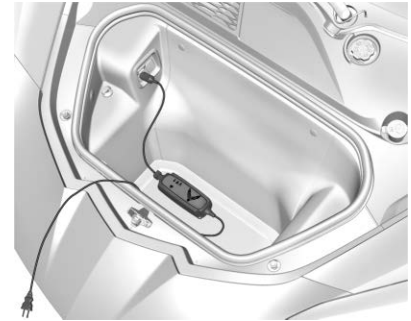
Innovation, Science, and Economic Development (ISED) Radiation Exposure Statement

This equipment complies with RSS-102 radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 5.7 cm (2.2 in) between the radiator and any part of your body. The vehicle design ensures this distance is maintained during normal use. Changes or modifications to any of these systems by other than an authorized service facility could void authorization to use this equipment.

Vehicle Storage

Warning

Batteries have acid that can burn you and gas that can explode. You can be badly hurt if you are not careful. Always wear eye protection. See *Jump Starting - North America* ⇨ 298 for tips on working around a battery without getting hurt.



Some vehicles have a battery maintainer package. Follow the instructions provided with the battery maintainer package to keep the battery charged when the vehicle is not in use. Plug the battery maintainer into the underhood accessory power outlet only.

For vehicles without a battery maintainer, see the following information:

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: It is recommended that the battery maintainer package be used. However, if not, remove the black, negative (-) cable from the battery. All vehicle memory settings will need to be reset when battery power is restored.

12-volt Lithium-ion Battery (E-Ray)

When the vehicle is going to be stored for longer than one week, the 12-volt lithium-ion battery negative and Controller Area Network (CAN) signal connectors should be disconnected to preserve the life of the 12-volt lithium-ion battery. Ensure the signal connector is facing downwards and shielded from direct water exposure to prevent corrosion while disconnected. A battery maintainer package can be used to keep the battery charged when the vehicle is not in use.

Warning

Lithium-ion battery cells contain chemicals that can burn you and gas that can explode under extreme conditions. Explosive gases can cause blindness and/or injury. You can be badly hurt if you are not careful. Always wear eye

(Continued)

Warning (Continued)

protection. See *Jump Starting - North America* ⇨ 298 for tips on working around a lithium-ion battery without getting hurt.

Warning

Use only GM approved jump start boxes and charging tools. Use of unapproved jump start boxes, charging tools, a loose battery, or battery charger may cause personal injury, death, or damage to the vehicle. For GM approved jump start boxes or charging tools, see <https://gmdesolutions.com>.

When storing the vehicle on a long-term basis:

- Attach a compatible battery tender or trickle charger to the 12-volt lithium-ion battery.
- Keep the remote key more than 3 m (10 ft) away from the vehicle.

Park Brake and P (Park) Mechanism Check

Warning

When you are doing this check, the vehicle could begin to move. You or others could be injured and property could be damaged. Make sure there is room in front of the vehicle in case it begins to roll. Be ready to apply the regular brake at once should the vehicle begin to move.

Park on a fairly steep hill, with the vehicle facing downhill. Keeping your foot on the regular brake, set the parking brake.

- To check the parking brake's holding ability: With the engine running and the transmission in N (Neutral), slowly remove foot pressure from the regular brake pedal. Do this until the vehicle is held by the parking brake only.
- To check the P (Park) mechanism's holding ability: With the engine running, shift to P (Park). Then release the parking brake followed by the regular brake.

Contact your dealer if service is required.



Warning

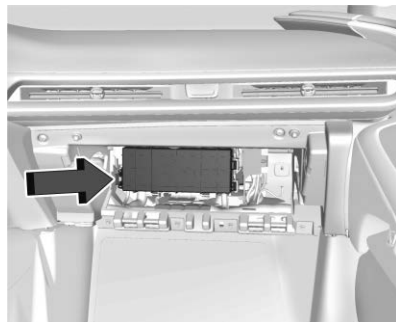
Installation or use of fuses that do not meet GM's original fuse specifications is dangerous. The fuses could fail, and result in a fire. You or others could be injured or killed, and the vehicle could be damaged.

See *Accessories and Modifications* ⇨ 231 and *General Information* ⇨ 231.

To check or replace a blown fuse, see *Electrical System Overload* ⇨ 270.

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.



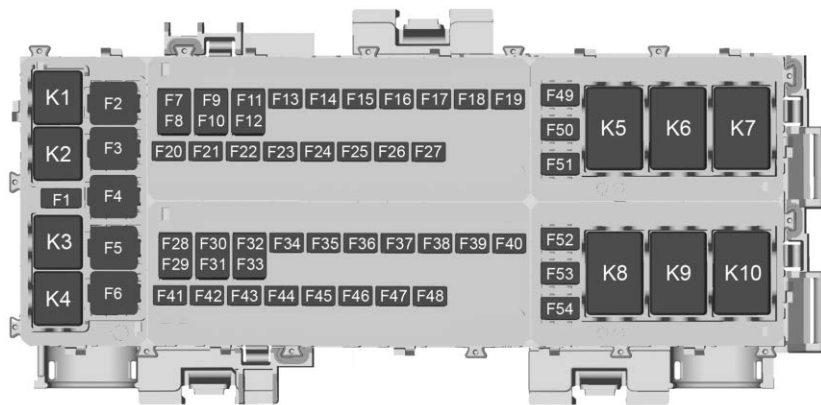
To Access:

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	Traction Power Inverter Module Battery 1
F11	USB

Fuses	Usage
F12	Traction Power Inverter Module Battery 2
F13	Transmission Oil Pump Motor
F14	Glove Box
F15	–
F16	–
F17	Remote Function Actuator
F18	Front Trunk Release
F19	Intelligent Battery Sensor
F20	Exterior Lighting Module 1
F21	Exterior Lighting Module 3
F22	Exterior Lighting Module 4
F23	Body Control Module 2
F24	Exterior Lighting Module 6
F25	Amplifier
F26	–
F27	–
F28	–
F29	–
F30	–
F31	–
F32	–
F33	–
F34	–
F35	–
F36	–
F37	–
F38	–
F39	–
F40	–
F41	–
F42	–
F43	–
F44	–
F45	–
F46	–
F47	–
F48	–
F49	–
F50	–
F51	–
F52	–
F53	–
F54	–

Fuses	Usage	Fuses	Usage	Fuses	Usage
F26	Automatic Occupant Sensing/Electric Park Brake	F38	Front Wash Pump	F52	Steering Wheel Control Switch
F27	Video Processing Module	F39	Rear Auxiliary Power Outlet	F53	Heated Steering Wheel
F28	Right Headlamp	F40	Performance Data Recorder/Center Stack Module	F54	– Steering Wheel (E-Ray)
F29	Clutch Actuator	F41	Integrated Chassis Control Module	Relays	Usage
F30	Sensing and Diagnostic Module/Automatic Occupant Sensing	F42	Theft Deterrent	K1	–
F31	Body Control Module 1	F43	Left Headlamp	K2	Glove Box Relay
F32	Driver Monitor System	F44	Exterior Lighting Module 2	K3	Horn Relay
F33	Data Link Connection/Wireless Charging Module	F45	Power Steering Column Module	K4	Front Wash Relay
F34	Telematics/Head Up Display	F46	Body Control Module 3	K5	Retained Accessory Power/Accessory Relay
F35	Horn	F47	Exterior Lighting Module 5	K6	Front Trunk Release Relay 1
F36	– Shift Interface Board (E-Ray)	F48	Exterior Lighting Module 7	K7	–
F37	– Body Control Module 1 (E-Ray)	F49	Body Control Module 4	K8	–
		F50	Front Auxiliary Power Outlet	K9	Front Trunk Release Relay 2
		F51	–	K10	Wiper Relay

Outward Facing Sidewall : The side of an asymmetrical tire that has a particular side that faces outward when mounted on a vehicle. The side of the tire that contains a whitewall, bears white lettering, or bears manufacturer, brand, and/or model name molding that is higher or deeper than the same moldings on the other sidewall of the tire.

Passenger (P-Metric) Tire : A tire used on passenger cars and some light duty trucks and multipurpose vehicles.

Recommended Inflation Pressure : Vehicle manufacturer's recommended tire inflation pressure as shown on the tire placard. See *Tire Pressure* ⇨ 284 and *Vehicle Load Limits* ⇨ 173.

Radial Ply Tire : A pneumatic tire in which the ply cords that extend to the beads are laid at 90 degrees to the centerline of the tread.

Rim : A metal support for a tire and upon which the tire beads are seated.

Sidewall : The portion of a tire between the tread and the bead.

Speed Rating : An alphanumeric code assigned to a tire indicating the maximum speed at which a tire can operate.

Traction : The friction between the tire and the road surface. The amount of grip provided.

Tread : The portion of a tire that comes into contact with the road.

Treadwear Indicators : Narrow bands, sometimes called wear bars, that show across the tread of a tire when only 1.6 mm (1/16 in) of tread remains. See *When It Is Time for New Tires* ⇨ 292.

UTQGS (Uniform Tire Quality Grading Standards) : A tire information system that provides consumers with ratings for a tire's traction, temperature, and treadwear. Ratings are determined by tire manufacturers using government testing procedures. The ratings are molded into the sidewall of the tire. See *Uniform Tire Quality Grading* ⇨ 294.

Vehicle Capacity Weight : The number of designated seating positions multiplied by 68 kg (150 lbs) plus the rated cargo load. See *Vehicle Load Limits* ⇨ 173.

Vehicle Maximum Load on the Tire : Load on an individual tire due to curb weight, accessory weight, occupant weight, and cargo weight.

Vehicle Placard : A label permanently attached to a vehicle showing the vehicle's capacity weight and the original equipment tire size and recommended inflation pressure. See "Tire and Loading Information Label" under *Vehicle Load Limits* ⇨ 173.

Tire Pressure

Tires need the correct amount of air pressure to operate effectively.

High Speed Operation Inflation Pressures				
Tire Size	Tire Model	Stingray	Z06	E-Ray
245/35ZR19	Pilot Sport All Season 4 ZP	260 kPa (38 psi)		
305/30ZR20	Pilot Sport All Season 4 ZP	260 kPa (38 psi)		
245/35ZR19	Pilot Sport 4 S ZP	260 kPa (38 psi)		
305/30ZR20	Pilot Sport 4 S ZP	260 kPa (38 psi)		
275/30ZR20	Pilot Sport 4 S ZP		260 kPa (38 psi)	220 kPa (32 psi)
345/25ZR21	Pilot Sport 4 S ZP		290 kPa (42 psi)	240 kPa (35 psi)
275/30ZR20	Pilot Sport Cup 2 R ZP		260 kPa (38 psi)	
345/25ZR21	Pilot Sport Cup 2 R ZP		290 kPa (42 psi)	
275/30ZR20	Pilot Sport All Season 4+ ZP			220 kPa (32 psi)
345/25ZR21	Pilot Sport All Season 4+ ZP			250 kPa (36 psi)

See *Track Events and Competitive Driving*

⇨ 159 for track use.

Return the tires to the recommended cold tire inflation pressure when high-speed driving has ended. See *Vehicle Load Limits*

⇨ 173 and

Tire Pressure ⇨ 284.

Tire Pressure Monitor System

The Tire Pressure Monitor System (TPMS) uses radio and sensor technology to check tire pressure levels. The TPMS sensors monitor the air pressure in your tires and transmit tire pressure readings to a receiver located in the vehicle.

Each tire, including the spare (if provided), should be checked monthly when cold and inflated to the inflation pressure recommended by the vehicle manufacturer on the vehicle placard or tire inflation pressure label. (If your vehicle has tires of a different size than the size indicated on the vehicle placard or tire inflation pressure label, you should determine the proper tire inflation pressure for those tires.)

If the vehicle tires must be replaced with a tire that does not have a TPC Spec number, make sure they are the same size, load range, speed rating, and construction (radial) as the original tires.

The Tire and Loading Information label indicates the original equipment tires on the vehicle. See *Vehicle Load Limits* ⇨ 173.

Different Size Tires and Wheels

If wheels or tires are installed that are a different size than the original equipment wheels and tires, vehicle performance, including its braking, ride and handling characteristics, stability, and resistance to rollover may be affected. If the vehicle has electronic systems such as antilock brakes, rollover airbags, traction control, electronic stability control, or All-Wheel Drive, the performance of these systems can also be affected.

Warning

If different sized wheels are used, there may not be an acceptable level of performance and safety if tires not recommended for those wheels are selected. This increases the chance of a crash and serious injury. Only use GM specific wheel and tire systems developed for the vehicle, and have them properly installed by a GM certified technician.

See *Buying New Tires* ⇨ 293 and *Accessories and Modifications* ⇨ 231.

Uniform Tire Quality Grading

The following information relates to the system developed by the United States National Highway Traffic Safety Administration (NHTSA), which grades tires by treadwear, traction, and temperature performance. This applies only to vehicles sold in the United States. The grades are molded on the sidewalls of most passenger car tires. The Uniform Tire Quality Grading (UTQG) system does not apply to deep tread, winter tires, compact spare tires,

tires with nominal rim diameters of 10 to 12 inches (25 to 30 cm), or to some limited-production tires.

While the tires available on General Motors passenger cars and light trucks may vary with respect to these grades, they must also conform to federal safety requirements and additional General Motors Tire Performance Criteria (TPC) standards.

Quality grades can be found where applicable on the tire sidewall between tread shoulder and maximum section width. For example:

Treadwear 200 Traction AA Temperature A

All Passenger Car Tires Must Conform to Federal Safety Requirements In Addition To These Grades.

Treadwear

The treadwear grade is a comparative rating based on the wear rate of the tire when tested under controlled conditions on a specified government test course. For example, a tire graded 150 would wear one and one-half (1½)

Jump Starting

Jump Starting - North America

For more information about the vehicle battery, see *Battery - North America* ⇨ 265.

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.

Warning

WARNING: Battery posts, terminals and related accessories can expose you to chemicals including lead and lead compounds, which are known to the State of California to cause cancer and birth defects or other reproductive harm. Wash hands after handling. For more information go to www.P65Warnings.ca.gov.

See *California Proposition 65 Warning* ⇨ 1.

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.

The battery is under a battery cover and side extensions/shields 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. The positive battery terminal is on the driver side and the negative terminal is on the passenger side.

Before you connect the cables, here are some basic things you should know. Positive (+) will go to the positive (+) terminal. Negative (-) will go to the remote jump starting negative (-) post.

E-Ray Only

The vehicle is equipped with a lithium-ion battery. The 12-volt lithium-ion battery requires a higher voltage than lead acid batteries for jump starting. Jumper cables will only work with some vehicles and under some circumstances. Follow the steps below to safely jump start the discharged lithium-ion batteries.

Warning

Use only GM approved jump start boxes and charging tools. Use of unapproved jump start boxes, charging tools, a loose battery, or battery charger may cause personal injury, death, or damage to the vehicle. For GM approved jump start boxes or charging tools, see <https://gmdesolutions.com>.

Warning

Lithium-ion batteries contain chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. **WASH HANDS AFTER HANDLING.**

See *California Proposition 65 Warning* ⇨ 1.

Caution

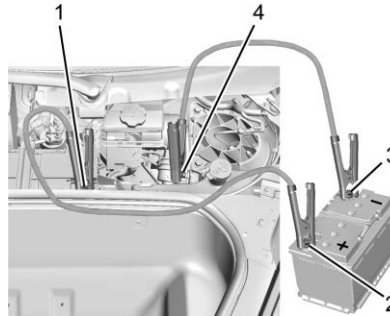
Ignoring these steps could result in costly damage to the vehicle that would not be covered by the vehicle warranty. Trying to start the vehicle by pushing or pulling it will not work, and it could damage the vehicle.

Caution

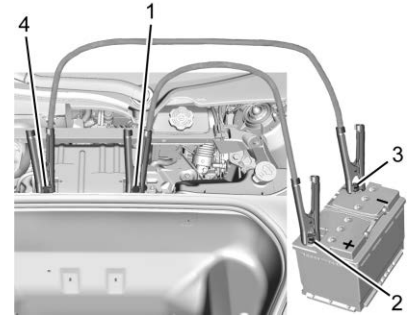
If the jumper cables are connected or removed in the wrong order, electrical shorting may occur and damage the vehicle. The repairs would not be covered by the vehicle warranty. Always connect
(Continued)

Caution (Continued)

and remove the jumper cables in the correct order, making sure that the cables do not touch each other or other metal.



All Models Shown, **Except E-Ray**



E-Ray

Connection Points and Sequence

1. Discharged Battery Positive (+) Terminal
2. Good Battery Positive (+) Terminal
3. Good Battery Negative (-) Terminal
4. Remote Jump Starting Negative (-) Post

Jump Starting Procedure (All Models)

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 jumper cables can reach, but be sure the vehicles are not touching each other. If they are, it could cause a ground connection you do not want. You would not be able to start the vehicle, and the bad grounding could damage the electrical systems.

To avoid the possibility of the vehicles rolling, set the parking brake firmly on both vehicles involved in the jump start procedure. Put an automatic transmission in P (Park) or a manual transmission 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)

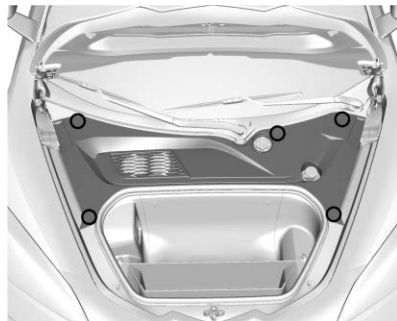
Caution (Continued)

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!
- Open the hood. See *Hood* ⇨ 17.



- Release the four clips for the left and right outer covers.



- Release the five clips and remove the outer cover to access the battery.
- Locate the battery positive (+) terminal and remote jump starting negative (-) post.
- Check that the jumper cables do not have loose or missing insulation. If they do, you could get a shock. The vehicles could be damaged too.
- 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.

11. 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.
12. Connect the other end of the negative (-) cable to the remote jump starting negative (-) post.
13. 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.

Jumper Cable Removal

Reverse the sequence exactly when removing the jumper cables.

After starting the disabled vehicle and removing the jumper cables, allow it to idle for several minutes.

The power windows may need to be initialized. See “Window Indexing” under *Power Windows* ⇨ 29.

Jump Start Box Procedure (E-Ray Only)

If equipped with a lithium-ion battery, another option is to use a jump start box and/or pack to revive the battery.

Caution

Electrical shorting may occur and damage the vehicle if either of the following is done:

- The jump start box is set to ON before beginning the jump starting procedure
- The jump start box is connected or removed in the wrong order

The repairs would not be covered by the vehicle warranty. Always set the jump start box to OFF before starting the jump starting procedure, and connect and remove the jump start box in the correct order, making sure that the cables do not touch each other or other metal.

1. Set the jump start box to OFF.
2. Connect the red (+) cable to the discharged lithium-ion battery positive (+) tab.

3. Connect the black (-) cable to the discharged lithium-ion battery negative (-) post.
4. Once the jump start box has been connected, set the jump start box to ON. After the jump start box is powered on, ensure the instrument cluster lights up before starting the vehicle.
5. After the instrument cluster lights up, use a GM approved battery charger to fully charge the battery.

Jumper Cable Removal

1. Set the jump start box to OFF.
2. Disconnect the black (-) cable to the negative post (-) on the discharged lithium-ion battery.
3. Disconnect the red (+) cable to the discharged lithium-ion battery positive (+) tab.

Charging The 12-Volt Lithium-Ion Battery

The 12-volt lithium-ion battery can be charged using a GM approved charger designed for lithium-ion batteries. Follow the instructions listed in the charger operating manual. See *Battery - North America* ⇨ 265 for more information.

Every 156 000 km (97,500 mi)

- Replace spark plugs. Inspect spark plug wires and/or boots.

Every 161 000 km (100,000 mi)

- Replace hood and/or body lift support gas struts. Or every 10 years, whichever comes first. See *Gas Strut(s)* ⇨ 269.

Every 240 000 km (150,000 mi)

- Drain and fill engine cooling system. Or every six years, whichever comes first. See *Cooling System (Engine)* ⇨ 256 or *Cooling System (Electrified Propulsion)* ⇨ 259.
- Drain and fill power electronic cooling system and rechargeable energy storage system coolant (E-Ray). Or every five years, whichever comes first.

Severe Conditions Requiring More Frequent Maintenance*

- Public service, military, or commercial use vehicles to include the following:
 - Ambulances, police cars, and emergency rescue vehicles.
 - Civilian vehicles such as light duty pick-up trucks, SUVs, and passenger cars that are used in military applications.

- Recovery vehicles such as tow trucks and flatbed single vehicle carriers or any vehicle that is consistently used in towing trailers or other loads.
- High use commercial vehicles such as courier delivery vehicles, private security patrol vehicles, or any vehicles that operate on a 24-hour basis.
- Any vehicle consistently operated in a high sand or dust environment such as those used on oil pipelines and similar applications.

- Vehicles that are regularly used for short trips of 6 km (4 mi) or less.

The oil life indicator will show you when to change the oil and filter. Under severe conditions the indicator may come on before 12 000 km (7,500 mi).

* Footnote: Under extreme driving conditions listed above, it may be necessary to replace your spark plugs at more frequent intervals. For further assistance in determining the most suitable service maintenance intervals for your vehicle, please contact your authorized GM Dealer.

Extreme service is for vehicles mainly driven off-road in four-wheel drive or used in farming, mining, forestry, or snow plowing.

Additional Required Services – Severe Service**Every 72 000 km (45,000 mi)**

- Change the front hybrid drive unit fluid (E-Ray). This service can be complex. See your dealer.

Owner Checks and Services**Every Five Years**

- Replace brake fluid. See *Brake Fluid* ⇨ 264.
- Replace front lift system fluid (if equipped). See *Recommended Fluids and Lubricants* ⇨ 320.

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.

Seasonal

- For Z06 or E-Ray models, inspect the engine air cleaner filter and clear out any leaves, dirt, and debris from the air filter housing to maximize engine performance and air filter life. See *Engine Air Cleaner/Filter* ⇨ 254 and *Vehicle Storage* ⇨ 233.

Conditional

- If brake squeal is observed during normal on road driving, clean and apply copper paste lubricant to the brake pad abutments on both front and rear calipers. See *Recommended Fluids and Lubricants* ⇨ 320.

Multi-Point Vehicle Inspection (MPVI)

A Multi Point Vehicle Inspection (MPVI) completed by a GM dealer 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 dealer.

Some items may not apply to your vehicle and/or region.

Diagnostics

- OnStar active, if equipped
- Service history/recall check

Engine Oil and Filter

- Engine oil
- Oil life monitor
 - Reset oil life monitor

Exterior Lights

- Visual inspection

Windshield and Wipers

- Visual inspection

Battery

- Battery visual inspection
- Battery test results
- Battery cables and connections

Systems, Fluids, and Visible Leak Inspection

- Engine oil
- Transmission
- Drive axle
- Transfer case
- Engine cooling system
- Power steering, if equipped
- Fuel system
- Windshield washer fluid

Tire Inspection

- Tire pressure, tread depth, and wear
- Rotation, if applicable
- Alignment check, optional
- Reset tire pressure monitor
- Check tire sealant expiration date, if equipped
- Check spare tire, if equipped

Brakes

- Check brake system

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 dealer.

Usage	Fluid/Lubricant
Brake Pad Lubrication	Molykote Copper Paste. See your dealer.
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 <i>Cooling System (Engine)</i> ⇨ 256 or <i>Cooling System (Electrified Propulsion)</i> ⇨ 259.
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> ⇨ 245 or <i>Engine Oil (6.2L LT2 Engine)</i> ⇨ 248.
Front Hybrid Drive Unit Fluid (E-Ray)	DEXRON ULV Automatic Transmission Fluid.
Front Lift System (If Equipped)	GM Approved DOT 4 Hydraulic Brake Fluid. See <i>Front Lift System</i> ⇨ 204.
Hydraulic Brake System	GM Approved DOT 4 Hydraulic Brake Fluid.
Power Electronic Cooling System and Rechargeable Energy Storage System Coolant (E-Ray)	Use only ACDelco Premix (50/50 mixture of de-ionized water and DEX-COOL Coolant). See your dealer.
Windshield Washer	Automotive windshield 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		
5.5L V8 Engine (LT6) – Z06*	84378662	A3249C
6.2L V8 Engine (LT2) – Stingray and E-Ray	84321605	A3239C
Engine Oil Filter		
5.5L V8 Engine (LT6) – Z06	12730579	PF2270G
6.2L V8 Engine (LT2) – Stingray and E-Ray	25206377	PF64
Passenger Compartment Air Filter Element	13508023	CF185
Spark Plug		
5.5L V8 Engine (LT6) – Z06	12672174	41-155-IP
6.2L V8 Engine (LT2) – Stingray and E-Ray	12622442	41-149
External Transmission Filter Kit	24045729	—

Vehicle Data

Capacities and Specifications

The following approximate capacities are given in metric and English conversions.

See *Recommended Fluids and Lubricants* ⇨ 320.

Application	Capacities	
	Metric	English
Air Conditioning Refrigerant	For the air conditioning system refrigerant charge type and amount, see the refrigerant label under the hood. 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 and E-Ray	21.5 L	22.7 qt
6.2L V8 Engine (LT2) Engine Cooling System without Performance Package* – Stingray	20.5 L	21.7 qt
Power Electronic Cooling System (E-Ray)	1.4 L	1.5 qt
Rechargeable Energy Storage System (E-Ray)	2.0 L	2.1 qt

Application	Capacities	
	Metric	English
Engine Oil with Filter		
5.5L V8 Engine (LT6) – Z06	7.6 L	8.0 qt
6.2L V8 Engine (LT2) – Stingray and E-Ray	7.1 L	7.5 qt
Front Hybrid Drive Unit (E-Ray)**	3.0 L	3.2 qt
Fuel Tank	70.0 L	18.5 gal
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. ** After draining.		

Engine Specifications

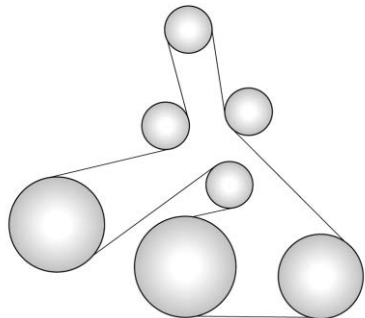
Engine	VIN Code	Transmission	Spark Plug Gap	Firing Order
5.5L V8 Engine (LT6) – Z06	3	Dual Clutch Transmission	0.65-0.75 mm (0.026-0.030 in)	1-4-3-8-7-6-5-2
6.2L V8 Engine (LT2) – Stingray and E-Ray	4	Dual Clutch Transmission	0.95-1.10 mm (0.037-0.043 in)	1-8-7-2-6-5-4-3

Spark plug gaps are preset by the manufacturer. Re-gapping the spark plug is not recommended and can damage the spark plug.

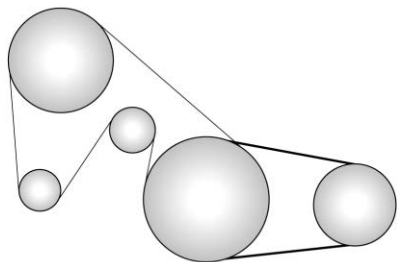
Engine Data

Engine	Horsepower	Torque	Displacement	Compression Ratio
5.5L V8 Engine (LT6) – Z06	670	460 lb ft	5.5 L	12.5:1
6.2L V8 Engine (LT2) with Performance Exhaust – Stingray and E-Ray	495	470 lb ft	6.2 L	11.5:1
6.2L V8 Engine (LT2) with Standard Exhaust – Stingray	490	465 lb ft	6.2 L	11.5:1

Engine Drive Belt Routing



5.5L V8 Engine (LT6) – Z06



6.2L V8 Engine (LT2) – Stingray and E-Ray

Index

A	
Accessories and Modifications	231
Accessory Power	180
Active	
Fuel Management	181
Add-On Electrical Equipment	229
Additional	
OnStar Information	343
Adjustments	
Lumbar, Front Seats	40
Advanced	
Driver Assistance Systems	213
Agreements	
Trademarks and License	146
Air	
Cleaner/Filter, Engine	254
Conditioning	149
Dam, Front	176
Filter Life System	253
Filter, Passenger Compartment	152
Vents	152
Airbag System	52
Check	60
How Does an Airbag Restrain?	55
Passenger Sensing System	56
What Makes an Airbag Inflate?	54
What Will You See after an Airbag Inflates?	55
Airbag System (cont'd)	
When Should an Airbag Inflate?	54
Where Are the Airbags?	53
Airbags	
Adding Equipment to the Vehicle	60
Passenger Status Indicator	88
Readiness Light	88
Replacing System Parts after a Crash	61
Servicing Airbag-Equipped Vehicles	59
Alarm	
Vehicle Security	22
Alert	
Rear Cross Traffic	217
Side Blind Zone (SBZA)	222
All-Season Tires	279
All-Wheel Drive	190
Light	93
AM-FM Radio	122
Antenna	
Diversity System	124
Antilock Brake System (ABS)	191
Warning Light	92
Appearance Care	
Exterior	304
Interior	309
Apple CarPlay and Android Auto	140
Assistance Program, Roadside	332

Assistance Systems			
Advanced	213		
Automatic Emergency			
Braking (AEB)	219		
Blind Zone Alert (SBZA)	222		
Curb View Camera	216		
Driving	217		
Forward Collision Alert (FCA)			
System	217		
Front Pedestrian Braking (FPB)	220		
Lane Keep Assist (LKA)	224		
Parking	216		
Parking and Backing	214		
Rear Cross Traffic Alert (RCTA)	217		
Rear Vision Camera (RVC)	214		
Audio			
Bluetooth	125		
Auto Stop			
Indicator	97		
Automatic			
Dimming Mirrors	26		
Door Locks	16		
Emergency Braking (AEB) Disabled			
Light	93		
Headlamp System	111		
Avoiding Untrusted Media Devices	124		
B			
Battery			
Exterior Lighting Battery Saver	115		
Gauge	85		
Power Protection	115		
Battery - North America	265, 298		
Blade Replacement, Wiper	269		
Bluetooth			
Audio	125		
Overview	135, 136		
Brake			
Fluid	264		
Pad Life System	263		
System Warning Light	91		
Brake Pad Life System	263		
Brakes	261		
Antilock	191		
Brake Assist	192		
Electric Brake Boost	191		
Electric Parking Brake	191		
Regenerative Braking	193		
Braking	156		
Automatic Emergency (AEB)	219		
Front Pedestrian (FPB) System	220		
Break-In, New Vehicle	176		
Buckle To Drive	45		
Bulb Replacement			
Headlamp Aiming	270		
Buying New Tires	293		
C			
Calibration			
Compass	75		
California			
Perchlorate Materials Requirements ...	231		
California Proposition 65 Warning	1, 298		
Camera			
Curb View	216		
Rear Vision (RVC)	214		
Canadian Vehicle Owners	2		
Capacities and Specifications	325		
Carbon Monoxide			
Engine Exhaust	182		
Hatch	20		
Winter Driving	171		
Cargo			
Tie-Downs	72		
Caution, Danger, and Warning	2		
Center Console			
Storage	72		
Chains, Tire	297		
Charging			
System Light	89		
Wireless	77		

Check Engine Light (Malfunction Indicator)	89	Connected Services		Customer Information	
Child Restraints		Connections	346	Publications Ordering Information	336
Infants and Young Children	62	Diagnostics	348	Customer Satisfaction Procedure	329
Lower Anchors and Tethers for Children	66	Navigation	346	Cybersecurity	339
Older Children	61	Connections		D	
Securing	66	Connected Services	346	Damage Repair, Collision	335
Systems	64	Control		Danger, Warning, and Caution	2
Circuit Breakers	271	Hill Rollback	195	Dashboard	4
Cleaning		Traction and Electronic Stability	193	Data Collection	
Exterior Care	304	Control of a Vehicle	156	Infotainment System	340
Interior Care	309	Controls		OnStar	340
Climate Control Systems		Steering Wheel	119	Data Recorder	
Dual Automatic	149	Convenience Net	72	Performance	130
Clock	75	Convertible Top	34	Data Recorders, Event	339
Cluster, Instrument	80	Convex Mirrors	24	Daytime Running Lamps (DRL)	111
Collision Alert		Coolant		Defensive Driving	156
Forward (FCA) System	217	Engine Temperature Gauge	86	Delayed Locking	16
Collision Damage Repair	335	Engine Temperature Warning Light	95	Destination	126
Compartment		Cooling	149	Diagnosics	
Underhood	234	Cooling System	256, 259	Connected Services	348
Compartments		Courtesy Lamps	113	Differential, Limited-Slip	210
Storage	70	Courtesy Transportation Program	334	Disabled Vehicle	
Compass	75	Cruise Control	211	Transporting	302
Competition Oriented Tires	280	Light	98	Distracted	
Composite Materials	176	Cupholders	70	Driving	155
		Customer Assistance		Distracted Driving	155
		Offices	331	Diversity Antenna System	124
		Text Telephone (TTY) Users	331		

- Door
Ajjar Light 98
Delayed Locking 16
Locks 13
- Drive Belt Routing, Engine 328
- Drive Systems
All-Wheel Drive 190
- Driver
Assistance Systems, Advanced 213
Information Center (DIC) 98
Mode Control 195
Mode Control Light 95
Teen 143
- Driving
Assistance Systems 217
Better Fuel Economy 155
Defensive 156
Hill and Mountain Roads 170
If the Vehicle is Stuck 172
Impaired 156
Loss of Control 158
Off-Road Recovery 158
Performance 205
Track Events and Competitive 159
Vehicle Load Limits 173
Wet Roads 170
Winter 171
- Dual
Automatic Climate Control System 149
Clutch Transmission 183
Clutch Transmission Fluid 252
Clutch Transmission Fluid Life
System 252
- Dual Clutch Transmission
Manual Mode 186
- E**
- Electric
Brake Boost 191
Parking Brake 191
Parking Brake Light 91
- Electrical
Equipment, Add-On 229
System Overload 270
- Electrical System
Fuses and Circuit Breakers 271
Instrument Panel Fuse Block 272
Rear Compartment Fuse Block 275
- Electronic Stability Control (ESC) Off
Light 94
- Emergency
OnStar 342
- Engine
Air Cleaner/Filter 254
Air Filter Life System 253
- Engine (cont'd)
Check Light (Malfunction Indicator) 89
Compartment Overview 237
Coolant Temperature Gauge 86
Coolant Temperature Warning Light 95
Cooling System 256, 259
Drive Belt Routing 328
Exhaust 182
Oil Life System 251
Oil Pressure Light 96
Overheating 260
Power Messages 105
Running While Parked 183
Starting 178
- Engine Compartment Lamp 114
- Entry Lighting 114
- Event Data Recorders 339
- Exit Lighting 114
- Extended Parking 182
- Extender, Seat Belt 51
- Exterior
Lamp Controls 109
Lamps Off Reminder 110
Lighting Battery Saver 115

F			
Filter			
Engine Air Cleaner	254		
Flash-to-Pass	111		
Flashers, Hazard Warning	112		
Flat Tire	297		
Floor Mats	312		
Fluid			
Brakes	264		
Dual Clutch Transmission	252		
Dual Clutch Transmission Life			
System	252		
Washer	261		
Folding Mirrors	25		
Frequency Statement			
Radio	337		
Front			
Air Dam	176		
Heated and Ventilated Seats	43		
Lift System	204		
Lift System Light	91		
Fuel			
Additives	227		
Economy, Driving for Better	155		
Filling a Portable Fuel Container	228		
Filling the Tank	227		
Foreign Countries	227		
Gauge	85		
		Fuel (cont'd)	
		Low Fuel Warning Light	97
		Management, Active	181
		Prohibited Fuels	226
		Recommended	226
		Top Tier	226
		Fuses	
		Fuses and Circuit Breakers	271
		Instrument Panel Fuse Block	272
		Rear Compartment Fuse Block	275
		G	
		Garage Door Opener	106
		Programming	106
		Gas Strut(s)	269
		Gauges	
		Battery	85
		Engine Coolant Temperature	86
		Fuel	85
		Odometer	84
		Power Indicator	86
		Speedometer	84
		Stealth Drive Mode Capability	85
		Tachometer	84
		Transmission Temperature	87
		Trip Odometer	84
		Warning Lights and Indicators	79
		General Information	
		Service and Maintenance	314
		Towing	229
		Vehicle Care	231
		Global Positioning System (GPS)	127
		Glove Box	70
		GM Mobility Reimbursement	
		Program	332
		Guidance	
		Problems with the Route	128
		H	
		Hatch	20
		Hazard Warning Flashers	112
		Head Restraints	38
		Head-Up Display (HUD)	101
		Headlamps	
		Aiming	270
		Automatic	111
		Daytime Running Lamps (DRL)	111
		Flash-to-Pass	111
		High-Beam On Light	98
		High/Low Beam Changer	110
		Lamps On Reminder	98
		Leveling Control	112
		Heated	
		Mirrors	26
		Steering Wheel	74

- Heated (cont'd)
Vented Front Seats 43
- Heating 149
- High Voltage Battery Gauge 85
- High-Beam On Light 98
- High-Speed Operation 286
- Hill
Rollback Control 195
- Hill and Mountain Roads 170
- Hill Start Assist (HSA) 193
- Hood 17
- Horn 74
- How to Wear Seat Belts Properly 45
- HVAC 149
- Hybrid Battery
Charging Light 86
- I**
- Ignition Positions 177
- Immobilizer 23
- Indicator
Auto Stop 97
Pedestrian Ahead 94
Traffic Sign 97
Vehicle Ahead 93
- Indicators
Warning Lights and Gauges 79
- Infants and Young Children, Restraints 62
- Information
Publication Ordering 336
- Infotainment
Using the System 120
- Infotainment System 340
- Inspection
Multi-Point Vehicle 318
- Instrument Cluster 80
- Instrument Panel Overview 4
- Interior Rearview Mirrors 26
- Introduction 2, 116
- J**
- Jump
Starting - North America 298
- K**
- Keys 6
Remote 7
Remote Operation 7
- L**
- Labeling, Tire Sidewall 281
- Lamps
Courtesy 113
Daytime Running (DRL) 111
Engine Compartment 114
Exterior Controls 109
Exterior Lamps Off Reminder 110
- Lamps (cont'd)
Exterior Lighting Battery Saver 115
Flash-to-Pass 111
High/Low Beam Changer 110
Malfunction Indicator (Check Engine) 89
On Reminder 98
Reading 113
- Lane
Keep Assist Light 93
- Lap-Shoulder Belt 47
- LATCH, Lower Anchors and Tethers for Children 66
- LED Lighting 270
- Leveling Control
Headlamp 112
- Lifting the Vehicle, Tires 232
- Lighting
Entry 114
Exit 114
Illumination Control 113
LED 270
- Lights
Airbag Readiness 88
All-Wheel-Drive 93
Antilock Brake System (ABS)
Warning 92

Lights (cont'd)	Lights (cont'd)	Manual
Automatic Emergency Braking (AEB)	Traction Control System	Mode 186
Disabled 93	(TCS)/Electronic Stability Control	Maps 126
Brake System Warning 91	Light 94	Media
Charging System 89	Traction Off 94	Avoiding Untrusted Devices 124
Check Engine (Malfunction	Limited-Slip Differential 210	Memory Seats 40
Indicator) 89	Locks	Messages
Cruise Control Light 98	Automatic Door 16	Engine Power 105
Door Ajar 98	Delayed Locking 16	Vehicle 105
Driver Mode Control 95	Door 13	Vehicle Speed 106
Electric Parking Brake 91	Lockout Protection 16	Mirrors
Electronic Stability Control	Loss of Control 158	Automatic Dimming 26
(ESC), Off 94	Low Fuel Warning Light 97	Automatic Dimming Rearview 26
Engine Coolant Temperature	Low-Profile Tires 280	Convex 24
Warning 95	Lower Anchors and Tethers for	Folding 25
Engine Oil Pressure 96	Children (LATCH System) 66	Heated 26
Front Lift System 91	Lumbar Adjustment 40	Interior Rearview 26
Gauges and Indicators 79	Front Seats 40	Power 24
High-Beam On 98	M	Rear Camera 26
Hybrid Battery Charging 86	Maintenance	Tilt in Reverse 26
Lane Keep Assist 93	Records 323	Mode
Low Fuel Warning 97	Maintenance Schedule 315	Driver Control 195
Seat Belt Reminders 87	Recommended Fluids and	Monitor System, Tire Pressure 287
Security 97	Lubricants 320	Multi-Point Vehicle Inspection (MPVI) 318
Service Electric Parking Brake 92	Malfunction Indicator Lamp 89	
Tire Pressure 96		

N

Navigation	
Connected Services	346
Destination	126
Symbols	126
Using the System	125
Net, Convenience	72
New Vehicle Break-In	176

O

Odometer	84
Trip	84
Off-Road	
Recovery	158
Oil	
Engine	245, 248
Engine Oil Life System	251
Pressure Light	96
Older Children, Restraints	61
Online Account	331
OnStar	340
Additional Information	343
Overview	341
OnStar Emergency	342
OnStar Security	342
Outlets	
Power	76
Overheating, Engine	260

Overview	117
Instrument Panel	4

P

Panel, Roof	30
Park	
Assist	214, 216
Shifting Into	180
Shifting Out of	181
Parking	
Brake and P (Park) Mechanism	
Check	268
Extended	182
Over Things That Burn	181
Parking or Backing	
Assistance Systems	214
Passenger	
Airbag Status Indicator	88
Compartment Air Filter	152
Sensing System	56
Pedestrian Ahead Indicator	94
Perchlorate Materials Requirements,	
California	231
Performance	
Data Recorder (PDR)	130
Driving	205
Transmission Active	92

Phone

Apple CarPlay and Android Auto	140
Bluetooth	135, 136

Port

USB	124
-----------	-----

Positioning

Vehicle	128
---------------	-----

Power

Indicator Gauge	86
Mirrors	24
Outlets	76
Protection, Battery	115
Retained Accessory (RAP)	180
Seat Adjustment	38
Windows	29

Pregnancy, Using Seat Belts	50
-----------------------------------	----

Privacy

Vehicle Data Recording	338
Problems with Route Guidance	128

Program

Courtesy Transportation	334
Prohibited Fuels	226

Proposition 65 Warning

California	1
Proposition 65 Warning, California	298
Publication Ordering Information	336

R		Remote		S	
Radiator	256, 259	Key	7	Safety Defects Reporting	
Radio		Key Operation	7	Canadian Government	338
AM-FM Radio	122	Vehicle Start	12	General Motors	338
Frequency Statement	337	Replacement Parts		U.S. Government	337
Reception	124	Airbags	61	Safety System Check	51
Satellite	123	Maintenance	321	Satellite Radio	123
Reading Lamps	113	Replacing		Scheduling Appointments	333
Rear		Airbag System	61	Seat Belts	44
Camera Mirror	26	Seat Belt System Parts after a Crash	51	Buckle To Drive	45
Storage	71	Reporting Safety Defects		Care	51
Windows	30	Canadian Government	338	Extender	51
Rearview Mirrors		General Motors	338	How to Wear Seat Belts Properly	45
Automatic Dimming	26	U.S. Government	337	Lap-Shoulder Belt	47
Reclining Seatbacks	39	Retained Accessory Power (RAP)	180	Reminders	87
Recognition		Reverse Tilt Mirrors	26	Replacing after a Crash	51
Voice	128	Ride Control Systems		Use During Pregnancy	50
Recommended		Enhanced Traction System (ETS)	210	Seats	
Fuel	226	Roads		Head Restraints	38
Recommended Fluids and Lubricants	320	Driving, Wet	170	Heated and Ventilated, Front	43
Records		Roadside Assistance Program	332	Lumbar Adjustment, Front	40
Maintenance	323	Roof		Memory	40
Recreational Vehicle Towing	304	Panel	30	Power Adjustment, Front	38
Regenerative Braking	193	Rotation, Tires	291	Reclining Seatbacks	39
Reimbursement Program, GM		Routing, Engine Drive Belt	328	Securing Child Restraints	66
Mobility	332	Run-Flat Tires	279	Security	
		Running the Vehicle While Parked	183	Light	97
				OnStar	342

Security (cont'd)		Steering	157	System (cont'd)	
Vehicle	22	Heated Wheel	74	Infotainment	340
Vehicle Alarm	22	Wheel Adjustment	74	T	
Service	153	Wheel Controls	119	Tachometer	84
Accessories and Modifications	231	Stop/Start System	179	Teen Driver	143
Doing Your Own Work	233	Storage		Text Telephone (TTY) Users	331
Electric Parking Brake Light	92	Center Console	72	Theft-Deterrent Systems	23
Maintenance Records	323	Compartments	70	Immobilizer	23
Maintenance, General Information	314	Convenience Net	72	Time	75
Parts Identification	324	Cupholders	70	Tires	278
Scheduling Appointments	333	Glove Box	70	All-Season	279
Services		Rear	71	Buying New Tires	293
Special Application	319	Vehicle	233	Chains	297
Servicing the Airbag	59	Storage Areas		Competition Oriented	280
Settings	141	Underhood	70	Designations	282
Shifting		Struts		Different Size	294
Into Park	180	Gas	269	If a Tire Goes Flat	297
Out of Park	181	Stuck Vehicle	172	Inspection	290
Signals, Turn and Lane-Change	112	Summer Tires	281	Lifting the Vehicle	232
Software Updates	122	Sun Visors	30	Low-Profile	280
Special Application Services	319	Symbols	3	Pressure	284, 286
Specifications and Capacities	325	Navigation	126	Pressure Light	96
Speedometer	84	System		Pressure Monitor Operation	288
Start Assist, Hill	193	Airbag	52	Pressure Monitor System	287
Start Vehicle, Remote	12	Brake Pad Life	263	Rotation	291
Starting the Engine	178	Engine Air Filter Life	253	Run-Flat	279
Stealth Drive Mode Capability Gauge	85	Front Lift	204	Sidewall Labeling	281
		Global Positioning	127		

- Tires (cont'd)
- Terminology and Definitions 283
 - Uniform Tire Quality Grading 294
 - Wheel Alignment and Tire Balance 295
 - Wheel Replacement 296
 - When It Is Time for New Tires 292
 - Winter 279
- Top Tier Fuel 226
- Towing
- General Information 229
 - Recreational Vehicle 304
- Track Events and Competitive Driving 159
- Traction
- Control System (TCS)/Electronic Stability Control Light 94
 - Control/Electronic Stability Control 193
 - Limited-Slip Differential 210
 - Off Light 94
- Trademarks and License Agreements 146
- Traffic
- Sign Indicator 97
- Transmission
- Dual Clutch 183
 - Dual Clutch Fluid 252
 - Dual Clutch Fluid Life System 252
 - Performance, Active 92
 - Temperature Gauge 87
- Transportation Program, Courtesy 334
- Transporting
- a Disabled Vehicle 302
- Trip Odometer 84
- TTY Users
- Customer Assistance 331
- Turn and Lane-Change Signals 112
- U**
- Underhood
- Compartment Overview 234
 - Storage 70
- Uniform Tire Quality Grading 294
- Universal Remote System 106
- Operation 108
 - Programming 106
- Updates
- Software 122
- USB Port 124
- Using
- Infotainment System 120
 - Navigation System 125
 - This Manual 2
- V**
- Vehicle
- Ahead Indicator 93
 - Alarm System 22
 - Canadian Owners 2
 - Control 156
- Vehicle (cont'd)
- Data Recording and Privacy 338
 - Identification Number (VIN) 324
 - Load Limits 173
 - Messages 105
 - Positioning 128
 - Remote Start 12
 - Security 22
 - Speed Messages 106
 - Storage 233
 - Symbols 3
- Vehicle Care
- Tire Pressure 284
- Ventilation, Air 152
- Visors 30
- Voice Recognition 128
- W**
- Warning
- Brake System Light 91
 - Caution and Danger 2
 - Hazard Flashers 112
 - Lights, Gauges, and Indicators 79
- Washer Fluid 261
- Wheels
- Alignment and Tire Balance 295
 - Different Size 294

Wheels (cont'd)	
Replacement	296
When It Is Time for New Tires	292
Windows	28
Power	29
Rear	30
Windshield	
Replacement	269
Wiper/Washer	74
Winter	
Driving	171
Tires	279
Wiper	
Blade Replacement	269
Wireless Charging	77

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- myChevrolet Mobile App
- How-To Videos
- Vehicle Diagnostics
- Scheduled Maintenance
- Vehicle Features
- Many Additional Resources

Canada



United States

Customer Assistance
1-800-222-1020
Roadside Assistance
1-800-243-8872

United States and Canada

Connected Services
1-888-4-ONSTAR

Canada

Customer Assistance
1-800-263-3777
Roadside Assistance
1-800-268-6800



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