2012 Chevrolet Malibu Owner Manual

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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, MALIBU, and the MALIBU Emblem are trademarks and/or service marks of General Motors LLC, its subsidiaries, affiliates, or licensors. This manual describes features that may or may not be on your specific vehicle either because they are options that you did not purchase or due to changes subsequent to the printing of this owner manual. Please refer to the purchase documentation relating to your specific vehicle to confirm each of the features found on your vehicle.

Keep this manual in the vehicle for quick reference.

Using this Manual

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

Danger, Warnings, and Cautions

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

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

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

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

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



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

Symbols

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

: This symbol is shown when you need to see your owner manual for additional instructions or information.

: This symbol is shown when you need to see a service manual for additional instructions or information.

Vehicle Symbol Chart

Here are some additional symbols that may be found on the vehicle and what they mean. For more information on the symbol, refer to the Index.

- ✤: Airbag Readiness Light
- ☆ : Air Conditioning
- Air Conditioning Refrigerant Oil
- (B) : Antilock Brake System (ABS)
- ໌ເຊີ: Audio Steering Wheel Controls
- (I): Brake System Warning Light
- Certified Technician
- : Charging System
- 🕥 : Cruise Control
- L: Engine Coolant Temperature
- -Ö-: Exterior Lamps

- 🗄 : Flammable
- 钓: Front Fog Lamps
- O≹: Rear Fog Lamps
- **:** Fuel Gauge
- 🗲: Fuses

 $\exists D$: Headlamp Main/Dipped-Beam Changer

- S: ISOFIX Child Restraint System
- 心: Malfunction Indicator Lamp
- 🗹 : Oil Pressure
- ப்: Power
- Safety Belt Reminders
- (!): Tyre Pressure Monitor
- 🛱: Windscreen Washer Fluid

Keys, Doors, and Windows

Keys and Locks

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Keys and Locks

Keys

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

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



The key that is part of the Remote Keyless Entry (RKE) transmitter can be used for the ignition and all locks if the vehicle is a key access vehicle. If the vehicle has the keyless ignition, the key can be used for the locks.



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

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

See your dealer if a new key is needed.

Remote Keyless Entry (RKE) System

Changes or modifications to this system by other than an authorised service facility could void authorisation to use this equipment.

If there is a decrease in the RKE operating range:

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

Remote Keyless Entry (RKE) System Operation

The transmitter functions will work up to 20 m (65 ft) away from the vehicle. On vehicles with remote start the distance will be greater.

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



RKE without Remote Start Shown

1-4 Keys, Doors, and Windows

(Lock): Press to lock all doors.

The indicators may flash and/or the horn may sound to indicate locking, see "Locking Feedback" under *Vehicle Personalisation on page 4-43*.

If the driver door is open when \bigcirc is pressed, all doors lock except the driver door, if enabled through the vehicle personalisation.

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

Pressing a may also arm the theft-deterrent system. See *Anti-theft Alarm System on page 1-13.*

When the doors are locked, the fuel door is also locked.

On some models, pressing and holding **a** will close all of the vehicle's windows.

(Unlock): Press to unlock the driver door or all doors. See "Door Unlock Options" under *Vehicle Personalisation on page 4-43.*

The indicators may flash and/or the horn may sound to indicate unlocking. See "Unlock Feedback" under Vehicle Personalisation on page 4-43.

Pressing a will disarm the theft-deterrent system. See *Anti-theft Alarm System on page 1-13*.

Memory seat positions may be recalled when unlocking the vehicle. See *Memory Seats on page 2-7* and "Memory Remote Recall" under *Vehicle Personalisation on page 4-43* for more information.

On some models, pressing and holding a will open all of the vehicle's windows.

(Vehicle Locator/Panic)

Alarm): Press and release one time to locate the vehicle. The exterior lamps flash and the horn chirps.

Press and hold if for at least two seconds to sound the panic alarm. The horn sounds and the indicators flash until is pressed again or the vehicle is started.

Q (Remote Vehicle Start): For vehicles with this feature,

press $\widehat{\mathbf{O}}$ and then press and hold $\widehat{\mathbf{O}}$ within five seconds to start the engine from outside the vehicle using the RKE transmitter. See *Remote Vehicle Start on page 1-7* for additional information.

The buttons on the keys are disabled when there is a key in the ignition, if equipped.

Keyless Access Operation

Some vehicles have a keyless access system that lets you lock and unlock the doors and access the boot without removing the RKE transmitter from your pocket, handbag, briefcase, etc. The RKE transmitter should be within 1 m (3 ft) of the door or boot being opened.

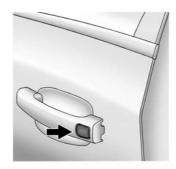
Keyless Unlocking

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

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

To customise which doors unlock when the driver door is opened, see "Door Unlock Options" under *Vehicle Personalisation on page 4-43.*

Lock Sensor



When all doors are closed and the ignition is off, the vehicle can be locked by pressing this area on the door handle. This feature will be available for several minutes after the vehicle has been turned off.

Keyless Boot Opening

Press the touch pad located on the centre high-mounted brake lamp to open the boot, if the RKE transmitter is within range.

Programming Transmitters to the Vehicle

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

A new transmitter can be programmed to the vehicle when there is more than one recognised transmitter. To program, the vehicle must be off and all of the transmitters, both currently recognised and new, must be with you.

1. Open the armrest storage area and place the transmitter in the transmitter pocket with the buttons facing the front of the vehicle. Insert the vehicle key of the new transmitter into the key lock cylinder located on the outside of the driver door and turn the key to the unlock position five times within 10 seconds.

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

- 3. Remove the recognised key and place the new transmitter into the transmitter pocket.
- 4. Press the ignition. When the transmitter is learned, the DIC will show that it is ready to program the next transmitter.
- 5. Remove the transmitter from the transmitter pocket and press **a**.

To program additional transmitters, repeat Steps 3 through 5.

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

Starting the Vehicle with a Low Transmitter Battery

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

To start the vehicle:

- Open the armrest storage area and place the transmitter in the transmitter pocket with the buttons facing the front of the vehicle.
- With the vehicle in P (Park) or N (Neutral), press the brake pedal and the ignition button. See Starting the Engine on page 8-18

Replace the transmitter battery as soon as possible.

Battery Replacement

Replace the battery if the REPLACE BATTERY IN REMOTE KEY message displays in the DIC. See "REPLACE BATTERY IN REMOTE KEY" under Key and Lock Messages on page 4-39.

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

The battery is not rechargeable. To replace the battery:

1. Push the button on the transmitter to extend the key blade.



- 2. Remove the battery cover by prying it with a finger.
- Remove the battery by pushing on the battery and sliding it toward the key blade.
- Insert the new battery, positive side facing up. Push the battery down until it is held in place. Replace with a CR2032 or equivalent battery.
- 5. Snap the battery cover back on to the transmitter.

Remote Vehicle Start

The vehicle may have this feature that allows you to start the engine from outside the vehicle.

O (Remote Vehicle Start):

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

Vehicles with an automatic climate control system will default to a heating or cooling mode depending on the outside temperature during a remote start. A vehicle without automatic climate control will default to the last used heating or cooling mode. Once the key is turned to ON/RUN, the climate control system will turn on at the setting the vehicle was last set to. If the vehicle has heated seats, they may come on during a remote start. See *Heated Front Seats on page 2-9*.

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

Other conditions can affect the performance of the transmitter. See *Remote Keyless Entry (RKE) System on page 1-3.*

Starting the Vehicle

To start the engine using the remote start feature:

- 1. Aim the RKE transmitter at the vehicle.
- 2. Press and release .
- 3. Immediately after completing Step 2, press and hold **O** until the indicator lamps flash, or for about two seconds if the vehicle is not in view.

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

1-8 Keys, Doors, and Windows

The engine will continue to run for 10 minutes. Repeat the steps for a 10-minute time extension. Remote start can be extended only once.

Start the vehicle before driving.

Extending Engine Run Time

For a 10-minute extension, repeat Steps 1–3 while the engine is still running. The remote start can be extended once.

When the remote start is extended, the second 10 minutes will start immediately.

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

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

The vehicle's ignition must be turned on and then back off before the remote start procedure can be used again.

Cancelling a Remote Start

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

- Aim the RKE transmitter at the vehicle and press and hold **Q** until the parking lamps turn off.
- Turn on the hazard warning flashers.
- Turn the vehicle on and then off.

Conditions in Which Remote Start Will Not Work

The remote vehicle start feature will not operate if:

- The key is in the ignition (key access) or if the key is in the vehicle (keyless access).
- The bonnet is not closed.
- The hazard warning flashers are on.
- The malfunction indicator lamp is on.
- The engine coolant temperature is too high.

- The oil pressure is low.
- Two remote vehicle starts, or a single remote start with an extension, have already been used.
- The vehicle is not in P (Park).

Door Locks

Unlocked doors can be dangerous.

 Passengers, especially children, can easily open the doors and fall out of a moving vehicle. When a door is locked, the handle will not open it. The chance of being thrown out of the vehicle in a crash is increased if the doors are not locked.

(Continued)

WARNING (Continued)

So, all passengers should wear safety belts properly and the doors should be locked whenever the vehicle is driven.

- Young children who get into unlocked vehicles may be unable to get out. A child can be overcome by extreme heat and can suffer permanent injuries or even death from heat stroke. Always lock the vehicle whenever leaving it.
- Outsiders can easily enter through an unlocked door when you slow down or stop the vehicle. Locking the doors can help prevent this from happening.

There are several ways to lock and unlock the vehicle.

From the outside:

- Turn the key in the driver door lock anticlockwise to lock the door and clockwise to unlock it.
- Press or or on the Remote Keyless Entry (RKE) transmitter.

From the inside:

- Push down on the manual lock knob on the top of the door.
- Pulling the door handle unlocks the door. Pulling the door handle again unlatches the door.
- Press **n** or **n** on the instrument panel.

Power Door Locks



(Lock): Press to lock the doors.

1 (Unlock): Press to unlock the doors.

Locking or unlocking the doors will also lock or unlock the boot and fuel filler door. See *Boot on page 1-11* or *Filling the Tank on page 8-43*.

Door Ajar Reminder

A chime will sound and the appropriate door message will display if one of the doors is not fully closed. This happens when the ignition is on and the gear lever is moved out of P (Park) or N (Neutral). See *Door Ajar Messages on page 4-36*.

Delayed Locking

This feature will delay the actual locking of the doors and arming of the theft-deterrent system for five seconds when the power door lock switch or Remote Keyless Entry (RKE) transmitter is used to lock the vehicle. If any door is open when locking the vehicle, three chimes will signal that the delayed locking feature is active. Five seconds after the last door is closed, all of the doors will lock. To cancel the delay and lock the doors immediately, press on the RKE transmitter or the power door lock switch a second time. The theft-deterrent system will arm after 30 seconds.

Automatic Door Locks

The vehicle can be programmed to unlock the doors automatically when the vehicle is shifted into P (Park) on automatic transmission vehicles or upon turning the ignition Off on manual gearbox vehicles.

The power door unlock function can be programmed through prompts displayed on the Driver Information Centre (DIC). See *Vehicle Personalisation on page 4-43* for more information.

Lockout Protection

If the power door lock switch is pressed when the key is in the ignition and any door is open, all doors will lock and then the driver door will unlock. Be sure to remove the key from the ignition when locking the vehicle.

If the Remote Keyless Entry (RKE) transmitter is used to lock the doors while the key is in the ignition, a chime will sound three times. All doors will then lock.

Safety Locks

The vehicle has rear door security locks to prevent passengers from opening the rear doors from the inside.



Open the rear doors to access the security locks on the inside edge of each door.

To set the locks, insert a key into the slot and turn it to the horizontal position. The door can only be opened from the outside with the door unlocked. To return the door to normal operation, turn the slot to the vertical position.

Doors

Boot

Exhaust gases can enter the vehicle if it is driven with the tailgate, boot/hatch open, or with any objects that pass through the seal between the body and the boot/hatch or tailgate. Engine exhaust contains carbon monoxide (CO) which cannot be seen or smelled. It can cause unconsciousness and even death.

If the vehicle must be driven with the tailgate, or boot/hatch open:

- Close all of the windows.
- Fully open the air outlets on or under the instrument panel.

(Continued)

WARNING (Continued)

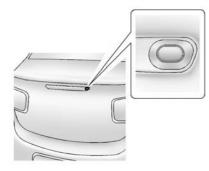
- Adjust the climate control system to a setting that brings in only outside air and set the fan speed to the highest setting. See "Climate Control Systems" in the Index.
- If the vehicle is equipped with a power tailgate, disable the power tailgate function.

For more information about carbon monoxide, see *Engine Exhaust on page 8-25*.

Boot Release

The boot can only be opened while the vehicle is in P (Park) or when the ignition is off.

Press \iff on the RKE transmitter. See Remote Keyless Entry (RKE) System Operation on page 1-3.

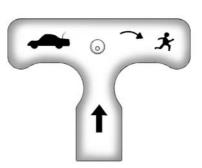


Unlock the boot first by pressing a on the instrument panel or RKE transmitter. Then, press the touch pad located on the boot to open it.

For vehicles with a key cylinder on the boot, use the key to unlock it.

Close the boot by pulling on the handle.

Emergency Boot Release Handle



Notice: Do not use the emergency boot release handle as a tie-down or anchor point when securing items in the boot as it could damage the handle. The emergency boot release handle is only intended to aid a person trapped in a latched boot, enabling them to open the boot from the inside.

There is a glow-in-the-dark emergency boot release handle located inside the boot on the boot latch. This handle glows following exposure to light. Pull the release handle up to open the boot from the inside.

Vehicle Security

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

Anti-theft Alarm System

This vehicle has an anti-theft alarm system.

In addition to standard theft-deterrent system capabilities, this system also has an intrusion sensor and inclination sensor.

Arming the System

To arm the system, press $\widehat{\mathbf{r}}$ on the RKE transmitter.

The alarm automatically arms after about 30 seconds. The security light, located on the instrument panel, flashes.

Press \clubsuit on the RKE transmitter to open the boot without setting off the alarm. The system rearms when the boot is closed.

Disarming the System

To disarm the system, do one of the following:

- Press **a** on the RKE transmitter.
- Approach the vehicle with the RKE transmitter (keyless access).
- Start the engine.

The alarm automatically disarms.

How to Detect a Tamper Condition

If **n** is pressed and the horn sounds, an attempted break-in occurred while the system was armed.

If the alarm has been activated, the THEFT ATTEMPTED message will appear on the DIC. See *Anti-theft Alarm System Messages on page 4-40* for additional information.

Intrusion Sensor

The vehicle's intrusion sensor monitors the vehicle interior and provides an alarm signal to the theft-deterrent module in the event of an unauthorised entry into the vehicle's interior. Do not allow passengers or pets to remain in the vehicle when the intrusion sensor is activated. Before arming the theft-deterrent system and activating the intrusion sensor, do the following:

- Make sure all doors, windows, and the sunroof (if equipped) are completely closed.
- Turn off any fans or blowers. Moving air may trigger the alarm.
- Be sure to secure any loose items such as a sunshade or window blinds.

1-14 Keys, Doors, and Windows

- Make sure there are no obstructions blocking the sensors in the front overhead console.
- Do not hang anything from the rear view mirror.

If any passengers must remain in the vehicle, they should lock the doors from inside using the power door lock switch after the doors have been closed. The intrusion sensor will not be activated.

Immobiliser Operation (Key Access)

This vehicle has a passive theft-deterrent system.

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

The vehicle is automatically immobilised when the key is removed from the ignition. The system is automatically disarmed when the vehicle is started with the correct key. The key uses a transponder that matches an immobiliser control unit in the vehicle and automatically disarms the system. Only the correct key starts the vehicle. The vehicle may not start if the key is damaged.



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

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

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

If the engine still does not start, and the key appears to be undamaged or the light continues to stay on, try another ignition key.

If the engine still does not start with the other key, the vehicle needs service. If the vehicle does start, the first key may be damaged. See your dealer who can service the theft-deterrent system and have a new key made.

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

Immobiliser Operation (Keyless Access)

This vehicle has a passive theft-deterrent system.

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

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

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



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

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

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

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

If the RKE transmitter appears to be undamaged, try another transmitter. Or, you may try placing the transmitter in the transmitter pocket located in the centre console. See "Starting the Vehicle with a Low Transmitter Battery" under *Remote Keyless Entry (RKE) System Operation on page 1-3.* If the engine does not start with the other transmitter or when the transmitter is in the pocket in the centre console, your vehicle needs service. See your dealer who can service the theft-deterrent system and have a new transmitter programmed to the vehicle.

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

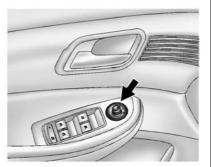
Exterior Mirrors

Convex Mirrors

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

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

Power Mirrors



Manual Folding Shown, Power Folding Similar

To adjust the mirrors:

- Turn the selector switch to L (Left) or R (Right) to choose the driver or passenger mirror.
- 2. Move the control to adjust the mirror.
- Turn the selector switch to O to deselect the mirror.

Folding Mirrors

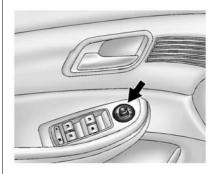
Manual Folding Mirrors

Manually fold the mirrors inward to prevent damage when going through an automatic car wash. To fold, push the mirror toward the vehicle. Push the mirror outward, to return to its original position.

Power Folding Mirrors

The vehicle may have power folding mirrors.

To fold the mirrors:



1. Turn the selector switch to \bigcirc .



- 2. Pull the selector switch back to fold the mirrors.
- 3. Pull the selector switch back again to return the mirrors to their original position.

Heated Mirrors

For vehicles with heated mirrors:

(**Rear Demister**): Press to heat the mirrors.

See "Rear Window Demister" under Automatic Climate Control System on page 7-3 for more information.

Reverse Tilt Mirrors

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

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

This feature can be turned on or off through the Driver Information Centre (DIC). See *Vehicle Personalisation on page 4-43*.

Interior Mirrors

Manual Rearview Mirror

To adjust the inside rearview mirror, hold the rearview mirror in the centre and move it to view the area behind the vehicle.

For vehicles with a manual rearview mirror, push the tab forward for daytime use and pull it backward for nighttime use to avoid glare from the headlamps from behind.

Automatic Dimming Rearview Mirror

For vehicles with an automatic dimming rearview mirror, the mirror will automatically reduce the glare from the headlamps from behind. The dimming feature comes on when the vehicle is started.

Cleaning the Mirror

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

Windows

\land WARNING

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



The vehicle aerodynamics are designed to improve fuel economy performance. This may result in a pulsing sound when a window is partially open. To reduce the sound, open another window or the sunroof (if fitted).

Power Windows



Uplevel Shown, Base Level Similar

The power windows only operate with the ignition in ACC/ ACCESSORY or ON/RUN/START, or when in Retained Accessory Power (RAP). See *Retained Accessory Power (RAP) on page 8-21.*

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

Express-Down Window

The express-down feature allows the windows to be lowered fully without holding the window switch. Press the switch fully to activate the express-down feature. The express mode can be cancelled at any time by briefly pressing or pulling the switch.

Express-Up Window (If Equipped)

On vehicles with this feature, pull the switch up fully and release the switch to activate the express-up feature. The express mode can be cancelled at any time by briefly pressing or pulling the switch.

Programming the Power Windows

If the battery on the vehicle has been recharged or disconnected, or is not working, the driver power window will need to be reprogrammed for the express-up feature to work. Replace or recharge the vehicle battery before reprogramming.

To program the driver window:

- 1. With the ignition in ACC/ ACCESSORY or ON/RUN, or when in RAP, close all doors.
- 2. Press and hold the power window switch until the window is fully open.
- 3. Pull the power window switch up until the window is fully closed.
- 4. Continue holding the switch up for approximately two seconds after the window is completely closed.

The window is now reprogrammed.

Express Window Anti-Pinch Feature

If any object is in the path of the window when express-up is active, the window stops at the obstruction and auto-reverses to a preset factory position. Weather conditions such as severe icing may also cause the window to auto-reverse. The window returns to normal operation once the obstruction or condition is removed.

Express Window Anti-Pinch Override

If express override is activated, the window will not reverse automatically. You or others could be injured and the window could be damaged. Before you use express override, make sure that all people and obstructions are clear of the window path.

In an emergency, the anti-pinch feature can be overridden in a supervised mode. Hold the window switch all the way up to the second position. The window rises for as long as the switch is held. Once the switch is released, the express mode is reactivated.

In this mode, the window can still close on an object in its path. Use care when using the override mode.

Window Lockout



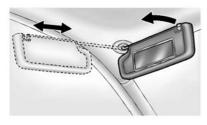
Uplevel Shown, Base Level Similar

This feature prevents the rear passenger windows from operating, except from the driver position.

Press $\overleftarrow{\&}$ to activate the window lockout. The indicator light in the switch will illuminate.

Press 🖾 again to deactivate the window lockout.

Sun Visors



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

The vehicle may have a lighted mirror; lift the cover.

Roof

Sunroof

On vehicles with a sunroof, the switches used to operate it are on the headliner above the rearview mirror. The ignition must be in ON/RUN or ACC/ACCESSORY, or in Retained Accessory Power (RAP) to operate the sunroof. See *Ignition Positions (Key Access) on page 8-14 or Ignition Positions (Keyless Access) on page 8-16 and Retained Accessory Power (RAP) on page 8-21.*



Open/Close: Press and hold the front or rear of switch (A) to open or close the sunroof. The sunshade automatically opens with the sunroof, but must be closed manually.

Express Open/Close: Press and release the front or rear of switch (A) to express-open or express-close the sunroof.

Vent/Close: Press and hold the rear of the switch (B) to vent the sunroof. Press and hold the front of the switch to close.

The sunroof cannot be opened or closed if the vehicle has an electrical failure.

Anti-Pinch Feature

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



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

∠ NOTES

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Head Restraints

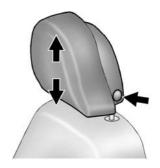
With head restraints that are not installed and adjusted properly, there is a greater chance that occupants will suffer a neck/ spinal injury in a crash. Do not drive until the head restraints for all occupants are installed and adjusted properly.

Front Seats

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



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



To raise or lower the head restraint, press the button located on the side of the head restraint and pull up or push down the head restraint and release the button.

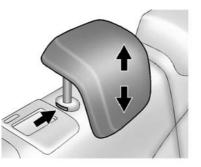
Pull and push on the head restraint after the button is released to make sure that it is locked in place.

On some models, the head restraint can be adjusted forward and rearward. To adjust the head restraint forward, grasp the head restraint at the bottom and pull forward to the desired locked position. To adjust the head restraint rearward, grasp the head restraint at the bottom and pull forward fully until the mechanism releases and allows the head restraint to return to the full rear position.

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

Rear Seats

The vehicle's rear seat has adjustable head restraints in all three seating positions.



The height of the head restraint can be adjusted. Pull the head restraint up to raise it. Try to move the head restraint to make sure that it is locked in place.

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

Rear head restraints are not designed to be removed.

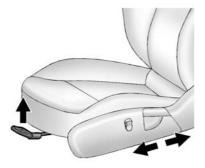
Active Head Restraints

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

Front Seats

Seat Adjustment

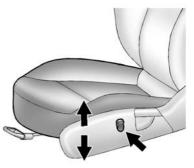
You can lose control of the vehicle if you try to adjust a driver seat while the vehicle is moving. The sudden movement could startle and confuse you, or make you push a pedal when you do not want to. Adjust the driver seat only when the vehicle is not moving.



To adjust a manual seat:

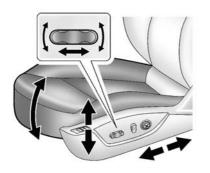
- 1. Pull the handle at the front of the seat.
- 2. Slide the seat to the desired position and release the handle.
- Try to move the seat back and forth to be sure it is locked in place.

Seat Height Adjuster



If available, press and hold the top or bottom of the switch to raise or lower the seat. Release the switch when the desired height is reached.

Power Seat Adjustment

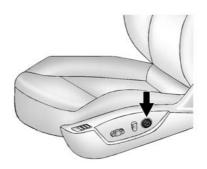


To adjust a power seat, if equipped:

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

To adjust the seatback, see *Reclining Seatbacks on page 2-5.*

Lumbar Adjustment



To adjust the lumbar support, if available:

- Press and hold the front or rear of the control to increase or decrease lumbar support.
- Press and hold the top or bottom of the control to raise or lower the height of the lumbar support.

Reclining Seat Backrests

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

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

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

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



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

Manual Reclining Seatbacks

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



To recline a manual seatback:

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

To return the seat backrest to the upright position:

 Lift the lever fully without applying pressure to the seatback, and the seatback will return to the upright position. 2. Push and pull on the backrest to make sure it is locked.

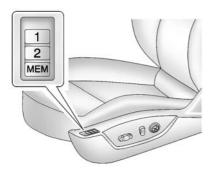
Power Reclining Seatbacks



To adjust a power seatback, if available:

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

Memory Seats



On vehicles with the memory feature, the "1" and "2" buttons on the outboard side of the driver seat are used to manually save and recall the positions of the driver seat and outside mirrors. These manually stored positions are referred to as Button Memory positions. The vehicle will also automatically save driver seat and outside mirror positions to the current driver Remote Keyless Entry (RKE) transmitter when the ignition is placed in OFF. These automatically stored positions are referred to as RKE Memory positions. See *Remote Keyless Entry (RKE) System Operation on page 1-3.*

Storing Button Memory Positions

To save positions into Button Memory:

- Adjust the driver seat, seatback recliner, and both outside mirrors to the desired driving positions.
- 2. Press and hold MEM (Memory) and "1" at the same time until a beep sounds.
- 3. Repeat Steps 1 and 2 for a second driver using "2."

Recalling Button Memory Positions

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

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

Recalling RKE Memory Positions

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

Every time the ignition is placed in OFF, the positions of the driver seat and outside mirrors are automatically stored to the RKE transmitter that was used to start the vehicle. These positions are called RKE Memory positions and may be different than the previously mentioned Button Memory positions saved to the "1" or "2" buttons. To automatically recall RKE Memory positions, unlock the driver door with the RKE transmitter, and open the driver door. On vehicles with keyless access, opening the driver door when an RKE transmitter is present will activate the RKE Memory recall. If the driver door is already open, pressing the RKE transmitter a button will also activate the RKE Memory recall.

The driver seat and outside mirrors will move to the previously saved RKE Memory positions.

This feature is turned on or off using the vehicle personalization menu. See Vehicle Personalisation on page 4-43.

To stop recall movement, press one of the memory, power mirror, or power seat controls.

If something has blocked the driver seat while recalling a memory position, the recall may stop. Remove the obstruction; then press and hold the appropriate manual control for the memory item that is not recalling for two seconds. Try recalling the memory position again by opening the driver door and pressing the RKE transmitter **D** button. If the memory position is still not recalling, see your dealer for service.

Easy Exit Driver Seat

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

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

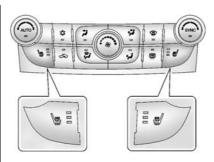
This feature is turned on or off using the vehicle personalization menu. See Vehicle Personalisation on page 4-43.

To stop recall movement, press one of the memory or power seat controls.

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

Heated Front Seats

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



Uplevel Climate Control System Shown, Base Similar

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

Press I or I to heat the driver or passenger seat cushion and backrest. Indicator lights on the button show the current setting.

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

Rear Seats

Folding the Seat Backrest

Either side of the seatback can be folded down for more cargo space. Fold a seatback only when the vehicle is not moving.

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

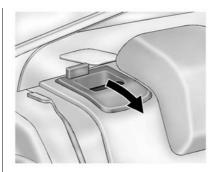
To fold the seat backrest down:

1. Lower the rear seat head restraints completely. See *Head Restraints on page 2-2*.

2. Lift the rear seat armrest and place it in the folded position, if necessary. See *Rear Seat Armrest on page 2-11*.



3. Place the outboard safety belt in the retainer clip.



4. Pull on the lever on the top of the seatback to unlock it.

A tab near the seatback lever raises when the seatback is unlocked.

5. Fold the backrest down.

Repeat the steps for the other seatback, if desired.

Raising the Seat Backrest

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

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

 Lift the seatback up and push it rearward to lock it in place. Make sure the safety belt is in the retainer clip and is not twisted or caught in the seatback.

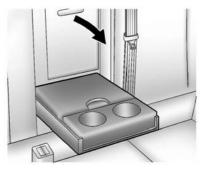
A tab near the seatback lever retracts when the seatback is locked in place.

The centre rear safety belt may lock when you raise the seatback. If this happens, let the belt go back all the way and start again.

- 2. Push and pull the top of the backrest to be sure it is locked into position.
- 3. Repeat Steps 1 and 2 for the other seatback, if necessary.

When the seat is not in use, it should be kept in the upright, locked position.

Rear Seat Armrest



The rear seat has an armrest in the centre of the seatback. Lower the armrest to access the two cupholders and the storage area.

To fold, lift the armrest up and push it rearward until it is flush with the seatback.

Safety Belts

This section of the manual describes how to use safety belts properly. It also describes some things not to do with safety belts.

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

(Continued)

WARNING (Continued)

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

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

This vehicle has indicators as a reminder to buckle the safety belts. See *Safety Belt Reminders on page 4-16* for additional information.

Why Safety Belts Work



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

When you wear a safety belt, you and the vehicle slow down together.

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

Questions and Answers About Safety Belts

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

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

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

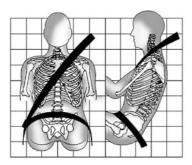
How to Wear Safety Belts Properly

This section is only for people of adult size.

There are special things to know about safety belts and children. And there are different rules for smaller children and infants. If a child will be riding in the vehicle, see *Older Children on page 2-29* or *Infants and Young Children on page 2-31*. Follow those rules for everyone's protection.

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

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



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

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

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

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

Lap-Shoulder Belt

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

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

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



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

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

If the shoulder portion of a passenger belt is pulled out all the way, the child restraint locking feature may be engaged. If this happens, let the belt go back all the way and start again.



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

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

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

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



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



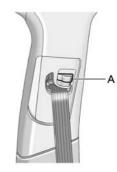
To unlatch the belt, push the button on the buckle. The belt should return to its stowed position.

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

Shoulder Belt Height Adjuster

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

Adjust the height so the shoulder portion of the belt is on the shoulder and not falling off it. The belt should be close to, but not contacting, the neck. Improper shoulder belt height adjustment could reduce the effectiveness of the safety belt in a crash. See *How to Wear Safety Belts Properly on page 2-13*.



Press the release button (A) and move the height adjuster to the desired position. The adjuster can be moved up by pushing the slide/ trim up. After the adjuster is set to the desired position, try to move it down without pushing the release button to make sure it has locked into position.

Safety Belt Pretensioners

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

Pretensioners work only once. If the pretensioners activate in a crash, the pretensioners and probably other parts of the vehicle's safety belt system will need to be replaced. See *Replacing Safety Belt System Parts after a Crash on page 2-18.*

Safety Belt Use During Pregnancy

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



A pregnant woman should wear a lap-shoulder belt, and the lap portion should be worn as low as possible, below the rounding, throughout the pregnancy. The best way to protect the fetus is to protect the mother. When a safety belt is worn properly, it is more likely that the fetus will not be hurt in a crash. For pregnant women, as for anyone, the key to making safety belts effective is wearing them properly.

Safety Belt Extender

If the vehicle's safety belt will fasten around you, you should use it.

But if a safety belt is not long enough, your dealer will order you an extender. When you go in to order it, take the heaviest coat you will wear, so the extender will be long enough for you. To help avoid personal injury, do not let someone else use it, and use it only for the seat it is made to fit. The extender has been designed for adults. Never use it for securing child seats. To wear it, attach it to the regular safety belt. See the instruction sheet that comes with the extender.

Safety System Check

Now and then, check that the safety belt reminder light, safety belts, buckles, latch plates, retractors, and anchorages are all working properly. Look for any other loose or damaged safety belt system parts that might keep a safety belt system from doing its job. See your dealer to have it repaired. Torn or frayed safety belts may not protect you in a crash. They can rip apart under impact forces. If a belt is torn or frayed, get a new one right away.

Make sure the safety belt reminder light is working. See *Safety Belt Reminders on page 4-16*.

Keep safety belts clean and dry. See Safety Belt Care on page 2-18.

Safety Belt Care

Keep belts clean and dry.

Do not bleach or dye safety belts. It may severely weaken them. In a crash, they might not be able to provide adequate protection. Clean safety belts only with mild soap and lukewarm water. Replacing Safety Belt System Parts after a Crash

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

After a minor crash, replacement of safety belts may not be necessary. But the safety belt assemblies that were used during any crash may have been stressed or damaged.

See your dealer to have the safety belt assemblies inspected or replaced.

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

Have the safety belt pretensioners checked if the vehicle has been in a crash, or if the airbag readiness light stays on after you start the vehicle or while you are driving. See *Airbag Readiness Light on page 4-18*.

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

Airbag System

The vehicle has the following airbags:

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

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

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

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

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

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

A WARNING

You can be severely injured or killed in a crash if you are not wearing your safety belt, even with airbags. Airbags are designed to work with safety belts, not replace them. Also, airbags are not designed to inflate in every crash. In some crashes safety belts are the only restraint. See When Should an Airbag Inflate? on page 2-22.

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

🗥 WARNING

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

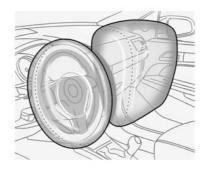
Occupants should not lean on or sleep against the door or side windows in seating positions with seat-mounted side impact airbags and/or roof-rail airbags.

Children who are up against, or very close to, any airbag when it inflates can be seriously injured or killed. Airbags plus lap-shoulder belts offer protection for adults and older children, but not for young children and infants. Neither the vehicle's safety belt system nor its airbag system is designed for them. Young children and infants need the protection that a child restraint system can provide. Always secure children properly in the vehicle. To read how, see Older Children on page 2-29 or Infants and Young Children on page 2-31.

X

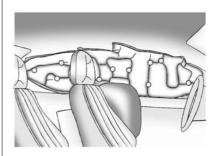
There is an airbag readiness light on the instrument panel cluster, which shows the airbag symbol. The system checks the airbag electrical system for malfunctions. The light tells you if there is an electrical problem. See *Airbag Readiness Light on page 4-18* for more information.

Where Are the Airbags?



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

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



Driver Side Shown, Passenger Side Similar

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

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

\land WARNING

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

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

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

When Should an Airbag Inflate?

Frontal airbags are designed to inflate in moderate to severe frontal or near frontal crashes to help reduce the potential for severe injuries mainly to the driver's or front outboard passenger's head and chest. However, they are only designed to inflate if the impact exceeds a predetermined deployment threshold. Deployment thresholds are used to predict how severe a crash is likely to be in time for the airbags to inflate and help restrain the occupants.

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

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

Thresholds can also vary with specific vehicle design.

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

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

The vehicle has seat-mounted side impact and roof-rail airbags. See *Airbag System on page 2-19.*

Seat-mounted side impact and roof-rail airbags are intended to inflate in moderate to severe side crashes depending on the location of the impact. Seat-mounted side impact and roof-rail airbags will inflate if the crash severity is above the system's designed threshold level. The threshold level can vary with specific vehicle design.

Seat-mounted side impact and roof-rail airbags are not intended to inflate in frontal impacts, near frontal impacts, rollovers, or rear impacts. Seat-mounted side impact airbags and roof-rail airbags are intended to inflate on the side of the vehicle that is struck.

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

What Makes an Airbag Inflate?

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

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

How Does an Airbag Restrain?

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

Airbags supplement the protection provided by safety belts 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? on page 2-22.*

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

What Will You See after an Airbag Inflates?

After the frontal airbags and seat-mounted side impact airbags inflate, they quickly deflate, so quickly that some people may not even realise that an airbag has been inflated. Roof-rail airbags may still be at least partially inflated for some time after deployment. Some components of the airbag module may be hot for several minutes. For location of the airbags, see *Where Are the Airbags? on page 2-21*.

The parts of the airbag that come into contact with you may be warm, but not too hot to touch. There may be some smoke and dust coming from the vents in the deflated airbags. Airbag inflation does not prevent the driver from seeing out of the windshield or being able to steer the vehicle, nor does it prevent people from leaving the vehicle.

🗥 WARNING

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

The vehicle has a feature that may automatically unlock the doors, turn on the interior lamps and hazard warning flashers, and shut off the fuel system after the airbags inflate. You can lock the doors, turn off the interior lamps and hazard warning flashers by using the controls for those features.

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

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

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

- Airbags are designed to inflate only once. After an airbag inflates, you will need some new parts for the airbag system. If you do not get them, the airbag system will not be there to help protect you in another crash. A new system will include airbag modules and possibly other parts. The service manual for the vehicle covers the need to replace other parts.
- The vehicle has a crash sensing and diagnostic module which records information after a crash. See Vehicle Data Recording and Privacy on page 12-1.
- Let only qualified technicians work on the airbag systems. Improper service can mean that an airbag system will not work properly. See your dealer for service.

Airbag On-Off Switch

The vehicle has an airbag on-off switch that you can use to manually turn on or off the front outboard passenger frontal airbag.



This switch should only be turned to the OFF position if the person in the front outboard passenger position falls under the conditions specified in this manual as follows:

Infant: An infant (less than 1 year old) must travel in the front seat because:

- My vehicle has no rear seat;
- My vehicle has a rear seat too small to accommodate a rear-facing infant seat; or
- The infant has a medical condition which, according to the infant's physician, makes it necessary for the infant to ride in the front seat so that the driver can constantly monitor the child's condition.

2-26 Seats and Restraints

Child age 1 to 12: A child age 1 to 12 must travel in the front seat because:

- My vehicle has no rear seat;
- Although children ages 1 to 12 ride in the rear seat(s) whenever possible, children ages 1 to 12 sometimes must travel in the front because no space is available in the rear seat(s) of my vehicle; or
- The child has a medical condition which, according to the child's physician, makes it necessary for the child to travel in the front seat so that the driver can constantly monitor the child's condition.

Medical Condition: A passenger has a medical condition which, according to his or her physician:

- Causes the passenger airbag to pose a special risk for the passenger; and
- Makes the potential harm from the passenger airbag in a crash greater than the potential harm from turning off the airbag and allowing the passenger, even if belted, to hit the dashboard or windscreen in a crash.

\land WARNING

If the front passenger frontal airbag is turned off for a person who does not fall under the conditions specified in this manual, that person will not have the extra protection of an airbag.

(Continued)

WARNING (Continued)

In a crash, the airbag will not be able to inflate and help protect the person sitting there. Do not turn off the passenger frontal airbag unless the person sitting there falls under the conditions specified in this manual.



To turn off the front outboard passenger frontal airbag, insert any key or a coin into the switch, push in, and move the switch to the off position. The word OFF will come on in the passenger airbag status indicator located in the instrument panel to let you know that the front outboard passenger frontal airbag is off, after the system check is completed. The airbag OFF light will come on and stay on to let you know that the front outboard passenger frontal airbag is off. See *Airbag On-Off Light on page 4-18*.

The front outboard passenger frontal airbag will remain off until you turn it back on again.

If the airbag readiness light ever comes on and stays on, it means that something may be wrong with the airbag system. For example, the outboard front passenger frontal airbag could inflate even though the airbag on-off switch is turned off.

To help avoid injury to yourself or others, have the vehicle serviced right away. See *Airbag Readiness Light on page 4-18* for more information, including important safety information.



To turn the front outboard passenger frontal airbag on again, insert any key or a coin into the switch, push in, and move the switch to the ON position.

The front outboard passenger frontal airbag is now enabled (may inflate). See *Airbag On-Off Light on page 4-18* for more information.

Servicing the Airbag-Equipped Vehicle

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

\land WARNING

For up to 10 seconds after the vehicle is turned off and the battery is disconnected, an airbag can still inflate during improper service. You can be injured if you are close to an airbag when it inflates. Avoid yellow connectors. They are probably part of the airbag system. Be sure to follow proper service procedures, and make sure the person performing work for you is qualified to do so.

Adding Equipment to the Airbag-Equipped Vehicle

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

The operation of the airbag system can also be affected by changing or moving any parts of the front seats, safety belts, the airbag sensing and diagnostic module, steering wheel, instrument panel, roof-rail airbag modules, ceiling headliner or pillar garnish trim, overhead console, front sensors, side impact sensors, or airbag wiring.

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

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

Airbag System Check

The airbag system does not need regularly scheduled maintenance or replacement. Make sure the airbag readiness light is working. See *Airbag Readiness Light on page 4-18.*

Notice: If an airbag covering is damaged, opened, or broken, the airbag may not work properly. Do not open or break the airbag coverings. If there are any opened or broken airbag covers, have the airbag covering and/or airbag module replaced. For the location of the airbags, see *Where Are the Airbags? on page 2-21.* See your dealer for service.

Replacing Airbag System Parts after a Crash

A crash can damage the airbag systems in the vehicle. A damaged airbag system may not work properly and may not protect you and your passenger(s) in a crash, resulting in serious injury or even death. To help make sure the airbag systems are working properly after a crash, have them inspected and any necessary replacements made as soon as possible. If an airbag inflates, you will need to replace airbag system parts. See your dealer for service.

If the airbag readiness light stays on after the vehicle is started or comes on when you are driving, the airbag system may not work properly. Have the vehicle serviced right away. See *Airbag Readiness Light on page 4-18* for more information.

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

Child Restraints

Older Children



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

2-30 Seats and Restraints

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

- Sit all the way back on the seat. Do the knees bend at the seat edge? If yes, continue. If no, return to the booster seat.
- Buckle the lap-shoulder belt. Does the shoulder belt rest on the shoulder? If yes, continue. If no, try using the rear safety belt comfort guide. See "Rear Safety Belt Comfort Guides" under Lap-Shoulder Belt on page 2-14 for more information. If the shoulder belt still does not rest on the shoulder, then return to the booster seat.
- Does the lap belt fit low and snug on the hips, touching the thighs? If yes, continue. If no, return to the booster seat.

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

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

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

Also see "Rear Safety Belt Comfort Guides" under *Lap-Shoulder Belt on page 2-14.*

According to accident statistics, children and infants are safer when properly restrained in a child restraint system or infant restraint system secured in a rear seating position.

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

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



Never allow a child to wear the safety belt with the shoulder belt behind their back. A child can be seriously injured by not wearing the lap-shoulder belt properly. In a crash, the child would not be restrained by the shoulder belt.

(Continued)

WARNING (Continued)

The child could move too far forward increasing the chance of head and neck injury. The child might also slide under the lap belt. The belt force would then be applied right on the abdomen. That could cause serious or fatal injuries. The shoulder belt should go over the shoulder and across the chest.



Infants and Young Children

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

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

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

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

Never hold an infant or a child while riding in a vehicle. Due to crash forces, an infant or a child will become so heavy it is not possible to hold it during a crash.

(Continued)

WARNING (Continued)

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



Children who are up against, or very close to, any airbag when it inflates can be seriously injured or killed. Never put a rear-facing child restraint in the right front seat. Secure a rear-facing child restraint in a rear seat. It is also better to secure a forward-facing child restraint in a rear seat.

(Continued)

WARNING (Continued)

If you must secure a forward-facing child restraint in the right front seat, always move the front passenger seat as far back as it will go.



Selection of a particular restraint should take into consideration not only the child's weight, height, and age but also whether or not the restraint will be compatible with the motor vehicle in which it will be used.

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

The restraint manufacturer's instructions should state the weight and height limitations for a particular child restraint.

To reduce the risk of neck and head injury during a crash, infants need complete support. In a crash, if an infant is in a rear-facing child restraint, the crash forces can be distributed across the strongest part of an infant's body, the back and shoulders. Infants should always be secured in rear-facing child restraints.

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

Child Restraint Systems



(A) Rear-Facing Infant Seat

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

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



(B) Forward-Facing Child Seat

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





(C) Booster Seats

A booster seat (C) is a child restraint designed to improve the fit of the vehicle's safety belt system. A booster seat can also help a child to see out the window.

Securing an Add-On Child Restraint in the Vehicle

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

To help reduce the chance of injury, the child restraint must be secured in the vehicle. Child restraint systems must be secured in vehicle seats by lap belts or the lap belt portion of a lap-shoulder belt, or by the ISOFIX system. See *ISOFIX Child Restraint Systems on page 2-40* for more information. Children can be endangered in a crash if the child restraint is not properly secured in the vehicle.

When securing an add-on child restraint, refer to the instructions that come with the restraint which may be on the restraint itself or in a booklet, or both, and to this manual. The child restraint instructions are important, so if they are not available, obtain a replacement copy from the manufacturer.

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

Securing the Child Within the Child Restraint

A child can be seriously injured or killed in a crash if the child is not properly secured in the child restraint. Secure the child properly following the instructions that came with that child restraint.

Where to Put the Restraint

According to accident statistics, children and infants are safer when properly restrained in a child restraint system or infant restraint system secured in a rear seating position.

We recommend that children and child restraints be secured in a rear seat, including: an infant or a child riding in a rear-facing child restraint; a child riding in a forward-facing child seat; an older child riding in a booster seat; and children, who are large enough, using safety belts. If a child restraint is secured in the right front passenger seat, there is a switch on the instrument panel to manually turn off the front passenger frontal airbag. See *Airbag On-Off Switch on page 2-25* and *Securing Child Restraints (Rear Seat) on page 2-42* or *Securing Child Restraints (Front Passenger Seat) on page 2-44* for more information, including important safety information.



DO NOT place rear-facing child seat on this seat unless the airbag is switched off. DEATH OR SERIOUS INJURY can occur. This is because the risk to the rear-facing child is so great, if the airbag deploys.

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

restraint can be seriously injured or killed if the front passenger airbag inflates and the passenger seat is in a forward position.

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

(Continued)

WARNING (Continued)

Secure rear-facing child restraints in a rear seat, even if the airbag is off. If you secure a forward-facing child restraint in the right front seat, always move the front passenger seat as far back as it will go. It is better to secure the child restraint in a rear seat. When securing a child restraint in a rear seating position, study the instructions that came with your child restraint to make sure it is compatible with this vehicle.

Child restraints and booster seats vary considerably in size, and some may fit in certain seating positions better than others. Always make sure the child restraint is properly secured.

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

Wherever a child restraint is installed, be sure to secure the child restraint properly.

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

Child Restraint Installation Locations

Permissible Options for Fitting a Child Restraint System

Weight and Age Class	On Front Passenger Seat Activated Airbag	On Front Passenger Seat Deactivated Airbag	On Rear Outboard Seats	On Rear Centre Seat			
Group 0 Up to 10 kg	Х	U1	U²	U²			
Group 0 + Up to 13 kg	Х	U1	U²	U²			
Group I 9 to 18 kg	Х	U1	U²	U²			
Group II 15 to 25 kg	Х	Х	U	U			
Group III 22 to 36 kg	Х	Х	U	U			
¹ : Only if front passenger seat airbag systems are deactivated. If the child restraint system is being secured using a three-point safety belt, move seat height adjustment to uppermost position and ensure that the vehicle safety belt runs forward from the upper anchorage point.							

²: Seat available with ISOFIX and Top-Tether mounting brackets.

U: Universal suitability in conjunction with three-point safety belt.

X: No child restraint system permitted in this weight class.

Permissible Options for Fitting an ISOFIX Child Restraint System

Mass Group	Class Size	Fixture	Vehicle ISOFIX Positions				
			On Front Passenger Seat	On Rear Outboard Seats	On Rear Centre Seat		
0 (up to 10 kg)	E	ISO/R1	Х	IL	IL		
0+ (up to 13 kg)	E	ISO/R1	Х	L	L		
	D	ISO/R2	Х	IL	IL		
	С	ISO/R3	Х	IL	IL		
l (9 to 18 kg)	D	ISO/R2	Х	IL	IL		
	С	ISO/R3	Х	IL	IL		
	В	ISO/F2	Х	IL, IUF	IL, IUF		
	B1	ISO/F2X	Х	IL, IUF	IL, IUF		
	A	ISO/F3	Х	IL, IUF	IL, IUF		
IUF: Suitable for ISOFIX forward-facing child restraint systems of the universal category approved for use in this weight class.							
IL: Suitable for particular ISOFIX child restraint systems of the specific vehicle, restricted or semi-universal categories. The ISOFIX child restraint system must be approved for the specific vehicle type.							

X: No ISOFIX child restraint systems approved in this weight class.

ISOFIX Size Class and Seat Device:

A - ISO/F3: Forward-facing child restraint system for children of maximum size in the weight class 9 to 18 kg.

B - ISO/F2: Forward-facing child restraint system for smaller children in the weight class 9 to 18 kg.

B1 - ISO/F2X: Forward-facing child restraint system for smaller children in the weight class 9 to 18 kg.

C - ISO/R3: Rear-facing child restraint system for children of maximum size in the weight class up to 13 kg.

D - **ISO/R2:** Rear-facing child restraint system for smaller children in the weight class up to 13 kg.

E - ISO/R1: Rear-facing child restraint system for young children in the weight class up to 13 kg.

ISOFIX Child Restraint Systems



Rear Seat (Top-Tether Fastening Eye): Seating positions with top-tether fastening eyes.

(ISOFIX Mounting Bracket):

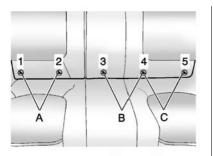
Seating positions with two ISOFIX mounting brackets.

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

ISOFIX mounting brackets are indicated by the Seatback.

No more than two ISOFIX child restraint systems can be installed on the rear seats at the same time, though not right next to each other.

Refer to the following illustration to learn which mounting brackets to use.



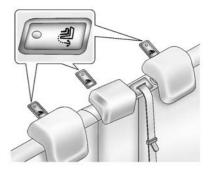
- A. Right Rear Seating Position and Mounting Brackets 1 and 2
- B. Centre Rear Seating Position and Mounting Brackets 3 and 4
- C. Left Rear Seating Position and Mounting Brackets 4 and 5

There are five ISOFIX mounting brackets in the rear seat.

- Use brackets 1 and 2 when installing a child restraint using ISOFIX in seating position A.
- Use brackets 3 and 4 when installing a child restraint using ISOFIX in seating position B.
- Use brackets 4 and 5 when installing a child restraint using ISOFIX in seating position C.

Installing child restraints using ISOFIX in seating positions B and C at the same time is prohibited.

Top-Tether Fastening Eyes



Top-tether fastening eyes are marked with the symbol 🏶 on the cover for a child seat.

In addition to the ISOFIX mounting, fasten the top-tether strap(s) to the top-tether fastening eyes.



A single strap must run between the two guide posts of the head restraint.



A dual strap must run around the head restraint.

Before placing a child in the child restraint, make sure it is securely held in place. Refer to your child restraint manufacturer instructions.

Securing Child Restraints (Rear Seat)

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

If the child restraint has the ISOFIX system, see *ISOFIX Child Restraint Systems on page 2-40* for how and where to install the child restraint using ISOFIX. If a child restraint is secured in the vehicle using a safety belt and it uses a top tether, see *ISOFIX Child Restraint Systems on page 2-40* for top tether anchor locations.

Do not secure a child seat in a position without a top tether anchor if a national or local law requires that the top tether be anchored, or if the instructions that come with the child restraint say that the top strap must be anchored. If the child restraint does not have the ISOFIX system, you will be using the safety belt to secure the child restraint in this position. Be sure to follow the instructions that came with the child restraint. Secure the child in the child restraint when and as the instructions say.

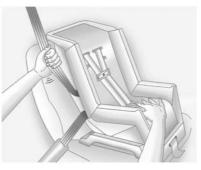
If more than one child restraint needs to be installed in the rear seat, be sure to read *Where to Put the Restraint on page 2-36.*

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



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

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



4. To tighten the belt, push down on the child restraint, pull the shoulder portion of the belt to tighten the lap portion of the belt, and feed the shoulder belt back into the retractor. When installing a forward-facing child restraint, it may be helpful to use your knee to push down on the child restraint as you tighten the belt.

If the child restraint system has a lock-off mechanism, use it to secure the vehicle safety belt.

- If the child restraint has a top tether, follow the child restraint manufacturer's instructions regarding the use of the top tether. See ISOFIX Child Restraint Systems on page 2-40 for more information.
- Before placing a child in the child restraint, make sure it is securely held in place. Push and pull the child restraint in different directions to be sure it is secure.

To remove the child restraint, unbuckle the vehicle safety belt and let it return to the stowed position. If the top tether is attached to a top tether anchor, disconnect it.

Securing Child Restraints (Front Passenger Seat)

This vehicle has airbags. A rear seat is a safer place to secure a forward-facing child restraint. See *Where to Put the Restraint on page 2-36.*

There is a switch on the instrument panel that you can use to turn off the front outboard passenger frontal airbag. See *Airbag On-Off Switch on page 2-25* for more information, including important safety information.

\land WARNING

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

(Continued)

WARNING (Continued)

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

"Do not use a rearward facing child restraint on a seat protected by an airbag in front of it!"

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

(Continued)

WARNING (Continued)

A child in a forward-facing child restraint can be seriously injured or killed if the front passenger airbag inflates and the passenger seat is in a forward position.

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

Secure rear-facing child restraints in a rear seat, even if the airbag is off. If you secure a forward-facing child restraint in the right front seat, always move the front passenger seat as far back as it will go. It is better to secure the child restraint in a rear seat.

If the airbag readiness light ever comes on and stays on, it means that something may be wrong with the airbag system. For example, the right front passenger airbag could inflate even though the airbag on-off switch is turned off.

To help avoid injury to yourself or others, have the vehicle serviced right away. See *Airbag Readiness Light on page 4-18* for more information, including important safety information. If the child restraint has the ISOFIX system, see *ISOFIX Child Restraint Systems on page 2-40* for how and where to install the child restraint using ISOFIX. If a child restraint is secured using a safety belt and it uses a top tether, see *ISOFIX Child Restraint Systems on page 2-40* for top tether anchor locations.

Do not secure a child seat in a position without a top tether anchor if a national or local law requires that the top tether be anchored, or if the instructions that come with the child restraint say that the top strap must be anchored. You will be using the lap-shoulder belt to secure the child restraint in this position. Follow the instructions that came with the child restraint.

1. Move the seat as far back as it will go before securing the forward-facing child restraint.

When the airbag on-off switch has turned off the front outboard passenger frontal airbag, the off indicator in the airbag off light should light and stay lit when you start the vehicle. See *Airbag On-Off Light on page 4-18*.

2. Put the child restraint on the seat.

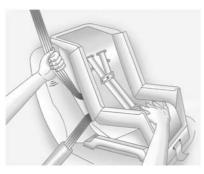
2-46 Seats and Restraints

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



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

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



5. To tighten the belt, push down on the child restraint, pull the shoulder portion of the belt to tighten the lap portion of the belt and feed the shoulder belt back into the retractor. When installing a forward-facing child restraint, it may be helpful to use your knee to push down on the child restraint as you tighten the belt.

If the child restraint system has a lock-off mechanism, use it to secure the vehicle safety belt. 6. Before placing a child in the restraint, make sure it is securely held in place. To check, push and pull the child restraint in different directions to be sure it is secure.

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

If you turned the airbag off with the switch, turn on the front outboard passenger airbag when you remove the child restraint from the vehicle unless the person who will be sitting there falls under the conditions specified in this manual. See *Airbag On-Off Switch on page 2-25* for more information, including important safety information.

Storage

Storage Compartments

Instrument Panel Storage	3-1
Glove Box	
Cupholders	
Sunglasses Storage	
Centre Console Storage	3-3

Additional Storage Features

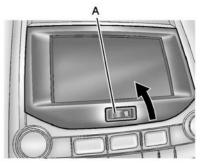
Cargo Tie-Downs 3-	-4
Convenience Net 3-	-4

Storage Compartments

Instrument Panel Storage



Pull the door down to access.



Uplevel

The vehicle may have a storage area behind the radio display. Push the button (A) to the right and release; the door automatically opens.

Keep storage area closed when not in use.

Push the door down to close.

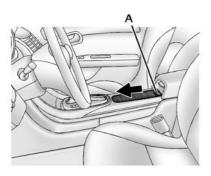
Glove Box

Pull the handle up to open. Use the key to lock and unlock the glove box, if equipped.

3-2 Storage

Cupholders

Centre Console



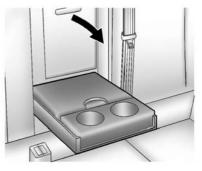
Push down on the cover handle (A) and then forward to access the cupholders.

The vehicle may have removable cupholders. To remove the cupholders:

- 1. Pull and hold the tab at the rear of the cupholders.
- 2. Lift up and rearward.

To reinstall, place the two forward tabs into the slots and push down on the rear of the cupholder.

Rear Seat



Lower the armrest to access the cupholders. There is also storage in the armrest; lift the lid to access.

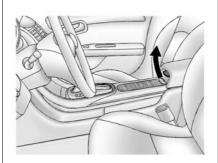
Storage 3-3

Sunglasses Storage



Push on the cover and release to open the compartment.

Centre Console Storage



Pull up the latch and lift to open.

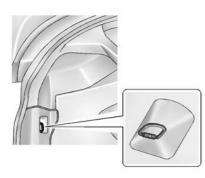
The centre console has storage under the armrest with a removable divider to configure storage. If equipped, it may have a USB port and a power outlet. For more information, see "Auxiliary Devices" in the separate infotainment system manual and *Power Outlets on page 4-10.* The armrest can be adjusted to a rearward, middle, and forward position. Pull or push the front of the armrest to adjust to the desired position.

If the vehicle has removable cupholders there is storage under them. See *Cupholders on page 3-2* to remove the cupholders.

3-4 Storage

Additional Storage Features

Cargo Tie-Downs



There are two cargo tie-downs in the boot. The cargo tie-downs can be used to secure small loads or the convenience net. See *Convenience Net on page 3-4*.

Convenience Net

For vehicles with a convenience net, it is located in the boot and used to store small loads. The net should not be used to store heavy loads. Attach the loops on each side of the net to the cargo tie-downs located in the boot. See *Cargo Tie-Downs on page 3-4*.

Instruments and Controls

Instrument Panel Overview

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4-2 Instruments and Controls

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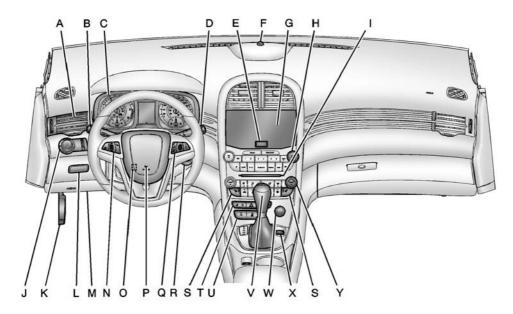
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Instrument Panel Overview



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- R. Ignition Positions (Key Access) on page 8-14 or Ignition Positions (Keyless Access) on page 8-16.
- S. Heated Front Seats on page 2-9.
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Passenger Airbag Status Indicator. See *Airbag On-Off Light on page 4-18* U. Ultrasonic Parking Assist on page 8-40 (If Equipped).

Traction Control System (TCS) on page 8-35. Electronic Stability Control (ESC) on page 8-36.

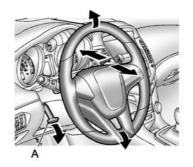
- V. Shift Lever. See Automatic Transmission on page 8-27 or Manual Gearbox on page 8-30 (If Equipped).
- W. Power Outlets on page 4-10.
- X. Electric Parking Brake. See Electric Parking Brake on page 8-32.
- Y. Climate Control Systems on page 7-1.

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Controls

Steering Wheel Adjustment



To adjust the steering wheel:

- 1. Pull the lever (A) down.
- 2. Move the steering wheel up or down.

- Instruments and Controls 4-5
 - 3. Pull or push the steering wheel closer or away from you.
 - 4. Push the lever (A) up to lock the steering wheel in place.

Do not adjust the steering wheel while driving.

Steering Wheel Controls



Vehicles with audio steering wheel controls could differ depending on the vehicle's options. Some audio controls can be adjusted at the steering wheel.

▷ / 𝒫 (Mute/End Call): Press to

reject an incoming call, or end a current call. Press to silence the vehicle speakers while using the infotainment system. Press again to turn the sound on.

 Δ SRC ∇ (Toggle Switch): Press to select an audio source.

Toggle up or down to select the next or previous favourite radio station or CD/MP3 track.

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

Horn

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

Windscreen Wiper/ Washer



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

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



较 (Adjustable Interval Wipes):

Turn the band up for more frequent wipes or down for less frequent wipes.

O (Off): Use to turn the windscreen wipers off.

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

Clear ice and snow from the wiper blades before using them. If they are frozen to the windscreen, carefully loosen or thaw them. Damaged wiper blades should be replaced. See *Wiper Blade Replacement on page 9-30.*

Heavy snow or ice can overload the wipers. A circuit breaker stops them until the motor cools.

Wipe Parking

If the ignition is turned to LOCK/ OFF while the wipers are on 1, 2, or $\overline{\hat{\nabla}}$, they will immediately stop.

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

If the ignition is turned to LOCK/ OFF during a windscreen wash, the wipers will stop when they reach the base of the windscreen.

Rainsense™

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

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



 $\overline{\nabla}$ (Sensitivity Control): Move the windscreen wiper stalk to $\overline{\nabla}$. Turn the band on the wiper stalk to adjust the sensitivity.

- Turn the band up for more sensitivity to moisture.
- Turn the band down for less sensitivity to moisture.
- Move the windscreen wiper lever out of the [™]√ position to deactivate Rainsense.

Wiper Arm Assembly Protection

When using an automatic car wash, move the windscreen wiper lever to \bigcirc . This disables the automatic Rainsense windscreen wipers.

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

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

Windscreen Washer

Pull the windscreen wiper lever toward you to spray windscreen washer fluid and activate the wipers.

The wipers will continue until the lever is released or the maximum wash time is reached.

When the windscreen wiper lever is released, additional wipes may occur depending on how long the windscreen washer had been activated. See *Washer Fluid on page 9-24* for information on filling the windscreen washer fluid reservoir.

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

Headlamp Washer

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

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

While the headlamps are on, pull the wiper lever toward you and hold briefly to activate the windscreen washers. The headlamp washers will spray once, pause, and spray again. The headlamp washer will spray again after five windscreen wash cycles.

See *Washer Fluid on page 9-24* for information on filling the windscreen washer fluid.

Clock

Setting the Time (Base Radio)

The infotainment system controls are used to access the time and date settings through the menu system.

Setting the Time and Date

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

Setting the 12/24 Hour Format

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

Setting the Date Format

- 1. Press the CONFIG button.
- 2. Select Date Settings.
- 3. Highlight Date Format.
- Press the TUNE/MENU to select MM/DD/YYY (month/day/year) or DD/MM/YYY (day/month/year).

RDS Clock Synchronisation

The RDS signal of most VHF transmitters automatically set the time. RDS time synchronisation can take a few minutes. Some transmitters do not send the correct time signal. In such cases, it is recommended to switch off automatic time synchronisation. See Vehicle Personalisation on page 4-43 for more information.

Setting the Time (Uplevel Radio)

The analogue clock is located on the instrument panel above the radio. The clock is not connected with any other vehicle system and runs by itself. To adjust the clock:

- 1. Locate the adjustment buttons directly below the clock face.
- 2. Push and hold either adjustment button to advance or reverse the clock hands. Holding the buttons down will cause the clock to advance faster. Release the buttons before reaching the desired time.
- 3. Push and release the buttons to increase the time by one minute increments until the desired time is reached.

Setting the Clock (Radio with CD and Touchscreen)

To set the time:

- Press the CONFIG button. Turn the TUNE/MENU knob to scroll through the available setup features. Press the TUNE/MENU knob or press the Time screen button to display other options within that feature.
- Press + or to decrease or increase the Hours and Minutes displayed on the clock.

12/24 HR Format: Press the 12 HR screen button for 12 hour clock time; press the 24 HR screen button for 24 hour clock time.

Day + or Day -: Press the Day + or Day - display buttons to increase or decrease the day.

Display: Press Display to turn the time display on the screen on or off.

Power Sockets

The accessory power outlets can be used to plug in electrical equipment, such as a mobile phone or MP3 player.

There are two accessory power outlets, one on the instrument panel below the climate control system, and one under the armrest inside the centre console storage.

The outlet is powered when the ignition is in ON/RUN or ACC/ ACCESSORY, or until the driver door is opened within 10 minutes of turning off the vehicle. See *Retained Accessory Power (RAP) on page 8-21.*

Open the protective cover to use the accessory power outlet.

Certain electrical accessories may not be compatible with the accessory power outlets and could overload vehicle or adapter fuses. If there is a problem, see your dealer. When adding electrical equipment, be sure to follow the installation instructions included with the equipment. See Add-On Electrical Equipment on page 8-51.

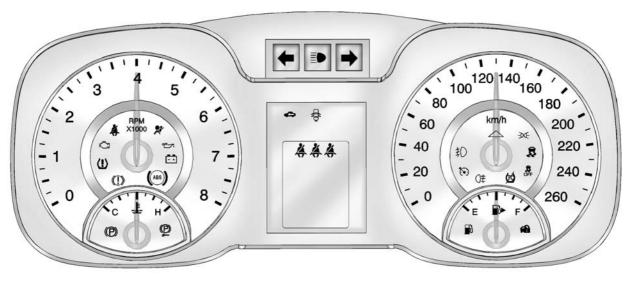
Notice: Hanging heavy equipment from the power outlet can cause damage not covered by the vehicle warranty. The power outlets are designed for accessory power plugs only, such as mobile phone charger cables.

Warning Lights, Gauges, and Indicators

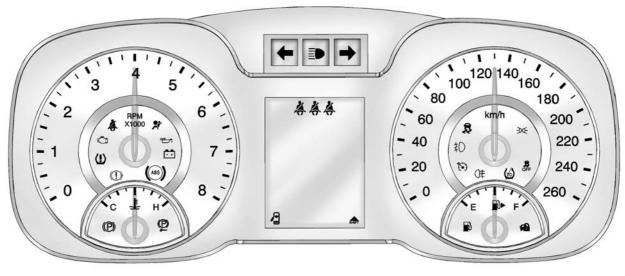
Warning lights and gauges can signal that something is wrong before it becomes serious enough to cause an expensive repair or replacement. Paying attention to the warning lights and gauges could prevent injury. Warning lights come on when there could be a problem with a vehicle function. Some warning lights come on briefly when the engine is started to indicate they are working.

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

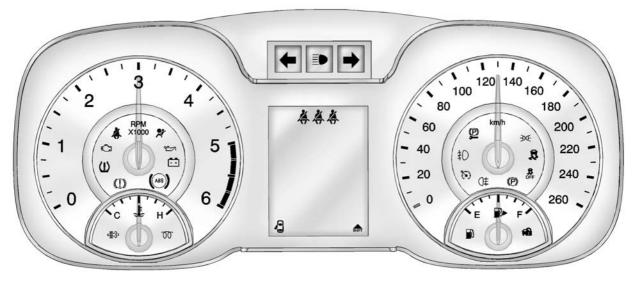
Instrument Cluster



Gas Cluster with Base Level DIC



Gas Cluster with Uplevel DIC



Diesel Cluster

Speedometer

The speedometer shows the vehicle's speed in kilometres per hour (km/h).

Mileometer

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

This vehicle has a tamper-resistant odometer. The digital odometer will read 999,999 if it is turned back.

If the vehicle needs a new odometer installed, it must be set to the mileage total of the old odometer. If that is not possible, then it must be set at zero and a label must be put on the driver door to show the old mileage reading when the new odometer was installed.

Trip Odometer

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

The trip odometer is accessed and reset through the Driver Information Centre (DIC). See Driver Information Centre (DIC) on page 4-31.

Rev Counter

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

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

Fuel Gauge



When the ignition is on, the fuel gauge shows how much fuel is left in the fuel tank. When the indicator nears empty, a message in the Driver Information Centre (DIC) displays. See *Fuel System Messages on page 4-38*. The vehicle still has a little fuel left, but the vehicle should be fuelled soon. An arrow on the fuel gauge indicates the side of the vehicle the fuel door is on.

4-16 Instruments and Controls

Here are four things that some owners ask about. These are normal and do not indicate a problem with the fuel gauge:

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

Engine Coolant Temperature Gauge



This gauge shows the engine coolant temperature.

If the indicator needle moves to the hot side of the gauge, the engine is too hot.

If the vehicle has been operated under normal driving conditions, pull off the road, stop the vehicle, and turn off the engine as soon as possible.

Seat Belt Reminders

Driver Safety Belt Reminder Light

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



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

This cycle may continue several times if the driver remains or becomes unbuckled during driving while the vehicle is moving.

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

Passenger Seat Belt Reminder Light



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

See Airbag On-Off Light on page 4-18 for more information.

This cycle may continue several times if the passenger remains or becomes unbuckled while the vehicle is moving.

If the passenger safety belt is fastened, neither the chime nor the light comes on.

The front passenger safety belt reminder light and chime may turn on if an object is put on the seat such as a briefcase, handbag, grocery bag, laptop, or other electronic device. To turn off the reminder light and/or chime, remove the object from the seat or buckle the safety belt.

Second Row Passenger Belt Reminder Light

<u>à à à</u>

Rear seat seating positions monitored for safety belt use are represented by a coloured symbol indicating safety belt status. When the vehicle is started, two safety belt symbols come on and stay on for several seconds in the instrument cluster to alert the driver that passengers may need to fasten their safety belts. After the passenger safety belt is buckled, the corresponding safety belt symbol in the instrument cluster turns green. If a safety belt is not initially buckled, the instrument cluster displays a red safety belt symbol. While the vehicle is moving, if a rear seat passenger who was previously buckled becomes unbuckled, the corresponding safety belt symbol will change to flashing red for several seconds and a chime may sound.

Airbag Readiness Light

The system checks the airbag's electrical system for possible malfunctions. If the light stays on it indicates there is an electrical problem. The system check includes the airbag sensor(s), the pretensioners (if equipped), the airbag modules, the wiring, and the crash sensing and diagnostic module. For more information on the airbag system, see *Airbag System on page 2-19*.



The airbag readiness light flashes for a few seconds when the engine is started. If the light does not come on then, have it fixed immediately.

\land WARNING

If the airbag readiness light stays on after the vehicle is started or comes on while driving, it means the airbag system might not be working properly. The airbags in the vehicle might not inflate in a crash, or they could even inflate without a crash. To help avoid injury, have the vehicle serviced right away.

If there is a problem with the airbag system, an airbag Driver Information Centre (DIC) message can also come on. See Vehicle Messages (Uplevel) on page 4-35 or Vehicle Messages (Base Level) on page 4-34 for more information.

Airbag On-Off Light

If the vehicle has an airbag on-off switch, it also has a passenger airbag status indicator located in the instrument panel.



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

When the front outboard passenger frontal airbag is manually turned off using the airbag on-off switch on the side of the instrument panel, the indicator light OFF will come on and stay on as a reminder that the airbag has been turned off. This light will go off when the airbag has been turned on. See *Airbag On-Off Switch on page 2-25* for more information, including important safety information.



\land WARNING

If the front passenger frontal airbag is turned off for a person who does not fall under the conditions specified in this

(Continued)

WARNING (Continued)

manual, that person will not have the extra protection of an airbag. In a crash, the airbag will not be able to inflate and help protect the person sitting there. Do not turn off the passenger frontal airbag unless the person sitting there falls under the conditions specified in this manual.

If the airbag readiness light ever comes on and stays on, it means that something may be wrong with the airbag system. For example, the outboard front passenger frontal airbag could inflate even though the airbag on-off switch is turned off.

(Continued)

WARNING (Continued)

To help avoid injury to yourself or others, have the vehicle serviced right away. See *Airbag Readiness Light on page 4-18* for more information, including important safety information.

If the word ON is lit, it means that the front outboard passenger frontal airbag is enabled (may inflate). See *Airbag On-Off Switch on page 2-25* for more information, including important safety information.

If, after several seconds, both status indicator lights remain on, or if there are no lights at all, there may be a problem with the lights or the airbag on-off switch. See your retailer for service.

Charging System Light



This light comes on briefly when the ignition key is turned to START, but the engine is not running, as a check to show it is working.

If it does not, have the vehicle serviced by your dealer.

The light should go out once the engine starts. If it stays on, or comes on while driving, there could be a problem with the charging system. This light could indicate that there are problems with a alternator drive belt, or that there is an electrical problem. Have it checked immediately. If the vehicle must be driven a short distance with the light on, turn off accessories, such as the radio and air conditioner.

Malfunction Indicator Lamp

A computer system called EOBD (European On-Board Diagnostics) monitors the operation of the vehicle to ensure emissions are at acceptable levels, to produce a cleaner environment. This light comes on when the vehicle is placed in ON/RUN for key access or Service Only Mode for keyless access, as a check to show it is working. If it does not, have the vehicle serviced by your dealer. See Ignition Positions (Key Access) on page 8-14 or Ignition Positions (Keyless Access) on page 8-16 for more information.



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

If the malfunction indicator lamp comes on and stays on while the engine is running, this indicates that there is an EOBD problem and service is required.

Malfunctions often are indicated by the system before any problem is apparent. Being aware of the light can prevent more serious damage to the vehicle. This system assists the dealer technician in correctly diagnosing any malfunction. *Notice:* If the vehicle is continually driven with this light on, the emission controls might not work as well, the vehicle fuel economy might not be as good, and the engine might not run as smoothly. This could lead to costly repairs that might not be covered by the vehicle warranty.

Notice: Modifications made to the engine, transmission, exhaust, intake, or fuel system of the vehicle or the replacement of the original tyres with other than those of the same Tyre Performance Criteria (TPC) can affect the vehicle's emission controls and can cause this light to come on. Modifications to these systems could lead to costly repairs not covered by the vehicle warranty. This could also result in a failure to pass a required Emission Inspection/ Maintenance test. See Accessories and Modifications on page 9-3.

This light comes on during a malfunction in one of two ways:

Light Flashing: A misfire condition has been detected. A misfire increases vehicle emissions and could damage the emission control system on the vehicle. Diagnosis and service might be required.

To prevent more serious damage to the vehicle:

- Reduce vehicle speed.
- Avoid hard accelerations.
- Avoid steep uphill grades.
- If the vehicle can tow a trailer, reduce the amount of cargo being hauled as soon as it is possible.

If the light continues to flash, when it is safe to do so, stop the vehicle. Find a safe place to park. Turn the vehicle off, wait at least 10 seconds, and restart the engine. If the light is still flashing, follow the previous steps and see your dealer for service as soon as possible. Light On Steady: An emission control system malfunction has been detected on the vehicle. Diagnosis and service might be required.

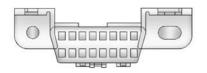
Check that good quality fuel is used. Poor fuel quality causes the engine not to run as efficiently as designed and may cause stalling after start-up, stalling when the vehicle is changed into gear, misfiring, hesitation on acceleration, or stumbling on acceleration. These conditions might go away once the engine is warmed up.

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

If none of the above have made the light turn off, your dealer can check the vehicle. The dealer has the proper test equipment and diagnostic tools to fix any mechanical or electrical problems that might have developed.

Emissions Inspection and Maintenance Programs

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



The DLC is under the instrument panel to the left of the steering wheel. See your dealer if assistance is needed. The vehicle may not pass inspection if:

- The malfunction indicator lamp is on while the vehicle is running. The vehicle is in ON/RUN for keyed access, or service only mode for keyless access and the malfunction indicator lamp does not come on. See your dealer for assistance in verifying proper operation of the malfunction indicator lamp.
- The EOBD (European On-Board Diagnostics) system determines that critical emission control systems have not been completely diagnosed. The vehicle would be considered not ready for inspection. This can happen if the 12-volt battery has recently been replaced or run down. The diagnostic system is designed to evaluate critical emission control systems during normal driving. This can take several days of routine driving.

If this has been done and the vehicle still does not pass the inspection for lack of EOBD system readiness, your dealer can prepare the vehicle for inspection.

Service Vehicle Soon Light



For base vehicles with this light, it comes on if a condition exists that may require the vehicle to be taken in for service.

If the light comes on, take the vehicle to your dealer for service as soon as possible.

Brake System Warning Light

The vehicle brake system consists of two hydraulic circuits. If one circuit is not working, the remaining circuit can still work to stop the vehicle. For normal braking performance, both circuits need to be working.

If the warning light comes on, there is a brake problem. Have the brake system inspected immediately.



The brake system warning light should come on briefly as the engine is started. If it does not come on have the vehicle serviced by your dealer. The brake system might not be working properly if the brake system warning light is on. Driving with the brake system warning light on can lead to a crash. If the light is still on after the vehicle has been pulled off the road and carefully stopped, have the vehicle towed for service.

If the light comes on while driving, a chime sounds. Pull off the road and stop. The pedal might be harder to push or go closer to the floor. It might also take longer to stop. If the light is still on, have the vehicle towed for service. See *Towing the Vehicle on page 9-67*.

Electric Parking Brake Light



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

The parking brake status light comes on when the brake is applied. If the light continues flashing after the parking brake is released or while driving, there is a problem with the Electric Parking Brake system. A SERVICE PARKING BRAKE message may also display in the Driver Information Centre (DIC). See Brake System Messages on page 4-35 for more information. If the light does not come on, or remains flashing, see your dealer.



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

If this light comes on, there is a problem with a system on the vehicle that is causing the parking brake system to work at a reduced level. The vehicle can still be driven, but should be taken to a dealer as soon as possible. See *Electric Parking Brake on page 8-32* for more information.

For vehicles with the uplevel cluster, this light is shown in the Driver Information Centre (DIC).

Antilock Brake System (ABS) Warning Light



The Antilock Brake System (ABS) light comes on briefly when the engine is started.

If it does not, have the vehicle serviced by your dealer. If the system is working normally, the indicator light then goes off.

If the ABS light stays on, turn the ignition off. If the light comes on while driving, stop as soon as it is safely possible and turn the ignition off.

Then start the engine again to reset the system. If the ABS light stays on, or comes on again while driving, the vehicle needs service. If the regular brake system warning light is not on, the vehicle still has brakes, but not antilock brakes. If the regular brake system warning light is also on, the vehicle does not have anti-lock brakes and there is a problem with the regular brakes. See Brake System Warning Light on page 4-23.

For vehicles with a Driver Information Centre (DIC), see *Brake System Messages on page 4-35* for all brake-related DIC messages.

Up-Shift Light



Base Cluster Uplevel Cluster

The vehicle may have an up-shift light.

When this light comes on, shift to the next higher gear if weather, road, and traffic conditions allow.

The light for the uplevel cluster displays in the Driver Information Centre (DIC).

Traction Off Light



This light comes on briefly while starting the engine.

If it does not, have the vehicle serviced by your dealer. If the system is working normally, the indicator light then goes off. This light comes on when the traction control system (TCS) has been turned off by pressing and releasing the traction control button.

This light also comes on and the system turns off if there is a problem with the traction control system.

If the light comes on and stays on for an extended period of time while the system is turned on, the vehicle needs service.

See Traction Control System (TCS) on page 8-35 and Electronic Stability Control (ESC) on page 8-36.

Electronic Stability Control (ESC) Indicator Light



This light comes on briefly while starting the engine.

If it does not, have the vehicle serviced by your dealer. If the system is working normally, the indicator light then goes off.

If the light comes on and stays on while driving, there could be a problem with the ESC and the vehicle might need service. When this warning light is on, the ESC is off and does not limit wheel spin. The light flashes if the system is active and is working to assist the driver with directional control of the vehicle in difficult driving conditions.

See Electronic Stability Control (ESC) on page 8-36 for more information.

Electronic Stability Control (ESC)/Traction Control System (TCS) Indicator/Warning Light



This light comes on briefly while starting the engine.

If it does not, have the vehicle serviced by your dealer. If the system is working normally, the indicator light then goes off. This light comes on when the ESC system is turned off. When the ESC is off, the TCS is also off, and wheel spin is not limited. If the ESC is off, the system does not assist in controlling the vehicle. Turn on the TCS and the ESC, and the warning light turns off.

See Traction Control System (TCS) on page 8-35 and Electronic Stability Control (ESC) on page 8-36.

Wait-to-Start Light



For diesel engines, the wait-to-start light shows that the engine is functioning properly and indicates when the engine can be started. The fast warm-up glow plug system makes the wait-to-start light stay on for a shorter amount of time than most diesel engines.

For more information, see *Starting the Engine on page 8-18.*

Tyre Pressure Light



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

When the Light Is On Steady

This indicates that one or more of the tyres are significantly under-inflated.

A Driver Information Centre (DIC) tyre pressure message may also display. See *Tyre Messages on page 4-41*. Stop as soon as possible, and inflate the tyres to the pressure value shown on the Tyre and Loading Information label. See *Tyre Pressure on page 9-45*.

When the Light Flashes First and Then Is On Steady

If the light flashes for about a minute and then stays on, there may be a problem with the TPMS. If the problem is not corrected, the light will come on at every ignition cycle. See *Tyre Pressure Monitor Operation on page 9-47*.

Diesel Particulate Filter Light



This indicator comes on or flashes yellow when the diesel particle filter requires cleaning. Continue driving until the light goes off. If possible do not allow the engine speed to drop below 2000 rpm.

This light illuminates when the diesel particle filter is full. Start the cleaning process as soon as possible.

The light flashes when the maximum filling level of the filter is reached. Start the cleaning process immediately to avoid damage to the engine.

See *Diesel Particulate Filter on page 8-25* for more information.

Engine Oil Pressure Light

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

Notice: Lack of proper engine oil maintenance can damage the engine. Driving with the engine oil low can also damage the engine. The repairs would not be covered by the vehicle warranty. Check the oil level as soon as possible. Add oil if required, but if the oil level is within the operating range and the oil pressure is still low, have the vehicle serviced. Always follow the maintenance schedule for changing engine oil.



Notice: Engine lubrication may be interrupted. This may result in damage to the engine and/or locking of the drive wheels.

The oil pressure light illuminates red when the ignition is switched on and goes out shortly after the engine starts.

This light illuminates when the engine is running.

- 1. Depress clutch.
- 2. Select neutral gear, set selector lever to N (neutral).

- Move out of the flow of traffic as quickly as possible without impeding other vehicles.
- 4. Switch off the ignition.

When the engine is off, considerably more force is needed to brake and steer.

Do not remove the key until the vehicle is stationary, otherwise the steering wheel lock could engage unexpectedly.

Check oil level before seeking assistance of a dealer.

Low Fuel Warning Light



This light, below the fuel gauge, comes on briefly when the engine is started.

If it does not come on, have the vehicle serviced by your dealer. If the system is working normally, the indicator light then goes off.

This light also comes on when the fuel tank is low on fuel. When fuel is added the light should go off. If it does not, have your vehicle serviced.

For vehicles with an uplevel or eAssist cluster, this telltale displays in the Driver Information Centre (DIC) screen. Security Light



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

If the light stays on and the engine does not start, there could be a problem with the theft-deterrent system.

This light is also used to indicate the status of the anti-theft alarm system when the ignition is turned off. The light will flash rapidly if the alarm system is arming and one or more of the monitored entry points is not closed. The light will stay on if the alarm is arming and all entry points are closed. For information regarding this light and the vehicle's security system, see *Anti-theft Alarm System on page 1-13.*

High-Beam On Light

ΞD

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

See *Headlamp High/Low-Beam Changer on page 5-3* for more information.

Front Fog Lamp Light



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

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

Rear Fog Lamp Light



For vehicles with rear fog lamps, this light comes on when they are in use.

For more information see *Rear Fog Lamps on page 5-6*.

Lamps On Reminder



The lamps on reminder light comes on when the lights are in use.

Cruise Control Light



The cruise control light comes on whenever the cruise control is set.

The light goes out when the cruise control is turned off. See *Cruise Control on page 8-37* for more information.

Door Ajar Light



For base level clusters this light comes on above the Driver Information Centre (DIC). For uplevel clusters, this light comes on in the Driver Information Centre (DIC) when a door is open or not securely latched.

Before driving, check that all doors are properly closed.

Information Displays

Driver Information Centre (DIC)

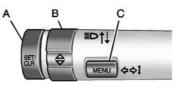
The Driver Information Centre (DIC) displays information about the vehicle. It also displays warning messages if a system problem is detected. See *Vehicle Messages* (Uplevel) on page 4-35 or *Vehicle Messages* (Base Level) on page 4-34 for more information. All messages appear in the DIC display located in the centre of the instrument panel cluster.

The vehicle may also have features that can be customised through the controls on the radio. See *Vehicle Personalisation on page 4-43* for more information.

DIC Operation and Displays

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

DIC Buttons



- A. **SET/CLR:** Press to set or clear the menu item displayed.
- B. $\triangle \nabla$ (Thumbwheel): Use to scroll through the menus.
- C. **MENU:** Press to display the Trip/Fuel menu and the Vehicle Information menu. This button is also used to return to or exit the last screen displayed on the DIC.

Trip/Fuel Menu Items

Press MENU on the indicator lever until Trip/Fuel Menu is displayed. Use $\triangle \nabla$ to scroll through the following possible menu items:

- Digital Speedometer
- Trip 1
- Trip 2
- Fuel Range
- Average Fuel Consumption
- Instantaneous Fuel Consumption
- Average Vehicle Speed

Digital Speedometer

The speedometer, available on some vehicles, shows how fast the vehicle is moving in either kilometres per hour (km/h) or miles per hour (mph). The speedometer cannot be reset.

Trip 1 and Trip 2

This display shows the current distance travelled, in either kilometres (km) or miles (mi), since the last reset for the trip odometer. The trip odometer can be reset to zero by pressing SET/CLR while the trip odometer display is showing.

Fuel Range

This display shows the approximate distance the vehicle can be driven without refuelling. The fuel range estimate is based on an average of the vehicle's fuel economy over recent driving history and the amount of fuel remaining in the fuel tank. On some models, this display is shown as km (mi). Fuel range cannot be reset.

Average Fuel Consumption

This display shows the approximate average litres per 100 kilometres (L/100 km) or miles per gallon (mpg). This number is calculated based on the number of L/100 km (mpg) recorded since the last time this menu item was reset. On some models, this display is shown as Ø ■ L/100 km (mpg). The fuel economy can be reset by pressing SET/CLR while the Average Fuel Economy display is showing. On some models, this display is shown on the same page with the instantaneous fuel consumption display.

Instantaneous Fuel Consumption

The instantaneous fuel consumption display shows the current fuel economy in litres per 100 kilometres (L/100 km) or miles per gallon (mpg). This number reflects only the fuel economy that the vehicle has right now and changes frequently as driving conditions change. On some models, this display is shown

as L/100 km (mpg). Unlike average economy, this display cannot be reset. On some models, this display is shown on the same page with the average fuel consumption display.

Average Vehicle Speed

This display shows the average speed of the vehicle in miles per hour (mph) or kilometres per hour (km/h). This average is calculated based on the various vehicle speeds recorded since the last reset of this value. On some models, this display is shown as \emptyset km/h (mph). The average speed can be reset by pressing SET/CLR while the Average Vehicle Speed display is showing.

Vehicle Information Menu Items

Press MENU on the indicator lever until Vehicle Information menu is displayed. Use $\triangle \nabla$ to scroll through the following possible menu items:

- Tyre Pressure
- Remaining Oil Life
- Battery Voltage

On some models, the menus may only be accessible when the vehicle is stopped.

Tyre Pressure

The display, available on some vehicles, will show a vehicle with the approximate pressures of all four tyres. Tyre pressure is displayed in either kilopascal (kPa) or pounds per square inch (psi). On some models, this display only allows for matching of the TPMS sensors. In this case, the display will show TYRE LEARN. See *Tyre Pressure Monitor System on page 9-46* and *Tyre Pressure Monitor Operation on page 9-47* for more information.

Remaining Oil Life

This display shows an estimate of the oil's remaining useful life. If REMAINING OIL LIFE 99% is displayed, that means 99% of the current oil life remains. On some models, this display is shown as \mathbf{M}' %. When the remaining oil life is low, the CHANGE ENGINE OIL SOON message will appear on the display. See Engine Oil Messages on page 4-37. The oil should changed as soon as possible. See Engine Oil on page 9-11. In addition to the engine oil life system monitoring the oil life, additional maintenance is recommended in the Maintenance Schedule. See Scheduled Maintenance on page 10-2 for more information.

Remember, the Oil Life display must be reset after each oil change. It will not reset itself. Also, be careful not to reset the Oil Life display accidentally at any time other than when the oil has just been changed. It cannot be reset accurately until the next oil change. To reset the engine oil life system, press SET/CLR while the Oil Life display is active. See *Engine Oil Life System on page 9-13*.

Battery Voltage

This display, available on some vehicles, shows the current battery voltage. If the voltage is in the normal range, the value will display. For example, the display may read Battery Voltage 15.0 Volts. The vehicle's charging system regulates voltage based on the state of the battery. The battery voltage can fluctuate while viewing this information on the DIC. This is normal. See Charging System Light on page 4-20 for more information. If there is a problem with the battery charging system, the DIC will display a message

Vehicle Messages

Vehicle Messages (Base Level)

DIC messages display when the status of the vehicle has changed and action may be needed to correct the condition. Multiple messages appear one after another.

Press any of the DIC buttons on the indicator lever to acknowledge and clear them from the display. More urgent messages cannot be cleared from the DIC display. All messages should be taken seriously. Clearing messages will not correct the problem. On the base level cluster, vehicle messages appear as code numbers. Some of these codes may appear along with the service vehicle soon light and the owner manual symbol in the DIC display.

- 3: Coolant level low, add coolant
- 4: A/C off due to high temp
- 5: Steering column is locked
- **6:** Step on brake to release park brake

7: Turn steering wheel turn key off then on

9: Turn steering wheel start vehicle again

- 25: Left front turn indicator failure
- 26: Left rear turn indicator failure
- 27: Right front turn indicator failure
- 28: Right rear turn indicator failure

- **35:** Replace battery in remote key
- **53:** Tighten filler cap
- 65: Theft attempted
- 67: Service steering column lock
- 68: Service power steering
- 75: Service air conditioner
- 81: Service transmission
- 82: Change engine oil soon
- 84: Engine power is reduced
- 91: No remote detected
- 94: Shift to park
- 95: Service airbag
- 128: Bonnet open
- 136: Service park assist
- 145: Washer fluid low, add fluid
- 174: Low battery
- 258: Park assist off

Vehicle Messages (Uplevel)

DIC messages display when the status of the vehicle has changed and action may be needed to correct the condition. Multiple messages appear one after another.

Press any of the DIC buttons on the indicator lever to acknowledge and clear them from the display. More urgent messages cannot be cleared from the DIC display. All messages should be taken seriously. Clearing messages will not correct the problem.

On the uplevel cluster, vehicle messages are displayed as text. The messages and information about them follow.

Battery Voltage and Charging Messages

BATTERY SAVER ACTIVE

This message displays when the vehicle has detected that the battery voltage is dropping beyond a reasonable point. The battery saver system starts reducing certain features of the vehicle that you may be able to notice. At the point that features are disabled, this message is displayed. It means that the vehicle is trying to save the charge in the battery. Turn off unnecessary accessories to allow the battery to recharge.

LOW BATTERY

This message is displayed when the battery voltage is low. See *Battery on page 9-27.*

SERVICE BATTERY CHARGING SYSTEM

This message is displayed when there is a fault in the battery charging system. Take the vehicle to your dealer for service.

Brake System Messages

BRAKE FLUID LOW

This message is displayed when the brake fluid level is low. See *Brake Fluid on page* 9-26.

RELEASE PARKING BRAKE

This message is displayed if the electric parking brake is on while the vehicle is in motion. Release it before you attempt to drive. See *Electric Parking Brake on page 8-32* for more information.

SERVICE BRAKE ASSIST

This message may be displayed when there is a problem with the brake boost assist system. When this message is displayed, the brake boost assist motor might be heard operating and you might notice pulsation in the brake pedal. This is normal under these conditions. Take the vehicle to your dealer for service.

SERVICE PARKING BRAKE

This message is displayed when there is a problem with the electric parking brake. See *Electric Parking Brake on page 8-32* for more information. Take the vehicle to your dealer.

STEP ON BRAKE TO RELEASE PARK BRAKE

This message is displayed if you attempt to release the electric parking brake without the brake pedal applied. See *Electric Parking Brake on page 8-32* for more information.

Cruise Control Messages CRUISE SET TO XXX

This message displays when the cruise control is set and shows the speed it was set to. See *Cruise Control on page 8-37*.

Door Ajar Messages

DRIVER DOOR OPEN

This message will display when the driver door is open. Close the door completely.

BONNET OPEN

This message will display when the bonnet is open. Close the bonnet completely.

LEFT REAR DOOR OPEN

This message will display when the driver side rear door is open. Close the door completely.

PASSENGER DOOR OPEN

This message will display when the front passenger door is open. Close the door completely.

RIGHT REAR DOOR OPEN

This message will display when the passenger side rear door is open. Close the door completely.

BOOTLID OPEN

This message will display when the boot is open. Close the boot completely.

Engine Cooling System Messages

A/C OFF DUE TO HIGH ENGINE TEMP

This message displays when the engine coolant becomes hotter than the normal operating temperature. To avoid added strain on a hot engine, the air conditioning compressor automatically turns off. When the coolant temperature returns to normal, the air conditioning compressor turns back on. You can continue to drive the vehicle.

If this message continues to appear, have the system repaired by your dealer as soon as possible to avoid damage to the engine.

COOLANT LEVEL LOW ADD COOLANT

This message will display if the coolant is low. See *Engine Coolant* on page 9-18.

ENGINE OVERHEATED - IDLE ENGINE

This message displays when the engine coolant temperature is too hot. Stop and allow the vehicle to idle until it cools down.

ENGINE OVERHEATED -STOP ENGINE

This message displays and a continuous chime sounds if the engine cooling system reaches unsafe temperatures for operation. Stop and turn off the vehicle as soon as it is safe to do so to avoid severe damage. This message clears when the engine has cooled to a safe operating temperature.

Engine Oil Messages

CHANGE ENGINE OIL SOON

This message displays when the engine oil needs to be changed. When you change the engine oil, be sure to reset the Oil Life System. See Engine Oil Life System on page 9-13 and Driver Information Centre (DIC) on page 4-31 for information on how to reset the system. See Engine Oil on page 9-11 and Scheduled Maintenance on page 10-2 for more information.

ENGINE OIL HOT, IDLE ENGINE

This message displays when the engine oil temperature is too hot. Stop and allow the vehicle to idle until it cools down.

OIL PRESSURE LOW— STOP ENGINE

This message displays if low oil pressure levels occur. Stop the vehicle as soon as safely possible and do not operate it until the cause of the low oil pressure has been corrected. Check the oil as soon as possible and have the vehicle serviced by your dealer.

Engine Power Messages

ENGINE POWER IS REDUCED

This message displays when the vehicle's engine power is reduced. Reduced engine power can affect the vehicle's ability to accelerate. If this message is on, but there is no reduction in performance, proceed to your destination. The performance may be reduced the next time the vehicle is driven. The vehicle may be driven at a reduced speed while this message is on, but maximum acceleration and speed may be reduced. Anytime this message stays on, the vehicle should be taken to your dealer for service as soon as possible.

Fuel System Messages

FUEL LEVEL LOW

This message displays when the vehicle is low on fuel. Refuel as soon as possible.

TIGHTEN FUEL CAP

This message displays when the fuel cap is not on tight. Tighten the fuel cap.

Diesel Particulate Filter Messages

DIESEL PARTIC (Particulate) FILTER IS FULL CONTINUE DRIVING

This message may display when the soot particles in the diesel particulate filter reach a certain amount. Continue driving to prevent the filter from clogging. See *Diesel Particulate Filter on page 8-25* for more information.

DIESEL PARTIC (Particulate) FILTER IS FULL CONTINUED DRIVING MANDATORY

This message may display when the soot particles in the diesel particulate filter reach a certain amount. Continued driving is mandatory to prevent the filter from clogging. See *Diesel Particulate Filter on page 8-25* for more information.

Key and Lock Messages NO REMOTE DETECTED

This message displays when the transmitter battery is weak on vehicles with keyless access. See "Starting the Vehicle with a Low Transmitter Battery" under *Remote Keyless Entry (RKE) System Operation on page 1-3.*

REPLACE BATTERY IN REMOTE KEY

This message displays when the battery in the Remote Keyless Entry (RKE) transmitter needs to be replaced.

Lamp Messages

AUTOMATIC LIGHT CONTROL ON

This message is displayed when the automatic light control has been turned on. See *Automatic Headlamp System on page 5-4*.

AUTOMATIC LIGHT CONTROL OFF

This message is displayed when the automatic light control has been turned off. See *Automatic Headlamp System on page 5-4*.

CHECK XXX INDICATOR LAMP

When one of the indicators is out, this message displays to show which bulb needs to be replaced. See *Bulb Replacement on page 9-31* and *Replacement Bulbs on page 9-36* for more information on indicator bulb replacement.

INDICATOR ON

This message is displayed if the indicator has been left on. Turn off the turn signal.

Object Detection System Messages

PARK ASSIST OFF

This message displays when the park assist system has been turned off or when there is a temporary condition causing the system to be disabled. See *Ultrasonic Parking Assist on page 8-40.*

SERVICE PARK ASSIST

This message displays if there is a problem with the Ultrasonic Rear Parking Assist (URPA) system. Do not use this system to help you park. See *Ultrasonic Parking Assist on page 8-40*. See your retailer for service.

Ride Control System Messages

SERVICE TRACTION CONTROL

This message displays when there is a problem with the Traction Control System (TCS). When this message is displayed, the system will not limit wheel spin. Adjust your driving accordingly. See your retailer for service.

SERVICE ESP

This message displays if there is a problem with the StabiliTrak system. If this message appears, try to reset the system. Stop; turn off the engine for at least 15 seconds; then start the engine again. If this message still comes on, it means there is a problem. See your retailer for service. The vehicle is safe to drive, however, you do not have the benefit of StabiliTrak, so reduce your speed and drive accordingly.

TRACTION CONTROL OFF

On some models, this message displays when the Traction Control System (TCS) is turned off. Adjust your driving accordingly.

TRACTION CONTROL ON

On some models, this message displays when the Traction Control System (TCS) is turned on.

Anti-theft Alarm System Messages

THEFT ATTEMPTED

This message displays if the vehicle detects a tamper condition.

Service Vehicle Messages

SERVICE AC SYSTEM

This message displays if there is a problem with the air conditioning system. Take the vehicle to your dealer for service.

SERVICE POWER STEERING

This message displays if there is a problem with the power steering system. Take the vehicle to your dealer for service.

SERVICE STEERING COLUMN LOCK

This message displays if there is a problem with the steering column lock system. Take the vehicle to your dealer for service.

SERVICE VEHICLE SOON

This message displays if there is a problem with the vehicle. Take the vehicle to your dealer for service.

STEERING COLUMN IS LOCKED

This message displays when the engine is running and the steering column is locked. Take the vehicle to your dealer for service.

Starting the Vehicle Messages

TURN STEERING WHEEL TURN KEY OFF THEN ON

This message displays when the steering column is locked. Try turning the steering wheel while turning the vehicle off and then back on to unlock the steering column.

TURN STEERING WHEEL START VEHICLE AGAIN

This message displays when you try to start the vehicle, but the column remains locked. Try turning the steering wheel while starting the vehicle to unlock the steering column. If the vehicle still does not start, turn the steering wheel the other way, and try starting the vehicle again.

Tyre Messages

TYRE PRESSURE LOW INFLATE TYRE

On vehicles with the Tyre Pressure Monitor System (TPMS), this message displays when the pressure in one or more of the vehicle's tyres is low.

The low tyre pressure warning light will also come on. See *Tyre Pressure Light on page 4-27*.

If a tyre pressure message appears on the DIC, stop as soon as you can. Inflate the tyres by adding air until the tyre pressure is equal to the values shown on the Tyre and Loading Information label. See *Tyres on page 9-44, Vehicle Load Limits on page 8-10, and Tyre Pressure on page 9-45.* You can receive more than one tyre pressure message at a time. To read the other messages that may have been sent at the same time, press the SET/CLR button. The DIC also shows the tyre pressure values. See *Driver Information Centre (DIC) on page 4-31*.

SERVICE TYRE MONITOR SYSTEM

This message displays if there is a problem with the Tyre Pressure Monitor System (TPMS). See *Tyre Pressure Monitor Operation on page 9-47* for more information.

TYRE LEARNING ACTIVE

This message displays when the system is learning new tyres. See *Tyre Pressure Monitor Operation on page 9-47* for more information.

Transmission Messages PRESS CLUTCH TO START

This message displays when attempting to start a vehicle with a manual gearbox without pressing on the clutch pedal.

SERVICE TRANSMISSION

This message displays if there is a problem with the transmission. See your dealer.

SHIFT DENIED

This message displays when attempting to use the automatic transmission manual mode to shift to too low a gear. See *Manual Mode on page 8-29* for more information.

SHIFT TO PARK

This message displays when the transmission needs to be shifted to P (Park). This may appear when attempting to remove the key from the ignition or from the vehicle if the vehicle is not in P (Park).

TRANSMISSION HOT-IDLE ENGINE

This message displays and a chime sounds if the transmission fluid in the vehicle gets hot. Driving with the transmission fluid temperature high can cause damage to the vehicle. Stop the vehicle and let it idle to allow the transmission to cool. This message clears when the fluid temperature reaches a safe level.

Vehicle Reminder Messages

ICE POSSIBLE DRIVE WITH CARE

This message displays when ice conditions are possible.

Washer Fluid Messages

WASHER FLUID LOW ADD FLUID

This message may display when the washer fluid level is low. See *Washer Fluid on page 9-24*.

Window Messages

OPEN, THEN CLOSE DRIVER WINDOW

This message is displayed when the window needs to be reprogrammed. If the vehicle's battery has been recharged or disconnected, you will need to reprogram each front window for the express-up feature to work. See *Power Windows on page 1-20*.

OPEN, THEN CLOSE PASSENGER WINDOW

This message is displayed when the window needs to be reprogrammed. If the vehicle's battery has been recharged or disconnected, you will need to reprogram each front window for the express-up feature to work. See *Power Windows on page 1-20*.

Vehicle Personalisation

The audio system controls are used to access the personalisation menus for customising vehicle features.

CONFIG (Configuration):

Press to access the Configuration Settings Menu.

TUNE/MENU: Turn to scroll through the menus. Press to enter the menus and select the menu items.

BACK ^{(¬}: Press to exit or move backward in a menu.

Entering the Personalisation Menus

- 1. Press CONFIG to access the Configuration Settings menu.
- 2. Turn the TUNE/MENU knob to highlight Vehicle Settings.
- 3. Press TUNE/MENU to select the Vehicle Settings menu.

The following list of menu items may be available:

- Climate and Air Quality
- Comfort and Convenience
- Language
- Lighting
- Power Door Locks
- Remote Locking, Unlocking, Starting
- Return to Factory Settings

Turn the TUNE/MENU knob to highlight the menu. Press TUNE/ MENU to select it. Each of the menus is detailed in the following information.

Climate and Air Quality

Select the Climate and Air Quality menu and the following may be displayed:

- Auto Fan Speed
- Air Quality Sensor
- Auto Defog
- Auto Rear Demist

Auto Fan Speed

This will allow you to select the automatic fan speed. It can be adjusted to run lower or higher than normal.

Press TUNE/MENU when Auto Fan Speed is highlighted to open the menu. Turn the TUNE/MENU knob to highlight High, Medium, or Low. Press TUNE/MENU to confirm the selection and move back to the last menu.

Air Quality Sensor

This will allow you to select whether the system will operate at high or low sensitivity. Only vehicles with the dual zone climate control will have this option.

Press TUNE/MENU when Air Quality Sensor is highlighted to open the menu. Turn the TUNE/ MENU knob to highlight High or Low. Press TUNE/MENU to confirm the selection and move back to the last menu.

Auto Defog

This will allow you to turn the auto demist on or off. Only vehicles with the dual zone climate control will have this option.

Press TUNE/MENU when Auto Demist is highlighted to open the menu. Turn the TUNE/MENU knob to highlight On or Off. Press TUNE/ MENU to confirm the selection and move back to the last menu.

Auto Rear Demist

This will allow you to turn the auto rear demist on or off. This feature will automatically turn on the rear demister when it is cold outside.

Press TUNE/MENU when Auto Rear Demist is highlighted to open the menu. Turn the TUNE/MENU knob to highlight On or Off. Press TUNE/MENU to confirm the selection and move back to the last menu.

Comfort and Convenience

Select the Comfort and Convenience menu and the following may be displayed:

- Easy Exit Driver Seat
- Chime Volume
- Reverse Tilt Mirror
- Personalisation by Driver

Easy Exit Driver Seat

When on, this feature will move the driver seat rearward upon turning the ignition off and opening the driver door. This may be performed to make it easier to exit the vehicle. See "Easy Exit Driver Seat" under *Power Seat Adjustment on page 2-5* for more information.

This allows you to turn the easy exit seat feature on or off.

Press TUNE/MENU when Easy Exit Driver Seat is highlighted. Turn the TUNE/MENU knob to select On or Off. Press TUNE/MENU to confirm and go back to the last menu.

Chime Volume

This allows selection of the chime volume level.

Press TUNE/MENU when Chime Volume is highlighted. Turn the TUNE/MENU knob to select Normal or High. Press TUNE/MENU to confirm and go back to the last menu.

Reverse Tilt Mirror

When on, both the driver and passenger mirrors will tilt downward when vehicle is shifted to R (Reverse) to improve visibility of the ground near the rear wheels. They will return to their previous driving position when the vehicle is shifted out of R (Reverse), the ignition is turned to OFF, or the vehicle is left in reverse. See *Reverse Tilt Mirrors on page 1-18* for more information. Press TUNE/MENU when Reverse Tilt Mirror is highlighted. Turn the TUNE/MENU knob to select On or Off. Press TUNE/MENU to confirm and go back to the last menu.

Personalisation by Driver

This allows programming to recall memory settings for the following features for up to three drivers:

- Driver's seat position
- Outside rearview mirror position
- Steering column position
- 1. Press the Vehicle menu.
- 2. Select Comfort and Convenience.
- 3. Turn the Personalisation by Driver feature on or off.
- 4. Press Back to return to the previous menu.

Language

Select the Language menu and the following may be displayed:

- UK English
- Spanish
- French
- German
- Italian
- Swedish
- Dutch
- Polish
- Danish
- Portuguese
- Norwegian
- Finnish

- Turkish
- Arabic
- Russian

Turn the TUNE/MENU knob to select the language. Press TUNE/ MENU to confirm and go back to the last menu.

Lighting

Select the Lighting menu and the following may be displayed:

- Vehicle Locator Lights
- Exit Lighting

Vehicle Locator Lights

This allows the vehicle locator lights to be turned on or off. The vehicle locator lights come on when unlocking the vehicle with the RKE transmitter. Press TUNE/MENU when Vehicle Locator Lights is highlighted. Turn the TUNE/MENU knob to select On or Off. Press TUNE/MENU to confirm and go back to the last menu.

Exit Lighting

This allows selection of how long the exterior lamps stay on when leaving the vehicle and it is dark outside.

Press TUNE/MENU when Exit Lighting is highlighted. Turn the TUNE/MENU knob to select Off, 30 Seconds, 1 Minute, or 2 Minutes. Press TUNE/MENU to confirm and go back to the last menu.

Power Door Locks

Select Power Door Locks and the following may be displayed:

- Unlocked Door Anti Lock Out
- Auto Door Unlock
- Delayed Door Lock

Unlocked Door Anti Lock Out

When on, this feature will keep the driver door from locking when the door is open. If off is selected, the Delayed Door Lock menu will be available and the door will lock as programmed through this menu.

Press TUNE/MENU when Auto Door Unlock is highlighted. Turn the TUNE/MENU knob to select On or Off. Press TUNE/MENU to confirm and go back to the last menu.

Auto Door Unlock

This allows selection of which of the doors will automatically unlock when the vehicle is shifted into P (Park).

Press TUNE/MENU when Auto Door Unlock is highlighted. Turn the TUNE/MENU knob to select All Doors, Driver Door, or Off. Press TUNE/MENU to confirm and go back to the last menu.

Delayed Door Lock

When on, this feature will delay the locking of the doors until five seconds after the last door is closed. You will hear three chimes to signal delayed locking is in use. Pressing either the power lock button or the lock button on the RKE transmitter twice will override the delayed locking feature and immediately lock all of the doors.

Press TUNE/MENU when Delayed Door Lock is highlighted. Turn the TUNE/MENU knob to select On or Off. Press TUNE/MENU to confirm and go back to the last menu.

Remote Locking, Unlocking, Starting

Select Remote Locking, Unlocking, Starting and the following may be displayed:

- Unlock Feedback (Lights)
- Locking Feedback
- Door Unlock Options
- Passive Door Lock

- Passive Door Unlock
- Memory Remote Recall
- Remote Left in Vehicle Reminder
- Relock Remote Door

Unlock Feedback (Lights)

When on, the exterior lamps will flash when unlocking the vehicle with the RKE transmitter.

Press TUNE/MENU when Unlock Feedback (Lights) is highlighted. Turn the TUNE/MENU knob to select On or Off. Press TUNE/ MENU to confirm and go back to the last menu.

Locking Feedback

This allows selection of what type of feedback is given when locking the vehicle with the RKE transmitter.

Press TUNE/MENU when Locking Feedback is highlighted. Turn the TUNE/MENU knob to select Lights and Horn, Lights Only, Horn Only, or Off. Press TUNE/MENU to confirm and go back to the last menu.

Door Unlock Options

This allows selection of which doors will unlock when pressing the unlock button on the RKE transmitter.

Press TUNE/MENU when Door Unlock Options is highlighted. Turn the TUNE/MENU knob to select All Doors or Driver Door Only. When set to Driver Door Only, the driver door will unlock the first time the unlock button is pressed and all doors will unlock when the button is pressed a second time. When set to All Doors, all of the doors will unlock at the first press of the unlock button. Press TUNE/MENU to confirm and go back to the last menu.

Passive Door Lock

This allows of which doors are unlocked by pressing the button on the outside door handle.

Press TUNE/MENU when Passive Door Lock is highlighted. Turn the TUNE/MENU knob to select Off, On, or On with Active Horn Chirp. Press TUNE/MENU to confirm and go back to the last menu.

Passive Door Unlock

This allows of which doors are locked by pressing the button on the outside door handle.

Press TUNE/MENU when Passive Door Unlock is highlighted. Turn the TUNE/MENU knob to select All Doors or Driver Door. Press TUNE/MENU to confirm and go back to the last menu.

Memory Remote Recall

When on, this feature will recall the current driver's last seat and outside mirror positions upon unlocking the driver door with the RKE, and opening that door. The current driver is identified when the RKE is used to unlock the driver door. If keyless access equipped, the recall will occur upon opening the driver door. See *Memory Seats on page 2-7* for more information.

This allows the Memory Remote Recall feature to be turned on or off.

Press TUNE/MENU when Memory Remote Recall is highlighted. Turn the TUNE/MENU knob to select On or Off. Press TUNE/MENU to confirm and go back to the last menu.

Remote Left in Vehicle Reminder

This allows the Remote Left in Vehicle Reminder feature to be turned on or off. If on, the horn will chirp if a remote is left in the vehicle. Press TUNE/MENU when Remote Left in Vehicle Reminder is highlighted. Turn the TUNE/MENU knob to select On or Off. Press TUNE/MENU to confirm and go back to the last menu.

Relock Remote Door

When on, the doors will automatically lock after a set time of not being opened.

Press TUNE/MENU when Relock Remote Door is highlighted. Turn the TUNE/MENU knob to select On or Off. Press TUNE/MENU to confirm and go back to the last menu.

Return to Factory Settings

Select Return to Factory Settings to return all of the vehicle personalisation to the default settings. Turn the TUNE/MENU knob to select Yes or No. Press TUNE/MENU to confirm and go back to the last menu.

Lighting 5-1

Lighting

Exterior Lighting

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Interior Lighting

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5-2 Lighting

Exterior Lighting

Exterior Lamp Controls



The exterior lamp control is located on the instrument panel on the outboard side of the steering wheel. Turn the control to the following positions:

(**Off):** Turns off the exterior lamps. The knob returns to the AUTO position after it is released. Turn to off again to reactivate the AUTO mode.

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

לייי (Parking Lamps): Turns on the parking lamps together with the following:

- Sidemarker Lamps
- Tail lamps
- License Plate Lamps
- Instrument Panel Lights

D (Headlamps): Turns on the headlamps together with the following:

- Sidemarker Lamps
- Tail lamps
- License Plate Lamps
- Instrument Panel Lights
- Parking Lamps

Lighting 5-3

Exterior Lamps Off Reminder

A warning chime sounds if the driver door is opened while the ignition is off and the exterior lamps are on.

Headlamp High/ Low-Beam Changer

DED (Headlamp Main/ Dipped-Beam Changer): Push the turn signal/lane change lever away from you and release, to turn the high beams on. To return to low beams, push the lever again or pull it toward you and release.



This indicator light turns on in the instrument panel cluster when the main-beam headlights are on.

Flash-to-Pass

To flash the main beams, pull the indicator/lane change lever toward you, and release.

Daytime Running Lamps (DRL)

Daytime Running Lamps (DRL) can make it easier for others to see the front of your vehicle during the day. The vehicle has a light sensor on top of the instrument panel that controls the DRL. Do not cover this sensor or the headlamps will be on when they are not needed.

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

- The ignition is on.
- The exterior lamps control is in AUTO.
- The light sensor detects daytime light.
- The parking brake is released or the vehicle is not in P (Park).

When the DRL system is on, the tail lamps, sidemarker lamps, parking lamps, and instrument panel lights are not on unless you turn the exterior lamps control to the parking lamp position.

This vehicle may have a DRL disabling function. When the DRL are on and an indicator is activated, the DRL on that side will be off until the indicator goes off.

The regular headlamp system should be turned on when they are needed.

5-4 Lighting

Automatic Headlamp System

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



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

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

When it is bright enough outside, the headlamps will turn off or may change to Daytime Running Lamps (DRL).

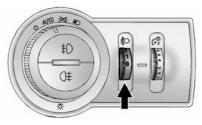
The automatic headlamp system turns off when the exterior lamp control is turned to \bigcirc or the ignition is off.

Headlamp Levelling Control (Automatic)

On vehicles with automatic headlamp levelling, no adjustment is necessary. Levelling is controlled automatically depending on the load the vehicle is carrying.

Headlamp aim is important to safe driving. If the headlights require aiming or the automatic headlight levelling system is malfunctioning, see your dealer for service.

Headlamp Levelling Control (Manual)



For vehicles with manual headlamp levelling, the control is located on the exterior lamp control. This feature lets the headlamp level be adjusted to suit the vehicle load.

The low-beam headlamps must be on to adjust the headlamp levelling.

- 0 = Front seat occupied.
- 1 = All seats occupied.
- 2 = All seats occupied and load in the luggage compartment.
- 3 = Drivers seat occupied and load in the luggage compartment.

Lighting 5-5

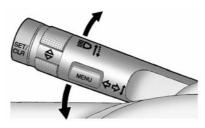
Hazard Warning Flashers



(Hazard Warning Flasher): Press this button located on the instrument panel above the audio system, to make the front and rear indicator lamps flash on and off. Press again to turn the flashers off.

The hazard warning flashers turn on automatically if the airbags deploy.

Turn and Lane-Change Signals



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

An arrow on the instrument panel cluster flashes in the direction of the turn or lane change. Raise or lower the lever until the arrow starts to flash to signal a lane change. Hold it there until the lane change is completed. If the lever is briefly pressed and released, the indicator flashes three times.

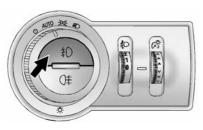
The indicator and lane-change signal can be turned off manually by moving the lever back to its original position.

If after signalling a turn or lane change, the arrow flashes rapidly or does not come on, a signal bulb might be burned out.

Have any burned out bulbs replaced. If the bulb is not burned out, check the fuse. See *Fuses on page 9-38*.

5-6 Lighting

Front Fog Lamps



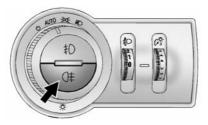
For vehicles with front fog lamps, the button is located on the exterior lamp control, left of the steering wheel.

To turn on the front fog lamps, the ignition and the headlamps or parking lamps must be on.

If the front fog lamps are turned on while the exterior lamp switch is in the AUTO position, the headlamps come on automatically.

D (Front Fog Lamps): Press to turn on or off. An indicator light on the instrument panel cluster comes on when the front fog lamps are on. Some localities have laws that require the headlamps to be on along with the fog lamps.

Rear Fog Lamps



The rear fog lamp button is located on the exterior lamp control, on the outboard side of the steering wheel.

The ignition and the headlamps must be on to turn the rear fog lamp on.

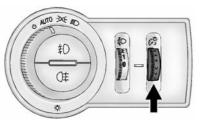
Other (Rear Fog Lamp): Press to turn the rear fog lamp on or off.

Q‡

This indicator light turns on in the instrument panel cluster when the rear fog lamp is on.

Interior Lighting

Instrument Panel Illumination Control



The brightness of the instrument panel lighting and steering wheel controls can be adjusted.

G^O; (Instrument Panel Brightness): Move and h

Brightness): Move and hold the thumbwheel up or down to brighten or dim the lights.

Courtesy Lamps

The courtesy lamps come on automatically when any door is opened and the dome lamp is in the door position.

Dome Lamps



The interior lamps control located in the overhead console controls both the front and rear interior lamps.

To operate, press the following buttons:

茶 (Off): Turns the lamps off.

(Door): Turns the lamps on when any door is opened.

ண (**On**): Keeps the lamps on all the time.

5-8 Lighting

Reading Lamps



The reading lamps are located in the overhead console.

Lighting Features

Entry Lighting

The headlamps, tail lamps, number plate lamps, reversing lamps, dome lamps, and most of the interior lights turn on briefly when the Remote Keyless Entry (RKE) a button is pressed, or when the door handle is pulled on a keyless access vehicle. See Ignition Positions (Key Access) on page 8-14 or Ignition Positions (Kevless Access) on page 8-16. After about 30 seconds the exterior lamps turn off, then the dome lamps and remaining interior lights dim to off. Entry lighting can be disabled manually by changing the ignition out of the OFF position, or by pressing the RKE **b**utton.

This feature can be changed. See *Vehicle Personalisation on* page 4-43.

Exit Lighting

The dome lamps come on when the key is removed from the ignition. For vehicles with keyless access, the dome lamps turn on as soon as the vehicle is turned off.

The headlamps, parking lamps, tail lamps, reversing lamps, and number plate lamps come on by doing the following:

- 1. Turn off the ignition.
- 2. Open the driver door.
- 3. Pull the indicator/lane-change lever briefly toward you and release.
- 4. Close the driver door.

The exterior lamps and interior lights remain on after the door is closed for a brief period and then turn off. If the driver door is not closed the lights will turn off after two minutes.

The exit lighting feature can be changed. See *Vehicle Personalisation on page 4-43*.

Battery Load Management

The vehicle has Electric Power Management (EPM), which estimates the battery's temperature and state of charge. It then adjusts the voltage for best performance and extended life of the battery.

When the battery's state of charge is low, the voltage is raised slightly to quickly bring the charge back up. When the state of charge is high, the voltage is lowered slightly to prevent overcharging. If the vehicle has a voltage display on the Driver Information Centre (DIC), you may see the voltage move up or down. This is normal. If there is a problem, an alert will be displayed. The battery can be discharged at idle if the electrical loads are very high. This is true for all vehicles. This is because the generator (alternator) may not be spinning fast enough at idle to produce all the power that is needed for very high electrical loads.

A high electrical load occurs when several of the following are on, such as: headlamps, high beams, fog lamps, rear window defogger, climate control fan at high speed, heated seats, engine cooling fans, trailer loads, and loads plugged into accessory power outlets.

EPM works to prevent excessive discharge of the battery. It does this by balancing the generator's output and the vehicle's electrical needs. It can increase engine idle speed to generate more power, whenever needed. It can temporarily reduce the power demands of some accessories.

Normally, these actions occur in steps or levels, without being noticeable. In rare cases at the highest levels of corrective action, this action may be noticeable to the driver. If so, a DIC message might be displayed and it is recommended that the driver reduce the electrical loads as much as possible. See *Battery Voltage and Charging Messages on page 4-35*.

Infotainment System

Introduction Infotainment 6-1

Introduction

Infotainment

Your vehicle has an infotainment system. See the separate infotainment system manual.



Climate Controls

Climate Control Systems

Climate Control Systems 7-1 Automatic Climate Control
System
Dual Automatic Climate Control
System 7-5

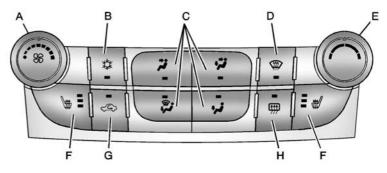
Air Vents

Maintenance

Passenger Compartment Air
Filter
Service

Climate Control Systems

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



- A. Fan Control
- B. Air Conditioning
- C. Air Delivery Modes
- D. Defrost
- E. Temperature Control
- F. Heated Seats (If Equipped)

- G. Recirculation
- H. Rear Window Demister

Temperature Control: Turn the knob clockwise or anticlockwise to increase or decrease the driver or passenger temperature setting.

Fan Control: Turn the knob clockwise or anticlockwise to increase or decrease the fan speed.

Air Delivery Modes: Press $\vec{*}, \vec{*}, \vec{*$

Went): Air is directed to the instrument panel outlets.

W (**Bi-Level**): Air is directed to the instrument panel outlets and the floor outlets.

iv (Floor): Air is directed to the floor outlets.

(Demist): Air is directed to the windscreen and floor outlets to clear the windows of mist or moisture.

(Defrost): Press to clear the windscreen of mist or frost more quickly. Air is directed to the windshield and side window outlets.

For best results, clear all snow and ice from the windscreen before defrosting.

☆ (Air Conditioning): Press to turn the air conditioning on or off. If the fan is turned off or the outside temperature falls below freezing, the air conditioner will not run and the indicator light turns off.

✓ (Recirculation): Press to turn on recirculation. An indicator light comes on. Air is recirculated to quickly cool the inside of the vehicle or prevent outside air and odours from entering.

I ★ I ★ (Heated Seats, If Equipped): Press to turn the heated seats on or off. See Heated Front Seats on page 2-9.

Rear Window Demister

(the ar Window Demister): Press to turn the rear window demister on or off.

The rear window demister turns off automatically after about 10 minutes. If turned on again, it runs for about five minutes before turning off. At higher speeds, the rear window demister may stay on continuously. For vehicles with heated outside rearview mirrors, they turn on with the rear window demister and help to clear mist or frost from the surface of the mirror. See *Heated Mirrors on page 1-18*.

Notice: Using a razor blade or sharp object to clear the inside rear window can damage the rear window aerial and/or the rear window demister. Repairs would not be covered by the vehicle warranty. Do not clear the inside rear window with sharp objects.

Sensors

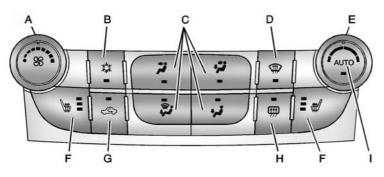
The solar sensor located on top of the instrument panel near the windscreen monitors the solar heat.

The climate control system uses the sensor information to adjust the temperature, fan speed, recirculation, and air delivery mode for best comfort.

If the sensor is covered, the automatic climate control system may not work properly.

Automatic Climate Control System

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



- A. Fan Control
- B. Air Conditioning
- C. Air Delivery Modes
- D. Defrost
- E. Temperature Control
- F. Heated Seats
- G. Recirculation

- H. Rear Demister
- I. AUTO (Automatic Operation)

Automatic Operation

The system automatically controls the fan speed, air delivery, air conditioning, and recirculation in order to heat or cool the vehicle to the desired temperature. When the indicator light is on, the system is in full automatic operation. If the air delivery mode or fan setting is manually adjusted, the auto indicator turns off and displays will show the selected settings.

To place the system in automatic mode:

- 1. Press AUTO.
- 2. Set the temperature. Allow the system time to stabilise. Then adjust the temperature as needed for best comfort.

Manual Operation

Temperature Control: Turn the knob clockwise or anticlockwise to increase or decrease the driver or passenger temperature setting.

Fan Control: Turn the knob clockwise or anticlockwise to increase or decrease the fan speed.

Press AUTO to return to automatic operation.

Air Delivery Modes: Press $\vec{*}, \vec{*}, \vec{*$

Changing the mode cancels the automatic operation and the system goes into manual mode. Press AUTO to return to automatic operation.

Went): Air is directed to the instrument panel outlets.

W (**Bi-Level**): Air is directed to the instrument panel outlets and the floor outlets.

' (Floor): Air is directed to the floor outlets.

(Demist): Air is directed to the windscreen and floor outlets to clear the windows of mist or moisture.

(Defrost): Press to clear the windscreen of mist or frost more quickly. Air is directed to the windshield and side window outlets.

For best results, clear all snow and ice from the windscreen before defrosting.

☆ (Air Conditioning): Press to turn the air conditioning on or off. If the fan is turned off or the outside temperature falls below freezing, the air conditioner will not run and the indicator light turns off.

Press AUTO to return to automatic operation and the air conditioner runs as needed. When the indicator light is on, the air conditioner runs automatically to cool the air inside the vehicle or to dry the air needed to demist the windscreen faster.

 \checkmark (**Recirculation**): Press to turn on recirculation. An indicator light comes on. Air is recirculated to quickly cool the inside of the vehicle or prevent outside air and odours from entering.

Auto Defog: The climate control system may have a sensor to automatically detect high humidity inside the vehicle. When high humidity is detected, the climate control system may adjust to outside air supply and turn on the air conditioner. The fan speed may slightly increase to help prevent misting. If the climate control system does not detect possible window misting, it returns to normal operation. To turn Auto Defog off or on, see "Climate and Air Quality" under Vehicle Personalisation on page 4-43

I ♥ (Heated Seats, If Equipped): Press to turn the heated seats on or off. See Heated Front Seats on page 2-9.

Rear Window Demister

(the ar Window Demister): Press to turn the rear window demister on or off.

The rear window demister turns off automatically after about 10 minutes. If turned on again, it runs for about five minutes before turning off. At higher speeds, the rear window demister may stay on continuously. For vehicles with heated outside rearview mirrors, they turn on with the rear window demister and help to clear mist or frost from the surface of the mirror. See *Heated Mirrors on page 1-18*.

Notice: Using a razor blade or sharp object to clear the inside rear window can damage the rear window aerial and/or the rear window demister. Repairs would not be covered by the vehicle warranty. Do not clear the inside rear window with sharp objects.

Sensors

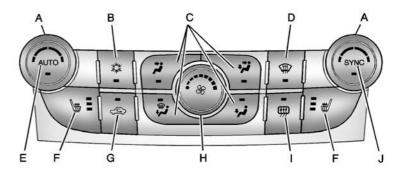
The solar sensor located on top of the instrument panel near the windscreen monitors the solar heat.

The climate control system uses the sensor information to adjust the temperature, fan speed, recirculation, and air delivery mode for best comfort.

If the sensor is covered, the automatic climate control system may not work properly.

Dual Automatic Climate Control System

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



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

- H. Fan Control
- I. Rear Demister
- J. SYNC

Automatic Operation

The system automatically controls the fan speed, air delivery, air conditioning, and recirculation in order to heat or cool the vehicle to the desired temperature.

7-6 Climate Controls

When the indicator light is on, the system is in full automatic operation. If the air delivery mode or fan setting is manually adjusted, the auto indicator turns off and displays will show the selected settings.

To place the system in automatic mode:

- 1. Press AUTO.
- 2. Set the temperature. Allow the system time to stabilise. Then adjust the temperature as needed for best comfort.

Manual Operation

Driver and Passenger Temperature Control: The temperature can be adjusted separately for the driver and passenger.

Turn the knob clockwise or anticlockwise to increase or decrease the driver or passenger temperature setting. **SYNC:** Press to link all climate zone settings to the driver settings. The SYNC indicator light will turn off. When the passenger settings are adjusted, the SYNC indicator light is on.

Fan Control: Turn the knob clockwise or anticlockwise to increase or decrease the fan speed.

Press AUTO to return to automatic operation.

Air Delivery Modes: Press $\vec{\nu}, \vec{\nu}, \vec{\nu$

Changing the mode cancels the automatic operation and the system goes into manual mode. Press AUTO to return to automatic operation.

instrument (Vent): Air is directed to the instrument panel outlets.

W (Bi-Level): Air is directed to the instrument panel outlets and the floor outlets.

iv (Floor): Air is directed to the floor outlets.

(Demist): Air is directed to the windscreen and floor outlets to clear the windows of mist or moisture.

(**Defrost**): Press to clear the windscreen of mist or frost more quickly. Air is directed to the windshield and side window outlets.

For best results, clear all snow and ice from the windscreen before defrosting.

☆ (Air Conditioning): Press to turn the air conditioning on or off. If the fan is turned off or the outside temperature falls below freezing, the air conditioner will not run and the indicator light turns off.

Press AUTO to return to automatic operation and the air conditioner runs as needed. When the indicator light is on, the air conditioner runs automatically to cool the air inside the vehicle or to dry the air needed to demist the windscreen faster. (Recirculation): Press to turn on recirculation. An indicator light comes on. Air is recirculated to quickly cool the inside of the vehicle or prevent outside air and odours from entering.

Auto Defog: The climate control system may have a sensor to automatically detect high humidity inside the vehicle. When high humidity is detected, the climate control system may adjust to outside air supply and turn on the air conditioner. The fan speed may slightly increase to help prevent misting. If the climate control system does not detect possible window misting, it returns to normal operation. To turn Auto Defog off or on, see "Climate and Air Quality" under Vehicle Personalisation on page 4-43

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Notice: Using a razor blade or sharp object to clear the inside rear window can damage the rear window aerial and/or the rear window demister. Repairs would not be covered by the vehicle warranty. Do not clear the inside rear window with sharp objects.

Remote Start Climate Control

Operation: For vehicles with the remote start feature, the climate control system may run when the vehicle is started remotely. The system will default to a heating or cooling mode depending on the outside temperature and then go back to the previous settings. The rear window demister turns on if it is cold outside.

Sensors

The solar sensor located on top of the instrument panel near the windscreen monitors the solar heat.

The climate control system uses the sensor information to adjust the temperature, fan speed, recirculation, and air delivery mode for best comfort.

If the sensor is covered, the automatic climate control system may not work properly.

Air Vents

Centre Air Vents

Use the louvres located on the air vents to change the direction of the airflow.

Move the louvres outward or inward to open or close off the airflow.

Side Air Vents

Use the thumbwheels to change the direction of the airflow.

Move the vertical thumbwheels up or down to open or close off the airflow.

Operation Tips

- Keep all outlets open whenever possible for best system performance.
- Keep the paths under all seats clear of objects to help circulate the air inside the vehicle more effectively.
- Use of non-GM approved bonnet air flow deflectors can adversely affect the performance of the system.

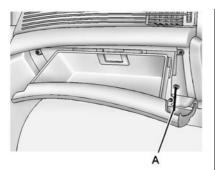
Maintenance

Passenger Compartment Air Filter

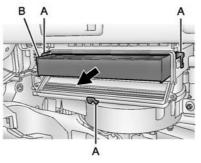
The filter removes dust, pollen, and other airborne irritants from outside air that is pulled into the vehicle.

The filter should be replaced as part of routine scheduled maintenance, see *Scheduled Maintenance on page 10-2.*

- 1. Open the glove box completely.
- Disconnect the glove box door dampener string (A) from the glove box door assembly. Please note: a pen or pencil may be inserted through the end of the dampener string to prevent the string from slipping inside the door assembly.



- Squeeze both sides of the glove box door to open beyond the stops.
- 4. Release the retainer clips (A) holding the service door. Open the service door and remove the old filter (B).



- 5. Install the new air filter.
- 6. Close the service door and retainer clips.
- 7. Reverse the steps to reinstall the glove box.

See your dealer if additional assistance is needed.

Service

This vehicle may have the new environmentally friendly refrigerant R1234yf. This refrigerant has more of a significantly reduced global warming impact than the traditional automotive refrigerant, R-134a. All vehicles have a label underbonnet that identifies the refrigerant used in the vehicle.

The refrigerant system should only be serviced by trained and certified technicians. The air conditioning evaporator should never be repaired or replaced by one from a salvage vehicle. It should only be replaced by a new evaporator to ensure proper and safe operation.

During service, all refrigerants should be reclaimed with proper equipment. Venting refrigerants directly to the atmosphere is harmful to the environment and may also create unsafe conditions based on inhalation, combustion, frostbite, or other health based concerns.

Driving and Operating

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Driving Information

Driving for Better Fuel Economy

Driving habits can affect fuel mileage. Here are some driving tips to get the best fuel economy possible.

- Avoid fast starts and accelerate smoothly.
- Brake gradually and avoid abrupt stops.
- Avoid idling the engine for long periods of time.
- When road and weather conditions are appropriate, use cruise control.
- Always follow posted speed limits or drive more slowly when conditions require.
- Keep vehicle tyres properly inflated.
- Combine several trips into a single trip.

- Replace the vehicle's tyres with the same TPC Spec number moulded into the tyre's sidewall near the size.
- Follow recommended scheduled maintenance.

Distracted Driving

Distraction comes in many forms and can take your focus from the task of driving. Exercise good judgement and do not let other activities divert your attention away from the road. Many local governments have enacted laws regarding driver distraction. Become familiar with the local laws in your area.

To avoid distracted driving, always keep your eyes on the road, hands on the wheel, and mind on the drive.

 Do not use a phone in demanding driving situations. Use a hands-free method to place or receive necessary phone calls.

- Watch the road. Do not read, take notes, or look up information on phones or other electronic devices.
- Designate a front seat passenger to handle potential distractions.
- Become familiar with vehicle features before driving, such as programming favourite radio stations and adjusting climate control and seat settings.
 Program all trip information into any navigation device prior to driving.
- Wait until the vehicle is parked to retrieve items that have fallen to the floor.
- Stop or park the vehicle to tend to children.
- Keep pets in an appropriate carrier or restraint.
- Avoid stressful conversations while driving, whether with a passenger or on a mobile phone.

\land WARNING

Taking your eyes off the road too long or too often could cause a crash resulting in injury or death. Focus your attention on driving.

Refer to the Infotainment section for more information on using that system, including pairing and using a mobile phone.

Defensive Driving

Defensive driving means "always expect the unexpected." The first step in driving defensively is to wear the safety belt. See *Safety Belts on page 2-12*.

 Assume that other road users (pedestrians, bicyclists, and other drivers) are going to be careless and make mistakes. Anticipate what they might do and be ready.

- Allow enough following distance between you and the driver in front of you.
- Focus on the task of driving.

Control of a Vehicle

Braking, steering, and accelerating are important factors in helping to control a vehicle while driving.

Braking

Braking action involves perception time and reaction time. Deciding to push the brake pedal is perception time. Actually doing it is reaction time.

Average driver reaction time is about three-quarters of a second. In that time, a vehicle moving at 100 km/h (60 mph) travels 20 m (66 ft), which could be a lot of distance in an emergency.

8-4 Driving and Operating

Helpful braking tips to keep in mind include:

- Keep enough distance between you and the vehicle in front of you.
- Avoid needless heavy braking.
- Keep pace with traffic.

If the engine ever stops while the vehicle is being driven, brake normally but do not pump the brakes. Doing so could make the pedal harder to push down. If the engine stops, there will be some power assisted braking but the available assistance capacity will be used when the brake is applied. Once the power assisted braking capacity is used up, it can take longer to stop and the brake pedal will be harder to push.

Steering

Electric Power Steering

If your vehicle has electric power steering, it does not have power steering fluid. Regular maintenance is not required.

If power assisted steering is lost due to a system malfunction, the vehicle can be steered, but may require increased effort. See your dealer if there is a problem.

If the steering wheel is turned until it reaches the end of its travel, and is held in that position for an extended period of time, power steering assist may be reduced.

Normal use of the power steering assist should return when the system cools down.

See specific vehicle steering messages under *Vehicle Messages* (*Uplevel*) on page 4-35 or *Vehicle Messages* (*Base Level*) on page 4-34.

Hydraulic Power Steering

If the vehicle has the hydraulic power steering, it may require maintenance. See *Power Steering Fluid* (3.0L V6 Engine) on page 9-23 or *Power Steering Fluid* (2.0L L4 and 2.4L L4 Engines) on page 9-23.

If power assisted steering is lost due to a system malfunction, the vehicle can be steered, but may require increased effort.

See your dealer if there is a problem.

Bend Tips

- Take bends at a reasonable speed.
- Reduce speed before entering a bend.
- Maintain a reasonable steady speed through the bend.
- Wait until the vehicle is out of the bend before accelerating gently into the straight.

Driving and Operating 8-5

Steering in Emergencies

- There are some situations when steering around a problem may be more effective than braking.
- Holding both sides of the steering wheel allows you to turn 180 degrees without removing a hand.
- Anti-lock Brake System (ABS) allows steering while braking.

Off-Road Recovery



The vehicle's right wheels can drop off the edge of a road onto the shoulder while driving. Follow these tips:

- Ease off the accelerator and then, if there is nothing in the way, steer the vehicle so that it straddles the edge of the pavement.
- 2. Turn the steering wheel about one-eighth of a turn, until the right front tyre contacts the pavement edge.

3. Then turn the steering wheel to go straight down the roadway.

Loss of Control

Skidding

There are three types of skids that correspond to the vehicle's three control systems:

- Braking Skid wheels are not rolling.
- Steering or Cornering Skid too much speed or steering in a bend causes tyres to slip and lose cornering force.
- Acceleration Skid too much throttle causes the driving wheels to spin.

Defensive drivers avoid most skids by taking reasonable care suited to existing conditions, and by not overdriving those conditions. But skids are always possible.

8-6 Driving and Operating

If the vehicle starts to slide, follow these suggestions:

- Ease your foot off the accelerator pedal and quickly steer the way you want the vehicle to go. The vehicle may straighten out. Be ready for a second skid if it occurs.
- Slow down and adjust your driving according to weather conditions. Stopping distance can be longer and vehicle control can be affected when traction is reduced by water, snow, ice, gravel, or other material on the road. Learn to recognise warning clues - such as enough water, ice, or packed snow on the road to make a mirrored surface - and slow down when you have any doubt.
- Try to avoid sudden steering, acceleration, or braking, including reducing vehicle speed by shifting to a lower gear. Any sudden changes could cause the tyres to slide.

Remember: Antilock brakes help avoid only the braking skid.

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.

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.

(Continued)

WARNING (Continued)

Flowing or rushing water creates strong forces. Driving through flowing water could cause the vehicle to be carried away. If this happens, you and other vehicle occupants could drown. Do not ignore police warnings and be very cautious about trying to drive through flowing water.

Aquaplaning

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

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

Other Rainy Weather Tips

Besides slowing down, other wet weather driving tips include:

- Allow extra following distance.
- Overtake with caution.
- Keep windscreen wiping equipment in good condition.
- Keep the windscreen washer fluid reservoir filled.
- Have good tyres with proper tread depth. See *Tyres on page 9-44*.
- Turn off cruise control.

Highway Hypnosis

Always be alert and pay attention to your surroundings while driving. If you become tired or sleepy, find a safe place to park the vehicle and rest.

Other driving tips include:

- Keep the vehicle well ventilated.
- Keep the interior temperature cool.

- Keep your eyes moving scan the road ahead and to the sides.
- Check the rearview mirror and vehicle instruments often.

Hill and Mountain Roads

Driving on steep hills or through mountains is different than driving on flat or rolling terrain. Tips for driving in these conditions include:

- Keep the vehicle serviced and in good shape.
- Check all fluid levels and brakes, tyres, cooling system, and transmission.
- Shift to a lower gear when going down steep or long hills.

If you do not shift down, the brakes could get so hot that they would not work well. You would then have poor braking or even

(Continued)

WARNING (Continued)

none going down a hill. You could crash. Shift down to let the engine assist the brakes on a steep downhill slope.

Coasting downhill in N (Neutral) or with the ignition off is dangerous. The brakes will have to do all the work of slowing down and they could get so hot that they would not work well. You would then have poor braking or even none going down a hill. You could crash. Always have the engine running and the vehicle in gear when going downhill.

8-8 Driving and Operating

- Stay in your own lane. Do not swing wide or cut across the centre of the road. Drive at speeds that let you stay in your own lane.
- Be alert on top of hills; something could be in your lane (stalled car, accident).
- Pay attention to special road signs (falling rocks area, winding roads, long grades, overtaking or no-overtaking zones) and take appropriate action.

Winter Driving

Driving on Snow or Ice

Drive carefully when there is snow or ice between the tyres and the road, creating less traction or grip. Wet ice can occur at about 0°C (32°F) when freezing rain begins to fall, resulting in even less traction. Avoid driving on wet ice or in freezing rain until roads can be treated with salt or sand. Drive with caution, whatever the condition. Accelerate gently so traction is not lost. Accelerating too quickly causes the wheels to spin and makes the surface under the tyres slick, so there is even less traction.

Try not to break the fragile traction. If you accelerate too fast, the drive wheels will spin and polish the surface under the tyres even more.

The Antilock Brake System (ABS) on page 8-31 improves vehicle stability during hard stops on slippery roads, but apply the brakes sooner than when on dry pavement.

Allow greater following distance on any slippery road and watch for slippery spots. Icy patches can occur on otherwise clear roads in shaded areas. The surface of a curve or an overpass can remain icy when the surrounding roads are clear. Avoid sudden steering manoeuvres and braking while on ice. Turn off cruise control on slippery surfaces.

Blizzard Conditions

Being stuck in snow can be a serious situation. Stay with the vehicle unless there is help nearby. To get help and keep everyone in the vehicle safe:

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

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

(Continued)

WARNING (Continued)

If the vehicle is stuck in the snow:

- Clear away snow from around the base of your vehicle, especially any that is blocking the exhaust pipe.
- Check again from time to time to be sure snow does not collect there.
- Open a window about 5 cm (2 in) on the side of the vehicle that is away from the wind to bring in fresh air.
- Fully open the air outlets on or under the instrument panel.
- Adjust the climate control system to a setting that circulates the air inside the vehicle and set the fan speed to the highest setting. See "Climate Control Systems" in the Index.

(Continued)

WARNING (Continued)

For more information about carbon monoxide, see *Engine Exhaust on page 8-25*.

Run the engine for short periods only as needed to keep warm, but be careful.

To save fuel, run the engine for only short periods as needed to warm the vehicle and then shut the engine off and close the window most of the way to save heat. Repeat this until help arrives but only when you feel really uncomfortable from the cold. Moving about to keep warm also helps.

If it takes some time for help to arrive, now and then when you run the engine, push the accelerator pedal slightly so the engine runs faster than the idle speed. This keeps the battery charged to restart the vehicle and to signal for help with the headlamps. Do this as little as possible to save fuel.

If the Vehicle Is Stuck

Slowly and cautiously spin the wheels to free the vehicle when stuck in sand, mud, ice, or snow.

If the vehicle has a traction system, it can often help to free a stuck vehicle. Refer to the vehicle's traction system in the Index. If stuck too severely for the traction system to free the vehicle, turn the traction system off and use the rocking method.

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

See Tyre Chains on page 9-55.

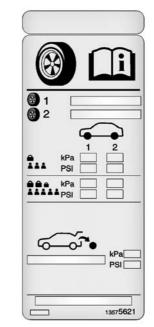
Rocking the Vehicle to Get It Out

Turn the steering wheel left and right to clear the area around the front wheels. Turn off any traction or stability system. Shift back and forth between R (Reverse) and a forward gear, spinning the wheels as little as possible. To prevent transmission wear, wait until the wheels stop spinning before shifting gears. Release the accelerator pedal while shifting, and press lightly on the accelerator pedal when the transmission is in gear. Slowly spinning the wheels in the forward and reverse directions causes a rocking motion that could free the vehicle. If that does not get the vehicle out after a few tries, it might need to be towed out. See Towing the Vehicle on page 9-67.

Vehicle Load Limits

It is very important to know how much weight the vehicle can carry. This weight is called the vehicle capacity weight and includes the weight of all occupants, cargo and all non-factory-installed options. The certification label shows how much weight it was designed to carry.

Tyre and Loading Information Label



Label Example

A vehicle-specific Tyre and Loading Information label is attached to the vehicle's centre pillar (B-pillar). The Tyre and Loading Information label shows the size of the original tyres, compact spare tyre and the recommended cold tyre inflation pressures. For more information on tyres and inflation, see *Tyres on page 9-44* and *Tyre Pressure on page 9-45*.

There is also important loading information on the Certification label. It tells the maximum laden mass of the vehicle, maximum laden mass when towing (when required), and the maximum permitted mass of each axle. See "Certification Label" later in this section.

Steps for Determining Correct Load Limit

- 1. Determine the combined weight of the driver and passengers that will be riding in your vehicle.
- 2. Subtract the combined weight of the driver and passengers from XXX kg or XXX lbs.
- The resulting figure equals the available amount of cargo and luggage load capacity. For example, if the "XXX" amount equals 1400 lbs and there will be five 150 lb passengers in your vehicle, the amount of available cargo and luggage load capacity is 650 lbs (1400 - 750 (5 x 150) = 650 lbs).

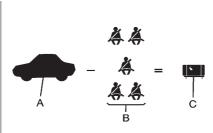
- Determine the combined weight of luggage and cargo being loaded on the vehicle. That weight may not safely exceed the available cargo and luggage load capacity calculated in Step 4.
- If your vehicle will be towing a trailer, the load from your trailer will be transferred to your vehicle. Consult this manual to determine how this reduces the available cargo and luggage load capacity of your vehicle.

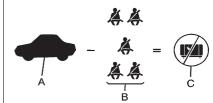
See *Trailer Towing on page 8-49* for important information on towing a trailer, towing safety rules, and trailering tips.



Example 1

- A. Vehicle Capacity Weight for Example 1 = 453 kg (1,000 lbs).
- B. Subtract Occupant Weight
 @ 68 kg (150 lbs) × 2 = 136 kg (300 lbs).
- C. Available Occupant and Cargo Weight = 317 kg (700 lbs).





Example 2

- A. Vehicle Capacity Weight for Example 2 = 453 kg (1,000 lbs).
- B. Subtract Occupant Weight
 @ 68 kg (150 lbs) × 5 = 340 kg (750 lbs).
- C. Available Cargo Weight = 113 kg (250 lbs).

Example 3

- A. Vehicle Capacity Weight for Example 3 = 453 kg (1,000 lbs).
- B. Subtract Occupant Weight
 @ 91 kg (200 lbs) × 5 = 453 kg (1,000 lbs).
- C. Available Cargo Weight = 0 kg (0 lbs).

Refer to the vehicle's Tyre and Loading Information label for specific information about the vehicle's capacity weight and seating positions. The combined weight of the driver, passengers, and cargo should never exceed the vehicle's capacity weight.

Certification Label

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1-	k
2-	k
	Π
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A vehicle-specific Certification label is attached to the vehicle's centre pillar (B-pillar). The label shows the maximum laden mass of the vehicle, maximum laden mass when towing (when required), and the maximum permitted mass of each axle. This is the Gross Vehicle Weight Rating (GVWR) and includes the weight of the vehicle, all occupants, fuel, and cargo. Never exceed the GVWR for the vehicle or the Gross Axle Weight Rating (GAWR) for either the front or rear axle.

Spread out heavy loads equally on both sides of the vehicle. See "Steps for Determining Correct Load Limit" earlier in this section.

If you put things inside the vehicle - like suitcases, tools, packages, or anything else they will go as fast as the vehicle goes. If you have to stop or turn quickly, or if there is a crash, they will keep going.

Always make sure that the load in the vehicle is securely stowed. Otherwise objects can be thrown around inside the vehicle and cause personal injury or damage to the load or car.

Starting and Operating

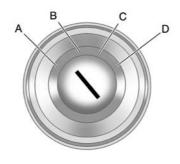
New Vehicle Run-In

Notice: The vehicle does not need an elaborate break-in. But it will perform better in the long run if you follow these guidelines:

- Do not drive at any one constant speed, fast or slow, for the first 805 km (500 mi). Do not make full-throttle starts. Avoid downshifting to brake or slow the vehicle.
- Avoid making hard stops for the first 322 km (200 mi) or so. During this time the new brake linings are not yet broken in. Hard stops with new linings can mean premature wear and earlier replacement. Follow this breaking-in guideline every time you get new brake linings.

Following break-in, engine speed and load can be gradually increased.

Ignition Positions (Key Access)



The ignition switch has four different positions.

Notice: Using a tool to force the key to turn in the ignition could cause damage to the switch or break the key. Use the correct key, make sure it is all the way in,

and turn it only with your hand. If the key cannot be turned by hand, see your dealer.

The key must be fully extended to start the vehicle.

To shift out of P (Park), turn the ignition to ON/RUN and apply the brake pedal.

A (STOPPING THE ENGINE/ LOCK/OFF): When the vehicle is stopped, turn the ignition switch to LOCK/OFF to turn the engine off. Retained Accessory Power (RAP) will remain active. See *Retained Accessory Power (RAP) on page 8-21* for more information.

This is the only position from which the key can be removed. This locks the steering wheel, ignition and automatic transmission.

Do not turn the engine off when the vehicle is moving. This will cause a loss of power assist in the brake and steering systems and disable the airbags.

If the vehicle must be shut off in an emergency:

- Brake using a firm and steady pressure. Do not pump the brakes repeatedly. This may deplete the power assisted braking capacity, requiring increased brake pedal force.
- Shift the vehicle to N (Neutral). This can be done while the vehicle is moving. After shifting to N (Neutral), firmly apply the brakes and steer the vehicle to a safe location.
- Come to a complete stop, shift to P (Park), and turn the ignition to LOCK/OFF. On vehicles with an automatic transmission, the shift lever must be in P (Park) to turn the ignition switch to the LOCK/OFF position.

4. Apply the parking brake. See *Electric Parking Brake on* page 8-32.

Turning off the vehicle while moving may cause loss of power assistance in the brake and steering systems and disable the airbags. While driving, only shut the vehicle off in an emergency.

If the vehicle cannot be pulled over, and must be shut off while driving, turn the ignition to ACC/ ACCESSORY.

The ignition switch can bind in the LOCK/OFF position with the wheels turned off centre. If this happens, move the steering wheel from right to left while turning the key to ACC/ACCESSORY. If this does not work, then the vehicle needs service.

B (ACC/ACCESSORY): This position provides power to some of the electrical accessories. It unlocks the ignition. To move the key from ACC/ACCESSORY to LOCK/OFF, the gear lever must be in P (Park).

C (ON/RUN): The ignition switch stays in this position when the engine is running. This position can be used to operate the electrical accessories, including the ventilation fan and 12-volt power outlet, as well as to display some warning and indicator lights. The transmission is also unlocked in this position. This position can also be used for service and diagnostics, and to verify the proper operation of the malfunction indicator lamp as may be required for emission inspection purposes.

The battery could be drained if the key is left in the ACC/ACCESSORY or ON/RUN position with the engine off. The vehicle might not restart if the battery is allowed to drain for an extended period of time.

D (START): This position starts the engine. When the engine starts, release the key. The ignition switch will return to ON/RUN for normal driving.

A warning tone sounds when the driver door is opened when the ignition is still in ACC/ACCESSORY and the key is in the ignition.

Key Lock Release



Vehicles with an automatic transmission are equipped with an electronic key lock release system. This system is to prevent ignition key removal unless the gear lever is in P (Park).

The key lock release will not work if the battery is charged less than 9-volts, or uncharged. Try charging or jump starting the battery. See *Jump Starting on page* 9-64 If charging or jump starting the battery does not work, there is a manual key lock release. Locate the hole below the ignition lock. Insert a tool or key into the opening. Locate the lever, and press it toward the driver while removing the key from the ignition.

Ignition Positions (Keyless Access)



The vehicle has an electronic keyless ignition with pushbutton start.

Pressing the button cycles it through three modes, ACC/ACCESSORY, ON/RUN/START, and Stopping the Engine/OFF. The transmitter must be in the vehicle for the system to operate. If the pushbutton start is not working, the vehicle may be near a strong radio aerial signal causing interference to the keyless access system. See *Remote Keyless Entry* (*RKE*) System Operation on page 1-3 for more information.

To shift out of P (Park), the vehicle must be in ACC/ACCESSORY or ON/RUN and the brake pedal must be applied.

Stopping the Engine/LOCK/OFF (No LED Lights): When the vehicle is stopped, press the ENGINE START/STOP button once to turn the engine off.

If the vehicle is in P (Park), the ignition will turn off, and Retained Accessory Power (RAP) will remain active. See *Retained Accessory Power (RAP) on page 8-21* for more information.

If the vehicle is not in P (Park), the ignition will return to ACC/ ACCESSORY and display the message SHIFT TO PARK in the Driver Information Centre (DIC). See *Transmission Messages on page 4-42* for more information. When the vehicle is shifted into P (Park), the ignition system will switch to OFF.

The vehicle has an electric steering column lock. The lock is activated when the ignition is switched to off and either front door is opened. A sound may be heard as the lock actuates or releases. The steering column lock may not release with the wheels turned off centre. If this happens, the vehicle may not start, and a DIC message will be displayed. Turn the steering wheel to the left or right while attempting to start the vehicle. See *Starting the Vehicle Messages on page 4-41*

Do not turn the engine off when the vehicle is moving. This will cause a loss of power assist in the brake and steering systems and disable the airbags.

If the vehicle must be shut off in an emergency:

- Brake using a firm and steady pressure. Do not pump the brakes repeatedly. This may deplete the power assisted braking capacity, requiring increased brake pedal force.
- Shift the vehicle to N (Neutral). This can be done while the vehicle is moving. After shifting to N (Neutral), firmly apply the brakes and steer the vehicle to a safe location.
- Come to a complete stop, shift to P (Park), and turn the ignition to LOCK/OFF. On vehicles with an automatic transmission, the shift lever must be in P (Park) to turn the ignition switch to the LOCK/OFF position.
- 4. Apply the parking brake. See *Electric Parking Brake on* page 8-32.

\land WARNING

Turning off the vehicle while moving may cause loss of power assistance in the brake and steering systems and disable the airbags. While driving, only shut the vehicle off in an emergency.

If the vehicle cannot be pulled over, and must be shut off while driving, switch the ignition to ACC/ ACCESSORY.

ACC/ACCESSORY (Amber LED

Light): This mode allows you to use some electrical accessories when the engine is off.

With the ignition off, pressing the button one time without the brake pedal applied will place the ignition system in ACC/ACCESSORY.

The ignition will switch from ACC/ ACCESSORY to OFF after five minutes to prevent battery run down.

ON/RUN/START (Green LED

Light): This mode is for driving and starting. With the ignition off, and the brake pedal applied, pressing the button once will place the ignition system in ON/RUN/START. Once engine cranking begins, release the button. Engine cranking will continue until the engine starts. See *Starting the Engine on page 8-18* for more information. The ignition will then remain in ON/RUN.

Service Only Mode

This power mode is available for service and diagnostics, and to verify the proper operation of the malfunction indicator lamp as may be required for emission inspection purposes. With the vehicle off, and the brake pedal not applied, pressing and holding the button for more than five seconds will place the vehicle in Service Only Mode. The instruments and audio systems will operate as they do in ON/RUN, but the vehicle will not be able to be driven. The engine will not start in Service Only Mode. Push the button again to turn the vehicle off.

Starting the Engine

Place the transmission in the proper gear.

Automatic Transmission

Move the shift lever to P (Park) or N (Neutral). The engine will not start in any other position. To restart the vehicle when it is already moving, use N (Neutral) only.

Notice: Do not try to shift to P (Park) if the vehicle is moving. If you do, you could damage the transmission. Shift to P (Park) only when the vehicle is stopped.

Manual Gearbox

The shift lever should be in Neutral and the parking brake engaged. Hold the clutch pedal down to the floor and start the engine. The vehicle will not start if the clutch pedal is not all the way down.

Petrol Engine Starting Procedure

 With your foot off the accelerator pedal, turn the ignition to START. When the engine starts, let go of the key. The idle speed will slow down as the engine warms. Do not race the engine immediately after starting it. Operate the engine and transmission gently to allow the oil to warm up and lubricate all moving parts.

The vehicle has a Computer-Controlled Cranking System. This feature assists in starting the engine and protects components. If the ignition key is turned to the START position. and then released when the engine begins cranking, the engine will continue cranking for a few seconds or until the vehicle starts. If the engine does not start and the key is held in START, cranking will be stopped after 15 seconds to prevent cranking motor damage. To prevent gear damage. this system also prevents cranking if

the engine is already running. Engine cranking can be stopped by turning the ignition switch to the ACC/ACCESSORY or LOCK/OFF position.

Notice: Cranking the engine for long periods of time, by returning the key to the START position immediately after cranking has ended, can overheat and damage the cranking motor, and drain the battery. Wait at least 15 seconds between each try, to let the cranking motor cool down.

 If the engine does not start after five to 10 seconds, especially in very cold weather (below -18°C or 0°F), it could be flooded with too much petrol. Try pushing the accelerator pedal all the way to the floor and holding it there as you hold the key in START for up to a maximum of 15 seconds. Wait at least 15 seconds between each try, to allow the cranking motor to cool down. When the engine starts, let go of the key and accelerator. If the vehicle starts briefly but then stops again, repeat these steps. This clears the extra petrol from the engine. Do not race the engine immediately after starting it. Operate the engine and transmission gently until the oil warms up and lubricates all moving parts.

Notice: The engine is designed to work with the electronics in the vehicle. If you add electrical parts or accessories, you could change the way the engine operates. Before adding electrical equipment, check with your dealer. If you do not, the engine might not perform properly. Any resulting damage would not be covered by the vehicle warranty.

Diesel Engine Starting Procedure

The diesel engine starts differently than a petrol engine. The vehicle will only start in the P (Park) or the N (Neutral) position.

Notice: Do not try to shift to P (Park) if the vehicle is moving. If you do, you could damage the transmission. Shift to P (Park) only when the vehicle is stopped.

1. Turn the ignition key to ON/RUN.

Observe the wait-to-start light. See *Wait-to-Start Light on page 4-26.* This light may not come on if the engine is warm.

2. As soon as the wait-to-start light goes off, immediately turn the ignition key to START. When the engine starts, let go of the key.

The engine has a fast warm-up glow plug system. The wait-to-start light will illuminate for a much shorter time than most diesel engines, due to the rapid heating of the glow plug system. *Notice:* If the wait-to-start light stays on after starting the vehicle, the vehicle may not run properly. Have the vehicle serviced right away.

3. If the engine does not start after 15 seconds of cranking, turn the ignition switch to LOCK/OFF. Wait one minute for the starter to cool, then try the same steps again.

If you are trying to start the engine after you have run out of fuel, follow the steps in *Running Out of Fuel on page 8-43.*

When the engine is cold, let it run for a few minutes before you move the vehicle. This lets oil pressure build up. The engine will sound louder when it's cold.

Notice: If you are not in an idling vehicle and the engine overheats, you would not be there to see the overheated engine indication. This could damage the vehicle. Do not let the engine run when you are not in the vehicle.

Cold Weather Starting (Diesel Engine)

The following tips will help with cold weather starting.

Use the recommended engine oil when the outside temperature drops below freezing. See *Engine Oil on page 9-11*. When the outside temperature drops below -18°C (0°F), use of the engine coolant heater is recommended.

See Fuel for Diesel Engines on page 8-42 for information on what fuel to use in cold weather.

If the Diesel Engine Will Not Start

If you have run out of fuel, see *Running Out of Fuel on page 8-43*.

If the vehicle is not out of fuel, and the engine will not start, do this:

Turn the ignition key to ON/RUN. Immediately after the wait-to-start light goes off, turn the ignition key to START. If the light does not go off, wait a few seconds, then try starting the engine again. See your dealer as soon as you can for a starting system check.

If the light comes on and then goes off and you know the batteries are charged, but the engine still will not start, the vehicle needs service.

If the light does not come on when the engine is cold, the vehicle needs service.

If the batteries do not have enough charge to start the engine, see *Battery on page 9-27.*

Be sure you have the right oil for the engine, and that you have changed the oil at the proper times. If you use the wrong oil, the engine may be harder to start. Be sure you are using the proper fuel for existing weather conditions. See Fuel for Diesel Engines on page 8-42.

If the engine starts, runs a short time, then stops, the vehicle needs service.

Do not use petrol or starting aids, such as ether, in the air intake. They could damage the engine, which may not be covered by the warranty. There could also be a fire, which could cause serious personal injury.

Retained Accessory Power (RAP)

These vehicle accessories can be used for up to 10 minutes after the engine is turned off:

- Audio System
- Power Windows
- Sunroof (if equipped)

These features continue to work up to 10 minutes after the ignition is turned to LOCK/OFF.

The power windows and sunroof will work until any door is opened.

The radio continues to work until the driver door is opened.

All these features operate when the key is in ON/RUN or ACC/ ACCESSORY.

Shifting Into Park

It can be dangerous to get out of the vehicle if the shift lever is not fully in P (Park) with the parking brake firmly set. The vehicle can roll. If you have left the engine running, the vehicle can move suddenly. You or others could be injured. To be sure the vehicle will not move, even when you are on fairly level ground, use the steps that follow.

- Hold the brake pedal down and apply the parking brake. See *Electric Parking Brake on* page 8-32 for more information.
- Move the gear lever into
 P (Park) by holding in the button
 on the gear lever and pushing
 the gear lever all the way toward
 the front of the vehicle.

- 3. Turn the ignition key to LOCK/OFF.
- Remove the key and take it with you. If you can leave the vehicle with the ignition key in your hand, the vehicle is in P (Park).

Leaving the Vehicle with the Engine Running

\land WARNING

It can be dangerous to leave the vehicle with the engine running. The vehicle could move suddenly if the shift lever is not fully in P (Park) with the parking brake firmly set. And, if you leave the vehicle with the engine running, it could overheat and even catch fire. You or others could be injured. Do not leave the vehicle with the engine running.

If you have to leave the vehicle with the engine running, be sure the vehicle is in P (Park) and the parking brake is firmly applied before you leave it. After you have moved the gear lever into P (Park), hold the regular brake pedal down. Then, see if you can move the gear lever away from P (Park) without first pushing the button.

If you can, it means that the gear lever was not fully locked in P (Park).

Torque Lock

Torque lock is when the weight of the vehicle puts too much force on the parking pawl in the transmission. This happens when parking on a hill and shifting the transmission into P (Park) is not done properly, then it is difficult to shift out of P (Park). To prevent torque lock, apply the parking brake and then shift into P (Park). To find out how, see "Shifting Into Park" listed previously. If torque lock does occur, your vehicle may need to be pushed uphill by another vehicle to relieve the parking pawl pressure, so you can shift out of P (Park).

Shifting out of Park

This vehicle is equipped with an electronic shift lock release system. The shift lock release is designed to:

- Prevent ignition key removal unless the shift lever is in P (Park) with the shift lever button fully released.
- Prevent movement of the shift lever out of P (Park), unless the ignition is in ON/RUN and the brake pedal is applied.

The shift lock release is always functional except in the case of an uncharged or low voltage (less than 9-volt) battery. If the vehicle has an uncharged battery or a battery with low voltage, try charging or jump starting the battery. See *Jump Starting on page 9-64*.

To shift out of P (Park):

- 1. Apply the brake pedal.
- 2. Place the ignition in ON/RUN.
- 3. Press the gear lever button.
- 4. Move the shift lever to the desired position.

If still unable to shift out of P (Park):

- 1. Fully release the gear lever button.
- 2. Hold the brake pedal down and press the gear lever button again.
- 3. Move the shift lever to the desired position.

If you are still having a problem shifting, see your dealer.

Shift Lock Manual Release

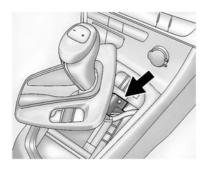
If jump starting the vehicle did not work, the shift lock manual release must be used.

To access the shift lock manual release:

1. Apply the parking brake.



2. Release the gear lever trim from the centre console at the rear, then fold upward and rotate to the left.



- Insert a tool into the opening as far as it will go and move the gear lever out of P (Park).
 If P (Park) is selected again, the gear lever will be locked again.
 Have the cause of the problem fixed by your dealer.
- 4. Install the gear lever trim on the console.

Parking

If the vehicle has a manual gearbox, before getting out of the vehicle, move the gear lever into R (Reverse) if parking on a downhill slope. On a level surface or an uphill slope, use 1 (First) gear. Firmly apply the parking brake. Turn the wheels toward the curb for a downhill slope, or away from the curb for an uphill slope. Once the gear lever has been placed into gear with the clutch pedal pressed in, turn the ignition key to LOCK/ OFF, remove the key, and release the clutch.

Parking over Things That Burn

Things that can burn could touch hot exhaust parts under the vehicle and ignite. Do not park over papers, leaves, dry grass, or other things that can burn.

Engine Exhaust

Engine exhaust contains carbon monoxide (CO) which cannot be seen or smelled. Exposure to CO can cause unconsciousness and even death.

Exhaust may enter the vehicle if:

- The vehicle idles in areas with poor ventilation (parking garages, tunnels, deep snow that may block underbody airflow or exhaust pipes).
- The exhaust smells or sounds strange or different.
- The exhaust system leaks due to corrosion or damage.

(Continued)

WARNING (Continued)

- The vehicle exhaust system has been modified, damaged or improperly repaired.
- There are holes or openings in the vehicle body from damage or aftermarket modifications that are not completely sealed.

If unusual fumes are detected or if it is suspected that exhaust is coming into the vehicle:

- Drive it only with the windows completely down.
- Have the vehicle repaired immediately.

Never park the vehicle with the engine running in an enclosed area such as a garage or a building that has no fresh air ventilation.

Diesel Particulate Filter

The diesel particle filter system filters harmful soot particles out of the exhaust gases. The system includes a self-cleaning function that runs automatically during driving without any notification. The filter is cleaned by periodically burning off the soot particles at high temperature. This process takes place automatically under set driving conditions and may take up to 25 minutes. Typically it needs between 7 and 12 minutes. Fuel consumption may be higher during this period. The emission of smells and smoke during this process is normal.

Under certain driving conditions, e.g. short distances, the system cannot clean itself automatically. If the cleaning of the filter is required and if previous driving conditions did not enable automatic cleaning, it will be indicated by the indicator light ==3. A warning message appears in the DIC. See *Diesel* Particulate Filter Messages on page 4-38. = ^{II}∃³ illuminates when diesel particle filter is full. Start cleaning process as soon as possible. = ^{II}I³ flashes when diesel particle filter has reached the maximum filling level. Start cleaning process immediately to avoid damage to the engine.

Cleaning Process

To activate cleaning process, continue driving, keep engine speed above 2000 revolutions per minute. Shift down if necessary. Diesel particle filter cleaning is then started. If illuminates

additionally or a warning message appears in the DIC, cleaning is not possible. Seek the assistance of a workshop.

Notice: If the cleaning process is interrupted, there is a risk of provoking severe engine damage.

Cleaning takes place quickest at high engine speeds and loads. Do not switch off the engine until the cleaning process is complete. This is indicated by the extinguished indicator light $= \frac{1}{2}3^{3}$.

During DPF self cleaning or during extended idling in P (Park), the exhaust system and exhaust gases are very hot. Things that burn could touch hot exhaust parts under the vehicle and ignite. You or others could be burned. Do not park, or idle for an extended period of time, near or over papers, leaves, dry grass, or other things that can burn. Keep the exhaust area clear of material that could ignite or burn. See Parking over Things That Burn on page 8-24 for more information.

Running the Vehicle While Parked

It is better not to park with the engine running. But if you ever have to, here are some things to know.

\land WARNING

Idling a vehicle in an enclosed area with poor ventilation is dangerous. Engine exhaust may enter the vehicle. Engine exhaust contains carbon monoxide (CO) which cannot be seen or smelled. It can cause unconsciousness and even death. Never run the engine in an enclosed area that has no fresh air ventilation. For more information, see *Engine Exhaust on page 8-25*.

It can be dangerous to get out of the vehicle if the automatic transmission shift lever is not fully in P (Park) with the parking brake firmly set. The vehicle can roll. Do not leave the vehicle when the engine is running unless you have to. If you have left the engine running, the vehicle can move suddenly. You or others could be injured. To be sure the vehicle will not move, even when you are on fairly level ground, always set the parking brake and move the shift lever to P (Park).

Follow the proper steps to be sure the vehicle will not move. See *Shifting Into Park on page 8-22.*

Automatic Transmission



The automatic transmission has a shift lever located on the console between the seats.

P (Park): This position locks the front wheels. It is the best position to use when you start the engine because the vehicle cannot move easily.

It is dangerous to get out of the vehicle if the shift lever is not fully in P (Park) with the parking brake firmly applied. The vehicle can roll.

Do not leave the vehicle when the engine is running unless you have to. If you have left the engine running, the vehicle can move suddenly. You or others could be injured. To be sure the vehicle will not move, even when you are on fairly level ground, always set the parking brake and move the shift lever to P (Park). See *Shifting Into Park on page 8-22.* Make sure the gear lever is fully in P (Park) before starting the engine. The vehicle has an automatic transmission shift lock control system. You must fully apply the brake pedal then press the gear lever button before you can shift from P (Park) while the ignition key is in ON/RUN. If you cannot shift out of P (Park), ease pressure on the gear lever and push the gear lever all the way into P (Park) as you maintain brake application. Then move the gear lever into another gear. See Shifting out of Park on page 8-23.

R (Reverse): Use this gear to reverse.

Notice: Shifting to R (Reverse) while the vehicle is moving forward could damage the transmission. The repairs would not be covered by the vehicle warranty. Shift to R (Reverse) only after the vehicle is stopped. To rock the vehicle back and forth to get out of snow, ice, or sand without damaging the transmission, see *If the Vehicle Is Stuck on page 8-9.*

N (Neutral): In this position, the engine does not connect with the wheels. To restart the engine when the vehicle is already moving, use N (Neutral) only.

Shifting into a drive gear while the engine is running at high speed is dangerous. Unless your foot is firmly on the brake pedal, the vehicle could move very rapidly. You could lose control and hit people or objects. Do not shift into a drive gear while the engine is running at high speed.

Notice: Shifting out of P (Park) or N (Neutral) with the engine running at high speed may damage the transmission.

The repairs would not be covered by the vehicle warranty. Be sure the engine is not running at high speed when shifting the vehicle.

D (Drive): This position is for normal driving. It provides the best fuel economy. If you need more power for passing, and you are:

- Accelerating slowly or maintaining a constant speed, push the accelerator pedal about halfway down.
- Accelerating quickly or passing, push the accelerator all the way down.

M (Manual Mode): This position allows you to change gears similar to a manual gearbox. If the vehicle has this feature, see *Manual Mode on page 8-29*.

Manual Mode

Driver Shift Control (DSC)

To use this feature:

 Move the gear lever from D (Drive) rearward to M (Manual).

> While driving in manual mode, the transmission will remain in the driver selected gear. When coming to a stop in the manual position, the vehicle will automatically shift into 1 (First) gear.

 Press the + (plus) end of the button on the top of the gear lever to upshift, or push the -(minus) end of the button to downshift.

The Driver Information Centre (DIC) in the instrument cluster will change from the currently displayed message to the letter "M," for Manual position, and a number indicating the requested gear. While using the DSC feature the transmission will have firmer shifting and sportier performance. You can use this for sport driving or when climbing hills to stay in gear longer or to downshift for more power or engine braking.

The transmission will only allow you to shift into gears appropriate for the vehicle speed and engine revolutions per minute (rpm):

- The transmission will not allow shifting to the next higher gear if the vehicle speed or engine rpm is too low.
- The transmission will not allow shifting to the next lower gear if the vehicle speed or engine rpm is too high.

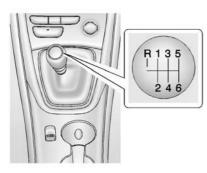
Second Gear Start Feature

When accelerating the vehicle from a stop in snowy and icy conditions, you may want to shift into 2 (Second) gear. A higher gear allows you to gain more traction on slippery surfaces.

With the DSC feature, the vehicle can be set to pull away in 2 (Second) gear.

- 1. Move the gear lever from D (Drive) to M (Manual Mode).
- With the vehicle stopped, press the (+) end of the button to select 2 (Second) gear. The vehicle will start from a stop position in 2 (Second) gear.
- 3. Once moving, select the desired drive gear.

Manual Gearbox



This is the shift pattern for the six-speed manual gearbox.

To operate the transmission:

Notice: Do not rest your hand on the gear lever while driving. The pressure could cause premature wear in the transmission. The repairs would not be covered by the vehicle warranty.

Notice: Do not rest your foot on the clutch pedal while driving or while stopped. The pressure can

cause premature wear in the clutch. The repairs would not be covered by the vehicle warranty.

1 (First): Press the clutch pedal fully to the pedal stop and shift into 1 (First). Then slowly let up on the clutch pedal as you press the accelerator pedal.

If you come to a complete stop and it is hard to shift into 1 (First), put the shift lever in Neutral and let up on the clutch. Press the clutch pedal back down. Then shift into 1 (First).

2 (Second): Press the clutch pedal as you let up on the accelerator pedal and shift into 2 (Second). Then, slowly let up on the clutch pedal as you press the accelerator pedal.

3 (Third), 4 (Fourth), 5 (Fifth) and

6 (Sixth): Shift into 3 (Third), 4 (Fourth), 5 (Fifth), and 6 (Sixth) the same way you do for 2 (Second). Slowly let up on the clutch pedal as you press the accelerator pedal. For the best fuel economy, use 6 (Sixth) gear whenever vehicle speed and driving conditions allow.

An up-shift light in the instrument cluster indicates when to shift to the next higher gear for the best fuel economy. See *Up-Shift Light on page 4-25*.

If you skip a gear when you downshift, you could lose control of the vehicle. You could injure yourself or others. Do not shift down more than one gear at a time when you downshift.

Notice: Do not skip gears while upshifting. This can cause premature wear in the transmission. The repairs would not be covered by the vehicle warranty. To stop, let up on the accelerator pedal and press the brake pedal. Just before the vehicle stops, press the clutch pedal and the brake pedal and shift to Neutral.

Neutral: Use this position when you start or idle the engine. The shift lever is in Neutral when it is centred in the shift pattern, not in any gear.

R (Reverse): To reverse, with the vehicle at a complete stop, press down the clutch pedal. Then pull up on the lock ring on the gear lever, and shift into R (Reverse). Let up on the clutch pedal slowly while pressing the accelerator pedal.

If R (Reverse) gear does not engage, shift the transmission to Neutral, release the clutch pedal, and press it back down. Repeat the gear selection.

Notice: Shifting to R (Reverse) while the vehicle is moving forward could damage the transmission. The repairs would not be covered by the vehicle warranty. Shift to R (Reverse) only after the vehicle is stopped.

When operating, press the clutch pedal down completely. Do not use the pedal as a foot rest.

Brakes

Antilock Brake System (ABS)

This vehicle has the Antilock Brake System (ABS), an advanced electronic braking system that helps prevent a braking skid.

When the engine is started and the vehicle begins to drive away, ABS checks itself. A momentary motor or clicking noise might be heard while this test is going on, and it might even be noticed that the brake pedal moves a little. This is normal.



If there is a problem with ABS, this warning light stays on. See *Antilock Brake System (ABS) Warning Light on page 4-24*.

If driving safely on a wet road and it becomes necessary to slam on the brakes and continue braking to avoid a sudden obstacle, a computer senses that the wheels are slowing down. If one of the wheels is about to stop rolling, the computer will separately work the brakes at each wheel.

ABS can change the brake pressure to each wheel, as required, faster than any driver could. This can help the driver steer around the obstacle while braking hard.

As the brakes are applied, the computer keeps receiving updates on wheel speed and controls braking pressure accordingly.

Remember: ABS does not change the time needed to get a foot up to the brake pedal or always decrease stopping distance. If you get too close to the vehicle in front of you, there will not be enough time to apply the brakes if that vehicle suddenly slows or stops. Always leave enough room up ahead to stop, even with ABS.

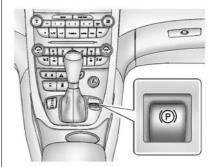
Using ABS

Do not pump the brakes. Just hold the brake pedal down firmly and let ABS work. You might hear the ABS pump or motor operating and feel the brake pedal pulsate, but this is normal.

Braking in Emergencies

ABS allows the driver to steer and brake at the same time. In many emergencies, steering can help more than even the very best braking.

Electric Parking Brake



Automatic Transmission



Manual Gearbox

The vehicle has an Electric Parking Brake (EPB). The switch for the EPB is in the centre console. The EPB can always be activated, even if the ignition is off. To prevent draining the battery, avoid repeated cycles of the EPB system when the engine is not running.

The system has a parking brake status light and a parking brake warning light. See *Electric Parking Brake Light on page 4-23*. There are also three Driver Information Centre (DIC) messages. See *Brake System Messages on page 4-35* for more information. In case of insufficient electrical power, the EPB cannot be applied or released.

Before leaving the vehicle, check the parking brake status light to ensure that the parking brake is applied.

EPB Apply

The EPB can be applied any time the vehicle is stopped. The EPB is applied by momentarily lifting up on the EPB switch. Once fully applied, the parking brake status light will be on. While the brake is being applied, the status light will flash until full apply is reached. If the light does not come on, or remains flashing, have the vehicle serviced. Do not drive the vehicle if the parking brake status light is flashing. See your dealer. See *Electric Parking Brake Light on page 4-23* for more information.

If the EPB is applied while the vehicle is in motion, a chime will sound and the DIC message RELEASE PARK BRAKE SWITCH will be displayed. The vehicle will decelerate as long as the switch is held in the up position. Releasing the EPB switch during deceleration will release the parking brake. If the switch is held in the up position until the vehicle comes to a stop, the EPB will remain applied. If the parking brake status light flashes continuously, the EPB is only partially applied or released, or there is a problem with the EPB. The DIC message SERVICE PARK BRAKE will be displayed. If this light flashes continuously, release the EPB, and attempt to apply it again. If this light continues to flash, do not drive the vehicle. See your dealer.

If the parking brake warning light is on, the EPB has detected an error in another system and is operating with reduced functionality. To apply the EPB when this light is on, lift up on the EPB switch and hold it in the up position. Full application of the parking brake by the EPB system may take longer period of time than normal when this light is on. Continue to hold the switch until the parking brake status light remains on. If the parking brake warning light is on, see your dealer.

If the EPB fails to apply, the rear wheels should be blocked to prevent vehicle movement.

EPB Release

To release the EPB, place the ignition in the ON/RUN position, apply and hold the brake pedal, and push down momentarily on the EPB switch. If you attempt to release the EPB without the brake pedal applied, a chime will sound, and the DIC message STEP ON BRAKE TO RELEASE PARK BRAKE will be displayed. The EPB is released when the parking brake status light is off.

If the parking brake warning light is on, the EPB has detected an error in another system and is operating with reduced functionality. To release the EPB when this light is on, push down on the EPB switch and hold it in the down position. EPB release may take longer period of time than normal when this light is on. Continue to hold the switch until the parking brake status light is off. If the light is on, see your dealer.

Notice: Driving with the parking brake on can overheat the brake system and cause premature wear or damage to brake system parts. Make sure that the parking brake is fully released and the brake warning light is off before driving.

Automatic EPB Release

The EPB will automatically release if the vehicle is running, placed into gear and an attempt is made to drive away. Avoid rapid acceleration when the EPB is applied, to preserve parking brake lining life.

The EPB can also be used to prevent roll back for vehicles with a manual gearbox starting on a hill. In a situation where no roll back is desired, an applied EPB will allow both feet to be used for the clutch and accelerator pedals in preparation for starting the vehicle moving in the intended direction. In this situation, perform the normal clutch and/or accelerator actions required to begin moving the vehicle. There is no need to push the switch to release the EPB.

Brake Assist

This vehicle has a brake assist feature designed to assist the driver in stopping or decreasing vehicle speed in emergency driving conditions. This feature uses the stability system hydraulic brake control module to supplement the power brake system under conditions where the driver has guickly and forcefully applied the brake pedal in an attempt to guickly stop or slow down the vehicle. The stability system hydraulic brake control module increases brake pressure at each corner of the vehicle until the ABS activates. Minor brake pedal pulsation or pedal movement during this time is normal and the driver should continue to apply the brake pedal as the driving situation dictates. The brake assist feature will automatically disengage when the brake pedal is released or brake pedal pressure is quickly decreased.

Ride Control Systems

Traction Control System (TCS)

The vehicle has a traction control system that limits wheel spin. This is especially useful in slippery road conditions. The system operates if it senses that one or both of the front wheels are spinning or beginning to lose traction. When this happens, the system brakes the spinning wheel(s) and/or reduces engine power to limit wheel spin.

The system may be heard or felt while it is working, but this is normal.

2

The Electronic Stability Control (ESC) indicator light flashes to indicate that the traction control system is active.

This warning light comes on if there is a problem with the traction control system.

See *Traction Off Light on page 4-25*. When this warning light is on, the system does not limit wheel spin. Adjust your driving accordingly.

TCS automatically comes on whenever the vehicle is started. To limit wheel spin, especially in slippery road conditions, the system should always be left on. But, TCS can be turned off if needed.

Notice: Do not repeatedly brake or accelerate heavily when TCS is off. The vehicle's driveline could be damaged.



The TCS off light comes on to indicate that the traction control system has been turned off.

It might be necessary to turn the system off if the vehicle gets stuck in sand, mud or snow and rocking the vehicle is required. See *If the Vehicle Is Stuck on page 8-9* for more information. See also *Winter Driving on page 8-8* for information on using TCS when driving in snowy or icy conditions.



To turn the system off, press $\frac{R}{2}$ located on the console in front of the gear lever.

Press and release $\frac{3}{6}$ and the traction control system turns off and the traction control system warning light comes on. Press $\frac{3}{6}$ again to turn the system back on. For information on turning StabiliTrak off and on, see *Electronic Stability Control (ESC) on page 8-36.*

Adding accessories can affect the vehicle performance. See *Accessories and Modifications on page 9-3* for more information.

Electronic Stability Control (ESC)

The vehicle has a vehicle stability enhancement system called StabiliTrak. It is an advanced computer controlled system that assists with directional control of the vehicle in difficult driving conditions.

StabiliTrak activates when the computer senses a difference between the intended path and the direction the vehicle is actually travelling. StabiliTrak selectively applies braking pressure at any one of the vehicle's brakes to help steer the vehicle in the intended direction.



When the stability control system activates, the Electronic Stability Control (ESC) indicator light flashes on the instrument panel. This also occurs when traction control is activated. A noise might be heard or vibration might be felt in the brake pedal. This is normal. Continue to steer the vehicle in the intended direction.

If there is a problem detected with StabiliTrak, the ESC indicator light comes on and the system is not operational. See *Electronic Stability Control (ESC) Indicator Light on page 4-26.* Driving should be adjusted accordingly.

StabiliTrak comes on automatically whenever the vehicle is started. To assist with directional control of the vehicle, the system should always be left on. **R** OFF

StabiliTrak can be turned off if needed by pressing and holding $\frac{3}{67}$ until the ECS/TCS indicator warning light comes on the instrument panel. For information on turning TCS off and on, see *Traction Control System* (*TCS*) on page 8-35.

If cruise control is being used when StabiliTrak activates, the cruise control automatically disengages. Press the cruise control button to reengage when road conditions allow. See *Cruise Control on page 8-37* for more information.

Cruise Control

The cruise control lets the vehicle maintain a speed of about 40 km/h (25 mph) or more without keeping your foot on the accelerator. Cruise control does not work at speeds below 40 km/h (25 mph).

With the Traction Control System (TCS) or Electronic Stability Control (ESC), the system may begin to limit wheel spin while you are using cruise control. If this happens, the cruise control will automatically disengage. See *Traction Control System (TCS) on page 8-35* or *Electronic Stability Control (ESC) on page 8-36*.

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

(Continued)

WARNING (Continued)

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



The cruise control buttons are on the steering wheel.

ਨੇ (On/Off): Press to turn the cruise control system on and off. An indicator light will turn on or off in the instrument cluster.

☆ (Cancel): Press to disengage cruise control without erasing the set speed from memory.

RES/+ (Resume/Accel): Move the thumbwheel up to resume to a previously set speed or to accelerate.

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

Setting Cruise Control

If the cruise button is on when not in use, it could get bumped and go into cruise when not desired. Keep the cruise control button off when cruise is not being used. To set a speed:

- 1. Press in to turn cruise control on.
- 2. Get up to the speed desired.
- Move the thumbwheel down toward SET/- and release it. The desired set speed briefly appears in the instrument cluster.
- 4. Take your foot off the accelerator pedal.

When the brakes are applied, the cruise control shuts off.

Resuming a Set Speed

If the cruise control is set at a desired speed and then the brakes are applied, the cruise control is disengaged without erasing the set speed from memory. Once the vehicle speed is about 40 km/h (25 mph) or greater, move the thumbwheel up toward RES/+ briefly and then release it. The vehicle returns to the previously set speed and stays there.

Increasing Speed While Using Cruise Control

If the cruise control system is already activated:

- Move the thumbwheel up toward RES/+ and hold it until the vehicle accelerates to the desired speed, then release it.
- To increase the speed in small amounts, move the thumbwheel up toward RES/+ briefly and then release it. Each time this is done, the vehicle goes about 1 km/h (1 mph) faster.

Reducing Speed While Using Cruise Control

If the cruise control system is already activated:

 Move the thumbwheel toward SET/- and hold until the desired lower speed is reached, then release it. To slow down in very small amounts, move the thumbwheel toward SET/- briefly. Each time this is done, the vehicle goes about 1 km/h (1 mph) slower.

Overtaking Another Vehicle While Using Cruise Control

Use the accelerator pedal to increase vehicle speed. When you take your foot off the pedal, the vehicle will slow down to the previously set cruise control speed.

Using Cruise Control on Hills

How well the cruise control works on hills depends upon the vehicle speed, load and the steepness of the hills. When going up steep hills, you might have to step on the accelerator pedal to maintain the vehicle speed. When going downhill, you might have to brake or shift to a lower gear to maintain the vehicle speed. When the brakes are applied the cruise control is disengaged.

Ending Cruise Control

There are three ways to end cruise control:

- To disengage cruise control, step lightly on the brake pedal. If the vehicle has a manual gearbox, lightly tap the clutch to end the cruise control session.
- Press 🕅.
- Press to turn the cruise control system off completely. The cruise control cannot be resumed.

Erasing Speed Memory

The cruise control set speed is erased from memory by pressing ∞ or if the vehicle is turned off.

Object Detection Systems

Ultrasonic Parking Assist

If available, the Ultrasonic Rear Parking Assist (URPA) system assists the driver with parking and avoiding objects while in R (Reverse). URPA operates at speeds less than 8 km/h (5 mph). The sensors on the rear bumper detect objects up to 2.5 m (8 ft) behind the vehicle, and at least 20 cm (8 in) off the ground.

The URPA system does not detect pedestrians, bicyclists, animals, or any other objects located below the bumper or that are too close or too far from the vehicle. To prevent injury, death, or vehicle damage, even with

(Continued)

WARNING (Continued)

URPA, always check the area around the vehicle and check all mirrors before reversing.

How the System Works

URPA comes on automatically when the shift lever is moved into R (Reverse). A single tone sounds to indicate the system is working.

URPA operates only at speeds less than 8 km/h (5 mph).

An obstacle is indicated by audible beeps. The interval between the beeps becomes shorter as the vehicle gets closer to the obstacle. When the distance is less than 30 cm (12 in) the beeping is a continuous tone for five seconds.

To be detected, objects must be at least 20 cm (8 in) off the ground and below trunk level. Objects must also be within 2.5 m (8 ft) from the rear bumper. The distance at which objects can be detected may be less during warmer or humid weather.

Turning the System On and Off

The URPA system can be turned on and off using the park assist button located next to the gear lever.



The indicator light next to the park assist button lights up when the system is on and turns off when it has been disabled.

When the system is off, a message displays on the Driver Information Centre (DIC). The message disappears after a short period of time.

URPA defaults to the on setting each time the vehicle is started.

When the System Does Not Seem to Work Properly

The following messages may be displayed on the DIC:

SERVICE PARK ASSIST: If this message occurs, take the vehicle to your dealer to repair the system.

PARK ASSIST OFF: If the URPA system does not activate due to a temporary condition, this message displays on the DIC. This can occur under the following conditions:

- The driver has disabled the system.
- The ultrasonic sensors are not clean. Keep the vehicle's rear bumper free of mud, dirt, snow, ice, and slush. For cleaning instructions, see *Exterior Care* on page 9-70.

- The park assist sensors are covered by frost or ice. Frost or ice can form around and behind the sensors and may not always be seen; this can occur after washing the vehicle in cold weather. The message may not clear until the frost or ice has melted.
- An object was hanging out of the trunk during the last drive cycle.
 Once the object is removed, URPA will return to normal operation.
- The bumper is damaged. Take the vehicle to your dealer to repair the system.
- Other conditions, such as vibrations from a jackhammer or the compression of air brakes on a very large truck, are affecting system performance.

Fuel

Use of the recommended fuel is an important part of the proper maintenance of this vehicle, keeps the engine clean, and maintains optimum vehicle performance.

Fuel Additives

Petrol should contain detergent additives that help prevent engine and fuel system deposits from forming. Clean fuel injectors and intake valves will allow the emission control system to work properly. Some petrol does not contain sufficient quantities of additive to keep fuel injectors and intake valves clean. To make up for this lack of detergency, it is recommended that **GM Fuel System Treatment PLUS** (GM Part No. 88861011) be added to the fuel tank at every engine oil change or every 15 000 km, whichever occurs first

Petrols containing oxygenates, such as ethers and ethanol, may be available in your area. However, fuels containing more than 15% ethanol, such as E85 (85% ethanol), or more than 15% MTBE (an ether) should not be used in vehicles that were not designed for those fuels. See *Recommended Fluids and Lubricants on page 10-7* for more information.

Notice: This vehicle was not designed for fuel that contains methanol. Do not use fuel containing methanol. It can corrode metal parts in the fuel system and also damage plastic and rubber parts. That damage would not be covered under the vehicle warranty.

Some petrols can contain an octane-enhancing additive called methylcyclopentadienyl manganese tricarbonyl (MMT); ask the attendant where you buy petrol whether the fuel contains MMT. We recommend against the use of such petrols. Fuels containing MMT can reduce spark plug life and affect emission control system performance. The malfunction indicator lamp might turn on. If this occurs, return to your dealer for service.

Fuel for Petrol Engines

Commercially available high-guality fuels are suitable. Fuel quality has a decisive influence on the power output, driveability and life of the engine. The additives contained in the fuel play an important role in this regard. You should therefore use only high-quality fuels containing additives. Petrol with too low an octane number can cause pinging and resulting damage. Petrol with a higher octane number can always be used. A dispensing pump for leaded fuel cannot be inserted in the fuel tank of a vehicle that must be operated on unleaded fuel only. Use of petrol with an octane rating of 95 will ensure economical driving.

Fuel for Diesel Engines

Diesel engines must be operated only on commercially available diesel fuel meeting the specifications of DIN EN 590. Marine diesel fuel, fuel oils, diesel fuels, which are entirely or partially plant based such as rape seed oil or bio-diesel, Aquazole and similar diesel-water emulsions must not be used. The flow and filterability of diesel fuels are insufficient at low temperatures, as a result of crystallised paraffins. Diesel fuels with improved low-temperature properties are therefore available on the market during the winter months. Make sure that you use winter fuel before the start of the cold weather season. Use of diesel fuels with manufacturer guaranteed winter properties eliminates the need for additives.

Water in Fuel

Drain diesel fuel filter of residual water at every engine oil change.

- 1. Place a container underneath the filter housing.
- 2. Turn the drain plug, located on the bottom of the filter housing, anticlockwise using a suitable screwdriver, to drain off the water. The filter is drained as soon as diesel fuel emerges from the port.
- 3. Retighten the drain plug by turning it clockwise.
- 4. With engine switched off, turn ignition key to ON, wait approximately five seconds, and turn key to LOCK to perform priming operation. Perform this operation three times or more while the engine is switched off, to avoid air entering the fuel line.

Check diesel fuel filter at shorter intervals if the vehicle is subjected to extreme operating conditions such as high humidity (primarily in coastal areas), extremely high or low outside temperatures and substantially varying daytime and nighttime temperatures. If there is water in the diesel fuel filter, a "Water in Fuel" warning light illuminates in the instrument panel. Drain the water immediately.

Running Out of Fuel

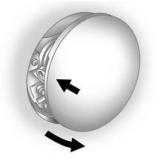
Running out of diesel fuel requires priming after fuel is added.

With the engine switched off, turn the ignition key to ON, wait approximately five seconds, and turn the key to LOCK to perform priming operation. Perform this operation three times or more while the engine is switched off, to avoid air entering the fuel line.

Then try to start the engine for a maximum of 40 seconds. Repeat this process after waiting more than five seconds. If the engine fails to start, see your dealer.

Filling the Tank

Fuel vapour burns violently and a fuel fire can cause bad injuries. To help avoid injuries to you and others, read and follow all the instructions on the fuel pump island. Turn off the engine when refuelling. Do not smoke near fuel or when refuelling the vehicle. Do not use mobile phones. Keep sparks, flames, and smoking materials away from fuel. Do not leave the fuel pump unattended when refuelling the vehicle. This is against the law in some places. Do not re-enter the vehicle while pumping fuel. Keep children away from the fuel pump; never let children pump fuel.



The fuel cap is behind the fuel door on the vehicle's passenger side. The fuel door can be opened or closed only when the vehicle is unlocked. To open the fuel door, push the rearward centre edge in and release and it will open.

Turn the tethered fuel cap anticlockwise to remove. While refueling, hang the tethered fuel cap from the hook on the fuel door. Reinstall the cap by turning it clockwise until it clicks.

Fuel can spray out on you if you open the fuel cap too quickly. If you spill fuel and then something ignites it, you could be badly burned. This spray can happen if the tank is nearly full, and is more likely in hot weather. Open the fuel cap slowly and wait for any hiss noise to stop. Then unscrew the cap all the way.

Do not top off or overfill the tank and wait a few seconds before removing the nozzle. Clean fuel from painted surfaces as soon as possible. See *Exterior Care on page* 9-70.

If a fire starts while you are refuelling, do not remove the nozzle. Shut off the flow of fuel by shutting off the pump or by notifying the station attendant. Leave the area immediately.

Notice: If a new fuel cap is needed, be sure to get the right type of cap from your dealer. The wrong type of fuel cap might not fit properly and could damage the fuel tank and emissions system.

Filling a Portable Fuel Container

Never fill a portable fuel container while it is in the vehicle. Static electricity discharge from the container can ignite the fuel vapour. You can be badly burned and the vehicle damaged if this occurs. To help avoid injury to you and others:

- Dispense fuel only into approved containers.
- Do not fill a container while it is inside a vehicle, in a vehicle's boot, pickup bed, or on any surface other than the ground.

(Continued)

WARNING (Continued)

- Bring the fill nozzle in contact with the inside of the fill opening before operating the nozzle. Contact should be maintained until the filling is complete.
- Do not smoke while pumping fuel.
- Do not use a mobile phone while pumping fuel.

Towing

General Towing Information

Only use towing equipment that has been designed for the vehicle. Contact your dealer or trailering dealer for assistance with preparing the vehicle for towing a trailer.

See the following trailer towing information in this section:

- For information on driving while towing a trailer, see "Driving Characteristics and Towing Tips."
- For maximum vehicle and trailer weights, see "Trailer Towing."

8-46 Driving and Operating

 For information on equipment to tow a trailer, see "Towing Equipment."

For information on towing a disabled vehicle, see *Towing the Vehicle on page 9-67*. For information on towing the vehicle behind another vehicle such as a motor home, see *Recreational Vehicle Towing on page 9-68*.

Driving Characteristics and Towing Tips

The driver can lose control when pulling a trailer if the correct equipment is not used or the vehicle is not driven properly. For example, if the trailer is too heavy, the brakes may not work well - or even at all. The driver and passengers could be seriously injured. The vehicle may also be damaged; the resulting

WARNING (Continued)

repairs would not be covered by the vehicle warranty. Pull a trailer only if all the steps in this section have been followed. Ask your dealer for advice and information about towing a trailer with the vehicle.

The vehicle can tow a trailer when equipped with the proper trailer towing equipment. For trailering capacity, see *Trailer Towing on page 8-49*. Trailering changes handling, acceleration, braking, durability and fuel economy. With the added weight, the engine, transmission, wheel assemblies and tyres are forced to work harder and under greater loads. The trailer also adds wind resistance, increasing the pulling requirements. For safe trailering, correctly use the proper trailering equipment. The following information has important trailering tips and rules for your safety and that of your passengers. Read this section carefully before pulling a trailer.

Pulling a Trailer

Here are some important points:

- There are many laws, including speed limit restrictions that apply to trailering. Check for legal requirements with state or provincial police.
- Do not tow a trailer at all during the first 1 600 km (1,000 miles) the new vehicle is driven. The engine, axle or other parts could be damaged.
- During the first 800 km (500 miles) that a trailer is towed, do not drive over 80 km/h (50 mph) and do not make starts at full throttle. This reduces wear on the vehicle.

(Continued)

- The vehicle can tow in D (Drive). Use a lower gear if the transmission shifts too often.
- Obey speed limit restrictions. Do not drive faster than the maximum posted speed for trailers, or no more than 90 km/h (55 mph), to reduce wear on the vehicle.

Driving with a Trailer

Towing a trailer requires experience. Get familiar with handling and braking with the added trailer weight. The vehicle is now longer and not as responsive as the vehicle is by itself.

Check all trailer hitch parts and attachments, safety chains, electrical connectors, lamps, tyres and mirror adjustments. If the trailer has electric brakes, start the vehicle and trailer moving and then apply the trailer brake controller by hand to be sure the brakes are working. During the trip, check regularly to be sure that the load is secure, and the lamps and trailer brakes are working properly.

Towing with a Stability Control System

When towing, the sound of the stability control system might be heard. The system is reacting to the vehicle movement caused by the trailer, which mainly occurs during cornering. This is normal when towing heavier trailers.

Following Distance

Stay at least twice as far behind the vehicle ahead as you would when driving the vehicle without a trailer. This can help to avoid situations that require heavy braking and sudden turns.

Passing

More passing distance is needed when towing a trailer. Because the rig is longer, it is necessary to go farther beyond the passed vehicle before returning to the lane.

Backing Up

Hold the bottom of the steering wheel with one hand. To move the trailer to the left, move that hand to the left. To move the trailer to the right, move your hand to the right. Always back up slowly and, if possible, have someone guide you.

Making Turns

Notice: Making very sharp turns while trailering could cause the trailer to come in contact with the vehicle. The vehicle could be damaged. Avoid making very sharp turns while trailering.

When turning with a trailer, make wider turns than normal so the trailer will not strike soft shoulders, curbs, road signs, trees or other objects. Use the indicators well in advance and avoid jerky or sudden manoeuvres.

Indications When Towing a Trailer

The indicators on the instrument panel flash whenever signalling a turn or lane change. Properly hooked up, the trailer lamps also flash, telling other drivers the vehicle is turning, changing lanes or stopping. When towing a trailer, the arrows on the instrument panel flash for turns even if the bulbs on the trailer are burned out. Check occasionally to be sure the trailer bulbs are still working.

Driving on Grades

Reduce speed and shift to a lower gear before starting down a long or steep downhill gradient. If the transmission is not shifted down, the brakes might have to be used so much that they would get hot and no longer work well.

The vehicle can tow in D (Drive). Use a lower gear if the transmission shifts too often.

When towing at high altitude on steep uphill grades, engine coolant boils at a lower temperature than at normal altitudes. If the engine is turned off immediately after towing at high altitude on steep uphill grades, the vehicle could show signs similar to engine overheating. To avoid this, let the engine run while parked, preferably on level ground, with the transmission in P (Park) for a few minutes before turning the engine off. If the overheat warning comes on, see *Engine Overheating on page 9-21*.

Parking on Hills

Parking the vehicle on a hill with the trailer attached can be dangerous. If something goes wrong, the rig could start to move. People can be injured, and both the vehicle and the trailer can be damaged. When possible, always park the rig on a flat surface.

If parking the rig on a hill:

 Press the brake pedal, but do not shift into P (Park) yet. Turn the wheels into the curb if facing downhill or into traffic if facing uphill.

- 2. Have someone place chocks under the trailer wheels.
- When the wheel chocks are in place, release the brake pedal until the chocks absorb the load.
- Reapply the brake pedal. Then apply the parking brake and shift into P (Park).
- 5. Release the brake pedal.

Leaving After Parking on a Hill

- 1. Apply and hold the brake pedal.
- 2. Start the engine.
- 3. Shift into a gear.
- 4. Release the parking brake.
- 5. Let up on the brake pedal.
- 6. Drive slowly until the trailer is clear of the chocks.
- 7. Stop and have someone pick up and store the chocks.

Maintenance When Trailer Towing

The vehicle needs service more often when pulling a trailer. See the Maintenance Schedule booklet for more information. Things that are especially important in trailer operation are automatic transmission fluid, engine oil, axle lubricant, belts, cooling system and brake system. Inspect these before and during the trip.

Check periodically to see that all hitch nuts and bolts are tight.

Engine Cooling When Trailer Towing

The cooling system may temporarily overheat during severe operating conditions. See *Engine Overheating on page 9-21*.

Trailer Towing

Before pulling a trailer, there are three important considerations that have to do with weight:

- The weight of the trailer.
- The weight of the trailer tongue.
- The total weight on your vehicle's tyres.

Weight of the Trailer

How heavy can a trailer safely be?

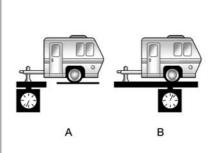
It depends on how the rig is used. For example, speed, altitude, road grades, outside temperature and how much the vehicle is used to pull a trailer are all important. It can depend on any special equipment on the vehicle, and the amount of tongue weight the vehicle can carry. See "Weight of the Trailer Tongue" later in this section for more information.

Maximum trailer weight is calculated assuming only the driver is in the tow vehicle and it has all the required trailering equipment. The weight of additional optional equipment, passengers and cargo in the tow vehicle must be subtracted from the maximum trailer weight.

Ask your dealer for trailering information or advice.

Weight of the Trailer Tongue

The tongue load (A) of any trailer is an important weight to measure because it affects the total gross weight of the vehicle. The Gross Vehicle Weight (GVW) includes the curb weight of the vehicle, any cargo carried in it, and the people who will be riding in the vehicle. If there are a lot of options. equipment, passengers or cargo in the vehicle, it will reduce the tongue weight the vehicle can carry, which will also reduce the trailer weight the vehicle can tow. If towing a trailer, the tongue load must be added to the GVW because the vehicle will be carrying that weight, too. See Vehicle Load Limits on page 8-10 for more information.



The trailer tongue (A) should weigh 10-15 percent of the total loaded trailer weight (B).

After loading the trailer, weigh the trailer and then the tongue, separately, to see if the weights are proper. If they are not, adjustments might be made by moving some items around in the trailer.

Total Weight on Your Vehicle's Tyres

Be sure the vehicle's tyres are inflated to the upper limit for cold tyres. These numbers can be found on the Tyre-Loading Information label. See *Vehicle Load Limits on page 8-10.* Make sure not to go over the GVW limit for the vehicle, including the weight of the trailer tongue.

Towing Equipment

Hitches

Use the correct hitch equipment. See your dealer or a hitch dealer for assistance.

- The rear bumper on the vehicle is not intended for hitches. Do not attach rental hitches or other bumper-type hitches to it. Use only a frame-mounted hitch that does not attach to the bumper.
- Will any holes be made in the body of the vehicle when the trailer hitch is installed? If there are, seal the holes when the hitch is removed. If the holes are not sealed, dirt, water, and deadly carbon monoxide (CO) from the exhaust can get into the vehicle. See *Engine Exhaust on page 8-25*.

Safety Chains

Always attach chains between the vehicle and the trailer. Cross the safety chains under the tongue of the trailer to help prevent the tongue from contacting the road if it becomes separated from the hitch. Leave enough slack so the rig can turn. Never allow safety chains to drag on the ground.

Trailer Brakes

Does the trailer have its own brakes? Be sure to read and follow the instructions for the trailer brakes so they are installed, adjusted and maintained properly.

Because the vehicle has antilock brakes, do not tap into the vehicle's brake system. If this is done, both brake systems will not work well or at all.

Conversions and Add-Ons

Add-On Electrical Equipment

Notice: Do not add anything electrical to the vehicle unless you check with your dealer first. Some electrical equipment can damage the vehicle and the damage would not be covered by the vehicle's warranty. Some add-on electrical equipment can keep other components from working as they should.

Add-on equipment can drain the vehicle's 12-volt battery, even if the vehicle is not operating.

The vehicle has an airbag system. Before attempting to add anything electrical to the vehicle, see Servicing the Airbag-Equipped Vehicle on page 2-28 and Adding Equipment to the Airbag-Equipped Vehicle on page 2-28.

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General Information

For service and parts needs, visit your dealer. You will receive genuine parts and trained and supported service people.

Accessories and Modifications

Adding non-dealer accessories or making modifications to the vehicle can affect vehicle performance and safety, including such things as airbags, braking, stability, ride and handling, emissions systems, aerodynamics, durability, and electronic systems like anti-lock brakes, traction control, and stability control. These accessories or modifications could even cause malfunction or damage not covered by the vehicle warranty.

Damage to vehicle components resulting from modifications or the installation or use of non-GM certified parts, including control module or software modifications, is not covered under the terms of the vehicle warranty and may affect remaining warranty coverage for affected parts. GM Accessories are designed to complement and function with other systems on the vehicle. See your dealer to accessorise the vehicle using genuine GM Accessories installed by a dealer technician.

Also, see Adding Equipment to the Airbag-Equipped Vehicle on page 2-28.

9-4 Vehicle Care

Vehicle Checks

Doing Your Own Service Work

\land WARNING

It can be dangerous to work on your vehicle if you do not have the proper knowledge, service manual, tools, or parts. Always follow owner manual procedures and consult the service manual for your vehicle before doing any service work. If doing some of your own service work, use the proper service manual. It tells you much more about how to service the vehicle than this manual can.

This vehicle has an airbag system. Before attempting to do your own service work, see *Airbag System Check on page 2-28*.

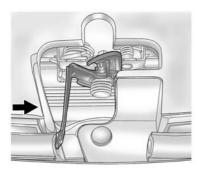
Keep a record with all parts receipts and list the mileage and the date of any service work performed.

Bonnet

To open the bonnet:



1. Pull the interior bonnet release handle located to the left of the steering column below the instrument panel.

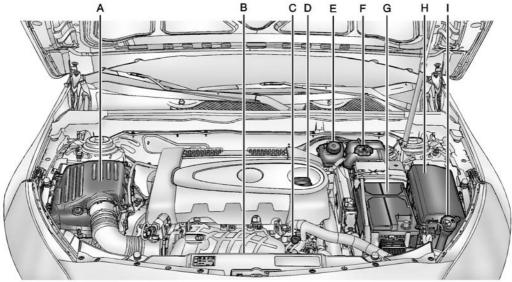


- 2. Go to the front of the vehicle and push the secondary bonnet release handle toward the driver side of the vehicle.
- 3. Lift the bonnet.

To close the bonnet:

- 1. Before closing the bonnet, be sure all the filler caps are on properly.
- 2. Lower the bonnet 30 cm (12 in) above the vehicle and release it so it fully latches. Check to make sure the bonnet is closed and repeat the process if necessary.

Engine Compartment Overview



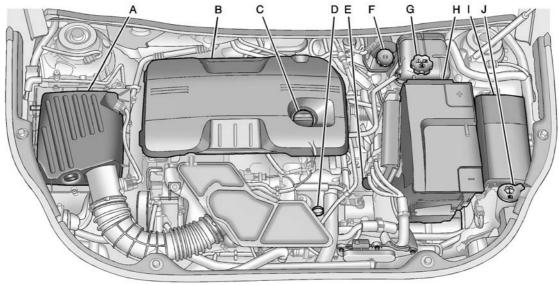
2.0L L4 Engine

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- A. Engine Air Cleaner/Filter on page 9-15.
- B. Engine Cooling Fans (Out of View). See *Cooling System on page 9-17*.
- C. Engine Oil Dipstick. See Engine Oil on page 9-11.

- D. Engine Oil Fill Cap. See Engine Oil on page 9-11.
- E. Brake Fluid Reservoir. See Brakes on page 9-25.
- F. Engine Coolant Reservoir and Pressure Cap. See *Engine Coolant on page 9-18.*

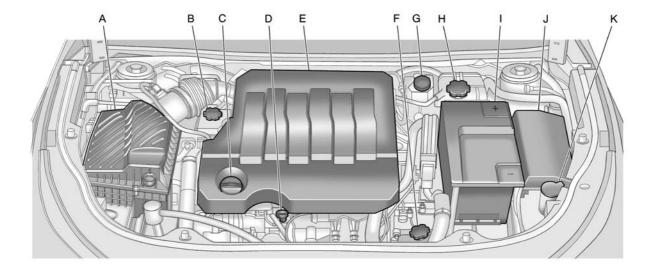
- G. Battery on page 9-27.
- H. Engine Compartment Fuse box on page 9-38.
- I. Windscreen Washer Fluid Reservoir. See Washer Fluid on page 9-24.



2.4L L4 Engine

- A. Engine Air Cleaner/Filter on page 9-15.
- B. Engine Cover.
- C. Engine Oil Fill Cap. See Engine Oil on page 9-11.
- D. Engine Oil Dipstick. See Engine Oil on page 9-11.
- E. Transmission Fluid Cap and Dipstick. See Automatic Transmission Fluid on page 9-14.
- F. Brake Fluid Reservoir. See Brakes on page 9-25.
- G. Engine Coolant Reservoir and Pressure Cap. See *Engine Coolant on page 9-18*.

- H. Battery Cover. See *Battery on* page 9-27.
- I. Engine Compartment Fuse box on page 9-38.
- J. Windscreen Washer Fluid Reservoir. See Washer Fluid on page 9-24.



3.0L V6 Engine

- A. Engine Air Cleaner/Filter on page 9-15.
- B. Power Steering Reservoir and Cap. See Power Steering Fluid (3.0L V6 Engine) on page 9-23 or Power Steering Fluid (2.0L L4 and 2.4L L4 Engines) on page 9-23.
- C. Engine Oil Fill Cap. See Engine Oil on page 9-11.
- D. Engine Oil Dipstick. See Engine Oil on page 9-11.
- E. Engine Cover.
- F. Transmission Fluid Cap and Dipstick. See Automatic Transmission Fluid on page 9-14.
- G. Brake Fluid Reservoir. See Brakes on page 9-25.
- H. Coolant Surge Tank and Pressure Cap. See *Engine Coolant on page 9-18*.

- I. Battery Cover. See Battery on page 9-27.
- J. Engine Compartment Fuse box on page 9-38.
- K. Windscreen Washer Fluid Reservoir. See Washer Fluid on page 9-24.

Engine Oil

To ensure proper engine performance and long life, careful attention must be paid to engine oil. Following these simple, but important steps will help protect your investment:

- Always use engine oil approved to the proper specification and of the proper viscosity grade. See "Selecting the Right Engine Oil" in this section.
- Check the engine oil level regularly and maintain the proper oil level. See "Checking Engine Oil" and "When to Add Engine Oil" in this section.

- Change the engine oil at the appropriate time. See *Engine Oil Life System on page 9-13.*
- Always dispose of engine oil properly. See "What to Do with Used Oil" in this section.

Checking Engine Oil

It is a good idea to check the engine oil level at each fuel fill. In order to get an accurate reading, the vehicle must be on level ground. The engine oil dipstick handle is a yellow loop. See *Engine Compartment Overview on page 9-6* for the location of the engine oil dipstick.

Obtaining an accurate oil level reading is essential:

 If the engine has been running recently, turn off the engine and allow several minutes for the oil to drain back into the oil sump. Checking the oil level too soon after engine shutoff will not provide an accurate oil level reading.

9-12 Vehicle Care

 Pull out the dipstick and clean it with a paper towel or cloth, then push it back in all the way. Remove it again, keeping the tip down, and check the level.

When to Add Engine Oil

If the oil is below the MIN (minimum) mark, add 1 L (1 qt) of the recommended oil and then recheck the level. See "Selecting the Right Engine Oil" in this section for an explanation of what kind of oil to use. For engine oil crankcase capacity, see *Capacities and Specifications on page 11-2*.

Notice: Do not add too much oil. If the engine has so much oil that the oil level gets above the upper mark that shows the proper operating range, the engine could be damaged.

See Engine Compartment Overview on page 9-6 for the location of the engine oil fill cap. Add enough oil to put the level somewhere in the proper operating range. Push the dipstick all the way back in when done.

Selecting the Right Engine Oil

Selecting the right engine oil depends on both the proper oil specification and viscosity grade. See *Recommended Fluids and Lubricants on page 10-7*.

Specification

Use and ask for licensed engine oils with the dexos2[™] approved certification mark. Engine oils meeting the requirements for the vehicle should have the dexos2 approved certification mark. This certification mark indicates that the oil has been approved to the dexos2 specification.

Notice: Failure to use the recommended engine oil or equivalent can result in engine damage not covered by the vehicle warranty.

Check with your dealer or service provider on whether the oil is approved to the dexos2 specification.

Viscosity Grade

SAE 5W-30 is the best viscosity grade for the vehicle. Do not use other viscosity grade oils such as SAE 10W-30, 10W-40, or 20W-50.

If in an area of extreme cold, where the temperature falls below -20°F (-29°C), an SAE 0W-30 oil should be used. An oil of this viscosity grade will provide easier cold starting for the engine at extremely low temperatures. When selecting an oil of the appropriate viscosity grade, always select an oil that meets the dexos2 specification or equivalent. See "Specification" for more information.

Engine Oil Additives/Engine Oil Flushes

Do not add anything to the oil. The use of engine oil additives could cause engine damage not covered by the vehicle warranty.

Engine oil system flushes are not recommended and could cause engine damage not covered by the vehicle warranty.

What to Do with Used Oil

Used engine oil contains certain elements that can be unhealthy for your skin and could even cause cancer. Do not let used oil stay on your skin for very long. Clean your skin and nails with soap and water, or a good hand cleaner. Wash or properly dispose of clothing or rags containing used engine oil. See the manufacturer's warnings about the use and disposal of oil products.

Used oil can be a threat to the environment. If you change your own oil, be sure to drain all the oil from the filter before disposal. Never dispose of oil by putting it in the trash or pouring it on the ground, into sewers, or into streams or bodies of water. Recycle it by taking it to a place that collects used oil.

Engine Oil Life System

When to Change Engine Oil

This vehicle has a computer system that indicates when to change the engine oil and filter. This is based on a combination of factors which include engine revolutions, engine temperature, and miles driven. Based on driving conditions, the mileage at which an oil change is indicated can vary considerably. For the oil life system to work properly, the system must be reset every time the oil is changed.

When the system has calculated that oil life has been diminished, it indicates that an oil change is necessary. A CHANGE ENGINE OIL SOON message comes on. See Engine Oil Messages on page 4-37. Change the oil as soon as possible within the next 1 000 km (600 mi). It is possible that, if driving under the best conditions, the oil life system might indicate that an oil change is not necessary for up to a year. The engine oil and filter must be changed at least once a year and, at this time, the system must be reset. Your dealer has trained service people who will perform this work and reset the system. It is also important to check the oil regularly over the course of an oil drain interval and keep it at the proper level.

If the system is ever reset accidentally, the oil must be changed at 5 000 km (3,000 mi) since the last oil change. Remember to reset the oil life system whenever the oil is changed.

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

Automatic Transmission Fluid

How to Check Automatic Transmission Fluid

It is not necessary to check the transmission fluid level. A transmission fluid leak is the only reason for fluid loss. If a leak occurs, take the vehicle to the dealer and have it repaired as soon as possible.

The vehicle is not equipped with a transmission fluid level dipstick. There is a special procedure for checking and changing the transmission fluid. Because this procedure is difficult, it should be done at the dealer. Contact your dealer for additional information.

Change the fluid and filter at the intervals listed in the *Scheduled Maintenance on page 10-2*, and be sure to use the fluid listed in *Recommended Fluids and Lubricants on page 10-7*.

Manual Gearbox Fluid

It is not necessary to check the manual gearbox fluid level. A transmission fluid leak is the only reason for fluid loss. If a leak occurs, take the vehicle to your dealer and have it repaired as soon as possible. See *Recommended Fluids and Lubricants on page 10-7* for the proper fluid to use.

Hydraulic Clutch

For vehicles with a manual transmission, it is not necessary to regularly check brake/clutch fluid unless there is a leak suspected. Adding fluid will not correct a leak. A fluid loss in this system could indicate a problem. Have the system inspected and repaired.

When to Check and What to Use



The brake/hydraulic clutch fluid reservoir cap has this symbol on it. The common brake/clutch fluid reservoir is filled with DOT 3 brake fluid as indicated on the reservoir cap. See *Engine Compartment Overview on page 9-6* for reservoir location.

How to Check and Add Fluid

Visually check the brake/clutch fluid reservoir to make sure the fluid level is at the MIN (minimum) line on the side of the reservoir. The brake/ hydraulic clutch fluid system should be closed and sealed.

Do not remove the cap to check the fluid level or to top off the fluid level. Remove the cap only when necessary to add the proper fluid until the level reaches the MIN line.

Engine Air Cleaner/Filter

The engine air cleaner/filter is located in the engine compartment on the driver side of the vehicle. See *Engine Compartment Overview on page 9-6* for more information on location.

When to Inspect the Engine Air Cleaner/Filter

Inspect the air cleaner/filter at the scheduled maintenance intervals. See the *Scheduled Maintenance on page 10-2* for more information. If you are driving in dusty/dirty conditions, inspect the filter at each engine oil change.

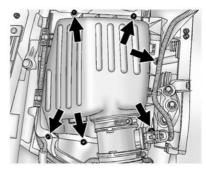
How to Inspect the Engine Air Cleaner/Filter

To inspect the air cleaner/filter, remove the filter from the vehicle and lightly shake the filter to release loose dust and dirt. If the filter remains covered with dirt, a new filter is required.

To inspect or replace the engine air cleaner/filter:

2.0L L4 Engine

1. Open the bonnet. See Bonnet on page 9-4.

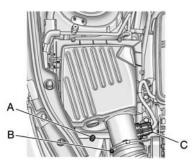


- 2. Remove the screws on top of the engine air cleaner/filter housing.
- 3. Lift the filter cover housing away from the engine.
- 4. Pull out the filter.
- 5. Inspect or replace the engine air cleaner/filter.
- 6. Lower the filter cover housing toward the engine.
- 7. Install the screws on the top of the housing to lock the cover in place.

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2.4L L4 Engine

1. Open the bonnet. See Bonnet on page 9-4.

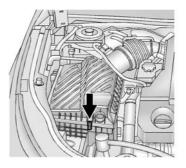


- A. Screws (6)
- B. Air Duct Clamp
- C. Electrical Connector

- 2. Disconnect the outlet duct by loosening the air duct clamp (B).
- 3. Disconnect the electrical connector (C).
- 4. Remove the screws (A) on top of the engine air cleaner/filter housing.
- 5. Lift the filter cover housing away from the engine.
- 6. Pull out the filter.
- 7. Inspect or replace the engine air cleaner/filter.
- 8. Reverse Steps 2 through 4 to reinstall the filter cover housing.

3.0L V6 Engine

1. Open the bonnet. See *Bonnet* on page 9-4.



- 2. Remove the screws on top of the engine air cleaner/filter housing.
- 3. Lift the filter cover housing away from the engine.
- 4. Pull out the filter.
- 5. Inspect or replace the engine air cleaner/filter.

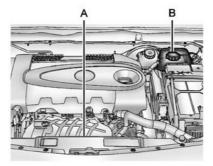
- 6. Lower the filter cover housing toward the engine.
- 7. Install the screws on the top of the housing to lock the cover in place.

Operating the engine with the air cleaner/filter off can cause you or others to be burned. The air cleaner not only cleans the air; it helps to stop flames if the engine backfires. Use caution when working on the engine and do not drive with the air cleaner/filter off.

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

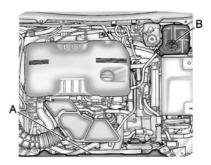
Cooling System

The cooling system allows the engine to maintain the correct working temperature.



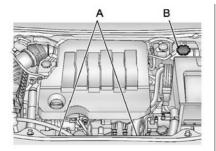
2.0L L4 Engine

- A. Engine Cooling Fans (Out of View)
- B. Coolant Surge Tank and Pressure Cap



2.4L L4 Engine

- A. Engine Cooling Fans (Out of View)
- B. Coolant Surge Tank and Pressure Cap



3.0L V6 Engine

- A. Engine Cooling Fans (Out of View)
- B. Coolant Surge Tank and Pressure Cap

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

Heater and radiator hoses, and other engine parts, can be very hot. Do not touch them. If you do, you can be burned.

Do not run the engine if there is a leak. If you run the engine, it could lose all coolant. That could cause an engine fire, and you could be burned. Get any leak fixed before you drive the vehicle. *Notice:* Using coolant other than DEX-COOL® can cause premature engine, heater core, or radiator corrosion. In addition, the engine coolant could require changing sooner. Any repairs would not be covered by the vehicle warranty. Always use DEX-COOL (silicate-free) coolant in the vehicle.

Engine Coolant

The cooling system in the vehicle is filled with DEX-COOL® engine coolant mixture. See the *Scheduled Maintenance on page 10-2* for more information.

The following explains the cooling system and how to check and add coolant when it is low. If there is a problem with engine overheating, see *Engine Overheating on page 9-21*.

What to Use

Adding only plain water or some other liquid to the cooling system can be dangerous. Plain water and other liquids, can boil before the proper coolant mixture will. The coolant warning system is set for the proper coolant mixture. With plain water or the wrong mixture, the engine could get too hot but you would not get the overheat warning. The engine could catch fire and you or others could be burned. Depending on the engine, use a 50/50 mixture of deionised water or clean. drinkable water and DEX-COOL coolant.

Use a 50/50 mixture of deionised water or clean, drinkable water and DEX-COOL coolant. If using this mixture, nothing else needs to be added. This mixture:

- Gives freezing protection down to -37°C (-34°F), outside temperature.
- Gives boiling protection up to 129°C (265°F), engine temperature.
- Protects against rust and corrosion.
- Will not damage aluminium parts.
- Helps keep the proper engine temperature.

Notice: If an improper coolant mixture is used, the engine could overheat and be badly damaged. The repair cost would not be covered by the vehicle warranty. Too much deionised water or clean, drinkable water in the

mixture can freeze and crack the engine, radiator, heater core, and other parts.

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

Checking Coolant

The vehicle must be on a level surface when checking the coolant level.

Check to see if coolant is visible in the coolant surge tank. If the coolant inside the coolant surge tank is boiling, do not do anything else until it cools down.

9-20 Vehicle Care

If coolant is visible but the coolant level is not at or above the mark pointed to, add a 50/50 mixture of deionised water or clean drinkable water and DEX-COOL coolant.

Be sure the cooling system is cool before this is done.

If no coolant is visible in the coolant surge tank, add coolant as follows:

How to Add Coolant to the Coolant Surge Tank

A WARNING

You can be burned if you spill coolant on hot engine parts. Coolant contains ethylene glycol and it will burn if the engine parts are hot enough. Do not spill coolant on a hot engine.

Notice: This vehicle has a specific coolant fill procedure. Failure to follow this procedure

could cause the engine to overheat and be severely damaged.

A WARNING

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

Steam and scalding liquids from a hot cooling system can blow out and burn you badly. They are under pressure, and if you turn the surge tank pressure cap even a little - they can come out at high speed. Never turn the cap when the cooling system,

(Continued)

WARNING (Continued)

including the surge tank pressure cap, is hot. Wait for the cooling system and surge tank pressure cap to cool if you ever have to turn the pressure cap.



The coolant surge tank pressure cap can be removed when the cooling system, including the surge tank pressure cap and upper radiator hose, is no longer hot.

 Turn the pressure cap slowly counterclockwise. If a hiss is heard, wait for that to stop. A hiss means there is still some pressure left. 2. Keep turning the cap and remove it.



- 3. Fill the coolant surge tank with the proper mixture to the mark pointed to on the front of the coolant surge tank.
- 4. With the coolant surge tank cap off, start the engine and let it run until the upper radiator hose starts getting hot. Watch out for the engine cooling fans. By this time, the coolant level inside the coolant surge tank may be

lower. If the level is lower, add more of the proper mixture to the coolant surge tank until the level reaches the mark pointed to on the front of the coolant surge tank.

5. Replace the cap. Be sure the cap is hand–tight and fully seated.

Notice: If the pressure cap is not tightly installed, coolant loss and possible engine damage may occur. Be sure the cap is properly and tightly secured.

Engine Overheating

There is a coolant temperature gauge on the instrument panel cluster that indicates an overheated engine condition. See *Engine Coolant Temperature Gauge on page 4-16* for more information.

If the decision is made not to lift the bonnet when this warning appears, get service help right away. If the decision is made to lift the bonnet, make sure the vehicle is parked on a level surface.

Then check to see if the engine cooling fans are running. If the engine is overheating, the fans should be running. If not, do not continue to run the engine and have the vehicle serviced.

Notice: Engine damage from running the engine without coolant is not covered by the warranty.

If Steam Is Coming from the Engine Compartment

See Overheated Engine Protection Operating Mode on page 9-22 for information on driving to a safe place in an emergency.

If No Steam Is Coming from the Engine Compartment

If an engine overheat warning is displayed but no steam can be seen or heard, the problem might

9-22 Vehicle Care

not be too serious. Sometimes the engine can get a little too hot when the vehicle:

- Climbs a long hill on a hot day.
- Stops after high-speed driving.
- Idles for long periods in traffic.
- Tows a trailer.

If the overheat warning displays with no sign of steam:

- 1. Turn the air conditioning off.
- 2. Turn the heater on to the highest temperature and to the highest fan speed. Open the windows as necessary.

 In heavy traffic, let the engine idle in N (Neutral) while stopped. If it is safe to do so, pull off the road, shift to P (Park) or N (Neutral), and let the engine idle.

If the temperature overheat gauge is no longer in the overheat zone, 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.

If the warning continues, pull over, stop, and park the vehicle right away.

If there is no sign of steam, idle the engine for three minutes while parked. If the warning is still displayed, turn off the engine until it cools down. Also, see *Overheated Engine Protection Operating Mode on page 9-22*.

Overheated Engine Protection Operating Mode

This emergency operating mode allows the vehicle to be driven to a safe place in an emergency situation. If an overheated engine condition exists, an overheat protection mode which alternates firing groups of cylinders helps prevent engine damage. In this mode, there is significant loss in power and engine performance.

The engine coolant temperature warning light comes on the instrument panel, to indicate the vehicle has entered overheated engine protection operating mode. The temperature gauge also indicates an overheat condition exists. Driving extended km (miles) and/or towing a trailer in the overheat protection mode should be avoided.

Power Steering Fluid (2.0L L4 and 2.4L L4 Engines)

The vehicle has electric power steering and does not use power steering fluid.

Power Steering Fluid (3.0L V6 Engine)



See Engine Compartment Overview on page 9-6 for information on the location of the power steering fluid reservoir.

When to Check Power Steering Fluid

It is not necessary to regularly check power steering fluid unless a leak is suspected in the system or an unusual noise is heard. A fluid loss in this system could indicate a problem. Have the system inspected and repaired.

How to Check Power Steering Fluid

Notice: Extremely small amounts of contamination can cause steering system damage and cause it to not work properly. Do not allow contaminants to contact the fluid side of the reservoir cap/ dipstick or to enter the reservoir.

Check the level after the vehicle has been driven for at least 20 minutes so the fluid is warm.

To check the power steering fluid:

- 1. Turn the ignition to LOCK/OFF and let the engine compartment cool down.
- 2. Wipe the cap and the top of the reservoir clean.
- 3. Unscrew the cap and pull it straight up.

- 4. Wipe the dipstick with a clean rag.
- 5. Replace the cap and completely tighten it.
- 6. Remove the cap again and look at the fluid level on the dipstick.



When the engine is hot, the level should be at the hot MAX level. When the engine is cold, the fluid level should be between MIN and MAX on the dipstick.

What to Use

To determine what kind of fluid to use, see *Recommended Fluids and Lubricants on page 10-7*. Always use the proper fluid.

Washer Fluid

What to Use

When windscreen washer fluid is needed, be sure to read the manufacturer's instructions before use. If operating the vehicle in an area where the temperature may fall below freezing, use a fluid that has sufficient protection against freezing.

Adding Washer Fluid



Open the cap with the washer symbol on it. Add washer fluid until the tank is full. See *Engine Compartment Overview on page 9-6* for reservoir location.

Notice

- When using concentrated washer fluid, follow the manufacturer's instructions for adding water.
- Do not mix water with ready-to-use washer fluid. Water can cause the solution to freeze and damage the washer fluid tank and other parts of the washer system.

- Fill the washer fluid tank only three-quarters full when it is very cold. This allows for fluid expansion if freezing occurs, which could damage the tank if it is completely full.
- Do not use engine coolant (antifreeze) in the windscreen washer. It can damage the windscreen washer system and paint.

Brakes

This vehicle has disc brakes. Disc brake pads have built-in wear indicators that make a high-pitched warning sound when the brake pads are worn and new pads are needed. The sound can come and go or be heard all the time the vehicle is moving, except when applying the brake pedal firmly.

The brake wear warning sound means that soon the brakes will not work well. That could lead to a crash. When the brake wear warning sound is heard, have the vehicle serviced.

Notice: Continuing to drive with worn-out brake pads could result in costly brake repair.

Some driving conditions or climates can cause a brake squeal when the brakes are first applied or lightly applied. This does not mean something is wrong with the brakes.

Properly torqued wheel nuts are necessary to help prevent brake pulsation. When tyres are rotated, inspect brake pads for wear and evenly tighten wheel nuts in the proper sequence to torque specifications in *Capacities and Specifications on page 11-2.*

Brake linings should always be replaced as complete axle sets.

Brake Pedal Travel

See your dealer if the brake pedal does not return to normal height, or if there is a rapid increase in pedal travel. This could be a sign that brake service might be required.

Brake Adjustment

Every time the brakes are applied, with or without the vehicle moving, the brakes adjust for wear.

Replacing Brake System Parts

The braking system on a vehicle is complex. Its many parts have to be of top quality and work well together if the vehicle is to have really good braking. The vehicle was designed and tested with top-quality brake parts. When parts of the braking system are replaced, be sure to get new, approved replacement parts. If this is not done, the brakes might not work properly. For example, installing disc brake pads that are wrong for the vehicle, can change the balance between the front and rear brakes - for the worse. The braking performance expected can change in many other ways if the wrong replacement brake parts are installed.

Brake Fluid



The brake/clutch master cylinder reservoir is filled with DOT 3 brake fluid as indicated on the reservoir cap. See *Engine Compartment Overview on page 9-6* for the location of the reservoir.

There are only two reasons why the fluid level in the reservoir might go down:

- The fluid level goes down because of normal brake lining wear. When new linings are installed, the fluid level goes back up.
- A fluid leak in the brake/clutch hydraulic system can also cause a low fluid level. Repair the brake/clutch hydraulic system,

since a leak means that sooner or later the brakes and/or clutch will not work well.

Do not top up the brake/clutch fluid. Adding fluid does not correct a leak. If fluid is added when the linings are worn, there will be too much fluid when new brake linings are installed. Add or remove brake fluid, as necessary, only when work is done on the brake/clutch hydraulic system.

If too much brake fluid is added, it can spill on the engine and burn, if the engine is hot enough. You or others could be burned, and the vehicle could be damaged. Add brake fluid only when work is done on the brake/clutch hydraulic system. When the brake/clutch fluid falls to a low level, the brake warning light comes on. See *Brake System Warning Light on page 4-23*.

What to Add

Use only new DOT 3 brake fluid from a sealed container.

Always clean the brake/clutch fluid reservoir cap and the area around the cap before removing it. This helps keep dirt from entering the reservoir.

With the wrong kind of fluid in the brake/clutch hydraulic system, the brakes might not work well. This could cause a crash. Always use the proper brake/clutch fluid.

Notice

- Using the wrong fluid can badly damage brake/clutch hydraulic system parts. For example, just a few drops of mineral-based oil, such as engine oil, in the brake hydraulic system can damage brake hydraulic system parts so badly that they will have to be replaced. Do not let someone put in the wrong kind of fluid.
- If brake fluid is spilled on the vehicle's painted surfaces, the paint finish can be damaged. Be careful not to spill brake fluid on the vehicle. If you do, wash it off immediately.

Used brake fluid should not be disposed of with regular refuse.

Have the brake fluid changed by an authorised service centre, familiar with the requirements of the law regarding used brake fluid disposal, to help protect the environment and your health.

Battery

Refer to the replacement number shown on the original battery label when a new battery is needed. See *Engine Compartment Overview on page 9-6* for battery location.



Do not use a match or flame near a vehicle's battery. If you need more light, use a torch.

(Continued)

WARNING (Continued)

Do not smoke near a vehicle's battery.

When working around a vehicle's battery, shield your eyes with protective glasses.

Keep children away from vehicle batteries.

Batteries have acid that can burn you and gas that can explode. You can be hurt badly if you are not careful.

Follow instructions carefully when working around a battery.

Battery posts, terminals and related accessories contain lead and lead compounds which can cause cancer and reproductive harm. Wash hands after handling.

Vehicle Storage

Infrequent Usage: Remove the black, negative (-) cable from the battery to keep the battery from running down.

Extended Storage: Remove the black, negative (-) cable from the battery or use a battery trickle charger.

Starter Switch Check

When you are doing this inspection, the vehicle could move suddenly. If the vehicle moves, you or others could be injured.

1. Before starting this check, be sure there is enough room around the vehicle. 2. Firmly apply both the parking brake and the regular brake. See *Electric Parking Brake on page 8-32.*

Do not use the accelerator pedal, and be ready to turn off the engine immediately if it starts.

 For automatic transmission vehicles, try to start the engine in each gear. The vehicle should start only in P (Park) or N (Neutral). If the vehicle starts in any other position, contact your dealer for service.

For manual gearbox vehicles, put the shift lever in Neutral, push the clutch pedal down halfway and try to start the engine. The vehicle should start only when the clutch pedal is pushed down all the way to the floor. If the vehicle starts when the clutch pedal is not pushed all the way down, contact your dealer for service.

Automatic Transmission Shift Lock Control Function Check

When you are doing this inspection, the vehicle could move suddenly. If the vehicle moves, you or others could be injured.

- Before starting this check, be sure there is enough room around the vehicle. It should be parked on a level surface.
- 2. Firmly apply the parking brake. See *Electric Parking Brake on page 8-32.*

Be ready to apply the regular brake immediately if the vehicle begins to move.

 With the engine off, turn the ignition on, but do not start the engine. Without applying the regular brake, try to move the gear lever out of P (Park) with normal effort. If the shift lever moves out of P (Park), contact your dealer for service.

Ignition Transmission Lock Check

While parked, and with the parking brake set, try to turn the ignition to LOCK/OFF in each shift lever position.

- The ignition should turn to LOCK/OFF only when the shift lever is in P (Park).
- The ignition key should come out only in LOCK/OFF.

Contact your dealer if service is required.

Park Brake and P (Park) Mechanism Check

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

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

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

Contact your dealer if service is required.

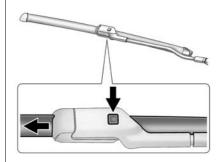
Wiper Blade Replacement

Windscreen wiper blades should be inspected for wear or cracking. See *Scheduled Maintenance on page 10-2* for more information.

It is a good idea to clean or replace the wiper blade assembly on a regular basis or when worn.

Notice: Allowing the wiper arm to touch the windscreen when no wiper blade is installed could damage the windscreen. Any damage that occurs would not be covered by your warranty. Do not allow the wiper arm to touch the windscreen. To replace the wiper blade:

1. Pull the windscreen wiper arm connector away from the windscreen.



- 2. Press the button in the middle of the wiper arm connector, and pull the wiper blade away from the arm connector.
- 3. Remove the wiper blade.
- 4. Reverse steps 1–3 for wiper blade replacement.

Headlamp Aiming

Headlamp alignment has been preset and should need no further adjustment.

If the vehicle is damaged in a crash, the headlamp alignment may be affected. If adjustment to the headlamps is necessary, see your dealer.

Bulb Replacement

For the proper type of replacement bulbs, see *Replacement Bulbs on page* 9-36.

For any bulb-changing procedure not listed in this section, contact your dealer.

Halogen Bulbs

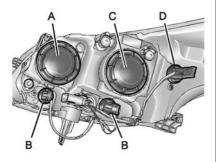
Halogen bulbs have pressurised gas inside and can burst if you drop or scratch the bulb. You or others could be injured. Be sure to read and follow the instructions on the bulb package.

High Intensity Discharge (HID) Lighting

The dipped beam high intensity discharge lighting system operates at a very high voltage. If you try to service any of the system components, you could be seriously injured. Have your dealer or a qualified technician service them.

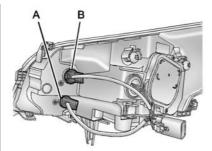
After an HID headlamp bulb has been replaced, the beam might be a slightly different shade than it was originally. This is normal.

Headlamps, Front Indicator and Parking Lamps



Base Headlamp Assembly (Passenger Side Shown, Driver Side Similar)

- A. Main Beam Headlamp
- B. Indicator Lamps
- C. Dipped-Beam Headlamp
- D. Daytime Running Lamp (DRL)/ Position Lamp

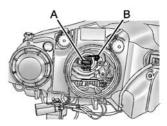


Up-Level Headlamp Assembly (Passenger Side Shown, Driver Side Similar)

- A. Indicator Lamp
- B. Daytime Running Lamp (DRL)/ Position Lamp

Dipped-Beam Headlamp (Base)

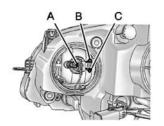
- For the driver side bulb, remove the windscreen washer bottle filler neck by firmly pulling it straight up and out of the bottle.
- 2. Remove the cap from the back of the headlamp assembly by turning it anticlockwise.



- 3. Disconnect the electrical connector (A).
- Disengage the spring clip (B) from the bulb by pressing down on the end and then swing upwards.
- 5. Remove the bulb from the lamp assembly.
- 6. Install a new bulb in the lamp assembly.
- 7. Install the spring clamp.
- 8. Connect the electrical connector.
- 9. Replace the cap from the back of the headlamp assembly by turning it clockwise.

Main-Beam Headlamp (Base)

- For the driver side bulb, remove the windscreen washer bottle filler neck by firmly pulling it straight up and out of the bottle.
- 2. Remove the cap from the back of the headlamp assembly by turning it anticlockwise.



 Disconnect the electrical connector by pressing the release tab (A) and pulling the connector from the bulb.

- Disengage the upper spring clip end (B) from the bulb by pressing down and then swing upwards.
- 5. Disengage the lower spring clip end (C) from the bulb by pressing down and then swing downwards.
- 6. Remove the bulb from the lamp assembly.
- 7. Install a new bulb in the lamp assembly.
- 8. Install the spring clamp.
- 9. Connect the electrical connector.
- 10. Replace the cap from the back of the headlamp assembly by turning it clockwise.

Main/Dipped-Beam Headlamp (Uplevel)

The main/dipped-beam headlamps on the uplevel headlamp system are High Intensity Discharge (HID) and should be replaced at the dealer.

Front Indicator and Daytime Running Lamp (DRL)/Position Lamp (Base and Uplevel)

To replace the front indicator or DRL/position lamp:

- For the driver side bulb, remove the windscreen washer bottle filler neck by firmly pulling it straight up and out of the bottle.
- 2. Remove the bulb socket from the headlamp assembly by turning it counterclockwise.
- 3. Remove the bulb from the socket.
- 4. Replace the bulb in the bulb socket.
- 5. Install the bulb socket in the headlamp assembly by turning it clockwise.

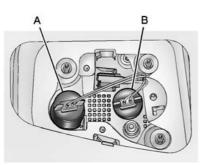
6. For the driver side, reinstall the windscreen washer bottle filler neck by firmly pushing it straight into the bottle. Ensure that the filler neck clip engages into the underbonnet electrical centre retainer.

Fog Lamps

To replace the front fog lamp bulb:

- 1. Remove the six access panel fasteners located under the front fascia.
- 2. Disconnect the electrical connector from the fog lamp bulb assembly.
- Remove the bulb by turning it anticlockwise and pulling it straight out of the assembly.
- 4. Install the new bulb by turning it clockwise into the assembly.
- 5. Reverse Steps 1 and 2 to reinstall.

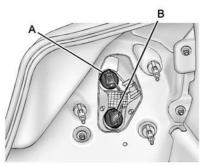
Tail lamps, Indicator, Brake lamps, and Reversing Lamps



- A. Reverse Light
- B. Tail lamp

Boot Deck Inboard Tail lamp and Reversing Lamp

- 1. Open the boot. See *Boot on* page 1-11.
- 2. Remove the push pins and pull back the boot deck trim.
- 3. Remove the bulb socket by turning anticlockwise and pulling straight out.
- 4. Remove the bulb from the socket.
- 5. Install the new bulb in the bulb socket.
- 6. Install the bulb socket by turning clockwise.
- 7. Install the boot deck trim.



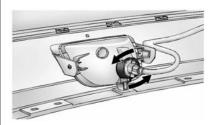
- A. Brake lamp/Tail lamp
- B. Indicator Lamp

Notice: Improper lamp assembly removal and installation can cause leaks and water intrusion which may cause damage to the tail lamp. Do not remove the tail lamp assembly to replace a bulb. Use the boot opening to access the bulb. To replace any one of these bulbs:

Brake lamp/Tail lamp and Indicator Lamp

- 1. Open the boot. See *Boot on* page 1-11.
- 2. Remove the push pins and pull the boot trim away from the tail lamp assembly.
- 3. Remove the bulb socket from the tail lamp assembly by turning it anticlockwise.
- 4. Remove the bulb from the socket by turning the bulb anticlockwise one-quarter turn and pulling it straight out.
- 5. Install a new bulb into the socket.
- Install the bulb socket into the tail lamp assembly by turning it clockwise.
- 7. Install the boot trim and push pins.

Rear Fog Lamps

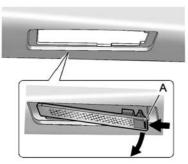


- 1. Locate the bulb assembly under the rear fascia.
- 2. Remove the bulb socket by turning it anticlockwise and pulling it straight out of the assembly.
- 3. Remove the bulb by turning it anticlockwise.
- 4. Install the new bulb by turning it clockwise into the socket.
- Install the socket by turning it clockwise into the lamp assembly.

9-36 Vehicle Care

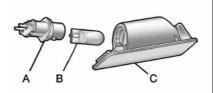
Number Plate Lamp

To replace one of these bulbs:



Passenger Side Shown, Driver Side Similar

- 1. Push the release tab (A) toward the lamp assembly.
- 2. Pull the lamp assembly down to remove.



- A. Bulb Socket
- B. Bulb

C. Lamp Assembly

- Turn the bulb socket (A) anticlockwise to remove it from the lamp assembly (C).
- 4. Pull the bulb (B) straight out of the bulb socket.
- Push the replacement bulb straight into the bulb socket and turn the bulb socket clockwise to install it into the lamp assembly.
- 6. Push the lamp assembly back into position until the release tab locks into place.

Replacement Bulbs

Exterior Lamp	Bulb Number
Reversing Lamp	W16W
Deck Lid Tail lamp	W3W LL
Front Fog Lamp	H10
Front Turn Signal Light	WY21W
Main-Beam Headlamp (Base)	H1
Number Plate Lamp	W5W LL
Dipped-Beam Headlamp (Base)	H7LL
Front Position Light	W21/5WLL
Rear Fog Lamp	P21W
Rear Indicator Lamp	WY21W
Brake Lamp/ Tail lamp	W21W

For replacement bulbs not listed here, contact your dealer.

Electrical System

Electrical System Overload

The vehicle has fuses and circuit breakers to protect against an electrical system overload.

When the current electrical load is too heavy, the circuit breaker opens and closes, protecting the circuit until the current load returns to normal or the problem is fixed. This greatly reduces the chance of circuit overload and fire caused by electrical problems. Fuses and circuit breakers protect power devices in the vehicle.

Replace a bad fuse with a new one of the identical size and rating.

If there is a problem on the road and a fuse needs to be replaced, the same amperage fuse can be borrowed. Choose some feature of the vehicle that is not needed to use and replace it as soon as possible.

Headlamp Wiring

An electrical overload may cause the lamps to go on and off, or in some cases to remain off. Have the headlamp wiring checked right away if the lamps go on and off or remain off.

Windscreen Wipers

If the wiper motor overheats due to heavy snow or ice, the windscreen wipers will stop until the motor cools and will then restart.

Although the circuit is protected from electrical overload, overload due to heavy snow or ice may cause wiper linkage damage. Always clear ice and heavy snow from the windscreen before using the windscreen wipers.

If the overload is caused by an electrical problem and not snow or ice, be sure to get it fixed.

Fuses

The wiring circuits in the vehicle are protected from short circuits by fuses. This greatly reduces the chance of damage caused by electrical problems.

To check a fuse, look at the silver-coloured band inside the fuse. If the band is broken or melted, replace the fuse. Be sure to replace a bad fuse with a new one of the identical size and rating. Fuses of the same amperage can be temporarily borrowed from another fuse location, if a fuse goes out. Replace the fuse as soon as possible.

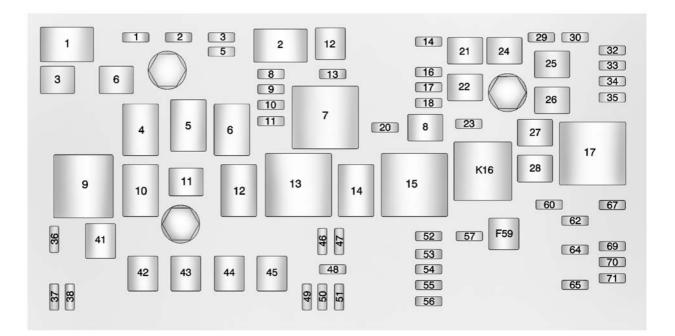
To identify and check fuses, circuit breakers, and relays, see *Engine Compartment Fuse box on page 9-38* and *Instrument Panel Fuse Block on page 9-42.*

Engine Compartment Fuse Block

The engine compartment fuse block is located on the driver side of the engine compartment, near the battery.

Notice: Spilling liquid on any electrical component on the vehicle may damage it. Always keep the covers on any electrical component.

Vehicle Care 9-39



9-40 Vehicle Care

The vehicle may not be equipped with all of the fuses, relays, and features shown.

MiniFuses	Usage
1	Transmission Control Module Battery
2	Engine Control Module Battery
3	Air Conditioning Compressor Clutch
5	Engine Control Module Ignition
8	Even Fuel Injectors/ Ignition Coils
9	Odd Fuel Injectors/ Ignition Coils
10	Engine Control Module
11	Emissions
13	Transmission/Fuel System Control Module Ignition

MiniFuses	Usage
14	Dipped Beam/ DRL Right
16	Engine Run/ Crank Ignition
17	SDM Ignition
18	Vehicle Air Purification System
20	Fuel Pump
23	Variable Effort Steering
29	Left Seat Power Lumber Control
30	Right Seat Power Lumber Control
32	Reverse Lamp, Dome Lamp
33	Front Heated Seats
34	Antilock Brake System Module
35	Amplifier
36	Spare

MiniFuses	Usage
37	Right Main Beam
38	Left Main Beam
46	Cooling Fans
47	Emissions
48	Foglamp
49	Right HID Dipped Beam
50	Left HID Dipped Beam
51	Horn
52	Instrument Cluster Ignition
53	Air Quality Sensor, Headlamp Position Motors
54	Instrument Panel Run/Crank, HVAC Controls, Headlamp Position Control
55	Front Power Windows/Mirrors

MiniFuses	Usage
56	Windscreen Washer
57	Electric Steering Column Lock
60	Heated Mirror
62	Canister Vent Solenoid, Alarm
64	Adaptive Forward Lighting/Headlamp Levelling
65	Anti-Theft Warning Siren Horn
67	Fuel System Control Module
69	Battery Voltage Sensor
70	Rain Sensor, Lane Departure Warning, Ultrasonic Park Assist
71	PEPS BATT

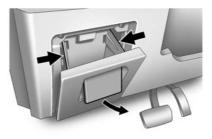
J-Case Fuses	Usage
6	Front Wiper
12	Starter
21	Rear Power Window
22	Sunroof
24	Front Power Window
25	PEPS Motors, Entry/Start
26	Anti-locking Brake System Pump
27	Electric Parking Brake
28	Rear Window Demister
41	Brake Vacuum Pump
42	Cooling Fan K2
43	Heated Rear Seats
44	Headlamp Washer
45	Cooling Fan K1
59	Diesel Fuel Heater

Mini Relays	Usage
7	Powertrain
9	Cooling Fan K2
13	Cooling Fan K1
15	Run/Crank
16	Diesel Fuel Heater
17	Window/Mirror Demister

Micro Relays	Usage
1	Air Conditioning Compressor Clutch
2	Starter Solenoid
3	Cooling Fan K7
4	Front Wiper Speed
5	Front Wiper On/Off
6	Dipped Beam DRL Right
8	Fuel Pump

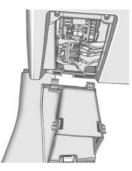
Micro Relays	Usage
10	Cooling Fan K3
11	Headlamp Washer
12	Cooling Fan K12 (Petrol Engines)
14	Dipped Beam HID/ Left DRL

Instrument Panel Fuse Block

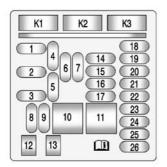


The instrument panel fuse block is located in the instrument panel, on the driver side of the vehicle. To access the fuses, open the fuse panel door by pulling down at the top.

Press in on the sides of the door to release it from the instrument panel.



Pull the door toward you to release it from the hinge.



Instrument Panel Fuse Block

The vehicle may not be equipped with all of the fuses, relays, and features shown.

Fuses	Usage	Fuses	Usage
1	Steering Wheel Controls Backlight		Number Plate Lamp, Centre High
2	Left Mirror Indicator, Right Rear Indicator, Left Front Indicator, Headlamp Washer		Mounted Brake Lamp, Rear Fog Lamps, Right Brake Iamp, Left Tail Iamp, Hazard Switch
3	Right Mirror Indicator, Left Brake Iamp, Right Front Indicator, Left Rear Indicator	8	Backlight, Boot Release, Indicator Light Dimming, Keyless Start Indicator Light,
4	Radio		Windscreen Washer Pump
5	Universal Hands-Free Phone, Digital Audio Broadcast	9	Left Dipped Beam Headlamp, Left Daytime Running Lamp
6	Front Accessory Power Outlet	10	Power Door Locks (J-Case Fuse)
7	Console Bin Power Outlet	11	Front Heater Ventilation Air Conditioning/Blower (J-Case Fuse)

Fuses	Usage
12	Passenger Seat (Circuit Breaker)
13	Driver Seat (Circuit Breaker)
14	Diagnostic Link Connector
15	Airbag, SDM
16	Boot Release
17	Heater Ventilation Air Conditioning Controller
18	Audio Main
19	Displays
20	Spare
21	Instrument Panel Cluster
22	Ignition Switch

Fuses	Usage
23	Right Dipped Beam Headlamp, Right Daytime Running Lamp
24	Ambient Lighting, Boot Lamp, Switch Backlighting, Key Capture
25	Spare
26	Electric Steering Column Lock
Relays	Usage
K1	Boot Release
K2	Not Used

K3

Power Outlet Relay

Wheels and Tyres

Tyre Condition, Wheel Condition

Drive over edges slowly and at right angles, if possible. Driving over sharp edges can cause tyre and wheel damage. Do not trap tyres on the curb when parking. Regularly check the wheels for damage. Seek the assistance of a dealer in the event of damage or unusual wear.

Tyres

Winter tyres of size 225/50R17, or 225/45R18 XL are to be purchased and used during the winter driving season. See *Tyre Pressure on page 11-6*.

Winter Tyres

Tyres of size 225/55R17, 245/ 45R18, and 245/40R19 must not be used as winter tyres for vehicles with diesel or gas engines. In accordance with country-specific regulations, affix the speed sticker in the driver's field of view.

Tyre Designations

e.g., 225/55 R 17 95 H

225 = Tyre width, mm

55 = Cross-section ratio (tyre height to tyre width), %

R = Belt type: Radial

RF = Type: RunFlat

17 = Wheel diameter, inches

95 = Load index e.g., 95 is equivalent to 690 kg

H = Speed code letter

Speed code letter:

Q = up to 160 km/h

- S = up to 180 km/h
- T = up to 190 km/h
- H = up to 210 km/h

V = up to 240 km/h

W = up to 270 km/h

Tyre Pressure

Check the pressure of cold tyres at least every 14 days and before any long journey. This also applies to vehicles with a tyre pressure monitoring system. Unscrew the valve cap.



The recommended tyre pressure is shown on the label attached to the vehicle's centre pillar (B-pillar). See *Vehicle Load Limits on page 8-10* and *Tyre Pressure on page 11-6* for more information. The tyre pressure data refers to cold tyres.

It applies to summer and winter tyres. Always inflate the spare tyre to the pressure specified for full load. The ECO tyre pressure serves to achieve the lowest fuel consumption possible. Incorrect tyre pressures will impair safety, vehicle handling, comfort, and fuel economy and will increase tyre wear.

If the pressure is too low, this can result in considerable tyre warmup and internal damage, leading to tread separation and even to tyre blow-out at high speeds.

If the tyre pressure shall be reduced or increased on a vehicle with tyre pressure monitoring system, switch off ignition.

Tyre Pressure Monitor System

Notice: Modifications made to the Tyre Pressure Monitor System (TPMS) by anyone other than an authorised service facility may void authorisation to use the system.

The Tyre Pressure Monitor System (TPMS) uses radio and sensor technology to check tyre pressure levels. The TPMS sensors monitor the air pressure in your vehicle's tyres and transmit tyre pressure readings to a receiver located in the vehicle.

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

As an added safety feature, your vehicle has been equipped with a tyre pressure monitoring system (TPMS) that illuminates a low tyre pressure telltale when one or more of your tyres is significantly under-inflated.

Accordingly, when the low tyre pressure telltale illuminates, you should stop and check your tyres as soon as possible, and inflate them to the proper pressure. Driving on a significantly under-inflated tyre causes the tyre to overheat and can lead to tyre failure. Under-inflation also reduces fuel efficiency and tyre tread life, and may affect the vehicle's handling and stopping ability.

Please note that the TPMS is not a substitute for proper tyre maintenance, and it is the driver's responsibility to maintain correct tyre pressure, even if under-inflation has not reached the level to trigger illumination of the TPMS low tyre pressure telltale.

Your vehicle has also been equipped with a TPMS malfunction indicator to indicate when the system is not operating properly. The TPMS malfunction indicator is combined with the low tyre pressure telltale. When the system detects a malfunction, the telltale will flash for approximately one minute and then remain continuously illuminated. This sequence will continue upon subsequent vehicle start-ups as long as the malfunction exists.

When the malfunction indicator is illuminated, the system may not be able to detect or signal low tyre pressure as intended. TPMS malfunctions may occur for a variety of reasons, including the installation of replacement or alternate tyres or wheels on the vehicle that prevent the TPMS from functioning properly. Always check the TPMS malfunction telltale after replacing one or more tyres or wheels on your vehicle to ensure that the replacement or alternate tyres and wheels allow the TPMS to continue to function properly.

See Tyre Pressure Monitor Operation on page 9-47 for additional information.

Tyre Pressure Monitor Operation

This vehicle may have a Tyre Pressure Monitor System (TPMS). The TPMS is designed to warn the driver when a low tyre pressure condition exists. TPMS sensors are mounted onto each tyre and wheel assembly, excluding the spare tyre and wheel assembly. The TPMS sensors monitor the air pressure in the tyres and transmit the tyre pressure readings to a receiver located in the vehicle.



When a low tyre pressure condition is detected, the TPMS illuminates the low tyre pressure warning light located on the instrument cluster. If the warning light comes on, stop as soon as possible and inflate the tires to the recommended pressure shown on the Tire and Loading Information label. See *Vehicle Load Limits on page 8-10*.

A message to check the pressure in a specific tyre may display in the Driver Information Centre (DIC). The low tyre pressure warning light and the DIC warning message, if equipped, come on at each ignition cycle until the tyres are inflated to the correct inflation pressure. Using the DIC, it may be possible to view the tyre pressure levels. For additional information and details about the DIC operation and displays, see *Driver Information Centre (DIC) on page 4-31*.

The low tyre pressure warning light may come on in cool weather when the vehicle is first started, and then turn off as the vehicle is driven. This could be an early indicator that the air pressure is getting low and needs to be inflated to the proper pressure.

A Tyre and Loading Information label shows the size of the original equipment tyres and the correct inflation pressure for the tyres when they are cold. See *Vehicle Load Limits on page 8-10*, for an example of the Tyre and Loading Information label and its location. Also see *Tyre Pressure on page 9-45*. The TPMS can warn about a low tyre pressure condition, but it does not replace normal tyre maintenance. See *Tyre Inspection on page 9-50, Tyre Rotation on page 9-50, and Tyres on page 9-44.*

Notice: Tyre sealant materials are not all the same. A non-approved tyre sealant could damage the TPMS sensors. TPMS sensor damage caused by using an incorrect tyre sealant is not covered by the vehicle warranty. Always use only the GM-approved tyre sealant available through your dealer or included in the vehicle.

TPMS Malfunction Light and Message

The TPMS will not function properly if one or more of the TPMS sensors are missing or inoperable. When the system detects a malfunction, the low tyre pressure warning light, defined above, flashes for about one minute and then stays on for the remainder of the ignition cycle. A DIC warning message may also display. The malfunction light and DIC warning message, if equipped, come on at each ignition cycle until the problem is corrected. Some of the conditions that can cause these to come on are:

 One of the road tyres has been replaced with the spare tyre. The spare tyre does not have a TPMS sensor. The malfunction light and the DIC message, if equipped, should go off after the road tyre is replaced and the sensor matching process is performed successfully. See "TPMS Sensor Matching Process" later in this section.

- The TPMS sensor matching process was not done or not completed successfully after rotating the tyres. The malfunction light and the DIC message, if equipped, should go off after successfully completing the sensor matching process. See "TPMS Sensor Matching Process" later in this section.
- One or more TPMS sensors are missing or damaged. The malfunction light and the DIC message, if equipped, should go off when the TPMS sensors are installed and the sensor matching process is performed successfully. See your dealer for service.
- Replacement tyres or wheels do not match the original equipment tyres or wheels. Tyres and wheels other than those recommended could prevent the TPMS from functioning properly. See Buying New Tyres on page 9-52.

 Operating electronic devices or being near facilities using radio wave frequencies similar to the TPMS could cause the TPMS sensors to malfunction.

If the TPMS is not functioning properly, it cannot detect or signal a low tyre condition. See your dealer for service if the TPMS malfunction light and DIC message, if equipped, come on and stay on.

TPMS Sensor Matching Process

Each TPMS sensor has a unique identification code. The identification code needs to be matched to a new tyre/wheel position after rotating the vehicle's tyres or replacing one or more of the TPMS sensors. Also, the TPMS sensor matching process should be performed after replacing a spare tyre with a road tyre containing the TPMS sensor. The malfunction light and the DIC message, if equipped, should go off at the next ignition cycle. The sensors are matched to the tyre/ wheel positions, using a TPMS relearn tool, in the following order: left front tyre, right front tyre, right rear tyre, and left rear tyre. See your dealer for service or to purchase a relearn tool.

You have two minutes to match the first tyre/wheel position, and five minutes overall to match all four tyre/wheel positions. If it takes longer, the matching process stops and must be restarted.

The TPMS sensor matching process is outlined below:

- 1. Apply the parking brake.
- 2. Turn the ignition to ON/RUN with the engine off.
- 3. Use the MENU button to select the Vehicle Information Menu in the Driver Information Centre (DIC).

- 4. Use the thumbwheel to scroll to the Tyre Pressure Menu Item screen.
- Press and hold the SET/CLR button to begin the sensor matching process.

A message requesting acceptance of the process may display.

6. If requested, press the SET/CLR button again to confirm the selection.

The horn sounds twice to signal the receiver is in relearn mode and the TYRE LEARN or TYRE LEARNING ACTIVE message displays on the DIC screen.

- 7. Start with the left front tyre.
- Place the relearn tool against the tyre sidewall, near the valve stem. Then press the button to activate the TPMS sensor. A horn chirp confirms that the sensor identification code has been matched to this tyre and wheel position.

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- 9. Proceed to the right front tyre, and repeat the procedure in Step 8.
- Proceed to the right rear tyre, and repeat the procedure in Step 8.
- 11. Proceed to the left rear tyre, and repeat the procedure in Step 8. The horn sounds two times to indicate the sensor identification code has been matched to the left rear tyre, and the TPMS sensor matching process is no longer active. The TYRE LEARN or TYRE LEARNING ACTIVE message on the DIC display screen goes off.
- 12. Turn the ignition to LOCK/OFF.
- Set all four tyres to the recommended air pressure level as indicated on the Tyre and Loading Information label.

Tyre Inspection

We recommend that the tyres, including the spare tyre, if the vehicle has one, be inspected for signs of wear or damage at least once a month.

Replace the tyre if:

- The indicators at three or more places around the tyre can be seen.
- There is cord or fabric showing through the tyre's rubber.
- The tread or sidewall is cracked, cut, or snagged deep enough to show cord or fabric.
- The tyre has a bump, bulge, or split.

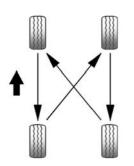
 The tyre has a puncture, cut, or other damage that cannot be repaired well because of the size or location of the damage.

Tyre Rotation

Tyres should be rotated at the intervals specified in the Maintenance Schedule. See *Scheduled Maintenance on page 10-2*.

Tyres are rotated to achieve a uniform wear for all tyres. The first rotation is the most important.

If at any time unusual wear is noticed, rotate the tyres as soon as possible and check the wheel alignment. Also check for damaged tyres or wheels. See When It Is Time for New Tyres on page 9-52 and Wheel Replacement on page 9-55.



Use this rotation pattern when rotating the tyres.

Do not include the compact spare tyre in the tyre rotation.

Adjust the front and rear tyres to the recommended inflation pressure on the Tyre and Loading Information label after the tyres have been rotated. See Tyre Pressure on page 9-45 and Vehicle Load Limits on page 8-10.

Reset the Tyre Pressure Monitor System. See *Tyre Pressure Monitor Operation on page 9-47.*

Check that all wheel nuts are properly tightened. See "Wheel Nut Torque" under *Capacities and Specifications on page 11-2*.

Rust or dirt on a wheel, or on the parts to which it is fastened, can make wheel nuts become loose after time. The wheel could come off and cause an accident. When changing a wheel, remove any rust or dirt from places where the wheel attaches to the vehicle.

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WARNING (Continued)

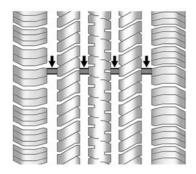
In an emergency, a cloth or a paper towel can be used; however, use a scraper or wire brush later to remove all rust or dirt.

Lightly coat the centre of the wheel hub with wheel bearing grease after a wheel change or tyre rotation to prevent corrosion or rust build-up. Do not get grease on the flat wheel mounting surface or on the wheel nuts or bolts.

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When It Is Time for New Tyres

Factors such as maintenance, temperatures, driving speeds, vehicle loading, and road conditions affect the wear rate of the tyres.



Tread wear indicators are one way to tell when it is time for new tyres. Tread wear indicators appear when the tyres have only 1.6 mm (1/16 in) or less of tread remaining. See *Tyre Inspection on page 9-50* and *Tyre Rotation on page 9-50* for more information. The rubber in tyres ages over time. This also applies for the spare tyre, if the vehicle has one, even if it is never used. Multiple conditions including temperatures, load conditions, and inflation pressure maintenance affect how fast ageing takes place. Tyres will typically need to be replaced due to wear before they may need to be replaced due to age. Consult the tyre manufacturer for more information on when tyres should be replaced.

Vehicle Storage

Tyres age when stored normally mounted on a parked vehicle. Park a vehicle that will be stored for at least a month in a cool, dry, clean area away from direct sunlight to slow ageing. This area should be free of grease, petrol, or other substances that can deteriorate rubber.

Parking for an extended period can cause flat spots on the tyres that may result in vibrations while driving. When storing a vehicle for at least a month, remove the tyres or raise the vehicle to reduce the weight from the tyres.

Buying New Tyres

GM has developed and matched specific tyres for the vehicle. The original equipment tyres installed were designed to meet General Motors Tyre Performance Criteria Specification (TPC Spec) system rating. When replacement tyres are needed, GM strongly recommends buying tyres with the same TPC Spec rating.

GM's exclusive TPC Spec system considers over a dozen critical specifications that impact the overall performance of the vehicle, including brake system performance, ride and handling, traction control, and tyre pressure monitoring performance. GM's TPC Spec number is moulded onto the tyre's sidewall near the tyre size. If the tyres have an all-season tread design, the TPC Spec number will be followed by MS for mud and snow.

GM recommends replacing all the tyres at the same time. Uniform tread depth on all tyres will help to maintain the performance of the vehicle. Braking and handling performance may be adversely affected if all the tyres are not replaced at the same time. See *Tyre Inspection on page 9-50* and *Tyre Rotation on page 9-50* for information on proper tyre rotation.

\land WARNING

Tyres could explode during improper service. Attempting to mount or dismount a tyre could cause injury or death. Only your dealer or authorised tyre service centre should mount or dismount the tyres.

Mixing tyres of different sizes, brands, or types may cause loss of control of the vehicle, resulting in a crash or other vehicle damage. Use the correct size, brand, and type of tyres on all wheels.

Never drive faster than the speed the tyres are rated, regardless of the legal speed limit. When frequently driving the vehicle at high speeds and/or for prolonged periods of time, check with your vehicle/tyre dealer for the proper type of tyres to use for the specific driving and weather conditions.

Using bias-ply tyres on the vehicle may cause the wheel rim flanges to develop cracks after many miles of driving. A tyre and/or wheel could fail suddenly and cause a crash. Use only radial-ply tyres with the wheels on the vehicle. If the vehicle tyres must be replaced with a tyre that does not have a TPC Spec number, make sure they are the same size, load range, speed rating, and construction (radial) as the original tyres.

Vehicles that have a tyre pressure monitoring system could give an inaccurate low-pressure warning if non-TPC Spec rated tyres are installed. See Tyre Pressure Monitor System on page 9-46.

The Tyre and Loading Information label indicates the original equipment tyres on the vehicle. See *Vehicle Load Limits on page 8-10*, for the label location and more information about the Tyre and Loading Information label.

Different Size Tyres and Wheels

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

\land WARNING

If different sized wheels are used, there may not be an acceptable level of performance and safety if tyres not recommended for those wheels are selected. This increases the chance of a crash and serious injury. Only use GM specific wheel and tyre systems

(Continued)

WARNING (Continued)

developed for the vehicle, and have them properly installed by a GM certified technician.

See Buying New Tyres on page 9-52 and Accessories and Modifications on page 9-3.

Wheel Alignment and Tyre Balance

The tyres and wheels were aligned and balanced at the factory to provide the longest tyre life and best overall performance. Adjustments to wheel alignment and tyre balancing will not be necessary on a regular basis. However, check the alignment if there is unusual tyre wear or if the vehicle is pulling to one side or the other. If the vehicle vibrates when driving on a smooth road, the tyres and wheels might need to be rebalanced. See your dealer for proper diagnosis.

Wheel Replacement

Replace any wheel that is bent, cracked, or badly rusted or corroded. If wheel nuts keep coming loose, the wheel, wheel bolts, and wheel nuts should be replaced. If the wheel leaks air, replace it. Some aluminium wheels can be repaired. See your dealer if any of these conditions exist.

Your dealer will know the kind of wheel that is needed.

Each new wheel should have the same load-carrying capacity, diameter, width, offset, and be mounted the same way as the one it replaces.

Replace wheels, wheel bolts, wheel nuts, or Tyre Pressure Monitor System (TPMS) sensors with new GM original equipment parts.

Using the wrong replacement wheels, wheel bolts, or wheel nuts can be dangerous. It could affect the braking and handling of the vehicle. Tyres can lose air, and cause loss of control, causing a crash. Always use the correct wheel, wheel bolts, and wheel nuts for replacement.

Notice: The wrong wheel can also cause problems with bearing life, brake cooling, speedometer or odometer calibration, headlamp aim, bumper height, vehicle ground clearance, and tyre or tyre chain clearance to the body and chassis.

Used Replacement Wheels

Replacing a wheel with a used one is dangerous. How it has been used or how far it has been driven may be unknown. It could fail suddenly and cause a crash. When replacing wheels, use a new GM original equipment wheel.

Tyre Chains

Use tyre chains or other traction devices only where legal and only when necessary.

Before using tyre chains, check with the tyre manufacturer to make sure tyre chains are compatible with the tyres on the vehicle. Follow the manufacturer's instructions. Tyre chains are not permitted on 225/50R17, 225/55R17 and 245/ 45R18 size tyres, which are original equipment summer tyres that may have come on the vehicle. Tyre chains are, also, not permitted on 245/40R19 size tyres, which are an available after-sales tyre. Do not use tyre chains on the spare tyre.

Tyre chains are only permitted on the front wheels of winter tyres 225/50R17, or 225/45R18 XL. See *Winter Tyres on page 9-44*.

Always use fine mesh chains that add no more than 10 mm to the tyre tread and the inboard sides, including the chain lock.

Notice: To help avoid damage to the vehicle, drive slowly, do not spin the wheels, and readjust or remove the device if it contacts the vehicle.

If a Tyre Goes Flat

It is unusual for a tyre to blow out while driving, especially if the tyres are maintained properly. If air goes out of a tyre, it is much more likely to leak out slowly. But if there ever is a blowout, here are a few tips about what to expect and what to do:

If a front tyre fails, the flat tyre creates a drag that pulls the vehicle toward that side. Take your foot off the accelerator pedal and grip the steering wheel firmly. Steer to maintain lane position, and then gently brake to a stop, well off the road, if possible.

A rear blowout, particularly on a curve, acts much like a skid and may require the same correction as used in a skid. Stop pressing the accelerator pedal and steer to straighten the vehicle. It may be very bumpy and noisy. Gently brake to a stop, well off the road, if possible.

Driving on a flat tyre will cause permanent damage to the tyre. Re-inflating a tyre after it has been driven on while severely underinflated or flat may cause a blowout and a serious crash. Never attempt to re-inflate a tyre that has been driven on while severely underinflated or flat. Have your dealer or an authorised tyre service centre repair or replace the flat tyre as soon as possible.

Lifting a vehicle and getting under it to do maintenance or repairs is dangerous without the appropriate safety equipment and training. If a jack is provided with the vehicle, it is designed only for

(Continued)

Vehicle Care 9-57

WARNING (Continued)

changing a flat tyre. If it is used for anything else, you or others could be badly injured or killed if the vehicle slips off the jack. If a jack is provided with the vehicle, only use it for changing a flat tyre.

If a tyre goes flat, avoid further tyre and wheel damage by driving slowly to a level place, well off the road, if possible. Turn on the hazard warning flashers. See *Hazard Warning Flashers on page 5-5*.

Changing a tyre can be dangerous. The vehicle can slip off the jack and roll over or fall causing injury or death. Find a level place to change the tyre.

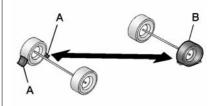
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WARNING (Continued)

To help prevent the vehicle from moving:

- 1. Apply the parking brake firmly.
- Put an automatic transmission in P (Park) or a manual gearbox in 1 (First) or R (Reverse).
- 3. Turn off the engine and do not restart while the vehicle is raised.
- 4. Do not allow passengers to remain in the vehicle.
- 5. Place wheel blocks on both sides of the tyre at the opposite corner of the tyre being changed.

When the vehicle has a flat tyre (B), use the following example as a guide to assist in the placement of the wheel blocks (A).



- A. Wheel Block
- B. Flat Tyre

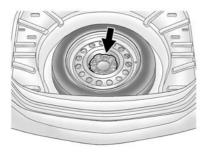
The following information explains how to repair or change a tyre.

Tyre Changing

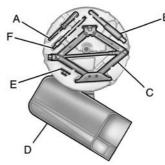
Removing the Spare Tyre and Tools

The equipment you need is located in the boot.

- 1. Open the boot.
- 2. Remove the spare tyre cover.



- 3. Turn the retainer nut anticlockwise and remove the spare tyre.
- 4. Place the spare tyre next to the tyre being changed.



- A. Screwdriver
- B. Tow Hook (If Equipped)
- C. Jack
- D. Wrench (In Bag)
- E. Trim Removal (If Equipped)
- F. Fastener (If Equipped)

The jack and tools are stored below the spare tire.

Place the tools next to the tire being changed.

Removing the Flat Tyre and Installing the Spare Tyre

- 1. Do a safety check before proceeding. See *If a Tyre Goes Flat on page 9-56* for more information.
- 2. Turn the wheel wrench anticlockwise to loosen the wheel nut caps.

If needed, finish loosening them by hand. The nut caps will not come off of the wheel cover.

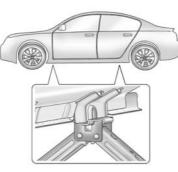
The edge of the wheel cover could be sharp, so do not try to remove the cover with your bare hands. Do not drop the cap or lay it face down, as it could become scratched or damaged.

Store the wheel cover in the boot until you have the flat tyre repaired or replaced.



 Turn the wheel wrench anticlockwise to loosen all of the wheel nuts, but do not remove them yet.

Notice: Make sure that the jack lift head is in the correct position or you may damage your vehicle. The repairs would not be covered by your warranty.



4. Position the jack head, as shown.

Set the jack to the necessary height before positioning it below the jacking point.

 Attach the jack lift assist tool to the jack by fitting both ends of the jack and tool over one another.

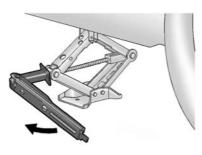
Getting under a vehicle when it is lifted on a jack is dangerous. If the vehicle slips off the jack, you could be badly injured or killed. Never get under a vehicle when it is supported only by a jack.

Raising the vehicle with the jack improperly positioned can damage the vehicle and even make the vehicle fall. To help avoid personal injury and vehicle damage, be sure to fit the jack lift head into the proper location before raising the vehicle.

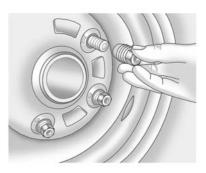
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\land WARNING

Lifting a vehicle and getting under it to do maintenance or repairs is dangerous without the appropriate safety equipment and training. If a jack is provided with the vehicle, it is designed only for changing a flat tyre. If it is used for anything else, you or others could be badly injured or killed if the vehicle slips off the jack. If a jack is provided with the vehicle, only use it for changing a flat tyre.



 Turn the jack handle clockwise to raise the vehicle far enough off the ground for the compact spare to fit under the vehicle.



- 7. Remove all of the wheel nuts.
- 8. Remove the flat tyre.

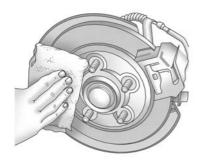
\land WARNING

Rust or dirt on a wheel, or on the parts to which it is fastened, can make wheel nuts become loose after time. The wheel could come off and cause an accident. When changing a wheel, remove any rust or dirt from places where the wheel attaches to the vehicle.

(Continued)

WARNING (Continued)

In an emergency, a cloth or a paper towel can be used; however, use a scraper or wire brush later to remove all rust or dirt.



- 9. Remove any rust or dirt from the wheel bolts, mounting surfaces, and spare wheel.
- 10. Install the compact spare tyre.

Never use oil or grease on bolts or nuts because the nuts might come loose. The vehicle's wheel could fall off, causing a crash.

- Put the wheel nuts back on with the rounded end of the nuts toward the wheel. Turn each nut clockwise by hand until the wheel is held against the hub.
- 12. Lower the vehicle by turning the jack handle anticlockwise. Lower the jack completely.

Wheel nuts that are improperly or incorrectly tightened can cause the wheels to become loose or come off. The wheel nuts should be tightened with a torque wrench to the proper torque specification

(Continued)

WARNING (Continued)

after replacing. Follow the torque specification supplied by the aftermarket manufacturer when using accessory locking wheel nuts. See *Capacities and Specifications on page 11-2* for original equipment wheel nut torque specifications.

Notice: Improperly tightened wheel nuts can lead to brake pulsation and disc damage. To avoid expensive brake repairs, evenly tighten the wheel nuts in the proper sequence and to the proper torque specification. See *Capacities and Specifications on page 11-2* for the wheel nut torque specification.



- Tighten the wheel nuts firmly in a crisscross sequence, as shown.
- Lower the jack all the way and remove the jack from under the vehicle.
- 15. Tighten the wheel nuts firmly with the wheel wrench.

Notice: Wheel covers will not fit on the vehicle's compact spare. If you try to put a wheel cover on the compact spare, the cover or the spare could be damaged. Storing a Flat or Spare Tyre and Tools

Storing a jack, a tyre, or other equipment in the passenger compartment of the vehicle could cause injury. In a sudden stop or collision, loose equipment could strike someone. Store all these in the proper place.

Store the spare or flat tyre in one of the ways shown below. Storage instructions will vary depending on the bolt that came with the vehicle and how it attaches to the vehicle. This vehicle will have a slide in fastener or a screw in fastener.

Storing a Flat or Spare Tyre and Tools With a Screw in Fastener

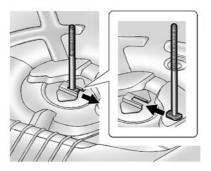


- 1. Turn the wrench anticlockwise to remove the fastener.
- 2. Replace the fastener with the one provided in the foam.
- 3. Turn the wrench clockwise to tighten the fastener.
- 4. Replace the foam, jack and tools, and the tyre.

- 5. Turn the retainer nut clockwise to secure the tyre.
- 6. Place the floor cover on the wheel.

Storing a Flat or Spare Tyre and Tools With a Slide In Fastener

1. If the flat tyre is larger than the spare tyre, use the longer mounting bolt.



2. Slide the shorter bolt to remove it from the floor and insert the longer one.

- 3. Replace the jack and tools in their original storage location.
- 4. Place the tyre, lying flat, facing up in the spare tyre well.
- 5. Turn the retainer nut clockwise to secure the tyre.
- 6. Place the floor cover on the wheel.

The compact spare is for temporary use only. Replace the compact spare tyre with a full-size tyre as soon as you can.

Compact Spare Tyre

Driving with more than one compact spare tyre at a time could result in loss of braking and handling. This could lead to a crash and you or others could be injured. Use only one compact spare tyre at a time. If your vehicle is equipped with a compact spare tyre it was fully inflated when the vehicle was new, it can lose air after a time. Check the inflation pressure regularly. It should be 60 psi (420 kPa).

After installing the compact spare on the vehicle, stop as soon as possible and make sure the spare tyre is correctly inflated. The compact spare should not be driven at speeds over 80 km/h (50 mph) or for distances over 5 000 km (3,000 miles). Of course, it is best to replace the spare with a full-size tyre as soon as possible. The spare tyre will last longer and be in good shape in case it is needed again.

Notice: When the compact spare is installed, do not take the vehicle through an automatic car wash with guide rails. The compact spare can get caught on the rails which can damage the tyre, wheel, and other parts of the vehicle.

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Notice: Tyre chains will not fit the compact spare. Using them can damage the vehicle and can damage the chains too. Do not use tyre chains on the compact spare.

Do not use the spare tyre on other vehicles.

Do not mix the compact spare tyre or wheel with other wheels or tyres. They will not fit.

Keep the spare tyre and its wheel together.

Jump Starting

For more information about the vehicle battery, see *Battery on page 9-27*.

If the battery has run down, try to use another vehicle and some jumper cables to start your vehicle. Be sure to use the following steps to do it safely.

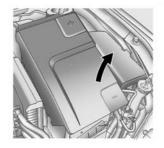
Batteries can hurt you. They can be dangerous because:

- They contain acid that can burn you.
- They contain gas that can explode or ignite.
- They contain enough electricity to burn you.

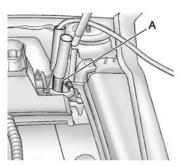
If you do not follow these steps exactly, some or all of these things can hurt you. *Notice:* Ignoring these steps could result in costly damage to the vehicle that would not be covered by the warranty.

Trying to start the vehicle by pushing or pulling it will not work, and it could damage the vehicle.

The jump start positive (A) is located under a trim cover in the engine compartment on the driver side of the vehicle.



This post is used instead of a direct connection to the battery.



1. Check the other vehicle. It must have a 12-volt battery with a negative earth system.

Notice: Only use a vehicle that has a 12-volt system with a negative earth for jump starting. If the other vehicle does not have a 12-volt system with a negative earth, both vehicles can be damaged.

2. Position the two vehicles so that they are not touching.

3. Apply the parking brake firmly and put the shift lever in P (Park). See *Shifting Into Park on page 8-22.*

Notice: If any accessories are left on or plugged in during the jump starting procedure, they could be damaged. The repairs would not be covered by the vehicle warranty. Whenever possible, turn off or unplug all accessories on either vehicle when jump starting the vehicle.

 Turn the ignition to LOCK/OFF and switch off all lights and accessories in both vehicles, except the hazard warning flashers if needed.

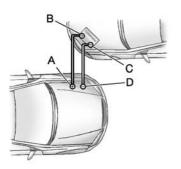
An electric fan can start up even when the engine is not running and can injure you. Keep hands, clothing and tools away from any underbonnet electric fan.

Using a match near a battery can cause battery gas to explode. People have been hurt doing this, and some have been blinded. Use a torch if you need more light.

Be sure the battery has enough water. You do not need to add water to the battery installed in your new vehicle. But if a battery has filler caps, be sure the right amount of fluid is there. If it is low, add water to take care of that first. If you do not, explosive gas could be present.

Battery fluid contains acid that can burn you. Do not get it on you. If you accidentally get it in your eyes or on your skin, flush the place with water and get medical help immediately.

Fans or other moving engine parts can injure you badly. Keep your hands away from moving parts once the engine is running.



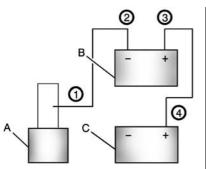
 Connect one end of the red positive (+) cable to the jump start positive (+) post (A). Use a remote positive (+) terminal if the vehicle has one.

- Do not let the other end of the red positive (+) cable touch metal. Connect it to the positive (+) terminal of the good battery (B). Use a remote positive (+) terminal if the vehicle has one.
- Connect one end of the black negative (-) cable to the negative (-) terminal of the good battery (C). Use a remote negative (-) terminal if the vehicle has one.

Do not let the other end touch anything until the next step. The other end of the negative (-) cable does not go to the dead battery. It goes to a heavy, unpainted metal engine part or to a remote negative (-) terminal on the vehicle with the dead battery.

- Connect the other end of the black negative (-) cable to an unpainted heavy metal engine part (D) away from the dead battery, but not near engine parts that move.
- Start the engine in the vehicle with the good battery and run the engine at idle speed for at least four minutes.
- Try to start the vehicle that had the dead battery. If it will not start after a few tries, it probably needs service.

Notice: If the jump leads are connected or removed in the wrong order, electrical shorting may occur and damage the vehicle. The repairs would not be covered by the vehicle warranty. Always connect and remove the jump leads in the correct order, making sure that the cables do not touch each other or other metal.



Jump Lead Removal

- A. Heavy, Unpainted Metal Engine Part or Remote Negative (-) Terminal
- B. Good Battery or Remote Positive (+) and Remote Negative (-) Terminals
- C. Dead Battery or Remote Positive (+) Terminal

To disconnect the jump leads from both vehicles:

- 1. Disconnect the black negative (-) cable from the vehicle that had the dead battery.
- 2. Disconnect the black negative (-) cable from the vehicle with the good battery.
- Disconnect the red positive (+) cable from the vehicle with the good battery.
- 4. Disconnect the red positive (+) cable from the other vehicle.
- Return the caps over the positive (+) and negative (-) terminals to their original positions.

Towing

Towing the Vehicle

Notice: To avoid damage, the disabled vehicle should be towed with all four wheels off the ground. Care must be taken with vehicles that have low ground clearance and/or special equipment. Always flatbed on a car carrier.

Consult your dealer or a professional towing service if the disabled vehicle must be towed.

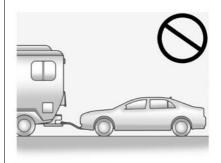
To tow the vehicle behind another vehicle for recreational purposes, such as behind a motor home, see "Recreational Vehicle Towing" in this section.

Recreational Vehicle Towing

Recreational vehicle towing means towing the vehicle behind another vehicle, such as behind a motor home. The two most common types of recreational vehicle towing are known as dinghy towing and dolly towing. Dinghy towing is towing the vehicle with all four wheels on the ground. Dolly towing is towing the vehicle with two wheels on the ground and two wheels up on a device known as a dolly. Here are some important things to consider before recreational vehicle towing:

- The towing capacity of the towing vehicle. Be sure to read the tow vehicle manufacturer's recommendations.
- How far the vehicle will be towed. Some vehicles have restrictions on how far and how long they can tow.
- Does the vehicle have the proper towing equipment. See your dealer or trailering professional for additional advice and equipment recommendations.
- Is the vehicle ready to be towed. Just as preparing the vehicle for a long trip, make sure the vehicle is prepared to be towed.

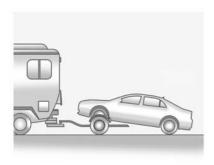
Dinghy Towing



Notice: If the vehicle is towed with all four wheels on the ground, the drivetrain components could be damaged. The repairs would not be covered by the vehicle warranty. Do not tow the vehicle with all four wheels on the ground.

The vehicle was not designed to be towed with all four wheels on the ground. If the vehicle must be towed, a dolly should be used. See "Dolly Towing" that follows for more information.

Dolly Towing from the Front



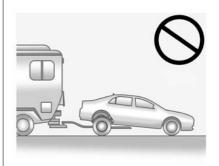
Vehicles with front-wheel drive can be dolly towed from the front.

Use the following procedure to dolly tow the vehicle from the front:

- Attach the dolly to the tow vehicle following the dolly manufacturer's instructions.
- 2. Drive the front wheels onto the dolly.

- Shift the automatic transmission into P (Park) or a manual gearbox into 1 (First) gear.
- 4. Firmly apply the parking brake.
- Use an adequate clamping device designed for towing to ensure that the front wheels are locked into the straight-ahead position.
- 6. Secure the vehicle to the dolly following the manufacturer's instructions.
- Release the parking brake only after the vehicle being towed is firmly attached to the towing vehicle.
- 8. Turn the ignition to LOCK/OFF.

Dolly Towing from the Rear



The vehicle cannot be dolly towed from the rear.

Appearance Care

Exterior Care

Washing the Vehicle

To preserve the vehicle's finish, wash it often and out of direct sunlight.

Notice: Do not use petroleum based, acidic, or abrasive cleaning agents as they can damage the vehicle's paint, metal, or plastic parts. If damage occurs, it would not be covered by the vehicle's warranty. Approved cleaning products can be obtained from your dealer. Follow all manufacturer directions regarding correct product usage, necessary safety precautions, and appropriate disposal of any vehicle care product.

Notice: Avoid using high pressure washes closer than 30 cm (12 in) to the surface of the vehicle. Use of power washers

exceeding 8,274 kPa (1,200 psi) can result in damage or removal of paint and decals.

Rinse the vehicle well, before washing and after, to remove all cleaning agents completely. If they are allowed to dry on the surface, they could stain.

Dry the finish with a soft, clean chamois or an all-cotton towel to avoid surface scratches and water spotting.

Finish Care

Application of aftermarket clearcoat sealant/wax materials is not recommended. If painted surfaces are damaged, see your dealer to have the damage assessed and repaired. Foreign materials such as calcium chloride and other salts, ice melting agents, road oil and tar, tree sap, bird droppings, chemicals from industrial chimneys, etc., can damage the vehicle's finish if they remain on painted surfaces. Wash the vehicle as soon as possible. If necessary, use non-abrasive cleaners that are marked safe for painted surfaces to remove foreign matter.

Occasional hand waxing or mild polishing should be done to remove residue from the paint finish. See your dealer for approved cleaning products.

Notice: Machine compounding or aggressive polishing on a base coat/clear coat paint finish may damage it. Use only non-abrasive waxes and polishes that are made for a base coat/clear coat paint finish on the vehicle.

To keep the paint finish looking new, keep the vehicle garaged or covered whenever possible.

Protecting Exterior Bright Metal Parts

Regularly clean bright metal parts with water or chrome polish on chrome or stainless steel trim, if necessary.

For aluminium, never use auto or chrome polish, steam, or caustic soap to clean. A coating of wax, rubbed to a high polish, is recommended for all bright metal parts.

Cleaning Exterior Lamps/ Lenses and Emblems

Use only lukewarm or cold water, a soft cloth, and a car washing soap to clean exterior lamps and lenses. Follow instructions under "Washing the Vehicle" later in this section.

Windscreen and Wiper Blades

Clean the outside of the windscreen with glass cleaner.

Clean rubber blades using a lint-free cloth or paper towel soaked with windscreen washer fluid or a mild detergent. Wash the windscreen thoroughly when cleaning the blades. Insects, road grime, sap, and a build-up of vehicle wash/wax treatments may cause wiper streaking.

Replace the wiper blades if they are worn or damaged. Damage can be caused by extreme dusty conditions, sand, salt, heat, sun, snow, and ice.

Weatherstrips

Apply silicone grease on weatherstrips to make them last longer, seal better, and not stick or squeak. See *Recommended Fluids and Lubricants on page 10-7*.

Tyres

Use a stiff brush with tyre cleaner to clean the tyres.

Notice: Using petroleum-based tyre dressing products on the vehicle may damage the paint finish and/or tyres. When applying a tyre dressing, always wipe off any overspray from all painted surfaces on the vehicle.

Wheels and Trim - Aluminium or Chrome

Use a soft, clean cloth with mild soap and water to clean the wheels. After rinsing thoroughly with clean water, dry with a soft, clean towel. A wax may then be applied.

Notice: Chrome wheels and other chrome trim may be damaged if the vehicle is not washed after driving on roads that have been sprayed with magnesium, calcium, or sodium chloride.

9-72 Vehicle Care

These chlorides are used on roads for conditions such as ice and dust. Always wash the chrome with soap and water after exposure.

Notice: To avoid surface damage, do not use strong soaps, chemicals, abrasive polishes, cleaners, brushes, or cleaners that contain acid on aluminium or chrome-plated wheels. Use only approved cleaners. Also, never drive a vehicle with aluminium or chrome-plated wheels through an automatic car wash that uses silicone carbide tyre cleaning brushes. Damage could occur and the repairs would not be covered by the vehicle warranty.

Steering, Suspension, and Chassis Components

Visually inspect front and rear suspension and steering system for damaged, loose, or missing parts or signs of wear. Inspect the power steering for proper hook-up, binding, leaks, cracks, chafing, etc. Visually check constant velocity joints, rubber boots, and axle seals for leaks.

Body Component Lubrication

Lubricate all key lock cylinders, bonnet hinges, tailgate hinges, and the steel fuel flap hinge unless the components are plastic. Applying silicone grease on weatherstrips with a clean cloth will make them last longer, seal better, and not stick or squeak.

Underbody Maintenance

Use plain water to flush dirt and debris from the vehicle's underbody. Your dealer or an underbody car washing system can do this. If not removed, rust and corrosion can develop.

Sheet Metal Damage

If the vehicle is damaged and requires sheet metal repair or replacement, make sure the body repair shop applies anti-corrosion material to parts repaired or replaced to restore corrosion protection.

Original manufacturer replacement parts will provide the corrosion protection while maintaining the vehicle warranty.

Finish Damage

Quickly repair minor chips and scratches with touch-up materials available from your dealer to avoid corrosion. Larger areas of finish damage can be corrected in your dealer's body and paint shop.

Chemical Paint Spotting

Airborne pollutants can fall upon and attack painted vehicle surfaces causing blotchy, ring-shaped discolourations, and small, irregular dark spots etched into the paint surface.

Interior Care

To prevent dirt particle abrasions, regularly clean the vehicle's interior. Immediately remove any soiling. Note that newspapers or dark garments that can transfer colour to home furnishings can also permanently transfer colour to the vehicle's interior.

Use a soft bristle brush to remove dust from knobs and crevices on the instrument cluster. Using a mild soap solution, immediately remove hand lotions, sunscreen, and insect repellent from all interior surfaces or permanent damage may result.

Your dealer may have products for cleaning the interior. Use cleaners specifically designed for the surfaces being cleaned to prevent permanent damage. To prevent overspray, apply all cleaners directly to the cleaning cloth. Cleaners should be removed quickly. Never allow cleaners to remain on the surface being cleaned for extended periods of time. Cleaners may contain solvents that can become concentrated in the interior. Before using cleaners, read and adhere to all safety instructions on the label. While cleaning the interior, maintain adequate ventilation by opening the doors and windows.

To prevent damage, do not clean the interior using the following cleaners or techniques:

- Never use a razor or any other sharp object to remove a soil from any interior surface.
- Never use a brush with stiff bristles.
- Never rub any surface aggressively or with excessive pressure.
- Do not use laundry detergents or dishwashing soaps with degreasers. For liquid cleaners, use approximately 20 drops per 3.78 L (1 gal) of water.

A concentrated soap solution will leave a residue that creates streaks and attracts dirt. Do not use solutions that contain strong or caustic soap.

- Do not heavily saturate the upholstery when cleaning.
- Do not use solvents or cleaners containing solvents.

Interior Glass

To clean, use a terry cloth fabric dampened with water. Wipe droplets left behind with a clean dry cloth. Commercial glass cleaners may be used, if necessary, after cleaning the interior glass with plain water.

Notice: To prevent scratching, never use abrasive cleaners on automotive glass. Abrasive cleaners or aggressive cleaning may damage the rear window demister.

Fabric/Carpet

Start by vacuuming the surface using a soft brush attachment. If a rotating brush attachment is being used during vacuuming, only use it on the floor carpet. Before cleaning, gently remove as much of the soil as possible using one of the following techniques:

- Gently blot liquids with a paper towel. Continue blotting until no more soil can be removed.
- For solid soil, remove as much as possible prior to vacuuming.

To clean:

- Saturate a clean lint-free colourfast cloth with water or club soda. Microfiber cloth is recommended to prevent lint transfer to the fabric or carpet.
- 2. Remove excess moisture by gently wringing until water does not drip from the cleaning cloth.
- Start on the outside edge of the soil and gently rub toward the centre. Fold the cleaning cloth to a clean area frequently to prevent forcing the soil in to the fabric.
- Continue gently rubbing the soiled area until there is no longer any colour transfer from the soil to the cleaning cloth.

5. If the soil is not completely removed, use a mild soap solution followed only by club soda or plain water.

If the soil is not completely removed, it may be necessary to use a commercial upholstery cleaner or spot lifter. Test a small hidden area for colourfastness before using a commercial upholstery cleaner or spot lifter. If ring formation occurs, clean the entire fabric or carpet.

Following the cleaning process, a paper towel can be used to blot excess moisture.

Instrument Panel, Vinyl, and Other Plastic Surfaces

Use a soft microfiber cloth dampened with water to remove dust and loose dirt. For a more thorough cleaning, use a soft microfiber cloth dampened with a mild soap solution.

Notice: Soaking or saturating leather, especially perforated leather, as well as other interior surfaces, may cause permanent damage. Wipe excess moisture from these surfaces after cleaning and allow them to dry naturally. Never use heat, steam, spot lifters or spot removers. Do not use cleaners that contain silicone or wax-based products. Cleaners containing these solvents can permanently change the appearance and feel of leather or soft trim and are not recommended.

Do not use cleaners that increase gloss, especially on the instrument panel. Reflected glare can decrease visibility through the windscreen under certain conditions.

Notice: Use of air fresheners may cause permanent damage to plastics and painted surfaces. If an air freshener comes in contact with any plastic or painted surface in the vehicle, blot immediately and clean with a soft cloth dampened with a mild soap solution. Damage caused by air fresheners would not be covered by the vehicle warranty.

Cleaning the Centre Stack

Cleaning the Display

Notice: Using abrasive cleaners when cleaning glass surfaces could scratch the glass. Use only a soft cloth and do not spray cleaner directly on the system as it could affect the mechanical parts.

Do not apply spray cleaner directly to the system, the cleaner could affect the mechanical parts.

Do not wipe the panel with a hard cloth or use a volatile liquid such as paint thinners, it could scratch the surface or erase the characters on the buttons.

Floor Mats

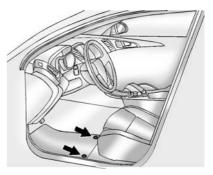
If a floor mat is the wrong size or is not properly installed, it can interfere with the pedals. Interference with the pedals can cause unintended acceleration and/or increased stopping distance which can cause a crash and injury. Make sure the floor mat does not interfere with the pedals. Use the following guidelines for proper floor mat usage:

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- The original equipment floor mats were designed for your vehicle. If the floor mats need replacing, it is recommended that GM certified floor mats be purchased. Non-GM floor mats may not fit properly and may interfere with the pedals. Always check that the floor mats do not interfere with the pedals.
- Use the floor mat with the correct side up. Do not turn it over.
- Do not place anything on top of the driver side floor mat.
- Use only a single floor mat on the driver side.
- Do not place one floor mat on top of another.

Removing and Replacing the Floor Mats

Pull up on the rear of the floor mat to unlock each retainer and remove.



Reinstall by lining up the floor mat retainer openings over the carpet retainers and snapping into position.

Make sure the floor mat is properly secured in place.

Verify the floor mat does not interfere with the pedals.

Service and Maintenance

General Information

General Information 10-1

Scheduled Maintenance

Scheduled Maintenance 10-2

Recommended Fluids,

General Information

Service Information

In order to ensure economical and safe vehicle operation and to maintain the value of your vehicle, it is of vital importance that all maintenance work is carried out at the proper intervals as specified.

Confirmations

Confirmation of service is recorded in the Service and Warranty Booklet. The date and mileage is completed with the stamp and signature of the servicing workshop. Make sure that the Service and Warranty Booklet is completed correctly as continuous proof of service is essential if any warranty or goodwill claims are to be met, and is also a benefit when selling the vehicle.

Oil Life Monitoring

The service intervals are based on several parameters depending on usage and are calculated using these parameters.

The engine oil life monitoring lets you know when to change the engine oil.

Scheduled Maintenance

Service Schedules

Maintenance interval

Every 1 year /15 000 km (10,000 miles) (whichever occurs first)

Maintenance I: Use Maintenance I for the first service or if Maintenance II was performed previously. Maintenance II: Use Maintenance II if the previous service performed was Maintenance I.

If code number 82 is displayed in the Driver Information Centre (DIC) or the CHANGE ENGINE OIL SOON message is on the display and the previous maintenance has been carried out at least 10 months before, then the relevant maintenance should also be carried out.

Service Operation	Maintenance I	Maintenance II
Replace engine oil and filter. 1)	R	R
Inspect for any leaks or damage. 2)	I	I
Inspect engine air filter. 3)	I	I
Inspect tyres for inflation pressures and wear.	I	I
Inspect brake system. 4)	I	I
Inspect engine coolant and windscreen washer fluid levels and add fluid as needed.	I	I
Inspect suspension and steering components. 5)	I	I
Inspect wiper blades and operation of exterior lighting. 6)	I	I
Inspect drive belts.	I	I
Perform any required additional services - see applicable section.	I	I
Check for field actions.	I	I
Replace brake fluid. 7)	-	R
Inspect engine cooling system. 8)	-	I
Inspect restraint system components. 9)	-	
Inspect powertrain and driveline components.	-	I
Lubricate body components. 10)	-	I

1

I: Inspect these items and their related parts. If necessary, correct, clean, replenish, adjust or replace.

R: Replace or change.

1) If driving under severe conditions: short distance driving, extensive idling or driving in dusty conditions, engine oil and the filter may require replacement more often. For diesel engines, replace when code number 82 is displayed in the DIC or the CHANGE ENGINE OIL SOON message is on the display.

2) Fluid loss in any vehicle system could indicate a problem. The system should be inspected and repaired and the fluid level checked. Add fluid if needed.

3) If driving regularly in dusty conditions, inspect the filter more frequently. The filter may require replacement more often.

4) Visually inspect brake lines and hoses for binding, leaks, cracks, chafing, etc. Inspect disc brake pads for wear and discs for surface

condition. Inspect drum brake linings/shoes for wear or cracks. Inspect other brake parts, including drums, wheel cylinders, callipers, handbrake, etc.

5) Visually inspect front and rear suspension and steering system for damage, loose or missing parts or signs of wear. Inspect power steering components for binding, cracks, chafing, etc.

6) Inspect wiper blades for wear, cracking, or contamination. Clean the windscreen and wiper blades, if contaminated. Replace wiper blades that are worn or damaged.

7) If driving under severe conditions: driving in hilly or mountainous terrain, or towing a trailer frequently, the brake fluid may require replacement more often.

8) Visually inspect hoses and have them replaced if they are cracked, swollen, or deteriorated. Inspect all pipes, fittings, and clamps; replace with genuine parts if needed. To help ensure correct operation, a pressure test of the cooling system and pressure cap and cleaning the outside of the radiator and air conditioning condenser is recommended.

9) Make sure the safety belt reminder light and safety belt assemblies are working correctly. Look for any other loose or damaged safety belt system parts. If you see anything that might keep a safety belt system from doing its job, have it repaired. Ensure any torn or frayed safety belts are replaced.

10) Lubricate all key lock cylinders, door hinges and latches, bonnet hinges and latches, and boot lid hinges and latches. More frequent lubrication may be required when exposed to a corrosive environment. Applying silicone grease on weatherstrips with a clean cloth will make them last longer, seal better, and not stick or squeak.

Service Operation	Interval
Replace pollen filter.	Every 45 000 km (30,000 miles) / 2 years
Replace air filter.	Every 60 000 km (40,000 miles) / 4 years
Replace spark plugs.	Every 150 000 km (100,000 miles) / 4 years
Replace ignition cable.	Every 45 000 km (30,000 miles) / 3 years
Replace diesel fuel filter.	Every 60 000 km (40,000 miles) / 2 years
Replace engine coolant.	Every 240 000 km (150,000 miles) / 5 years
Replace automatic transmission oil.	Every 150 000 km (100,000 miles) for normal conditions, every 75 000 km (50,000 miles) for severe conditions
Replace auxiliary belt.	Every 150 000 km (100,000 miles) / 10 years
Replace timing belt, if equipped.	Every 150 000 km (100,000 miles) / 10 years
Replace timing chain.	Maintenance free
Inspect valve clearance, adjust if required.	Every 150 000 km (100,000 miles) / 10 years

General Maintenance Items

Item	Service Operation
All	Check all systems for interference or binding and for damaged or missing parts. Replace parts as needed. Replace any components that have excessive wear.
Automatic transmission	Change automatic transmission fluid and filter if the vehicle is mainly driven under one or more of these conditions:
	 In heavy city traffic where the outside temperature regularly reaches 32 °C or higher.
	In hilly or mountainous terrain.
	When doing frequent trailer towing.
	Uses such as found in taxi, police, or delivery service.
Belts	Visually inspect belt for fraying, excessive cracks, or obvious damage. Replace belt if necessary.
Tyre condition & inflation pressure	Tyre condition should be inspected before driving and tyre pressure should be checked each time you fill your fuel tank or at least once a month using a tyre pressure gauge.
Wheel alignment	If necessary, rotate and balance wheels.

Additional Servicing

Extreme Operating Conditions

Extreme operating conditions are given when at least one of the following occurs frequently:

- Cold starts
- Stop and go
- Trailer towing
- Gradients and/or high altitudes
- Poor road surfaces
- Sand and dust
- Extreme temperature fluctuations

Police vehicles, taxis, and driving school vehicles are also classified as operating under extreme conditions.

Under extreme operating conditions, it may be necessary to have certain scheduled service work done more frequently than the scheduled intervals.

Seek technical advice on the servicing requirements dependent on the specific operating conditions.

Recommended Fluids, Lubricants, and Parts

Recommended Fluids and Lubricants

Only use products that have been tested and approved. Damage resulting from the use of non-approved materials will not be covered by the warranty.

Operating materials are hazardous and could be poisonous. Handle with care. Pay attention to information given on the containers.

Engine Oil

Engine oil is identified by its quality and its viscosity. Quality is more important than viscosity when selecting which engine oil to use. The oil quality ensures e.g. engine cleanliness, wear protection and oil ageing control, whereas viscosity grade gives information on the oil's thickness over a temperature range.

Engine Oil Quality

dexos 2

Selecting the Right Engine Oil

Selecting the right engine oil depends on the proper oil specification and viscosity grade.

Use and ask for engine oils with the dexos certification mark. Oils meeting the requirements of your vehicle should have the dexos certification mark on the container. This certification mark indicates that the oil has been approved to the dexos specification. Your vehicle was filled at the factory with dexos approved engine oil.

Use only engine oil that is approved to the dexos specification or an equivalent engine oil of the appropriate viscosity grade. Failure to use the recommended engine oil or equivalent can result in engine damage not covered by the vehicle warranty.

If you are unsure whether your oil is approved to the dexos specification, ask your service provider.

Use of substitute engine oils if dexos is unavailable: In the event that dexos approved engine oil is not available at an oil change or for maintaining proper oil level, you may use substitute engine oil of the qualities mentioned above. Use of oils that do not meet the dexos specification, however, may result in reduced performance under certain circumstances.

Topping Up Engine Oil

Engine oils of different manufacturers and brands can be mixed as long as they comply with the required engine oil (quality and viscosity).

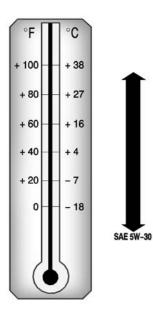
If engine oil of the required quality is not available, a maximum of 1 litre of ACEA A3/B4 or A3/B3 grade may be used (only once between each oil change). The viscosity should be of the correct rating.

Use of engine oil with only ACEA A1/B1 or only A5/B5 quality is prohibited, since it can cause longterm engine damage under certain operating conditions.

Engine Oil Additives

The use of engine oil additives could cause damage and invalidate the warranty.

Engine Oil Viscosity Grades



SAE 5W-30 is the best viscosity grade for your vehicle. Do not use other viscosity grade oils such as SAE 10W-30, 10W-40 or 20W-50.

Cold temperature operation:

If in an area of extreme cold, where the temperature falls below -25°C, an SAE 0W-30 oil should be used. An oil of this viscosity grade will provide easier cold starting for the engine at extremely low temperatures. When selecting an oil of the appropriate viscosity grade be sure to always select an oil that meets the dexos specification.

- Down to -25°C and below: 0W-30, 0W-40.
- Down to -25°C and below: 5W-30, 5W-40.

Note: Diesel engine can not use xW-30.

The SAE viscosity grade gives information of the thickness of the oil. Multigrade oil is indicated by two figures. The first figure, followed by a W, indicates the low temperature viscosity and the second figure the high temperature viscosity.

Coolant and Antifreeze

Use only silicate-free long life coolant (LLC) antifreeze.

The system is factory filled with coolant designed for excellent corrosion protection and frost protection down to approx. -28 °C. This concentration should be maintained all year round. The use of additional coolant additives intended to give additional corrosion protection or seal against minor leaks can cause function problems. Liability for consequences resulting from the use of additional coolant additives will be rejected.

10-10 Service and Maintenance

Brake and Clutch Fluid

Only use DOT4 brake fluid.

Over time, brake fluid absorbs moisture which will reduce braking effectiveness. The brake fluid should therefore be replaced at the specified interval.

Brake fluid should be stored in a sealed container to avoid water absorption.

Ensure brake fluid does not become contaminated.

Technical Data

Vehicle Identification

Vehicle Identification	
Number (VIN)	11-1

Vehicle Data

Capacities and	
Specifications	11-2
Engine Drive Belt Routing	11-5
Tyre Pressure	11-6

Vehicle Identification

Vehicle Identification Number (VIN)



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This legal identifier is in the front corner of the instrument panel, on the left side of the vehicle. It can be seen through the windscreen from outside. The VIN also appears on the Vehicle Certification and Service Parts labels and certificates of title and registration.

Engine Identification

The eighth character in the VIN is the engine code. This code identifies the vehicle's engine, specifications, and replacement parts. See "Engine Specifications" under *Capacities and Specifications on page 11-2* for the vehicle's engine code.

Vehicle Data

Capacities and Specifications

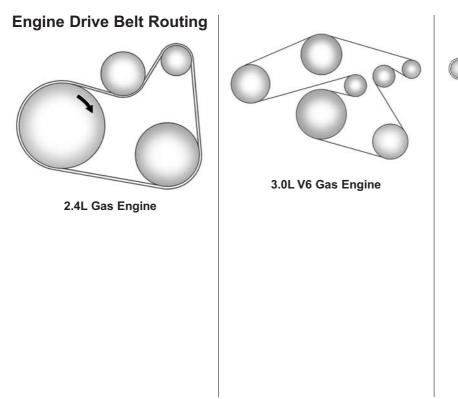
Amplication	Capacities		
Application	Metric	English	
Air Conditioning Refrigerant R1234yf	For the air conditioning system refrigerant charge amount, see the refrigerant label located under the bonnet. See your dealer for more information.		
Engine Cooling System			
2.0L L4 Engine (diesel)	6.1 L	6.4 qt	
2.4L L4 Engine	7.1 L	7.5 qt	
3.0L V6 Engine	7.8 L	8.2 qt	
Engine Oil with Filter			
2.0L L4 Engine (diesel)	6 L	6.3 qt	
2.4L L4 Engine	4.7 L	5.0 qt	
3.0L V6 Engine	5.7 L	6.0 qt	
Fuel Tank	67.0 L	17.7 gal	
Wheel Nut Torque	150 N• m	110 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.			

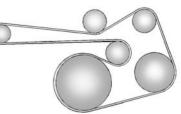
		2		
Carbon Dioxide (g/km)	1590 kg (3505 lb)	283	145	196
Fuel Economy (L/100 km)	1590 kg (3505 lb)	12.0	6.2	8.3
2.4L L4 Engine with electric power steering				
Carbon Dioxide (g/km)	1590 kg (3505 lb)	269	140	188
Fuel Economy (L/100 km)	1590 kg (3505 lb)	11.5	6.0	8.0

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Fuel Consumption and Emissions mormation (cont d)					
	Equivalent Inertia Mass	Urban	Extra-Urban	Combined	
3.0L V6 Engine					
Carbon Dioxide (g/km)	1700 kg (3748 lb)	338	162	226	
Fuel Economy (L/100 km)	1700 kg (3748 lb)	14.4	6.9	9.6	
2.0L L4 Engine (diesel)					
Carbon Dioxide (g/km)	TBD kg (TBD lb)	TBD	TBD	TBD	
Fuel Economy (L/100 km)	TBD kg (TBD lb)	TBD	TBD	TBD	

Fuel Consumption and Emissions Information (cont'd)





2.0L L4 Diesel Engine

11-6 Technical Data

Tyre Pressure

Gas and Diesel Engines

	Comfort with up to 3 people		ECO with up to 3 people		With full load	
Tyre Size/RPO	Front	Rear	Front	Rear	Front	Rear
	kPa/bar (psi)	kPa/bar (psi)	kPa/bar (psi)	kPa/bar (psi)	kPa/bar (psi)	kPa/bar (psi)
225/50R17 94V1	250/2.5 (36)	250/2.5 (36)	300/3.0 (44)	300/3.0 (44)	250/2.5 (36)	250/2.5 (36)
225/55R17 97W	230/2.3 (33)	230/2.3 (33)	300/3.0 (44)	300/3.0 (44)	250/2.5 (36)	250/2.5 (36)
225/45R18 ² 3	250/2.5 (36)	250/2.5 (36)	270/2.7 (39)	270/2.7 (39)	250/2.5 (36)	250/2.5 (36)
245/45R18 96W	230/2.3 (33)	230/2.3 (33)	300/3.0 (44)	300/3.0 (44)	250/2.5 (36)	250/2.5 (36)
245/40R19 98Y	250/2.5 (36)	250/2.5 (36)	300/3.0 (44)	300/3.0 (44)	250/2.5 (36)	250/2.5 (36)
(if so equipped) Temporary spare	420/4.2 (61)	420/4.2 (61)	-	-	420/4.2 (61)	420/4.2 (61)
¹ Permitted as a wi ² Only permitted as ³ Reinforced variar	s winter tyres.					

Customer Information

Vehicle Data Recording and Privacy

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Vehicle Data Recording and Privacy

This vehicle has a number of sophisticated systems that monitor and control several types of vehicle data. Some data may be stored during regular operation to facilitate repair of detected malfunctions. Other data is stored only in a crash or near crash event by modules in the vehicle systems that have an event data recording function, such as the airbag control module.

The systems may record diagnostic data about the condition of the vehicle, such as oil level or vehicle mileage, and information about how it was operated, such as engine speed, brake application, and safety belt usage.

To read this data, special equipment and access to the vehicle is required. Some diagnostic data may be electronically fed into global systems when the vehicle is serviced by an authorised repairer, in order to document the service history of the vehicle. This enables the authorised repairers to offer efficient maintenance and repair, tailored to the individual vehicle each time the vehicle is brought to the repairer.

The manufacturer will not access the driver behaviour-related information about a crash event or share it with others except:

- With the consent of the vehicle owner or, if the vehicle is leased, with the consent of the lessee.
- In response to an official request by police or similar government office.
- As part of the manufacturer defence in case of legal proceedings.
- · As required by law.

12-2 Customer Information

In addition, the manufacturer may use the collected or received diagnostic data:

- For manufacturer research needs.
- To make it available for research needs where appropriate confidentiality is maintained and need is shown.
- To share summary data which is not tied to a specific vehicle with other organisations for research purposes.

Navigation System

If the vehicle has a navigation system, use of the system may result in the storage of destinations, addresses, telephone numbers, and other trip information. Refer to the navigation manual for information on stored data and for deletion instructions.

Radio Frequency Identification (RFID)

Radio Frequency Identification (RFID) technology is used in some vehicles for functions such as tyre pressure monitoring and ignition system security. It is also used in connection with conveniences such as Remote Keyless Entry (RKE) transmitters for remote door locking/ unlocking and starting, and in-vehicle transmitters for garage door openers. RFID technology in Chevrolet vehicles does not use or record personal information or link with any other Chevrolet system containing personal information.

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