2008 Buick Enclave Owner Manual

Seats and Restraint Systems 1-1
- Front Seats 1-2
- Rear Seats 1-9
- Safety Belts 1-15
- Child Restraints 1-34
- Airbag System 1-59
- Restraint System Check 1-76

Features and Controls 2-1
- Keys 2-3
- Doors and Locks 2-10
- Windows 2-18
- Theft-Deterrent Systems 2-22
- Starting and Operating Your Vehicle 2-26
- Mirrors 2-40
- Object Detection Systems 2-44
- OnStar® System 2-47
- Universal Home Remote System 2-50
- Storage Areas 2-55
- Sunroof 2-60

Instrument Panel 3-1
- Instrument Panel Overview 3-4
- Climate Controls 3-22
- Warning Lights, Gages, and Indicators 3-33
- Driver Information Center (DIC) 3-50
- Audio System(s) 3-74

Driving Your Vehicle 4-1
- Your Driving, the Road, and Your Vehicle 4-2
- Towing 4-25

Service and Appearance Care 5-1
- Service 5-3
- Fuel 5-5
- Checking Things Under the Hood 5-10
- All-Wheel Drive 5-43
- Headlamp Aiming 5-44
- Bulb Replacement 5-45
- Windshield Replacement 5-47
- Windshield Wiper Blade Replacement 5-48
- Tires 5-49
- Appearance Care 5-96
- Vehicle Identification 5-105
- Electrical System 5-106
- Capacities and Specifications 5-116

Maintenance Schedule 6-1
- Maintenance Schedule 6-2

Customer Assistance Information 7-1
- Customer Assistance and Information 7-2
- Reporting Safety Defects 7-15
- Vehicle Data Recording and Privacy 7-17

Index 1

GENERAL MOTORS, GM, the GM Emblem, BUICK, the BUICK Emblem are registered trademarks; and the name ENCLAVE is a trademark of General Motors Corporation.

This manual includes the latest information at the time it was printed. GM reserves the right to make changes after that time without further notice. For vehicles first sold in Canada, substitute the name “General Motors of Canada Limited” for Buick Motor Division wherever it appears in this manual.

This manual describes features that may or may not be on your specific vehicle.

Keep this manual in the vehicle for quick reference.

Litho in U.S.A.
Part No. 15861575 B Second Printing

Canadian Owners

A French language copy of this manual can be obtained from your dealer/retailer or from:

Helm, Incorporated
P.O. Box 07130
Detroit, MI 48207

1-800-551-4123
www.helminc.com

Propriétaires Canadiens

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

Helm Incorporated
P.O. Box 07130
Detroit, MI 48207

1-800-551-4123
www.helminc.com

Using this Manual

Read this owner manual from beginning to end to learn about the vehicle’s features and controls. Pictures and words work together to explain things.

©2007 General Motors Corporation. All Rights Reserved.

Index

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.

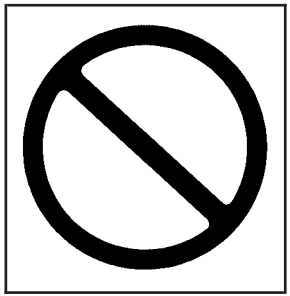
Safety Warnings and Symbols

There are a number of safety cautions in this book. A box with the word CAUTION is used to tell about things that could hurt you or others if you were to ignore the warning.

⚠CAUTION:

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

Cautions tell what the hazard is and what to do to avoid or reduce the hazard. Read these cautions.



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.”

Vehicle Damage Warnings

Notices are also used in this manual.

Notice: **These mean there is something that could damage your vehicle.**

A notice tells about something that can damage the vehicle. Many times, this damage would not be covered by the vehicle's warranty, and it could be costly. The notice tells what to do to help avoid the damage.

When you read other manuals, you might see CAUTION and NOTICE warnings in different colors or in different words.

There are also warning labels on the vehicle which use the same words, CAUTION or NOTICE.

Vehicle 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, gage, or indicator.

Section 1 Seats and Restraint Systems

Front Seats 1-2
- Power Seats 1-2
- Manual Lumbar 1-3
- Power Lumbar 1-3
- Heated Seats 1-4
- Memory Seat and Mirrors 1-4
- Reclining Seatbacks 1-6
- Head Restraints 1-8

Rear Seats 1-9
- Rear Seat Operation 1-9
- Third Row Seats 1-11

Safety Belts 1-15
- Safety Belts: They Are for Everyone 1-15
- How to Wear Safety Belts Properly 1-20
- Lap-Shoulder Belt 1-28
- Safety Belt Use During Pregnancy 1-33
- Safety Belt Extender 1-33

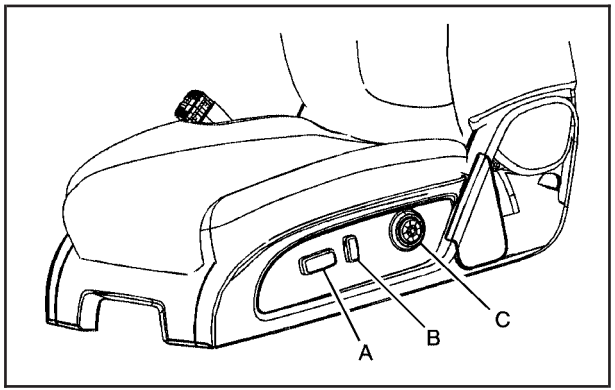
Child Restraints 1-34
- Older Children 1-34
- Infants and Young Children 1-37
- Child Restraint Systems 1-41
- Where to Put the Restraint 1-44
- Lower Anchors and Tethers for Children (LATCH) 1-45
- Securing a Child Restraint in a Rear Seat Position 1-53
- Securing a Child Restraint in the Right Front Seat Position 1-56

Airbag System 1-59
- Where Are the Airbags? 1-62
- When Should an Airbag Inflate? 1-65
- What Makes an Airbag Inflate? 1-67
- How Does an Airbag Restrain? 1-67
- What Will You See After an Airbag Inflates? 1-68
- Passenger Sensing System 1-69
- Servicing Your Airbag-Equipped Vehicle 1-74
- Adding Equipment to Your Airbag-Equipped Vehicle 1-74

Restraint System Check 1-76
- Checking the Restraint Systems 1-76
- Replacing Restraint System Parts After a Crash 1-77

Front Seats

Power Seats



Driver's Seat with Power Seat Control, Power Recline, and Power Lumbar shown

A. Power Seat Adjustment Control.

B. Power Reclining Seatback Control. See *Reclining Seatbacks on page 1-6*.

C. Power Lumbar Control. See *Power Lumbar on page 1-3*.

If the vehicle has power seats, the controls used to operate them are located on the outboard side of the seats.

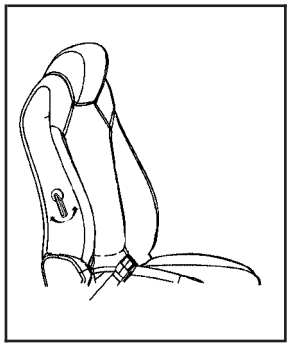
Move the seat forward or rearward by sliding the control forward or rearward.

Your vehicle may have additional features to adjust your vehicle's power seat:

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

Your vehicle may have a memory function which allows seat settings to be saved and recalled. See *Memory Seat and Mirrors on page 1-4* for more information.

Manual Lumbar



If your vehicle has this feature, the handle is located on the inboard side of the seatback.

Turn the handle rearward to decrease lumbar support. Turn the handle forward to increase lumbar support.

You may need to adjust the lumbar support whenever you change your seating position.

Power Lumbar

If the seats have power lumbar, the controls used to operate this feature are located on the outboard side of the seats. See *Power Seats on page 1-2* for more information.

- To increase lumbar support, press and hold the front of the control.
- To decrease lumbar support, press and hold the rear of the control.
- To raise the height of the lumbar support, press and hold the top of the control.
- To lower the height of the lumbar support, press and hold the bottom of the control.

Release the control when the lower seatback reaches the desired level of lumbar support.

You may need to adjust the lumbar support whenever you change your seating position.

Heated Seats

On vehicles with heated front seats the controls are located on the center console. To operate the heated seats the engine must be running.

(Heated Seatback): Press this button to turn on the heated seatback.

(Heated Seat and Seatback): Press this button to turn on the heated seat and seatback.

The light on the button will come on to indicate that the feature is working. Press the button to cycle through the temperature settings of high, medium, and low and to turn the heat to the seat off. Indicator lights above the button will show the level of heat selected: three for high, two for medium, and one for low.

The passenger seat may take longer to heat up.

If your vehicle has remote vehicle start and is started using the remote keyless entry transmitter, the front heated seats will be turned on to the high setting if it is cold outside. See “Remote Vehicle Start” under *Remote Keyless Entry (RKE) System Operation on page 2-5*. When the key is inserted into the ignition and the ignition is turned on, the heated seat feature will turn off. To turn the heated seat feature back on, press the desired button.

Memory Seat and Mirrors

On vehicles with the memory package, the controls are located on the driver’s doorl.

1: Saves the seating position for driver 1

2: Saves the seating position for driver 2

: Recalls the easy exit position.

To save your positions in memory, do the following:

1. Adjust the driver’s seat, including the seatback recliner, both outside mirrors, and the power steering column to a comfortable position.

   See *Outside Power Mirrors on page 2-42* for more information.

   Not all mirrors will have the ability to save and recall the mirror positions.
2. Press and hold button 1 until two beeps let you know that the position has been stored.

A second seating and mirror position can be programmed by repeating the above steps and pressing button 2.

To recall the memory positions, the vehicle must be in PARK (P). Press and release either button 1 or button 2 corresponding to the desired driving position. The seat, outside mirrors, and power steering column will move to the position previously stored. You will hear a single beep.

If you use the Remote Keyless Entry (RKE) transmitter to enter your vehicle and the remote recall memory feature has been turned on, automatic seat and mirror movement will occur. See “MEMORY SEAT RECALL” under *DIC Vehicle Customization on page 3-65* for more information.

To stop recall movement of the memory feature at any time, press one of the power seat controls, memory buttons, or power mirror buttons.

If something has blocked the driver’s seat while recalling a memory position, the driver’s seat recall may stop working. If this happens, press the appropriate control for the area that is not recalling for two seconds, after the obstruction is removed. Then try recalling the memory position again by pressing the appropriate memory button. If the memory position is still not being recalled, see your dealer/retailer for service.

Easy Exit Seat

: With the vehicle in PARK (P), the exit position can be recalled by pressing the exit button. You will hear a single beep. The driver’s seat will move back.

If the easy exit seat feature has been turned on in the Driver Information Center (DIC), automatic seat movement will occur when the key is removed from the ignition. See “EASY EXIT SEAT” under *DIC Vehicle Customization on page 3-65* for more information.

For programming information, see *DIC Vehicle Customization on page 3-65*.

Reclining Seatbacks

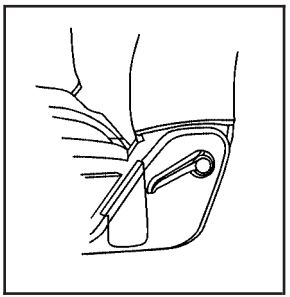
Manual Reclining Seatbacks

⚠CAUTION:

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

⚠CAUTION:

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



In vehicles with seats that have manual reclining seatbacks, the lever used to operate them is located on the outboard side of the seat.

To recline the seatback, do the following:

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

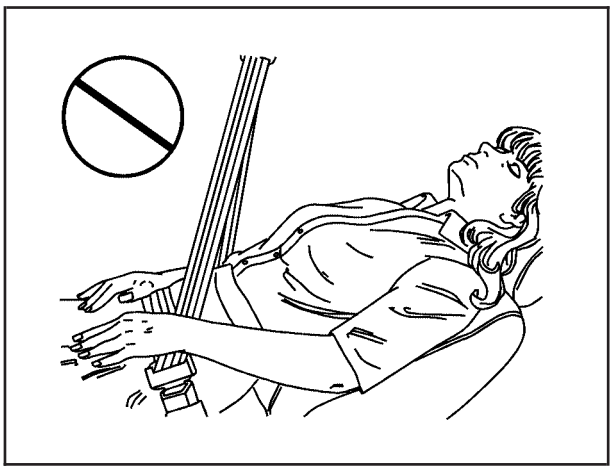
To return the seatback to an upright position, do the following:

1. 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 seatback to make sure it is locked.

Power Reclining Seatbacks

In vehicles with seats that have power reclining seatbacks, the control used to recline them is located on the outboard side of the seat behind the power seat control. See *Power Seats on page 1-2* for more information.

- To recline the seatback, tilt the top of the control rearward.
- To bring the seatback forward, tilt the top of the control forward.



⚠CAUTION:

Sitting in a reclined position when your vehicle is in motion can be dangerous. Even if you buckle up, your safety belts cannot do their job when you are reclined like this.

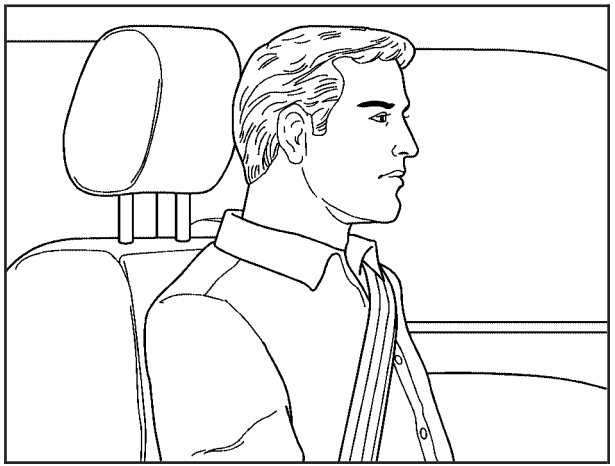
The shoulder belt cannot do its job because it will not be against your body. Instead, it will be in front of you. In a crash, you could go into it, receiving neck or other injuries.

The lap belt cannot do its job either. In a crash, the belt could go up over your abdomen. The belt forces would be there, not at your pelvic bones. This could cause serious internal injuries.

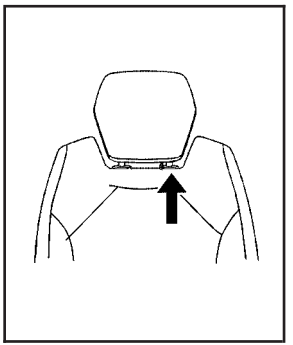
For proper protection when the vehicle is in motion, have the seatback upright. Then sit well back in the seat and wear your safety belt properly.

Do not have a seatback reclined if your vehicle is moving.

Head Restraints



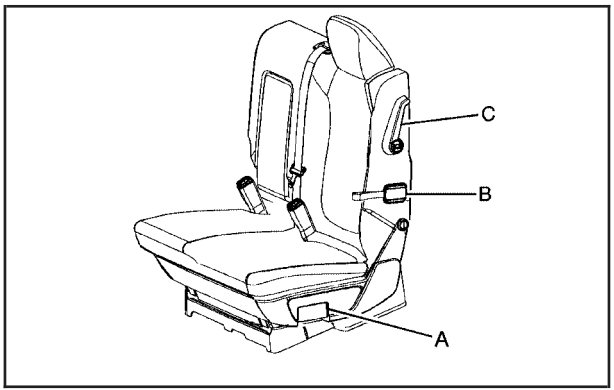
Adjust the head restraint so that the top of the restraint is at the same height as the top of the occupant's head. This position reduces the chance of a neck injury in a crash.



Pull the head restraint up to raise it. To lower the head restraint, press the release button, located on the head restraint post on the top of the seatback, while you push the head restraint down.

Rear Seats

Rear Seat Operation



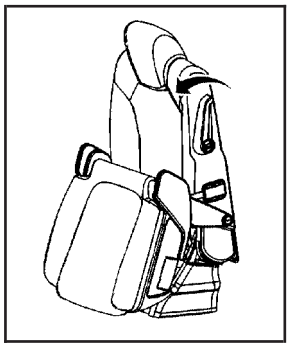
A. Seat Adjustment Handle.
B. Reclining Seatback Strap.
C. Sliding Seat Lever.

Entering and Exiting the Third Row

⚠CAUTION:

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

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 access the third row:

1. Remove objects on the floor in front of or on the second row seat, or in the seat tracks on the floor.
2. Move the front center console armrest completely forward. See *Center Console Storage on page 2-56*
3. Place folding armrests in the upright position.
4. The safety belt must be unfastened and in the stowed position.
5. Pull the sliding seat lever (C) forward and move the seatback forward. The seat cushion will fold, and the entire seat will slide forward.

Returning the Seat to the Seating Position

To return the second row seat to its normal seating position:

1. Remove objects on the floor behind the second row seat, or in the seat tracks on the floor.
2. Pull the seatback rearward until it is locked in place.
3. Slide the seat rearward by pushing on the seatback until it is locked into place.
4. Push down on the rear of the seat cushion until it is locked in place.
5. Push and pull on the seatback and seat cushion to make sure they are locked in place
6. Check that the safety belt is not under the seat cushion.

Reclining the Seatbacks

To recline the seatback:

1. Leaning forward in the seat, pull the reclining seatback strap (B).
2. Move the seatback to the desired position, then release the strap to lock the seatback in place.
3. Push and pull on the seatback to make sure it is locked.

Folding the Rear Seat

To fold the second row seats:

1. Remove anything on or under the seat.
2. Place the armrest in the upright position, and unfasten the safety belt.
3. Pull forward on the reclining seatback strap (B) and push down on the seatback.
4. If the headrest hits the front seat, slide the second row seat rearward.

To return the seatback to the seating position, lift the upper corner of the seatback and push it rearward until it locks into place. Push and pull on the seatback to make sure it is locked.

Adjusting the Seats

To adjust the second row seats, pull outward on the seat adjustment handle (A). Slide the seat forward or rearward to the desired position. Release the handle and push and pull on the seat to make sure it is locked.

Third Row Seats

⚠CAUTION:

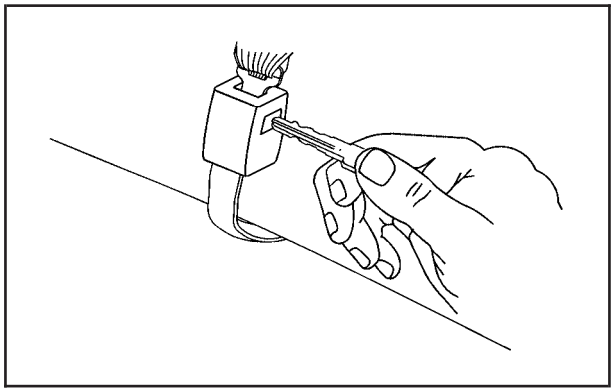
Using the third row seating position while the second row is folded, or pushed forward in the entry position, could cause injury in a sudden stop or crash. Be sure to return the seat to the passenger seating position. Push and pull on the seat to make sure it is locked into place.

The third row seats can be folded forward or removed.

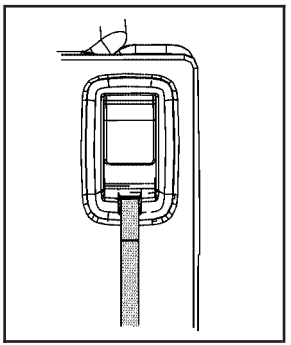
Notice: **Folding a rear seat with the safety belts still fastened may cause damage to the seat or the safety belts. Always unbuckle the safety belts and return them to their normal stowed position before folding a rear seat.**

To fold the seatback:

1. Remove anything on or under the seat.



2. Disconnect the rear safety belt mini-latch, using a key in the slot on the mini-buckle, let the belt retract into the headliner. Stow the mini-latch in the holder located in the headliner.



3. Pull up on the release lever located on the back of the seat. The headrest moves forward automatically.

4. Push the seatback forward to lay flat.

To return the seatback to the seating position:

1. Raise the seatback into place by using the pullstrap from the rear of the vehicle, or by pushing it into place from inside the vehicle.
2. The headrest must be locked into place before sitting in the seat.

⚠CAUTION:

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

3. Push and pull on the seatback to make sure it is locked in place.

⚠CAUTION:

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.

4. Reconnect the center safety belt mini-latch to the mini-buckle. Do not let it twist.
5. Pull on the safety belt to be sure the mini-latch is secure.

Removing the Third Row Seats

1. Remove the cargo management system, if it is in the vehicle. See *Cargo Management System on page 2-59*.
2. Remove anything on or under the seat.

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.**

3. Fold the seatback down. See “Folding the Seatback” earlier in this section.
4. Remove the rear bolts located on the floor on each side of the seat.
5. Remove the seat by tilting it slightly upward, and then pulling it out of the rear of the vehicle in one motion.
6. Put the bolts back into the holes on the floor so they do not get misplaced.

Installing the Third Row Seats

1. Before installing the seat the seatback must be folded forward. See “Folding the Seatback” earlier in this section.

   The seats must be placed in the proper locations for the legs to attach correctly. The wider seat must be installed on the driver side and the narrower seat on the passenger side. Remove the bolts from the holes in the floor before installing the seats.
2. Place the seat on the vehicle floor so that the front seat hooks are on the vehicle bars.
3. Reinstall the bolts, and torque to 55 N•m (41 lb ft). Pull up on the seat to make sure it is locked in place.
4. Raise the seatback to its upright position. Push and pull on the seatback to make sure it is locked into place.
5. Push the headrest up into position. Push and pull on the headrest to make sure it is locked into place.
6. Reconnect the center safety belt mini-latch to the mini-buckle. Do not let it twist.

Safety Belts

Safety Belts: They Are for Everyone

This part of the manual tells you how to use safety belts properly. It also tells you some things you should not do with safety belts.

⚠CAUTION:

Do not let anyone ride where he or she cannot wear a safety belt properly. If you are in a crash and you are not wearing a safety belt, your injuries can be much worse. You can hit things inside the vehicle harder or be ejected from it and be seriously injured or killed. In the same crash, you might not be, if you are buckled up. Always fasten your safety belt, and check that your passenger(s) are restrained properly too.

⚠CAUTION:

It is extremely dangerous to ride in a cargo area, inside or outside of a vehicle. In a collision, people riding in these areas are more likely to be seriously injured or killed. Do not allow people to ride in any area of your vehicle that is not equipped with seats and safety belts. Be sure everyone in your vehicle is in a seat and using a safety belt properly.

Your vehicle has indicators as a reminder to buckle your safety belts. See *Safety Belt Reminders on page 3-35*.

In most states and in all Canadian provinces, the law requires wearing safety belts. Here is why:

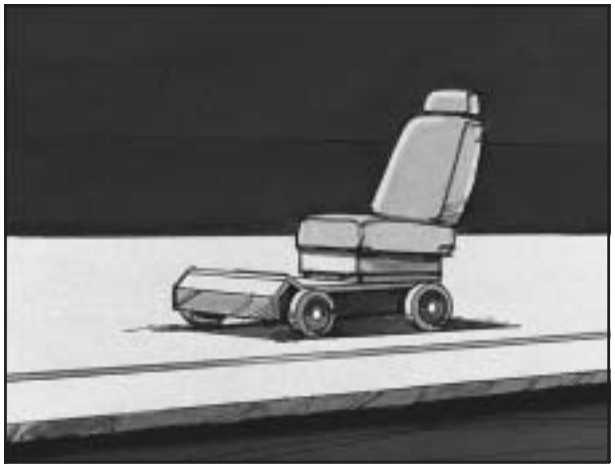
You never know if you will be in a crash. If you do have a crash, you do not know if it will be a serious one.

A few crashes are mild, and some crashes can be so serious that even buckled up, a person would not survive. But most crashes are in between. In many of them, people who buckle up can survive and sometimes walk away. Without belts they could have been badly hurt or killed.

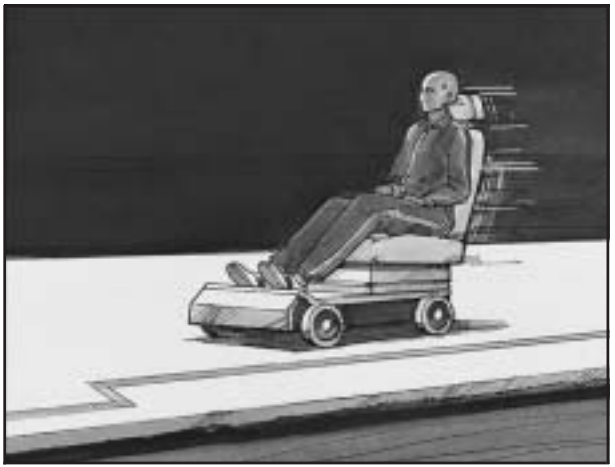
After more than 40 years of safety belts in vehicles, the facts are clear. In most crashes buckling up does matter... a lot!

Why Safety Belts Work

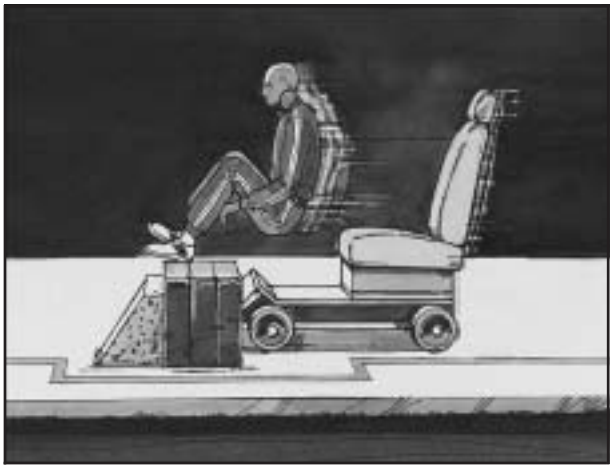
When you ride in or on anything, you go as fast as it goes.



Take the simplest vehicle. Suppose it is just a seat on wheels.

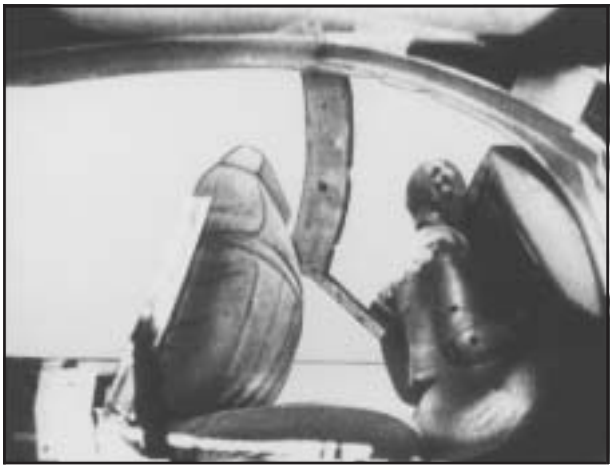


Put someone on it.



Get it up to speed. Then stop the vehicle. The rider does not stop.

The person keeps going until stopped by something. In a real vehicle, it could be the windshield...



or the instrument panel...

or the safety belts!

With safety belts, you slow down as the vehicle does. You get more time to stop. You stop over more distance, and your strongest bones take the forces. That is why safety belts make 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. But your chance of being conscious during and after an accident, so you *can* unbuckle and get out, is *much* greater if you are belted. And you can unbuckle a safety belt, even if you are upside down.

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. That is true not only in frontal collisions, but especially in side and other collisions.

Q: If I am a good driver, and I never drive far from home, why should I wear safety belts?

A: You may be an excellent driver, but if you are in a crash — even one that is not your fault — you and your passenger(s) can be hurt. Being a good driver does not protect you from things beyond your control, such as bad drivers.

Most accidents occur within 25 miles (40 km) of home. And the greatest number of serious injuries and deaths occur at speeds of less than 40 mph (65 km/h).

Safety belts are for everyone.

How to Wear Safety Belts Properly

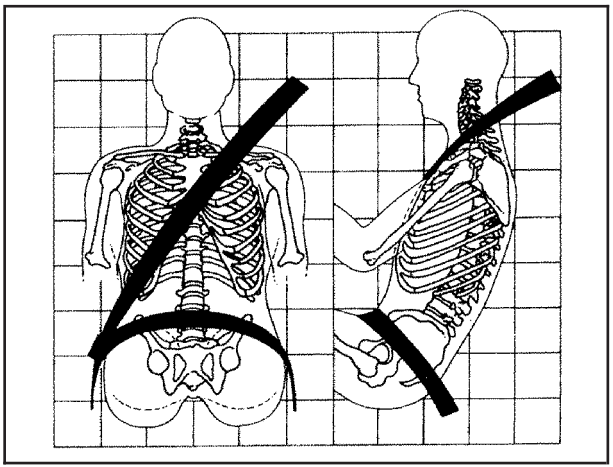
This section is only for people of adult size.

Be aware that there are special things to know about safety belts and children. And there are different rules for smaller children and babies. If a child will be riding in your vehicle, see *Older Children on page 1-34* or *Infants and Young Children on page 1-37*. 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.

Occupants who are not buckled up can be thrown out of the vehicle in a crash. And they can strike others in the vehicle who are wearing safety belts.

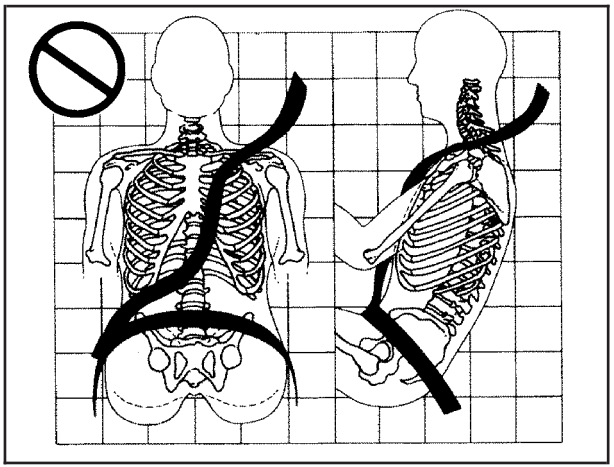
First, before you or your passenger(s) wear a safety belt, there is important information you should know.



Sit up straight and always keep your feet on the floor in front of you. The lap part of the belt should be worn 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. The shoulder belt should go 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.

Q: What is wrong with this?

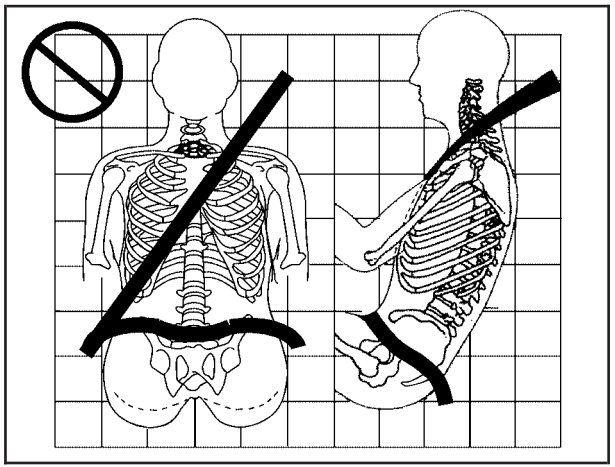


A: The shoulder belt is too loose. It will not give as much protection this way.

⚠CAUTION:

You can be seriously hurt if your shoulder belt is too loose. In a crash, you would move forward too much, which could increase injury. The shoulder belt should fit snugly against your body.

Q: What is wrong with this?

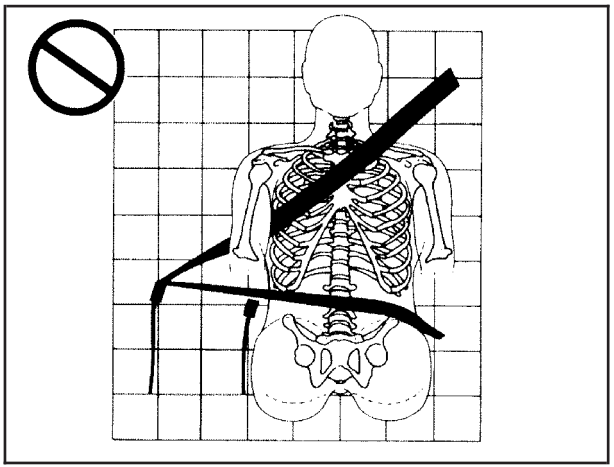


A: The lap belt is too loose. It will not give nearly as much protection this way.

⚠CAUTION:

You can be seriously hurt if your lap belt is too loose. In a crash, you could slide under the lap belt and apply force on your abdomen. This could cause serious or even fatal injuries. The lap belt should be worn low and snug on the hips, just touching the thighs.

Q: **What is wrong with this?**

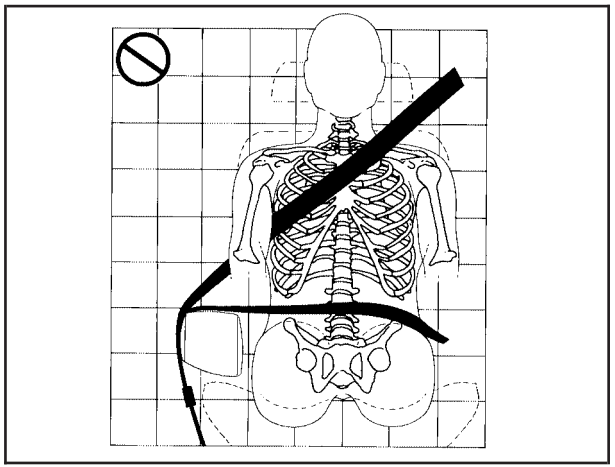


A: The belt is buckled in the wrong place.

⚠CAUTION:

You can be seriously injured if your belt is buckled in the wrong place like this. In a crash, the belt would go up over your abdomen. The belt forces would be there, not on the pelvic bones. This could cause serious internal injuries. Always buckle your belt into the buckle nearest you.

Q: **What is wrong with this?**

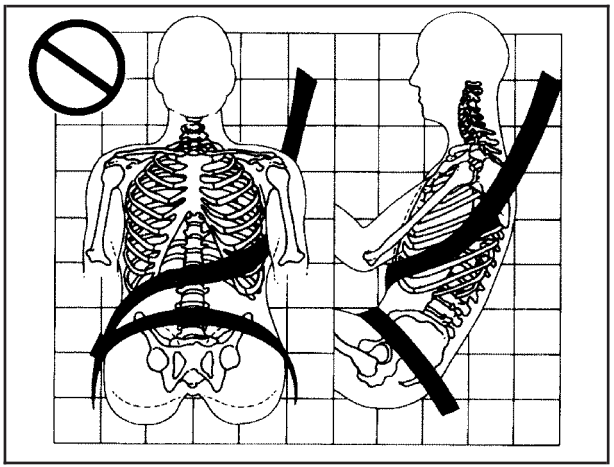


A: The belt is over an armrest.

⚠CAUTION:

You can be seriously injured if your belt goes over an armrest like this. The belt would be much too high. In a crash, you can slide under the belt. The belt force would then be applied on the abdomen, not on the pelvic bones, and that could cause serious or fatal injuries. Be sure the belt goes under the armrests.

Q: What is wrong with this?

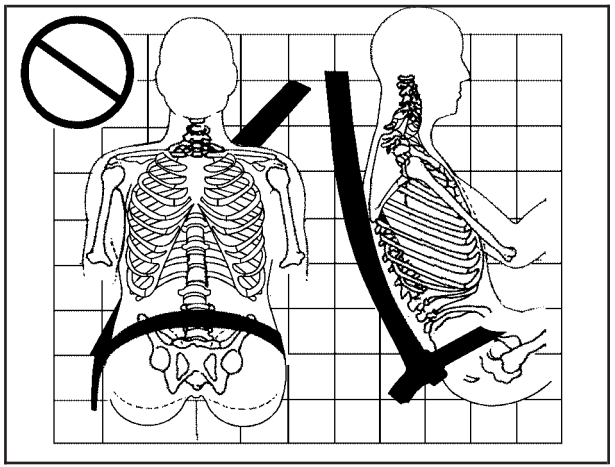


A: The shoulder belt is worn under the arm. It should be worn over the shoulder at all times.

⚠CAUTION:

You can be seriously injured if you wear the shoulder belt under your arm. In a crash, your body would move too far forward, which would increase the chance of head and neck injury. Also, the belt would apply too much force to the ribs, which are not as strong as shoulder bones. You could also severely injure internal organs like your liver or spleen. The shoulder belt should go over the shoulder and across the chest.

Q: What is wrong with this?

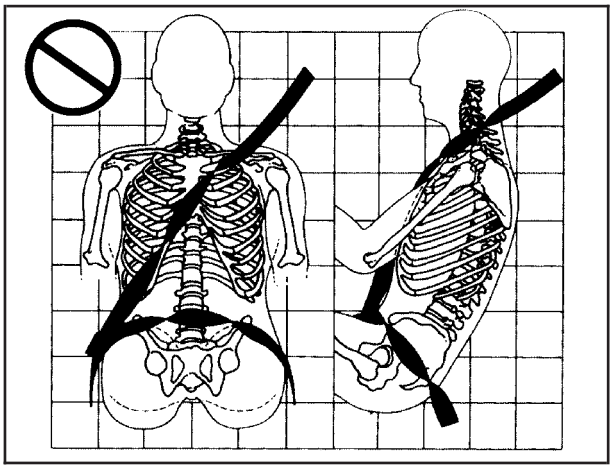


A: The belt is behind the body.

⚠CAUTION:

You can be seriously injured by not wearing the lap-shoulder belt properly. In a crash, you would not be restrained by the shoulder belt. Your body could move too far forward increasing the chance of head and neck injury. You 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.

Q: **What is wrong with this?**



A: The belt is twisted across the body.

⚠CAUTION:

You can be seriously injured by a twisted belt. In a crash, you would not have the full width of the belt to spread impact forces. If a belt is twisted, make it straight so it can work properly, or ask your dealer/retailer to fix it.

Lap-Shoulder Belt

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

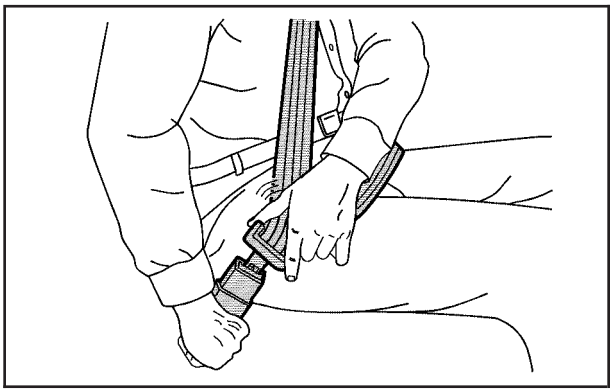
If you are using a rear seating position with a detachable safety belt and the safety belt is not attached, see *Third Row Seats on page 1-11* for instruction on reconnecting the safety belt to the mini-buckle.

Here is how to wear a lap-shoulder belt properly.

1. Adjust the seat, if the seat is adjustable, so you can sit up straight. To see how, see “Seats” in the Index.
2. Pick up the latch plate and pull the belt across you. Do not let it get twisted.

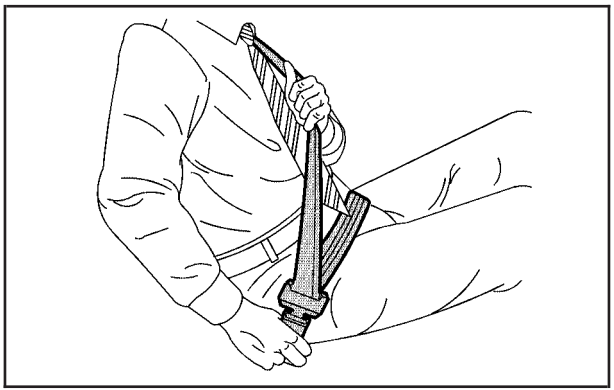
   The lap-shoulder belt may lock if you pull the belt across you very quickly. If this happens, let the belt go back slightly to unlock it. Then pull the belt across you more slowly.

   If you ever pull the shoulder portion of a passenger belt out all the way, you may engage the child restraint locking feature. If this happens, just let the belt go back all the way and start again.



3. Push the latch plate into the buckle until it clicks.
4. Pull up on the latch plate to make sure it is secure. If the belt is not long enough, see *Safety Belt Extender on page 1-33*.

   Make sure the release button on the buckle is positioned so you would be able to unbuckle the safety belt quickly if necessary.
5. If equipped with a shoulder belt height adjuster, move it to the height that is right for you. Improper shoulder belt height adjustment could reduce the effectiveness of the safety belt in a crash. See “Shoulder Belt Height Adjustment” later in this section.



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

   It may be necessary to pull the stitching on the safety belt through the latch plate to fully tighten the lap belt on smaller occupants.

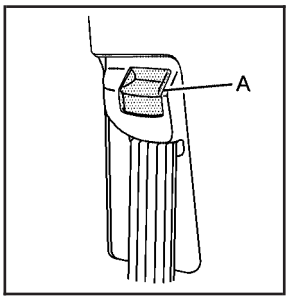
To unlatch the belt, push the button on the buckle. The belt should go back out of the way. When the safety belt is not in use, slide the latch plate up the safety belt webbing. The latch plate should rest on the stitching on the safety belt, near the guide loop on the side wall.

Before you close a door, be sure the belt is out of the way. If you slam the door on it, you can damage both the belt and your vehicle.

Shoulder Belt Height Adjustment

Your vehicle has shoulder belt height adjusters for the driver and right front passenger.

Adjust the height so that the shoulder portion of the belt is centered on your shoulder. The belt should be away from your face and neck, but not falling off your shoulder. Incorrect positioning of the shoulder belt can reduce the effectiveness of the safety belt.



To move it down, push down on the button (A) and move the height adjuster to the desired position. You can move the height adjuster up by pushing up on the shoulder belt guide.

After you move the height adjuster to where you want it, try to move it down without pushing the button down to make sure it has locked into position.

Safety Belt Pretensioners

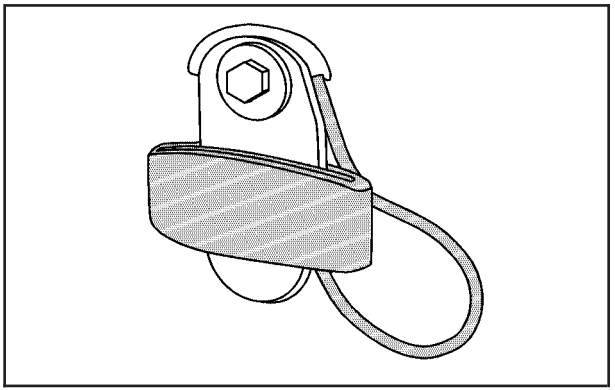
Your vehicle has safety belt pretensioners for front outboard occupants. Although you cannot see them, they are part of the safety belt assembly. They can help tighten the safety belts during the early stages of a moderate to severe frontal, near frontal, or rear crash if the threshold conditions for pretensioner activation are met. And, for vehicles that have side impact airbags, safety belt pretensioners can help tighten the safety belts in a side crash or a rollover event.

Pretensioners work only once. If they activate in a crash, you will need to get new ones, and probably other new parts for your safety belt system. See *Replacing Restraint System Parts After a Crash on page 1-77*.

Rear Safety Belt Comfort Guides

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

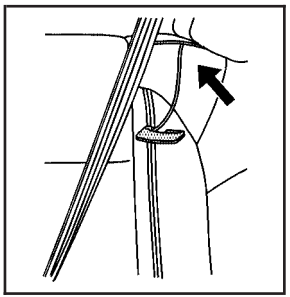
There is a guide for each outboard passenger position in the second row seat and all passenger positions in the third row. Here is how to install a comfort guide to the safety belt:



Outboard Positions

1. For the outboard positions, remove the guide from its storage clip on the interior body.

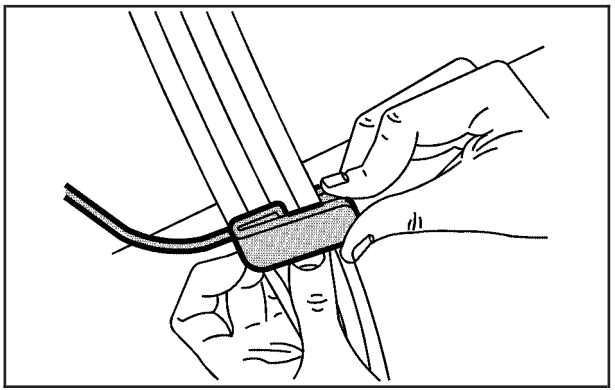
   For the third row center position, locate the comfort guide which is located in a storage pocket, at the top of the seat, under the headrest on the driver's side of the vehicle. To access the comfort guide, you will first need to move the headrest forward by pulling on the handle behind the seatback. The comfort guide will now be accessible.



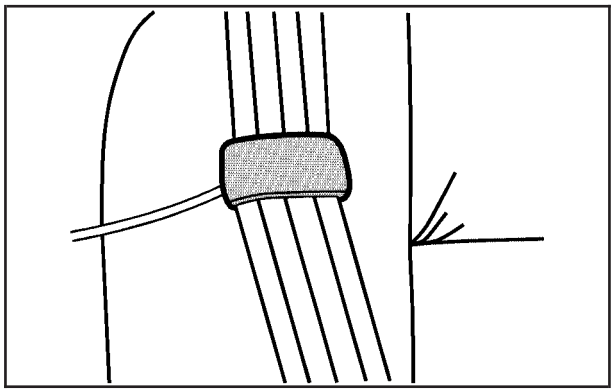
Third Row Center Position

Pull the comfort guide out of its storage location and then return the headrest to its upright position.

The elastic cord on the comfort guide is adjustable. You can make it longer or shorter by squeezing both ends of the plastic adjuster.



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



3. Be sure that the belt is not twisted and it lies flat. The elastic cord must be under the belt and the guide on top.

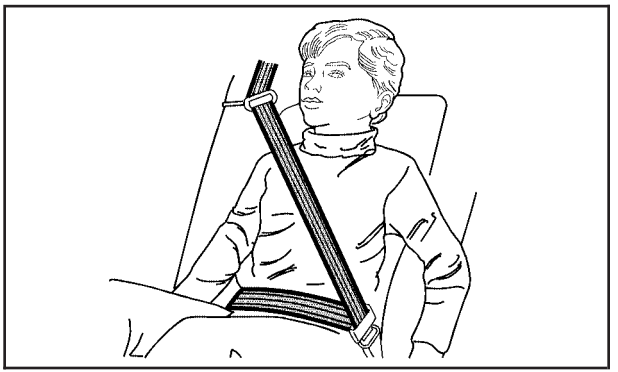
⚠CAUTION:

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

CAUTION: (Continued)

CAUTION: (Continued)

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

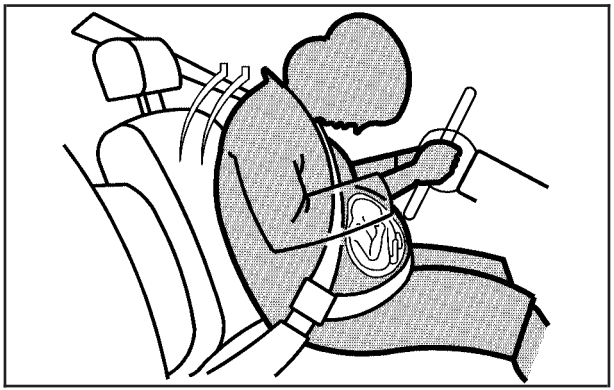


4. Buckle, position, and release the safety belt as described previously in this section. Make sure that the shoulder belt crosses the shoulder.

To remove and store the comfort guide, squeeze the belt edges together so that you can take them out of the guide. Slide the guide into its storage location or on its storage clip.

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.

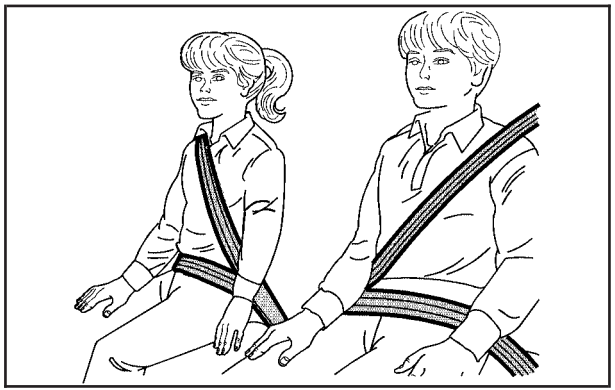
Safety Belt Extender

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

But if a safety belt is not long enough, your dealer/retailer 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. For more information, see the instruction sheet that comes with the extender.

Child Restraints

Older Children



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

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 below fit test:

- 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 1-28* 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 1-28*.

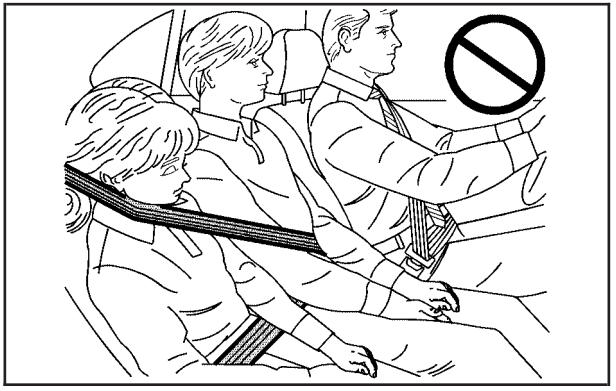
According to accident statistics, children and infants are safer when properly restrained in the rear seating positions than in the front seating positions.

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.

⚠CAUTION:

Never do this.

Here two children are wearing the same belt. The belt cannot properly spread the impact forces. In a crash, the two children can be crushed together and seriously injured. A belt must be used by only one person at a time.



⚠CAUTION:

Never do this.

Here a child is sitting in a seat that has a lap-shoulder belt, but the shoulder part is behind the child. In a crash, the child would not be restrained by the shoulder belt. The child might slide under the lap belt. The belt force would then be applied right on the abdomen. That could cause serious or fatal injuries. The child could also move too far forward increasing the chance of head and neck injury. 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. In fact, the law in every state in the United States and in every Canadian province says children up to some age must be restrained while in a vehicle.

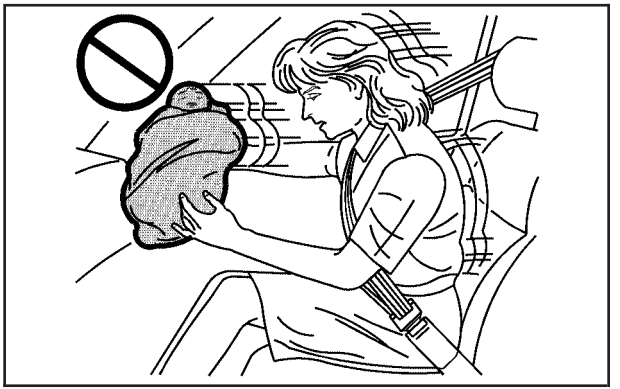
⚠CAUTION:

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.

Every time infants and young children ride in vehicles, they should have the protection provided by appropriate restraints. Children who are not restrained properly can strike other people, or can be thrown out of the vehicle. In addition, young children should not use the vehicle's adult safety belts alone; they need to use a child restraint.

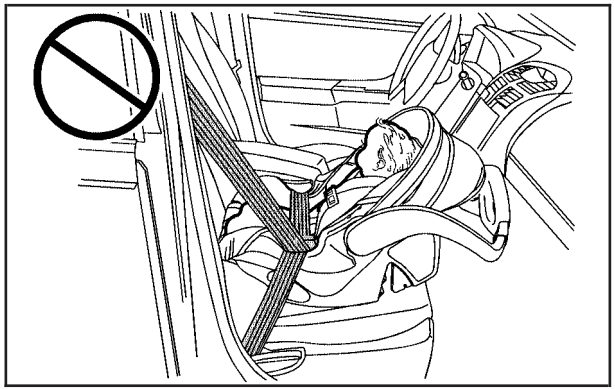
⚠CAUTION:

People should never hold an infant in their arms while riding in a vehicle. An infant does not weigh much — until a crash. During a crash an infant will become so heavy it is not possible to hold it. For example, in a crash at only 25 mph (40 km/h), a 12 lb (5.5 kg) infant will suddenly become a 240 lb (110 kg) force on a person's arms. An infant should be secured in an appropriate restraint.



⚠CAUTION:

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.



Q: What are the different types of add-on child restraints?

A: Add-on child restraints, which are purchased by the vehicle's owner, are available in four basic types. 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. If it is, the restraint will have a label saying that it meets federal motor vehicle safety standards.

The restraint manufacturer's instructions that come with the restraint state the weight and height limitations for a particular child restraint. In addition, there are many kinds of restraints available for children with special needs.

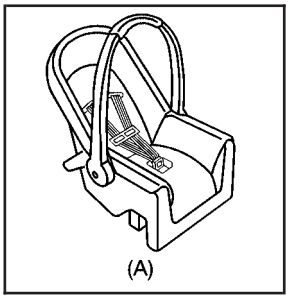
⚠CAUTION:

Newborn infants need complete support, including support for the head and neck. This is necessary because a newborn infant's neck is weak and its head weighs so much compared with the rest of its body. In a crash, an infant in a rear-facing seat settles into the restraint, so 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 appropriate infant restraints.

⚠CAUTION:

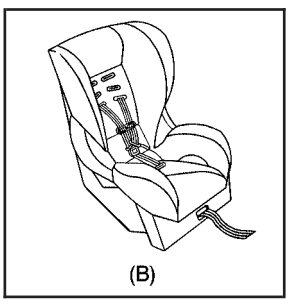
The body structure of a young child is quite unlike that of an adult or older child, for whom the safety belts are designed. A young child's hip bones are still so small that the vehicle's regular safety belt may not remain low on the hip bones, as it should. Instead, it may settle up around the child's 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. Young children should always be secured in appropriate child restraints.

Child Restraint Systems

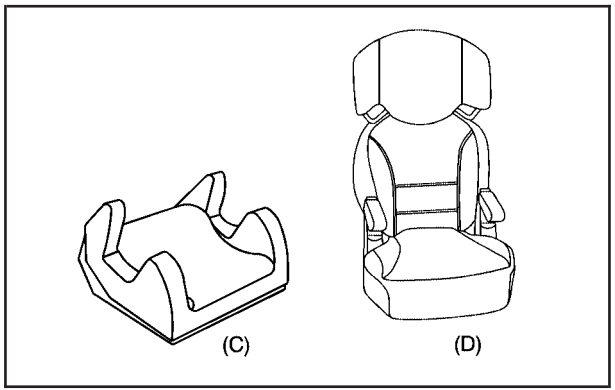

(A)

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)

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



A booster seat (C-D) 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

⚠CAUTION:

A child can be seriously injured or killed in a crash if the child restraint is not properly secured in the vehicle. Make sure the child restraint is properly installed in the vehicle using the vehicle's safety belt or LATCH system, following the instructions that came with that restraint, and also the instructions in this manual.

To help reduce the chance of injury, the child restraint must be secured in the vehicle. Child restraint systems must be secured in vehicle seats by lap belts or the lap belt portion of a lap-shoulder belt, or by the LATCH system. See *Lower Anchors and Tethers for Children (LATCH) on page 1-45* for more information. A child can be endangered in a crash if the child restraint is not properly secured in the vehicle.

When securing an add-on child restraint, refer to the 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 your vehicle — even when no child is in it.

Securing the Child Within the Child Restraint

⚠CAUTION:

A child can be seriously injured or killed in a crash if the child is not properly secured in the child restraint. Because there are different systems, it is important to refer to the instructions that come with the restraint. Make sure the child is properly secured, following the instructions that came with that restraint.

Where to Put the Restraint

Accident statistics show that children are safer if they are restrained in the rear rather than the front seat.

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.

A label on your sun visor says, “Never put a rear-facing child seat in the front.” This is because the risk to the rear-facing child is so great, if the airbag deploys.

⚠CAUTION:

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

CAUTION: (Continued)

CAUTION: (Continued)

Even if the passenger sensing system has turned off the right front passenger’s 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. Rear-facing child restraints should be secured 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.

See *Passenger Sensing System on page 1-69* for additional information.

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.

Wherever you install a child restraint, 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.

Lower Anchors and Tethers for Children (LATCH)

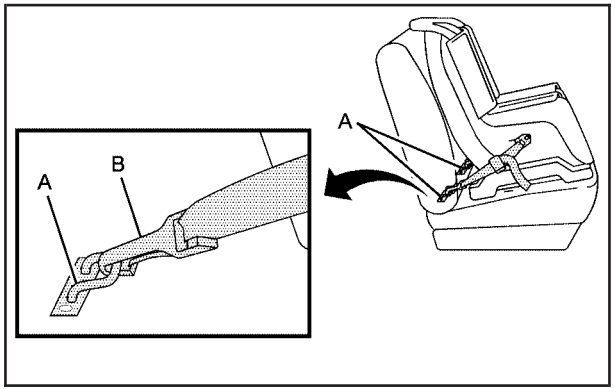
The LATCH system holds a child restraint during driving or in a crash. This system is designed to make installation of a child restraint easier. The LATCH system uses anchors in the vehicle and attachments on the child restraint that are made for use with the LATCH system.

Make sure that a LATCH-compatible child restraint is properly installed using the anchors, or use the vehicle's safety belts to secure the restraint, following the instructions that came with that restraint, and also the instructions in this manual. When installing a child restraint with a top tether, you must also use either the lower anchors or the safety belts to properly secure the child restraint. A child restraint must never be attached using only the top tether and anchor.

In order to use the LATCH system in your vehicle, you need a child restraint that has LATCH attachments. The child restraint manufacturer will provide you with instructions on how to use the child restraint and its attachments. The following explains how to attach a child restraint with these attachments in your vehicle.

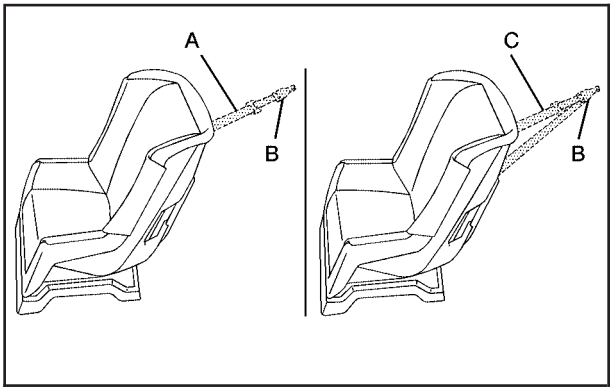
Not all vehicle seating positions or child restraints have lower anchors and attachments or top tether anchors and attachments.

Lower Anchors



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

Top Tether Anchor



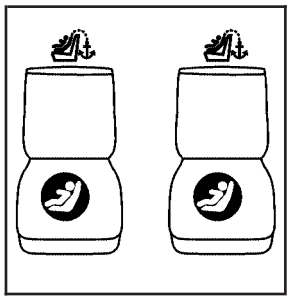
A top tether (A, C) anchors the top of the child restraint to the vehicle. A top tether anchor is built into the vehicle. The top tether attachment (B) on the child restraint connects to the top tether anchor in the vehicle in order to reduce the forward movement and rotation of the child restraint during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

Your child restraint may have a single tether (A) or a dual tether (C). Either will have a single attachment (B) to secure the top tether to the anchor.

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

If the child restraint does not have a top tether, one can be obtained, in kit form, for many child restraints. Ask the child restraint manufacturer whether or not a kit is available.

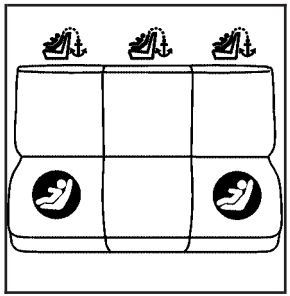
Lower Anchor and Top Tether Anchor Locations



Second Row — Bucket

(Top Tether Anchor): Seating positions with top tether anchors.

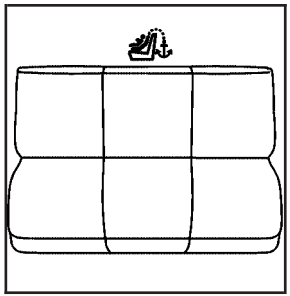
(Lower Anchor): Seating positions with two lower anchors.



Second Row — 60/40 Bench

(Top Tether Anchor): Seating positions with top tether anchors.

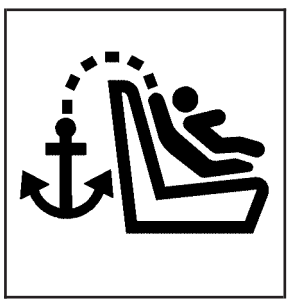
(Lower Anchor): Seating positions with two lower anchors.



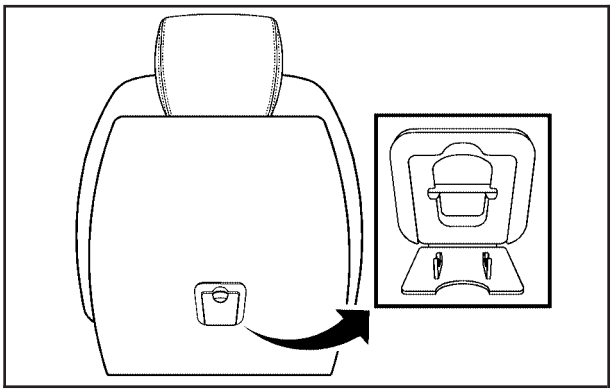
Third Row

(Top Tether Anchor): Seating positions with top tether anchors.

To assist you in locating the lower anchors, each second row anchor position has a label, near the crease between the seatback and the seat cushion.

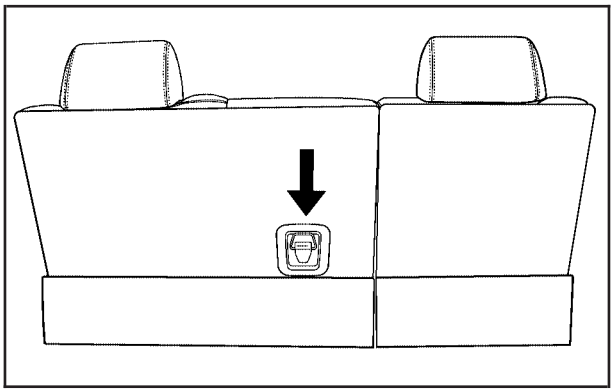


To assist you in locating the top tether anchors, the top tether anchor symbol is located on the cover or near the anchor.



Second Row — Bucket Shown, Bench Similar

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



Third Row Seat

The third row has one top tether anchor located at the bottom rear of the center seatback. This anchor should be used for the center seating position only. Never install two top tethers using the same top tether anchor.

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

Accident statistics show that children are safer if they are restrained in the rear rather than the front seat. See *Where to Put the Restraint on page 1-44* for additional information.

Securing a Child Restraint Designed for the LATCH System

⚠CAUTION:

If a LATCH-type child restraint is not attached to anchors, the restraint will not be able to protect the child correctly. In a crash, the child could be seriously injured or killed. Make sure that a LATCH-type child restraint is properly installed using the anchors, or use the vehicle's safety belts to secure the restraint, following the instructions that came with that restraint, and also the instructions in this manual.

⚠CAUTION:

Each top tether anchor and lower anchor in the vehicle is designed to hold only one child restraint. Attaching more than one child restraint to a single anchor could cause the anchor or attachment to come loose or even break during a crash. A child or others could be injured if this happens. To help prevent injury to people and damage to your vehicle, attach only one child restraint per anchor.

⚠CAUTION:

Children can be seriously injured or strangled if a shoulder belt is wrapped around their neck and the safety belt continues to tighten. Secure any unused safety belts behind the child restraint so children cannot reach them. Pull the shoulder belt all the way out of the retractor to set the lock, if your vehicle has one, after the child restraint has been installed. Be sure to follow the instructions of the child restraint manufacturer.

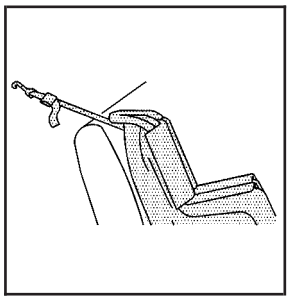
Notice: **Contact between the child restraint LATCH attachment parts and the vehicle's safety belt assembly may cause damage to these parts. Make sure when securing unused safety belts behind the child restraint that there is no contact between the child restraint LATCH attachment parts and the vehicle's safety belt assembly.**

Folding an empty rear seat with the safety belts secured may cause damage to the safety belt or the seat. When removing the child restraint, always remember to return the safety belts to their normal, stowed position before folding the rear seat.

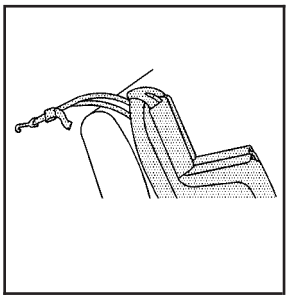
1. Attach and tighten the lower attachments to the lower anchors. If the child restraint does not have lower attachments or the desired seating position does not have lower anchors, secure the child restraint with the top tether and the safety belts. Refer to your child restraint manufacturer instructions and the instructions in this manual.
   1.1. Find the lower anchors for the desired seating position.
   1.2. Recline the seatback to the full reclined position.

        Make sure the second row bench seatbacks are aligned at the same angle before placing the child restraint on the seat. Make sure the third row bench seatbacks are both upright before placing the child restraint on the seat.
   1.3. Put the child restraint on the seat.
   1.4. Attach and tighten the lower attachments on the child restraint to the lower anchors.

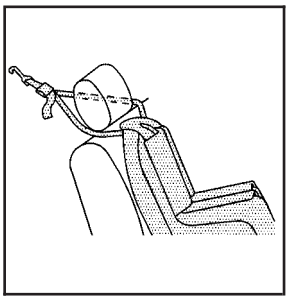
2. If the child restraint manufacturer recommends that the top tether be attached, attach and tighten the top tether to the top tether anchor, if the vehicle has one. Refer to the child restraint instructions and the following steps:
   2.1. Find the top tether anchor.
   2.2. If the anchor is covered, flip open the cover to expose the anchor.
   2.3. Route, attach and tighten the top tether according to your child restraint instructions and the following instructions:



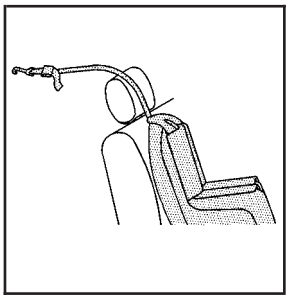
If the position you are using does not have a headrest or head restraint and you are using a single tether, route the tether over the seatback.



If the position you are using does not have a headrest or head restraint and you are using a dual tether, route the tether over the seatback.



If the position you are using has a fixed headrest or head restraint and you are using a dual tether, route the tether around the headrest or head restraint.



If the position you are using has a fixed headrest or head restraint and you are using a single tether, route the tether over the headrest or head restraint.

3. Push and pull the child restraint in different directions to be sure it is secure.

Securing a Child Restraint in a Rear Seat Position

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.

If your child restraint has the LATCH system, see *Lower Anchors and Tethers for Children (LATCH) on page 1-45* for how and where to install your child restraint using LATCH. If you secure a child restraint using a safety belt and it uses a top tether, see *Lower Anchors and Tethers for Children (LATCH) on page 1-45* for top tether anchor locations.

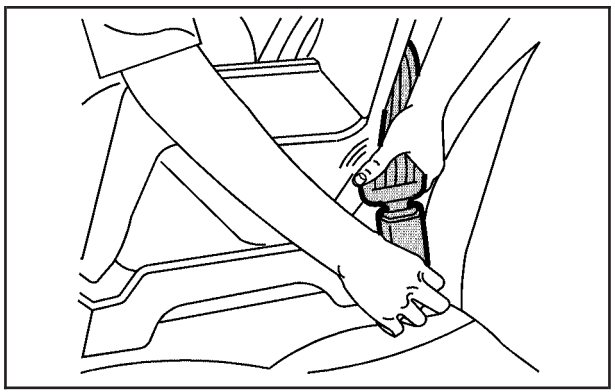
Do not secure a child restraint in a position without a top tether anchor if a national or local law requires that the top tether be anchored, or if the instructions that come with the child restraint say that the top strap must be anchored.

In Canada, the law requires that forward-facing child restraints have a top tether, and that the tether be attached.

If your child restraint does not have the LATCH 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.

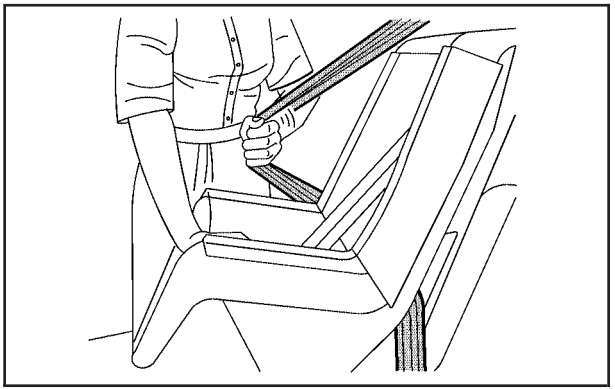
If you need to install more than one child restraint in the rear seat, be sure to read *Where to Put the Restraint on page 1-44*.

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.

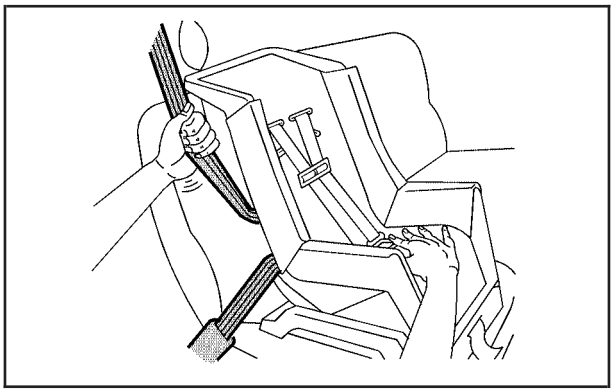


3. Push the latch plate into the buckle until it clicks.

   Make sure the release button is positioned so you would be able to unbuckle the safety belt quickly if necessary.



4. Pull the rest of the shoulder belt all the way out of the retractor to set the lock.



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. If you are using a forward-facing child restraint, you may find it helpful to use your knee to push down on the child restraint as you tighten the belt.
6. If your child restraint has a top tether, follow the child restraint manufacturer's instructions regarding the use of the top tether. See *Lower Anchors and Tethers for Children (LATCH) on page 1-45* for more information.
7. 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 a Child Restraint in the Right Front Seat Position

Your 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 1-44*.

In addition, your vehicle has a passenger sensing system which is designed to turn off the right front passenger's frontal airbag and seat-mounted side impact airbag under certain conditions. See *Passenger Sensing System on page 1-69* and *Passenger Airbag Status Indicator on page 3-37* for more information on this, including important safety information.

A label on your sun visor says, "Never put a rear-facing child seat in the front." This is because the risk to the rear-facing child is so great, if the airbag deploys.

⚠CAUTION:

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

Even if the passenger sensing system has turned off the right front passenger's 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. Rear-facing child restraints should be secured 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.

See *Passenger Sensing System on page 1-69* for additional information.

If your child restraint has the LATCH system, see *Lower Anchors and Tethers for Children (LATCH) on page 1-45* for how to install your child restraint using LATCH. If you secure a child restraint using a safety belt and it uses a top tether, see *Lower Anchors and Tethers for Children (LATCH) on page 1-45* for top tether anchor locations.

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

In Canada, the law requires that forward-facing child restraints have a top tether, and that the tether be attached.

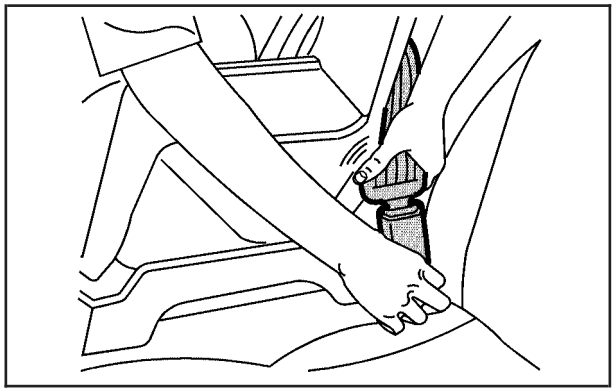
You will be using the lap-shoulder belt to secure the child restraint in this position. Follow the instructions that came with the child restraint.

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

   When the passenger sensing system has turned off the right front passenger's frontal airbag and seat-mounted side impact airbag, the off indicator on the passenger airbag status indicator should light and stay lit when you start the vehicle. See *Passenger Airbag Status Indicator on page 3-37*.

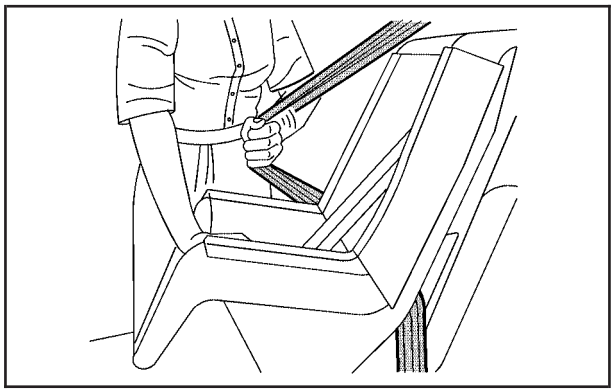
2. Put the child restraint on the seat.

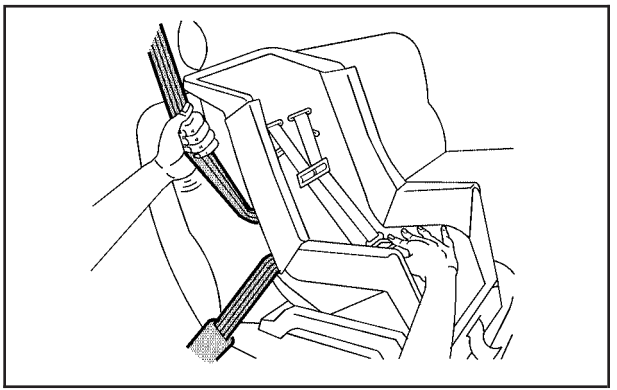
3. Pick up the latch plate, and run the lap and shoulder portions of the vehicle's safety belt through or around the restraint. The child restraint instructions will show you how.



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

   Make sure the release button is positioned so you would be able to unbuckle the safety belt quickly if necessary.





5. Pull the rest of the shoulder belt all the way out of the retractor to set the lock.
6. To tighten the belt, push down on the child restraint, pull the shoulder portion of the belt to tighten the lap portion of the belt and feed the shoulder belt back into the retractor. If you are using a forward-facing child restraint, you may find it helpful to use your knee to push down on the child restraint as you tighten the belt.
7. Push and pull the child restraint in different directions to be sure it is secure.

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

If a child restraint has been installed and the on indicator is lit, turn the vehicle off. Remove the child restraint from the vehicle and reinstall the child restraint.

If, after reinstalling the child restraint and restarting the vehicle, the on indicator is still lit, check to make sure that the vehicle's seatback is not pressing the child restraint into the seat cushion. If this happens, slightly recline the vehicle's seatback and adjust the seat cushion if possible. Also make sure the child restraint is not trapped under the vehicle head restraint. If this happens, adjust the head restraint.

Remove any additional material from the seat such as blankets, cushions, seat covers, seat heaters or seat massagers before reinstalling or securing the child restraint.

If the on indicator is still lit, secure the child in the child restraint in a rear seat position in the vehicle and check with your dealer/retailer.

To remove the child restraint, unbuckle the vehicle's safety belt and let it go back all the way.

Airbag System

Your vehicle has the following airbags:

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

All of the airbags in your vehicle will have the word AIRBAG embossed in the trim or on an attached label near the deployment opening.

For frontal airbags, the word AIRBAG will appear on the middle part of the steering wheel for the driver and on the instrument panel for the right front passenger.

With seat-mounted side impact airbags, the word AIRBAG will appear on the side of the seatback closest to the door.

With roof-rail airbags, the word AIRBAG will appear along the headliner 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:

⚠CAUTION:

You can be severely injured or killed in a crash if you are not wearing your safety belt — even if you have airbags. Wearing your safety belt during a crash helps reduce your chance of hitting things inside the vehicle or being ejected from it. Airbags are "supplemental restraints" to the safety belts. All airbags are designed to work with safety belts, but do not replace them.

⚠CAUTION:

Frontal airbags are designed to deploy in moderate to severe frontal and near frontal crashes. They are not designed to inflate in rollover, rear crashes, or in many side crashes.

Seat-mounted side impact airbags are designed to inflate in moderate to severe crashes where something hits the side of your vehicle. They are not designed to inflate in frontal, in rollover, or in rear crashes. Rollover capable roof-rail airbags are designed to inflate in moderate to severe crashes where something hits the side of your vehicle, during a vehicle rollover, or in a severe frontal impact. They are not designed to inflate in rear crashes.

Everyone in your vehicle should wear a safety belt properly — whether or not there is an airbag for that person.

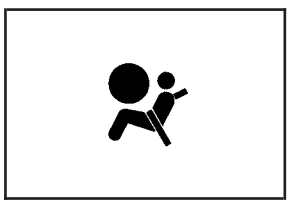
⚠CAUTION:

Airbags inflate with great force, 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 the airbag, as you would be if you were sitting on the edge of your seat or leaning forward. Safety belts help keep you in position before and during a crash. Always wear your 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.

⚠CAUTION:

Airbags plus lap-shoulder belts offer the best protection for adults, 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 your vehicle. To read how, see *Older Children on page 1-34* or *Infants and Young Children on page 1-37*.



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 3-36* for more information.

Where Are the Airbags?

The driver's frontal airbag is in the middle of the steering wheel.

The right front passenger's frontal airbag is in the instrument panel on the passenger's side.

Driver Side shown, Passenger Side similar

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

Driver Side shown, Passenger Side similar

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

⚠CAUTION:

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.

If your vehicle has roof-rail airbags, never secure anything to the roof of your vehicle by routing the 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 right front 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 your frontal airbags will or should deploy is not based on how fast your vehicle is traveling. It depends largely on what you hit, the direction of the impact, and how quickly your vehicle slows down.

Frontal airbags may inflate at different crash speeds. For example:

- If the vehicle hits a stationary object, the airbags could inflate at a different crash speed than if the vehicle hits a moving object.
- If the vehicle hits an object that deforms, the airbags could inflate at a different crash speed than if the vehicle hits an object that does not deform.
- If the vehicle hits a narrow object (like a pole), the airbags could inflate at a different crash speed than if the vehicle hits a wide object (like a wall).
- If the vehicle goes into an object at an angle, the airbags could inflate at a different crash speed than if the vehicle goes straight into the object.

Thresholds can also vary with specific vehicle design.

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

In addition, your vehicle has dual-stage frontal airbags. Dual-stage airbags adjust the restraint according to crash severity. Your vehicle has electronic frontal sensors, which 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.

Your vehicle has seat-mounted side impact and roof-rail airbags. See *Airbag System on page 1-59*. Seat-mounted side impact and roof-rail airbags are intended to inflate in moderate to severe side crashes. In addition, these roof-rail airbags are intended to inflate during a rollover or in a severe frontal 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 airbags are not intended to inflate in frontal impacts, near-frontal impacts, rollovers, or rear impacts. Roof-rail airbags are not intended to inflate in rear impacts. A seat-mounted side impact airbag is intended to deploy on the side of the vehicle that is struck. Both roof-rail airbags will deploy when either side of the vehicle is struck, or if the sensing system predicts that the vehicle is about to roll over, or in a severe frontal impact.

In any particular crash, no one can say whether an airbag should have inflated simply because of the damage to a vehicle or because of what the repair costs were. For frontal airbags, inflation is determined by what the vehicle hits, the angle of the impact, and how quickly the vehicle slows down. For seat-mounted side impact and roof-rail airbags, deployment is determined by the location and severity of the side impact. In a rollover event, roof-rail airbag deployment is determined by the direction of the roll.

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 seatbacks 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.

Frontal airbags distribute the force of the impact more evenly over the occupant's upper body, stopping the occupant more gradually. Seat-mounted side impact and roof-rail airbags distribute the force of the impact more evenly over the occupant's upper body.

Rollover capable roof-rail airbags are designed to help contain the head and chest of occupants in the outboard seating positions in the first, second, and third rows. The rollover capable roof-rail airbags are designed to help reduce the risk of full or partial ejection in rollover events, although no system can prevent all such ejections.

But airbags would not help in many types of collisions, primarily because the occupant's motion is not toward those airbags. See *When Should an Airbag Inflate? on page 1-65* for more information.

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 realize an airbag inflated. Roof-rail airbags may still be at least partially inflated for some time after they deploy. Some components of the airbag module may be hot for several minutes. For location of the airbag modules, see *What Makes an Airbag Inflate? on page 1-67*.

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.

⚠CAUTION:

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.

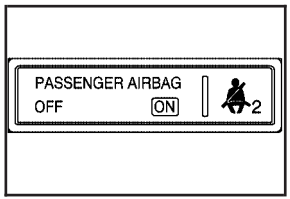
Your vehicle has a feature that may automatically unlock the doors, turn the interior lamps on, and turn the hazard warning flashers on when the airbags inflate. You can lock the doors, turn the interior lamps off, and turn the hazard warning flashers off by using the controls for those features.

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

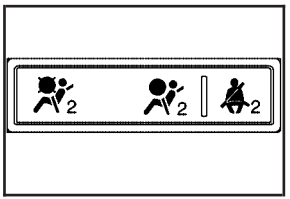
- Airbags are designed to inflate only once. After an airbag inflates, you will need some new parts for the airbag system. If you do not get them, the airbag system will not be there to help protect you in another crash. A new system will include airbag modules and possibly other parts. The service manual for your vehicle covers the need to replace other parts.
- Your vehicle has a crash sensing and diagnostic module which records information after a crash. See *Vehicle Data Recording and Privacy on page 7-17* and *Event Data Recorders on page 7-18*.
- Let only qualified technicians work on the airbag systems. Improper service can mean that an airbag system will not work properly. See your dealer/retailer for service.

Passenger Sensing System

Your vehicle has a passenger sensing system for the right front passenger's position. The passenger airbag status indicator will be visible on the instrument panel when you start your vehicle.



United States



Canada

The words ON and OFF, or the symbol for on and off, will be visible during the system check. If you are using remote start to start your vehicle from a distance, if equipped, you may not see the system check. When the system check is complete, either the word ON or the word OFF, or the symbol for on or the symbol for off, will be visible. See *Passenger Airbag Status Indicator on page 3-37*.

The passenger sensing system will turn off the right front passenger's frontal airbag and seat-mounted side impact airbag under certain conditions. The driver's airbags are not part of the passenger sensing system.

The passenger sensing system works with sensors that are part of the right front passenger's seat. The sensors are designed to detect the presence of a properly-seated occupant and determine if the right front passenger's frontal airbag and seat-mounted side impact airbag should be enabled (may inflate) or not.

Accident statistics show that children are safer if they are restrained in the rear rather than the front seat.

We recommend that children 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.

A label on your sun visor says, "Never put a rear-facing child seat in the front." This is because the risk to the rear-facing child is so great, if the airbag deploys.

⚠CAUTION:

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

Even if the passenger sensing system has turned off the right front passenger's frontal and seat-mounted side impact airbag (if equipped), 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. Rear-facing child restraints should be secured in a rear seat, even if the airbag(s) are 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.

The passenger sensing system is designed to turn off the right front passenger's frontal airbag and seat-mounted side impact airbag if:

- The right front passenger seat is unoccupied.
- The system determines that an infant is present in a rear-facing infant seat.
- The system determines that a small child is present in a child restraint.
- The system determines that a small child is present in a booster seat.
- A right front passenger takes his/her weight off of the seat for a period of time.
- The right front passenger seat is occupied by a smaller person, such as a child who has outgrown child restraints.
- Or, if there is a critical problem with the airbag system or the passenger sensing system.

When the passenger sensing system has turned off the right front passenger's frontal airbag and seat-mounted side impact airbag, the off indicator will light and stay lit to remind you that the airbags are off. See *Passenger Airbag Status Indicator on page 3-37*.

If a child restraint has been installed and the on indicator is lit, turn the vehicle off. Remove the child restraint from the vehicle and reinstall the child restraint following the child restraint manufacturer's directions and refer to *Securing a Child Restraint in the Right Front Seat Position on page 1-56*.

If, after reinstalling the child restraint and restarting the vehicle, the on indicator is still lit, check to make sure that the vehicle's seatback is not pressing the child restraint into the seat cushion. If this happens, slightly recline the vehicle's seatback and adjust the seat cushion if possible. Also make sure the child restraint is not trapped under the vehicle head restraint. If this happens, adjust the head restraint. See *Head Restraints on page 1-8*.

Remove any additional material from the seat such as blankets, cushions, seat covers, seat heaters, or seat massagers before reinstalling or securing the child restraint.

If the on indicator is still lit, secure the child in the child restraint in a rear seat position in the vehicle, and check with your dealer/retailer.

The passenger sensing system is designed to enable (may inflate) the right front passenger's frontal airbag and seat-mounted side impact airbag anytime the system senses that a person of adult size is sitting properly in the right front passenger's seat. When the passenger sensing system has allowed the airbags to be enabled, the on indicator will light and stay lit to remind you that the airbags are active.

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

If a person of adult-size is sitting in the right front passenger's seat, but the off indicator is lit, it could be because that person is not sitting properly in the seat. If this happens, turn the vehicle off, remove any additional material from the seat, such as blankets, cushions, seat covers, seat heaters or seat massagers and ask the person to place the seatback in the fully upright position, then sit upright in the seat, centered on the seat cushion, with the person's legs comfortably extended. Restart the vehicle and have the person remain in this position for two to three minutes. This will allow the system to detect that person and then enable the right front passenger's frontal airbag and seat-mounted side impact airbag.

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

⚠CAUTION:

If the airbag readiness light in the instrument panel cluster ever comes on and stays on, it means that something may be wrong with the airbag system. If this ever happens, have the vehicle serviced promptly, because an adult-size person sitting in the right front passenger's seat may not have the protection of the airbag(s). See *Airbag Readiness Light on page 3-36* for more on this, including important safety information.

A thick layer of additional material, such as a blanket or cushion, or aftermarket equipment such as seat covers, seat heaters, and seat massagers can affect how well the passenger sensing system operates. We recommend that you not use seat covers or other aftermarket equipment other than any that GM has approved for your specific vehicle. See *Adding Equipment to Your Airbag-Equipped Vehicle on page 1-74* for more information about modifications that can affect how the system operates.

⚠CAUTION:

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

Servicing Your Airbag-Equipped Vehicle

Airbags affect how your vehicle should be serviced. There are parts of the airbag system in several places around your vehicle. Your dealer/retailer and the service manual have information about servicing your vehicle and the airbag system. To purchase a service manual, see *Service Publications Ordering Information on page 7-16*.

⚠CAUTION:

For up to 10 seconds after the ignition 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 Your Airbag-Equipped Vehicle

Q: Is there anything I might add to or change about the vehicle that could keep the airbags from working properly?

A: Yes. If you add things that change your vehicle's frame, bumper system, height, front end or side sheet metal, they may keep the airbag system from working properly. 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, front sensors, side impact sensors, rollover sensor module, or airbag wiring can affect the operation of the airbag system.

In addition, your vehicle has a passenger sensing system for the right front passenger's position, which includes sensors that are part of the passenger's seat. The passenger sensing system may not operate properly if the original seat trim is replaced with non-GM covers, upholstery or trim, or with GM covers, upholstery or trim designed for a different vehicle.

Any object, such as an aftermarket seat heater or a comfort enhancing pad or device, installed under or on top of the seat fabric, could also interfere with the operation of the passenger sensing system. This could either prevent proper deployment of the passenger airbag(s) or prevent the passenger sensing system from properly turning off the passenger airbag(s). See *Passenger Sensing System on page 1-69*.

If you have any questions about this, you should contact Customer Assistance before you modify your vehicle. The phone numbers and addresses for Customer Assistance are in Step Two of the Customer Satisfaction Procedure in this manual. See *Customer Satisfaction Procedure on page 7-2*.

If your vehicle has rollover roof-rail airbags, see *Different Size Tires and Wheels on page 5-66* for additional important information.

Q: Because I have a disability, I have to get my vehicle modified. How can I find out whether this will affect my airbag system?

A: If you have questions, call Customer Assistance. The phone numbers and addresses for Customer Assistance are in Step Two of the Customer Satisfaction Procedure in this manual. See *Customer Satisfaction Procedure on page 7-2*.

In addition, your dealer/retailer and the service manual have information about the location of the airbag sensors, sensing and diagnostic module and airbag wiring.

Restraint System Check

Checking the Restraint Systems

Safety Belts

Now and then, make sure the safety belt reminder light and all your belts, buckles, latch plates, retractors and anchorages are working properly.

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. 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 3-35* for more information.

Keep safety belts clean and dry. See *Care of Safety Belts on page 5-99*.

Airbags

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 3-36* for more information.

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 airbag modules, see *What Makes an Airbag Inflate? on page 1-67*. See your dealer/retailer for service.**

Replacing Restraint System Parts After a Crash

⚠CAUTION:

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

If you have had a crash, do you need new belts or LATCH system (if equipped) parts?

After a very minor crash, nothing may be necessary. But the belt assemblies that were used during any crash may have been stressed or damaged. See your dealer/retailer to have your safety belt assemblies inspected or replaced.

If your vehicle has the LATCH system and it was being used during a crash, you may need new LATCH system parts.

New parts and repairs may be necessary even if the belt or LATCH system (if equipped), was not being used at the time of the crash.

If an airbag inflates, you will need to replace airbag system parts. See the part on the airbag system earlier in this section.

Have your safety belt pretensioners checked if your vehicle has been in a crash, if your airbag readiness light stays on after you start your vehicle, or while you are driving. See *Airbag Readiness Light on page 3-36*.

NOTES

Section 2 Features and Controls

Keys 2-3
- Remote Keyless Entry (RKE) System 2-4
- Remote Keyless Entry (RKE) System Operation 2-5
- Remote Vehicle Start 2-7

Doors and Locks 2-10
- Door Locks 2-10
- Power Door Locks 2-10
- Delayed Locking 2-11
- Programmable Automatic Door Locks 2-11
- Rear Door Security Locks 2-11
- Lockout Protection 2-12
- Liftgate 2-12
- Power Liftgate 2-14

Windows 2-18
- Power Windows 2-19
- Sun Visors 2-21

Theft-Deterrent Systems 2-22
- Content Theft-Deterrent 2-22
- PASS-Key® III+ Electronic Immobilizer 2-24
- PASS-Key® III+ Electronic Immobilizer Operation 2-24

Starting and Operating Your Vehicle 2-26
- New Vehicle Break-In 2-26
- Ignition Positions 2-26
- Retained Accessory Power (RAP) 2-27
- Starting the Engine 2-28
- Engine Coolant Heater 2-29
- Automatic Transmission Operation 2-30
- Tow/Haul Mode 2-34
- Parking Brake 2-35
- Shifting Into Park 2-36
- Shifting Out of Park 2-37
- Parking Over Things That Burn 2-38
- Engine Exhaust 2-38
- Running the Vehicle While Parked 2-39

Mirrors 2-40
- Automatic Dimming Rearview Mirror with OnStar® and Compass 2-40
- Outside Power Mirrors 2-42
- Outside Power Foldaway Mirrors 2-42
- Park Tilt Mirrors 2-43
- Outside Convex Mirror 2-44
- Outside Heated Mirrors 2-44

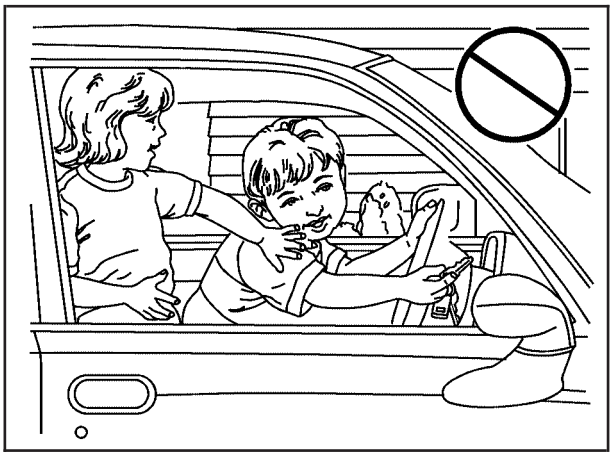
Section 2 Features and Controls

Object Detection Systems 2-44
Ultrasonic Rear Parking Assist (URPA) 2-44
Rear Vision Camera 2-47
OnStar® System 2-47
Universal Home Remote System 2-50
Universal Home Remote System Operation (With One Triangular LED) 2-50
Storage Areas 2-55
Glove Box 2-55
Cupholders 2-55
Instrument Panel Storage 2-55
Center Console Storage 2-56
Second Row Center Console 2-56
Floor Mats 2-57
Luggage Carrier 2-58
Rear Seat Armrest 2-58
Convenience Net 2-58
Cargo Cover 2-59
Cargo Tie Downs 2-59
Cargo Management System 2-59
Sunroof 2-60

Keys

⚠CAUTION:

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 they 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.



The key can be used for the ignition and all door locks.

The key has a bar-coded key tag that the dealer/retailer or qualified locksmith can use to make new keys. Store this information in a safe place, not in your vehicle.

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

Notice: **If you ever lock your keys in your vehicle, you may have to damage the vehicle to get in. Be sure you have spare keys.**

If you are locked out of your vehicle, call the Roadside Assistance Center. See *Roadside Assistance Program on page 7-8*.

Remote Keyless Entry (RKE) System

The Remote Keyless Entry (RKE) system operates on a radio frequency subject to Federal Communications Commission (FCC) Rules and with Industry Canada.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause interference.
2. This device must accept any interference received, including interference that may cause undesired operation of the device.

This device complies with RSS-210 of Industry Canada. Operation is subject to the following two conditions:

1. This device may not cause interference.
2. This device must accept any interference received, including interference that may cause undesired operation of the device.

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

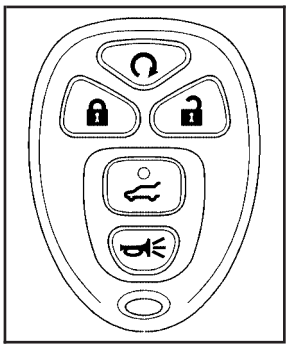
If there is a decrease in the RKE operating range, try this:

- Check the distance. The transmitter may be too far from the vehicle. Stand closer during rainy or snowy weather.
- Check the location. Other vehicles or objects may be blocking the signal. Take a few steps to the left or right, hold the transmitter higher, and try again.
- Check the transmitter's battery. See "Battery Replacement" later in this section.
- If the transmitter is still not working correctly, see your dealer/retailer or a qualified technician for service.

Remote Keyless Entry (RKE) System Operation

The Remote Keyless Entry (RKE) transmitter functions will work up to 195 feet (60 m) away. However, the operating range may be less while the vehicle is running.

There are other conditions which can affect the performance of the transmitter. See *Remote Keyless Entry (RKE) System on page 2-4*.



With Remote Start and Liftgate (Without Remote Start or Liftgate Similar)

(Remote Vehicle Start): If your vehicle has this feature, press to start the engine from outside the vehicle using the RKE transmitter. See *Remote Vehicle Start on page 2-7* for additional information.

(Lock): Press to lock all the doors. If enabled through the Driver Information Center (DIC), the parking lamps will flash once to indicate locking has occurred. If enabled through the DIC, the horn will chirp when is pressed again within five seconds of the previous press of the lock button. See *DIC Vehicle Customization on page 3-65* for additional information. Pressing may arm the content theft-deterrent system. See *Content Theft-Deterrent on page 2-22*.

(Unlock): Press to unlock the driver's door. If is pressed again within five seconds, all remaining doors will unlock. The interior lamps will come on and stay on for 20 seconds or until the ignition is turned on. If enabled through the DIC, the parking lamps will flash twice to indicate unlocking has occurred. See *DIC Vehicle Customization on page 3-65*. Pressing on the RKE transmitter will disarm the content theft-deterrent system. See *Content Theft-Deterrent on page 2-22*.

(Power Liftgate): Press and hold for about one second to open and close the liftgate. The taillamps will flash and a chime will sound to indicate when the liftgate is opening and closing.

(Vehicle Locator/Panic Alarm): Press and release to locate your vehicle. The turn signal lamps will flash and the horn will sound three times.

Press and hold for more than two seconds to activate the panic alarm. The turn signal lamps will flash and the horn will sound repeatedly for 30 seconds. The alarm will turn off when the ignition is moved to ON/RUN or is pressed again. The ignition must be in LOCK/OFF for the panic alarm to work.

Matching Transmitter(s) to Your Vehicle

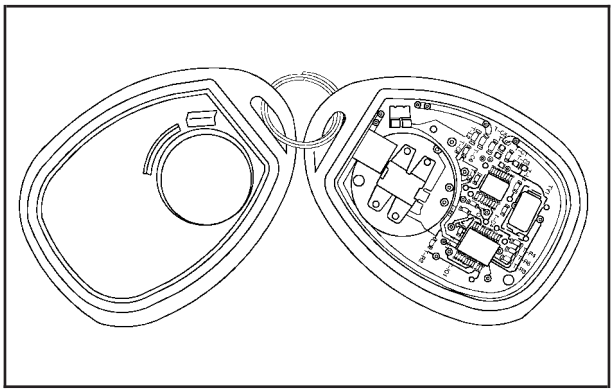
Each RKE transmitter is coded to prevent another transmitter from unlocking your vehicle. If a transmitter is lost or stolen, a replacement can be purchased through your dealer/retailer. All transmitters need to be re-coded to match the new transmitter.

The lost transmitter will no longer work after the new transmitters are re-coded. The vehicle can have a maximum of eight transmitters matched to it. See "Relearn Remote Key" under *DIC Operation and Displays on page 3-50* for instructions on how to match RKE transmitters to your vehicle.

Battery Replacement

Replace the battery if the REPLACE BATTERY IN REMOTE KEY message displays in the DIC. See "REPLACE BATTERY IN REMOTE KEY" under *DIC Warnings and Messages on page 3-56* for additional information.

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



To replace the battery in the RKE transmitter:

1. Separate the halves of the transmitter with a flat, thin object inserted into the notch on the side.
2. Remove the old battery. Do not use a metal object.
3. Insert the new battery, positive side facing down. Replace with a CR2032 or equivalent battery.
4. Put the transmitter back together tightly.

Remote Vehicle Start

Your vehicle may have a remote starting feature that starts the engine from outside of the vehicle.

If your vehicle has an automatic climate control system, the climate control system will default to a heating or cooling mode depending on the outside temperatures. If your vehicle does not have an automatic climate control system, the system will turn on at the setting the vehicle was set to when the vehicle was last turned off.

If your vehicle has an automatic climate control system and heated seats, the heated seats will turn on during colder outside temperatures and will shut off when the key is turned to ON/RUN. See *Heated Seats on page 1-4* for more information.

The rear window defogger and heated mirrors, if your vehicle has them, will turn on during colder outside temperatures and will turn off when the key is turned to ON/RUN.

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

If your vehicle has the remote start feature, the RKE transmitter functions will have an increased range of operation. However, the range may be less while the vehicle is running.

There are other conditions which can affect the performance of the transmitter, see *Remote Keyless Entry (RKE) System on page 2-4* for additional information.

(Remote Start): This button will be on the RKE transmitter if you have remote start.

To start the vehicle:

1. Aim the transmitter at the vehicle.
2. Press and release the transmitter's lock button, then immediately press and hold the transmitter's remote start button until the turn signal lights flash. If you cannot see the vehicle's lights, press and hold the remote start button for at least four seconds. The vehicle's doors will lock. Pressing the remote start button again, after the vehicle has started, will shut the vehicle off.

   When the vehicle starts, the parking lamps will turn on and remain on while the vehicle is running.
3. If it is the first remote start since the vehicle has been driven, repeat these steps while the engine is still running, to extend the time by 10 minutes for the engine to continue to run. Remote start can be extended one time.

After entering the vehicle during a remote start, insert and turn the key to the ON/RUN position to drive the vehicle.

If the vehicle is left running it will automatically shut off after 10 minutes unless a time extension has been done.

To manually shut off a remote start:

- Aim the RKE transmitter at the vehicle and press the remote start button until the parking lamps turn off.
- Turn on the hazard warning flashers.
- Turn the ignition switch on and then off.

The vehicle can be started using the remote start feature two separate times between driving sequences. The engine will run for 10 minutes after each remote start.

Or, you can extend the engine run time by another 10 minutes within the first 10 minute remote start time frame, and before the engine stops.

For example, if the lock button and then the remote start buttons are pressed again after the vehicle has been running for five minutes, 10 minutes are added, allowing the engine to run for 15 minutes.

The additional 10 minutes are considered a second remote start.

Once two remote starts, or a single remote start with one time extension has been done, the vehicle must be started with the key.

After the key is removed from the ignition, the vehicle can be started using the remote start feature again.

The vehicle cannot be started using the remote start feature if the key is in the ignition, the hood is not closed, or if there is an emission control system malfunction.

Also, the engine will turn off during a remote start if the coolant temperature gets too high or if the oil pressure gets low.

Vehicles that have the remote vehicle start feature are shipped from the factory with the remote vehicle start system enabled. The system may be enabled or disabled through the DIC if your vehicle has DIC buttons. See “REMOTE START” under *DIC Vehicle Customization on page 3-65* for additional information. If your vehicle does not have DIC buttons, see your dealer/retailer to enable or disable the remote start system.

Remote Start Ready

If your vehicle does not have the remote start feature, it will have the remote start ready feature. This feature allows your dealer/retailer to add the manufacturer’s remote start feature.

See your dealer/retailer if you would like to add the manufacturer’s remote start feature to your vehicle.

Doors and Locks

Door Locks

⚠CAUTION:

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. You increase the chance of being thrown out of the vehicle in a crash if the doors are not locked. So, wear safety belts properly and lock the doors whenever you drive.**
- **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 your vehicle whenever you leave it.**

CAUTION: (Continued)

CAUTION: (Continued)

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

The vehicle's doors can be manually locked or unlocked in the following ways:

- From the outside, use the key in the driver's door.
- From the inside, use the lock control on the door.

Power Door Locks

The power door lock switches are located on the front doors.

(Unlock): Press to unlock the doors.

(Lock): Remove the key from the ignition and press to lock the doors.

Delayed Locking

When locking the doors with the power lock switch and a door or the liftgate is open, the doors will lock five seconds after the last door is closed. You will hear three chimes to signal that the delayed locking feature is in use.

Pressing the power lock switch twice or the lock button on the RKE transmitter twice will override the delayed locking feature and immediately lock all the doors.

This feature will not operate if the key is in the ignition.

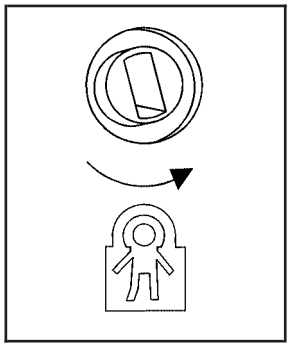
You can program this feature using the Driver Information Center (DIC). See DELAY DOOR LOCK under *DIC Vehicle Customization on page 3-65*.

Programmable Automatic Door Locks

Vehicles with an automatic lock/unlock feature enable you to program the vehicle's power door locks. You can program this feature through the Driver Information Center (DIC). See *DIC Vehicle Customization on page 3-65* for more information on DIC programming.

Rear Door Security Locks

Your 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.

Lockout Protection

This feature protects you from locking the key in the vehicle when the key is in the ignition and a front door is open.

If the driver's side power door lock switch is pressed when the driver's door is open and the key is in the ignition, all of the doors will lock and then the driver's door will unlock.

If the passenger's side power door lock switch is pressed when the front passenger's door is open and the key is in the ignition, all of the doors will lock and then the front passenger's door will unlock.

Liftgate

⚠CAUTION:

It can be dangerous to drive with the liftgate open because carbon monoxide (CO) gas can come into your vehicle. You cannot see or smell CO. It can cause unconsciousness and even death.

If you must drive with the liftgate open, or if electrical wiring or other cable connections must pass through the seal between the body and the liftgate:

- **Make sure all other windows are shut.**
- **Turn the fan on your heating or cooling system to its highest speed with the recirculation mode off. That will force outside air into your vehicle. See *Dual Automatic Climate Control System on page 3-22*.**

CAUTION: (Continued)

CAUTION: (Continued)

- **If you have air outlets on or under the instrument panel, open them all the way.**
- **If your vehicle has a power liftgate, disable the power liftgate function.**

See *Power Liftgate on page 2-14*.

If your vehicle has a power liftgate, see *Power Liftgate on page 2-14*.

To unlock the liftgate, use the power door lock switch or press the door unlock button on the Remote Keyless Entry (RKE) transmitter twice. See *Remote Keyless Entry (RKE) System Operation on page 2-5*.

To open the liftgate, press the touchpad on the underside of the liftgate handle. The vehicle must be in PARK (P) to open the liftgate. To close the liftgate, use the pull cup or pull strap as an aid.

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

If the battery is properly connected and has adequate voltage, and the liftgate still will not function, your vehicle should be taken to a dealership for service.

Power Liftgate

Power Liftgate Operation

⚠CAUTION:

It can be dangerous to drive with the liftgate open because carbon monoxide (CO) gas can come into your vehicle. You cannot see or smell CO. It can cause unconsciousness and even death.

If you must drive with the liftgate open, or if electrical wiring or other cable connections must pass through the seal between the body and the liftgate:

- **Make sure all other windows are shut.**
- **Turn the fan on your heating or cooling system to its highest speed with the recirculation mode off. That will force outside air into your vehicle. See *Dual Automatic Climate Control System on page 3-22*.**

CAUTION: (Continued)

CAUTION: (Continued)

- **If you have air outlets on or under the instrument panel, open them all the way.**
- **If your vehicle has a power liftgate, disable the power liftgate function.**

See *Power Liftgate on page 2-14*.

Your vehicle may have a power liftgate. The vehicle must be in PARK (P) to use the power feature.

The taillamps will flash and a chime will sound when the power liftgate is used.

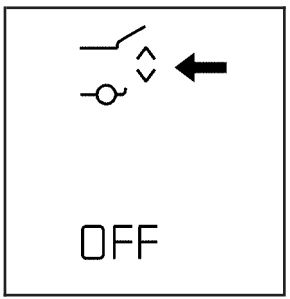
⚠CAUTION:

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

Notice: **If you open the liftgate without checking for overhead obstructions such as a garage door, you could damage the liftgate or the liftgate glass. Always check to make sure the area above and behind the liftgate is clear before opening it.**

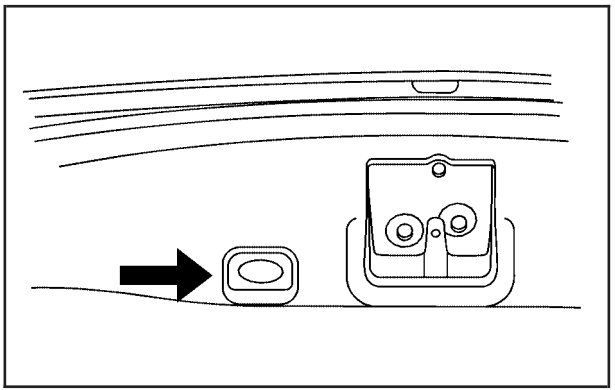
The power liftgate can be power opened and closed in the following ways:

- Press and hold the power liftgate button on the Remote Keyless Entry (RKE) transmitter until the liftgate starts moving. *Remote Keyless Entry (RKE) System Operation on page 2-5* for more information.



- Pressing the liftgate button on the center console.
- Pressing the touchpad switch on the outside liftgate handle.

Pressing the buttons, or touchpad switch a second time while the liftgate is moving reverses the direction.



Power Liftgate Button Near Liftgate Latch

The liftgate can also be closed by pressing the power liftgate button next to the liftgate latch. Press the button a second time during liftgate operation to reverse that operation.

The power liftgate may be temporarily disabled under extreme temperatures, or under low battery conditions. If this occurs, the liftgate can still be operated manually.

If you shift the transmission out of PARK (P) while the power function is in progress, the liftgate power function will continue to completion. If you shift the transmission out of PARK (P) and accelerate before the power liftgate latches closed, the liftgate may reverse to the open position. Cargo could fall out of the vehicle. Always make sure the power liftgate is closed and latched before you drive away.

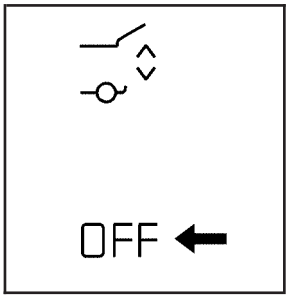
If you power open the liftgate and the liftgate support struts have lost pressure, the lights will flash and a chime will sound. The liftgate will stay open temporarily, then slowly close. See your dealer/retailer for service before using the liftgate.

Obstacle Detection Features

If the liftgate encounters an obstacle during a power open or close cycle, a warning chime will sound and the liftgate will automatically reverse direction to the full closed or open position. After removing the obstruction, the power liftgate operation can be used again. If the liftgate encounters multiple obstacles on the same power cycle, the power function will deactivate, and you must manually open or close the liftgate. The LIFTGATE OPEN warning message in the Driver Information Center (DIC) will indicate that the liftgate is open. After removing the obstructions, manually open the liftgate to the full open position or close the liftgate to the fully closed and latched position. The liftgate will now resume normal power operation.

Your vehicle has pinch sensors located on the side edges of the liftgate. If an object is caught between the liftgate and the body and presses against this sensor, the liftgate will reverse direction and open fully. The liftgate will remain open until it is activated again or closed manually. Do not force the liftgate open or closed during a power cycle.

Manual Operation of Power Liftgate



To change the liftgate to manual operation, press the switch on the center console to the OFF position.

With the power liftgate disabled and all of the doors unlocked, the liftgate can be manually opened and closed.

To open the liftgate, press the touchpad on the handle on the outside of the liftgate, and lift the gate open. To close the liftgate, use the pull cup to lower the liftgate and close. The liftgate latch will power close. Always close the liftgate before driving.

If the RKE button or the power close button on the liftgate is pressed while power operation is disabled, the lights will flash three times, but the liftgate will not move.

It is not recommended that you drive with the liftgate open, however, if you must drive with the liftgate open, the liftgate should be set to manual operation by pressing the OFF switch on the center console.

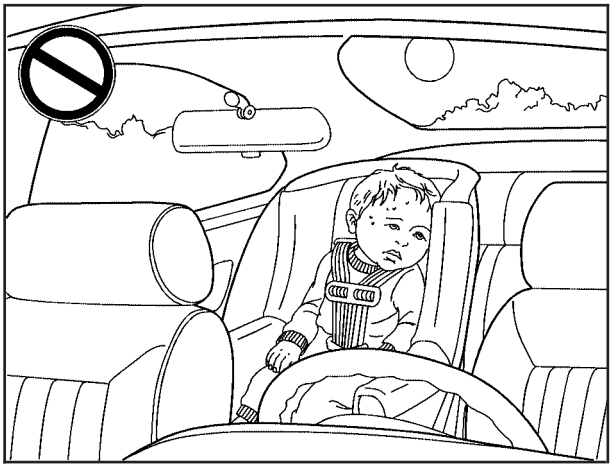
The liftgate has an electric latch. If the battery is disconnected or has low voltage, the liftgate will not open. The liftgate will resume operation when the battery is reconnected and charged.

If the battery is properly connected with adequate voltage, the switch is not disabled, and the liftgate still will not function, your vehicle should be taken to a dealer/retailer for service.

Windows

⚠CAUTION:

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.

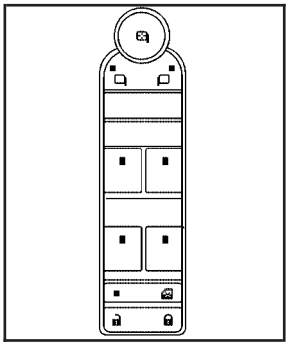


Power Windows

⚠CAUTION:

Leaving children in a vehicle with the keys 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 and they could be seriously injured or killed if caught in the path of a closing window. Do not leave keys in a vehicle with children.

When there are children in the rear seat use the window lockout button to prevent unintentional operation of the windows.



Uplevel shown, base similar

The power window controls are located on each of the side doors.

The driver's door also has switches that control the passenger and rear windows. The power windows work when the ignition has been turned to ACCESSORY or ON or when Retained Accessory Power (RAP) is active. See *Retained Accessory Power (RAP) on page 2-27*.

Press the switch to lower the window.

Pull up on the front edge of the switch to raise the window.

Express-Down Windows

Windows that have the express-down feature allow the windows to be lowered without holding the switch. Press the window switch fully and release it to activate the express-down feature. The express mode can be canceled at any time by briefly pressing, or pulling the switch.

Express-Up Window

Windows that have the express-up feature allow the windows to be raised all the way without holding the switch up. Pull the switch up fully and release it to activate the express-up feature. The express-up mode can be canceled at any time by briefly pressing, or pulling the switch.

Programming the Power Windows

If the battery on your vehicle has been recharged, disconnected, or replaced, windows with the express-up feature need to be reprogrammed for this feature to work. To program the window:

1. With the ignition in the ACCESSORY or ON positions, or when Retained Accessory Power (RAP) is active, close all doors. See *Retained Accessory Power (RAP) on page 2-27*.
2. Press and continue to hold the window switch until the window is fully open.
3. Pull up and hold the window switch to close the window. Continue to hold it briefly after the window is fully closed.
4. Repeat for each window that has the express up feature.

Anti-Pinch Feature

The anti-pinch feature is on windows with the express-up feature. If an object is in the way of the window as it is express-closing, or in certain weather conditions like severe icing, the window will stop and open to a factory preset position. The window functions normally once the obstruction is removed.

Window Lockout

(Window Lockout): The window lockout switch is located with the power window switches on the driver's door armrest. This feature prevents the rear passenger windows from operating, except from the driver's position. Press the switch to turn the lockout feature on or off. An indicator light will come on to show the lockout feature is on.

Sun Visors

Pull the sun visor down to block glare. Detach the sun visor from the center mount and slide it along the rod from side-to-side to cover the driver or passenger side of the front window. Swing the sun visor to the side to cover the side window. It can be moved along the rod from side-to-side in this position also.

Lighted Visor Vanity Mirror

Your vehicle has lighted visor vanity mirrors on both the driver's and passenger's sun visors. Pull the sun visor down and lift the mirror cover to turn the lamps on.

Theft-Deterrent Systems

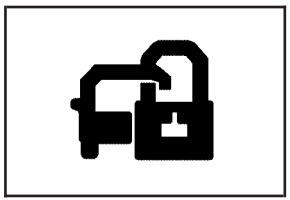
Vehicle theft is big business, especially in some cities. This vehicle has theft-deterrent features, however, they do not make it impossible to steal.

Content Theft-Deterrent

Your vehicle has a content theft-deterrent alarm system.

To activate the theft-deterrent system, do one of the following:

- Press the lock button on the Remote Keyless Entry (RKE) transmitter when any door is open.



The security light should come on and flash.

When the door is closed, the security light will stop flashing and stay on solid and then go off after approximately 30 seconds. The content theft deterrent alarm is not armed until the security light goes off.

If the delayed locking feature is active, the alarm will not be activated until all doors are closed and the security light goes off.

- Press the lock button on the Remote Keyless Entry (RKE) transmitter when the driver door is closed. The security light will come on solid for approximately 30 seconds and then go off. The content theft deterrent alarm is not armed until the security light goes off.

If a locked door is opened without using the key in the driver's door key cylinder or the RKE transmitter, a ten second pre-alarm will occur. The horn will chirp and the lights will flash. If the key is not placed in the ignition and turned to START or the door is not unlocked by pressing the unlock button on the RKE transmitter during the ten second pre-alarm, the alarm will go off. Your vehicle's headlamps will flash and the horn will sound for about two minutes, then will turn off to save the battery power.

The theft-deterrent system will not activate if the doors are locked with the vehicle's key or the manual door lock. It activates only if you use the power door lock switch with the door open or the RKE transmitter. You should also remember that you can start your vehicle with the correct ignition key if the alarm has been set off.

Here is how to avoid setting off the alarm by accident:

- If you do not want to activate the theft-deterrent system, the vehicle should be locked with the door key after the doors are closed.
- Always unlock a door with the RKE transmitter. Unlocking a door any other way will set off the alarm if the system has been armed.

If you set off the alarm by accident, turn off the alarm by pressing unlock on the RKE transmitter or by placing the key in the ignition and turning it to START.

Testing the Alarm

The alarm can be tested by following these steps:

1. From inside the vehicle, lower the driver's window and open the driver's door.
2. Activate the system by locking the doors with the RKE transmitter.
3. Get out of the vehicle, close the door and wait for the security light to go out.
4. Then reach in through the window, unlock the door with the manual door lock and open the door. This should set off the alarm.

If the alarm does not sound when it should, but the vehicle's headlamps flash, check to see if the horn works. The horn fuse may be blown. To replace the fuse, see *Fuses and Circuit Breakers on page 5-108*.

If the alarm does not sound or the vehicle's headlamps do not flash, see your dealer/retailer for service.

PASS-Key® III+ Electronic Immobilizer

The PASS-Key III+ system operates on a radio frequency subject to Federal Communications Commission (FCC) Rules and with Industry Canada.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.

This device complies with RSS-210 of Industry Canada. Operation is subject to the following two conditions:

1. This device may not cause interference.
2. This device must accept any interference received, including interference that may cause undesired operation of the device.

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

PASS-Key III+ uses a radio frequency transponder in the key that matches a decoder in the vehicle.

PASS-Key® III+ Electronic Immobilizer Operation

Your vehicle has PASS-Key® III+ (Personalized Automotive Security System) theft-deterrent system. PASS-Key® III+ is a passive theft-deterrent system.

The system is automatically armed when the key is removed from the ignition.

The system is automatically disarmed when the key is turned to ON/RUN, ACC/ACCESSORY or START from the LOCK/OFF position.

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

The security light will come on if there is a problem with arming or disarming the theft-deterrent system.

When the PASS-Key® III+ system senses that someone is using the wrong key, it prevents the vehicle from starting. Anyone using a trial-and-error method to start the vehicle will be discouraged because of the high number of electrical key codes.

If the engine does not start and the security light on the instrument panel comes on when trying to start the vehicle, there may be a problem with your theft-deterrent system. Turn the ignition off and try again.

If the engine still does not start, and the key appears to be undamaged, try another ignition key. At this time, you may also want to check the fuse, see *Fuses and Circuit Breakers on page 5-108*. If the engine still does not start with the other key, your vehicle needs service. If your vehicle does start, the first key may be faulty. See your dealer/retailer who can service the PASS-Key® III+ to have a new key made. In an emergency, contact Roadside Assistance.

It is possible for the PASS-Key® III+ decoder to learn the transponder value of a new or replacement key. Up to 10 keys may be programmed to the vehicle. The following procedure is for programming additional keys only. If all the currently programmed keys are lost or do not operate, you must see your dealer/retailer or a locksmith who can service PASS-Key® III+ to have keys made and programmed to the system.

See your dealer/retailer or a locksmith who can service PASS-Key® III+ to get a new key blank that is cut exactly as the ignition key that operates the system.

To program the new additional key do the following:

1. Verify that the new key has a ⊕ stamped on it.
2. Insert the original, already programmed, key in the ignition and start the engine. If the engine will not start, see your dealer/retailer for service.
3. After the engine has started, turn the key to LOCK/OFF, and remove the key.
4. Insert the new key to be programmed and turn it to the ON/RUN position within five seconds of turning the original key to LOCK/OFF.
5. The security light will turn off once the key has been programmed.
6. Repeat Steps 1 through 5 if additional keys are to be programmed.

If you lose or damage your PASS-Key® III+ key, see your dealer/retailer or a locksmith who can service PASS-Key® III+ to have a new key made.

The SERVICE THEFT DETERRENT SYSTEM message displays on the Driver Information Center (DIC) when there is a problem with the theft-deterrent system. See *DIC Warnings and Messages on page 3-56* for additional information.

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

Starting and Operating Your Vehicle

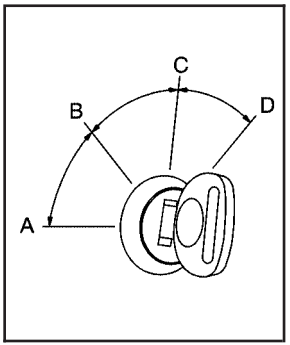
New Vehicle Break-In

Notice: **Your vehicle does not need an elaborate break-in. But it will perform better in the long run if you follow these guidelines:**

- **If you have all-wheel drive, keep your speed at 55 mph (88 km/h) or less for the first 500 miles (805 km).**
- **Do not drive at any one constant speed, fast or slow, for the first 500 miles (805 km). Do not make full-throttle starts. Avoid downshifting to brake or slow the vehicle.**
- **Avoid making hard stops for the first 200 miles (322 km) 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.**
- **Do not tow a trailer during break-in. See *Towing a Trailer on page 4-29* for the trailer towing capabilities of your vehicle and more information.**

Following break-in, engine speed and load can be gradually increased.

Ignition Positions



With the key in the ignition, you can turn it to four different positions.

In order to shift out of PARK (P), ignition must be in ON/RUN or ACC/ACCESSORY and the regular brake pedal must be applied.

Notice: **Using a tool to force the key from the ignition switch could cause damage or break the key. Use the correct key and turn the key only with your hand. Make sure the key is all the way in. If none of this works, then your vehicle needs service.**

A (LOCK/OFF): This is the only position in which you can remove the key. This position locks the ignition and transmission. If the steering wheel is locked, move it from right to left and turn the key to ACC/ACCESSORY. If none of this works, then your vehicle needs service.

B (ACC/ACCESSORY): This position allows you to use things like the radio and the windshield wipers while the engine is off. This position will also allow you to turn off the engine.

C (ON/RUN): This is the position that the switch returns to after you start your engine and release the key. The switch stays in ON/RUN when the engine is running. But even when the engine is not running, you can use ON/RUN to operate your electrical power accessories, and to display some instrument panel warning lights.

The battery could be drained if you leave the key in the ACC/ACCESSORY or ON/RUN position with the engine off. You may not be able to start your vehicle 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.

Key In the Ignition

Never leave your vehicle with the keys inside, as it is an easy target for joy riders or thieves. If you leave the key in the ignition and park your vehicle, a chime will sound when you open the driver's door. Always remember to remove your key from the ignition and take it with you. This will lock your ignition and transmission. Also, always remember to lock the doors.

The battery could be drained if you leave the key in the ignition while your vehicle is parked. You may not be able to start your vehicle after it has been parked for an extended period of time.

Retained Accessory Power (RAP)

These vehicle accessories can be used for up to 10 minutes after the ignition key is turned off:

- Audio System
- Power Windows
- Sunroof (if equipped)

Power to the windows and sunroof will work up to 10 minutes or until a door is opened.

The radio continues to work for 10 minutes or until the driver's door is opened.

For an additional 10 minutes of operation, close all the doors and turn the key to ON/RUN and then back to LOCK/OFF.

All these features will work when the key is in the ON/RUN or ACC/ACCESSORY positions.

Starting the Engine

Move your shift lever to PARK (P) or NEUTRAL (N). Your engine will not start in any other position – this is a safety feature. To restart when you are already moving, use NEUTRAL (N) only.

Notice: **Do not try to shift to PARK (P) if your vehicle is moving. If you do, you could damage the transmission. Shift to PARK (P) only when your vehicle is stopped.**

Starting Procedure

1. With your foot off the accelerator pedal, turn the ignition key to START. When the engine starts, let go of the key. The idle speed will go down as your engine gets warm. 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.

   Your 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 for many seconds, 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.**

2. If the engine does not start after 5-10 seconds, especially in very cold weather (below 0°F or −18°C), it could be flooded with too much gasoline. Try pushing the accelerator pedal all the way to the floor and holding it there as you 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, do the same thing. This clears the extra gasoline from the engine. Do not race the engine immediately after starting it. Operate the engine and transmission gently until the oil warms up and lubricates all moving parts.

Notice: **The engine is designed to work with the electronics in your vehicle. If you add electrical parts or accessories, you could change the way the engine operates. Before adding electrical equipment, check with your dealer/retailer. If you do not, your engine might not perform properly. Any resulting damage would not be covered by your vehicle's warranty.**

Engine Coolant Heater

The engine coolant heater, if available, can help in cold weather conditions at or below 0°F (−18°C) for easier starting and better fuel economy during engine warm-up. Plug in the coolant heater at least four hours before starting your vehicle. An internal thermostat in the plug-end of the cord may exist which will prevent engine coolant heater operation at temperatures above 0°F (−18°C).

To Use the Engine Coolant Heater

1. Turn off the engine.
2. Open the hood and unwrap the electrical cord. The cord is located on the driver's side of the engine compartment, it is routed around the windshield washer fluid reservoir.
3. Plug the cord into a normal, grounded 110-volt AC outlet.

⚠CAUTION:

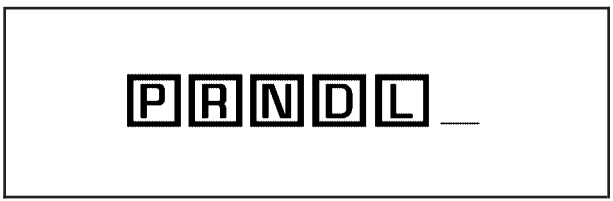
Plugging the cord into an ungrounded outlet could cause an electrical shock. Also, the wrong kind of extension cord could overheat and cause a fire. You could be seriously injured. Plug the cord into a properly grounded three-prong 110-volt AC outlet. If the cord will not reach, use a heavy-duty three-prong extension cord rated for at least 15 amps.

4. Before starting the engine, be sure to unplug and store the cord as it was before to keep it away from moving engine parts. If you do not, it could be damaged.

How long should you keep the coolant heater plugged in? The answer depends on the outside temperature, the kind of oil you have, and some other things. Instead of trying to list everything here, we ask that you contact your dealer/retailer in the area where you will be parking your vehicle. The dealer/retailer can give you the best advice for that particular area.

Automatic Transmission Operation

Your vehicle has an electronic shift position indicator within the instrument panel cluster.



When using the Electronic Range Select Mode a number will display next to the L, indicating the current gear that has been selected.

See Electronic Range Select mode in this section for more information.

Your automatic transmission has a shift lever located on the console between the seats.

PARK (P): This position locks your front wheels. It is the best position to use when you start your engine because your vehicle cannot move easily.

⚠CAUTION:

It is dangerous to get out of your vehicle if the shift lever is not fully in PARK (P) with the parking brake firmly set. Your vehicle can roll.

Do not leave your 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 your vehicle will not move, even when you are on fairly level ground, always set your parking brake and move the shift lever to PARK (P). See *Shifting Into Park on page 2-36*. If you are pulling a trailer, see *Towing a Trailer on page 4-29*.

Make sure the shift lever is fully in PARK (P) before starting the engine. Your vehicle has an automatic transmission shift lock control system. You must fully apply your regular brake first and then press the shift lever button before you can shift from PARK (P) when the ignition key is in ON/RUN. If you cannot shift out of PARK (P), ease pressure on the shift lever, then push the shift lever all the way into PARK (P) as you maintain brake application. Then press the shift lever button and move the shift lever into another gear. See *Shifting Out of Park on page 2-37*.

REVERSE (R): Use this gear to back up.

Notice: **Shifting to REVERSE (R) while your vehicle is moving forward could damage the transmission. The repairs would not be covered by your warranty. Shift to REVERSE (R) only after your vehicle is stopped.**

To rock your vehicle back and forth to get out of snow, ice or sand without damaging your transmission, see *If Your Vehicle is Stuck in Sand, Mud, Ice, or Snow on page 4-19*.

NEUTRAL (N): In this position, your engine does not connect with the wheels. To restart when you are already moving, use NEUTRAL (N) only. Also, use NEUTRAL (N) when your vehicle is being towed.

⚠CAUTION:

Shifting into a drive gear while the engine is running at high speed is dangerous. Unless your foot is firmly on the brake pedal, your vehicle could move very rapidly. You could lose control and hit people or objects. Do not shift into a drive gear while your engine is running at high speed.

Notice: **Shifting out of PARK (P) or NEUTRAL (N) with the engine running at high speed may damage the transmission. The repairs would not be covered by your warranty. Be sure the engine is not running at high speed when shifting your vehicle.**

DRIVE (D): This position is for normal driving. It provides the best fuel economy for your vehicle. If you need more power for passing, and you are:

- Going less than 35 mph (56 km/h), push your accelerator pedal about halfway down.
- Going about 35 mph (56 km/h) or more, push the accelerator all the way down.

Notice: **If your vehicle seems to accelerate slowly or not shift gears when you go faster, and you continue to drive your vehicle that way, you could damage the transmission. Have your vehicle serviced right away. You can drive in LOW (L) when you are driving less than 35 mph (56 km/h) and DRIVE (D) for higher speeds until then.**

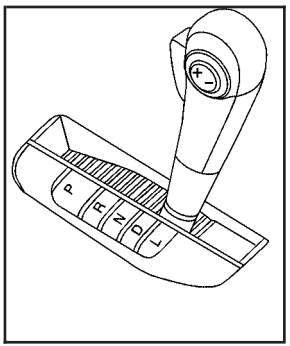
LOW (L): This position gives you access to gear ranges. This provides more engine braking but lower fuel economy than DRIVE (D). You can use it on very steep hills, or in deep snow or mud.

Electronic Range Select Mode

Electronic Range Selector (ERS) mode allows you to choose the top-gear limit of the vehicle's transmission and the vehicle's speed while driving down hill or towing a trailer.

To use this feature, do the following:

1. Move the shift lever to LOW (L).



2. Press the plus/minus button located on the shift lever, to increase or decrease the gear range available based upon your current driving conditions and needs.

When you shift from DRIVE (D) to LOW (L), the transmission will shift to a pre-determined lower gear range. The highest gear available for this pre-determined range is displayed next to the L in the DIC.

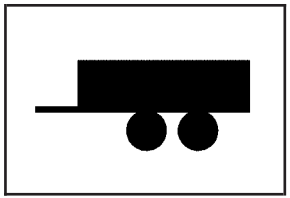
See *Driver Information Center (DIC) on page 3-50* and *DIC Operation and Displays on page 3-50* for more information. The number displayed in the DIC is the highest gear that the transmission will be allowed to operate in. However, your vehicle can automatically shift to lower gears as required by various driving conditions. This means that all gears below that number are available. For example, when FOURTH (4) is shown next to the L, FIRST (1) through FOURTH (4) gears are automatically shifted by the vehicle. You cannot shift into FIFTH (5) until the plus (+) button is used or you shift back into DRIVE (D) mode.

While in LOW (L), the transmission will prevent shifting to a lower gear range if the engine speed is too high for the gear range you are trying to select. You have a brief period of time to slow the vehicle speed. If vehicle speed is not reduced within the timeframe allowed, the lower gear range attempted will not be available. The highest possible gear that is allowed for that engine speed will display next to the L in the DIC. Try again to slow the vehicle speed and press the minus (–) button to the desired lower gear range.

Automatic Engine Grade braking is not available when the ERS is active. It is available in DRIVE (D) for both normal and Tow/Haul mode. While using the ERS, cruise control and the tow/haul mode can be used. See *Tow/Haul Mode on page 2-34* for more information.

Tow/Haul Mode

Your vehicle may have a Tow/Haul mode.



The button to turn it on or off is located on instrument panel under the climate controls.

Push the button to turn it on, push it again to deactivate the system. You can use this feature to assist when towing or hauling a heavy load.

When Tow/Haul is activated the Tow/Haul symbol will come on the instrument panel cluster. See *Tow/Haul Mode* under *Towing a Trailer on page 4-29* for more information.

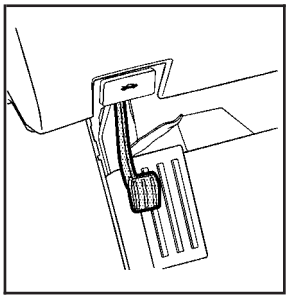
Automatic Engine Grade Braking

Automatic Engine Grade Braking assists when driving on a downhill grade. It maintains the vehicle's speed by automatically implementing a shift schedule that uses the engine and the transmission to slow the vehicle. This reduces wear on the brakes system and increases control of the vehicle. The system constantly monitors the vehicle's speed, acceleration, throttle position, and whether the brake pedal is being pressed, and determines when to keep the current vehicle speed or to slow down. The system will then automatically command downshifts that reduces the vehicle's speed, until the brake pedal is no longer being pressed. This indicates the desired vehicle speed has been reached.

While in the Electronic Range Select (ERS) mode, grade braking is deactivated, allowing the driver to select a range and limiting the highest gear available. Grade braking is available for normal driving and in Tow/Haul mode.

See *Automatic Transmission Operation on page 2-30*.

Parking Brake



To set the parking brake, push down the parking brake pedal down with your left foot.

If the ignition is on, the brake system warning light will come on. See *Brake System Warning Light on page 3-41*.

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.**

To release the parking brake, hold the regular brake pedal down with your right foot. Push down momentarily on the parking brake pedal with your left foot until you feel the pedal release, then slowly pull your foot up off the park brake pedal. If the parking brake is not released when you begin to drive, the brake system warning light will be on and a chime will sound warning you that the parking brake is still on.

If you are towing a trailer and are parking on a hill, see *Towing a Trailer on page 4-29*.

Shifting Into Park

⚠CAUTION:

It can be dangerous to get out of your vehicle if the shift lever is not fully in PARK (P) with the parking brake firmly set. Your vehicle can roll. If you have left the engine running, the vehicle can move suddenly. You or others could be injured. To be sure your vehicle will not move, even when you are on fairly level ground, use the steps that follow. If you are pulling a trailer, see *Towing a Trailer on page 4-29*.

1. Hold the brake pedal down with your right foot and set the parking brake. See *Parking Brake on page 2-35* for more information.
2. Move the shift lever into PARK (P) by holding in the button on the shift lever and pushing the shift lever all the way toward the front of the vehicle.
3. Turn the ignition key to LOCK/OFF.
4. Remove the key and take it with you. If you can leave your vehicle with the ignition key in your hand, your vehicle is in PARK (P).

Leaving Your Vehicle With the Engine Running

⚠CAUTION:

It can be dangerous to leave your vehicle with the engine running. Your vehicle could move suddenly if the shift lever is not fully in PARK (P) 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 your vehicle with the engine running.

If you have to leave your vehicle with the engine running, be sure your vehicle is in PARK (P) and your parking brake is firmly set before you leave it. After you have moved the shift lever into PARK (P), hold the regular brake pedal down. Then, see if you can move the shift lever away from PARK (P) without first pushing the button.

If you can, it means that the shift lever was not fully locked in PARK (P).

Torque Lock

If you are parking on a hill and you do not shift your transmission into PARK (P) properly, the weight of the vehicle may put too much force on the parking pawl in the transmission. You may find it difficult to pull the shift lever out of PARK (P). This is called torque lock. To prevent torque lock, set the parking brake and then shift into PARK (P) properly before you leave the driver's seat. To find out how, see *Shifting Into Park on page 2-36*.

When you are ready to drive, move the shift lever out of PARK (P) *before* you release the parking brake.

If torque lock does occur, you may need to have another vehicle push your vehicle a little uphill to take some of the pressure from the parking pawl in the transmission, so you can pull the shift lever out of PARK (P).

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 PARK (P) with the shift lever button fully released, and
- Prevent movement of the shift lever out of PARK (P), unless the ignition is in ON/RUN or ACC/ACCESSORY and the regular 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 your vehicle has an uncharged battery or a battery with low voltage, try charging or jump starting the battery. See *Jump Starting on page 5-38* for more information.

To shift out of PARK (P) use the following:

1. Apply the brake pedal.
2. Then press the shift lever button.
3. Move the shift lever to the desired position.

If you still are unable to shift out of PARK (P):

1. Fully release the shift lever button.
2. While holding down the brake pedal, press the shift lever button again.
3. Move the shift lever to the desired position.

If you still cannot move the shift lever from PARK (P), consult your dealer/retailer or a professional towing service.

Parking Over Things That Burn

⚠CAUTION:

Things that can burn could touch hot exhaust parts under your vehicle and ignite. Do not park over papers, leaves, dry grass, or other things that can burn.

Engine Exhaust

⚠CAUTION:

Engine exhaust can kill. It contains the gas carbon monoxide (CO), which you cannot see or smell. It can cause unconsciousness and death.

You might have exhaust coming in if:

- **The exhaust system sounds strange or different.**
- **Your vehicle gets rusty underneath.**
- **Your vehicle was damaged in a collision.**
- **Your vehicle was damaged when driving over high points on the road or over road debris.**
- **Repairs were not done correctly.**
- **Your vehicle or the exhaust system has been modified improperly.**

If you ever suspect exhaust is coming into your vehicle:

- **Drive it only with all the windows down to blow out any CO.**
- **Have your vehicle fixed immediately.**

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.

⚠CAUTION:

Idling the engine with the climate control system off could allow dangerous exhaust into your vehicle. See the earlier caution under *Engine Exhaust on page 2-38*.

Also, idling in a closed-in place can let deadly carbon monoxide (CO) into your vehicle even if the climate control fan is at the highest setting. One place this can happen is a garage. Exhaust — with CO — can come in easily. NEVER park in a garage with the engine running.

Also see "If You Are Caught in a Blizzard" under *Winter Driving on page 4-16*.

⚠CAUTION:

It can be dangerous to get out of your vehicle if the shift lever is not fully in PARK (P) with the parking brake firmly set. Your vehicle can roll. Do not leave your 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 your vehicle will not move, even when you are on fairly level ground, always set the parking brake and move the shift lever to PARK (P).

Follow the proper steps to be sure your vehicle will not move. See *Shifting Into Park on page 2-36*.

If you are pulling a trailer, see *Towing a Trailer on page 4-29*.

Mirrors

Automatic Dimming Rearview Mirror with OnStar® and Compass

Your vehicle may have an automatic-dimming rearview mirror with a compass.

There may be three additional buttons for the OnStar® system. See your dealer/retailer for more information on the system and how to subscribe to OnStar®. See *OnStar® System on page 2-47* for more information about the services OnStar® provides.

⏻ **(On/Off):** This is the on/off button.

Automatic Dimming Mirror Operation

The automatic dimming mirror comes on each time the ignition is turned to start. To turn the automatic dimming feature off or back on, press the on/off button. The indicator light on the mirror is lit when the automatic dimming feature is on.

Compass Operation

Press the on/off button once to turn the compass on or off.

There is a compass display in the window in the upper right corner of the mirror face.

Compass Calibration

Press and hold the on/off button to activate the compass calibration mode. CAL will be displayed in the compass window on the mirror.

The compass can be calibrated by driving the vehicle in circles at 5 mph (8 km/h) or less until the display reads a direction.

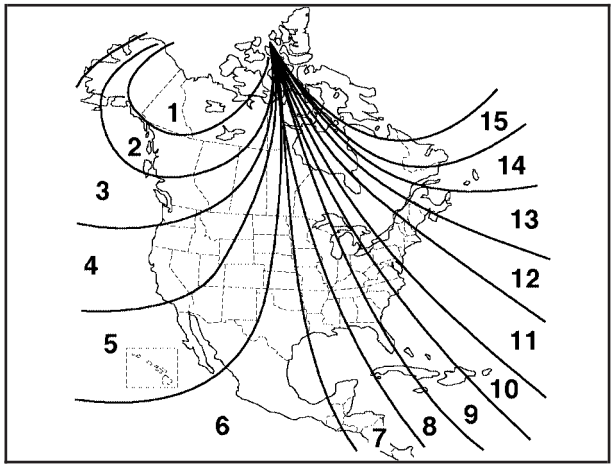
If after a few seconds the display does not show a compass direction, (N for North for example), there may be a strong magnetic field interfering with the compass. Such interference may be caused by a magnetic antenna mount, note pad holder, or similar object. If the letter C or CAL appears in the compass window, the compass may need to be reset or calibrated.

Compass Variance

Compass variance is the difference between earth's magnetic north and true geographic north. The mirror is set to zone eight upon leaving the factory. It will be necessary to adjust the compass to compensate for compass variance if you live outside zone eight. Under certain circumstances, such as during a long distance cross-country trip, it will be necessary to adjust for compass variance. If not adjusted to account for compass variance, your compass could give false readings.

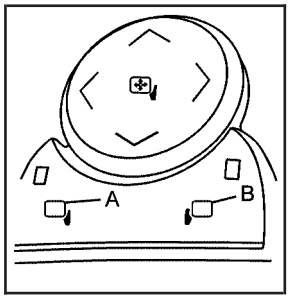
To adjust for compass variance:

1. Find your current location and variance zone number on the following zone map.



2. Press and hold the on/off button until the zone number is displayed. The number shown is the current zone number.
3. Scroll through the zone numbers that appear in the window on the mirror by pressing the on/off button. Once you find your zone number, release the button. After about four seconds, the mirror will return to the compass display, and the new zone number will be set. If C or CAL appears in the compass window, the compass may need calibration. See "Compass Calibration" listed previously.

Outside Power Mirrors



Controls for the outside power mirrors are located on the driver's door armrest.

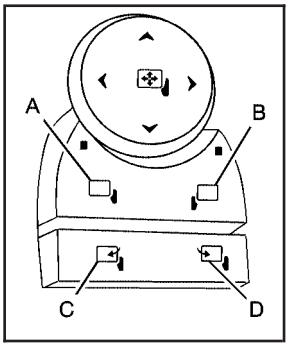
To adjust each mirror:

1. Press (A) or (B) to select the driver or passenger side mirror.
2. Press one of the four arrows located on the control pad to move the mirror to the desired direction.
3. Adjust each outside mirror to see a little of your vehicle, and the area behind your vehicle.
4. Press either (A) or (B) again to deselect the mirror.

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.

Using hood-mounted air deflectors and add-on convex mirror attachments could decrease mirror performance.

Outside Power Foldaway Mirrors



Your vehicle may have outside power foldaway mirrors. The controls are located on the driver's door armrest.

- Press (A) to select the driver side mirror. Then press the arrows located on the four-way control pad to adjust the mirror. Press (A) again to deselect the mirror.
- Press (B) to select the passenger side mirror. Then press the arrows located on the four-way control pad to adjust the mirror. Press (B) again to deselect the mirror.
- Press (C) to fold the mirrors out to the driving position.
- Press (D) to fold the mirrors in to the folded position.

Resetting the Power Foldaway Mirrors

You may need to reset the power foldaway mirrors if the following occurs:

- The mirrors are accidentally obstructed while folding.
- They are accidentally manually folded/unfolded.
- The mirrors do not stay in the unfolded position.
- The mirrors shake and flutter at normal driving speeds.

To reset the power foldaway mirrors, fold and unfold them one time using the mirror controls. This resets them to their normal position.

Automatic Dimming

The driver's outside mirror adjusts for the glare of the headlamps behind you. See *Automatic Dimming Rearview Mirror with OnStar® and Compass on page 2-40* for information on how to turn on this feature.

Park Tilt Mirrors

If the vehicle has the memory package, the outside mirrors are able to perform the park tilt function. This feature could be useful in allowing the driver to view the curb when parallel parking. This feature causes the passenger's and/or driver's mirror to tilt to a preselected position when the vehicle is in REVERSE (R). The passenger's and/or driver's mirror returns to its original position when the vehicle is shifted out of REVERSE (R), or the ignition is turned to LOCK/OFF.

This feature can be turned on or off through the Driver Information Center (DIC). See "Park Tilt Mirrors" under *DIC Vehicle Customization on page 3-65* for more information.

Park Tilt Mirrors

If the vehicle has the memory package, the passenger and/or driver outside mirrors tilt to a preselected position when the vehicle is in R (Reverse). This lets the driver view the curb while parallel parking.

The mirror(s) return to its original position when the vehicle is shifted out of R (Reverse), or the ignition is turned to LOCK/OFF.

This feature can be turned on or off through the Driver Information Center (DIC). See "Park Tilt Mirrors" under *DIC Vehicle Customization on page 3-65* for more information.

Outside Convex Mirror

⚠CAUTION:

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 your right. Check your inside mirror or glance over your shoulder before changing lanes.

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

Outside Heated Mirrors

(Rear Window Defogger): Press to heat the mirrors.

See "Rear Window Defogger" under *Dual Automatic Climate Control System on page 3-22* for more information.

Object Detection Systems

Ultrasonic Rear Parking Assist (URPA)

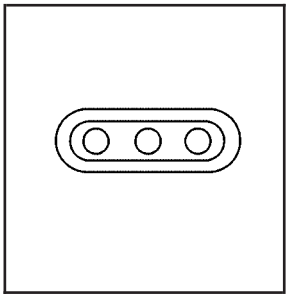
For vehicles with the Ultrasonic Rear Parking Assist (URPA) system, it operates at speeds less than 5 mph (8 km/h), and assists the driver with parking and avoiding objects while in R (Reverse). The sensors on the rear bumper are used to detect the distance to an object up to 8 feet (2.5 m) behind the vehicle, and at least 10 inches (25.4 cm) off the ground.

⚠CAUTION:

The Ultrasonic Rear Parking Assist (URPA) system does not replace driver vision. It cannot detect:

- **objects that are below the bumper, underneath the vehicle, or if they are too close or far from the vehicle**
- **children, pedestrians, bicyclists, or pets.**

If you do not use proper care before and while backing; vehicle damage, injury, or death could occur. Even with URPA, always check behind your vehicle before backing up. While backing, be sure to look for objects and check your vehicle's mirrors.



The display is located in the headliner and can be seen by looking over your right shoulder.

URPA uses three color-coded lights to provide distance and system information.

How the System Works

URPA comes on automatically when the shift lever is moved into R (Reverse). The rear display briefly illuminates to indicate the system is working.

URPA operates only at speeds less than 5 mph (8 km/h). If the vehicle is above this speed, the red light on the rear display will flash.

To be detected, objects must be at least 10 inches (25.4 cm) off the ground and below liftgate level. Objects must also be within 8 feet (2.5 m) from the rear bumper. This distance may be less during warmer or humid weather.

A single beep will sound the first time an object is detected between 20 inches (0.5 m) and 8 feet (2.5 m) away. Beeping will occur for a short time when the vehicle is closer than 1 foot (0.3 m) from the object.

The following describes what will occur with the URPA display as the vehicle gets closer to a detected object:

Description	English	Metric
amber light	8 ft	2.5 m
amber/amber lights	40 in	1.0 m
amber/amber/red lights	23 in	0.6 m
amber/amber/red lights flashing and beep for three seconds	1 ft	0.3 m

The system can be disabled through the Driver Information Center (DIC). See “Park Assist” under *DIC Operation and Displays on page 3-50* for more information.

When the System Does Not Seem to Work Properly

If the URPA system will not activate due to a temporary condition, the message PARKING ASSIST OFF will be displayed on the DIC and a red light will be shown on the rear URPA display when the shift lever is moved into R (Reverse). This occurs under the following conditions:

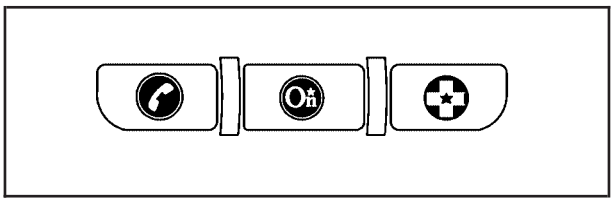
- The driver disables the system.
- The parking brake pedal is depressed.
- The ultrasonic sensors are not clean. Keep the vehicle’s rear bumper free of mud, dirt, snow, ice and slush. For cleaning instructions, see *Washing Your Vehicle on page 5-100*.
- A trailer was attached to the vehicle, or a bicycle or an object was hanging out of the liftgate during the last drive cycle, the red light may illuminate in the rear display. Once the attached object is removed, URPA will return to normal operation.
- A tow bar is attached to the vehicle.
- The vehicle’s bumper is damaged. Take the vehicle to your dealer/retailer to repair the system.
- Other conditions may affect system performance, such as vibrations from a jackhammer or the compression of air brakes on a very large truck.

If the system is still disabled, after driving forward at least 15 mph (25 km/h), take the vehicle to your dealer/retailer.

Rear Vision Camera

The vehicle may have a Rear Vision Camera system. Read the entire section before using the system. The rear vision camera system is designed to help the driver when backing up. See “Rear Vision Camera” in the Index of the navigation manual.

OnStar® System



OnStar uses several innovative technologies and live advisors to provide you with a wide range of safety, security, information, and convenience services. If your airbags deploy, the system is designed to make an automatic call to OnStar Emergency advisors who can request emergency services be sent to your location. If you lock your keys in the vehicle, call OnStar at 1-888-4-ONSTAR and they can send a signal to unlock your doors. If you need roadside assistance, press the OnStar button and they can contact Roadside Service for you.

OnStar service is provided to you subject to the OnStar Terms and Conditions. You may cancel your OnStar service at any time by contacting OnStar. A complete OnStar Owner’s Guide and the OnStar Terms and Conditions are included in the vehicle’s OnStar Subscriber glove box literature. For more information, visit onstar.com or onstar.ca, contact OnStar at 1-888-4-ONSTAR (1-888-466-7827) or TTY 1-877-248-2080, or press the OnStar button to speak with an OnStar advisor 24 hours a day, 7 days a week.

Not all OnStar features are available on all vehicles. To check if your vehicle is equipped to provide the services described below, or for a full description of OnStar services and system limitations, see the OnStar Owner’s Guide in your glove box or visit onstar.com.

OnStar Services

For new vehicles with OnStar, the Safe & Sound Plan, or the Directions & Connections Plan is included for one year from the date of purchase. You can extend this plan beyond the first year, or upgrade to the Directions & Connections Plan. For more information, press the OnStar button to speak with an advisor. Some OnStar services (such as Remote Door Unlock or Stolen Vehicle Location Assistance) may not be available until you register with OnStar.

Available Services with Safe & Sound Plan

- Automatic Notification of Airbag Deployment
- Advanced Automatic Crash Notification (AACN) (If equipped)
- Link to Emergency Services
- Roadside Assistance
- Stolen Vehicle Location Assistance
- AccidentAssist
- Remote Door Unlock/Vehicle Alert
- OnStar Vehicle Diagnostics
- GM Goodwrench On Demand Diagnostics
- OnStar Hands-Free Calling with 30 complimentary minutes
- OnStar Virtual Advisor (U.S. Only)

Available Services included with Directions & Connections Plan

- All Safe and Sound Plan Services
- Driving Directions - Advisor delivered or OnStar Turn-by-Turn Navigation (If equipped)
- RideAssist
- Information and Convenience Services

OnStar Hands-Free Calling

OnStar Hands-Free Calling allows eligible OnStar subscribers to make and receive calls using voice commands. Hands-Free Calling is fully integrated into the vehicle, and can be used with OnStar Pre-Paid Minute Packages. Hands-Free Calling may also be linked to a Verizon Wireless service plan in the U.S. or a Bell Mobility service plan in Canada, depending on eligibility. To find out more, refer to the OnStar Owner's Guide in the vehicle's glove box, visit www.onstar.com or www.onstar.ca, or speak with an OnStar advisor by pressing the OnStar button or calling 1-888-4-ONSTAR (1-888-466-7827).

OnStar Virtual Advisor

OnStar Virtual Advisor is a feature of OnStar Hands-Free Calling that uses your minutes to access location-based weather, local traffic reports, and stock quotes. By pressing the phone button and giving a few simple voice commands, you can browse through the various topics. See the OnStar Owner's Guide for more information (Only available in the continental U.S.).

OnStar Steering Wheel Controls

Your vehicle may have a Talk/Mute button that can be used to interact with OnStar Hands-Free Calling. See *Audio Steering Wheel Controls on page 3-119* for more information.

On some vehicles, you may have to hold the button for a few seconds and give the command “ONSTAR” to activate the OnStar Hands-Free Calling.

On some vehicles, the mute button can be used to dial numbers into voicemail systems, or to dial phone extensions. See the OnStar Owner’s Guide for more information.

How OnStar Service Works

Your vehicle’s OnStar system has the capability of recording and transmitting vehicle information. This information is automatically sent to an OnStar Call Center at the time of an OnStar button press, Emergency button press or if your airbags or AACN system deploys. The vehicle information usually includes your GPS location and, in the event of a crash, additional information regarding the accident that your vehicle has been involved in (e.g. the direction from which your vehicle was hit). When you use the Virtual Advisor feature of OnStar Hands-Free Calling, your vehicle also sends OnStar your GPS location so that we can provide you with location-based services.

OnStar service cannot work unless your vehicle is in a place where OnStar has an agreement with a wireless service provider for service in that area. OnStar service also cannot work unless you are in a place where the wireless service provider OnStar has hired for that area has coverage, network capacity and reception when the service is needed, and technology that is compatible with the OnStar service. Not all services are available everywhere, particularly in remote or enclosed areas, or at all times.

Location information about your vehicle is only available if the GPS satellite signals are unobstructed and available.

Your vehicle must have a working electrical system (including adequate battery power) for the OnStar equipment to operate. There are other problems OnStar cannot control that may prevent OnStar from providing OnStar service to you at any particular time or place. Some examples are damage to important parts of your vehicle in an accident, hills, tall buildings, tunnels, weather or wireless phone network congestion.

Your Responsibility

Increase the radio volume if you cannot hear the OnStar advisor. If the light next to the OnStar buttons is red, this means that your system is not functioning properly and should be checked by your dealer/retailer. If the light appears clear (no light is appearing), your OnStar subscription has expired. You can always press the OnStar button to confirm that your OnStar equipment is active.

Universal Home Remote System

The Universal Home Remote System provides a way to replace up to three hand-held Radio-Frequency (RF) transmitters used to activate devices such as garage door openers, security systems, and home lighting.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

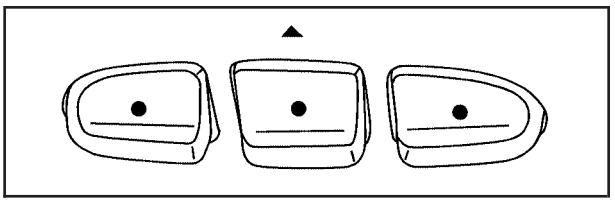
1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.

This device complies with RSS-210 of Industry Canada. Operation is subject to the following two conditions:

1. This device may not cause interference.
2. This device must accept any interference received, including interference that may cause undesired operation of the device.

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

Universal Home Remote System Operation (With One Triangular LED)



If there is one triangular Light Emitting Diode (LED) indicator light above the Universal Home Remote buttons, follow the instructions below.

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

Do not use the Universal Home Remote with any garage door opener that does not have the stop and reverse feature. This includes any garage door opener model manufactured before April 1, 1982.

Read the instructions completely before attempting to program the Universal Home Remote. Because of the steps involved, it may be helpful to have another person available to assist you in the programming the Universal Home Remote.

Keep the original hand-held transmitter for use in other vehicles as well as for future Universal Home Remote programming. It is also recommended that upon the sale of the vehicle, the programmed Universal Home Remote buttons should be erased for security purposes. See “Erasing Universal Home Remote Buttons” later in this section.

When programming a garage door, park outside of the garage. Park directly in line with and facing the garage door opener motor-head or gate motor-head. Be sure that people and objects are clear of the garage door or gate that is being programmed.

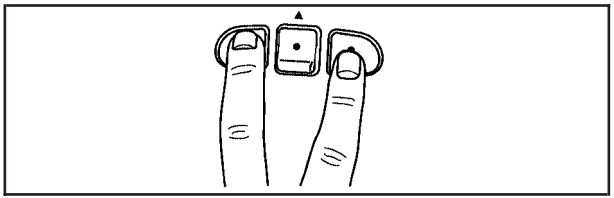
It is recommended that a new battery be installed in your hand-held transmitter for quicker and more accurate transmission of the radio-frequency signal.

Programming the Universal Home Remote System

For questions or help programming the Universal Home Remote System, call 1-800-355-3515 or go to www.homelink.com.

Programming a garage door opener involves time-sensitive actions, so read the entire procedure before starting. Otherwise, the device will time out and the procedure will have to be repeated.

To program up to three devices:



1. From inside the vehicle, press and hold down the two outside buttons at the same time, releasing only when the Universal Home Remote indicator light begins to flash, after 20 seconds. This step will erase the factory settings or all previously programmed buttons.

   Do not hold down the buttons for longer than 30 seconds and do not repeat this step to program the remaining two Universal Home Remote buttons.

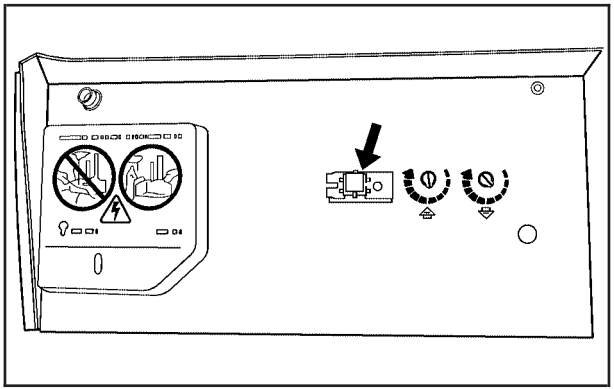
2. Hold the end of your hand-held transmitter about 1 to 3 inches (3 to 8 cm) away from the Universal Home Remote buttons while keeping the indicator light in view. The hand-held transmitter was supplied by the manufacturer of your garage door opener receiver (motor head unit).
3. At the same time, press and hold both the Universal Home Remote button to be used to control the garage door and the hand-held transmitter button. Do not release the Universal Home Remote button or the hand-held transmitter button until Step 4 has been completed.

   Some entry gates and garage door openers may require substitution of Step 3 with the procedure noted in “Gate Operator and Canadian Programming” later in this section.
4. The indicator light on the Universal Home Remote will flash slowly at first and then rapidly after Universal Home Remote successfully receives the frequency signal from the hand-held transmitter. Release both buttons.
5. Press and hold the newly-trained Universal Home Remote button and observe the indicator light.

   If the indicator light stays on continuously, the programming is complete and the garage door should move when the Universal Home Remote button is pressed and released. There is no need to continue programming Steps 6 through 8.

   If the Universal Home Remote indicator light blinks rapidly for two seconds and then turns to a constant light, continue with the programming Steps 6 through 8.

   It may be helpful to have another person assist with the remaining steps.



6. After Steps 1 through 5 have been completed, locate inside the garage the garage door opener receiver (motor-head unit). Locate the “Learn” or “Smart” button. The name and color of the button may vary by manufacturer.
7. Firmly press and release the “Learn” or “Smart” button. After you press this button, you will have 30 seconds to complete Step 8.
8. Immediately return to the vehicle. Firmly press and hold the Universal Home Remote button, chosen in Step 3 to control the garage door, for two seconds, and then release it. If the garage door does not move, press and hold the same button a second time for two seconds, and then release it. Again, if the door does not move, press and hold the same button a third time for two seconds, and then release.

   The Universal Home Remote should now activate the garage door.

To program the remaining two Universal Home Remote buttons, begin with Step 2 of “Programming the Universal Home Remote System.” Do not repeat Step 1, as this will erase all previous programming from the Universal Home Remote buttons.

Gate Operator and Canadian Programming

If you have questions or need help programming the Universal Home Remote System, call 1-800-355-3515 or go to www.homelink.com.

Canadian radio-frequency laws require transmitter signals to time out or quit after several seconds of transmission. This may not be long enough for Universal Home Remote to pick up the signal during programming. Similarly, some U.S. gate operators are manufactured to time out in the same manner.

If you live in Canada, or you are having difficulty programming a gate operator or garage door opener by using the “Programming Universal Home Remote” procedures, regardless of where you live, replace Step 3 under “Programming Universal Home Remote” with the following:

Continue to press and hold the Universal Home Remote button while you press and release every two seconds (cycle) the hand-held transmitter button until the frequency signal has been successfully accepted by the Universal Home Remote. The Universal Home Remote indicator light will flash slowly at first and then rapidly. Proceed with Step 4 under “Programming Universal Home Remote” to complete.

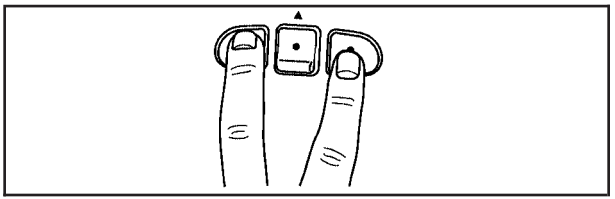
Using Universal Home Remote

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

Erasing Universal Home Remote Buttons

The programmed buttons should be erased when the vehicle is sold or the lease ends.

To erase all programmed buttons on the Universal Home Remote device:



1. Press and hold down the two outside buttons until the indicator light begins to flash, after 20 seconds.
2. Release both buttons.

Reprogramming a Single Universal Home Remote Button

To reprogram any of the three Universal Home Remote buttons, repeat the programming instructions earlier in this section, beginning with Step 2.

For help or information on the Universal Home Remote System, call the customer assistance phone number under *Customer Assistance Offices on page 7-6*.

Storage Areas

Glove Box

To open, lift the handle up. Use the key to lock and unlock.

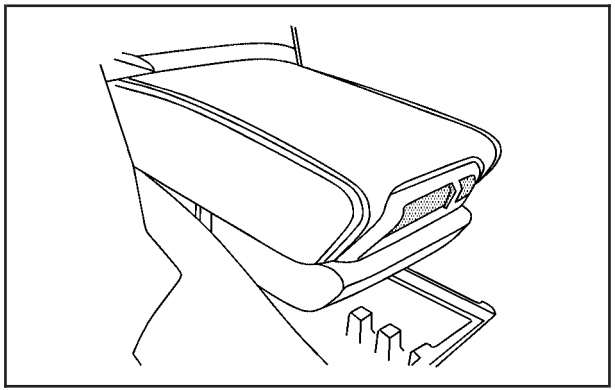
Cupholders

There are two cupholders, with removable liners, located in front of the center console. There may be cupholders located in the second row seat armrest. To access, pull the armrest down. There are additional cupholders located on each side of the third row seat and in each door. There may be cupholders located at the rear of the center console. To access, pull the handle down.

Instrument Panel Storage

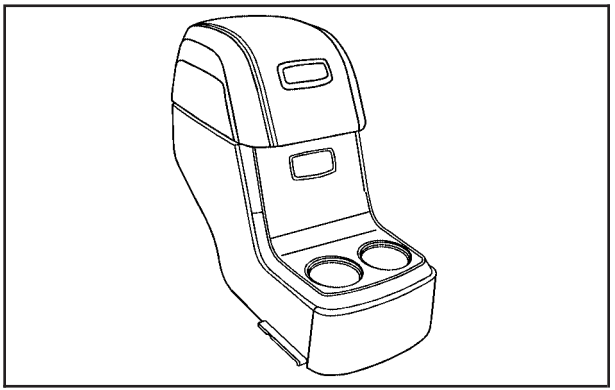
Your vehicle has an instrument panel storage area located above the radio. To open the cover, press the button.

Center Console Storage

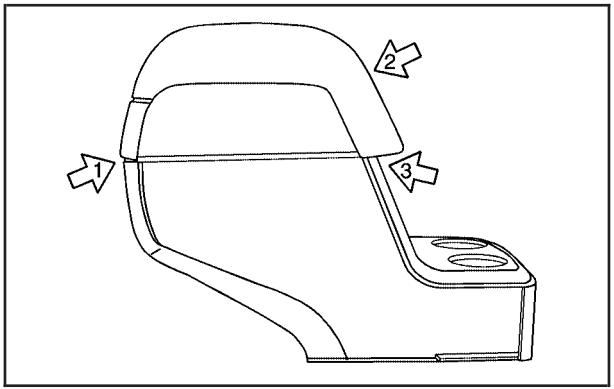


The center console armrest can slide forward and backward by pulling up the lever located on the front of it. To open the armrest storage area, press the button located on the front of the armrest. There is additional storage under the armrest. Move the armrest all the way to the rear position. Slide the cover back and remove the tray for additional storage.

Second Row Center Console



Your vehicle may have a second row center console.



To access the upper storage area, press the upper button (2) and lift up. To access the lower storage area, press the lower button (3) and lift up. The top of the console can be folded forward for increased storage area. Lift up on handle on the rear of the console (1) and pull forward.

⚠CAUTION:

Never open more than one of the three latches at a time. This is to help avoid personal injury and damage to the console.

Notice: **Slide the front console as far forward as it will go before folding the second row console forward. This will help prevent damage to the consoles.**

Floor Mats

There is a grommet in the driver side floor mat that attaches to a hook on the floor of the vehicle to hold the floor mat in place. To remove the floor mat, pull the mat towards the rear of the vehicle until the grommet can be removed from the hook.

Luggage Carrier

⚠CAUTION:

If you try to carry something on top of your vehicle that is longer or wider than the luggage carrier — like paneling, plywood, a mattress and so forth — the wind can catch it as you drive along. This can cause you to lose control. What you are carrying could be violently torn off, and this could cause you or other drivers to have a collision, and of course damage your vehicle. You may be able to carry something like this inside. But, never carry something longer or wider than the luggage carrier on top of your vehicle.

The luggage carrier allows you to load things on top of your vehicle. Crossrails are available at your dealer/retailer.

Notice: **Loading cargo on the luggage carrier that weighs more than 200 lbs (91 kg) or hangs over the rear or sides of the vehicle may damage your vehicle. Load cargo so that it rests as far forward as possible and against the side rails, making sure to fasten it securely.**

Do not exceed the maximum vehicle capacity when loading your vehicle. For more information on vehicle capacity and loading, see *Loading Your Vehicle on page 4-20*.

To prevent damage or loss of cargo as you are driving, check to make sure the cargo is still securely fastened.

Rear Seat Armrest

Your vehicle may have a rear seat armrest that contains two cupholders. To access the cupholders, pull the armrest down from the rear seatback.

Convenience Net

Your vehicle may have a convenience net in the rear of the vehicle. Store small loads as far forward as possible. The net should not be used to store heavy loads.

Cargo Cover

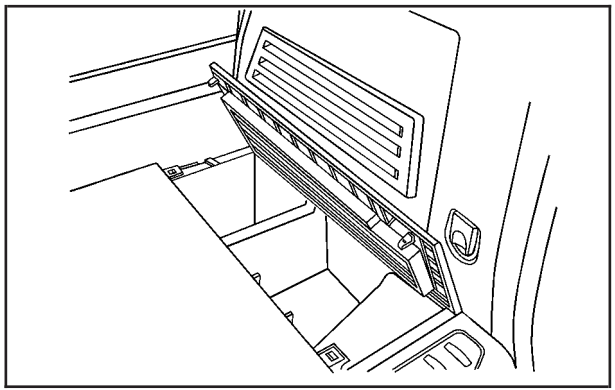
Your vehicle may have a cargo cover. It can be used to cover items in the rear of the vehicle. To install the cover, place the loops on each corner of the cover on the four hooks in the rear of the vehicle. The cover should be stored securely when not in use.

Cargo Tie Downs

There are four cargo tie-downs located in the rear compartment of the vehicle, that can be used to secure small loads.

Cargo Management System

Your vehicle has a cargo management system located in the rear of the vehicle. To open, pull the handle toward the rear of the vehicle and lift the cover up.



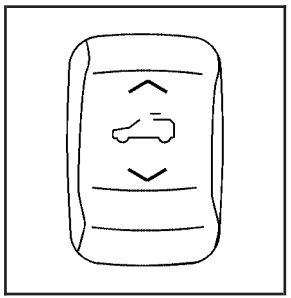
There is an additional storage compartment on each side of the system. To open, unlatch and lift the panel up.

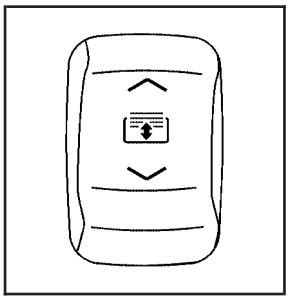
To remove the cargo management system:

1. Open the lid.
2. Remove the side panels and place inside the bin.
3. Loosen the retaining nuts on each side of the system by turning them counterclockwise.
4. Close the lid.
5. Pull up on the system by using the built in handles and remove it from the vehicle.

Sunroof

The vehicle may have a sunroof over the front seats, and a rear sunroof over the second row seats. The rear sunroof does not open. The switches to operate the front sunroof and rear sunshade are located on the headliner above the rearview mirror. The ignition must be in ON or ACCESSORY to operate the sunroof. See *Ignition Positions on page 2-26*.





Vent: From the closed position, press and hold the front of the driver's side switch to vent the sunroof. Press and hold the rear of the driver's side switch to close the sunroof.

Express-open/Express-close: From the closed position, press and release the rear of the driver's side switch to express-open the sunroof. Press and release the front of the driver's side switch to express-close the sunroof.

The front sunshade must be opened and closed manually. Push up on the sunshade handle to open the sunshade.

Notice: **The rear sunshade could be damaged if you attempt to open or close it manually. Do not manually open or close the rear sunshade.**

To open the rear sunshade, located over the second row seats, press and release the rear of the passenger's side switch. Press and release the front of the switch to close the sunshade.

Section 3 Instrument Panel

Instrument Panel Overview 3-4
Hazard Warning Flashers 3-6
Other Warning Devices 3-6
Horn 3-6
Tilt and Telescopic Steering Wheel 3-7
Power Tilt Wheel and Telescopic Steering Column 3-7
Turn Signal/Multifunction Lever 3-8
Turn and Lane-Change Signals 3-8
Headlamp High/Low-Beam Changer 3-9
Flash-to-Pass 3-9
Windshield Wipers 3-9
Windshield Washer 3-10
Rear Window Wiper/Washer 3-11
Cruise Control 3-12
Exterior Lamps 3-14
Delayed Headlamps 3-15
Daytime Running Lamps (DRL)/Automatic Headlamp System 3-16
Adaptive Forward Lighting System 3-16
Fog Lamps 3-17
Instrument Panel Brightness 3-17
Dome Lamps 3-17
Dome Lamp Override 3-17
Entry Lighting 3-18
Delayed Entry Lighting 3-18
Delayed Exit Lighting 3-19
Parade Dimming 3-19
Reading Lamps 3-19
Electric Power Management 3-19
Battery Run-Down Protection 3-20
Accessory Power Outlet(s) 3-20
Power Outlet 115 Volt Alternating Current 3-21
Analog Clock 3-22

Climate Controls 3-22
Dual Automatic Climate Control System 3-22
Outlet Adjustment 3-29
Rear Air Conditioning and Heating System 3-30
Rear Air Conditioning and Heating System and Electronic Climate Controls 3-31

Warning Lights, Gages, and Indicators 3-33
Instrument Panel Cluster 3-34
Speedometer and Odometer 3-35
Tachometer 3-35
Safety Belt Reminders 3-35
Airbag Readiness Light 3-36
Passenger Airbag Status Indicator 3-37
Charging System Light 3-39
Voltmeter Gage 3-40
Brake System Warning Light 3-41
Anti-lock Brake System (ABS) Warning Light 3-42
StabiliTrak® Indicator Light 3-42
Engine Coolant Temperature Warning Light 3-43

Section 3 Instrument Panel

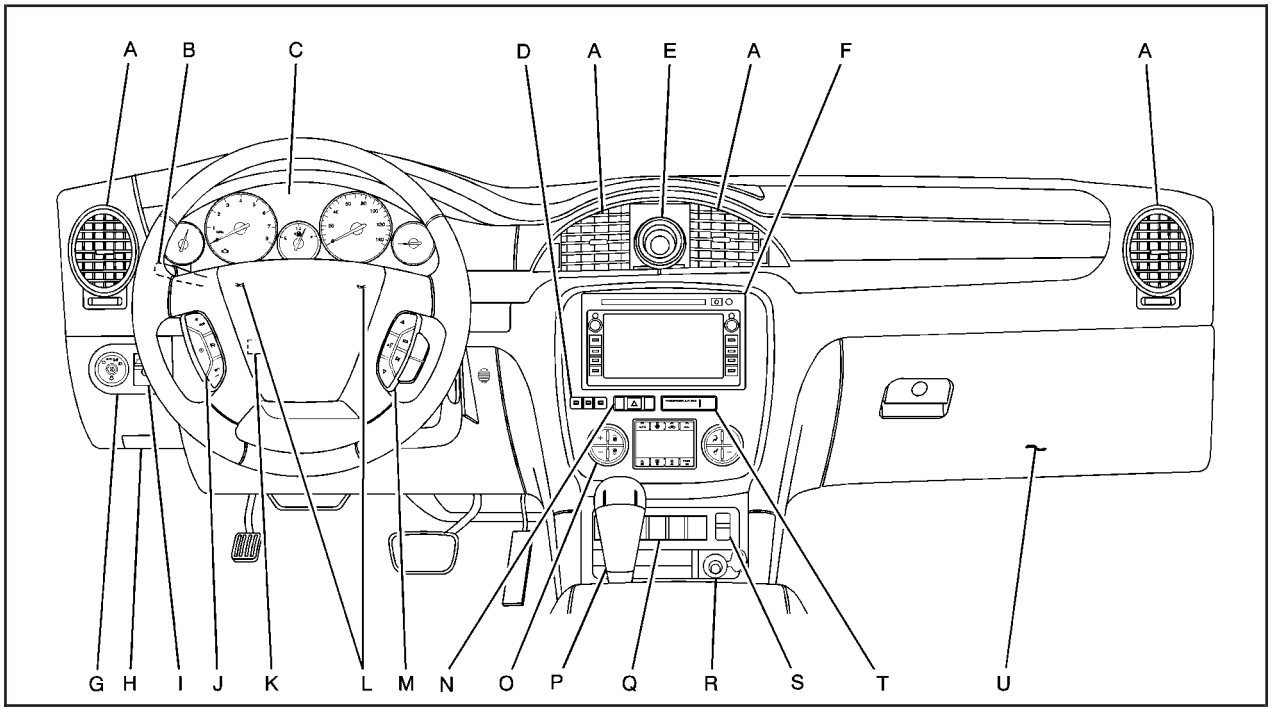
Engine Coolant Temperature Gage 3-43
Tire Pressure Light 3-44
Malfunction Indicator Lamp 3-45
Oil Pressure Light 3-47
Security Light 3-48
Fog Lamp Light 3-48
Cruise Control Light 3-48
Highbeam On Light 3-48
Tow/Haul Mode Light 3-49
Fuel Gage 3-49

Driver Information Center (DIC) 3-50
DIC Operation and Displays 3-50
DIC Warnings and Messages 3-56
DIC Vehicle Customization 3-65

Audio System(s) 3-74
Setting the Clock 3-75
Radio(s) (MP3) 3-78
Using an MP3 (Radio with CD and Six-Disc CD Player) 3-96
Using an MP3 (Radio with CD and DVD Player) 3-101
XM Radio Messages 3-106
Navigation/Radio System 3-107
Rear Seat Entertainment (RSE) System 3-107
Rear Seat Audio (RSA) 3-117
Theft-Deterrent Feature 3-118
Audio Steering Wheel Controls 3-119
Radio Reception 3-120
Multi-Band Antenna 3-120

NOTES

Instrument Panel Overview



The main components of your instrument panel are listed here:

A. Air Vent. See *Outlet Adjustment on page 3-29*.

B. Multifunction Lever. See *Turn Signal/Multifunction Lever on page 3-8*. Windshield Wipers. See *Windshield Wipers on page 3-9*.

C. Instrument Panel Cluster. See *Instrument Panel Cluster on page 3-34*.

D. Driver Information Center (DIC) Buttons. See *Driver Information Center (DIC) on page 3-50*.

E. Analog Clock. See *Analog Clock on page 3-22*.

F. Audio System. See *Audio System(s) on page 3-74*. Navigation/Radio System (If Equipped). See *Navigation/Radio System on page 3-107*.

G. Exterior Lamps Control. See *Exterior Lamps on page 3-14*. Fog Lamps. See *Fog Lamps on page 3-17*.

H. Hood Release. See *Hood Release on page 5-11*.

I. Dome Lamp Override Button. See *Dome Lamp Override on page 3-17*. Instrument Panel Brightness Control. See *Instrument Panel Brightness on page 3-17*. Heated Windshield Washer Button (If Equipped). See *Windshield Washer on page 3-10*.

J. Cruise Control Buttons. See *Cruise Control on page 3-12*.

K. Tilt and Telescopic Steering Wheel. See *Tilt and Telescopic Steering Wheel on page 3-7*.

L. Horn. See *Horn on page 3-6*.

M. Audio Steering Wheel Control Buttons. See *Audio Steering Wheel Controls on page 3-119*.

N. Hazard Warning Flasher Button. See *Hazard Warning Flashers on page 3-6*.

O. Dual Automatic Climate Controls. See *Dual Automatic Climate Control System on page 3-22*.

P. Center Console Shift Lever. See “Console Shift Lever” under *Shifting Into Park on page 2-36*.

Q. Rear Window Wiper/Washer. See *Rear Window Wiper/Washer on page 3-11*. Traction Control System (TCS) Disable Button (If Equipped). See *StabiliTrak® System on page 4-5*. Tow/Haul Selector Button (If Equipped). See *Tow/Haul Mode on page 2-34*. Power Liftgate Button (If Equipped). See *Power Liftgate on page 2-14*.

R. Accessory Power Outlets. See *Accessory Power Outlet(s) on page 3-20*.

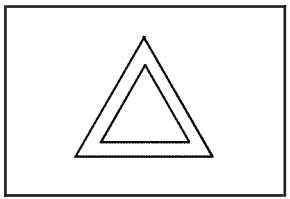
S. Heated Seats Button. See *Heated Seats on page 1-4*.

T. Passenger Air Bag Status Indicator. See *Passenger Sensing System on page 1-69*.

U. Glove Box. See *Glove Box on page 2-55*.

Hazard Warning Flashers

The hazard warning flashers let you warn others. They also let police know you have a problem. The front and rear turn signal lamps will flash on and off.



The hazard warning flasher button is located in the center of the instrument panel, below the audio system.

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

The hazard warning flashers work at all times. However, when they are on, the turn signals will not work.

Other Warning Devices

If you carry reflective triangles, you can set them up at the side of the road about 300 feet (100 m) behind your vehicle.

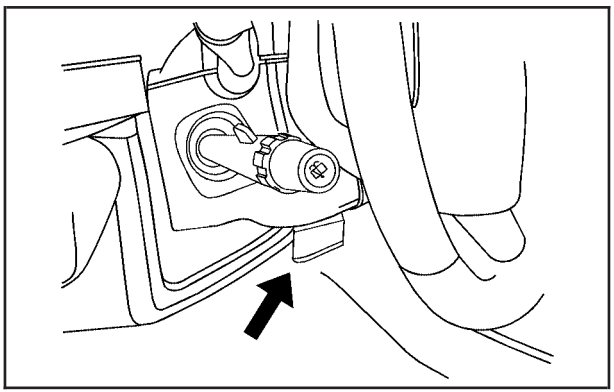
Horn

Press near or on the horn symbols on the steering wheel pad to sound the horn.

Tilt and Telescopic Steering Wheel

A tilt and telescope wheel lets you adjust the steering wheel before you drive. The steering wheel can be raised to the highest level to give your legs more room when you enter and exit the vehicle.

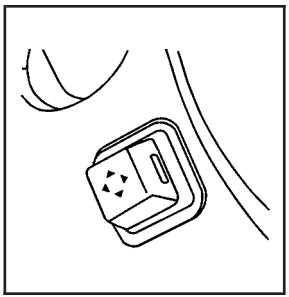
The lever that lets you tilt and telescope the steering wheel is located on the left side of the steering column.



To tilt and telescope the steering wheel, pull down the lever. Then move the steering wheel up or down or backward or forward into a comfortable position. Pull the lever up to lock the steering wheel in place.

Do not adjust the tilt and telescope lever while driving.

Power Tilt Wheel and Telescopic Steering Column

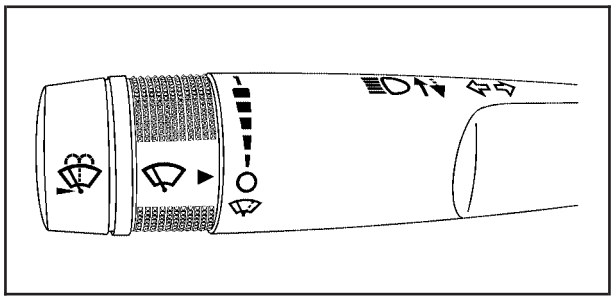


The power tilt and telescope wheel control is located on the outboard side of the steering column.

To operate the power tilt feature, push the control up and the steering wheel tilts up. Push the control down and the steering wheel goes down.

Push the control forward and the steering wheel moves toward the front of the vehicle. Push the control rearward and the steering wheel moves toward the rear of the vehicle. To set the memory position, see *DIC Vehicle Customization on page 3-65* and *Memory Seat and Mirrors on page 1-4*.

Turn Signal/Multifunction Lever



The lever on the left side of the steering column includes the following:

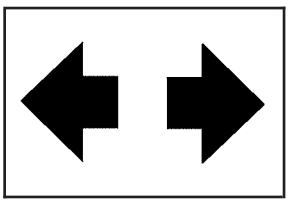
- Turn and Lane Change Signals. See *Turn and Lane-Change Signals on page 3-8*.
- Headlamp High/Low-Beam Changer. See *Headlamp High/Low-Beam Changer on page 3-9*.
- Flash-to-Pass. See *Flash-to-Pass on page 3-9*.
- Windshield Wipers. See *Windshield Wipers on page 3-9*.
- Windshield Washer. See *Windshield Washer on page 3-10*.

For information on the headlamps, see *Exterior Lamps on page 3-14*.

Turn and Lane-Change Signals

The turn signal has two upward (for right) and two downward (for left) positions. These positions allow you to signal a turn or a lane change.

To signal a turn, move the lever all the way up or down. When the turn is finished, the lever will return automatically.



An arrow on the instrument panel cluster will flash in the direction of the turn or lane change.

To signal a lane change, raise or lower the lever until the arrow starts to flash. Hold it there until you complete your lane change. The lever will return by itself when you release it. If you momentarily press and release the lever, the turn signal will flash three times.

If the arrow flashes faster than normal as you signal a turn or a lane change, a signal bulb may be burned out and other drivers will not see your turn signal.

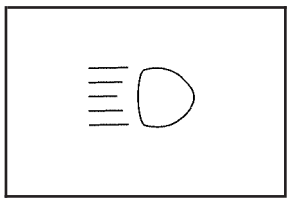
If a bulb is burned out, replace it to help avoid an accident. If the arrows do not go on at all when you signal a turn, check for burned-out bulbs and then check the fuse. See *Fuses and Circuit Breakers on page 5-108*.

Turn Signal On Chime

If either one of the turn signals are left on and you have drove more than 3/4 mile (1.2 km), a chime will sound.

Headlamp High/Low-Beam Changer

To change the headlamps from low beam to high beam, push the turn signal/multifunction lever toward the front of the vehicle.



This light on the instrument panel cluster comes on if the high beam lamps are turned on while the ignition is on.

To change the headlamps from high beam to low beam, pull the turn signal lever toward the rear of the vehicle.

Flash-to-Pass

With the turn signal lever in the low-beam position, pull the lever toward you momentarily to switch to high-beam, to signal that you are going to pass.

If the headlamps are on, they will return to low-beam when the lever is released.

Windshield Wipers

Clear ice and snow from the wiper blades before using them. If they are frozen to the windshield, gently loosen or thaw them. Damaged wiper blades may not clear the windshield well, making it harder to see and drive safely. If the blades do become damaged, install new blades or blade inserts. For more information, see *Windshield Wiper Blade Replacement on page 5-48*.

Heavy snow or ice can overload the wiper motor. A circuit breaker will stop the motor until it cools down. Clear away snow or ice to prevent an overload.

Turn the band with the wiper symbol to control the windshield wipers.

(Mist): Turn the band to mist for a single wiping cycle. Hold it there until the wipers start. Then let go. The wipers stop after one wipe. Hold the band on mist longer, for more wipe cycles.

(Off): To stop the wipers, move the band to off.

(Delay): Turn the band to adjust the delay time. The delay between wiping cycles becomes shorter as the band is moved to the top of the lever. This can be very useful in light rain or snow.

1 (Low Speed): Turn the band away from you to the first solid band past the delay settings, for steady wiping at low speed.

2 (High Speed): Turn the band further, to the second solid band past the delay settings, for high-speed wiping.

Windshield Washer

(Washer Fluid): Press the button located at the end of the turn signal/multifunction lever, to spray washer fluid on the windshield. The wipers clear the windshield and either stop or return to the preset speed. The ignition key must be in ACCESSORY or ON for this to work. See *Windshield Washer Fluid on page 5-33* Windshield Washer Fluid.

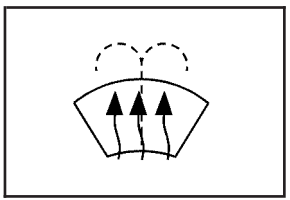
⚠CAUTION:

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

WASHER FLUID LOW ADD FLUID is displayed on the Driver Information Center (DIC) when the washer fluid is low. See *DIC Warnings and Messages on page 3-56*.

Heated Windshield Washer

If your vehicle has the heated windshield washer fluid system it can be used to help clear ice, snow, tree sap, or bugs from the windshield. This feature only works with the front wiper system.



The button is located to the left of the steering column below the instrument panel brightness control knob.

Push the heated washer fluid button to activate the heated windshield washer fluid system. This activation begins four heated wash/wipe cycles. The first heated wash/wipe cycle can take up to 40 seconds to occur, depending on outside temperature. After the first wash/wipe cycle, it can take up to 20 seconds for each of the remaining cycles. Press the button again to turn off the heated windshield washer fluid system or it will automatically turn off after four wipe cycles have been completed.

When the heated windshield washer fluid system is activated under certain outside temperature conditions, steam might flow out of the washer nozzles for a short period of time before washer fluid is sprayed. This is a normal condition.

WASHER FLUID LOW ADD FLUID is displayed on the DIC when the washer fluid is low. See *DIC Warnings and Messages on page 3-56*.

Rear Window Wiper/Washer

The rear wiper and rear wash button is located on the instrument panel below the climate control system.

(Rear Wiper): Press this symbol to turn the rear wiper on and off. The wiper speed cannot be changed.

(Wash): Press this symbol to spray washer fluid on the rear window. The window wiper will also come on. Release the button when enough fluid has been sprayed on the window. The rear wiper will run a few more cycles after it is released. If the rear wiper function was already on, prior to pressing the wash button, it will stay on until the wiper button is pressed again.

The rear window washer uses the same fluid that is in the windshield washer reservoir. See *Windshield Washer Fluid on page 5-33*.

Cruise Control

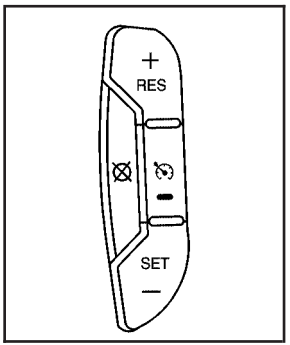
With cruise control, you can maintain a speed of about 25 mph (40 km/h) or more without keeping your foot on the accelerator. This can really help on long trips. Cruise control does not work at speeds below about 25 mph (40 km/h).

When you apply your brakes, cruise control is turned off.

⚠CAUTION:

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

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



The cruise control buttons are located on left side of the steering wheel.

(On/Off): Press this button to turn cruise control on and off. The indicator comes on when cruise control is on.

+ RES (Resume/Accelerate): Press this button to make the vehicle accelerate or resume to a previously set speed.

SET–: Press this button to set the speed or make the vehicle decelerate.

(Cancel): Press this button to cancel cruise control.

Setting Cruise Control

Cruise control will not work if your parking brake is set, or if the master cylinder brake fluid level is low.

The cruise control light on the instrument panel cluster comes on after the cruise control has been set to the desired speed.

⚠CAUTION:

If you leave your cruise control on when you are not using cruise, you might hit a button and go into cruise when you do not want to. You could be startled and even lose control. Keep the cruise control switch off until you want to use cruise control.

1. Press the cruise control on/off button.
2. Get up to the speed desired.
3. Press and release the SET– button located on the steering wheel.
4. Take your foot off the accelerator.

Resuming a Set Speed

Suppose you set your cruise control at a desired speed and then you apply the brake. This shuts off the cruise control. But you do not need to reset it.

Once you are driving about 25 mph (40 km/h) or more, press the +RES button on your steering wheel. The vehicle will go back to the previously chosen speed and stay there.

Increasing Speed While Using Cruise Control

To increase the cruise speed while using cruise control:

- Press and hold the +RES button on the steering wheel until you reach the desired speed, then release it.
- To increase vehicle speed in small increments, press the +RES button.

Reducing Speed While Using Cruise Control

To reduce your speed while using cruise control:

- Press and hold the SET– button on the steering wheel until you reach the lower speed desired, then release it.
- To slow down in very small amounts, press the SET– button on the steering wheel briefly. Each time this is done, the vehicle will go about 1 mph (1.6 km/h) slower.

Passing Another Vehicle While Using Cruise Control

Use the accelerator pedal to increase vehicle speed. When you take your foot off the pedal, your vehicle will slow down to the previously set cruise speed.

Using Cruise Control on Hills

How well your cruise control will work on hills depends upon the vehicle speed, load, and the steepness of the hills. When going up steep hills, you might have to step on the accelerator pedal to maintain the vehicle speed. When going downhill, you might have to brake or shift to a lower gear to keep the vehicle speed down. Of course, applying the brake turns off the cruise control. Many drivers find this to be too much trouble and do not use cruise control on steep hills.

Ending Cruise Control

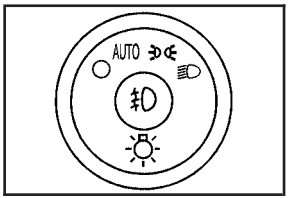
There are three ways to end cruise control:

- Step lightly on the brake pedal.
- Press the ⊗ (cancel) button on the steering wheel.
- Press the (on/off) button on the steering wheel.

Erasing Speed Memory

The cruise control set speed memory is erased by turning off the cruise control or the ignition.

Exterior Lamps



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

It controls the following systems:

- Headlamps
- Taillamps
- Parking Lamps
- License Plate Lamps
- Instrument Panel Lights
- Fog Lamps

The exterior lamps control has four positions:

○ **(Off):** Briefly turn the control to this position to turn off the automatic light control. Briefly turn to this position again to turn automatic light control on again.

AUTO (Automatic): Turn the control to this position to automatically turn on the headlamps at normal brightness, together with the following:

- Parking Lamps
- Taillamps
- License Plate Lamps
- Instrument Panel Lights

(Parking Lamps): Turn the control to this position to turn on the parking lamps together with the following:

- Taillamps
- License Plate Lamps
- Instrument Panel Lights

(Headlamps): Turn the control to this position to turn on the headlamps together with the following lamps listed below. A warning chime will sound if you open the driver's door when the ignition switch is off and the headlamps are on.

- Parking Lamps
- Taillamps
- License Plate Lamps
- Instrument Panel Lights

(Fog Lamps): Push the fog lamps control in to turn on the fog lamps.

See *Fog Lamps on page 3-17*.

Delayed Headlamps

The delayed headlamps feature provides a period of exterior lighting as you leave the area around your vehicle. The feature is activated when the headlamps are on due to the automatic headlamps control feature described previously in this section, and when the ignition is turned off. Your headlamps will then remain on until the exterior lamps control is moved to the parking lamps position or until the pre-selected delayed headlamp lighting period has ended.

If you turn off the ignition with the headlamps switch in the parking lamps or headlamps position, the delayed headlamps cycle will not occur.

To disable the delayed headlamps feature or change the time of delay, see *DIC Vehicle Customization on page 3-65*.

Daytime Running Lamps (DRL)/ Automatic Headlamp System

Daytime Running Lamps (DRL) can make it easier for others to see the front of your vehicle during the day. DRL can be helpful in many different driving conditions, but they can be especially helpful in the short periods after dawn and before sunset. Fully functional daytime running lamps are required on all vehicles first sold in Canada.

A light sensor on top of the instrument panel makes the DRL work, so be sure it is not covered.

The DRL system's automatic control will make the DRL lights come on when the following conditions are met:

- The ignition is in the ON position.
- The exterior lamps control is in AUTO.
- The engine is running.

When the DRL are on, only the DRL lights will be on. The headlamps, taillamps, sidemarker, and other lamps will not be on. The instrument panel and cluster will also not be lit.

When it is dark enough outside, the DRL lights will turn off and the headlamps and parking lamps will turn on. The other lamps that come on with the headlamps will also come on.

When it is bright enough outside, the headlamps will go off and the DRL will come on.

As with any vehicle, you should turn on the regular headlamp system when it is needed.

Adaptive Forward Lighting System

Vehicles with the Adaptive Forward Lighting System (AFS) have headlamps that swivel to the left or right when making a turn to provide better lighting. To enable AFS, set the exterior lamp switch to the AUTO position. Move the switch out of the AUTO position to turn off the system. See *Exterior Lamps on page 3-14*.

AFS operates when the vehicle speed is greater than 2 mph (3 km/h). AFS does not operate when the transmission is in REVERSE (R). AFS is not immediately operable after starting the vehicle; driving a short distance is required to calibrate the AFS.

Fog Lamps

Use the fog lamps for better vision in foggy or misty conditions.

(Fog Lamps): The fog lamps button is located on the exterior lamps control. The exterior lamps control is located on the instrument panel to the left of the steering column.

The ignition must be on for the fog lamps to work.

Press the exterior lamps button to turn the fog lamps on or off. A light will come on in the instrument panel cluster when the fog lamps are in use.

When the headlamps are changed to high-beam, the fog lamps will turn off. The fog lamps come back on again when the high-beam headlamps are turned off.

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

Instrument Panel Brightness

(Instrument Panel Brightness): The knob with this symbol on it is located next to the exterior lamps control to the left of the steering wheel. Push the knob in all the way until it extends out and then turn the knob clockwise to brighten or counterclockwise to dim the lights. Push the knob back in when finished.

Dome Lamps

The dome lamps automatically come on when a door is opened, unless the dome lamp override button is pressed in.

The lamps can also be turned on and off by turning the instrument panel brightness control clockwise to the farthest position.

Dome Lamp Override

The dome lamp override button is located next to the exterior lamps control.

The dome lamp override is used to set the dome lamps to remain off or come on automatically when a door is opened.

(Dome Lamp Override): Press the button in and the dome lamps remain off when a door is opened. Press the button again to return it to the extended position so that the dome lamps come on when a door is opened.

Entry Lighting

Your vehicle may have courtesy lamps that will come on and stay on for a set time whenever the unlock symbol is pressed on the Remote Keyless Entry (RKE) Transmitter, if the vehicle has one.

If a door is opened, the lamps stay on while it is open and then turn off automatically about 25 seconds after the door is closed. If the unlock symbol is pressed and you do not open a door, the lamps turn off after about 20 seconds.

Entry lighting includes a feature called theater dimming. With theater dimming, the lamps do not turn off at the end of the delay time. Instead, they slowly dim after the delay time until they go out. The delay time is canceled if you turn the ignition key to ON/RUN or press the power door lock switch. The lamps will dim right away.

When the ignition is on, illuminated entry is inactive, which means the courtesy lamps will not come on unless a door is opened.

Delayed Entry Lighting

Delayed entry lighting illuminates the interior for a period of time after all the doors have been closed.

The ignition must be off for delayed entry lighting to work. Immediately after all the doors have been closed, the delayed entry lighting feature will continue to work until one of the following occurs:

- The ignition is in ON/RUN.
- The doors are locked.
- An illumination period of 25 seconds has elapsed.

If during the illumination period a door is opened, the timed illumination period will be canceled and the interior lamps will remain on because a door is open.

Delayed Exit Lighting

This feature illuminates the interior for a period of time after the key is removed from the ignition.

The ignition must be off for delayed exit lighting to work. When the key is removed, interior illumination will activate and remain on until one of the following occurs:

- The ignition is in ON/RUN.
- The power door locks are activated.
- An illumination period of 20 seconds has elapsed.

If during the illumination period a door is opened, the timed illumination period will be canceled and the interior lamps will remain on because a door is open.

Parade Dimming

Parade mode automatically prohibits the dimming of the instrument panel displays during the daylight while the headlamps are on so that the displays are still able to be seen.

Reading Lamps

The vehicle has reading lamps that also act as the dome lamp. Press the button to turn them on and off.

Electric Power Management

The vehicle has Electric Power Management (EPM) that 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 put the charge back in. When the state of charge is high, the voltage is lowered slightly to prevent overcharging. If the vehicle has a voltmeter gage or a voltage display on the Driver Information Center (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 loads are on: 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 Driver Information Center (DIC) message might be displayed, such as Battery Saver Active or Service Battery Charging System. If this message is displayed, it is recommended that the driver reduce the electrical loads as much as possible. See *DIC Warnings and Messages on page 3-56*.

Battery Run-Down Protection

This vehicle has a feature to help prevent the battery from being drained, if the interior courtesy lamps, reading/map lamps, visor vanity lamps or trunk lamp are accidentally left on. If any of these lamps are left on, they will automatically turn off after 10 minutes, if the ignition is off. The lamps will not come back on again until one of the following occurs:

- The ignition is turned on.
- The exterior lamps control is turned off, then on again.

The headlamps will timeout after 10 minutes, if they are manually turned on before the ignition is off.

Accessory Power Outlet(s)

Your vehicle has four 12-volt outlets which can be used to plug in electrical equipment, such as a cellular telephone, a compact disc player, etc.

The power outlets are located on the instrument panel below the climate controls, inside the center floor console, at the rear of the center console, and on driver side of the rear cargo area. Lift the cover to access the outlet. Close the cover when not using the outlet.

Notice: **Leaving electrical equipment plugged in for an extended period of time while the vehicle is off will drain the battery. Power is always supplied to the outlets. Always unplug electrical equipment when not in use and do not plug in equipment that exceeds the maximum 20 ampere rating.**

Certain accessory plugs may not be compatible to the accessory power outlet and could result in blown vehicle and adapter fuses. If you experience a problem, see your dealer/retailer for additional information on the power accessory plugs.

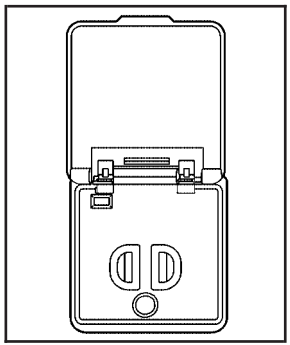
Notice: **Adding any electrical equipment to the vehicle can damage it or keep other components from working as they should. The repairs would not be covered by the vehicle warranty. Do not use equipment exceeding maximum amperage rating of 20 amperes. Check with your dealer/retailer before adding electrical equipment.**

When adding electrical equipment, be sure to follow the proper installation instructions included with the equipment. Check with your dealer/retailer before adding electrical equipment, and never use anything that exceeds the maximum amperage rating of 20 amps.

Notice: **Improper use of the power outlet can cause damage not covered by your warranty. Do not hang any type of accessory or accessory bracket from the plug because the power outlets are designed for accessory power plugs only.**

Power Outlet 115 Volt Alternating Current

Your vehicle may have a power outlet that can be used to plug in electrical equipment that uses a maximum limit of 150 watts.



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

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

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

If you try to connect equipment using more than 150 watts or a system fault is detected, a protection circuit shuts off the power supply and the indicator light turns off. To reset the circuit, unplug the item and plug it back in or turn the Remote Accessory Power (RAP) off and then back on. See *Retained Accessory Power (RAP) on page 2-27*. The power restarts when equipment using 150 watts or less is plugged into the outlet and a system fault is not detected.

The power outlet is not designed for the following electrical equipment and may not work properly if these items are plugged into the power outlet:

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

See *High Voltage Devices and Wiring on page 5-106*.

Analog Clock

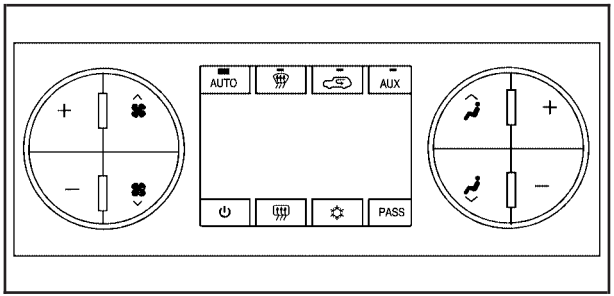
The analog clock is located on the instrument panel above the radio. The clock is not connected with any other vehicle system and runs by itself. To change the clock, do the following:

1. Push and hold the button located directly above the clock to advance the clock hands. Holding the button down will cause the clock to advance faster. Release the button before you get to the desired time.
2. Push and release the button to increase the time by one minute increments until the desired time is reached.

Climate Controls

Dual Automatic Climate Control System

The heating, cooling, and ventilation in your vehicle can be controlled with this system. Your vehicle also has a flow-through ventilation system described later in this section.



Different temperature settings can be selected for the driver and all passengers.

Display Function

Each time the temperature, mode, or fan control buttons are pressed, the climate control display shows that function along with the inside temperature setting. The outside temperature is displayed on the instrument panel cluster.

Driver's Side Temperature Control

The driver side temperature buttons are used to adjust the temperature of the air coming through the system on the driver side. The temperature can be adjusted even if the system is turned off. This is possible since outside air will always flow through the system as the vehicle is moving forward unless it is set to recirculation mode. See "Recirculation" later in this section.

Press the + or – buttons to increase or decrease the temperature. The driver side temperature display will show the temperature setting decreasing or increasing.

Passenger's Side Temperature Control

The passenger's temperature buttons can be used to change the temperature of the air coming through the system on the passenger side of the vehicle. The temperature can be adjusted even if the system is turned off. This is possible since outside air will always flow through the system as the vehicle is moving forward unless it is set to recirculation mode. See "Recirculation" later in this section.

Press the + or – buttons to increase or decrease the temperature. The passenger side display will show the temperature setting decreasing or increasing.

The passenger's temperature setting can be set to match the driver's temperature setting by pressing the PASS button and turning off the PASS indicator. When the passenger's temperature setting is set different than the driver's setting, the indicator on the PASS button comes on and both the driver side and passenger side temperature displays are shown.

Automatic Operation

AUTO (Automatic): When automatic operation is active the system controls the inside temperature, the air delivery, and the fan speed.

Use the steps below to place the entire system in automatic mode:

1. Press the AUTO button.

   When AUTO is selected, the display shows the current temperature(s) selected and AUTO is on the display. The current delivery mode and fan speed also display for approximately 5 seconds.

   When AUTO is selected, the air conditioning operation and air inlet are automatically controlled. The air conditioning compressor runs when the outside temperature is over about 40°F (4°C). The air inlet is normally set to outside air. If it is hot outside, the air inlet can automatically switch to recirculate inside air to help quickly cool down your vehicle. The light comes on the recirculation button while in recirculation.

2. Set the driver's and passenger's temperature.

   To find your comfort setting, start with a 73°F (22°C) temperature setting and allow about 20 minutes for the system to regulate. Use the driver's or passenger's temperature buttons to adjust the temperature setting as necessary. If you choose the temperature setting of 60°F (15°C), the system remains at the maximum cooling setting. If you choose the temperature setting of 90°F (32°C), the system remains at the maximum heat setting. Choosing either maximum setting will not cause the vehicle to heat or cool any faster.

Do not cover the solar sensor located on the top of the instrument panel near the windshield. This sensor regulates air temperature based on sun load and also turns on your vehicle's headlamps. For more information on the solar sensor, see "Sensors" later in this section.

To avoid blowing cold air in cold weather, the system delays turning on the fan until warm air is available. The length of delay depends on the engine coolant temperature. Press the fan switch to override this delay and change the fan to a selected speed.

(On/Off): Press this button to turn off the climate control system. Outside air still enters the vehicle, and is directed to the floor. This direction can be changed by pressing the mode button. Recirculation can only be selected in vent or bi-level mode. The temperature can also be adjusted using either temperature button. If you adjust the air delivery mode or temperature settings with the system off, the display comes on briefly to show the settings and then turns off. Press the on/off button or the up down arrows on the fan switch, the defrost button, AUTO button, or the air conditioning button to turn the system on when it is off.

Manual Operation

The air delivery mode or fan speed can be manually adjusted.

(Fan): The buttons with the fan symbols let you manually adjust the fan speed. Press the up arrow to increase fan speed and the down arrow to decrease fan speed.

Pressing a fan button while the system is off will turn the system on. Pressing a fan button while in automatic control places the fan under manual control. The fan setting remains displayed, the word AUTO is no longer displayed, and the AUTO button indicator light turns off. The air delivery mode remains in automatic control.

(Mode): Press the mode up and down buttons to manually change the direction of the airflow in the vehicle. Repeatedly press the button until the desired mode appears on the display. Pressing a mode button while the system is off will change air delivery mode without turning the system on. Pressing one of these buttons while in automatic control to place the mode under manual control.

The air delivery mode setting remains displayed, the word AUTO is no longer displayed, and the AUTO button indicator light turns off.

(Vent): This setting delivers air to the instrument panel outlets.

(Bi-Level): This mode directs air to the instrument panel outlets and to the floor outlets. A little air is directed towards the windshield and side window outlets. Cooler air is directed to the upper outlets and warmer air to the floor outlets.

(Floor): This mode directs most of the air to the floor outlets, with some of the air directed to the windshield, side window outlets, and second row floor outlets. In this mode, the system automatically selects outside air. Recirculation cannot be selected in floor mode.

(Defog): See “Defogging and Defrosting” later in this section.

(Recirculation): Press this button to turn the recirculation mode on. When the button is pressed, an indicator light comes on.

This mode keeps outside air from entering the vehicle. It can be used to reduce outside air and prevent odors from entering your vehicle. Recirculation also helps to quickly cool the warmer air inside your vehicle.

The recirculation mode cannot be used with floor, defrost, or defogging modes. If you try to select recirculation in one of those modes, the indicator flashes three times and turns off. The air conditioning compressor also comes on when this mode is activated. While in recirculation mode the windows may fog when the weather is cold and damp. To clear the fog, select either the defog or defrost mode and increase the fan speed.

Press the button again to turn off the recirculation mode. It automatically turns off when the engine is turned off and must be re-selected when the engine is turned on again.

Air Conditioning

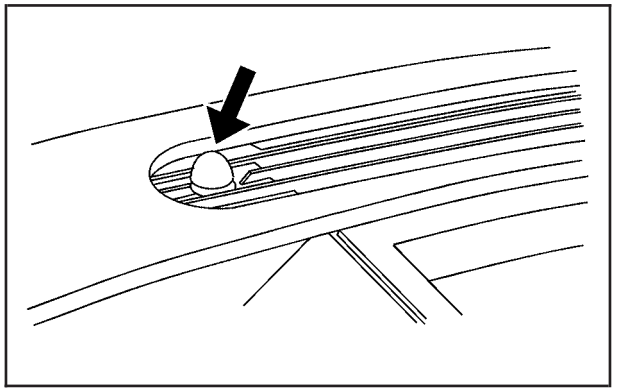
(Air Conditioning): Press this button to turn the air conditioning (A/C) compressor on and off. When air conditioning is selected, an indicator light comes on to show that the air conditioning has been activated.

The air conditioning compressor does not work when outside temperatures fall below 40°F (4°C). Pressing this button when the outside temperature is too cool makes the air conditioning indicator flash three times and turn off to let you know the air conditioning mode is not available. If the air conditioning is on and the outside temperature drops below a temperature which is too cool for air conditioning to be effective, the air conditioning light turns off to show that the air conditioning mode has been canceled.

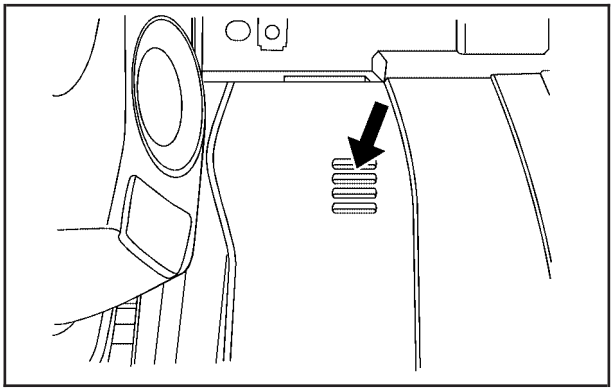
On hot days, open the windows long enough to let hot inside air escape. This helps to reduce the time it takes for the vehicle to cool down. It also helps the system to operate more efficiently.

The air conditioning system removes moisture from the air, so a small amount of water may drip underneath your vehicle while idling or after turning off the engine. This is normal.

Sensors



The solar sensor, located in the defrost grille in the middle of the instrument panel, monitors the solar radiation. Do not cover the solar sensor or the system will not work properly.



The interior temperature sensor located on the instrument panel to the right of the steering column, measures the temperature of the air inside the vehicle.

There is also an exterior temperature sensor located behind the front grille. This sensor reads the outside air temperature and helps maintain the temperature inside the vehicle. Any cover on the front of the vehicle could cause a false reading in the displayed temperature.

The climate control system uses the information from these sensors to maintain your comfort setting by adjusting the outlet temperature, fan speed, and the air delivery mode. The system may also supply cooler air to the side of the vehicle facing the sun. The recirculation mode will also be used as needed to maintain cool outlet temperatures.

Defogging and Defrosting

Fog on the inside of the windows is a result of high humidity (moisture) condensing on the cool window glass. This can be minimized if the climate control system is used properly. There are two modes to clear fog or frost from your windshield.

Use the mode up and down arrows to select the defog mode. Use the defrost button to select the defrost mode.

(Defog): The defog mode is used to clear the windows of fog or moisture and warm the passengers. This mode directs air to the windshield, floor outlets, and side window vents. When this mode is selected, the system turns off recirculation and runs the air conditioning compressor unless the outside temperature is close to freezing. The recirculation mode cannot be selected while in the defog mode. Do not drive the vehicle until all the windows are clear.

To clear fog from the rear seat side windows, select the bi-level mode on the rear climate control system and direct the headliner outlets toward the side windows.

(Defrost): Press this button to remove fog or frost from the windshield more quickly. This mode directs most of the air to the windshield and side window vents and some to the floor vents. In this mode, the system automatically forces outside air into the vehicle. The recirculation mode cannot be selected while in the defrost mode. The air conditioning compressor runs automatically in this setting, unless the outside temperature is close to freezing. Do not drive the vehicle until all the windows are clear.

While in defrost mode, if the PASS button is pressed, the PASS button indicator will flash three times to let you know that the passenger climate control system cannot be activated. If the passenger temperature buttons are adjusted while in defrost mode, the driver temperature indicator will change. The passenger temperature will not be displayed.

AUX (Auxiliary): Press this button to turn the rear heating and air conditioning on. See *Rear Air Conditioning and Heating System on page 3-30* or *Rear Air Conditioning and Heating System and Electronic Climate Controls on page 3-31*.

Rear Window Defogger

The rear window defogger uses a warming grid to remove fog from the rear window.

(Rear Window Defogger): Press this button to turn the rear window defogger on or off. The rear window defogger stays on for about 10 minutes after the button is pressed, before turning off. The defogger can also be turned off by pressing the button again or by turning off the engine. Do not drive the vehicle until all the windows are clear.

If your vehicle has heated outside rearview mirrors, the mirrors will heat to help clear fog or frost from the surface of the mirror when the rear window defog button is pressed.

Notice: **Do not use a razor blade or sharp object to clear the inside rear window. Do not adhere anything to the defogger grid lines in the rear glass. These actions may damage the rear defogger. Repairs would not be covered by your warranty.**

Outlet Adjustment

Use the slider switch in the center of the outlet, to change the direction of the air flow. Use the thumbwheel near the outlet to control the amount of air flow or to shut off the airflow completely.

Keep all outlets open whenever possible for best system performance.

Operation Tips

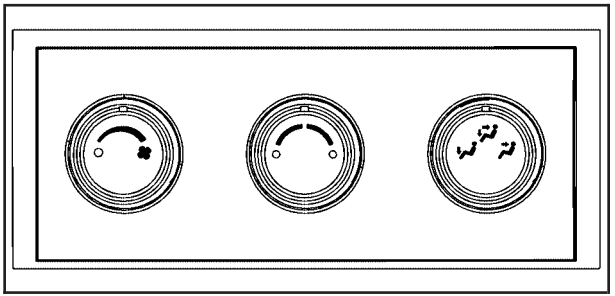
- Clear away any ice, snow, or leaves from the air inlets at the base of the windshield that can block the flow of air into the vehicle.
- Use of non-GM approved hood deflectors can adversely affect the performance of the system.
- Keep the path under all seats clear of objects to help circulate the air inside the vehicle more effectively.
- If fogging reoccurs while in vent or bi-level modes with mild temperature throughout the vehicle, turn on the air conditioner to reduce windshield fogging.

Rear Air Conditioning and Heating System

If your vehicle has this system, the rear controls are three knobs located on the rear of the center console. The system can be controlled from the front controls as well as the rear controls.

To turn the system on, press the AUX button on the front climate control system, an indicator will be lit. Pressing the AUX button the first time will turn the rear system on in a mimic mode. In this mode, the airflow in the rear will be approximately the same direction, temperature, and fan speed as the front. Pressing the AUX button again will turn the rear system and the indicator off.

If the rear controls are adjusted, the system turns on in a rear independent mode. Airflow in the rear will then be directed according to the settings of the rear controls. The rear system can be turned off by pressing the AUX button on the front climate control system and the indicator will turn off. The system can be turned back on, by adjusting any of the rear air conditioning control knobs.



Fan Knob

Turn the left knob clockwise or counterclockwise to increase or decrease the fan speed. Turn the knob all the way counterclockwise to turn the rear system off.

Temperature Knob

The middle knob on the control panel lets you select the temperature of the air flowing into the passenger area. Turn the knob clockwise or counterclockwise for warmer or cooler air.

Mode Knob

The right knob on the control panel lets you choose the direction of the air flow.

(Vent): This setting directs the air through the headliner outlets.

(Bi-Level): This setting directs the air through the rear floor outlets under the third row seat, as well as the headliner outlets. The flow can be divided between headliner and floor outlets depending upon where the knob is placed between the settings.

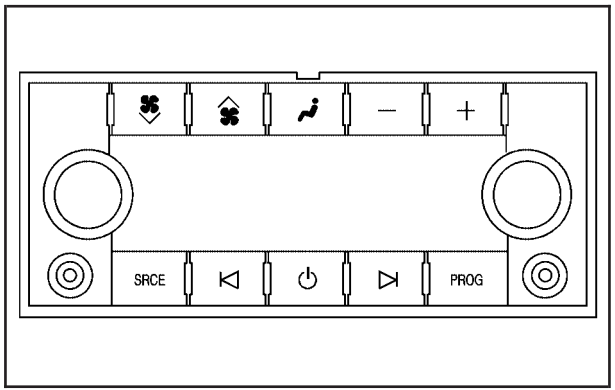
(Floor): This setting directs the air through the floor outlets. The rear system floor outlets are located under the third row seats.

Rear Air Conditioning and Heating System and Electronic Climate Controls

If your vehicle has this rear climate control system there are rear seat audio controls located in the center console.

The rear system can be controlled through the AUX button on the front climate control panel. Press the AUX button to turn the rear climate control system on or off. An indicator light in the AUX button comes on when the rear climate control system is on. The direction, temperature, and speed of the airflow for the rear of the vehicle will be the same as those set for the front of the vehicle.

Use the controls located in the rear of the front console, to independently control the air flow for the rear of the vehicle separately from that of the front of the vehicle. To turn the system on, press any of the rear air conditioning control buttons, except the button. To turn the system off, press and hold the button.



Rear Climate Control with Rear Seat Audio Controls

Manual Operation

(Fan): The fan buttons on the rear seat audio control panel let you manually adjust the fan speed. Press to increase airflow and to decrease airflow.

+/– (Increase/Decrease Temperature): These buttons select the temperature of the air flowing into the rear passenger area. Press the + button for warmer air and press the – button for cooler air. The temperature settings will display in 0-12 increments, going from the coolest (0) to the warmest (12) setting.

(Mode): Press the mode button to manually change the direction of the airflow in the vehicle. Repeatedly press the button until the desired mode appears on the display. Multiple presses cycles through the delivery selections.

(Vent): This mode directs air through the headliner outlets.

(Bi-Level): This mode directs air through the floor outlets as well as the headliner outlets. The rear system floor outlets are located under the third row seats.

(Floor): This mode directs air through the floor outlets. The rear system floor outlets are located under the third row seats.

Warning Lights, Gages, and Indicators

This section describes the warning lights and gages on the vehicle.

Warning lights and gages 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 gages could prevent injury.

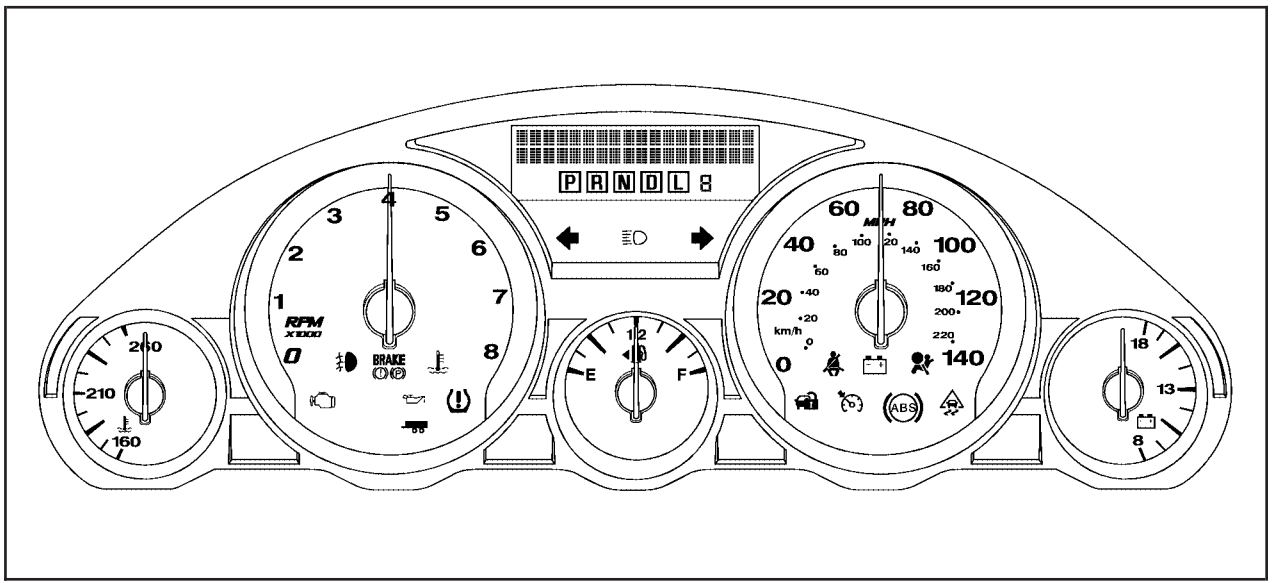
Warning lights come on when there may be or is a problem with one of the vehicle's functions. Some warning lights come on briefly when the engine is started to indicate they are working.

Gages can indicate when there may be or is a problem with one of the vehicle's functions. Often gages 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 gages 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 Panel Cluster

The instrument cluster is designed to let you know at a glance how the vehicle is running. You will know how fast you are going, about how much fuel you have used, and many other things you will need to know to drive safely and economically.



United States version shown, Canada similar

Speedometer and Odometer

The speedometer lets you see your speed in both miles per hour (mph) and kilometers per hour (km/h).

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

Your vehicle has a tamper-resistant odometer. If your vehicle needs a new odometer installed, the new one will be set to the mileage total of the old odometer. If this is not possible, it will be set at zero and a label must be put on the driver's door to show the old mileage reading when the new odometer was installed. If the mileage is unknown, the label should then indicate "previous mileage unknown".

Tachometer

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

Safety Belt Reminders

Safety Belt Reminder Light

When the engine is started, a chime will come on for several seconds to remind people to fasten their safety belts, unless the driver's safety belt is already buckled.

The safety belt light will also come on and stay on for several seconds, then it will flash for several more.

This chime and light is repeated if the driver remains unbuckled and the vehicle is in motion. If the driver's belt is already buckled, neither the chime nor the light will come on.

Passenger Safety Belt Reminder Light

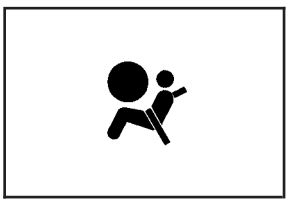
Several seconds after the engine is started, a chime will sound for several seconds to remind the front passenger to buckle their safety belt. This would only occur if the passenger airbag is enabled. See *Passenger Sensing System on page 1-69* for more information. The passenger safety belt light, located on the instrument panel, will come on and stay on for several seconds and then flash for several more.

This chime and light are repeated if the passenger remains unbuckled and the vehicle is in motion.

If the passenger's safety belt is buckled, neither the chime nor the light will come on.

Airbag Readiness Light

There is an airbag readiness light on the instrument panel cluster, which shows the airbag symbol. The system checks the airbag's electrical system for malfunctions. The light tells you if there is an electrical problem. The system check includes the airbag sensor, the pretensioners, the airbag modules, the wiring and the crash sensing and diagnostic module. For more information on the airbag system, see *Airbag System on page 1-59*.



This light will come on when you start your vehicle, and it will flash for a few seconds. The light should go out and the system is ready.

If the airbag readiness light stays on after you start the vehicle or comes on when you are driving, your airbag system may not work properly. Have your vehicle serviced right away.

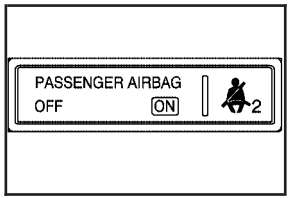
⚠CAUTION:

If the airbag readiness light stays on after you start your vehicle, it means the airbag system may not be working properly. The airbags in your vehicle may not inflate in a crash, or they could even inflate without a crash. To help avoid injury to yourself or others, have your vehicle serviced right away.

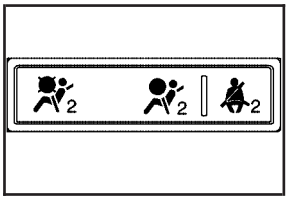
The airbag readiness light should flash for a few seconds when you start the engine. If the light does not come on then, have it fixed immediately. If there is a problem with the airbag system, an airbag Driver Information Center (DIC) message may also come on. See *DIC Warnings and Messages on page 3-56* for more information.

Passenger Airbag Status Indicator

Your vehicle has the passenger sensing system. Your instrument panel has a passenger airbag status indicator.



United States



Canada

When you start the vehicle, the passenger airbag status indicator will light ON and OFF, or the symbol for on and off, for several seconds as a system check. If you use remote start to start your vehicle from a distance, if equipped, you may not see the system check. Then, after several more seconds, the status indicator will light either ON or OFF, or either the on or off symbol to let you know the status of the right front passenger's frontal and seat-mounted side impact airbags.

If the word ON or the on symbol is lit on the passenger airbag status indicator, it means that the right front passenger's frontal airbag and seat-mounted side impact airbag are enabled (may inflate).

⚠CAUTION:

If the on indicator comes on when you have a rear-facing child restraint installed in the right front passenger's seat, it means that the passenger sensing system has not turned off the passenger's frontal airbag and seat-mounted side impact airbag (if equipped). A child in a rear-facing child restraint can be seriously injured or killed if the right front passenger's airbag inflates. This is because the back of the rear-facing child restraint would be very close to the inflating airbag. Do not use a rear-facing child restraint in the right front passenger's seat if the airbag is turned on.

⚠CAUTION:

Even though the passenger sensing system is designed to turn off the right front passenger's frontal airbag and seat-mounted side impact airbag (if equipped) if the system detects a rear-facing child restraint, no system is fail-safe, and no one can guarantee that an airbag will not deploy under some unusual circumstance, even though it is turned off. We recommend that rear-facing child restraints be secured in a rear seat, even if the airbag is or airbags are off.

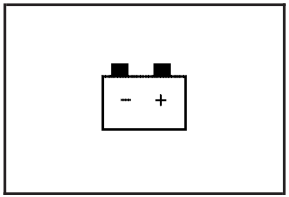
If the word OFF or the off symbol is lit on the passenger airbag status indicator, it means that the passenger sensing system has turned off the right front passenger's frontal airbag and seat-mounted side impact airbag. See *Passenger Sensing System on page 1-69* for more on this, including important 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 passenger sensing system. See your dealer/retailer for service.

⚠CAUTION:

If the airbag readiness light in the instrument panel cluster ever comes on and stays on, it means that something may be wrong with the airbag system. If this ever happens, have the vehicle serviced promptly, because an adult-size person sitting in the right front passenger's seat may not have the protection of the airbag(s). See *Airbag Readiness Light on page 3-36* for more on this, including important safety information.

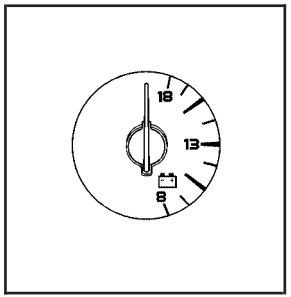
Charging System Light



This light will come on briefly when you turn on the ignition key, but the engine is not running, as a check to show you it is working.

It should go out once the engine is running. If it stays on, or comes on while driving, there could be a problem with the charging system. A charging system Driver Information Center (DIC) message may also appear. See *DIC Warnings and Messages on page 3-56* for more information. This light could indicate that there are problems with a generator drive belt, or that there is an electrical problem. Have it checked right away. If you must drive a short distance with the light on, be certain to turn off all the accessories, such as the radio and air conditioner.

Voltmeter Gage



When the engine is not running, but the ignition is on, this gage shows the battery's state of charge in DC volts.

When the engine is running, this gage shows the condition of the charging system. The vehicle's charging system regulates voltage based on the state of charge of the battery. The voltmeter may fluctuate. This is normal. Readings between the low and high warning zones indicate the normal operating range.

Readings in the low warning zone may occur when a large number of electrical accessories are operating in the vehicle and the engine is left idling for an extended period.

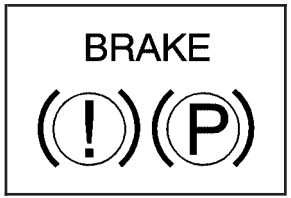
If there is a problem with the battery charging system, a SERVICE BATTERY CHARGING SYSTEM message will appear in the Driver Information Center (DIC) and/or the charging system light will come on. See *DIC Warnings and Messages on page 3-56* and *Charging System Light on page 3-39* for more information.

However, readings in either warning zone may indicate a possible problem in the electrical system. Have the vehicle serviced as soon as possible.

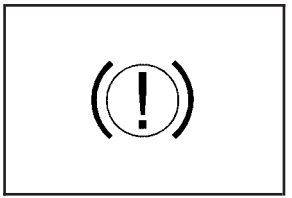
Brake System Warning Light

Your vehicle's hydraulic brake system is divided into two parts. If one part is not working, the other part can still work and stop you. For good braking, though, you need both parts working well.

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



United States



Canada

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

This light may also come on due to low brake fluid. See *Brakes on page 5-34* for more information.

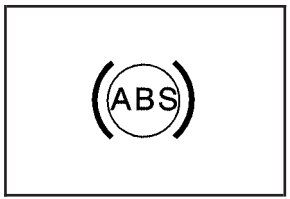
When the ignition is on, the brake system warning light will also come on when you set your parking brake. The light will stay on if your parking brake does not release fully. If it stays on after your parking brake is fully released, it means you have a brake problem.

If the light comes on while you are driving, pull off the road and stop carefully. Make sure the parking brake is fully released. You may notice that the pedal is harder to push or, the pedal may go closer to the floor. It may take longer to stop. If the light is still on, have the vehicle towed for service. See *Towing Your Vehicle on page 4-25*.

⚠CAUTION:

Your brake system may not be working properly if the brake system warning light is on. Driving with the brake system warning light on can lead to an accident. If the light is still on after you have pulled off the road and stopped carefully, have the vehicle towed for service.

Anti-lock Brake System (ABS) Warning Light



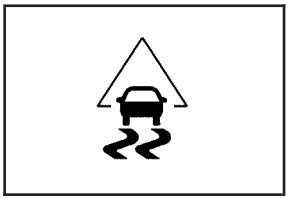
For vehicles with the Antilock Brake System (ABS), this light comes on briefly when the engine is started.

That is normal. If the light does not come on then, have it fixed so it will be ready to warn you if there is a problem.

If the ABS light stays on, turn the ignition off. If the light comes on when you are 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 still stays on, or comes on again while you are driving, your vehicle needs service. If the regular brake system warning light is not on, your vehicle still has brakes, but not antilock brakes. If the regular brake system warning light is also on, your vehicle does not have antilock brakes and there is a problem with the regular brakes. See *Brake System Warning Light on page 3-41*.

For vehicles with a Driver Information Center (DIC), see *DIC Warnings and Messages on page 3-56* for all brake related DIC messages.

StabiliTrak® Indicator Light



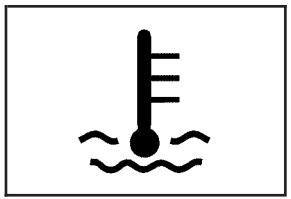
This warning light should come on briefly when the engine is started.

If the warning light does not come on then, have it fixed so it will be ready to warn you if there is a problem. If it stays on, or comes on when you are driving, there may be a problem with your StabiliTrak® system and your vehicle may need service. When this warning light is on, the system is off and will not limit wheel spin. Adjust your driving accordingly.

This light will also flash when the StabiliTrak® system is active.

If the StabiliTrak® system warning light comes on and stays on for an extended period of time when the system is turned on, your vehicle needs service. See *StabiliTrak® System on page 4-5* for more information.

Engine Coolant Temperature Warning Light



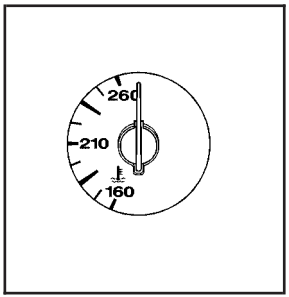
The engine coolant temperature warning light will come on when the engine has overheated.

If this happens you should pull over and turn off the engine as soon as possible. See *Engine Overheating on page 5-23* for more information.

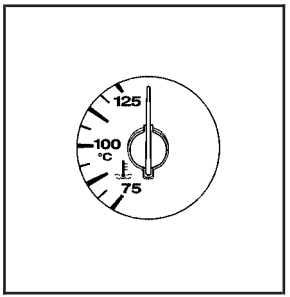
Notice: **Driving with the engine coolant temperature warning light on could cause your vehicle to overheat. See *Engine Overheating on page 5-23*. Your vehicle could be damaged, and it might not be covered by your warranty. Never drive with the engine coolant temperature warning light on.**

This light will also come on briefly when starting your vehicle. If it does not, have your vehicle serviced.

Engine Coolant Temperature Gage



United States



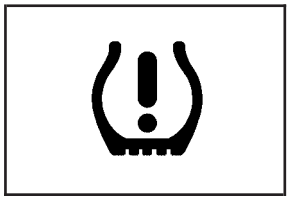
Canada

This gage shows the engine coolant temperature. Under normal driving conditions the gage will read 210°F (100 °C) or less. If the gage pointer is near 260°F (125 °C), the engine is too hot.

It means that your engine coolant has overheated. If you have been operating your vehicle under normal driving conditions, you should pull off the road, stop your vehicle and turn off the engine as soon as possible.

See *Engine Overheating on page 5-23* for more information.

Tire Pressure Light



Your vehicle has a tire pressure light.

This light comes on briefly when the engine is started and provides information about tire pressures and the Tire Pressure Monitoring System.

When the Light is Solid

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

A tire pressure message in the Driver Information Center (DIC), may accompany the light. See *DIC Warnings and Messages on page 3-56* for more information. Stop and check your tires as soon as it is safe to do so. If underinflated, inflate to the proper pressure. See *Tires on page 5-49* for more information.

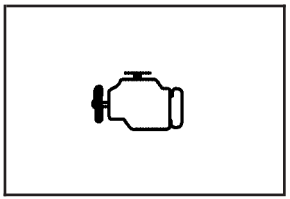
When the Light Flashes First and Then is Solid

This indicates that there may be a problem with the Tire Pressure Monitor System. The light flashes for about a minute and stays on solid for the remainder of the ignition cycle. This sequence will repeat with every ignition cycle. See *Tire Pressure Monitor System on page 5-57* for more information.

Malfunction Indicator Lamp

Check Engine Light

A computer system called OBD II (On-Board Diagnostics-Second Generation) monitors operation of the fuel, ignition, and emission control systems. It makes sure that emissions are at acceptable levels for the life of the vehicle, helping to produce a cleaner environment.



The check engine light comes on to indicate that there is an OBD II problem and service is required.

Malfunctions often are indicated by the system before any problem is apparent. This can prevent more serious damage to your vehicle. This system is also designed to assist your service technician in correctly diagnosing any malfunction.

Notice: **If you keep driving your vehicle with this light on, after a while, the emission controls might not work as well, your vehicle's 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 your warranty.**

Notice: **Modifications made to the engine, transmission, exhaust, intake, or fuel system of your vehicle or the replacement of the original tires with other than those of the same Tire Performance Criteria (TPC) can affect your vehicle's emission controls and can cause this light to come on. Modifications to these systems could lead to costly repairs not covered by your warranty. This could also result in a failure to pass a required Emission Inspection/Maintenance test. See *Accessories and Modifications on page 5-3*.**

This light comes on, as a check to show it is working, when the ignition is turned ON/RUN but the engine is not running. If the light does not come on, have it repaired. This light also 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 your vehicle. Diagnosis and service might be required.
- **Light On Steady** — An emission control system malfunction has been detected on your vehicle. Diagnosis and service might be required.

If the Light is Flashing

The following can prevent more serious damage to your vehicle:

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

If the light stops flashing and remains on steady, see “If the Light Is On Steady” following.

If the light continues to flash, when it is safe to do so, stop the vehicle. Find a safe place to park the vehicle. Turn the ignition off, wait at least 10 seconds, and restart the engine. If the light remains on steady, see “If the Light Is On Steady” following. If the light is still flashing, follow the previous steps and see your dealer/retailer for service as soon as possible.

If the Light Is On Steady

You might be able to correct the emission system malfunction by considering the following:

Did you recently put fuel into your vehicle?

If so, reinstall the fuel cap, making sure to fully install the cap. See *Filling the Tank on page 5-8*. The diagnostic system can determine if the fuel cap has been left off or improperly installed. A loose or missing fuel cap allows fuel to evaporate into the atmosphere. A few driving trips with the cap properly installed should turn the light off.

Did you just drive through a deep puddle of water?

If so, your vehicle’s electrical system might be wet. The condition is usually corrected when the electrical system dries out. A few driving trips should turn the light off.

Have you recently changed brands of fuel?

If so, be sure to fuel your vehicle with quality fuel. See *Gasoline Octane on page 5-5*. Poor fuel quality causes the engine not to run as efficiently as designed. You might notice this as stalling after start-up, stalling when you put the vehicle into gear, misfiring, hesitation on acceleration, or stumbling on acceleration — these conditions might go away once the engine is warmed up. This will be detected by the system and cause the light to turn on.

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

If none of the above steps have made the light turn off, your dealer/retailer can check the vehicle. Your dealer/retailer 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 state/provincial and local governments have or might begin programs to inspect the emission control equipment on your vehicle. Failure to pass this inspection could prevent you from getting a vehicle registration.

Here are some things you need to know to help your vehicle pass an inspection:

Your vehicle will not pass this inspection if the check engine light is on or not working properly.

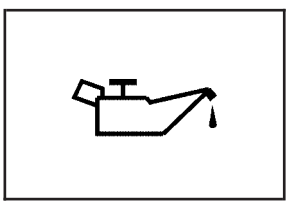
Your vehicle will not pass this inspection if the OBD (on-board diagnostic) system determines that critical emission control systems have not been completely diagnosed by the system. The vehicle would be considered not ready for inspection. This can happen if you have recently replaced the battery or if the battery has 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 you have done this and your vehicle still does not pass the inspection for lack of OBD system readiness, your dealer/retailer can prepare the vehicle for inspection.

Oil Pressure Light

⚠CAUTION:

Do not keep driving if the oil pressure is low. If you do, your engine can become so hot that it catches fire. You or others could be burned. Check your oil as soon as possible and have your vehicle serviced.

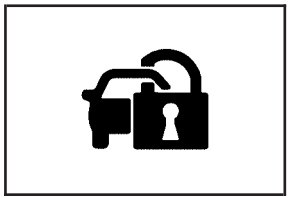
Notice: **Lack of proper engine oil maintenance may damage the engine. The repairs would not be covered by your warranty. Always follow the maintenance schedule in this manual for changing engine oil.**



This light will come on briefly when you start your engine as a check to be sure it works. If it does not, have your vehicle serviced.

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

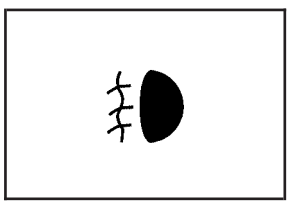
Security Light



This light flashes when the security system is activated.

For more information, see *Theft-Deterrent Systems on page 2-22*.

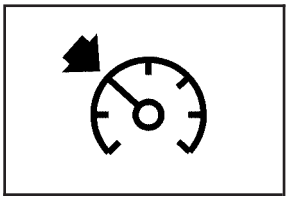
Fog Lamp Light



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

The light will go out when the fog lamps are turned off. See *Fog Lamps on page 3-17* for more information.

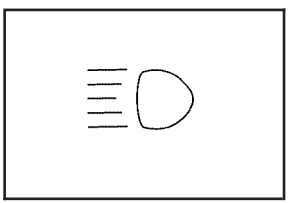
Cruise Control Light



This light comes on whenever you set the cruise control.

The light goes out when the cruise control is turned off. See *Cruise Control on page 3-12* for more information.

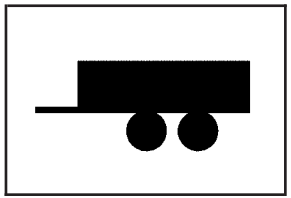
Highbeam On Light



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

See *Headlamp High/Low-Beam Changer on page 3-9* for more information.

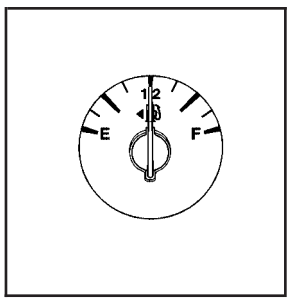
Tow/Haul Mode Light



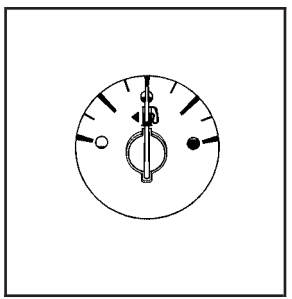
This light comes on when the Tow/Haul mode has been activated.

For more information, see *Tow/Haul Mode on page 2-34*.

Fuel Gage



United States



Canada

When the ignition is on, the fuel gage tells you about how much fuel you have left in the fuel tank.

The gage will first indicate empty before you are out of fuel, and you should get more fuel as soon as possible.

When the fuel tank is low on fuel, the FUEL LEVEL LOW message will appear on the Driver Information Center (DIC). For more information see *DIC Warnings and Messages on page 3-56*.

Here are some situations you may experience with your fuel gage. None of these indicate a problem with the fuel gage.

- At the gas station, the fuel pump shuts off before the gage reads full.
- It takes a little more or less fuel to fill up than the fuel gage indicated. For example, the gage may have indicated the tank was half full, but it actually took a little more or less than half the tank's capacity to fill the tank.
- The gage goes back to empty when you turn off the ignition.

Driver Information Center (DIC)

Your vehicle has a Driver Information Center (DIC).

The DIC displays information about your vehicle. It also displays warning messages if a system problem is detected.

All messages will appear in the DIC display located at the top of the instrument panel cluster.

The DIC comes on when the ignition is on. After a short delay, the DIC will display the information that was last displayed before the engine was turned off.

The DIC also displays a shift lever position indicator on the bottom line of the display. See *Automatic Transmission Operation on page 2-30* for more information.

The outside air temperature also displays on the DIC when viewing the trip and fuel information. The outside air temperature automatically appears in the top right corner of the DIC display. If there is a problem with the system that controls the temperature display, the numbers will be replaced with dashes. If this occurs, have the vehicle serviced.

See *DIC Operation and Displays on page 3-50* and *DIC Vehicle Customization on page 3-65* for the displays available.

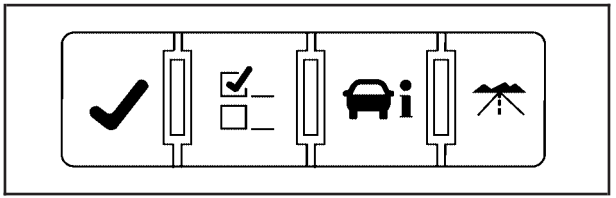
DIC Operation and Displays

The DIC has different displays which can be accessed by pressing the DIC buttons located on the instrument panel. See *Instrument Panel Overview on page 3-4* for more information.

The DIC displays trip, fuel, and vehicle system information, and warning messages if a system problem is detected.

The DIC also allows some features to be customized. See *DIC Vehicle Customization on page 3-65* for more information.

DIC Buttons



The buttons are the set/reset, customization, vehicle information, and trip/fuel buttons. The button functions are detailed in the following pages.

✓ **(Set/Reset):** Press this button to set or reset certain functions and to turn off or acknowledge messages on the DIC.

(Customization): Press this button to customize the feature settings on your vehicle. See *DIC Vehicle Customization on page 3-65* for more information.

(Vehicle Information): Press this button to display the oil life, park assist on vehicles with this feature, units, tire pressure readings, and Remote Keyless Entry (RKE) transmitter programming.

(Trip/Fuel): Press this button to display the odometer, trip odometers, fuel range, average economy, timer, fuel used, and average speed.

Vehicle Information Menu Items

(Vehicle Information): Press this button to scroll through the following menu items:

OIL LIFE

Press the vehicle information button until OIL LIFE REMAINING displays. This display shows an estimate of the oil's remaining useful life. If you see 99% OIL LIFE REMAINING on the display, that means 99% of the current oil life remains. The engine oil life system will alert you to change the oil on a schedule consistent with your driving conditions.

When the remaining oil life is low, the CHANGE ENGINE OIL SOON message will appear on the display. See "CHANGE ENGINE OIL SOON" under *DIC Warnings and Messages on page 3-56*. You should change the oil as soon as you can. See *Engine Oil on page 5-13*. In addition to the engine oil life system monitoring the oil life, additional maintenance is recommended in the Maintenance Schedule in this manual. See *Scheduled Maintenance on page 6-4* for more information.

Remember, you must reset the OIL LIFE display yourself 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, see *Engine Oil Life System on page 5-16*.

PARK ASSIST

If your vehicle has the Ultrasonic Rear Parking Assist (URPA) system, press the vehicle information button until PARK ASSIST displays. This display allows the system to be turned on or off. Once in this display, press the set/reset button to select between ON or OFF. If you choose ON, the system will be turned on. If you choose OFF, the system will be turned off. The URPA system automatically turns back on after each vehicle start. When the URPA system is turned off and the vehicle is shifted out of PARK (P), the DIC will display the PARK ASSIST OFF message as a reminder that the system has been turned off. See *DIC Warnings and Messages on page 3-56* and *Ultrasonic Rear Parking Assist (URPA) on page 2-44* for more information.

UNITS

Press the vehicle information button until UNITS displays. This display allows you to select between English or Metric units of measurement. Once in this display, press the set/reset button to select between ENGLISH or METRIC units. All of the vehicle information will then be displayed in the unit of measurement selected.

FRONT TIRES or REAR TIRES

The pressure for each tire can be viewed in the DIC. The tire pressure will be shown in either pounds per square inch (psi) or kilopascals (kPa). Press the vehicle information button until the DIC displays FRONT TIRES PSI (kPa) LEFT ## RIGHT ##. Press the vehicle information button again until the DIC displays REAR TIRES PSI (kPa) LEFT ## RIGHT ##.

If a low or high tire pressure condition is detected by the system while driving, a message advising you to check the pressure in a specific tire will appear in the display. See *Inflation - Tire Pressure on page 5-56* and *DIC Warnings and Messages on page 3-56* for more information.

If the tire pressure display shows dashes instead of a value, there may be a problem with your vehicle. If this consistently occurs, see your dealer/retailer for service.

RELEARN REMOTE KEY

This display allows you to match Remote Keyless Entry (RKE) transmitters to your vehicle. To match an RKE transmitter to your vehicle:

1. Press the vehicle information button until PRESS ✓ TO RELEARN REMOTE KEY displays.
2. Press the set/reset button until REMOTE KEY LEARNING ACTIVE is displayed.
3. Press and hold the lock and unlock buttons on the first transmitter at the same time for about 15 seconds.

   On vehicles with memory recall seats, the first transmitter learned will match driver 1 and the second will match driver 2.

   A chime will sound indicating that the transmitter is matched.
4. To match additional transmitters at this time, repeat Step 3.

   Each vehicle can have a maximum of eight transmitters matched to it.
5. To exit the programming mode, you must cycle the key to LOCK/OFF.

Blank Display

This display shows no information.

Trip/Fuel Menu Items

(Trip/Fuel): Press this button to scroll through the following menu items:

ODOMETER

Press the trip/fuel button until ODOMETER displays. This display shows the distance the vehicle has been driven in either miles (mi) or kilometers (km).

To switch between English and metric measurements, see “UNITS” later in this section.

TRIP A and TRIP B

Press the trip/fuel button until TRIP A or TRIP B displays. This display shows the current distance traveled in either miles (mi) or kilometers (km) since the last reset for each trip odometer. Both trip odometers can be used at the same time.

Each trip odometer can be reset to zero separately by pressing the set/reset button while the desired trip odometer is displayed.

The trip odometer has a feature called the retro-active reset. This can be used to set the trip odometer to the number of miles (kilometers) driven since the ignition was last turned on. This can be used if the trip odometer is not reset at the beginning of the trip.

To use the retro-active reset feature, press and hold the set/reset button for at least four seconds. The trip odometer will display the number of miles (mi) or kilometers (km) driven since the ignition was last turned on and the vehicle was moving. Once the vehicle begins moving, the trip odometer will accumulate mileage. For example, if the vehicle was driven 5 miles (8 km) before it is started again, and then the retro-active reset feature is activated, the display will show 5 miles (8 km). As the vehicle begins moving, the display will then increase to 5.1 miles (8.2 km), 5.2 miles (8.4 km), etc.

If the retro-active reset feature is activated after the vehicle is started, but before it begins moving, the display will show the number of miles (mi) or kilometers (km) that were driven during the last ignition cycle.

RANGE

Press the trip/fuel button until RANGE displays. This display shows the approximate number of remaining miles (mi) or kilometers (km) the vehicle can be driven without refueling. The display will show LOW if the fuel level is low.

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. This estimate will change if driving conditions change. For example, if driving in traffic and making frequent stops, this display may read one number, but if the vehicle is driven on a freeway, the number may change even though the same amount of fuel is in the fuel tank. This is because different driving conditions produce different fuel economies. Generally, freeway driving produces better fuel economy than city driving. Fuel range cannot be reset.

AVG (Average) ECONOMY

Press the trip/fuel button until AVG ECONOMY displays. This display shows the approximate average miles per gallon (mpg) or liters per 100 kilometers (L/100 km). This number is calculated based on the number of mpg (L/100 km) recorded since the last time this menu item was reset. To reset AVG ECONOMY, press and hold the set/reset button.

TIMER

Press the trip/fuel button until TIMER displays. This display can be used as a timer.

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

To stop the timer, press the set/reset button briefly while TIMER is displayed.

To reset the timer to zero, press and hold the set/reset button while TIMER is displayed.

FUEL USED

Press the trip/fuel button until FUEL USED displays. This display shows the number of gallons (gal) or liters (L) of fuel used since the last reset of this menu item. To reset the fuel used information, press and hold the set/reset button while FUEL USED is displayed.

AVG (Average) SPEED

Press the trip/fuel button until AVG SPEED displays. This display shows the average speed of the vehicle in miles per hour (mph) or kilometers per hour (km/h). This average is calculated based on the various vehicle speeds recorded since the last reset of this value. To reset the value to zero, press and hold the set/reset button.

Blank Display

This display shows no information.

DIC Warnings and Messages

Messages are displayed on the DIC to notify the driver that the status of the vehicle has changed and that some action may be needed by the driver to correct the condition. Multiple messages may appear one after another.

Some messages may not require immediate action, but you can press any of the DIC buttons on the instrument panel to acknowledge that you received the messages and to clear them from the display.

Some messages cannot be cleared from the DIC display because they are more urgent. These messages require action before they can be cleared. You should take any messages that appear on the display seriously and remember that clearing the messages will only make the messages disappear, not correct the problem.

The following are the possible messages that can be displayed and some information about them.

ALL WHEEL DRIVE OFF

If your vehicle has the All-Wheel Drive (AWD) system, this message displays when there is a compact spare tire on the vehicle, when the Antilock Brake System (ABS) warning light comes on, or when the rear differential fluid is overheating. This message turns off when the differential fluid cools.

The AWD system is disabled until the compact spare tire is replaced by a full-size tire. If the warning message is still on after putting on the full-size tire, you need to reset the warning message. To reset the warning message, turn the ignition off and then back on again after 30 seconds. If the message stays on, see your dealer/retailer right away. See *All-Wheel Drive (AWD) System on page 4-7* for more information.

AUTOMATIC LIGHT CONTROL OFF

This message displays when the automatic headlamps are turned off. This message clears itself after 10 seconds.

AUTOMATIC LIGHT CONTROL ON

This message displays when the automatic headlamps are turned on. This message clears itself after 10 seconds.

BATTERY SAVER ACTIVE

This message displays when the system detects that the battery voltage is dropping below expected levels. The battery saver system starts reducing certain features of the vehicle that you may be able to notice. At the point that the features are disabled, this message is displayed. It means that the vehicle is trying to save the charge in the battery.

Turn off all unnecessary accessories to allow the battery to recharge.

The normal battery voltage range is 11.5 to 15.5 volts.

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 CHANGE ENGINE OIL SOON message. See *Engine Oil Life System on page 5-16* for information on how to reset the message. See *Engine Oil on page 5-13* and *Scheduled Maintenance on page 6-4* for more information.

CHECK TIRE PRESSURE

This message displays when the pressure in one or more of the vehicle's tires needs to be checked. This message also displays LEFT FRONT, RIGHT FRONT, LEFT REAR, or RIGHT REAR to indicate which tire needs to be checked. You can receive more than one tire pressure message at a time. To read the other messages that may have been sent at the same time, press the set/reset button. If a tire pressure message appears on the DIC, stop as soon as you can. Have the tire pressures checked and set to those shown on the Tire Loading Information label. See *Tires on page 5-49*, *Loading Your Vehicle on page 4-20*, and *Inflation - Tire Pressure on page 5-56*. The DIC also shows the tire pressure values. See *DIC Operation and Displays on page 3-50*. If the tire pressure is low, the low tire pressure warning light comes on. See *Tire Pressure Light on page 3-44*.

CRUISE SET TO XXX

This message displays whenever the cruise control is set. See *Cruise Control on page 3-12* for more information.

DRIVER DOOR OPEN

This message displays and a chime sounds if the driver door is not fully closed and the vehicle is in a drive gear. Stop and turn off the vehicle, check the door for obstructions, and close the door again. Check to see if the message still appears on the DIC.

ENGINE HOT A/C (Air Conditioning) OFF

This message displays when the engine coolant becomes hotter than the normal operating temperature. See *Engine Coolant Temperature Gage on page 3-43*. 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 your vehicle.

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

ENGINE OVERHEATED IDLE ENGINE

Notice: **If you drive your vehicle while the engine is overheating, severe engine damage may occur. If an overheat warning appears on the instrument panel cluster and/or DIC, stop the vehicle as soon as possible. Do not increase the engine speed above normal idling speed. See *Engine Overheating on page 5-23* for more information.**

This message displays when the engine coolant temperature is too hot. Stop and allow the vehicle to idle until it cools down. See *Engine Coolant Temperature Gage on page 3-43*.

See *Overheated Engine Protection Operating Mode on page 5-25* for information on driving to a safe place in an emergency.

ENGINE OVERHEATED STOP ENGINE

Notice: **If you drive your vehicle while the engine is overheating, severe engine damage may occur. If an overheat warning appears on the instrument panel cluster and/or DIC, stop the vehicle as soon as possible. See *Engine Overheating on page 5-23* for more information.**

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 POWER IS REDUCED

This message displays and a chime sounds when the cooling system temperature gets too hot and the engine further enters the engine coolant protection mode. See *Engine Overheating on page 5-23* for further information.

This message also 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 acceleration and speed may be reduced. Anytime this message stays on, the vehicle should be taken to your dealer/retailer for service as soon as possible.

FUEL LEVEL LOW

This message displays and a chime sounds if the fuel level is low. Refuel as soon as possible. See *Fuel Gage on page 3-49* and *Fuel on page 5-5* for more information.

HEATED WASH (Washer) FLUID SYSTEM OFF

If your vehicle has this feature, this message displays when you manually turn off the heated windshield washer fluid system or when the system automatically turns off. See "Heated Windshield Washer" under *Windshield Washer on page 3-10* for more information. This message clears itself after 10 seconds.

HEATING WASH (Washer) FLUID WASH (Washer) WIPES PENDING

If your vehicle has this feature, this message displays when you turn on the heated windshield washer fluid system. See "Heated Windshield Washer" under *Windshield Washer on page 3-10* for more information.

HOOD OPEN

This message displays and a chime sounds if the hood is not fully closed. Stop and turn off the vehicle, check the hood for obstructions, and close the hood again. Check to see if the message still appears on the DIC.

ICE POSSIBLE DRIVE WITH CARE

This message displays when the outside air temperature is cold enough to create icy road conditions. Adjust your driving accordingly.

LEFT REAR DOOR OPEN

This message displays and a chime sounds if the driver side rear door is not fully closed and the vehicle is in a drive gear. Stop and turn off the vehicle, check the door for obstructions, and close the door again. Check to see if the message still appears on the DIC.

LIFTGATE OPEN

This message displays and a chime sounds if the liftgate is open while the ignition is in ON/RUN. Turn off the vehicle and check the liftgate. Restart the vehicle and check for the message on the DIC display.

OIL PRESSURE LOW STOP ENGINE

Notice: **If you drive your vehicle while the engine oil pressure is low, severe engine damage may occur. If a low oil pressure warning appears on the Driver Information Center (DIC), stop the vehicle as soon as possible. Do not drive the vehicle until the cause of the low oil pressure is corrected. See *Engine Oil on page 5-13* for more information.**

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 your vehicle serviced by your dealer/retailer. See *Engine Oil on page 5-13*.

PARK ASSIST OFF

If your vehicle has the Ultrasonic Rear Parking Assist (URPA) system, after the vehicle has been started and shifted out of PARK (P), this message displays to remind the driver that the URPA system has been turned off. Press the set/reset button to acknowledge this message and clear it from the DIC display. To turn the URPA system back on, see *Ultrasonic Rear Parking Assist (URPA) on page 2-44*.

PASSENGER DOOR OPEN

This message displays and a chime sounds if the passenger door is not fully closed and the vehicle is in a drive gear. Stop and turn off the vehicle, check the door for obstructions, and close the door again. Check to see if the message still appears on the DIC.

REMOTE KEY LEARNING ACTIVE

This message displays while you are matching a Remote Keyless Entry (RKE) transmitter to your vehicle. See “Matching Transmitter(s) to Your Vehicle” under *Remote Keyless Entry (RKE) System Operation on page 2-5* and *DIC Operation and Displays on page 3-50* for more information.

REPLACE BATTERY IN REMOTE KEY

This message displays if a Remote Keyless Entry (RKE) transmitter battery is low. The battery needs to be replaced in the transmitter. See “Battery Replacement” under *Remote Keyless Entry (RKE) System Operation on page 2-5*.

RIGHT REAR DOOR OPEN

This message displays and a chime sounds if the passenger side rear door is not fully closed and the vehicle is in a drive gear. Stop and turn off the vehicle, check the door for obstructions, and close the door again. Check to see if the message still appears on the DIC.

SERVICE A/C (Air Conditioning) SYSTEM

This message displays when the electronic sensors that control the air conditioning and heating systems are no longer working. Have the climate control system serviced by your dealer/retailer if you notice a drop in heating and air conditioning efficiency.

SERVICE AIR BAG

This message displays if there is a problem with the airbag system. Have your dealer/retailer inspect the system for problems. See *Airbag Readiness Light on page 3-36* and *Airbag System on page 1-59* for more information.

SERVICE ALL WHEEL DRIVE

If your vehicle has the All-Wheel Drive (AWD) system, this message displays if there is a problem with this system. If this message appears, stop as soon as possible and turn off the vehicle. Restart the vehicle after 30 seconds and check for the message on the DIC display. If the message is still displayed or appears again when you begin driving, the AWD system needs service. See your dealer/retailer.

SERVICE BATTERY CHARGING SYSTEM

On some vehicles, this message displays if there is a problem with the battery charging system. Under certain conditions, the charging system light may also turn on in the instrument panel cluster. See *Charging System Light on page 3-39*. Driving with this problem could drain the battery. Turn off all unnecessary accessories. Have the electrical system checked as soon as possible. See your dealer/retailer.

SERVICE BRAKE SYSTEM

This message displays along with the brake system warning light if there is a problem with the brake system. See *Brake System Warning Light on page 3-41*. If this message appears, stop as soon as possible and turn off the vehicle. Restart the vehicle and check for the message on the DIC display. If the message is still displayed or appears again when you begin driving, the brake system needs service as soon as possible. See your dealer/retailer.

SERVICE PARK ASSIST

If your vehicle has the Ultrasonic Rear Parking Assist (URPA) system, this message displays if there is a problem with the URPA system. Do not use this system to help you park. See *Ultrasonic Rear Parking Assist (URPA) on page 2-44* for more information. See your dealer/retailer for service.

SERVICE POWER STEERING

This message displays when a problem is detected with the power steering system. When this message is displayed, you may notice that the effort required to steer the vehicle increases or feels heavier, but you will still be able to steer the vehicle. Have your vehicle serviced by your dealer/retailer immediately.

SERVICE STABILITRAK

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 dealer/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.

SERVICE THEFT DETERRENT SYSTEM

This message displays when there is a problem with the theft-deterrent system. The vehicle may or may not restart so you may want to take the vehicle to your dealer/retailer before turning off the engine. See *PASS-Key® III+ Electronic Immobilizer Operation on page 2-24* for more information.

SERVICE TIRE MONITOR SYSTEM

This message displays if a part on the Tire Pressure Monitor System (TPMS) is not working properly. The tire pressure light also flashes and then remains on during the same ignition cycle. See *Tire Pressure Light on page 3-44*. Several conditions may cause this message to appear. See *Tire Pressure Monitor Operation on page 5-59* for more information. If the warning comes on and stays on, there may be a problem with the TPMS. See your dealer/retailer.

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 dealer/retailer for service. See *StabiliTrak® System on page 4-5* for more information.

SERVICE TRANSMISSION

This message displays when there is a problem with the transmission. See your dealer/retailer for service.

SERVICE VEHICLE SOON

This message displays when a non-emissions related malfunction occurs. Have the vehicle serviced by your dealer/retailer as soon as possible.

SPEED LIMITED TO XXX MPH (KM/H)

This message displays when your vehicle speed is limited to 80 mph (128 km/h) because the vehicle detects a problem in the speed variable assist steering system. Have your vehicle serviced by your dealer/retailer.

STARTING DISABLED SERVICE THROTTLE

This message displays when your vehicle's throttle system is not functioning properly. Have your vehicle serviced by your dealer/retailer.

THEFT ATTEMPTED

This message displays if the content theft-deterrent system has detected a break-in attempt while you were away from your vehicle. See *Content Theft-Deterrent on page 2-22* for more information.

TIGHTEN GAS CAP

This message may display along with the check engine light on the instrument panel cluster if the vehicle's fuel cap is not tightened properly. See *Malfunction Indicator Lamp on page 3-45*. Reinstall the fuel cap fully. See *Filling the Tank on page 5-8*. The diagnostic system can determine if the fuel cap has been left off or improperly installed. A loose or missing fuel cap allows fuel to evaporate into the atmosphere. A few driving trips with the cap properly installed should turn this light and message off.

TIRE LEARNING ACTIVE

This message displays when the Tire Pressure Monitor System (TPMS) is re-learning the tire positions on your vehicle. The tire positions must be re-learned after rotating the tires or after replacing a tire or sensor. See *Tire Inspection and Rotation on page 5-62*, *Tire Pressure Monitor System on page 5-57*, and *Inflation - Tire Pressure on page 5-56* for more information.

TRACTION CONTROL OFF

This message displays when the Traction Control System (TCS) is turned off. Adjust your driving accordingly. See *StabiliTrak® System on page 4-5* for more information. This message clears itself after 10 seconds.

TRANSMISSION HOT IDLE ENGINE

Notice: **If you drive your vehicle while the transmission fluid is overheating and the transmission temperature warning is displayed on the instrument panel cluster and/or DIC, you can damage the transmission. This could lead to costly repairs that would not be covered by your warranty. Do not drive your vehicle with overheated transmission fluid or while the transmission temperature warning is displayed.**

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.

TURN SIGNAL ON

This message displays and a chime sounds if a turn signal is left on for 3/4 of a mile (1.2 km). Move the turn signal/multifunction lever to the off position.

WASHER FLUID LOW ADD FLUID

This message displays when the windshield washer fluid is low. Fill the windshield washer fluid reservoir as soon as possible. See *Engine Compartment Overview on page 5-12* for the location of the windshield washer fluid reservoir. Also, see *Windshield Washer Fluid on page 5-33* for more information.

DIC Vehicle Customization

Your vehicle may have customization capabilities that allow you to program certain features to one preferred setting. Customization features can only be programmed to one setting on the vehicle and cannot be programmed to a preferred setting for two different drivers.

All of the customization options may not be available on your vehicle. Only the options available will be displayed on the DIC.

The default settings for the customization features were set when your vehicle left the factory, but may have been changed from their default state since then.

The customization preferences are automatically recalled.

To change customization preferences, use the following procedure.

Entering the Feature Settings Menu

1. Turn the ignition on and place the vehicle in PARK (P).

   To avoid excessive drain on the battery, it is recommended that the headlamps are turned off.

2. Press the customization button to enter the feature settings menu. If the menu is not available, FEATURE SETTINGS AVAILABLE IN PARK will display. Before entering the menu, make sure the vehicle is in PARK (P).

Feature Settings Menu Items

The following are customization features that allow you to program settings to the vehicle:

DISPLAY IN ENGLISH

This feature will only display if a language other than English has been set. This feature allows you to change the language in which the DIC messages appear to English.

Press the customization button until the PRESS ✓ TO DISPLAY IN ENGLISH screen appears on the DIC display. Press the set/reset button once to display all DIC messages in English.

DISPLAY LANGUAGE

This feature allows you to select the language in which the DIC messages will appear.

Press the customization button until the DISPLAY LANGUAGE screen appears on the DIC display. Press the set/reset button once to access the settings for this feature. Then press the customization button to scroll through the following settings:

ENGLISH (default): All messages will appear in English.

FRANCAIS: All messages will appear in French.

ESPANOL: All messages will appear in Spanish.

NO CHANGE: No change will be made to this feature. The current setting will remain.

To select a setting, press the set/reset button while the desired setting is displayed on the DIC.

AUTO DOOR LOCK

This feature allows you to select when the vehicle's doors will automatically lock. See *Programmable Automatic Door Locks on page 2-11* for more information.

Press the customization button until AUTO DOOR LOCK appears on the DIC display. Press the set/reset button once to access the settings for this feature. Then press the customization button to scroll through the following settings:

SHIFT OUT OF PARK (default): The doors will automatically lock when the vehicle is shifted out of PARK (P).

AT VEHICLE SPEED: The doors will automatically lock when the vehicle speed is above 8 mph (13 km/h) for three seconds.

NO CHANGE: No change will be made to this feature. The current setting will remain.

To select a setting, press the set/reset button while the desired setting is displayed on the DIC.

AUTO DOOR UNLOCK

This feature allows you to select whether or not to turn off the automatic door unlocking feature. It also allows you to select which doors and when the doors will automatically unlock. See *Programmable Automatic Door Locks on page 2-11* for more information.

Press the customization button until AUTO DOOR UNLOCK appears on the DIC display. Press the set/reset button once to access the settings for this feature. Then press the customization button to scroll through the following settings:

OFF: None of the doors will automatically unlock.

DRIVER AT KEY OUT: Only the driver's door will unlock when the key is taken out of the ignition.

DRIVER IN PARK: Only the driver's door will unlock when the vehicle is shifted into PARK (P).

ALL AT KEY OUT: All of the doors will unlock when the key is taken out of the ignition.

ALL IN PARK (default): All of the doors will unlock when the vehicle is shifted into PARK (P).

NO CHANGE: No change will be made to this feature. The current setting will remain.

To select a setting, press the set/reset button while the desired setting is displayed on the DIC.

REMOTE DOOR LOCK

This feature allows you to select the type of feedback you will receive when locking the vehicle with the Remote Keyless Entry (RKE) transmitter. You will not receive feedback when locking the vehicle with the RKE transmitter if the doors are open. See *Remote Keyless Entry (RKE) System Operation on page 2-5* for more information.

Press the customization button until REMOTE DOOR LOCK appears on the DIC display. Press the set/reset button once to access the settings for this feature. Then press the customization button to scroll through the following settings:

OFF: There will be no feedback when you press the lock button on the RKE transmitter.

LIGHTS ONLY: The exterior lamps will flash when you press the lock button on the RKE transmitter.

HORN ONLY: The horn will sound on the second press of the lock button on the RKE transmitter.

HORN & LIGHTS (default): The exterior lamps will flash when you press the lock button on the RKE transmitter, and the horn will sound when the lock button is pressed again within five seconds of the previous command.

NO CHANGE: No change will be made to this feature. The current setting will remain.

To select a setting, press the set/reset button while the desired setting is displayed on the DIC.

REMOTE DOOR UNLOCK

This feature allows you to select the type of feedback you will receive when unlocking the vehicle with the Remote Keyless Entry (RKE) transmitter. You will not receive feedback when unlocking the vehicle with the RKE transmitter if the doors are open. See *Remote Keyless Entry (RKE) System Operation on page 2-5* for more information.

Press the customization button until REMOTE DOOR UNLOCK appears on the DIC display. Press the set/reset button once to access the settings for this feature. Then press the customization button to scroll through the following settings:

LIGHTS OFF: The exterior lamps will not flash when you press the unlock button on the RKE transmitter.

LIGHTS ON (default): The exterior lamps will flash when you press the unlock button on the RKE transmitter.

NO CHANGE: No change will be made to this feature. The current setting will remain.

To select a setting, press the set/reset button while the desired setting is displayed on the DIC.

DELAY DOOR LOCK

This feature allows you to select whether or not the locking of the vehicle's doors and liftgate will be delayed. When locking the doors and liftgate with the power door lock switch and a door or the liftgate is open, this feature will delay locking the doors and liftgate until five seconds after the last door is closed. You will hear three chimes to signal that the delayed locking feature is in use. The key must be out of the ignition for this feature to work. You can temporarily override delayed locking by pressing the power door lock switch twice or the lock button on the RKE transmitter twice. See *Delayed Locking on page 2-11* for more information.

Press the customization button until DELAY DOOR LOCK appears on the DIC display. Press the set/reset button once to access the settings for this feature. Then press the customization button to scroll through the following settings:

OFF: There will be no delayed locking of the vehicle's doors.

ON (default): The doors will not lock until five seconds after the last door or the liftgate is closed.

NO CHANGE: No change will be made to this feature. The current setting will remain.

To select a setting, press the set/reset button while the desired setting is displayed on the DIC.

EXIT LIGHTING

This feature allows you to select the amount of time you want the exterior lamps to remain on when it is dark enough outside. This happens after the key is turned from ON/RUN to LOCK/OFF.

Press the customization button until EXIT LIGHTING appears on the DIC display. Press the set/reset button once to access the settings for this feature. Then press the customization button to scroll through the following settings:

OFF: The exterior lamps will not turn on.

30 SECONDS (default): The exterior lamps will stay on for 30 seconds.

1 MINUTE: The exterior lamps will stay on for one minute.

2 MINUTES: The exterior lamps will stay on for two minutes.

NO CHANGE: No change will be made to this feature. The current setting will remain.

To select a setting, press the set/reset button while the desired setting is displayed on the DIC.

APPROACH LIGHTING

This feature allows you to select whether or not to have the exterior lights turn on briefly during low light periods after unlocking the vehicle using the Remote Keyless Entry (RKE) transmitter.

Press the customization button until APPROACH LIGHTING appears on the DIC display. Press the set/reset button once to access the settings for this feature. Then press the customization button to scroll through the following settings:

OFF: The exterior lights will not turn on when you unlock the vehicle with the RKE transmitter.

ON (default): If it is dark enough outside, the exterior lights will turn on briefly when you unlock the vehicle with the RKE transmitter.

The lights will remain on for 20 seconds or until the lock button on the RKE transmitter is pressed, or the vehicle is no longer off. See *Remote Keyless Entry (RKE) System Operation on page 2-5* for more information.

NO CHANGE: No change will be made to this feature. The current setting will remain.

To select a setting, press the set/reset button while the desired setting is displayed on the DIC.

CHIME VOLUME

This feature allows you to select the volume level of the chime.

Press the customization button until CHIME VOLUME appears on the DIC display. Press the set/reset button once to access the settings for this feature. Then press the customization button to scroll through the following settings:

NORMAL: The chime volume will be set to a normal level.

LOUD: The chime volume will be set to a loud level.

NO CHANGE: No change will be made to this feature. The current setting will remain.

There is no default for chime volume. The volume will stay at the last known setting.

To select a setting, press the set/reset button while the desired setting is displayed on the DIC.

PARK TILT MIRRORS

If your vehicle has this feature, it allows you to select whether or not the outside mirror(s) will automatically tilt down when the vehicle is shifted into REVERSE (R). See *Outside Power Foldaway Mirrors on page 2-42* for more information.

Press the customization button until PARK TILT MIRRORS appears on the DIC display. Press the set/reset button once to access the settings for this feature. Then press the customization button to scroll through the following settings:

OFF (default): Neither outside mirror will be tilted down when the vehicle is shifted into REVERSE (R).

DRIVER MIRROR: The driver's outside mirror will be tilted down when the vehicle is shifted into REVERSE (R).

PASSENGER MIRROR: The passenger's outside mirror will be tilted down when the vehicle is shifted into REVERSE (R).

BOTH MIRRORS: The driver's and passenger's outside mirrors will be tilted down when the vehicle is shifted into REVERSE (R).

NO CHANGE: No change will be made to this feature. The current setting will remain.

To select a setting, press the set/reset button while the desired setting is displayed on the DIC.

EASY EXIT SEAT

If your vehicle has this feature, it allows you to select your preference for the automatic easy exit seat feature. See *Memory Seat and Mirrors on page 1-4* for more information.

Press the customization button until EASY EXIT SEAT appears on the DIC display. Press the set/reset button once to access the settings for this feature. Then press the customization button to scroll through the following settings:

OFF (default): No automatic seat exit recall will occur.

ON: The driver's seat will move back when the key is removed from the ignition. The steering column will also move up and forward on vehicles with the power tilt and telescopic steering feature. See *Power Tilt Wheel and Telescopic Steering Column on page 3-7* for more information.

The automatic easy exit seat movement will only occur one time after the key is removed from the ignition. If the automatic movement has already occurred, and you put the key back in the ignition and remove it again, the seat and steering column will stay in the original exit position, unless a memory recall took place prior to removing the key again.

NO CHANGE: No change will be made to this feature. The current setting will remain.

To select a setting, press the set/reset button while the desired setting is displayed on the DIC.

MEMORY SEAT RECALL

If your vehicle has this feature, it allows you to select your preference for the remote memory seat recall feature. See *Memory Seat and Mirrors on page 1-4* for more information.

Press the customization button until MEMORY SEAT RECALL appears on the DIC display. Press the set/reset button once to access the settings for this feature. Then press the customization button to scroll through the following settings:

OFF (default): No remote memory seat recall will occur.

ON: The driver's seat and outside mirrors will automatically move to the stored driving position when the unlock button on the Remote Keyless Entry (RKE) transmitter is pressed. The steering column will also move on vehicles with the power tilt and telescopic steering feature. See *Power Tilt Wheel and Telescopic Steering Column on page 3-7* for more information. See "Relearn Remote Key" under *DIC Operation and Displays on page 3-50* for more information on matching transmitters to driver ID numbers.

NO CHANGE: No change will be made to this feature. The current setting will remain.

To select a setting, press the set/reset button while the desired setting is displayed on the DIC.

REMOTE START

If your vehicle has this feature, it allows you to turn the remote start off or on. The remote start feature allows you to start the engine from outside of the vehicle using the Remote Keyless Entry (RKE) transmitter. See *Remote Vehicle Start on page 2-7* for more information.

Press the customization button until REMOTE START appears on the DIC display. Press the set/reset button once to access the settings for this feature. Then press the customization button to scroll through the following settings:

OFF: The remote start feature will be disabled.

ON (default): The remote start feature will be enabled.

NO CHANGE: No change will be made to this feature. The current setting will remain.

To select a setting, press the set/reset button while the desired setting is displayed on the DIC.

FACTORY SETTINGS

This feature allows you to set all of the customization features back to their factory default settings.

Press the customization button until FACTORY SETTINGS appears on the DIC display. Press the set/reset button once to access the settings for this feature. Then press the customization button to scroll through the following settings:

RESTORE ALL (default): The customization features will be set to their factory default settings.

DO NOT RESTORE: The customization features will not be set to their factory default settings.

To select a setting, press the set/reset button while the desired setting is displayed on the DIC.

EXIT FEATURE SETTINGS

This feature allows you to exit the feature settings menu.

Press the customization button until FEATURE SETTINGS PRESS ✓ TO EXIT appears in the DIC display. Press the set/reset button once to exit the menu.

If you do not exit, pressing the customization button again will return you to the beginning of the feature settings menu.

Exiting the Feature Settings Menu

The feature settings menu will be exited when any of the following occurs:

- The vehicle is shifted out of PARK (P).
- The vehicle is no longer in ON/RUN.
- The trip/fuel or vehicle information DIC buttons are pressed.
- The end of the feature settings menu is reached and exited.
- A 40 second time period has elapsed with no selection made.

Audio System(s)

Determine which radio your vehicle has and then read the pages following to familiarize yourself with its features.

⚠CAUTION:

This system provides you with far greater access to audio stations and song listings. Giving extended attention to entertainment tasks while driving can cause a crash and you or others can be injured or killed. Always keep your eyes on the road and your mind on the drive — avoid engaging in extended searching while driving.

Keeping your mind on the drive is important for safe driving. See *Defensive Driving on page 4-2*. Here are some ways in which you can help avoid distraction while driving.

While your vehicle is parked:

- Familiarize yourself with all of its controls.
- Familiarize yourself with its operation.
- Set up your audio system by presetting your favorite radio stations, setting the tone, and adjusting the speakers. Then, when driving conditions permit, you can tune to your favorite radio stations using the presets and steering wheel controls if the vehicle has them.

Notice: **Before adding any sound equipment to your vehicle, such as an audio system, CD player, CB radio, mobile telephone, or two-way radio, make sure that it can be added by checking with your dealer/retailer. Also, check federal rules covering mobile radio and telephone units. If sound equipment can be added, it is very important to do it properly. Added sound equipment may interfere with the operation of your vehicle's engine, radio, or other systems, and even damage them. Your vehicle's systems may interfere with the operation of sound equipment that has been added.**

Your vehicle has a feature called Retained Accessory Power (RAP). With RAP, the audio system can be played even after the ignition is turned off. See *Retained Accessory Power (RAP) on page 2-27* for more information.

Setting the Clock

The vehicle has an analog clock and a digital radio clock. To use the digital radio clock and the analog clock, change the setting to enable or disable the radio clock display.

Enabling/Disabling the Digital Radio Clock

For Radios with a Single CD or a Single CD and DVD Player

Turn the radio clock display on or off by following these steps:

1. Press the 🕘 (clock) button until the clock and date setting menus appear.
2. Press the pushbutton located under the forward arrow label until the menu for default clock and date settings appear.
3. Press the pushbutton located under the currently displayed status of either ON or OFF. The ON display indicates the radio clock display is disabled and the OFF display indicates the radio clock display is enabled. Press this pushbutton to toggle the radio clock display on or off.

   If the radio clock display is turned on, the screen displays Radio Clock ON for 10 seconds, then returns to the original clock display menu.

   If the radio clock display is turned off, the screen displays Radio Clock OFF for 10 seconds. The menus for clock and date settings are removed, and ON displays as a current status indicating that the clock display can be turned on, if desired.

The radio clock and analog clock are not synchronized. Use the procedure below to synchronize both clocks.

For a Radio with a Six-Disc CD Player

Turn the radio clock display on or off by following these steps:

1. Press the MENU button until the (clock) label display appears.
2. Press the pushbutton located under the label until the clock and date settings appear.
3. Press the pushbutton located under the forward arrow label until the menu for default clock and date settings appear.
4. Press the pushbutton located under the currently displayed status of either ON or OFF. The ON display indicates the radio clock display is disabled and the OFF display indicates the radio clock display is enabled. Press this pushbutton to toggle the radio clock display on or off.

   If the radio clock display is turned on, the screen displays Radio Clock ON for 10 seconds, then returns to the original clock display menu.

   If the radio clock display is turned off, the screen displays Radio Clock OFF for 10 seconds. The menus for clock and date settings are removed, and ON displays as a current status indicating that the clock display can be turned on, if desired.

Setting the Time and Date

For Radios with a Single CD or a Single CD and DVD Player

This type of radio has a (clock) button for setting the time and date. To set the time and date, do the following:

1. Press the button and HR, MIN, MM, DD, YYYY (hour, minute, month, day, and year) displays.
2. Press the pushbutton located under any one of the labels to change it. Every time the pushbutton is pressed again, the time or the date if selected, increases by one.
   - Another way to increase the time or date, is to press the SEEK arrow or the FWD (forward) button.
   - To decrease the time or date, press the SEEK arrow or the REV (reverse) button. The (tune) knob, located on the upper right side of the radio faceplate, can also be used to adjust the selected setting.

For a Radio with a Six-Disc CD Player

This type of radio has a MENU button for setting the time and date. To set the time and date, do the following:

1. Press the MENU button until the (clock) label option is displayed.
2. Press the pushbutton located under the label and the HR, MIN, MM, DD, YYYY (hour, minute, month, day, and year) displays.
3. Press the pushbutton located under any one of the labels to change it. Every time the pushbutton is pressed again, the time or the date if selected, increases by one.
   - Another way to increase the time or date, is to press the SEEK arrow or the FWD (forward) button.
   - To decrease the time or date, press the SEEK arrow or the REV (reverse) button. The (tune) knob, located on the upper right side of the radio faceplate, can also be used to adjust the selected setting.

Changing the Time and Date Default Setting

For Radios with a Single CD or a Single CD and DVD Player

To change the time and date default setting, do the following:

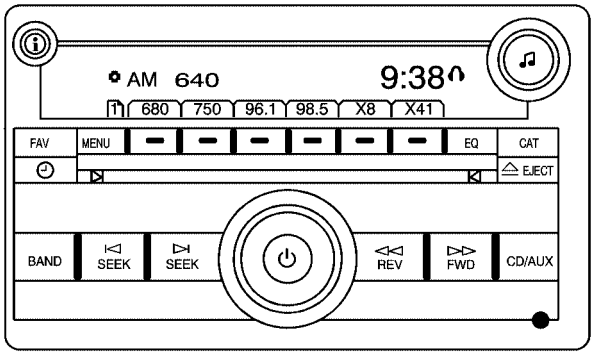
1. Change the time default setting from 12 hour to 24 hour or the date default setting from month/day/year to day/month/year, by pressing the (clock) button.
2. Once the clock and date settings display along with the forward arrow, press the pushbutton located under the forward arrow until the time 12H and 24H, and the date MM/DD/YYYY (month, day, and year) and DD/MM/YYYY (day, month, and year) displays.
3. Press the pushbutton located under the desired option, then press the button again to apply the selected default, or let the screen time out.

For a Radio with a Six-Disc CD Player

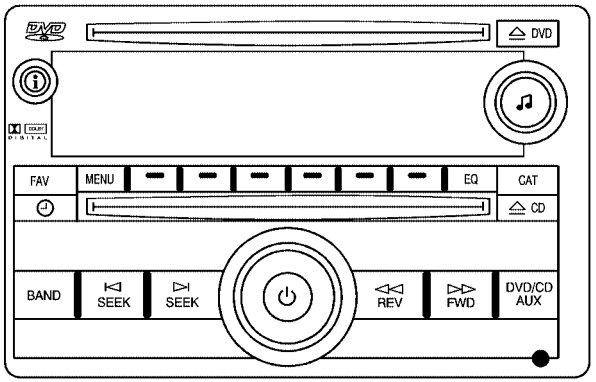
To change the time and date default setting, do the following:

1. Change the time default setting from 12 hour to 24 hour or the date default setting from month/day/year to day/month/year, by pressing the MENU button.
2. Once the (clock) label displays, press the pushbutton located under that label until the time and date settings display along with a forward arrow.
3. Press the pushbutton located under the forward arrow until the time 12H and 24H, and the date MM/DD/YYYY (month, day, and year) and DD/MM/YYYY (day, month, and year) displays.
4. Press the pushbutton located under the desired option, then press the MENU button again to apply the selected default, or let the screen time out.

Radio(s) (MP3)



Radio with CD shown, Radio with Six-Disc CD similar



Radio with CD and DVD

The vehicle has one of these radios as its audio system.

Radios with CD and DVD

Radios with CD and DVD have a Bose® Surround Sound System. Some of its features are explained later in this section under, “Adjusting the Speakers (Balance/Fade)”.

If the vehicle has a Rear Seat Entertainment (RSE) system, it has a CD/DVD radio. See *Rear Seat Entertainment (RSE) System on page 3-107* for more information on the vehicle’s RSE system.

The DVD player is the top slot on the radio faceplate. The player is capable of reading the DTS programmed DVD Audio or DVD Video media, (DTS and DTS Digital Surround are registered trademarks of Digital Theater Systems, Inc.).

Manufactured under license from Dolby Laboratories. Dolby and the double-D symbol are trademarks of Dolby Laboratories.

Radio Data System (RDS)

The Radio Data System (RDS) feature is available for use only on FM stations that broadcast RDS information. This system relies upon receiving specific information from these stations and only works when the information is available. While the radio is tuned to an FM-RDS station, the station name or call letters display. In rare cases, a radio station could broadcast incorrect information that causes the radio features to work improperly. If this happens, contact the radio station.

Playing the Radio

⏻ **(Power/Volume):** Press to turn the system on and off.

Turn clockwise or counterclockwise to increase or decrease the volume.

Speed Compensated Volume (SCV): The Speed Compensated Volume (SCV) feature automatically adjusts the radio volume to compensate for road and wind noise as the vehicle speeds up or slows down. That way, the volume level should sound about the same.

To activate SCV:

1. Set the radio volume to the desired level.
2. Press the MENU button to display the radio setup menu.
3. Press the pushbutton under the AUTO VOLUM (automatic volume) label on the radio display.
4. Press the pushbutton under the desired Speed Compensated Volume setting (OFF, Low, Med, or High) to select the level of radio volume compensation. Press the pushbutton located below the BACK label on the MENU SETUP display or let the display time out after approximately 10 seconds. Each higher setting allows for more radio volume compensation at faster vehicle speeds.

Finding a Station

BAND: Press to switch between AM, FM, or XM™ (if equipped). The selection displays.

♫ **(Tune):** Turn to select radio stations.

⏮ **SEEK** ⏭ **:** Press the arrows to go to the previous or to the next station and stay there.

To scan stations, press and hold either arrow for a few seconds until a beep sounds. The radio goes to a station, plays for a few seconds, then goes to the next station. Press either arrow again to stop scanning.

The radio only seeks and scans stations with a strong signal that are in the selected band.

i (Information) (XM™ Satellite Radio Service, MP3, and RDS Features): Press to display additional text information related to the current FM-RDS or XM™ station, or MP3 song. A choice of additional information such as: Channel, Song, Artist, and CAT (category) can display. Continue pressing to highlight the desired label, or press the pushbutton positioned under any one of the labels and the information about that label displays.

When information is not available, No Info displays.

Storing a Radio Station as a Favorite

Drivers are encouraged to set up their radio station favorites while the vehicle is in P (Park). Tune to favorite stations using the presets, favorites button, and steering wheel controls. See *Defensive Driving on page 4-2*.

FAV (Favorites): A maximum of 36 stations can be programmed as favorites using the six pushbuttons positioned below the radio station frequency labels and by using the radio favorites page button (FAV button). Press to go through up to six pages of favorites, each having six favorite stations available per page. Each page of favorites can contain any combination of AM, FM, or XM™ (if equipped) stations.

The balance/fade and tone settings that were previously adjusted, are stored with the favorite stations.

To store a station as a favorite, perform the following steps:

1. Tune to the desired radio station.
2. Press the FAV button to display the page where to store the station.
3. Press and hold one of the six pushbuttons until a beep sounds. When that pushbutton is pressed and released, the station that was set, returns.
4. Repeat the steps for each pushbutton radio station to be stored as a favorite.

The number of favorites pages can be setup using the MENU button. To setup the number of favorites pages, perform the following steps:

1. Press the MENU button to display the radio setup menu.
2. Press the pushbutton located below the FAV 1-6 label.
3. Select the desired number of favorites pages by pressing the pushbutton located below the displayed page numbers.
4. Press the FAV button, or let the menu time out, to return to the original main radio screen showing the radio station frequency labels and to begin the process of programming favorites for the chosen amount of numbered pages.

Setting the Tone (Bass/Midrange/Treble)

BASS/MID/TREB (Bass, Midrange, or Treble): To adjust bass, midrange, or treble, press the ♫ knob until the tone control labels display. Continue pressing to highlight the desired label, or press the pushbutton positioned under the desired label. Turn the ♫ knob clockwise or counterclockwise to adjust the highlighted setting, or press either SEEK arrow, ▷▷ FWD (forward), or ◁◁ REV (reverse) button until the desired levels are obtained. If a station's frequency is weak or if there is static, decrease the treble.

To quickly adjust bass, midrange, or treble to the middle position, press the pushbutton positioned under the BASS, MID, or TREB label for more than two seconds. A beep sounds and the level adjusts to the middle position.

To quickly adjust all tone and speaker controls to the middle position, press the ♫ knob for more than two seconds until a beep sounds.

EQ (Equalization): Press to choose bass and treble equalization settings designed for different types of music. The choices are pop, rock, country, talk, jazz, and classical. Selecting MANUAL or changing bass or treble, returns the EQ to the manual bass and treble settings.

Unique EQ settings can be saved for each source.

If the radio has a Bose® audio system, the EQ settings are either MANUAL or TALK.

Adjusting the Speakers (Balance/Fade)

BAL/FADE (Balance/Fade): To adjust balance or fade, press the♫ knob until the speaker control labels display. Continue pressing to highlight the desired label, or press the pushbutton positioned under the desired label. Turn the ♫ knob clockwise or counterclockwise to adjust the highlighted setting, or press either SEEK arrow, ▷▷ FWD, or ◁◁ REV button until the desired levels are obtained.

To quickly adjust balance or fade to the middle position, press the pushbutton positioned under the BAL or FADE label for more than two seconds. A beep sounds and the level adjusts to the middle position.

To quickly adjust all speaker and tone controls to the middle position, press the ♫ knob for more than two seconds until a beep sounds.

Radios with CD and DVD differ when using fade in 5.1 Surround. The left front and right front speakers fade rearward, leaving the center front speaker unaffected until the last fade step, then all front speakers mute.

If the Rear Seat Audio (RSA) is turned on, the radio disables FADE and mutes the rear speakers.

Finding a Category (CAT) Station

CAT (Category): The CAT button is used to find XM™ stations when the radio is in the XM™ mode. To find XM™ channels within a desired category, perform the following:

1. Press the BAND button until the XM™ frequency displays. Press the CAT button to display the category labels. Continue pressing the CAT button until the desired category name displays.
   - Radios with CD and DVD can also navigate the category list by pressing the ◁◁ REV button or the ▷▷ FWD button.
2. Press either of the two buttons below the desired category label to immediately tune to the first XM™ station associated with that category.
3. Turn the ♫ knob, press the buttons below the right or left arrows displayed, or press either SEEK arrow to go to the previous or to the next XM™ station within the selected category.
4. To exit the category search mode, press the FAV button or BAND button to display the favorites again.

Undesired XM™ categories can be removed through the setup menu. To remove an undesired category, perform the following:

1. Press the MENU button to display the radio setup menu.
2. Press the pushbutton located below the XM CAT label.
3. Turn the ♫ knob to display the category to be removed.
4. Press the pushbutton located under the Remove label until the category name along with the word Removed displays.
5. Repeat the steps to remove more categories.

Removed categories can be restored by pressing the pushbutton under the Add label when a removed category is displayed or by pressing the pushbutton under the Restore All label.

Categories cannot be removed or added while the vehicle is moving faster than 5 mph (8 km/h).

Radio Messages

Calibration Error: The audio system has been calibrated for the vehicle from the factory. If Calibration Error displays, it means that the radio has not been configured properly for the vehicle and it must be returned to your dealer/retailer for service.

Locked: This message displays when the THEFTLOCK® system has locked up the radio. Take the vehicle to your dealer/retailer for service.

If any error occurs repeatedly or if an error cannot be corrected, contact your dealer/retailer.

XM™ Satellite Radio Service

XM™ is a satellite radio service that is based in the 48 contiguous United States and 10 Canadian provinces. XM™ Satellite Radio has a wide variety of programming and commercial-free music, coast-to-coast, and in digital-quality sound. During your trial or when you subscribe, you will get unlimited access to XM™ Radio Online for when you are not in your vehicle. A service fee is required to receive the XM™ service. For more information, contact XM™ at www.xmradio.com or call 1-800-929-2100 in the U.S. and www.xmradio.ca or call 1-877-438-9677 in Canada.

Radio Messages for XM™ Only

See *XM Radio Messages on page 3-106* later in this section for further detail.

Playing a CD (Single CD Player)

Insert a CD partway into the slot, label side up. The player pulls it in and the CD should begin playing.

Playing a CD(s) (Six-Disc CD Player)

LOAD ⏏: Press to load CDs into the CD player. This CD player holds up to six CDs.

To insert one CD, do the following:

1. Press and release the ⏏ button.
2. Wait for the message to insert the disc.
3. Load a CD. Insert the CD partway into the slot, label side up. The player pulls the CD in.

To insert multiple CDs, do the following:

1. Press and hold the ⏏ button for two seconds. A beep sounds and Load All Discs displays.
2. Follow the displayed instruction on when to insert the discs. The CD player takes up to six CDs.
3. Press the ⏏ button again to cancel loading more CDs.

Insert a CD partway into the slot, label side up. The player pulls it in and the CD should begin playing. To insert a CD with the ignition off, first press the ⏏ button or the DISP knob.

If the ignition or radio is turned off with a CD in the player it stays in the player. When the ignition or radio is turned on, the CD starts to play where it stopped, if it was the last selected audio source.

When the CD is inserted, the CD symbol displays. As each new track starts to play, the track number displays.

Playing a CD (In Either the DVD or CD Slot)

Insert a CD partway into the slot, label side up. The player pulls it in and the CD should begin playing (loading a disc into the system, depending on media type and format ranges from 5 to 20 seconds for a CD, and up to 30 seconds for a DVD to begin playing).

If the ignition or radio is turned off, with a CD in the player, it stays in the player. When the ignition or radio is turned on, the CD starts playing where it stopped, if it was the last selected audio source. The CD is controlled by the buttons on the radio faceplate or by the RSA unit. See *Rear Seat Audio (RSA) on page 3-117* for more information. The DVD/CD decks, (upper slot is the DVD deck and the lower slot is the CD deck) of the radio are compatible with most audio CDs, CD-R, CD-RW, and MP3/WMAs.

When a CD is inserted, the text label DVD or CD symbol displays on the left side of the radio display. As each new track starts to play, the track number displays.

Care of CDs and DVDs

If playing a CD-R, the sound quality can be reduced due to CD-R or CD-RW quality, the method of recording, the quality of the music that has been recorded, and the way the CD-R or CD-RW has been handled. Handle them carefully. Store CD-R(s) or CD-RW(s) in their original cases or other protective cases and away from direct sunlight and dust. The CD or DVD player scans the bottom surface of the disc. If the surface of a CD is damaged, such as cracked, broken, or scratched, the CD does not play properly or not at all. Do not touch the bottom side of a CD while handling it; this could damage the surface. Pick up CDs by grasping the outer edges or the edge of the hole and the outer edge.

If the surface of a CD is soiled, take a soft, lint free cloth or dampen a clean, soft cloth in a mild, neutral detergent solution mixed with water, and clean it. Make sure the wiping process starts from the center to the edge.

Care of the CD and DVD Player

Do not add any label to a CD, it could get caught in the CD or DVD player. If a CD is recorded on a personal computer and a description label is needed, try labeling the top of the recorded CD with a marking pen.

The use of CD lens cleaners for CDs is not advised, due to the risk of contaminating the lens of the CD optics with lubricants internal to the CD and DVD player mechanism.

Notice: **If a label is added to a CD, or more than one CD is inserted into the slot at a time, or an attempt is made to play scratched or damaged CDs, the CD player could be damaged. While using the CD player, use only CDs in good condition without any label, load one CD at a time, and keep the CD player and the loading slot free of foreign materials, liquids, and debris.**

If an error displays, see “CD Messages” later in this section.

⏏ **EJECT or CD (Eject):** Press and release to eject the disc that is currently playing. A CD ejecting from a radio with CD and DVD, ejects from the bottom slot. A beep sounds and Ejecting Disc displays. Once the disc is ejected, Remove Disc displays. The disc can be removed. If the disc is not removed, after several seconds, the disc automatically pulls back into the player.

For the Six-Disc CD player, press and hold for two seconds to eject all discs.

⏏ **DVD (Eject):** Press and release to eject the disc that is currently playing in the top slot. A beep sounds and Ejecting Disc displays.

If loading and reading of a disc cannot be completed, such as unknown format, etc., and the disc fails to eject, press and hold for more than five seconds to force the disc to eject.

♫ **(Tune):** Turn to select tracks on the CD that is currently playing.

⏮ **SEEK** ⏭ **:** Press the left arrow to go to the start of the current track, if more than ten seconds on the CD have played. Press the right arrow to go to the next track.

For Radios with CD and DVD, Press the left arrow to go to the start of the current track, if more than five seconds on the CD have played. If less than five seconds on the CD have played, the previous track plays. Press the right arrow to go to the next track.

If either arrow is held, or pressed multiple times, the player continues moving backward or forward through the tracks on the CD.

REV (Fast Reverse): Press and hold to reverse playback quickly within a track. Sound will be heard at a reduced volume. Release to resume playing the track. The elapsed time of the track displays.

FWD (Fast Forward): Press and hold to advance playback quickly within a track. Sound will be heard at a reduced volume. Release to resume playing the track. The elapsed time of the track displays.

RDM (Random): With the random setting, the tracks can be listened to in random, rather than sequential order, on one CD or all CDs in a six-disc CD player. To use random, do one of the following:

- Press the CD/AUX button, or for a single CD player, insert a disc partway into the slot of the CD player. A RDM label displays.

  To play the tracks from the single CD in random order, press the pushbutton positioned under the RDM label until Random Current Disc displays. Press the pushbutton again to turn off random play.

- Press the CD/AUX button, or for a six-disc CD player, press and hold the button. A beep sounds and Load All Discs displays. Insert one or more discs partway into the slot of the CD player.

  To play tracks from all CDs loaded in a six-disc CD player in random order, press the pushbutton positioned under the RDM label until Randomize All Discs displays. Press the same pushbutton again to turn off random play.

  To play the tracks from a CD loaded in the radio with CD and DVD, press the DVD/CD AUX button when not sourced to the CD, or insert a disc partway into the slot. A RDM label displays.

  To play tracks from a single CD in random order, press the pushbutton positioned under the RDM label until Random Current Disc displays. Press the pushbutton again to turn off random play.

BAND: Press to listen to the radio when a CD is playing. The CD remains inside the radio for future listening.

For the radio with CD and DVD, press to listen to the radio when a CD or DVD is playing. The CD or DVD remains inside the radio for future listening or for viewing entertainment.

CD/AUX (CD/Auxiliary): Press to play a CD when listening to the radio. The CD icon and a message showing the disc and/or track number displays when a CD is in the player. Press again and the system automatically searches for an auxiliary input device, such as a portable audio player. If a portable audio player is not connected, “No Input Device Found” displays.

DVD/CD AUX (Auxiliary): Press this button to cycle through DVD, CD, or Auxiliary when listening to the radio. The DVD/CD text label and a message showing the track or chapter number displays when a disc is in either slot. Press this button again and the system automatically searches for an auxiliary input device, such as a portable audio player. If a portable audio player is not connected, “No Aux Input Device” displays. If a disc is in both the DVD slot and the CD slot the DVD/CD AUX button cycles between the two sources and not indicate “No Aux Input Device”. If a front auxiliary device is connected, the DVD/CD AUX button cycles through all available options, such as: DVD slot, CD slot, Front Auxiliary, and Rear Auxiliary (if available). See “Using the Auxiliary Input Jack(s)” later in this section, or “Audio/Video (A/V) Jacks” under, *Rear Seat Entertainment (RSE) System on page 3-107* for more information.

If a disc is inserted into top DVD slot, the rear seat operator can turn on the video screen and use the remote control to navigate the CD (tracks only) through the remote control.

Radios with CD and DVD Audio Output

Only one audio source can be heard through the speakers at one time. An audio source is defined as DVD slot, CD slot, XM™, FM/AM, Front Auxiliary Jack, or Rear Auxiliary Jack.

Press the ⏻ button to turn the radio on. The radio can be heard through all of the vehicle speakers.

Front seat passengers can listen to the radio (AM, FM, or XM) by pressing the BAND button or the DVD/CD AUX button to select CD slot, DVD slot, front or rear auxiliary input (if available).

If a playback device is plugged into the radio’s front auxiliary input jack or the rear auxiliary jack, the front seat passengers are able to listen to playback from this source through the vehicle speakers. See “Using the Auxiliary Input Jack(s)” later in this section, or “Audio/Video (A/V) Jacks” under, *Rear Seat Entertainment (RSE) System on page 3-107* for more information.

In some vehicles, depending on audio options, the rear speakers can be muted when the RSA power is turned on. See *Rear Seat Audio (RSA) on page 3-117* for more information.

Playing an MP3/WMA CD-R or CD-RW Disc

The radio has the capability of playing an MP3/WMA CD-R or CD-RW disc. For more information on how to play an MP3/WMA CD-R or CD-RW disc, see “Using an MP3” in the index.

CD Messages

CHECK DISC: Radios with a Single CD player or radios with a Six-Disc player displays CHECK DISC and/or ejects the CD if an error occurs.

Radios with a CD and DVD player may display other messages when an error occurs:

Optical Error: The disc was inserted upside down.

Disk Read Error: A disc was inserted with an invalid or unknown format.

Player Error: There are disc LOAD or disc EJECT problems.

- It is very hot. When the temperature returns to normal, the CD should play.
- The road is very rough. When the road becomes smoother, the CD should play.
- The CD is dirty, scratched, wet, or upside down.
- The air is very humid. If so, wait about an hour and try again.
- There could have been a problem while burning the CD.
- The label could be caught in the CD player.

If the CD is not playing correctly, for any other reason, try a known good CD.

Radios with a CD and DVD player displays:

If any error occurs repeatedly or if an error cannot be corrected, contact your dealer/retailer. If the radio displays an error message, write it down and provide it to your dealer/retailer when reporting the problem.

Using the DVD Player

The DVD player is controlled by the buttons on the remote control, or by the RSA system, or by the buttons on the radio faceplate. See “Remote Control”, under *Rear Seat Entertainment (RSE) System on page 3-107* and *Rear Seat Audio (RSA) on page 3-117* for more information.

The DVD player is only compatible with DVDs of the appropriate region code that is printed on the jacket of most DVDs.

The DVD slot of the radio is compatible with most audio CDs, CD-R, CD-RW, DVD-Video, DVD-Audio, DVD-R/RW, DVD+R/RW media along with MP3 and WMA formats.

If an error message displays on the video screen or the radio, see “DVD Display Error Messages” under, *Rear Seat Entertainment (RSE) System on page 3-107* and “DVD Radio Error Messages” in this section for more information.

Playing a DVD

DVD/CD AUX (Auxiliary): Press this button to cycle through DVD, CD, or Auxiliary when listening to the radio. The DVD/CD text label and a message showing track or chapter number displays when a disc is in either slot. Press this button again and the system automatically searches for an auxiliary input device, such as a portable audio player. If a portable audio player is not connected, “No Aux Input Device” displays. If a disc is in both the DVD slot and the CD slot the DVD/CD AUX button cycles between the two sources and not indicate “No Aux Input Device”. If a front auxiliary device is connected, the DVD/CD AUX button cycles through all available options, such as: DVD slot, CD slot, Front Auxiliary, and Rear Auxiliary (if available). See “Using the Auxiliary Input Jack(s)” later in this section, or “Audio/Video (A/V) Jacks” under, *Rear Seat Entertainment (RSE) System on page 3-107* for more information.

⏻ **(Power):** Press to turn the radio on or off. Turn clockwise or counterclockwise to increase or decrease the volume. Press and hold for more than two seconds to turn off the entire radio and Rear Seat Entertainment (RSE) system and to start the parental control feature. Parental control prevents the rear seat occupant from operating the Rear Seat Audio (RSA) system or remote control.

A lock symbol displays next to the clock display. The parental control feature remains on until you press and hold for more than two seconds again, or until the driver turns the ignition off and exits the vehicle.

♫ **(Tune):** Turn to change tracks on a CD or DVD, to manually tune a radio station, or to change clock or date settings, while in the clock or date setting mode. See the information given earlier in this section specific to the radio, CD, and the DVD. Also, see “Setting the Clock” in the index, for setting the clock and date.

⏮ **SEEK (Previous Track/Chapter):** Press the left SEEK arrow to return to the start of the current track or chapter. Press the left SEEK arrow again to go to the previous track or chapter. This button might not work when the DVD is playing the copyright information or the previews.

SEEK ⏭ **(Next Track/Chapter):** Press the right arrow to go to the next track or chapter. This button might not work when the DVD is playing the copyright information or the previews.

⏪ **REV (Fast Reverse):** Press to quickly reverse the CD or DVD at five times the normal speed. The radio displays the elapsed time while in fast reverse. To stop fast reversing, press again. This button might not work when the DVD is playing the copyright information or the previews.

⏩ **FWD (Fast Forward):** Press to fast forward the CD or DVD. The radio displays the elapsed time and fast forwards five times the normal speed. To stop fast forwarding, press again. This button might not work when the DVD is playing the copyright information or the previews.

⏏ **(Eject):** Press to eject a CD or DVD. If a CD or DVD is ejected, but not removed, the player automatically pulls it back in after 15 seconds.

If loading and reading of a CD cannot be completed, because of an unknown format, etc., and the disc fails to eject, press and hold for more than five seconds to force the disc to eject.

DVD-V (Video) Display Buttons

Once a DVD-V is inserted, the radio display menu shows several tag options for DVD playing. Press the pushbuttons located under any desired tag option during DVD playback. See the tag options listed after, for more information.

The rear seat passenger can navigate the DVD-V menus and controls through the remote control. See “Remote Control”, under *Rear Seat Entertainment (RSE) System on page 3-107* for more information. The Video Screen automatically turns on when the DVD-V is inserted into the DVD slot.

▶ / ❚❚ (Play/Pause): Press either the play or pause icon displayed on the radio system, to toggle between pausing or restarting playback of a DVD. If the forward arrow is showing on display, the system is in pause mode. If the pause icon is showing on display, the system is in playback mode. If the DVD screen is off, press the play button to turn the screen on.

Some DVDs begin playing after the previews have finished, although there could be a delay of up to 30 seconds. If the DVD does not begin playing the movie automatically, press the pushbutton located under the play/pause symbol tag displayed on the radio. If the DVD still does not play, refer to the on-screen instructions, if available.

■ (Stop): Press to stop playing, rewinding, or fast forwarding a DVD.

↵ (Enter): Press to select the choices that are highlighted in any menu.

(Menu): Press to access the DVD menu. The DVD menu is different on every DVD. Use the pushbuttons located under the navigation arrows to navigate the cursor through the DVD menu. After making a selection press this button. This button only operates when using a DVD.

Nav (Navigate): Press to display directional arrows for navigating through the menus.

↶ (Return): Press to exit the current active menu and return to the previous menu. This button operates only when a DVD is playing and a menu is active.

DVD-A (Audio) Display Buttons

Once a DVD-A is inserted, radio display menu shows several tag options for DVD playing. Press the pushbuttons located under any desired tag option during DVD playback. See the tag options listed after, for more information.

The rear seat operator can navigate the DVD-A menus and controls through the remote control. See “Remote Control”, under *Rear Seat Entertainment (RSE) System on page 3-107* for more information. The Video Screen does not automatically power on when the DVD-A is inserted into the DVD slot. It must be manually turned on by the rear seat occupant through the remote control power button.

▶ / ❚❚ **(Play/Pause):** Press either the play or pause icon displayed on the radio system, to toggle between pausing or restarting playback of a DVD. If the forward arrow is showing on the display, the system is in pause mode. If the pause icon is showing on the display, the system is in playback mode.

◀ **Group** ▶**:** Press to cycle through musical groupings on the DVD-A disc.

Nav (Navigate): Press to display directional arrows for navigating through the menus.

♪ **(Audio Stream):** Press to cycle through audio stream formats located on the DVD-A disc. The video screen shows the audio stream changing.

Inserting a Disc

To play a disc, gently insert the disc, with the label side up, into the loading slot. The DVD player might not accept some paper labeled media. The player starts loading the disc into the system and show “Loading Disc” on the radio display. At the same time, the radio displays a softkey menu of option(s). Some discs automatically play the movie while others default to the softkey menu display, which requires the Play, Enter, or Navigation softkeys to be pressed; either by softkey or by the rear seat passenger using the remote control.

Loading a disc into the system, depending on media type and format, ranges from 5 to 20 seconds for a CD, and up to 30 seconds for a DVD.

Stopping and Resuming Playback

To stop playing a DVD without turning off the system, press the ■ button on the remote control, or press the pushbutton located under the stop or the play/pause symbol tags displayed on the radio. If the radio head is sourced to something other than DVD-V, press the DVD/CD AUX button to make DVD-V the active source.

To resume DVD playback, press the ▶ / ❚❚ button on the remote control, or press the pushbutton located under the play/pause symbol tag displayed on the radio. The DVD should resume play from where it last stopped if the disc has not been ejected and the stop button has not been pressed twice on the remote control. If the disc has been ejected or the stop button has been pressed twice on the remote control, the disc resumes playing at the beginning of the disc.

Ejecting a Disc

Press the ⏏ button on the radio to eject the disc. If a disc is ejected from the radio, but not removed, the radio reloads the disc after a short period of time. The disc is stored in the radio. The radio does not resume play of the disc automatically. If the RSA system is sourced to the DVD, the movie when reloaded into the DVD player begins to play again. In case loading and reading of a DVD or CD cannot be completed (unknown format, etc.), and the disc fails to eject, press and hold the DVD ⏏ button more than five seconds to force the disc to eject.

DVD Radio Error Messages

Player Error: This message displays when there are disc load or eject problems.

Disc Format Error: This message displays, if the disc is inserted with the disc label wrong side up, or if the disc is damaged.

Disc Region Error: This message displays, if the disc is not from a correct region.

No Disc Inserted: This message displays, if no disc is present when the ⏏ or DVD/CD AUX button is pressed on the radio.

Using the Auxiliary Input Jack

The radio system has an auxiliary input jack located on the lower right side of the faceplate. This is not an audio output; do not plug the headphone set into the front auxiliary input jack. Connect an external audio device such as an iPod, laptop computer, MP3 player, CD player, or cassette tape player, etc. to the auxiliary input jack for use as another source for audio listening.

Drivers are encouraged to set up any auxiliary device while the vehicle is in P (Park). See *Defensive Driving on page 4-2* for more information on driver distraction.

To use a portable audio player, connect a 3.5 mm (1/8 inch) cable to the radio's front auxiliary input jack. When a device is connected, press the radio CD/AUX button to begin playing audio from the device over the vehicle speakers.

⏻ **(Power/Volume):** Turn clockwise or counterclockwise to increase or decrease the volume of the portable player. Additional volume adjustments might have to be made from the portable device if the volume is not loud or soft enough.

BAND: Press to listen to the radio when a portable audio device is playing. The portable audio device continues playing, so you might want to stop it or turn it off.

CD/AUX (CD/Auxiliary): Press to play a CD when a portable audio device is playing. Press again and the system begins playing audio from the connected portable audio player. If a portable audio player is not connected, "No Input Device Found" displays.

DVD/CD AUX (DVD/CD/Auxiliary): Press to cycle through DVD, CD, or Auxiliary when listening to the radio. The DVD/CD text label and a message showing track or chapter number displays when a disc is in either slot. Press again and the system automatically searches for an auxiliary input device, such as a portable audio player. If a portable audio player is not connected, "No Aux Input Device" displays. If a disc is in both the DVD slot and the CD slot the DVD/CD AUX button cycles between the two sources and not indicate "No Aux Input Device". If a front auxiliary device is connected, the DVD/CD AUX button cycles through all available options, such as: DVD slot, CD slot, Front Auxiliary, and Rear Auxiliary (if available). See "Using the Auxiliary Input Jack(s)" later in this section, or "Audio/Video (A/V) Jacks" under, *Rear Seat Entertainment (RSE) System on page 3-107* for more information.

Using an MP3 (Radio with CD and Six-Disc CD Player)

MP3/WMA CD-R or CD-RW Disc

The radio plays MP3/WMA files that were recorded on a CD-R or CD-RW disc. The files can be recorded with the following fixed bit rates: 32 kbps, 40 kbps, 56 kbps, 64 kbps, 80 kbps, 96 kbps, 112 kbps, 128 kbps, 160 kbps, 192 kbps, 224 kbps, 256 kbps, and 320 kbps or a variable bit rate. Song title, artist name, and album are available for display by the radio when recorded using ID3 tags version 1 and 2.

Compressed Audio

The radio also plays discs that contain both uncompressed CD audio (.CDA files) and MP3/WMA files. By default the radio shows the MP3 label on the left side of the screen but plays both file formats in the order in which they were recorded to the disc.

MP3/WMA Format

Creating an MP3/WMA disc on a personal computer:

- Make sure the MP3/WMA files are recorded on a CD-R or CD-RW disc.
- Do not mix standard audio and MP3/WMA files on one disc.
- The CD player is able to read and play a maximum of 50 folders, 15 playlists, and a combined total of 512 folders and files.
- Create a folder structure that makes it easy to find songs while driving. Organize songs by albums using one folder for each album. Each folder or album should contain 18 songs or less.
- Avoid subfolders. The system can support up to eight subfolders deep, however, keep the total number of folders to a minimum in order to reduce the complexity and confusion in trying to locate a particular folder during playback.
- Make sure playlists have a .mp3 or .wpl extension (other file extensions might not work).

- Minimize the length of the file, folder, or playlist names. Long file, folder, or playlist names, or a combination of a large number of files and folders, or playlists could cause the player to be unable to play up to the maximum number of files, folders, playlists, or sessions. To play a large number of files, folders, playlists or sessions, minimize the length of the file, folder, or playlist name. Long names also take up more space on the display, potentially getting cut off.
- Finalize the audio disc before burning it. Trying to add music to an existing disc could cause the disc not to function in the player.

Change playlists by using the < (previous) and > (next) folder buttons, the ♫ knob, or the SEEK arrows. An MP3/WMA CD-R or CD-RW that was recorded using no file folders can be played. If a CD-R or CD-RW contains more than the maximum of 50 folders, 15 playlists, and a combined total of 512 folders and files, the player accesses and navigates up to the maximum, but all items over the maximum are not accessible.

Root Directory

The root directory of the CD-R or CD-RW is treated as a folder. If the root directory has compressed audio files, the directory displays as the CD label. All files contained directly under the root directory are accessed prior to any root directory folders. However, playlists (Px) are always accessed before root folders or files.

If a disc contains both uncompressed CD audio (.CDA) and MP3/WMA files, a folder under the root directory called CD accesses all of the CD audio tracks on the disc.

Empty Directory or Folder

If a root directory or a folder exists somewhere in the file structure that contains only folders/subfolders and no compressed files directly beneath them, the player advances to the next folder in the file structure that contains compressed audio files. The empty folder does not display.

No Folder

When the CD-R or CD-RW disc contains only compressed files, the files are located under the root folder. The next and previous folder function does not display on a CD-R or CD-RW disc that was recorded without folders or playlists.

When the CD-R or CD-RW disc contains only playlists and compressed audio files, but no folders, all files are located under the root folder. The folder down and up buttons search playlists (Px) first and then goes to the root folder.

Order of Play

Tracks recorded to the CD-R or CD-RW disc are played in the following order:

- Play begins from the first track in the first playlist and continues sequentially through all tracks in each playlist. When the last track of the last playlist has played, play continues from the first track of the first playlist.
- Play begins from the first track in the first folder and continues sequentially through all tracks in each folder. When the last track of the last folder has played, play continues from the first track of the first folder.

When play enters a new folder, the display does not automatically show the new folder name unless the folder mode is chosen as the default display. The new track name displays.

File System and Naming

The song name that displays is the song name that is contained in the ID3 tag. If the song name is not present in the ID3 tag, then the radio displays the file name without the extension (such as .mp3) as the track name.

Track names longer than 32 characters or four pages are shortened. Parts of words on the last page of text and the extension of the filename does not display.

Preprogrammed Playlists

Preprogrammed playlists that were created using WinAmp™, MusicMatch™, or Real Jukebox™ software can be accessed, however, they cannot be edited using the radio. These playlists are treated as special folders containing compressed audio song files.

Playing an MP3/WMA

Insert a CD-R or CD-RW disc partway into the slot (Single CD Player), or press the load button and wait for the message to insert disc (Six-Disc CD Player), label side up. The player pulls it in, and the CD-R or CD-RW should begin playing.

⏏ **EJECT:** Press and hold this button for two seconds to eject all discs, if one or more discs are loaded.

♫ **(Tune):** Turn this knob to select MP3/WMA files on the CD-R or CD-RW currently playing.

⏮ **SEEK** ⏭ **:** Press the left SEEK arrow to go to the start of the current MP3/WMA file, if more than ten seconds have played. Press the right SEEK arrow to go to the next MP3/WMA file. If either SEEK arrow is held or pressed multiple times, the player continues moving backward or forward through MP3/WMA files on the CD.

(Previous Folder): Press the pushbutton positioned under the Folder label to go to the first track in the previous folder.

(Next Folder): Press the pushbutton positioned under the Folder label to go to the first track in the next folder.

⏪ **REV (Reverse):** Press and hold this button to reverse playback quickly within an MP3/WMA file. Sound is heard at a reduced volume. Release this button to resume playing the file. The elapsed time of the file displays.

⏩ **FWD (Fast Forward):** Press and hold this button to advance playback quickly within an MP3/WMA file. Sound is heard at a reduced volume. Release this button to resume playing the file. The elapsed time of the file displays.

RDM (Random): With the random setting, MP3/WMA files on the CD-R or CD-RW can be listened to in random, rather than sequential order, on one CD-R or CD-RW disc or all discs in a six-disc CD player. To use random, do one of the following:

- To play MP3/WMA files from the CD-R or CD-RW in random order, press the pushbutton positioned under the RDM label until Random Current Disc displays. Press the same pushbutton again to turn off random play.
- To play songs from all CDs loaded in a six-disc CD player in random order, press the pushbutton positioned under the RDM label until Randomize All Discs displays. Press the same pushbutton again to turn off random play.

(Music Navigator): Use the music navigator feature to play MP3/WMA files on the CD-R or CD-RW in order by artist or album. Press the pushbutton located below the music navigator label. The player scans the disc to sort the files by artist and album ID3 tag information. It could take several minutes to scan the disc depending on the number of MP3/WMA files recorded to the CD-R or CD-RW disc. The radio can begin playing while it is scanning the disc in the background. When the scan is finished, the CD-R or CD-RW begins playing again.

Once the disc has scanned, the player defaults to playing MP3/WMA files in order by artist. The current artist playing is shown on the second line of the display between the arrows. Once all songs by that artist are played, the player moves to the next artist in alphabetical order on the CD-R or CD-RW and begins playing MP3/WMA files by that artist. To listen to MP3/WMA files by another artist, press the pushbutton located below either arrow button. The player goes to the next or previous artist in alphabetical order. Continue pressing either button until the desired artist is displayed.

To change from playback by artist to playback by album, press the pushbutton located below the Sort By label. From the sort screen, push one of the buttons below the album button. Press the pushbutton below the back label to return to the main music navigator screen. Now the album name is displayed on the second line between the arrows and songs from the current album begins to play. Once all songs from that album are played, the player moves to the next album in alphabetical order on the CD-R or CD-RW and begins playing MP3/WMA files from that album.

To exit music navigator mode, press the pushbutton below the Back label to return to normal MP3/WMA playback.

Using an MP3 (Radio with CD and DVD Player)

MP3/WMA CD-R or CD-RW Disc

Compressed Audio or Mixed Mode Discs

The radio also plays discs that contain both uncompressed CD audio (.CDA files) and MP3/WMA files depending on which slot the disc is loaded into. By default the radio reads only the uncompressed audio (.CDA) and ignores the MP3/WMA files on the DVD deck. On the CD deck, pressing the CAT (category) button toggles between compressed and uncompressed audio format, the default being the uncompressed format (.CDA).

MP3/WMA Format

To create an MP3/WMA disc on a personal computer:

- Make sure the MP3/WMA files are recorded on a CD-R or CD-RW disc.
- Do not mix standard audio and MP3/WMA files on one disc.
- The CD player (lower slot) is able to read and play a maximum combination of 512 files and folders. The DVD player (upper slot) is able to read 255 folders, 15 playlists and 40 sessions.
- Create a folder structure that makes it easy to find songs while driving. Organize songs by albums using one folder for each album. Each folder or album should contain 18 songs or less.
- Avoid subfolders. The system can support up to eight subfolders deep, however, keep the total number of folders to a minimum in order to reduce the complexity and confusion in trying to locate a particular folder during playback.
- Make sure playlists have a .m3u, .wpl or .pls extension as other file extensions might not work.
- Minimize the length of the file, folder or playlist names. Long file, folder, or playlist names, or a combination of a large number of files and folders, or playlists could cause the player to be unable to play up to the maximum number of files, folders, playlists, or sessions. To play a large number of files, folders, playlists, or sessions, minimize the length of the file, folder, or playlist name. Long names also take up more space on the display, potentially getting cut off.
- Finalize the audio disc before burning it. Trying to add music to an existing disc could cause the disc not to function in the player.

Root Directory

The root directory of the CD-R or CD-RW disc is treated as a folder. If the root directory has compressed audio files, the directory is displayed as F1 ROOT. All files contained directly under the root directory are accessed prior to any root directory folders. However, playlists (Px) are always accessed before root folders or files.

Empty Directory or Folder

If a root directory or a folder exists somewhere in the file structure that contains only folders/subfolders and no compressed files directly beneath them, the player advances to the next folder in the file structure that contains compressed audio files. The empty folder does not display.

No Folder

When the CD-R or CD-RW disc contains only compressed files, the files are located under the root folder. The next and previous folder function does not function on a CD-R or CD-RW that was recorded without folders or playlists. When displaying the name of the folder the radio displays ROOT.

When the CD-R or CD-RW disc contains only playlists and compressed audio files, but no folders, all files are located under the root folder. The folder down and the folder up buttons search playlists (Px) first and then goes to the root folder. When the radio displays the name of the folder the radio displays ROOT.

Order of Play

Tracks recorded to the CD-R or CD-RW disc are played in the following order:

- Play begins from the first track in the first playlist and continues sequentially through all tracks in each playlist. When the last track of the last playlist has played, play continues from the first track of the first playlist.
- Play begins from the first track in the first folder and continues sequentially through all tracks in each folder. When the last track of the last folder has played, play continues from the first track of the first folder.

When play enters a new folder, the display does not automatically show the new folder name unless the folder mode has been chosen as the default display. The new track name displays.

File System and Naming

The song name that is displayed is the song name that is contained in the ID3 tag. If the song name is not present in the ID3 tag, then the radio displays the file name without the extension (such as .mp3) as the track name.

Track names longer than 32 characters or four pages are shortened. Parts of words on the last page of text and the extension of the filename displays.

Preprogrammed Playlists

Preprogrammed playlists that were created using WinAmp™, MusicMatch™, or Real Jukebox™ software can be accessed, however, they cannot be edited using the radio. These playlists are treated as special folders containing compressed audio song files.

Playing an MP3/WMA (In Either the DVD or CD Slot)

Insert a CD-R or CD-RW disc partway into either the top or bottom slot, label side up. The player pulls it in, and the CD-R or CD-RW should begin playing.

Depending on the format of the disc, a softkey menu appears and allows navigation of the disc. The menu reads left to right as RDM (Randomize song play order), a Folder icon with left and right arrows (to move up or down through available folders), a PL tag if the disc has a Playlist available, and a Music Navigator tag. If a Playlist tag is shown, toggling this key brings up a Folder softkey only or the menu as previously described.

If the ignition or radio is turned off with a CD-R or CD-RW disc in the player it stays in the player. When the ignition or radio is turned back on, the CD-R or CD-RW starts to play where it stopped, if it was the last selected audio source.

As each new track starts to play, the track number and song title displays.

⏏ **CD (Eject):** Press and release this button to eject the CD-R or CD-RW that is currently playing in the bottom slot. A beep sounds and Ejecting Disc displays. Once the disc is ejected, Remove Disc displays. The CD-R or CD-RW disc can be removed. If the CD-R or CD-RW disc is not removed, after several seconds, the CD-R or CD-RW disc automatically pulls back into the player.

If loading and reading of a CD cannot be completed, such as unknown format, etc., and the disc fails to eject, press and hold this button for more than five seconds to force the disc to eject.

⏏ **DVD (Eject):** Press and release this button to eject the CD-R or CD-RW that is currently playing in the top slot. A beep sounds and Ejecting Disc displays. Once the disc is ejected, Remove Disc displays. The CD-R or CD-RW disc can be removed. If the CD-R or CD-RW disc is not removed, after several seconds, the CD-R or CD-RW disc automatically pulls back into the player. If loading and reading of a CD cannot be completed, such as unknown format, etc., and the disc fails to eject, press and hold this button for more than five seconds to force the disc to eject.

♫ **(Tune):** Turn this knob to select MP3/WMA files on the CD-R or CD-RW that is currently playing.

⏮ **SEEK** ⏭ **:** Press the left SEEK arrow to go to the start of the current MP3/WMA file, if more than five seconds have played. If less than five seconds have played, the previous MP3/WMA file plays. Press the right SEEK arrow to go to the next MP3/WMA file. If either SEEK arrow is held, or pressed multiple times, the player continues moving backward or forward through the MP3/WMA files on the CD.

(Previous Folder): Press the pushbutton positioned under the Folder label to go to the first track in the previous folder.

(Next Folder): Press the pushbutton positioned under the Folder label to go to the first track in the next folder.

⏪ **REV (Reverse):** Press and hold this button to reverse playback quickly within an MP3/WMA file. Sound is heard at a reduced volume. Release this button to resume playing the file. The elapsed time of the file displays.

▷▷ **FWD (Fast Forward):** Press and hold this button to advance playback quickly within an MP3/WMA file. Sound is heard at a reduced volume. Release this button to resume playing the file. The elapsed time of the file displays.

RDM (Random): With the random setting, MP3/WMA files on the CD-R or CD-RW can be listened to in random, rather than sequential order. To play MP3/WMA files from the CD-R or CD-RW in random order, press the pushbutton positioned under the RDM label until Random Current Disc displays. Press the same pushbutton again to turn off random play.

(Music Navigator): Use the music navigator feature to play MP3/WMA files on the CD-R or CD-RW in order by artist or album. Press the pushbutton located below the music navigator label. The player scans the disc to sort the files by artist and album ID3 tag information. It could take several minutes to scan the disc depending on the number of MP3/WMA files recorded to the CD-R or CD-RW disc.

To cancel music navigator while the player is scanning, press the pushbutton located below the music navigator label or eject the disc.

The radio can begin playing while it is scanning the disc in the background. When the scan is finished, the CD-R or CD-RW begins playing again.

Once the disc has been scanned, the player defaults to playing MP3/WMA files in order by artist. The current artist playing is shown on the second line of the display between the arrows. To listen to MP3/WMA files by another artist, press the pushbutton located below either arrow button. The disc goes to the next or previous artist in alphabetical order. Continue pressing either button until the desired artist is displayed.

To change from playback by artist to playback by album, press the pushbutton located below the Sort By label. From the sort screen, push one of the buttons below the album button. Press the pushbutton below the back label to return to the main music navigator screen. Now the album name displays on the second line between the arrows and songs from the current album begin to play. Once all songs from that album are played, the player moves to the next album in alphabetical order on the CD-R or CD-RW and begins playing MP3/WMA files from that album.

To exit music navigator mode, press the pushbutton below the Back label to return to normal MP3/WMA playback.

BAND: Press this button to listen to the radio when a CD or a DVD is playing. The CD or DVD remains inside the radio for future listening or viewing entertainment.

DVD/CD AUX (Auxiliary): Press this button to cycle through DVD, CD, or Auxiliary when listening to the radio. The DVD/CD text label and a message showing track or chapter number displays when a disc is in either slot. Press this button again and the system automatically searches for an auxiliary input device, such as a portable audio player. If a portable audio player is not connected, “No Aux Input Device” displays. If a disc is in both the DVD slot and the CD slot the DVD/CD AUX button cycles between the two sources and does not indicate “No Aux Input Device”. If a front auxiliary device is connected, the DVD/CD AUX button cycles through all available options, such as: DVD slot, CD slot, Front Auxiliary, and Rear Auxiliary (if available). See “Using the Auxiliary Input Jack(s)” later in this section, or “Audio/Video (A/V) Jacks” under, *Rear Seat Entertainment (RSE) System on page 3-107* for more information.

If a MP3/WMA is inserted into top DVD slot, the rear seat operator can turn on the video screen and use the remote control to navigate the CD (tracks only).

XM Radio Messages

XL (Explicit Language Channels): These channels, or any others, can be blocked at a customer’s request, by calling 1-800-852-XMXM (9696).

XM Updating: The encryption code in the receiver is being updated, and no action is required. This process should take no longer than 30 seconds.

No XM Signal: The system is functioning correctly, but the vehicle is in a location that is blocking the XM™ signal. When you move into an open area, the signal should return.

Loading XM: The audio system is acquiring and processing audio and text data. No action is needed. This message should disappear shortly.

Channel Off Air: This channel is not currently in service. Tune to another channel.

Channel Unavail: This previously assigned channel is no longer assigned. Tune to another station. If this station was one of the presets, choose another station for that preset button.

No Artist Info: No artist information is available at this time on this channel. The system is working properly.

No Title Info: No song title information is available at this time on this channel. The system is working properly.

No CAT Info: No category information is available at this time on this channel. The system is working properly.

No Information: No text or informational messages are available at this time on this channel. The system is working properly.

CAT Not Found: There are no channels available for the selected category. The system is working properly.

XM TheftLocked: The XM receiver in the vehicle could have previously been in another vehicle. For security purposes, XM receivers cannot be swapped between vehicles. If this message appears after having your vehicle serviced, check with your dealer/retailer.

XM Radio ID: If tuned to channel 0, this message alternates with the XM Radio eight digit radio ID label. This label is needed to activate the service.

Unknown: If this message is received when tuned to channel 0, there could be a receiver fault. Consult with your dealer/retailer.

Check XM Receivr: If this message does not clear within a short period of time, the receiver could have a fault. Consult with your dealer/retailer.

XM Not Available: If this message does not clear within a short period of time, the receiver could have a fault. Consult with your dealer/retailer.

Navigation/Radio System

Your vehicle may have a navigation radio system.

The navigation system has built-in features intended to minimize driver distraction. Technology alone, no matter how advanced, can never replace your own judgment. See the Navigation System manual for some tips to help you reduce distractions while driving.

Rear Seat Entertainment (RSE) System

The vehicle may have a DVD Rear Seat Entertainment (RSE) system. The RSE system works with the vehicle's audio system. The DVD player is part of the front radio. The RSE system includes a radio with a DVD player, a video display screen, audio/video jacks, two wireless headphones, and a remote control. See *Radio(s) (MP3) on page 3-78* for more information on the vehicle's audio/DVD system.

Before Driving

The RSE is designed for rear seat passengers only. The driver cannot safely view the video screen while driving and should not try to do so.

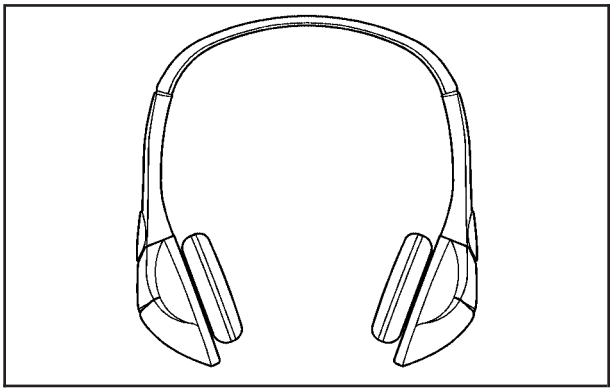
In severe or extreme weather conditions the RSE system might or might not work until the temperature is within the operating range. The operating range for the RSE system is above –4°F (–20°C) or below 140°F (60°C). If the temperature of the vehicle is outside of this range, heat or cool the vehicle until the temperature is within the operating range of the RSE system.

Parental Control

The RSE system may have a Parental Control feature, depending on which radio the vehicle has. To enable Parental Control, press and hold the radio power button for more than two seconds to stop all system features such as: radio, video screen, RSA, DVD and/or CD. While Parental Control is on, a padlock icon displays.

When the radio is turned back on, Parental Control is unlocked.

Headphones



The RSE includes two 2-channel wireless headphones that are dedicated to this system. Channel 1 is dedicated to the video screen, while Channel 2 is dedicated to RSA selections. These headphones are used to listen to media such as CDs, DVDs, MP3/WMAs, DVD-As, radio, any auxiliary source connected to A/V jacks, or the auxiliary input jack, if the vehicle has this feature. The wireless headphones have an On/Off button, channel 1/2 switch, and a volume control. Switch the headphones to Off when not in use.

Push the power button to turn on the headphones. An indicator light located on the headphones comes on. If the light does not come on, the batteries might need to be replaced. Intermittent sound or static on the headphones can also be an indication of weak batteries. See “Battery Replacement” later in this section for more information.

Infrared transmitters are located at the rear of the RSE overhead console. The headphones shut off automatically to save the battery power if the RSE system and RSA are shut off or if the headphones are out of range of the transmitters for more than three minutes. Moving too far forward or stepping out of the vehicle, can cause the headphones lose the audio signal.

The headphones automatically turns off after four hours of continuous use.

To adjust the volume on the headphones, use the volume control located on the right side.

For optimal audio performance, the headphones must be worn correctly. The symbol L (Left) appears on the upper left side, above the ear pad and should be positioned on the left ear. The symbol R (Right) appears on the upper right side, above the ear pad and should be positioned on the right ear.

Notice: **Do not store the headphones in heat or direct sunlight. This could damage the headphones and repairs will not be covered by your warranty. Storage in extreme cold can weaken the batteries. Keep the headphones stored in a cool, dry place.**

If the foam ear pads attached to the headphones become worn or damaged, the pads can be replaced separately from the headphone set. See your dealer/retailer for more information.

Headphones should be stored in the front floor console and not in the front seat back pocket. Headphone damage can occur when the second row seats are folded forward.

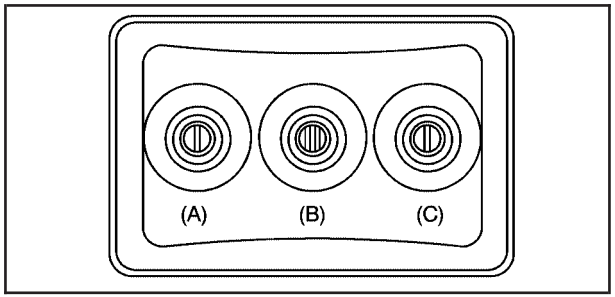
Battery Replacement

To change the batteries on the headphones, do the following:

1. Turn the screw to loosen the battery door located on the left side of the headphones. Slide the battery door open.
2. Replace the two batteries in the compartment. Make sure that they are installed correctly, using the diagram on the inside of the battery compartment.
3. Replace the battery door and tighten the door screw.

If the headphones are to be stored for a long period of time, remove the batteries and keep them in a cool, dry place.

Audio/Video (A/V) Jacks



The A/V jacks, located on the rear of the floor console, allow audio or video signals to be connected from an auxiliary device such as a camcorder or a video game unit to the RSE system. Adapter connectors or cables (not supplied) might be required to connect the auxiliary device to the A/V jacks. Refer to the manufacturer's instructions for proper usage.

The A/V jacks are color coded to match typical home entertainment system equipment. The yellow jack (A) is for the video input. The white jack (B) is for the left audio input. The red jack (C) is for the right audio input.

Power for auxiliary devices is not supplied by the radio system.

To use the auxiliary inputs of the RSE system, connect an external auxiliary device to the color-coded A/V jacks and turn both the auxiliary device and the video screen power on. If the video screen is in the DVD player mode, pressing the AUX (auxiliary) button on the remote control, switches the video screen from the DVD player mode to the auxiliary device. The radio can listen to the audio of the connected auxiliary device by sourcing to auxiliary. See *Radio(s) (MP3) on page 3-78* for more information.

How to Change the RSE Video Screen Settings

The screen display mode (normal, full, and zoom), screen brightness, and setup menu language can be changed from the on screen setup menu. To change any feature, do the following:

1. Press the ▢ (display menu) button on the remote control.
2. Use the remote control ▲, ▼, ◀, ▶ (navigation arrows) and the ◀┘ (enter) button to use the setup menu.
3. Press the display menu button again to remove the setup menu from the screen.

Audio Output

Audio from the DVD player or auxiliary inputs can be heard through the following possible sources:

- Wireless Headphones
- Vehicle Speakers
- Vehicle wired headphone jacks on the rear seat audio system, if the vehicle has this feature.

The RSE system always transmits the audio signal to the wireless headphones, if there is audio available. See “Headphones” earlier in this section for more information.

The DVD player is capable of outputting audio to the wired headphone jacks on the RSA system, if the vehicle has this feature. The DVD player can be selected as an audio source on the RSA system. See *Rear Seat Audio (RSA) on page 3-117* for more information.

When a device is connected to the A/V jacks, or the radio’s auxiliary input jack, if the vehicle has this feature, the rear seat passengers are able to hear audio from the auxiliary device through the wireless or wired headphones. The front seat passengers are able to listen to playback from this device through the vehicle speakers by selecting AUX as the source on the radio.

Video Screen

The video screen is located in the overhead console.

To use the video screen, do the following:

1. Push the release button located on the overhead console.
2. Move the screen to the desired position.

When the video screen is not in use, push it up into its locked position.

If a DVD is playing and the screen is raised to its locked position, the screen remains on; this is normal, and the DVD continues to play through the previous audio source. Use the remote control ⏻ button or ⏏ the disc to turn off the screen.

The overhead console contains the infrared receivers for the wireless headphones and the infrared receivers for the remote control. They are located at the rear of the console.

Notice: **Avoid directly touching the video screen, as damage may occur. See “Cleaning the Video Screen” later in this section for more information.**

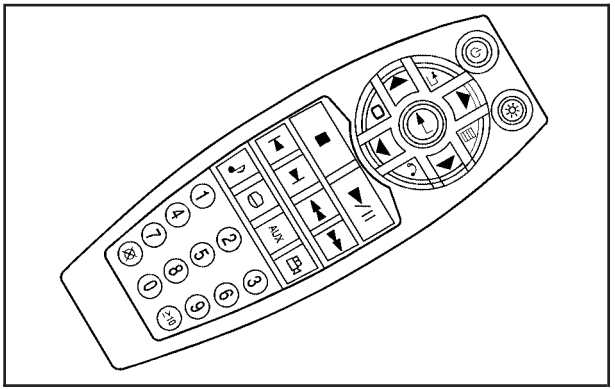
Remote Control

To use the remote control, aim it at the transmitter window at the rear of the overhead console and press the desired button. Direct sunlight or very bright light could affect the ability of the RSE transmitter to receive signals from the remote control. If the remote control does not seem to be working, the batteries might need to be replaced. See “Battery Replacement” later in this section. Objects blocking the line of sight could also affect the function of the remote control.

If a CD or DVD is in the Radio DVD slot, the remote control ⏻ button can be used to turn on the video screen display and start the disc. The radio can also turn on the video screen display. See *Radio(s) (MP3) on page 3-78* for more information.

Notice: **Storing the remote control in a hot area or in direct sunlight can damage it, and the repairs will not be covered by your warranty. Storage in extreme cold can weaken the batteries. Keep the remote control stored in a cool, dry place.**

Remote Control Buttons



⏻ **(Power):** Press to turn the video screen on and off.

☼ **(Illumination):** Press to turn the remote control backlight on. The backlight automatically times out after seven to ten seconds if no other button is pressed while the backlight is on.

(Title): Press to return the DVD to the main menu of the DVD. This function could vary for each disc.

(Main Menu): Press to access the DVD menu. The DVD menu is different on every DVD. Use the navigation arrows to move the cursor around the DVD menu. After making a selection press the enter button. This button only operates when using a DVD.

(Menu Navigation Arrows): Use the arrow buttons to navigate through a menu.

(Enter): Press to select the choice that is highlighted in any menu.

(Display Menu): Press to adjust the brightness, screen display mode (normal, full, or zoom), and display the language menu.

(Return): Press to exit the current active menu and return to the previous menu. This button operates only when the display menu or a DVD menu is active.

(Stop): Press to stop playing, rewinding, or fast forwarding a DVD. Press twice to return to the beginning of the DVD.

(Play/Pause): Press to start playing a DVD. Press while a DVD is playing to pause it. Press again to continue playing the DVD.

When the DVD is playing, depending on the radio, play may be slowed down by pressing the play/pause button then pressing the (fast forward) button. The DVD continues playing in a slow play mode. Depending on the radio, perform reverse slow play by pressing the play/pause button and then pressing the fast forward button. To cancel slow play mode, press the play/pause button.

(Previous Track/Chapter): Press to return to the start of the current track or chapter. Press again to go to the previous track or chapter. This button might not work when the DVD is playing the copyright information or the previews.

(Next Track/Chapter): Press to go to the beginning of the next chapter or track. This button might not work when the DVD is playing the copyright information or the previews.

(Fast Reverse): Press to quickly reverse the DVD or CD. To stop fast reversing a DVD video, press the play/pause button. To stop fast reversing a DVD audio or CD, release the fast reverse button. This button might not work when the DVD is playing the copyright information or the previews.

(Fast Forward): Press to fast forward the DVD or CD. To stop fast forwarding a DVD video, press the play/pause button. To stop fast forwarding a DVD audio or CD, release the fast forward button. This button might not work when the DVD is playing the copyright information or the previews.

(Audio): Press to change audio tracks on DVDs that have this feature when the DVD is playing. The format and content of this function vary for each disc.

(Subtitles): Press to turn ON/OFF subtitles and to move through subtitle options when a DVD is playing. The format and content of this function vary for each disc.

AUX (Auxiliary): Press to switch the system between the DVD player and an auxiliary source.

(Camera): Press to change camera angles on DVDs that have this feature when a DVD is playing. The format and content of this function vary for each disc.

1 through 0 (Numeric Keypad): The numeric keypad provides the capability of direct chapter or track number selection.

(Clear): Press within three seconds after entering a numeric selection, to clear all numerical inputs.

10 (Double Digit Entries): Press to select chapter or track numbers greater than nine. Press this button before entering the number.

If the remote control becomes lost or damaged, a new universal remote control can be purchased. If this happens, make sure the universal remote control uses a code set of Toshiba®.

Battery Replacement

To change the remote control batteries, do the following:

1. Slide the rear cover back, on the remote control.
2. Replace the two batteries in the compartment. Make sure that they are installed correctly, using the diagram on the inside of the battery compartment.
3. Replace the battery cover.

If the remote control is to be stored for a long period of time, remove the batteries and keep them in a cool, dry place.

Problem	Recommended Action
No power.	The ignition might not be turned ON/RUN or in ACC/ACCESSORY.
The picture does not fill the screen. There are black borders on the top and bottom or on both sides or it looks stretched out.	Check the display mode settings in the setup menu by pressing the display menu button on the remote control.
In auxiliary mode, the picture moves or scrolls.	Check the auxiliary input connections at both devices.
The remote control does not work.	Check to make sure there is no obstruction between the remote control and the transmitter window. Check the batteries to make sure they are not dead or installed incorrectly.
After stopping the player, I push Play but sometimes the DVD starts where I left off and sometimes at the beginning.	If the stop button was pressed one time, the DVD player resumes playing where the DVD was stopped. If the stop button was pressed two times the DVD player begins to play from the beginning of the DVD.
The auxiliary source is running but there is no picture or sound.	Check that the RSE video screen is in the auxiliary source mode. Check the auxiliary input connections at both devices.

Problem	Recommended Action
Sometimes the wireless headphone audio cuts out or buzzes.	Check for obstructions, low batteries, reception range, and interference from cellular telephone towers or by using a cellular telephone in the vehicle. Check that the headphones are on correctly using the L (left) and R (right) on the headphones.
I lost the remote and/or the headphones.	See your dealer/retailer for assistance.
The DVD is playing, but there is no picture or sound.	Check that the RSE video screen is sourced to the DVD player.

DVD Display Error Messages

The DVD display error message depends on which radio the vehicle has. The video screen might display one of the following:

Disc Load/Eject Error: This message displays when there are disc load or eject problems.

Disc Format Error: This message displays, if the disc is inserted with the disc label wrong side up, or if the disc is damaged.

Disc Region Error: This message displays, if the disc is not from a correct region.

No Disc Inserted: This message displays, if no disc is present when the ⏏ EJECT button is pressed on the radio.

DVD Distortion

Video distortion can occur when operating cellular phones, scanners, CB radios, Global Position Systems (GPS)*, two-way radios, mobile fax, or walkie talkies.

It might be necessary to turn off the DVD player when operating one of these devices in or near the vehicle.

*Excludes the OnStar® System.

Cleaning the RSE Overhead Console

When cleaning the RSE overhead console surface, use only a clean cloth dampened with clean water.

Cleaning the Video Screen

Use only a clean cloth dampened with clean water. Use care when directly touching or cleaning the screen, as damage could result.

Rear Seat Audio (RSA)

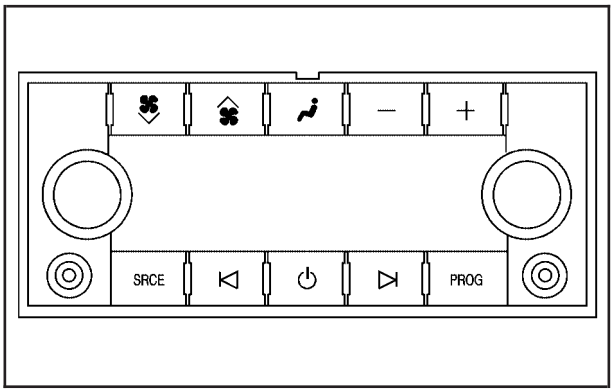
This feature allows rear seat passengers to listen to and control any of the music sources: radio, CDs, DVDs, or other auxiliary sources. However, the rear seat passengers can only control the music sources the front seat passengers are not listening to (except on some radios where dual control is allowed). For example, rear seat passengers can control a CD and listen to it through the headphones, while the driver listens to the radio through the front speakers. The rear seat passengers have control of the volume for each set of headphones.

The RSA functions operate even when the main radio is off. The front audio system will display the headphone icon when the RSA is on, and will disappear from the display when it is off.

Audio can be heard through wired headphones (not included) plugged into the jacks on the RSA. If the vehicle has this feature, audio can also be heard on Channel 2 of the wireless headphones.

The audio system mutes the rear speakers when the RSA audio is active through the headphones.

To listen to an iPod or portable audio device through the RSA, attach the iPod or portable audio device to the front auxiliary input (if available), located on the front audio system. Turn the iPod on, then choose the front auxiliary input with the RSA SRCE button.



(Power): Press this button to turn the RSA on or off.

Volume: Turn the knob to increase or to decrease the volume of the wired headphones. The left knob controls the left headphones and the right knob controls the right headphones.

SRCE (Source): Press this button to switch between the radio (AM/FM), XM™ (if equipped), CD, and if the vehicle has these features, DVD, front auxiliary, and rear auxiliary.

⋈ ⋊ **(Seek):** When listening to FM, AM, or XM™ (if equipped), press either the seek arrows to go to the previous or to the next station or channels and stay there. This function is inactive, with some radios, if the front seat passengers are listening to the radio.

Press and hold either seek arrow until the display flashes, to tune to an individual station. The display stops flashing after the buttons have not been pushed for more than two seconds. This function is inactive, with some radios, if the front seat passengers are listening to the radio.

While listening to a disc, press the right seek arrow to go to the next track or chapter on the disc. Press the left seek arrow to go back to the start of the current track or chapter (if more than ten seconds have played). This function is inactive, with some radios, if the front seat passengers are listening to the disc.

When a DVD video menu is being displayed, press either seek arrow to perform a cursor up or down on the menu. Hold either seek arrow to perform a cursor left or right on the menu.

PROG (Program): Press this button to go to the next preset radio station or channel set on the main radio. This function is inactive, with some radios, if the front seat passengers are listening to the radio.

When a CD or DVD audio disc is playing, press this button to go to the beginning of the CD or DVD audio. This function is inactive, with some radios, if the front seat passengers are listening to the disc.

When a disc is playing in the CD or DVD changer, press this button to select the next disc, if multiple discs are loaded. This function is inactive, with some radios, if the front seat passengers are listening to the disc.

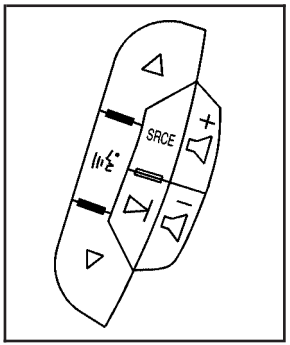
When a DVD video menu is being displayed, press the PROG button to perform the menu function, enter.

Theft-Deterrent Feature

THEFTLOCK® is designed to discourage theft of the vehicle's radio. The feature works automatically by learning a portion of the Vehicle Identification Number (VIN). If the radio is moved to a different vehicle, it does not operate and LOC, LOCK, or LOCKED could display.

With THEFTLOCK® activated, the radio does not operate if stolen.

Audio Steering Wheel Controls



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

▽△ **(Next/Previous):** Press the down or up arrow to go to the next or to the previous radio station stored as a favorite.

When a CD/DVD is playing, press either arrow to go to the next or previous track or chapter.

(Mute/Voice Recognition): Press and release this button to silence the vehicle speakers only. The audio of the wireless and wired headphones, if your vehicle has these features, does not mute. Press and release this button again, to turn the sound on.

If your vehicle has the navigation system, press and hold this button for longer than one second to initiate voice recognition. See "Voice Recognition" in the Navigation System manual for more information.

If your vehicle has OnStar®, press and hold this button for longer than one second to interact with the OnStar® system. If your vehicle also has the navigation system, press and hold this button for longer than one second to initiate voice recognition and say "OnStar" to enter OnStar® mode. See the *OnStar® System on page 2-47* in this manual for more information.

SRCE (Source): Press this button to switch between the radio (AM, FM), XM™ (if equipped), CD, and if your vehicle has these features, DVD, front auxiliary, and rear auxiliary.

+ – (Volume): Press the plus or minus volume button to increase or to decrease the radio volume.

(Seek): Press the seek arrow to go to the next radio station while in AM, FM, or XM™ (if equipped). Press the seek arrow to go to the next track or chapter while sourced to the CD or DVD slot. Press the seek arrow to go to the next disc while sourced to a CD player, if multiple discs are loaded.

Radio Reception

Frequency interference and static can occur during normal radio reception if items such as cell phone chargers, vehicle convenience accessories, and external electronic devices are plugged into the accessory power outlet. If there is interference or static, unplug the item from the accessory power outlet.

AM

The range for most AM stations is greater than for FM, especially at night. The longer range can cause station frequencies to interfere with each other. For better radio reception, most AM radio stations boost the power levels during the day, and then reduce these levels during the night. Static can also occur when things like storms and power lines interfere with radio reception. When this happens, try reducing the treble on the radio.

FM Stereo

FM stereo gives the best sound, but FM signals only reach about 10 to 40 miles (16 to 65 km). Tall buildings or hills can interfere with FM signals, causing the sound to fade in and out.

XM™ Satellite Radio Service

XM™ Satellite Radio Service gives digital radio reception from coast-to-coast in the 48 contiguous United States, and in Canada. Just as with FM, tall buildings or hills can interfere with satellite radio signals, causing the sound to fade in and out. In addition, traveling or standing under heavy foliage, bridges, garages, or through tunnels could cause loss of the XM signal for a period of time. The radio may display NO XM SIGNAL to indicate interference.

Multi-Band Antenna

The multi-band antenna is located on the roof of the vehicle. This type of antenna is used with the AM/FM radio, as well as OnStar® and the XM™ Satellite Radio Service System, if the vehicle has these features. Keep this antenna clear of snow and ice build up for clear radio reception. If the vehicle has a sunroof, the performance of the radio system may be affected if the sunroof is open. Loading items onto the roof of the vehicle can interfere with the performance of the radio system and, if the vehicle has this feature, OnStar®. Make sure the multi-band antenna is not obstructed.

Section 4 Driving Your Vehicle

Your Driving, the Road, and Your Vehicle 4-2
- Defensive Driving 4-2
- Drunk Driving 4-2
- Control of a Vehicle 4-3
- Braking 4-3
- Antilock Brake System (ABS) 4-4
- Braking in Emergencies 4-5
- StabiliTrak® System 4-5
- All-Wheel Drive (AWD) System 4-7
- Steering 4-8
- Off-Road Recovery 4-10
- Passing 4-10
- Loss of Control 4-10
- Driving at Night 4-12
- Driving in Rain and on Wet Roads 4-13
- Before Leaving on a Long Trip 4-14
- Highway Hypnosis 4-14
- Hill and Mountain Roads 4-15
- Winter Driving 4-16
- If Your Vehicle is Stuck in Sand, Mud, Ice, or Snow 4-19
- Rocking Your Vehicle to Get It Out 4-20
- Loading Your Vehicle 4-20

Towing 4-25
- Towing Your Vehicle 4-25
- Recreational Vehicle Towing 4-25
- Towing a Trailer 4-29

Your Driving, the Road, and Your Vehicle

Defensive Driving

Defensive driving means “always expect the unexpected.” The first step in driving defensively is to wear your safety belt — See *Safety Belts: They Are for Everyone on page 1-15*.

⚠CAUTION:

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. In addition:

- **Allow enough following distance between you and the driver in front of you.**
- **Focus on the task of driving.**

Driver distraction can cause collisions resulting in injury or possible death. These simple defensive driving techniques could save your life.

Drunk Driving

⚠CAUTION:

Drinking and then driving is very dangerous. Your reflexes, perceptions, attentiveness, and judgment can be affected by even a small amount of alcohol. You can have a serious — or even fatal — collision if you drive after drinking. Do not drink and drive or ride with a driver who has been drinking. Ride home in a cab; or if you are with a group, designate a driver who will not drink.

Death and injury associated with drinking and driving is a global tragedy.

Alcohol affects four things that anyone needs to drive a vehicle: judgment, muscular coordination, vision, and attentiveness.

Police records show that almost 40 percent of all motor vehicle-related deaths involve alcohol. In most cases, these deaths are the result of someone who was drinking and driving. In recent years, more than 17,000 annual motor vehicle-related deaths have been associated with the use of alcohol, with about 250,000 people injured.

For persons under 21, it is against the law in every U.S. state to drink alcohol. There are good medical, psychological, and developmental reasons for these laws.

The obvious way to eliminate the leading highway safety problem is for people never to drink alcohol and then drive.

Medical research shows that alcohol in a person's system can make crash injuries worse, especially injuries to the brain, spinal cord, or heart. This means that when anyone who has been drinking — driver or passenger — is in a crash, that person's chance of being killed or permanently disabled is higher than if the person had not been drinking.

Control of a Vehicle

The following three systems help to control your vehicle while driving — brakes, steering, and accelerator. At times, as when driving on snow or ice, it is easy to ask more of those control systems than the tires and road can provide. Meaning, you can lose control of your vehicle. See *StabiliTrak® System on page 4-5*.

Adding non-dealer/non-retailer accessories can affect your vehicle's performance. See *Accessories and Modifications on page 5-3*.

Braking

See *Brake System Warning Light on page 3-41*.

Braking action involves perception time and reaction time. First, you have to decide to push on the brake pedal. That is perception time. Then you have to bring up your foot and do it. That is reaction time.

Average reaction time is about three-fourths of a second. But that is only an average. It might be less with one driver and as long as two or three seconds or more with another. Age, physical condition, alertness, coordination, and eyesight all play a part. So do alcohol, drugs, and frustration. But even in three-fourths of a second, a vehicle moving at 60 mph (100 km/h) travels 66 feet (20 m). That could be a lot of distance in an emergency, so keeping enough space between your vehicle and others is important.

And, of course, actual stopping distances vary greatly with the surface of the road, whether it is pavement or gravel; the condition of the road, whether it is wet, dry, or icy; tire tread; the condition of the brakes; the weight of the vehicle; and the amount of brake force applied.

Avoid needless heavy braking. Some people drive in spurts — heavy acceleration followed by heavy braking — rather than keeping pace with traffic. This is a mistake. The brakes might not have time to cool between hard stops. The brakes will wear out much faster if you do a lot of heavy braking. If you keep pace with the traffic and allow realistic following distances, you will eliminate a lot of unnecessary braking. That means better braking and longer brake life.

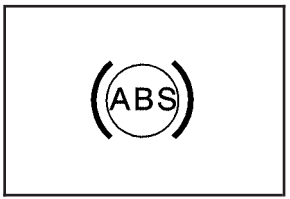
If your vehicle's engine ever stops while you are driving, brake normally but do not pump the brakes. If you do, the pedal could get harder to push down. If the engine stops, you will still have some power brake assist. But you will use it when you brake. Once the power assist is used up, it can take longer to stop and the brake pedal will be harder to push.

Adding non-dealer/non-retailer accessories can affect your vehicle's performance. See *Accessories and Modifications on page 5-3*.

Antilock Brake System (ABS)

Your vehicle has the Antilock Brake System (ABS), an advanced electronic braking system that will help prevent a braking skid.

When you start the engine and begin to drive away, ABS will check itself. You might hear a momentary motor or clicking noise while this test is going on, and you might even notice that the brake pedal moves a little. This is normal.



If there is a problem with ABS, this warning light will stay on. See *Anti-lock Brake System (ABS) Warning Light on page 3-42*.

Let us say the road is wet and you are driving safely. Suddenly, an animal jumps out in front of you. You slam on the brakes and continue braking. Here is what happens with ABS:

A computer senses that 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 faster than any driver could. The computer is programmed to make the most of available tire and road conditions. This can help you steer around the obstacle while braking hard.

As you brake, the computer keeps receiving updates on wheel speed and controls braking pressure accordingly.

Remember: ABS does not change the time you need to get your foot up to the brake pedal or always decrease stopping distance. If you get too close to the vehicle in front of you, you will not have time to apply the brakes if that vehicle suddenly slows or stops. Always leave enough room up ahead to stop, even though you have ABS.

Using ABS

Do not pump the brakes. Just hold the brake pedal down firmly and let antilock work for you. You might hear the antilock pump or motor operate, and feel the brake pedal pulsate, but this is normal.

Braking in Emergencies

With ABS, you can steer and brake at the same time. In many emergencies, steering can help you more than even the very best braking.

Panic Brake Assist

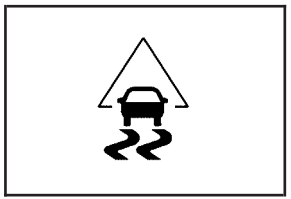
Your vehicle may have a Panic Brake Assist feature designed to assist the driver in stopping or decreasing vehicle speed in emergency driving conditions. This feature uses the Electronic Stability Control (ESC) hydraulic brake control module to supplement the power brake system under conditions where the driver has quickly and forcefully applied the brake pedal in an attempt to quickly stop or slow down the vehicle. The ESC hydraulic brake control module increases brake pressure at each corner of the vehicle until the Antilock Brake System (ABS) activates. Minor brake pedal pulsations or pedal movement during this time is normal and the driver should continue to apply the brake pedal as the driving situation dictates. The Panic Brake Assist feature will automatically disengage when the brake pedal is released or brake pedal pressure is quickly decreased.

StabiliTrak® System

Your vehicle has the StabiliTrak® system which combines antilock brake, traction and stability control systems and helps the driver maintain directional control of the vehicle in most driving conditions.

When you first start your vehicle and begin to drive away, the system performs several diagnostic checks to ensure there are no problems. You may hear or feel the system working. This is normal and does not mean there is a problem with your vehicle. The system should initialize before the vehicle reaches 20 mph (32 km/h). In some cases, it may take approximately two miles of driving before the system initializes.

If the system fails to turn on or activate, the StabiliTrak® light along with one of the following messages will be displayed on the Driver Information Center (DIC): TRACTION CONTROL OFF, SERVICE TRACTION CONTROL, SERVICE STABILITRAK. If you see these conditions, turn the vehicle off, wait 15 seconds, and then turn it back on again to reset the system. If any of these messages still appear on the Driver Information Center (DIC), your vehicle should be taken in for service. For more information on the DIC messages, see *Driver Information Center (DIC) on page 3-50*.



The StabiliTrak® light will flash on the instrument panel cluster when the system is both on and activated.

You may also feel or hear the system working; this is normal.

The traction control disable button is located on the instrument panel below the climate controls.

The traction control part of StabiliTrak® can be turned off by pressing and releasing the traction control disable button.

Traction control can be turned on by pressing and releasing the traction control disable button if not automatically shut off for any other reason.

When the traction control system is turned off, the StabiliTrak® light and the appropriate traction control off message will be displayed on the DIC to warn the driver. Your vehicle will still have brake-traction control when traction control is off, but will not be able to use the engine speed management system. See "Traction Control Operation" next for more information.

When the traction control system has been turned off, you may still hear system noises as a result of the brake-traction control coming on.

It is recommended to leave the system on for normal driving conditions, but it may be necessary to turn the system off if your vehicle is stuck in sand, mud, ice or snow, and you want to "rock" your vehicle to attempt to free it. It may also be necessary to turn off the system when driving in extreme off-road conditions where high wheel spin is required. See *If Your Vehicle is Stuck in Sand, Mud, Ice, or Snow on page 4-19*.

Traction Control Operation

The traction control system is part of the StabiliTrak® system. Traction control limits wheel spin by reducing engine power to the wheels (engine speed management) and by applying brakes to each individual wheel (brake-traction control) as necessary.

The traction control system is enabled automatically when you start your vehicle. It will activate and the StabiliTrak® light will flash if it senses that any of the wheels are spinning or beginning to lose traction while driving. If you turn off traction control, only the brake-traction control portion of traction control will work. The engine speed management will be disabled. In this mode, engine power is not reduced automatically and the driven wheels can spin more freely. This can cause the brake-traction control to activate constantly.

Notice: **If you allow the wheel(s) of one axle to spin excessively while the StabiliTrak®, ABS and brake warning lights and the SERVICE STABILITRAK message are displayed, you could damage the transfer case. The repairs would not be covered by your warranty. Reduce engine power and do not spin the wheel(s) excessively while these lights and this message are displayed.**

The traction control system may activate on dry or rough roads or under conditions such as heavy acceleration while turning or abrupt upshifts/downshifts of the transmission. When this happens, you may notice a reduction in acceleration, or may hear a noise or vibration. This is normal.

If your vehicle is in cruise control when the system activates, the StabiliTrak® light will flash and the cruise control will automatically disengage. When road conditions allow you to use cruise again, you may re-engage the cruise control. See *Cruise Control on page 3-12*.

StabiliTrak® may also turn off automatically if it determines that a problem exists with the system. If the problem does not clear itself after restarting the vehicle, you should see your dealer/retailer for service.

All-Wheel Drive (AWD) System

If your vehicle has this feature, engine power is sent to all four wheels when extra traction is needed. This is like four-wheel drive, but there is no separate lever or switch to engage or disengage the front axle. It is fully automatic, and adjusts itself as needed for road conditions.

When using a compact spare tire on your AWD equipped vehicle, the AWD system automatically detects the presence of the compact spare and the AWD is disabled. To restore the AWD operation and prevent excessive wear on the clutch in your AWD system, replace the compact spare with a full-size tire as soon as possible. See *Compact Spare Tire on page 5-96* for more information.

Steering

Power Steering

If you lose power steering assist because the engine stops or the system is not functioning, you can steer but it will take much more effort.

Variable Effort Steering

Your vehicle has a steering system that continuously adjusts the effort you feel when steering at all vehicle speeds. It provides ease when parking, yet a firm, solid feel at highway speeds.

Steering Tips

It is important to take curves at a reasonable speed.

A lot of the “driver lost control” accidents mentioned on the news happen on curves. Here is why:

Experienced driver or beginner, each of us is subject to the same laws of physics when driving on curves. The traction of the tires against the road surface makes it possible for the vehicle to change its path when you turn the front wheels. If there is no traction, inertia will keep the vehicle going in the same direction. If you have ever tried to steer a vehicle on wet ice, you will understand this.

Traction in a curve depends on the condition of the tires and the road surface, the angle at which the curve is banked, and your speed. While in a curve, speed is the one factor you can control.

Suppose you are steering through a sharp curve. Then you suddenly accelerate. Both control systems — steering and acceleration — have to do their work where the tires meet the road. Adding the sudden acceleration can demand too much of those places. You can lose control. See *StabiliTrak® System on page 4-5*.

What should you do if this ever happens? Ease up on the accelerator pedal, steer the vehicle the way you want it to go, and slow down.

Speed limit signs near curves warn that you should adjust your speed. Of course, the posted speeds are based on good weather and road conditions. Under less favorable conditions you will want to go slower.

If you need to reduce speed when approaching a curve, do it before you enter the curve, while the front wheels are straight ahead.

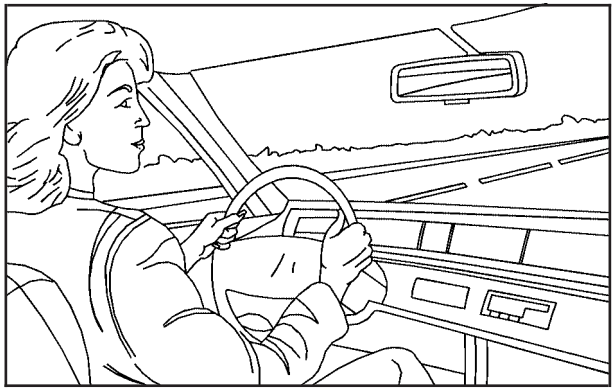
Try to adjust the speed so you can drive through the curve. Maintain a reasonable, steady speed. Wait to accelerate until you are out of the curve, and then accelerate gently into the straightaway.

Adding non-dealer/non-retailer accessories can affect your vehicle’s performance. See *Accessories and Modifications on page 5-3*.

Steering in Emergencies

There are times when steering can be more effective than braking. For example, you come over a hill and find a truck stopped in your lane, or a car suddenly pulls out from nowhere, or a child darts out from between parked cars and stops right in front of you. You can avoid these problems by braking — if you can stop in time. But sometimes you cannot; there is not room. That is the time for evasive action — steering around the problem.

Your vehicle can perform very well in emergencies like these. First, apply the brakes. See *Braking on page 4-3*. It is better to remove as much speed as you can from a possible collision. Then steer around the problem, to the left or right depending on the space available.

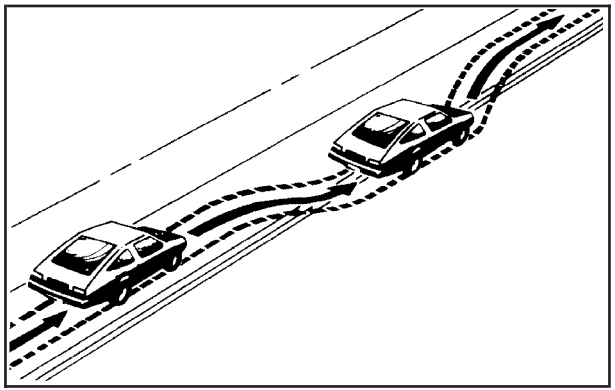


An emergency like this requires close attention and a quick decision. If you are holding the steering wheel at the recommended 9 and 3 o'clock positions, you can turn it a full 180 degrees very quickly without removing either hand. But you have to act fast, steer quickly, and just as quickly straighten the wheel once you have avoided the object.

The fact that such emergency situations are always possible is a good reason to practice defensive driving at all times and wear safety belts properly.

Off-Road Recovery

Your vehicle's right wheels can drop off the edge of a road onto the shoulder while driving.



If the level of the shoulder is only slightly below the pavement, recovery should be fairly easy. Ease off the accelerator and then, if there is nothing in the way, steer so that your vehicle straddles the edge of the pavement. Turn the steering wheel up to one-quarter turn until the right front tire contacts the pavement edge. Then turn the steering wheel to go straight down the roadway.

Passing

Passing another vehicle on a two-lane road can be dangerous. To reduce the risk of danger while passing:

- Look down the road, to the sides, and to crossroads for situations that might affect a successful pass. If in doubt, wait.
- Watch for traffic signs, pavement markings, and lines that could indicate a turn or an intersection. Never cross a solid or double-solid line on your side of the lane.
- Do not get too close to the vehicle you want to pass. Doing so can reduce your visibility.
- Wait your turn to pass a slow vehicle.
- When you are being passed, ease to the right.

Loss of Control

Let us review what driving experts say about what happens when the three control systems — brakes, steering, and acceleration — do not have enough friction where the tires meet the road to do what the driver has asked.

In any emergency, do not give up. Keep trying to steer and constantly seek an escape route or area of less danger.

Skidding

In a skid, a driver can lose control of the vehicle. Defensive drivers avoid most skids by taking reasonable care suited to existing conditions, and by not overdriving those conditions. But skids are always possible.

The three types of skids correspond to your vehicle's three control systems. In the braking skid, the wheels are not rolling. In the steering or cornering skid, too much speed or steering in a curve causes tires to slip and lose cornering force. And in the acceleration skid, too much throttle causes the driving wheels to spin.

A cornering skid is best handled by easing your foot off the accelerator pedal.

If your vehicle starts to slide, ease your foot off the accelerator pedal and quickly steer the way you want the vehicle to go. If you start steering quickly enough, your vehicle may straighten out. Always be ready for a second skid if it occurs.

Of course, traction is reduced when water, snow, ice, gravel, or other material is on the road. For safety, you want to slow down and adjust your driving to these conditions. It is important to slow down on slippery surfaces because stopping distance is longer and vehicle control more limited.

While driving on a surface with reduced traction, try your best to avoid sudden steering, acceleration, or braking, including reducing vehicle speed by shifting to a lower gear. Any sudden changes could cause the tires to slide. You might not realize the surface is slippery until your vehicle is skidding. Learn to recognize warning clues —such as enough water, ice, or packed snow on the road to make a mirrored surface — and slow down when you have any doubt.

Remember: Any Antilock Brake System (ABS) helps avoid only the braking skid.

Driving at Night

Night driving is more dangerous than day driving because some drivers are likely to be impaired — by alcohol or drugs, with night vision problems, or by fatigue.

Night driving tips include:

- Drive defensively.
- Do not drink and drive.
- Reduce headlamp glare by adjusting the inside rearview mirror.
- Slow down and keep more space between you and other vehicles because headlamps can only light up so much road ahead.
- Watch for animals.
- When tired, pull off the road.
- Do not wear sunglasses.
- Avoid staring directly into approaching headlamps.
- Keep the windshield and all glass on your vehicle clean — inside and out.
- Keep your eyes moving, especially during turns or curves.

No one can see as well at night as in the daytime. But, as we get older, these differences increase. A 50-year-old driver might need at least twice as much light to see the same thing at night as a 20-year-old.

Driving in Rain and 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.

⚠CAUTION:

Wet brakes can cause crashes. They might not work as well in a quick stop and could cause pulling to one side. You could lose control of the vehicle.

After driving through a large puddle of water or a car/vehicle wash, lightly apply the brake pedal until the brakes work normally.

Flowing or rushing water creates strong forces. Driving through flowing water could cause your 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.

Hydroplaning

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

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

Other Rainy Weather Tips

Besides slowing down, other wet weather driving tips include:

- Allow extra following distance.
- Pass with caution.
- Keep windshield wiping equipment in good shape.
- Keep the windshield washer fluid reservoir filled.
- Have good tires with proper tread depth. See *Tires on page 5-49*.

Before Leaving on a Long Trip

To prepare your vehicle for a long trip, consider having it serviced by your dealer/retailer before departing.

Things to check on your own include:

- *Windshield Washer Fluid:* Reservoir full? Windows clean — inside and outside?
- *Wiper Blades:* In good shape?
- *Fuel, Engine Oil, Other Fluids:* All levels checked?
- *Lamps:* Do they all work and are lenses clean?
- *Tires:* Are treads good? Are tires inflated to recommended pressure?
- *Weather and Maps:* Safe to travel? Have up-to-date maps?

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 your vehicle and rest.

Other driving tips include:

- Keep the vehicle well ventilated.
- Keep 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 your vehicle serviced and in good shape.
- Check all fluid levels and brakes, tires, cooling system, and transmission.
- Going down steep or long hills, shift to a lower gear.

⚠CAUTION:

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 none going down a hill. You could crash. Shift down to let the engine assist the brakes on a steep downhill slope.

⚠CAUTION:

Coasting downhill in NEUTRAL (N) 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 your vehicle in gear when you go downhill.

- Stay in your own lane. Do not swing wide or cut across the center of the road. Drive at speeds that let you stay in your own lane.
- Top of hills: Be alert — something could be in your lane (stalled car, accident).
- Pay attention to special road signs (falling rocks area, winding roads, long grades, passing or no-passing zones) and take appropriate action.

Winter Driving

Here are some tips for winter driving:

- Have your vehicle in good shape for winter.
- You might want to put winter emergency supplies in your vehicle.

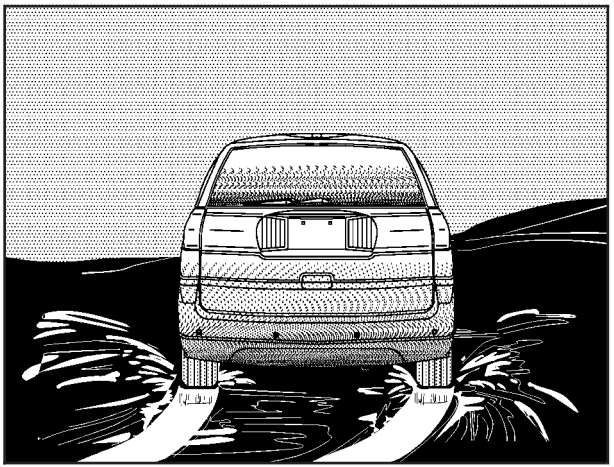
Include an ice scraper, a small brush or broom, a supply of windshield washer fluid, a rag, some winter outer clothing, a small shovel, a flashlight, a red cloth, and a couple of reflective warning triangles. And, if you will be driving under severe conditions, include a small bag of sand, a piece of old carpet, or a couple of burlap bags to help provide traction. Be sure you properly secure these items in your vehicle.

Also see *Tires on page 5-49*.

Driving on Snow or Ice

Most of the time, those places where the tires meet the road probably have good traction.

However, if there is snow or ice between the tires and the road, you can have a very slippery situation. You have a lot less traction, or grip, and need to be very careful.



What is the worst time for this? Wet ice. Very cold snow or ice can be slick and hard to drive on. But wet ice can be even more trouble because it can offer the least traction of all. You can get wet ice when it is about freezing, 32°F (0°C), and freezing rain begins to fall. Try to avoid driving on wet ice until salt and sand crews can get there.

Whatever the condition — smooth ice, packed, blowing, or loose snow — drive with caution.

StabiliTrak® improves your ability to accelerate when driving on a slippery road. Even with StabiliTrak®, slow down and adjust your driving to the road conditions. Under certain conditions, you might want to turn the traction control part of the StabiliTrak® System off, such as when driving through deep snow and loose gravel, to help maintain vehicle motion at lower speeds. See *StabiliTrak® System on page 4-5* and *If Your Vehicle is Stuck in Sand, Mud, Ice, or Snow on page 4-19*.

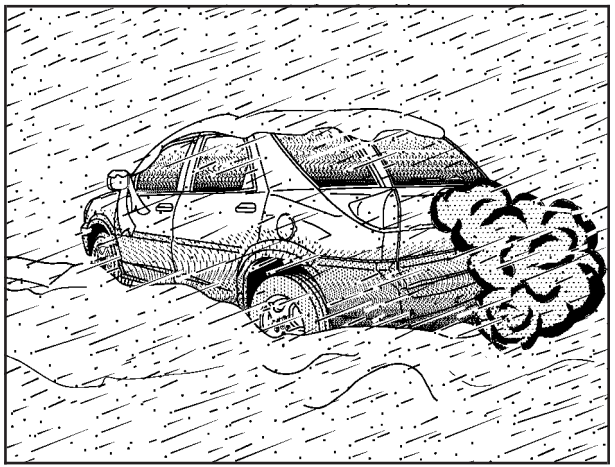
The Antilock Brake System (ABS) improves your vehicle's stability when you make a hard stop on a slippery road. Even though you have ABS, begin stopping sooner than you would on dry pavement. See *Antilock Brake System (ABS) on page 4-4*.

- Allow greater following distance on any slippery road.
- Watch for slippery spots. The road might be fine until you hit a spot that is covered with ice. On an otherwise clear road, ice patches can appear in shaded areas where the sun cannot reach, such as around clumps of trees, behind buildings, or under bridges. Sometimes the surface of a curve or an overpass can remain icy when the surrounding roads are clear. If you see a patch of ice ahead of you, brake before you are on it. Try not to brake while you are actually on the ice, and avoid sudden steering maneuvers.

If You Are Caught in a Blizzard

If you are stopped by heavy snow, you could be in a serious situation. You should probably stay with your vehicle unless you know for sure that you are near help and you can hike through the snow. Here are some things to do to summon help and keep yourself and your passengers safe:

- Turn on the hazard warning flashers.
- Tie a red cloth to your vehicle to alert police that you have been stopped by the snow.
- Put on extra clothing or wrap a blanket around you. If you do not have blankets or extra clothing, make body insulators from newspapers, burlap bags, rags, floor mats — anything you can wrap around yourself or tuck under your clothing to keep warm.



You can run the engine to keep warm, but be careful.

⚠CAUTION:

Snow can trap exhaust gases under your vehicle. This can cause deadly CO (carbon monoxide) gas to get inside. CO could overcome you and kill you. You cannot see it or smell it, so you might not know it is in your vehicle. Clear away snow from around the base of your vehicle, especially any that is blocking the exhaust pipe. And check around again from time to time to be sure snow does not collect there.

Open a window just a little on the side of the vehicle that is away from the wind. This will help keep CO out.

Run the engine only as long as you must. This saves fuel. When you run the engine, make it go a little faster than just idle. That is, push the accelerator slightly. This uses less fuel for the heat that you get and it keeps the battery charged. You will need a well-charged battery to restart the vehicle, and possibly for signaling later on with the headlamps. Let the heater run for a while.

Then, shut the engine off and close the window almost all the way to preserve the heat. Start the engine again and repeat this only when you feel really uncomfortable from the cold. But do it as little as possible. Preserve the fuel as long as you can. To help keep warm, you can get out of the vehicle and do some fairly vigorous exercises every half hour or so until help comes.

If Your Vehicle is Stuck in Sand, Mud, Ice, or Snow

Slowly and cautiously spin the wheels to free your vehicle when stuck in sand, mud, ice, or snow. See *Rocking Your Vehicle to Get It Out on page 4-20*.

If your vehicle has a traction system, it can often help to free a stuck vehicle. Refer to your vehicle's traction system in the Index. If the stuck condition is too severe for the traction system to free the vehicle, turn the traction system off and use the rocking method.

⚠CAUTION:

If you let your vehicle's tires spin at high speed, they can explode, and you or others could be injured. The vehicle can overheat, causing an engine compartment fire or other damage. Spin the wheels as little as possible and avoid going above 35 mph (55 km/h) as shown on the speedometer.

For information about using tire chains on your vehicle, see *Tire Chains on page 5-69*.

Rocking Your Vehicle to Get It Out

First, turn the steering wheel left and right to clear the area around the front wheels. Turn the traction control part of the StabiliTrak® System off. See *StabiliTrak® System on page 4-5*. Then shift back and forth between REVERSE (R) 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 you shift, and press lightly on the accelerator pedal when the transmission is in gear. By slowly spinning the wheels in the forward and reverse directions, you will cause a rocking motion that could free your vehicle. If that does not get your vehicle out after a few tries, it might need to be towed out. If your vehicle does need to be towed out, see *Towing Your Vehicle on page 4-25*.

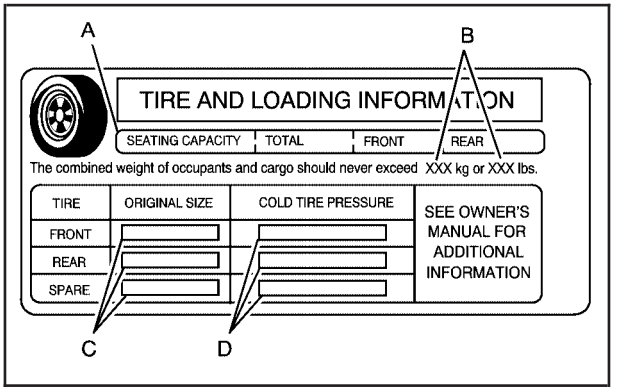
Loading Your Vehicle

It is very important to know how much weight your vehicle can carry. This weight is called the vehicle capacity weight and includes the weight of all occupants, cargo, and all nonfactory-installed options. Two labels on your vehicle show how much weight it may properly carry, the Tire and Loading Information label and the Certification/Tire label.

⚠CAUTION:

Do not load the vehicle any heavier than the Gross Vehicle Weight Rating (GVWR), or either the maximum front or rear Gross Axle Weight Rating (GAWR). If you do, parts on the vehicle can break, and it can change the way your vehicle handles. These could cause you to lose control and crash. Also, overloading can shorten the life of the vehicle.

Tire and Loading Information Label



Example Label

A vehicle specific Tire and Loading Information label is attached to the center pillar (B-pillar) of your vehicle. With the driver's door open, you will find the label attached below the door lock post (striker). The tire and loading information label shows the number of occupant seating positions (A), and the maximum vehicle capacity weight (B) in kilograms and pounds.

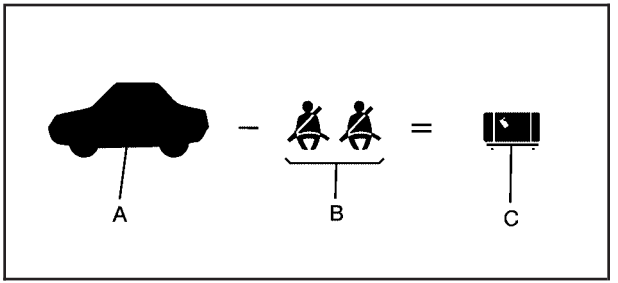
The Tire and Loading Information label also shows the size of the original equipment tires (C) and the recommended cold tire inflation pressures (D). For more information on tires and inflation see *Tires on page 5-49* and *Inflation - Tire Pressure on page 5-56*.

There is also important loading information on the vehicle Certification/Tire label. It tells you the Gross Vehicle Weight Rating (GVWR) and the Gross Axle Weight Rating (GAWR) for the front and rear axle. See "Certification/Tire Label" later in this section.

Steps for Determining Correct Load Limit

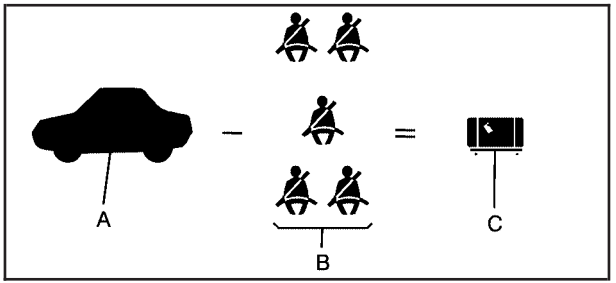
1. Locate the statement “The combined weight of occupants and cargo should never exceed XXX kg or XXX lbs” on your vehicle’s placard.
2. Determine the combined weight of the driver and passengers that will be riding in your vehicle.
3. Subtract the combined weight of the driver and passengers from XXX kg or XXX lbs.
4. The resulting figure equals the available amount of cargo and luggage load capacity. For example, if the “XXX” amount equals 1400 lbs and there will be five 150 lb passengers in your vehicle, the amount of available cargo and luggage load capacity is 650 lbs (1400 – 750 (5 x 150) = 650 lbs).
5. Determine the combined weight of luggage and cargo being loaded on the vehicle. That weight may not safely exceed the available cargo and luggage load capacity calculated in Step 4.
6. If your vehicle will be towing a trailer, 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 for your vehicle.

See *Towing a Trailer on page 4-29* for important information on towing a trailer, towing safety rules, and trailering tips.



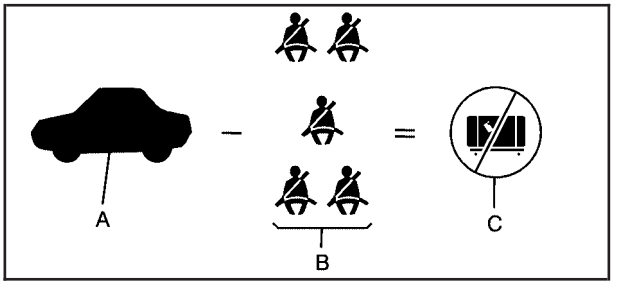
Example 1

Item	Description	Total
A	Vehicle Capacity Weight for Example 1 =	1,000 lbs (453 kg)
B	Subtract Occupant Weight 150 lbs (68 kg) × 2 =	300 lbs (136 kg)
C	Available Occupant and Cargo Weight =	700 lbs (317 kg)



Example 2

Item	Description	Total
A	Vehicle Capacity Weight for Example 2 =	1,000 lbs (453 kg)
B	Subtract Occupant Weight 150 lbs (68 kg) × 5 =	750 lbs (340 kg)
C	Available Cargo Weight =	250 lbs (113 kg)

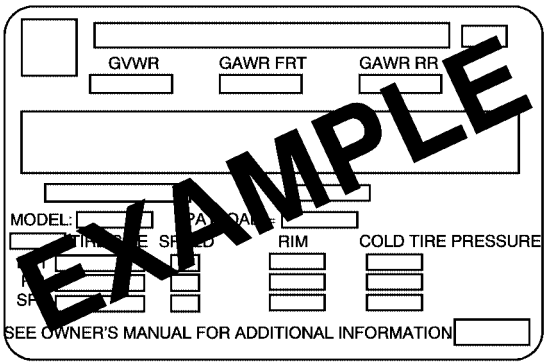


Example 3

Item	Description	Total
A	Vehicle Capacity Weight for Example 3 =	1,000 lbs (453 kg)
B	Subtract Occupant Weight 200 lbs (91 kg) × 5 =	1,000 lbs (453 kg)
C	Available Cargo Weight =	0 lbs (0 kg)

Refer to your vehicle's tire and loading information label for specific information about your vehicle's capacity weight and seating positions. The combined weight of the driver, passengers, and cargo should never exceed your vehicle's capacity weight.

Certification/Tire Label



A vehicle specific Certification/Tire label is attached to the rear edge of the driver's door.

The label shows the gross weight capacity of your vehicle. This is called the Gross Vehicle Weight Rating (GVWR). The GVWR includes the weight of the vehicle, all occupants, fuel, and cargo.

The Certification/Tire label also tells you the maximum weights for the front and rear axles, called the Gross Axle Weight Rating (GAWR).

To find out the actual loads on your front and rear axles, you need to go to a weigh station and weigh your vehicle. Your dealer/retailer can help you with this. Be sure to spread out your load equally on both sides of the centerline.

Never exceed the GVWR for your vehicle or the GAWR for either the front or rear axle.

⚠CAUTION:

Do not load the vehicle any heavier than the Gross Vehicle Weight Rating (GVWR), or either the maximum front or rear Gross Axle Weight Rating (GAWR). If you do, parts on the vehicle can break, and it can change the way your vehicle handles. These could cause you to lose control and crash. Also, overloading can shorten the life of the vehicle.

Notice: **Overloading your vehicle may cause damage. Repairs would not be covered by your warranty. Do not overload your vehicle.**

If you put things inside your 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.

⚠CAUTION:

Things you put inside your vehicle can strike and injure people in a sudden stop or turn, or in a crash.

- **Put things in the cargo area of your vehicle. Try to spread the weight evenly.**
- **Never stack heavier things, like suitcases, inside the vehicle so that some of them are above the tops of the seats.**
- **Do not leave an unsecured child restraint in your vehicle.**
- **When you carry something inside the vehicle, secure it whenever you can.**
- **Do not leave a seat folded down unless you need to.**

Towing

Towing Your Vehicle

To avoid vehicle damage, a platform or flatbed trailer should be used to transport this vehicle. Consult your dealer/retailer or a professional towing service if you need to have your disabled vehicle towed. See *Roadside Assistance Program on page 7-8*.

If you want to tow your vehicle behind another vehicle for recreational purposes (such as behind a motorhome), see “Recreational Vehicle Towing” following.

Recreational Vehicle Towing

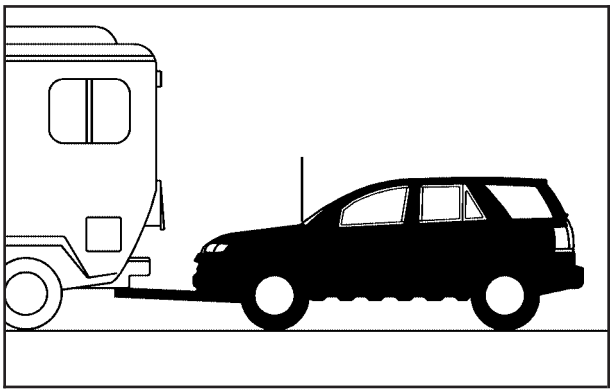
Recreational vehicle towing means towing your vehicle behind another vehicle – such as behind a motorhome. The two most common types of recreational vehicle towing are known as “dinghy towing” (towing your vehicle with all four wheels on the ground) and “dolly towing” (towing your vehicle with two wheels on the ground and two wheels up on a device known as a “dolly”).

With the proper preparation and equipment, many vehicles can be towed in these ways. See “Dinghy Towing” and “Dolly Towing” following in this section.

Here are some important things to consider before you do recreational vehicle towing:

- What’s the towing capacity of the towing vehicle? Be sure you read the tow vehicle manufacturer’s recommendations.
- How far will you tow? Some vehicles have restrictions on how far and how long they can tow.
- Do you have the proper towing equipment? See your dealer/retailer or trailering professional for additional advice and equipment recommendations.
- Is your vehicle ready to be towed? Just as you would prepare your vehicle for a long trip, you’ll want to make sure your vehicle is prepared to be towed. See *Before Leaving on a Long Trip on page 4-14*.

Dinghy Towing



If you have a front-wheel-drive vehicle, it can be dinghy towed from the front. These vehicles may also be towed by putting the front wheels on a dolly. See “Dolly Towing” later in this section.

If you have an all-wheel-drive vehicle, it can be dinghy towed from the front. You can also tow these vehicles by placing them on a platform trailer with all four wheels off of the ground. These vehicles cannot be towed using a dolly.

For vehicles being dinghy towed, the vehicle should be run at the beginning of each day and at each RV fuel stop for about five minutes. This will ensure proper lubrication of transmission components. Re-install the fuse to start the vehicle.

To tow your vehicle from the front with all four wheels on the ground:

1. Position the vehicle to tow and then secure it to the towing vehicle.
2. Shift the transmission to P (Park) and turn the ignition to LOCK/OFF.
3. Set the parking brake.
4. Turn the ignition to ACC/ACCESSORY.
5. Shift the transmission to N (Neutral).
6. To prevent your battery from draining while the vehicle is being towed, remove the 50 amp BATT1 fuse from the underhood fuse block and store in a safe location. See *Underhood Fuse Block on page 5-111*.
7. Release the parking brake.

Notice: **If you tow your vehicle without performing each of the steps listed under "Dinghy Towing," you could damage the automatic transmission. Be sure to follow all steps of the dinghy towing procedure prior to and after towing your vehicle.**

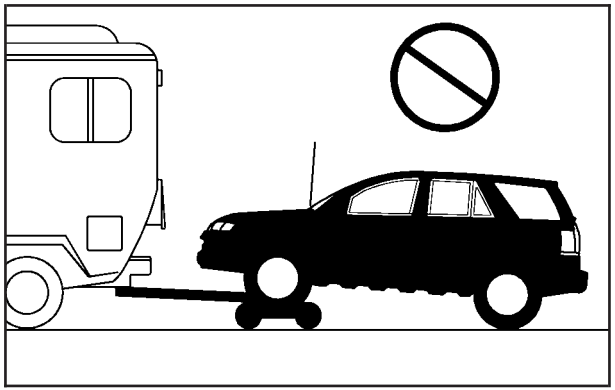
Notice: **If you exceed 65 mph (105 km/h) while towing your vehicle, it could be damaged. Never exceed 65 mph (105 km/h) while towing your vehicle.**

Once you have reached your destination:

1. Set the parking brake.
2. Reinstall the 50 amp BATT1 fuse to the underhood fuse block.
3. Shift the transmission to P (Park), turn the ignition to LOCK/OFF and remove the key from the ignition.
4. Release the parking brake.

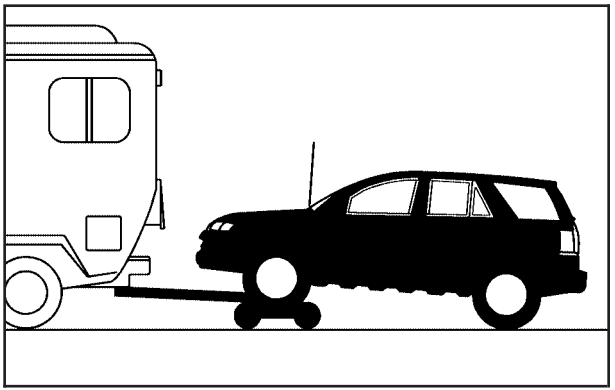
Notice: **Don't tow a vehicle with the front drive wheels on the ground if one of the front tires is a compact spare tire. Towing with two different tire sizes on the front of the vehicle can cause severe damage to the transmission.**

Dolly Towing (All-Wheel-Drive Vehicles)



All-wheel-drive vehicles must not be towed with two wheels on the ground. To properly tow these vehicles, they should be placed on a platform trailer with all four wheels off of the ground or dinghy towed from the front.

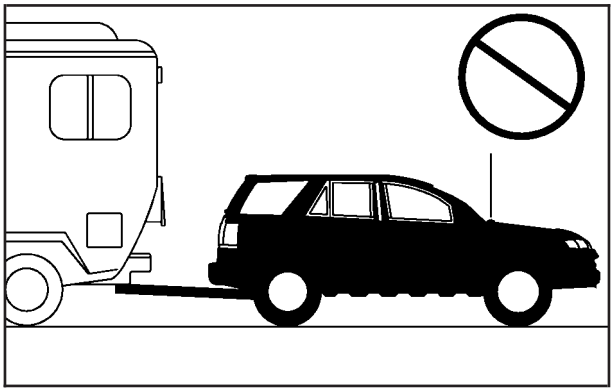
Dolly Towing (Front-Wheel-Drive Vehicles Only)



To tow your front-wheel-drive vehicle from the front with two wheels on the ground:

1. Put the front wheels on a dolly.
2. Move the shift lever to P (Park).
3. Set the parking brake.
4. Clamp the steering wheel in a straight-ahead position with a clamping device designed for towing.
5. Remove the key from the ignition.
6. Secure the vehicle to the dolly.
7. Release the parking brake.

Towing Your Vehicle From the Rear



Notice: **Towing your vehicle from the rear could damage it. Also, repairs would not be covered by the warranty. Never have your vehicle towed from the rear.**

Do not tow your vehicle from the rear.

Towing a Trailer

⚠CAUTION:

If you do not use the correct equipment and drive properly, you can lose control when you pull a trailer. For example, if the trailer is too heavy, the brakes may not work well — or even at all. You and your passengers could be seriously injured. You may also damage your vehicle; the resulting repairs would not be covered by your warranty. Pull a trailer only if you have followed all the steps in this section. Ask your dealer/retailer for advice and information about towing a trailer with your vehicle.

To identify the trailering capacity of your vehicle, you should read the information in “Weight of the Trailer” that appears later in this section. But trailering is different than just driving your vehicle by itself. Trailering means changes in handling, acceleration, braking, durability and fuel economy. Successful, safe trailering takes correct equipment, and it has to be used properly.

That is the reason for this part. In it are many time-tested, important trailering tips and safety rules. Many of these are important for your safety and that of your passengers. So please read this section carefully before you pull a trailer.

Load-pulling components such as the engine, transmission, rear axle, wheel assemblies and tires are forced to work harder against the drag of the added weight. The engine is required to operate at relatively higher speeds and under greater loads, generating extra heat. What's more, the trailer adds considerably to wind resistance, increasing the pulling requirements.

If You Do Decide to Pull a Trailer

If you do, here are some important points:

- There are many different laws, including speed limit restrictions, having to do with trailering. Make sure your rig will be legal, not only where you live but also where you will be driving. A good source for this information can be state or provincial police.
- Consider using a sway control. You can ask a hitch dealer/retailer about sway controls.
- Do not tow a trailer at all during the first 500 miles (805 km) your new vehicle is driven. Your engine, axle or other parts could be damaged.
- Then, during the first 500 miles (805 km) that you tow a trailer, do not drive over 50 mph (80 km/h) and do not make starts at full throttle. This helps your engine and other parts of your vehicle wear in at the heavier loads.
- Obey speed limit restrictions when towing a trailer. Do not drive faster than the maximum posted speed for trailers, or no more than 55 mph (90 km/h), to save wear on your vehicle's parts.
- You can tow in DRIVE (D). You may want to shift the transmission to LOW (L) or, if necessary, a lower gear selection if the transmission shifts too often (e.g., under heavy loads and/or hilly conditions). See "Tow/Haul Mode" later in this section.

Three important considerations have to do with weight:

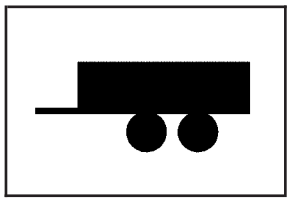
- The weight of the trailer.
- The weight of the trailer tongue.
- And the total weight on your vehicle's tires.

Tow/Haul Mode

Tow/Haul is a feature that assists when pulling a heavy trailer or a large or heavy load. The purpose of the Tow/Haul mode is to:

- Reduce the frequency and improve the predictability of transmission shifts when pulling a heavy trailer or a large or heavy load.
- Provide the same solid shift feel when pulling a heavy trailer or a large or heavy load as when the vehicle is unloaded.

- Improve control of vehicle speed while requiring less throttle pedal activity when pulling a heavy trailer or a large or heavy load.
- Increase the charging system voltage to assist in recharging a battery installed in a trailer.



Press this button located on the console to enable/disable the Tow/Haul mode.

The Tow/Haul light on the instrument panel will come on to indicate that Tow/Haul mode has been selected.

Tow/Haul may be turned off by pressing the button again, at which time the indicator light on the instrument panel will turn off. The vehicle will automatically turn off Tow/Haul every time it is started.

Tow/Haul is designed to be most effective when the vehicle and trailer combined weight is at least 75 percent of the vehicle's Gross Combined Weight Rating (GCWR). See Weight of the Trailer later in this section. Tow/Haul is most useful under the following driving conditions:

- When pulling a heavy trailer or a large or heavy load through rolling terrain.
- When pulling a heavy trailer or a large or heavy load in stop and go traffic.
- When pulling a heavy trailer or a large or heavy load in busy parking lots where improved low speed control of the vehicle is desired.

Operating the vehicle in Tow/Haul when lightly loaded or with no trailer at all will not cause damage. However, there is no benefit to the selection of Tow/Haul when the vehicle is unloaded. Such a selection when unloaded may result in unpleasant engine and transmission driving characteristics and reduced fuel economy. Tow/Haul is recommended only when pulling a heavy trailer or a large or heavy load.

Weight of the Trailer

How heavy can a trailer safely be?

It depends on how you plan to use your rig. For example, speed, altitude, road grades, outside temperature and how much your vehicle is used to pull a trailer are all important. It can also depend on any special equipment that you have on your 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.

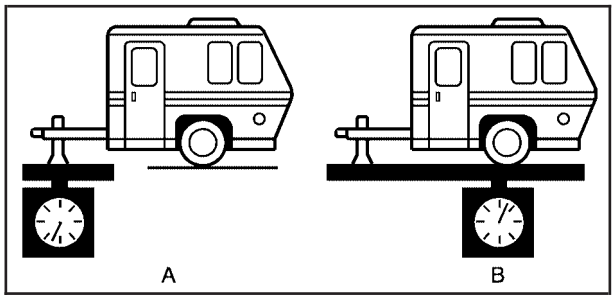
Look in the following chart to find the maximum trailer weight for your vehicle.

Package	Maximum Trailer Weight	*GCWR
Front-Wheel Drive	2,000 lbs (907 kg)	7,500 lbs (3 402 kg)
**Front-Wheel Drive	4,500 lbs (2 041 kg)	9,500 lbs (4 309 kg)
All-Wheel Drive	2,000 lbs (907 kg)	7,700 lbs (3 493 kg)
**All-Wheel Drive	4,500 lbs (2 041 kg)	9,700 lbs (4 400 kg)
**Includes optional trailer towing package (V92)		
*The Gross Combination Weight Rating (GCWR) is the total allowable weight of the completely loaded vehicle and trailer including any passengers, cargo, equipment and conversions. The GCWR for your vehicle should not be exceeded.		

Ask your dealer/retailer for our trailering information or advice, or write us at our Customer Assistance Offices. See *Customer Assistance Offices on page 7-6* for more information.

Weight of the Trailer Tongue

The tongue load (A) of any trailer is an important weight to measure because it affects the total or gross weight of your vehicle. The Gross Vehicle Weight (GVW) includes the curb weight of the vehicle, any cargo you may carry in it, and the people who will be riding in the vehicle. If you have a lot of options, equipment, passengers or cargo in the vehicle, it will reduce the tongue weight your vehicle can carry, which will also reduce the trailer weight your vehicle can tow. And if you tow a trailer, you must add the tongue load to the GVW because your vehicle will be carrying that weight, too. See *Loading Your Vehicle on page 4-20* for more information about your vehicle's maximum load capacity.



If you are using a weight-carrying hitch or a weight-distributing hitch, the trailer tongue (A) should weigh 10-15 percent of the total loaded trailer weight (B).

After you have loaded your trailer, weigh the trailer and then the tongue, separately, to see if the weights are proper. If they are not, you may be able to get them right simply by moving some items around in the trailer.

Trailering may also be limited by the vehicle's ability to carry tongue weight. Tongue weight cannot cause the vehicle to exceed the GVWR (Gross Vehicle Weight Rating) or the RGAWR (Rear Gross Axle Weight Rating). The effect of additional weight may reduce your trailering capacity more than the total of the additional weight.

Consider the following example:

A vehicle model base weight is 5,500 lbs (2 495 kg); 2,800 lbs (1 270 kg) at the front axle and 2,700 lbs (1 225 kg) at the rear axle. It has a GVWR of 7,200 lbs (3 266 kg), a RGAWR of 4,000 lbs (1 814 kg) and a GCWR (Gross Combination Weight Rating) of 14,000 lbs (6 350 kg). The trailer rating should be:

14,000 lbs (6350 kg)	GCWR
–5,500 lbs (2495 kg)	Vehicle Weight
8,500 lbs (3855 kg)	Trailer Rating

You can expect tongue weight to be at least 10 percent of trailer weight (850 lbs (386 kg)) and because the weight is applied well behind the rear axle, the effect on the rear axle will be greater than just the weight itself, as much as 1.5 times as much. The weight at the rear axle could be 850 lbs (386 kg) X 1.5 = 1,275 lbs (578 kg). Since the rear axle already weighs 2,700 lbs (1 225 kg), adding 1,275 lbs (578 kg) brings the total to 3,975 lbs (1 803 kg). This is very close to, but within the limit for RGAWR as well. The vehicle is set to trailer up to 8,500 lbs (3 856 kg).

But let us say your specific vehicle is equipped with some of the latest options and you have a front seat passenger and two rear seat passengers with some luggage and gear in the vehicle as well. You may add 300 lbs (136 kg) to the front axle weight and 400 lbs (181 kg) to the rear axle weight. Your vehicle now weighs:

2,800 lbs (1270 kg)	+	300 lbs (136 kg)	Front
2,700 lbs (1225 kg)	+	400 lbs (181 kg)	Rear
6,200 lbs (2812 kg)			Total

Weight is still below 7,200 lbs (3 266 kg) and you may think that you should subtract 700 additional pounds (318 kg) from your trailering capacity to stay within GCWR limits. Your maximum trailer would only be 7,800 lbs (3 538 kg). You may go further and think you must limit tongue weight to less than 1,000 lbs (454 kg) to avoid exceeding GVWR. But, you must still consider the effect on the rear axle. Because your rear axle now weighs 3,100 lbs (1 406 kg), you can only put 900 lbs (408 kg) on the rear axle without exceeding RGAWR.

The effect of tongue weight is about 1.5 times the actual weight. Dividing the 900 lbs (408 kg) by 1.5 leaves you with being able to handle only 600 lbs (272 kg) of tongue weight. Since tongue weight is usually at least 10 percent of total loaded trailer weight, you can expect that the largest trailer your vehicle can properly handle is 6,000 lbs (2 721 kg).

It is important that you make sure your vehicle does not exceed any of its ratings — GCWR, GVWR, RGAWR, Maximum Trailer Rating or Tongue Weight. The only way to be sure you are not exceeding any of these ratings is to weigh your vehicle and trailer.

Total Weight on Your Vehicle's Tires

Be sure your vehicle's tires are inflated to the upper limit for cold tires. You will find these numbers on the Certification/Tire label. See *Loading Your Vehicle on page 4-20*. Then be sure you do not go over the GVW limit for your vehicle, including the weight of the trailer tongue.

Hitches

It is important to have the correct hitch equipment. Crosswinds, large trucks going by and rough roads are a few reasons why you will need the right hitch. Here are some rules to follow:

- The rear bumper on your 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 you have to make any holes in the body of your vehicle when you install a trailer hitch? If you do, then be sure to seal the holes later when you remove the hitch. If you do not seal them, deadly carbon monoxide (CO) from your exhaust can get into your vehicle. See *Engine Exhaust on page 2-38*. Dirt and water can, too.

Safety Chains

You should always attach chains between your vehicle and your trailer. Cross the safety chains under the tongue of the trailer so that the tongue will not drop to the road if it becomes separated from the hitch. Instructions about safety chains may be provided by the hitch manufacturer or by the trailer manufacturer. Follow the manufacturer's recommendation for attaching safety chains and do not attach them to the bumper. Always leave just enough slack so you can turn with your rig. And, never allow safety chains to drag on the ground.

Trailer Brakes

If you tow more than 1,000 lbs (450 kg), use trailer brakes. Because your vehicle has Antilock brakes, do not try to tap into your vehicle's hydraulic brake system. If you do, both brake systems will not work well, or at all.

Be sure to read and follow the instructions for the trailer brakes so you will be able to install, adjust and maintain them properly.

Driving with a Trailer

Towing a trailer requires a certain amount of experience. Before setting out for the open road, you will want to get to know your rig. Acquaint yourself with the feel of handling and braking with the added weight of the trailer. And always keep in mind that the vehicle you are driving is now a good deal longer and not nearly as responsive as your vehicle is by itself.

Before you start, check all trailer hitch parts and attachments, safety chains, electrical connector, lamps, tires and mirror adjustment. If the trailer has electric brakes, start your vehicle and trailer moving and then apply the trailer brake controller by hand to be sure the brakes are working. This lets you check your electrical connection at the same time.

During your trip, check occasionally to be sure that the load is secure, and that the lamps and any trailer brakes are still working.

Following Distance

Stay at least twice as far behind the vehicle ahead as you would when driving your vehicle without a trailer. This can help you avoid situations that require heavy braking and sudden turns.

Passing

You will need more passing distance up ahead when you are towing a trailer. And, because you are a good deal longer, you will need to go much farther beyond the passed vehicle before you can return to your lane.

Backing Up

Hold the bottom of the steering wheel with one hand. Then, to move the trailer to the left, just 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. Your vehicle could be damaged. Avoid making very sharp turns while trailering.**

When you are turning with a trailer, make wider turns than normal. Do this so your trailer will not strike soft shoulders, curbs, road signs, trees or other objects. Avoid jerky or sudden maneuvers. Signal well in advance.

Turn Signals When Towing a Trailer

When you tow a trailer, your vehicle may need a different turn signal flasher and/or extra wiring. Check with your dealer/retailer. The arrows on your instrument panel will flash whenever you signal a turn or lane change. Properly hooked up, the trailer lamps will also flash, telling other drivers you're about to turn, change lanes or stop.

When towing a trailer, the arrows on your instrument panel will flash for turns even if the bulbs on the trailer are burned out. Thus, you may think drivers behind you are seeing your signal when they are not. It is important to check occasionally to be sure the trailer bulbs are still working.

Driving on Grades

Your vehicle is designed primarily as a passenger and load carrying vehicle. If you tow a trailer, your vehicle will require more frequent maintenance due to the additional load. Because of the added load of the trailer, your vehicle's engine may overheat on hot days, when going up a long or steep grade with a trailer. If the engine coolant temperature gage indicates overheating, turn off the air conditioning to reduce engine load, pull off the road and stop in a safe spot.

Reduce speed and shift to a lower gear before you start down a long or steep downgrade. If you do not shift down, you might have to use your brakes so much that they would get hot and no longer work well.

On a long uphill grade, shift down and reduce your speed to around 55 mph (88 km/h) to reduce the possibility of the engine and the transmission overheating.

Parking on Hills

⚠CAUTION:

You really should not park your vehicle, with a trailer attached, on a hill. If something goes wrong, your rig could start to move. People can be injured, and both your vehicle and the trailer can be damaged.

But if you ever have to park your rig on a hill, here is how to do it:

1. Apply your regular brakes, but do not shift into PARK (P).

   When parking uphill, turn your wheels away from the curb. When parking downhill, turn your wheels into the curb.
2. Have someone place chocks behind the trailer wheels.
3. When the chocks are in place, release the regular brakes until the chocks absorb the load.
4. Reapply the regular brakes. Then apply your parking brake and shift into PARK (P).
5. Release the regular brakes.

When You Are Ready to Leave After Parking on a Hill

1. Apply your regular brakes and hold the pedal down while you:
   - start your engine,
   - shift into a gear, and
   - release the parking brake.
2. Let up on the brake pedal.
3. Drive slowly until the trailer is clear of the chocks.
4. Stop and have someone pick up and store the chocks.

Maintenance When Trailer Towing

Your vehicle will need service more often when you are pulling a trailer. See *Scheduled Maintenance on page 6-4* for more information. Things that are especially important in trailer operation are automatic transmission fluid (do not overfill), engine oil, axle lubricant, drive belt, cooling system and brake system. Each of these is covered in this manual, and the Index will help you find them quickly. If you are trailering, it is a good idea to review this information before you start your trip.

Check periodically to see that all hitch nuts and bolts are tight.

Trailer Wiring Harness

Your vehicle is equipped with the following wiring harness for towing a trailer.

Basic Trailer Wiring

The trailer wiring harness, with a seven-pin connector, is located at the rear of the vehicle and is tied to the vehicle's frame. The harness connector can be plugged into a seven-pin universal heavy-duty trailer connector available through your dealer/retailer.

The seven-wire harness contains the following trailer circuits:

- Yellow: Left Stop/Turn Signal
- Dark Green: Right Stop/Turn Signal
- Brown: Taillamps
- Black: Ground
- Light Green: Back-up Lamps
- Red/Black: Battery Feed
- Dark Blue: Trailer Brake*

*The fuse for this circuit is installed in the underhood electrical center, but the wires are not connected. They should be connected by your dealer/retailer or a qualified service center.

If the back-up lamp circuit is not functional, contact your dealer/retailer.

If you are charging a remote (non-vehicle) battery, press the Tow/Haul mode switch located on the center console near the climate controls. This will boost the vehicle system voltage and properly charge the battery. If the trailer is too light for Tow/Haul mode, you can turn on the headlamps (Non-HID only) as a second way to boost the vehicle system and charge the battery.

Engine Cooling When Trailer Towing

Your cooling system may temporarily overheat during severe operating conditions. See *Engine Overheating on page 5-23*.

Section 5 Service and Appearance Care

Service 5-3
- Accessories and Modifications 5-3
- California Proposition 65 Warning 5-4
- California Perchlorate Materials Requirements 5-4
- Doing Your Own Service Work 5-4
- Adding Equipment to the Outside of Your Vehicle 5-5

Fuel 5-5
- Gasoline Octane 5-5
- Gasoline Specifications 5-5
- California Fuel 5-6
- Additives 5-6
- Fuels in Foreign Countries 5-7
- Filling the Tank 5-8
- Filling a Portable Fuel Container 5-10

Checking Things Under the Hood 5-10
- Hood Release 5-11
- Engine Compartment Overview 5-12
- Engine Oil 5-13
- Engine Oil Life System 5-16
- Engine Air Cleaner/Filter 5-18
- Automatic Transmission Fluid 5-19
- Engine Coolant 5-20
- Radiator Pressure Cap 5-23
- Engine Overheating 5-23
- Overheated Engine Protection Operating Mode 5-25
- Cooling System 5-26
- Power Steering Fluid 5-32
- Windshield Washer Fluid 5-33
- Brakes 5-34
- Battery 5-37
- Jump Starting 5-38

All-Wheel Drive 5-43

Headlamp Aiming 5-44

Bulb Replacement 5-45
- High Intensity Discharge (HID) Lighting 5-45
- Halogen Bulbs 5-45
- Taillamps, Turn Signal, Stoplamps and Sidemarker Lamps 5-46
- License Plate Lamp 5-47
- Replacement Bulbs 5-47

Windshield Replacement 5-47

Windshield Wiper Blade Replacement 5-48

Tires 5-49
- Tire Sidewall Labeling 5-50
- Tire Terminology and Definitions 5-53
- Inflation - Tire Pressure 5-56
- Tire Pressure Monitor System 5-57

Section 5 Service and Appearance Care

Tire Pressure Monitor Operation 5-59
Tire Inspection and Rotation 5-62
When It Is Time for New Tires 5-63
Buying New Tires 5-64
Different Size Tires and Wheels 5-66
Uniform Tire Quality Grading 5-66
Wheel Alignment and Tire Balance 5-68
Wheel Replacement 5-68
Tire Chains 5-69
If a Tire Goes Flat 5-70
Tire Sealant and Compressor Kit 5-71
Changing a Flat Tire 5-80
Removing the Spare Tire and Tools 5-81
Removing the Flat Tire and Installing the Spare Tire 5-84
Secondary Latch System 5-89
Storing a Flat or Spare Tire and Tools 5-92
Compact Spare Tire 5-96

Appearance Care 5-96
Interior Cleaning 5-96
Fabric/Carpet 5-98
Leather 5-98
Instrument Panel, Vinyl, and Other Plastic Surfaces 5-99
Care of Safety Belts 5-99
Weatherstrips 5-99
Washing Your Vehicle 5-100
Cleaning Exterior Lamps/Lenses 5-100
Finish Care 5-101
Windshield, Backglass, and Wiper Blades 5-102
Aluminum or Chrome-Plated Wheels and Trim 5-102
Tires 5-103
Sheet Metal Damage 5-103
Finish Damage 5-103
Underbody Maintenance 5-104
Chemical Paint Spotting 5-104
Vehicle Care/Appearance Materials 5-104

Vehicle Identification 5-105
Vehicle Identification Number (VIN) 5-105
Service Parts Identification Label 5-106

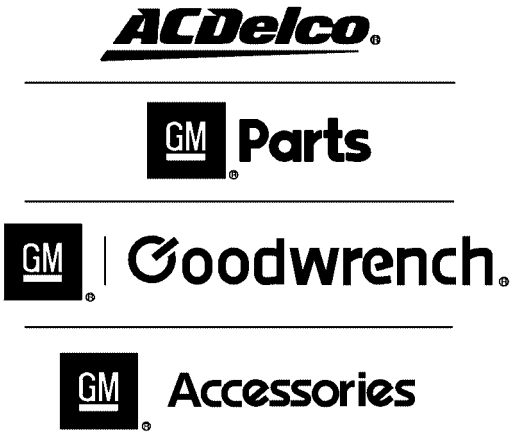
Electrical System 5-106
High Voltage Devices and Wiring 5-106
Add-On Electrical Equipment 5-107
Windshield Wiper Fuses 5-107
Power Windows and Other Power Options 5-107
Fuses and Circuit Breakers 5-108
Instrument Panel Fuse Block 5-108
Underhood Fuse Block 5-111

Capacities and Specifications 5-116

Service

For service and parts needs, visit your dealer/retailer. You will receive genuine GM parts and GM-trained and supported service people.

Genuine GM parts have one of these marks:



Accessories and Modifications

When non-dealer/non-retailer accessories are added to your vehicle they can affect your vehicle's performance and safety, including such things as, airbags, braking, stability, ride and handling, emissions systems, aerodynamics, durability, and electronic systems like antilock brakes, traction control and stability control. Some of these accessories could even cause malfunction or damage not covered by warranty.

GM Accessories are designed to complement and function with other systems on your vehicle. Your GM dealer/retailer can accessorize your vehicle using genuine GM Accessories. When you go to your GM dealer/retailer and ask for GM Accessories, you will know that GM-trained and supported service technicians will perform the work using genuine GM Accessories.

Also, see *Adding Equipment to Your Airbag-Equipped Vehicle on page 1-74*.

California Proposition 65 Warning

Most motor vehicles, including this one, contain and/or emit chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. Engine exhaust, many parts and systems (including some inside the vehicle), many fluids, and some component wear by-products contain and/or emit these chemicals.

California Perchlorate Materials Requirements

Certain types of automotive applications, such as airbag initiators, seat belt pretensioners, and lithium batteries contained in remote keyless entry transmitters, may contain perchlorate materials. Special handling may be necessary. For additional information, see www.dtsc.ca.gov/hazardouswaste/perchlorate.

Doing Your Own Service Work

⚠CAUTION:

You can be injured and your vehicle could be damaged if you try to do service work on a vehicle without knowing enough about it.

- **Be sure you have sufficient knowledge, experience, the proper replacement parts, and tools before you attempt any vehicle maintenance task.**
- **Be sure to use the proper nuts, bolts, and other fasteners. English and metric fasteners can be easily confused. If you use the wrong fasteners, parts can later break or fall off. You could be hurt.**

If you want to do some of your own service work, you should use the proper service manual. It tells you much more about how to service your vehicle than this manual can. To order the proper service manual, see *Service Publications Ordering Information on page 7-16*.

Your vehicle has an airbag system. Before attempting to do your own service work, see *Servicing Your Airbag-Equipped Vehicle on page 1-74*.

You should keep a record with all parts receipts and list the mileage and the date of any service work you perform. See *Maintenance Record on page 6-15*.

Adding Equipment to the Outside of Your Vehicle

Things you might add to the outside of your vehicle can affect the airflow around it. This can cause wind noise and can affect fuel economy and windshield washer performance. Check with your dealer/retailer before adding equipment to the outside of your vehicle.

Fuel

Use of the recommended fuel is an important part of the proper maintenance of your vehicle. To help keep the engine clean and maintain optimum vehicle performance, we recommend the use of gasoline advertised as TOP TIER Detergent Gasoline.

Gasoline Octane

Use regular unleaded gasoline with a posted octane rating of 87 or higher. For best performance or trailer towing, you could choose to use middle grade 89 octane unleaded gasoline. If the octane rating is less than 87, you might notice an audible knocking noise when you drive, commonly referred to as spark knock. If this occurs, use a gasoline rated at 87 octane or higher as soon as possible. If you are using gasoline rated at 87 octane or higher and you hear heavy knocking, the engine needs service.

Gasoline Specifications

At a minimum, gasoline should meet ASTM specification D 4814 in the United States or CAN/CGSB-3.5 or 3.511 in Canada. Some gasolines contain an octane-enhancing additive called methylcyclopentadienyl manganese tricarbonyl (MMT). We recommend against the use of gasolines containing MMT. See *Additives on page 5-6* for additional information.

California Fuel

If your vehicle is certified to meet California Emissions Standards, it is designed to operate on fuels that meet California specifications. See the underhood emission control label. If this fuel is not available in states adopting California emissions standards, your vehicle will operate satisfactorily on fuels meeting federal specifications, but emission control system performance might be affected. The malfunction indicator lamp could turn on and your vehicle might fail a smog-check test. See *Malfunction Indicator Lamp on page 3-45*. If this occurs, return to your authorized dealer/retailer for diagnosis. If it is determined that the condition is caused by the type of fuel used, repairs might not be covered by the vehicle warranty.

Additives

To provide cleaner air, all gasolines in the United States are now required to contain additives that help prevent engine and fuel system deposits from forming, allowing the emission control system to work properly. In most cases, you should not have to add anything to the fuel. However, some gasolines contain only the minimum amount of additive required to meet U.S. Environmental Protection Agency regulations. To help keep fuel injectors and intake valves clean, or if your vehicle experiences problems due to dirty injectors or valves, look for gasoline that is advertised as TOP TIER Detergent Gasoline. Also, your dealer/retailer has additives that will help correct and prevent most deposit-related problems.

Gasolines containing oxygenates, such as ethers and ethanol, and reformulated gasolines might be available in your area. We recommend that you use these gasolines, if they comply with the specifications described earlier. However, E85 (85% ethanol) and other fuels containing more than 10% ethanol must not be used in vehicles that were not designed for those fuels.

Notice: **Your 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 your warranty.**

Some gasolines that are not reformulated for low emissions can contain an octane-enhancing additive called methylcyclopentadienyl manganese tricarbonyl (MMT); ask the attendant where you buy gasoline whether the fuel contains MMT. We recommend against the use of such gasolines.

Fuels containing MMT can reduce the life of spark plugs and the performance of the emission control system could be affected. The malfunction indicator lamp might turn on. If this occurs, return to your dealer/retailer for service.

Fuels in Foreign Countries

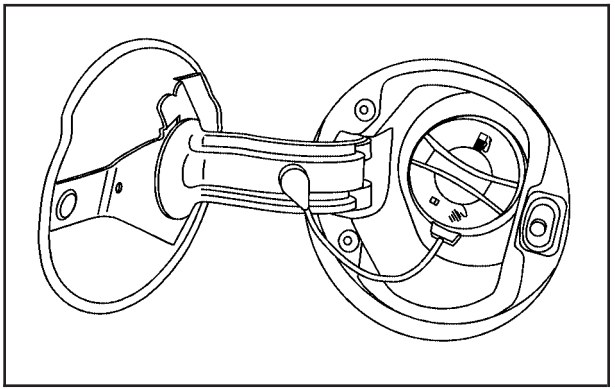
If you plan on driving in another country outside the United States or Canada, the proper fuel might be hard to find. Never use leaded gasoline or any other fuel not recommended in the previous text on fuel. Costly repairs caused by use of improper fuel would not be covered by your warranty.

To check the fuel availability, ask an auto club, or contact a major oil company that does business in the country where you will be driving.

Filling the Tank

⚠CAUTION:

Fuel vapor 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 pump island. Turn off your engine when you are refueling. Do not smoke if you are near fuel or refueling your vehicle. Do not use cellular phones. Keep sparks, flames, and smoking materials away from fuel. Do not leave the fuel pump unattended when refueling your 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 tethered fuel cap is located behind a hinged fuel door on the driver's side of the vehicle.

To open the fuel door, apply pressure in the center of the rear edge of the fuel door and it will pop open.

To remove the fuel cap, turn it slowly counterclockwise. The fuel cap has a spring in it; if the cap is released too soon, it will spring back to the right.

While refueling, hang the tethered fuel cap from the hook on the fuel door.

⚠CAUTION:

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 your 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.

Be careful not to spill fuel. Do not top off or overfill the tank and wait a few seconds after you have finished pumping before removing the nozzle. Clean fuel from painted surfaces as soon as possible. See *Washing Your Vehicle on page 5-100*.

When replacing the fuel cap, turn it clockwise until it clicks. Make sure the cap is fully installed. The diagnostic system can determine if the fuel cap has been left off or improperly installed. This would allow fuel to evaporate into the atmosphere. See *Malfunction Indicator Lamp on page 3-45*.

If your vehicle has a Driver Information Center (DIC), the TIGHTEN GAS CAP message will be displayed if the fuel cap is not properly installed.

⚠CAUTION:

If a fire starts while you are refueling, do not remove the nozzle. Shut off the flow of fuel by shutting off the pump or by notifying the station attendant. Leave the area immediately.

Notice: **If you need a new fuel cap, be sure to get the right type. Your dealer/retailer can get one for you. If you get the wrong type, it may not fit properly. This may cause your malfunction indicator lamp to light and may damage your fuel tank and emissions system. See *Malfunction Indicator Lamp on page 3-45*.**

Filling a Portable Fuel Container

⚠CAUTION:

Never fill a portable fuel container while it is in your vehicle. Static electricity discharge from the container can ignite the fuel vapor. You can be badly burned and your 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 trunk, pickup bed, or on any surface other than the ground.**
- **Bring the fill nozzle in contact with the inside of the fill opening before operating the nozzle. Contact should be maintained until the filling is complete.**
- **Do not smoke while pumping fuel.**
- **Do not use a cellular phone while pumping fuel.**

Checking Things Under the Hood

⚠CAUTION:

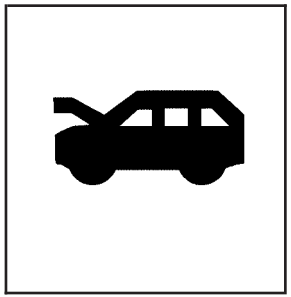
An electric fan under the hood can start up and injure you even when the engine is not running. Keep hands, clothing, and tools away from any underhood electric fan.

⚠CAUTION:

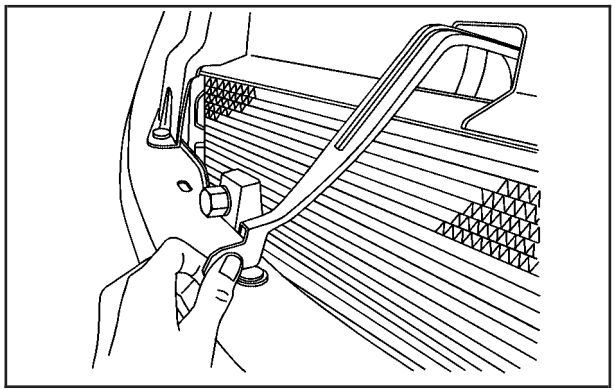
Things that burn can get on hot engine parts and start a fire. These include liquids like fuel, oil, coolant, brake fluid, windshield washer and other fluids, and plastic or rubber. You or others could be burned. Be careful not to drop or spill things that will burn onto a hot engine.

Hood Release

To open the hood, do the following:



1. Pull the hood release handle with this symbol on it. It is located under the instrument panel on the driver side of the vehicle.



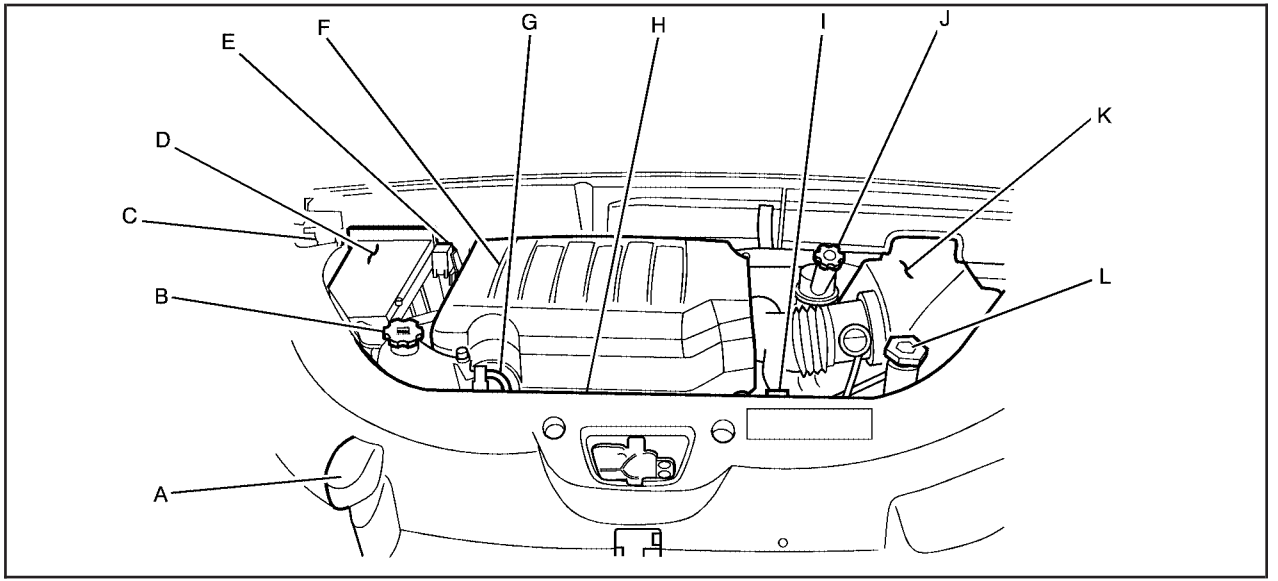
2. At the front of the vehicle, pull up on the bottom center of the grille, and push the secondary hood release to the left.
3. After you have partially lifted the hood, a gas strut automatically lifts and holds the hood in the fully open position.

Before closing the hood, be sure all filler caps are on properly.

Pull the hood down to close. Lower the hood until the lifting pressure of the strut is reduced. Then allow the hood to fall and latch into place under its own weight. Check to make sure the hood is closed. If the hood does not fully latch, gently push the hood down at the front and center until it is completely latched.

Engine Compartment Overview

When you lift the hood, here is what you will see:



A. Radiator Pressure Cap (Out of View). See *Radiator Pressure Cap on page 5-23*.

B. Engine Coolant Recovery Cap. See *Cooling System on page 5-26*.

C. Remote Negative (–) Terminal. See *Jump Starting on page 5-38*.

D. Underhood Fuse Block. See *Underhood Fuse Block on page 5-111*.

E. Remote Positive (+) Terminal. See *Jump Starting on page 5-38*.

F. Power Steering Fluid Reservoir (Out of View). See *Power Steering Fluid on page 5-32*.

G. Engine Oil Fill Cap. See “When to Add Engine Oil” under *Engine Oil on page 5-13*.

H. Engine Oil Dipstick. See “Checking Engine Oil” under *Engine Oil on page 5-13*.

I. Automatic Transmission Fluid Dipstick. See “Checking the Fluid Level” under *Automatic Transmission Fluid on page 5-19*.

J. Brake Master Cylinder Reservoir. See “Brake Fluid” under *Brakes on page 5-34*.

K. Engine Air Cleaner/Filter. See *Engine Air Cleaner/Filter on page 5-18*.

L. Windshield Washer Fluid Reservoir. See “Adding Washer Fluid” under *Windshield Washer Fluid on page 5-33*.

Engine Oil

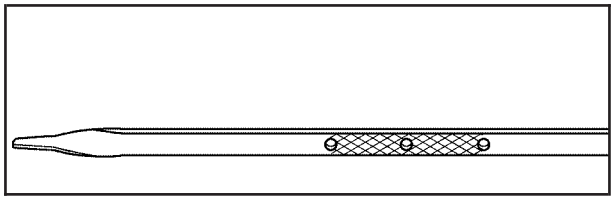
Checking Engine Oil

It is a good idea to check the engine oil every time you get fuel. In order to get an accurate reading, the oil must be warm and the vehicle must be on level ground.

The engine oil dipstick handle is a yellow loop. See *Engine Compartment Overview on page 5-12* for the location of the engine oil dipstick.

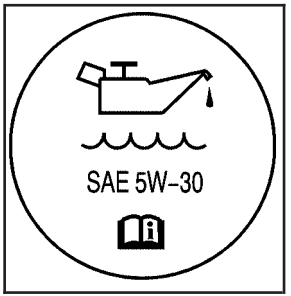
1. Turn off the engine and give the oil several minutes to drain back into the oil pan. If you do not do this, the oil dipstick might not show the actual level.
2. Pull out the dipstick and clean it with a paper towel or cloth, then push it back in all the way. Remove it again, keeping the tip down, and check the level.

When to Add Engine Oil



If the oil is below the cross-hatched area at the tip of the dipstick, add at least one quart/liter of the recommended oil. This section explains what kind of oil to use. For engine oil crankcase capacity, see *Capacities and Specifications on page 5-116*.

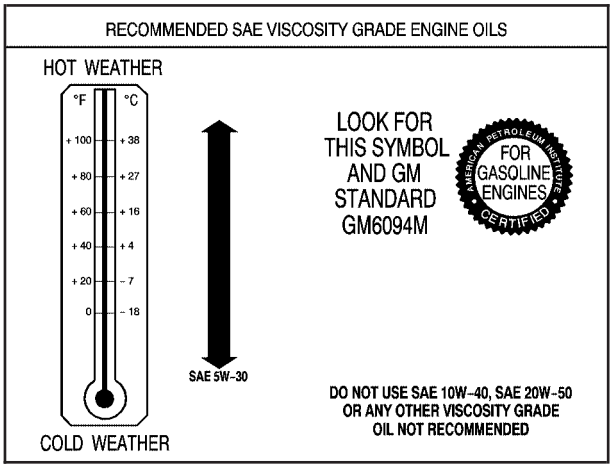
Notice: **Do not add too much oil. If the engine has so much oil that the oil level gets above the cross-hatched area that shows the proper operating range, the engine could be damaged.**



See *Engine Compartment Overview on page 5-12* for the location of the engine oil fill cap.

Be sure to add enough oil to put the level somewhere in the proper operating range in the cross-hatched area. Push the dipstick all the way back in when you are through.

What Kind of Engine Oil to Use



Look for three things:

- GM6094M

  Your vehicle's engine requires oil meeting GM Standard GM6094M. Look for and use only an oil that meets GM Standard GM6094M.

- SAE 5W-30

  As shown in the viscosity chart, SAE 5W-30 is best for your vehicle.

  These numbers on an oil container show its viscosity, or thickness. Do not use other viscosity oils such as SAE 20W-50.

- Oils meeting these requirements should have the starburst symbol on the container. This symbol indicates that the oil has been certified by the American Petroleum Institute (API).

Look for this information on the oil container, and use only those oils that are identified as meeting GM Standard GM6094M and have the starburst symbol on the front of the oil container.

Notice: **Use only engine oil identified as meeting GM Standard GM6094M and showing the American Petroleum Institute Certified For Gasoline Engines starburst symbol. Failure to use the recommended oil can result in engine damage not covered by your warranty.**

If you are in an area of extreme cold, where the temperature falls below –20°F (–29°C), it is recommended that you use either an SAE 5W-30 synthetic oil or an SAE 0W-30 oil. Both provide easier cold starting and better protection for the engine at extremely low temperatures.

Engine Oil Additives

Do not add anything to the oil. The recommended oils with the starburst symbol that meet GM Standard GM6094M are all you need for good performance and engine protection.

Engine Oil Life System

When to Change Engine Oil

Your vehicle has a computer system that lets you know when to change the engine oil and filter. This is based on engine revolutions and engine temperature, and not on mileage. Based on driving conditions, the mileage at which an oil change will be indicated can vary considerably. For the oil life system to work properly, you must reset the system every time the oil is changed.

When the system has calculated that oil life has been diminished, it will indicate that an oil change is necessary. A CHANGE ENGINE OIL SOON message will come on. Change the oil as soon as possible within the next 600 miles (1 000 km). It is possible that, if you are driving under the best conditions, the oil life system might not indicate that an oil change is necessary for over a year. However, the engine oil and filter must be changed at least once a year and at this time the system must be reset. Your dealer/retailer has trained service people who will perform this work using genuine parts and reset the system. It is also important to check the oil regularly and keep it at the proper level.

If the system is ever reset accidentally, you must change the oil at 3,000 miles (5 000 km) since your last oil change. Remember to reset the oil life system whenever the oil is changed.

How to Reset the Engine Oil Life System

The Engine Oil Life System calculates when to change the engine oil and filter based on vehicle use. Whenever the oil is changed, reset the system so it can calculate when the next oil change is required. If a situation occurs where you change the oil prior to a CHANGE ENGINE OIL SOON message being turned on, reset the system.

To reset the Engine Oil Life System:

1. Turn the ignition to ON/RUN, with the engine off.
2. Press the vehicle information button until OIL LIFE REMAINING displays.
3. Press and hold the set/reset button until 100% is displayed. You will hear three chimes and the CHANGE ENGINE OIL SOON message will go off.
4. Turn the key to LOCK/OFF.

If the CHANGE ENGINE OIL SOON message comes back on when you start your vehicle, the engine oil life system has not reset. Repeat the procedure.

What to Do with Used Oil

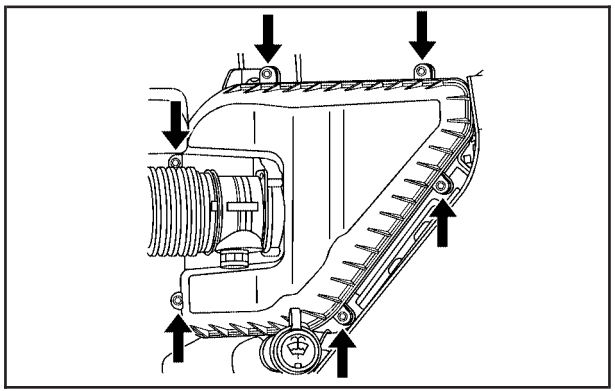
Used engine oil contains certain elements that can be unhealthy for your skin and could even cause cancer. Do not let used oil stay on your skin for very long. Clean your skin and nails with soap and water, or a good hand cleaner. Wash or properly dispose of clothing or rags containing used engine oil. 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, pouring it on the ground, into sewers, or into streams or bodies of water. Instead, recycle it by taking it to a place that collects used oil. If you have a problem properly disposing of used oil, ask your dealer/retailer, a service station, or a local recycling center for help.

Engine Air Cleaner/Filter

When to Inspect the Engine Air Cleaner/Filter

Inspect the air cleaner/filter at the Maintenance II intervals and replace it at the first oil change after each 50,000 mile (80 000 km) interval. See *Scheduled Maintenance on page 6-4* for more information. If you are driving in dusty/dirty conditions, inspect the filter at each engine oil change.



See *Engine Compartment Overview on page 5-12* for the location of the engine air cleaner/filter.

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 (away from vehicle) to release loose dust and dirt. If the filter remains caked with dirt, a new filter is required.

To inspect or replace the engine air cleaner/filter, do the following:

1. Loosen the screws that hold the cover on.
2. Disconnect the electrical connector.
3. Lift off the cover.
4. Remove the engine air cleaner/filter element and any loose debris that may be found in the air cleaner base.
5. Inspect or replace the air filter element.
6. Reverse Steps 1 through 3 to reinstall the cover and reconnect the electrical connector.

⚠CAUTION:

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. If it is not there and the engine backfires, you could be burned. Do not drive with it off, and be careful working on the engine with the air cleaner/filter off.

Notice: **If the air cleaner/filter is off, a backfire can cause a damaging engine fire. And, dirt can easily get into your engine, which will damage it. Always have the air cleaner/filter in place when you are driving.**

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 your vehicle to the dealer/retailer and have it repaired as soon as possible.

Change the fluid at the intervals listed in *Additional Required Services on page 6-6*, and be sure to use the transmission fluid listed in *Recommended Fluids and Lubricants on page 6-12*.

Notice: **Use of the incorrect automatic transmission fluid may damage your vehicle, and the damages may not be covered by your warranty. Always use the automatic transmission fluid listed in *Recommended Fluids and Lubricants on page 6-12*.**

The transmission fluid will not reach the end of the dipstick unless the transmission is at operating temperature. If you need to check the transmission fluid level, please take your vehicle to your dealer/retailer.

Engine Coolant

The cooling system in your vehicle is filled with DEX-COOL® engine coolant. This coolant is designed to remain in your vehicle for five years or 150,000 miles (240 000 km), whichever occurs first, if you add only DEX-COOL® extended life coolant.

The following explains your cooling system and how to add coolant when it is low. If you have a problem with engine overheating or if you need to add coolant to the radiator, see *Engine Overheating on page 5-23*.

A 50/50 mixture of clean, drinkable water and DEX-COOL® coolant will:

- Give freezing protection down to –34°F (–37°C).
- Give boiling protection up to 265°F (129°C).
- Protect against rust and corrosion.
- Help keep the proper engine temperature.
- Let the warning lights and gages work as they should.

Notice: **Using coolant other than DEX-COOL® may cause premature engine, heater core, or radiator corrosion. In addition, the engine coolant may require changing sooner, at the first maintenance service after each 30,000 miles (50 000 km) or 24 months, whichever occurs first. Any repairs would not be covered by your warranty. Always use DEX-COOL® (silicate-free) coolant in your vehicle.**

What to Use

Use a mixture of one-half clean, drinkable water and one-half DEX-COOL® coolant which will not damage aluminum parts. If you use this coolant mixture, you do not need to add anything else.

⚠CAUTION:

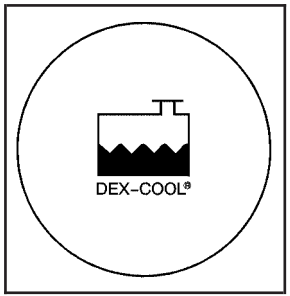
Adding only plain water to your cooling system can be dangerous. Plain water, or some other liquid such as alcohol, can boil before the proper coolant mixture will. Your vehicle's coolant warning system is set for the proper coolant mixture. With plain water or the wrong mixture, your engine could get too hot but you would not get the overheat warning. Your engine could catch fire and you or others could be burned. Use a 50/50 mixture of clean, drinkable water and DEX-COOL® coolant.

Notice: **If you use an improper coolant mixture, your engine could overheat and be badly damaged. The repair cost would not be covered by your warranty. Too much water in the mixture can freeze and crack the engine, radiator, heater core, and other parts.**

If coolant needs to be added more than four times a year, have your dealer/retailer check the cooling system.

Notice: **If you use extra inhibitors and/or additives in your vehicle's cooling system, you could damage your vehicle. Use only the proper mixture of the engine coolant listed in this manual for the cooling system. See *Recommended Fluids and Lubricants on page 6-12* for more information.**

Checking Coolant



The coolant recovery tank cap has this symbol on it.

See *Engine Compartment Overview on page 5-12* for more information on the location of the coolant recovery tank.

The vehicle must be on a level surface when checking the coolant level.

When the engine is cold, the coolant level should be at the FULL COLD line or a little higher. When the engine is warm, the level could be above the FULL COLD level. The FULL COLD line is marked on the coolant recovery tank.

Adding Coolant

If more coolant is needed, add the proper DEX-COOL® coolant mixture at the coolant recovery tank, but be careful not to spill it.

If the coolant recovery tank is completely empty, add coolant to the radiator. See *Engine Overheating on page 5-23*.

⚠CAUTION:

Turning the radiator pressure cap when the engine and radiator are hot can allow steam and scalding liquids to blow out and burn you badly. With the coolant recovery tank, you will almost never have to add coolant at the radiator. Never turn the radiator pressure cap — even a little — when the engine and radiator are hot.

⚠CAUTION:

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.

Occasionally check the coolant level in the radiator. For information on how to add coolant to the radiator, see *Cooling System on page 5-26*.

Radiator Pressure Cap

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.**

See *Engine Compartment Overview on page 5-12* for more information on location.

Engine Overheating

There is an engine coolant temperature gage on your vehicle's instrument panel. See *Engine Coolant Temperature Gage on page 3-43*.

Your vehicle may also have an ENGINE OVERHEATED IDLE ENGINE and ENGINE OVERHEATED STOP ENGINE message displayed in the Driver Information Center (DIC). See *DIC Warnings and Messages on page 3-56*.

If Steam Is Coming From Your Engine

⚠CAUTION:

Steam from an overheated engine can burn you badly, even if you just open the hood. Stay away from the engine if you see or hear steam coming from it. Turn it off and get everyone away from the vehicle until it cools down. Wait until there is no sign of steam or coolant before you open the hood.

If you keep driving when the vehicles engine is overheated, the liquids in it can catch fire. You or others could be badly burned. Stop your engine if it overheats, and get out of the vehicle until the engine is cool.

See *Overheated Engine Protection Operating Mode on page 5-25* for information on driving to a safe place in an emergency.

Notice: **If your engine catches fire because you keep driving with no coolant, your vehicle can be badly damaged. The costly repairs would not be covered by your warranty. See *Overheated Engine Protection Operating Mode on page 5-25* for information on driving to a safe place in an emergency.**

If No Steam Is Coming From Your Engine

If you get an engine overheat warning but see or hear no steam, the problem may not be too serious. Sometimes the engine can get a little too hot when you:

- Climb a long hill on a hot day.
- Stop after high-speed driving.
- Idle for long periods in traffic.
- Tow a trailer.

If you get the overheat warning with no sign of steam, try this for a minute or so:

1. If your air conditioner is on, turn it off.
2. Turn on your heater to full hot at the highest fan speed and open the windows as necessary.
3. If you are in a traffic jam, shift to NEUTRAL (N); otherwise, shift to the highest gear while driving —DRIVE (D) or LOW (L).

If you no longer have the overheat warning, you can drive. Just to be safe, drive slower for about 10 minutes. If the warning does not come back on, you can drive normally.

If the warning continues, pull over, stop, and park your vehicle right away.

If there is still no sign of steam, idle the engine for three minutes while you are parked. If you still have the warning, turn off the engine and get everyone out of the vehicle until it cools down. Also, see “Overheated Engine Protection Operating Mode” later in this section.

You may decide not to lift the hood but to get service help right away.

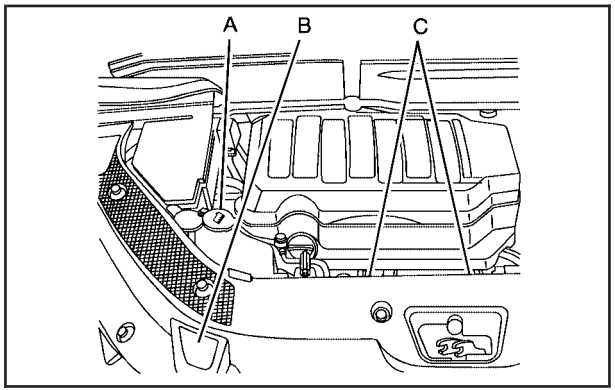
Overheated Engine Protection Operating Mode

This emergency operating mode lets your vehicle 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 a significant loss in power and engine performance. The temperature gage indicates an overheat condition exists. Driving extended distances and/or towing a trailer in the overheat protection mode should be avoided.

Notice: **After driving in the overheated engine protection operating mode, to avoid engine damage, allow the engine to cool before attempting any repair. The engine oil will be severely degraded. Repair the cause of coolant loss, change the oil and reset the oil life system. See *Engine Oil on page 5-13*.**

Cooling System

When you decide it is safe to lift the hood, here is what you will see:



A. Engine Coolant Reservoir
B. Radiator Pressure Cap (covered)
C. Engine Cooling Fans

⚠CAUTION:

An electric engine cooling fan under the hood can start up even when the engine is not running and can injure you. Keep hands, clothing, and tools away from any underhood electric fan.

If the coolant inside the coolant recovery tank is boiling, do not do anything else until it cools down. The vehicle should be parked on a level surface.

When the engine is cold, the coolant level should be at least up to the FULL COLD mark. If it is not, you may have a leak at the pressure cap or in the radiator hoses, heater hoses, radiator, water pump or somewhere else in the cooling system.

⚠CAUTION:

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.

If there seems to be no leak, with the engine on, check to see if the electric engine cooling fans are running. If the engine is overheating, both fans should be running. If they are not, your vehicle needs service.

Notice: **Engine damage from running the engine without coolant is not covered by the warranty.**

Notice: **Using coolant other than DEX-COOL® may cause premature engine, heater core, or radiator corrosion. In addition, the engine coolant could require changing sooner, at 30,000 miles (50 000 km) or 24 months, whichever occurs first. Any repairs would not be covered by the warranty. Always use DEX-COOL® (silicate-free) coolant in the vehicle.**

How to Add Coolant to the Coolant Recovery Tank

Notice: **This vehicle has a specific coolant fill procedure. Failure to follow this procedure could cause your engine to overheat and be severely damaged.**

If you have not found a problem yet, check to see if coolant is visible in the coolant recovery tank. If coolant is visible but the coolant level is not at or above the FULL COLD mark, add a 50/50 mixture of clean, drinkable water and DEX-COOL® coolant at the coolant recovery tank, but be sure the cooling system, including the coolant recovery tank pressure cap, is cool before you do it. See *Engine Coolant on page 5-20* for more information.

⚠CAUTION:

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 radiator pressure cap — even a little — they can come out at high speed. Never turn the cap when the cooling system, including the radiator pressure cap, is hot. Wait for the cooling system and radiator pressure cap to cool if you ever have to turn the pressure cap.

⚠CAUTION:

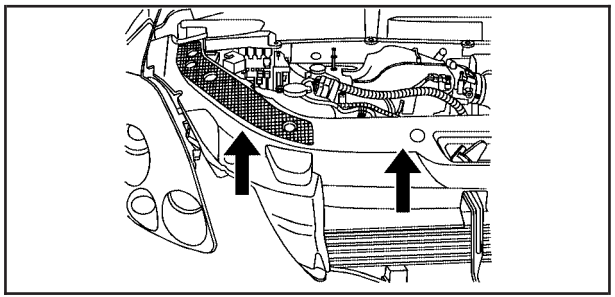
Adding only plain water to the cooling system can be dangerous. Plain water, or some other liquid such as alcohol, can boil before the proper coolant mixture will. The vehicle's coolant warning system is set for the proper coolant mixture. With plain water or the wrong mixture, the engine could get too hot but you would not get the overheat warning. The engine could catch fire and you or others could be burned. Use a 50/50 mixture of clean, drinkable water and DEX-COOL® coolant.

Notice: **In cold weather, water can freeze and crack the engine, radiator, heater core and other parts. Use the recommended coolant and the proper coolant mixture.**

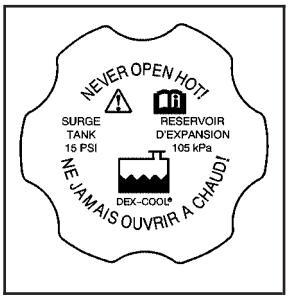
⚠CAUTION:

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.

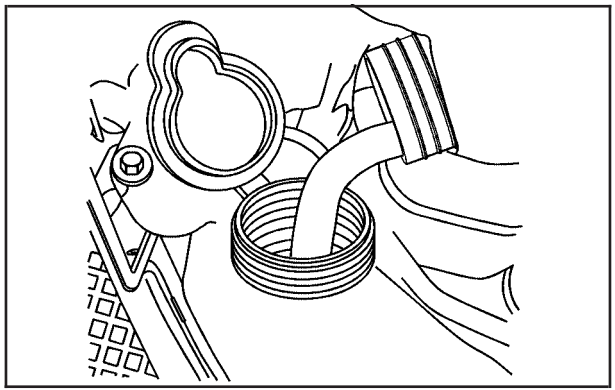
When the coolant in the coolant recovery tank is at the FULL COLD mark, start your vehicle. If the overheat warning continues, there is one more thing you can try. You can add the proper mixture directly to the radiator, but be sure the cooling system is cool before you do it.

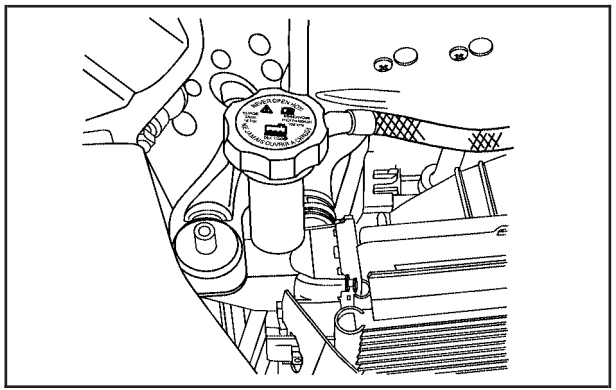


1. To remove the panel that covers the radiator cap, detach fasteners and lift off panel.
2. Remove the radiator pressure cap when the cooling system, including the upper radiator hose, is no longer hot. Turn the pressure cap slowly counterclockwise about one full turn. If you hear a hiss, wait for that to stop. A hiss means there is still some pressure left.



3. Keep turning the pressure cap slowly, and remove it.
4. Fill the radiator with the proper DEX-COOL® coolant mixture, up to the base of the filler neck. See *Engine Coolant on page 5-20* for more information about the proper coolant mixture.

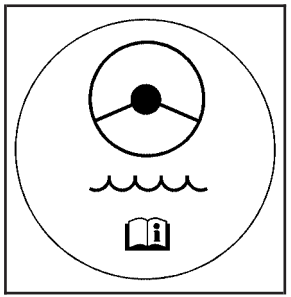




5. Fill the coolant recovery tank to the FULL COLD mark.
6. Reinstall the cap on the coolant recovery tank, but leave the radiator pressure cap off.
7. Start the engine and let it run until you can feel the upper radiator hose getting hot. Watch out for the engine cooling fan.
8. By this time, the coolant level inside the radiator filler neck may be lower. If the level is lower, add more of the proper DEX-COOL® coolant mixture through the filler neck until the level reaches the base of the filler neck. Replace the pressure cap.

At any time during this procedure if coolant begins to flow out of the filler neck, reinstall the pressure cap. Be sure to secure it tightly.

Power Steering Fluid



The power steering fluid reservoir is located toward the front of the engine compartment on the passenger's side of the vehicle. See *Engine Compartment Overview on page 5-12* for reservoir location.

When to Check Power Steering Fluid

It is not necessary to regularly check power steering fluid unless you suspect there is a leak in the system or you hear an unusual noise. A fluid loss in this system could indicate a problem. Have the system inspected and repaired.

How to Check Power Steering Fluid

To check the power steering fluid, do the following:

1. Turn the key off and let the engine compartment cool down.
2. Remove engine oil fill cap
3. Slide engine cover rearward and lift to remove
4. Wipe the cap and the top of the reservoir clean.
5. Unscrew the cap and wipe the dipstick with a clean rag.
6. Replace the cap and completely tighten it.
7. Remove the cap again and look at the fluid level on the dipstick.

The fluid level should be somewhere between MAX and MIN line on the dipstick in room temperature. If the fluid is on or below MIN line, you should add fluid close to MAX Line.

What to Use

To determine what kind of fluid to use, see *Recommended Fluids and Lubricants on page 6-12*. Always use the proper fluid.

Notice: **Use of the incorrect fluid may damage your vehicle and the damages may not be covered by your warranty. Always use the correct fluid listed in *Recommended Fluids and Lubricants on page 6-12*.**

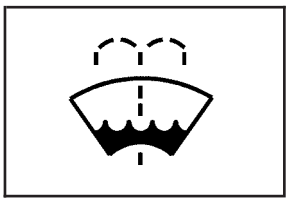
Windshield Washer Fluid

What to Use

When adding windshield washer fluid, be sure to read the manufacturer's instructions before use. If operating your vehicle in an area where the temperature may fall below freezing, use a fluid that has sufficient protection against freezing.

Adding Washer Fluid

When the windshield washer fluid reservoir is low, a WASHER FLUID LOW ADD FLUID message will be displayed on the Driver Information Center (DIC). See *DIC Warnings and Messages on page 3-56* for more information.



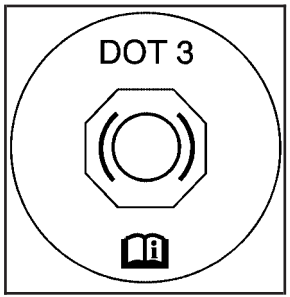
Open the cap with the washer symbol on it. Add washer fluid until the tank is full. See *Engine Compartment Overview on page 5-12* for reservoir location.

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 your washer fluid tank and other parts of the washer system. Also, water does not clean as well as washer fluid.**
- **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 your windshield washer. It can damage the vehicle's windshield washer system and paint.**

Brakes

Brake Fluid



The brake master cylinder reservoir is filled with DOT-3 brake fluid. See *Engine Compartment Overview on page 5-12* for the location of the reservoir.

There are only two reasons why the brake fluid level in the reservoir might go down. The first is that the brake fluid goes down to an acceptable level during normal brake lining wear. When new linings are put in, the fluid level goes back up. The other reason is that fluid is leaking out of the brake hydraulic system. If it is, have the brake hydraulic system fixed, since a leak means that sooner or later the brakes will not work well.

It is not a good idea to top off the brake fluid. Adding brake fluid will 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 hydraulic system.

⚠CAUTION:

If your vehicle has too much brake fluid, it can spill on the engine. The fluid will burn if the engine is hot enough. You or others could be burned, and your vehicle could be damaged. Add brake fluid only when work is done on the brake hydraulic system.

When the brake fluid falls to a low level, the brake warning light comes on. See *Brake System Warning Light on page 3-41*.

What to Add

When you need brake fluid, use only DOT-3 brake fluid. Use new brake fluid from a sealed container only. See *Recommended Fluids and Lubricants on page 6-12*.

Always clean the brake fluid reservoir cap and the area around the cap before removing it. This helps keep dirt from entering the reservoir.

⚠CAUTION:

With the wrong kind of fluid in the brake hydraulic system, the brakes might not work well. This could cause a crash. Always use the proper brake fluid.

Notice:

- **Using the wrong fluid can badly damage brake 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 you spill brake fluid on your vehicle's painted surfaces, the paint finish can be damaged. Be careful not to spill brake fluid on your vehicle. If you do, wash it off immediately. See *Washing Your Vehicle on page 5-100*.**

Brake Wear

Your 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 your vehicle is moving, except when you are pushing on the brake pedal firmly.

⚠CAUTION:

The brake wear warning sound means that soon the brakes will not work well. That could lead to an accident. When you hear the brake wear warning sound, have your 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 tires 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 5-116*.

Brake linings should always be replaced as complete axle sets.

Brake Pedal Travel

See your dealer/retailer 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 you apply the brakes, 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. Your vehicle was designed and tested with top-quality brake parts. When you replace parts of the braking system — for example, when the brake linings wear down and you need new ones put in — be sure you get new approved replacement parts. If you do not, the brakes might not work properly. For example, if someone puts in brake linings that are wrong for your vehicle, the balance between the front and rear brakes can change — for the worse. The braking performance you have come to expect can change in many other ways if someone puts in the wrong replacement brake parts.

Battery

Your vehicle has a maintenance free battery. When it is time for a new battery, see your dealer/retailer for one that has the replacement number shown on the original battery's label.

For battery replacement, see your dealer/retailer or the service manual. To purchase a service manual, see *Service Publications Ordering Information on page 7-16*.

Warning: Battery posts, terminals, and related accessories contain lead and lead compounds, chemicals known to the State of California to cause cancer and reproductive harm. Wash hands after handling.

Vehicle Storage

⚠CAUTION:

Batteries have acid that can burn you and gas that can explode. You can be badly hurt if you are not careful. See *Jump Starting on page 5-38* for tips on working around a battery without getting hurt.

Infrequent Usage: If you drive your vehicle infrequently, remove the black, negative (–) cable from the battery. This will help keep the battery from running down.

Extended Storage: For extended storage of your vehicle, remove the black, negative (–) cable from the battery or use a battery trickle charger. This will help maintain the charge of the battery over an extended period of time.

Jump Starting

If your vehicle's battery has run down, you may want to use another vehicle and some jumper cables to start your vehicle. Be sure to use the following steps to do it safely.

⚠CAUTION:

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 your vehicle that would not be covered by your warranty.**

Trying to start your vehicle by pushing or pulling it will not work, and it could damage your vehicle.

1. Check the other vehicle. It must have a 12-volt battery with a negative ground system.

Notice: **If the other vehicle's system is not a 12-volt system with a negative ground, both vehicles can be damaged. Only use vehicles with 12-volt systems with negative grounds to jump start your vehicle.**

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

   To avoid the possibility of the vehicles rolling, set the parking brake firmly on both vehicles involved in the jump start procedure. Put an automatic transmission in P (PARK) or a manual transmission in NEUTRAL before setting the parking brake. If you have a four-wheel-drive vehicle, be sure the transfer case is not in NEUTRAL.

Notice: **If you leave your radio or other accessories on during the jump starting procedure, they could be damaged. The repairs would not be covered by your warranty. Always turn off your radio and other accessories when jump starting your vehicle.**

3. Turn off the ignition on both vehicles. Unplug unnecessary accessories plugged into the cigarette lighter or the accessory power outlets. Turn off the radio and all lamps that are not needed. This will avoid sparks and help save both batteries. And it could save the radio!

4. Open the hoods and locate the positive (+) and negative (–) terminal locations on the other vehicle. Your vehicle has a remote positive (+) and a remote negative (–) jump starting terminal. See *Engine Compartment Overview on page 5-12* for more information on the terminal locations.

⚠CAUTION:

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 flashlight if you need more light.

Be sure the batteries have enough water. You do not need to add water to the ACDelco® battery (or batteries) 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.

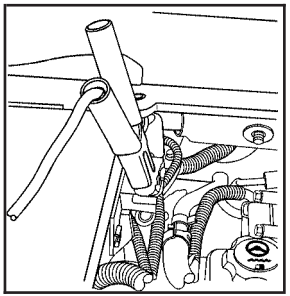
⚠CAUTION:

Fans or other moving engine parts can injure you badly. Keep your hands away from moving parts once the engine is running.

5. Check that the jumper cables do not have loose or missing insulation. If they do, you could get a shock. The vehicles could be damaged too.

   Before you connect the cables, here are some basic things you should know. Positive (+) will go to positive (+) or to a remote positive (+) terminal if the vehicle has one. Negative (–) will go to a heavy, unpainted metal engine part or to a remote negative (–) terminal if the vehicle has one.

   Do not connect positive (+) to negative (–) or you will get a short that would damage the battery and maybe other parts too. And do not connect the negative (–) cable to the negative (–) terminal on the dead battery because this can cause sparks.

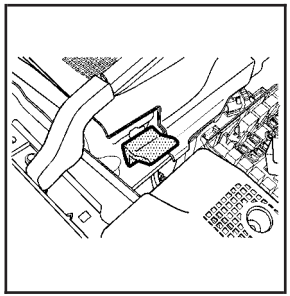


6. Connect the red positive (+) cable to the positive (+) terminal of the dead battery.

   Use a remote positive (+) terminal if the vehicle has one.

7. Do not let the other end touch metal. Connect it to the positive (+) terminal of the good battery. Use a remote positive (+) terminal if the vehicle has one.
8. Now connect the black negative (–) cable to the negative (–) terminal of the good battery. Use a remote negative (–) terminal if the vehicle has one.

   Do not let the other end touch anything until the next step. 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.



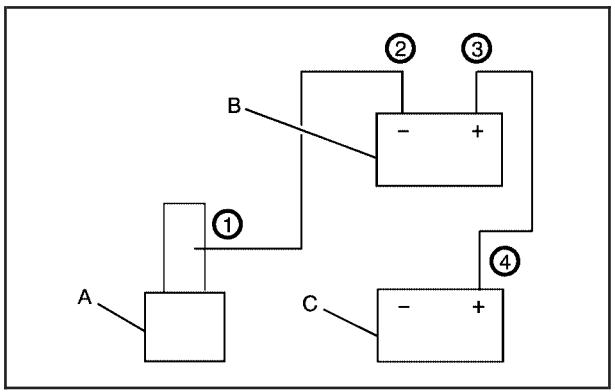
9. Connect the other end of the negative (–) cable at least 18 inches (45 cm) away from the dead battery, but not near engine parts that move.

   The electrical connection is just as good there, and the chance of sparks getting back to the battery is much less.

   Your vehicle has a remote negative (–) terminal for this purpose.

10. Now start the vehicle with the good battery and run the engine for a while.
11. 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 jumper cables are connected or removed in the wrong order, electrical shorting may occur and damage the vehicle. The repairs would not be covered by your warranty. Always connect and remove the jumper cables in the correct order, making sure that the cables do not touch each other or other metal.**



Jumper Cable Removal

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 jumper cables from both vehicles, do the following:

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.
3. Disconnect the red positive (+) cable from the vehicle with the good battery.
4. Disconnect the red positive (+) cable from the other vehicle.

All-Wheel Drive

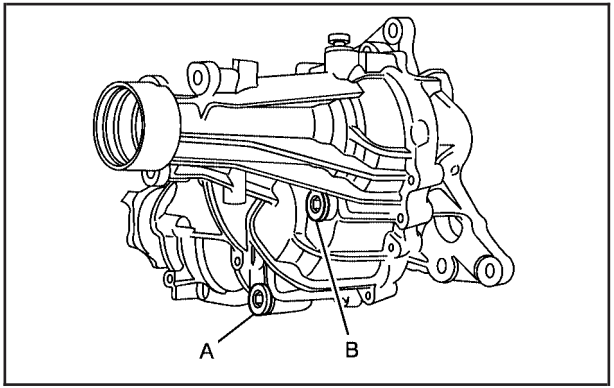
Be sure to perform the lubricant checks described in this section. There are two additional systems that need lubrication.

Transfer Case

When to Check Lubricant

Refer to the Maintenance Schedule to determine how often to check the lubricant. See *Scheduled Maintenance on page 6-4*.

How to Check Lubricant



(A) Drain Plug (B) Filler Plug

To get an accurate reading, the vehicle should be on a level surface.

If the level is below the bottom of the filler plug hole, you will need to add some lubricant. Add enough lubricant to raise the level to the bottom of the filler plug hole. Use care not to overtighten the plug.

What to Use

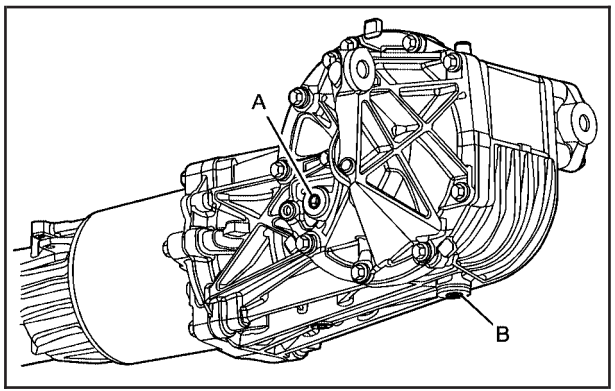
Refer to the Maintenance Schedule to determine what kind of lubricant to use. See *Recommended Fluids and Lubricants on page 6-12*.

Rear Drive Module

When to Check Lubricant

Refer to the Maintenance Schedule to determine how often to check the lubricant. See *Scheduled Maintenance on page 6-4*.

How to Check Lubricant



(A) Filler Plug (B) Drain Plug

To get an accurate reading, the vehicle should be on a level surface.

If the level is below the bottom of the filler plug hole, you will need to add some lubricant. Add enough lubricant to raise the level to the bottom of the filler plug hole. Use care not to overtighten the plug.

What to Use

Refer to the Maintenance Schedule to determine what kind of lubricant to use. See *Recommended Fluids and Lubricants on page 6-12*.

Headlamp Aiming

Headlamp aim has been preset at the factory and should need no further adjustment.

However, if your vehicle is damaged in a crash, the headlamp aim may be affected. Aim adjustment to the low-beam headlamps may be necessary if oncoming drivers flash their high-beam headlamps at you (for vertical aim).

If the headlamps need to be re-aimed, it is recommended that you take the vehicle to your dealer/retailer for service.

Bulb Replacement

For the proper type of replacement bulbs, see *Replacement Bulbs on page 5-47*.

For any bulb changing procedure not listed in this section, contact your dealer/retailer.

High Intensity Discharge (HID) Lighting

⚠CAUTION:

The low 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/retailer or a qualified technician service them.

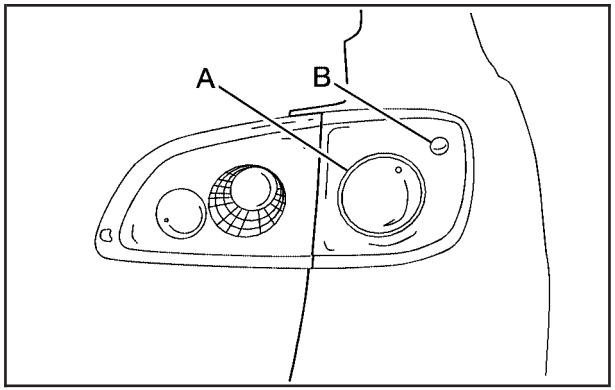
Your vehicle has HID headlamps. After your vehicle's HID headlamp bulb has been replaced, you may notice that the beam is a slightly different shade than it was originally. This is normal.

Halogen Bulbs

⚠CAUTION:

Halogen bulbs have pressurized gas inside and can burst if you drop or scratch the bulb. You or others could be injured. Be sure to read and follow the instructions on the bulb package.

Taillamps, Turn Signal, Stoplamps and Sidemarker Lamps



A. Taillamp
B. Sidemarker Lamp

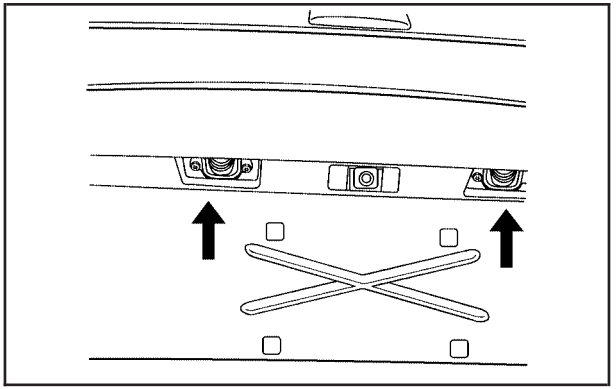
To replace one of these bulbs:

1. Open the liftgate. See *Liftgate on page 2-12* or *Power Liftgate on page 2-14*.
2. Remove the convenience net.
3. Remove the three hex nuts holding the taillamp assembly in place.
4. Pull out the taillamp assembly.
5. Turn the bulb socket counterclockwise and pull it straight out to remove it.
6. Replace the old bulb with a new one.
7. Reverse steps 3 through 5 to reinstall the taillamp assembly.

   When reinstalling the taillamp assembly, make sure the plastic pin on the taillamp assembly lines up and is inserted correctly into the opening of the vehicle.

License Plate Lamp

To replace one of these bulbs:



1. Remove the two screws holding each of the license plate lamps to the liftgate trim.
2. Turn and pull the license plate lamp forward through the lift gate trim opening.
3. Turn the bulb socket counterclockwise and pull the bulb straight out of the socket.
4. Install the new bulb.
5. Reverse steps 1 – 3 to reinstall the license plate lamp.

Replacement Bulbs

Exterior Lamp	Bulb Number
License Plate Lamp	W5W
Rear Turn Signal, Stoplamp, and Taillamp	3057

For replacement bulbs not listed here, contact your dealer/retailer.

Windshield Replacement

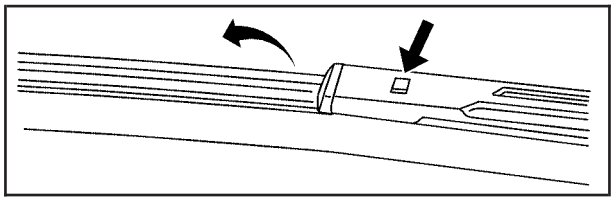
Your vehicle is equipped with an acoustic windshield. If you ever have to have your windshield replaced be sure to get an acoustic windshield so you will continue to have the benefits an acoustic windshield can provide.

Windshield Wiper Blade Replacement

Windshield wiper blades should be inspected for wear or cracking. See *Scheduled Maintenance on page 6-4* for more information.

Replacement blades come in different types and are removed in different ways. To replace the wiper blade assembly, do the following:

1. Pull the windshield wiper arm away from the windshield.



2. Press the button in the middle of the wiper arm connector, and pull the wiper blade away from the arm connector.
3. Install the new wiper blade, and make sure the wiper blade locks into place.

For the proper size and type see *Maintenance Replacement Parts on page 6-13*.

Backglass Wiper Blade

1. Pull the wiper blade assembly away from the backglass. The backglass wiper blade will not lock in a vertical position, so care should be used when pulling it away from the vehicle.
2. Rotate the wiper blade assembly, hold the wiper arm in position and push the blade away from the wiper arm.
3. Replace the wiper blade.
4. Return the wiper arm and blade assembly to the rest position on the glass.

Tires

Your new vehicle comes with high-quality tires made by a leading tire manufacturer. If you ever have questions about your tire warranty and where to obtain service, see your vehicle Warranty booklet for details.

⚠CAUTION:

Poorly maintained and improperly used tires are dangerous.

- **Overloading your vehicle's tires can cause overheating as a result of too much flexing. You could have an air-out and a serious accident. See *Loading Your Vehicle on page 4-20*.**

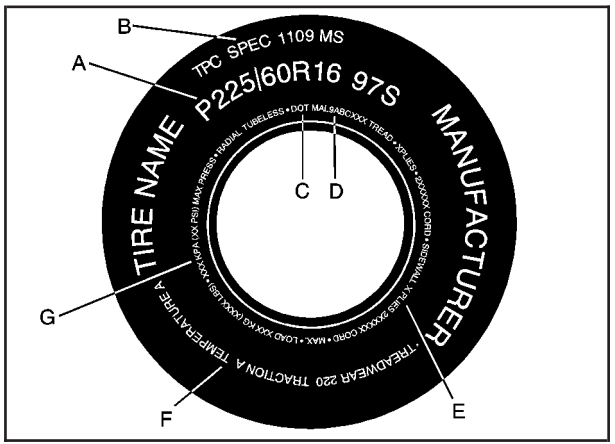
CAUTION: (Continued)

CAUTION: (Continued)

- **Underinflated tires pose the same danger as overloaded tires. The resulting accident could cause serious injury. Check all tires frequently to maintain the recommended pressure. Tire pressure should be checked when your vehicle's tires are cold. See *Inflation - Tire Pressure on page 5-56*.**
- **Overinflated tires are more likely to be cut, punctured, or broken by a sudden impact — such as when you hit a pothole. Keep tires at the recommended pressure.**
- **Worn, old tires can cause accidents. If the tire's tread is badly worn, or if your vehicle's tires have been damaged, replace them.**

Tire Sidewall Labeling

Useful information about a tire is molded into its sidewall. The examples below show a typical passenger vehicle tire and a compact spare tire sidewall.



Passenger (P-Metric) Tire Example

(A) Tire Size: The tire size is a combination of letters and numbers used to define a particular tire's width, height, aspect ratio, construction type, and service description. See the "Tire Size" illustration later in this section for more detail.

(B) TPC Spec (Tire Performance Criteria Specification): Original equipment tires designed to GM's specific tire performance criteria have a TPC specification code molded onto the sidewall. GM's TPC specifications meet or exceed all federal safety guidelines.

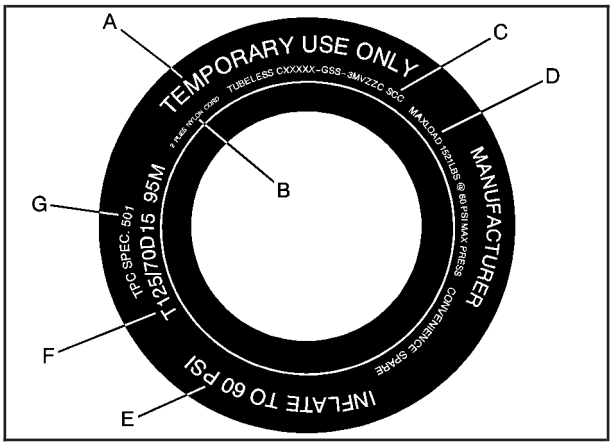
(C) DOT (Department of Transportation): The Department of Transportation (DOT) code indicates that the tire is in compliance with the U.S. Department of Transportation Motor Vehicle Safety Standards.

(D) Tire Identification Number (TIN): The letters and numbers following DOT (Department of Transportation) code is the Tire Identification Number (TIN). The TIN shows the manufacturer and plant code, tire size, and date the tire was manufactured. The TIN is molded onto both sides of the tire, although only one side may have the date of manufacture.

(E) Tire Ply Material: The type of cord and number of plies in the sidewall and under the tread.

(F) Uniform Tire Quality Grading (UTQG): Tire manufacturers are required to grade tires based on three performance factors: treadwear, traction, and temperature resistance. For more information see *Uniform Tire Quality Grading on page 5-66*.

(G) Maximum Cold Inflation Load Limit: Maximum load that can be carried and the maximum pressure needed to support that load.



Compact Spare Tire Example

(A) Temporary Use Only: The compact spare tire or temporary use tire has a tread life of approximately 3,000 miles (5 000 km) and should not be driven at speeds over 65 mph (105 km/h). The compact spare tire is for emergency use when a regular road tire has lost air and gone flat. If your vehicle has a compact spare tire, see *Compact Spare Tire on page 5-96* and *If a Tire Goes Flat on page 5-70*.

(B) Tire Ply Material: The type of cord and number of plies in the sidewall and under the tread.

(C) Tire Identification Number (TIN): The letters and numbers following the DOT (Department of Transportation) code is the Tire Identification Number (TIN). The TIN shows the manufacturer and plant code, tire size, and date the tire was manufactured. The TIN is molded onto both sides of the tire, although only one side may have the date of manufacture.

(D) Maximum Cold Inflation Load Limit: Maximum load that can be carried and the maximum pressure needed to support that load.

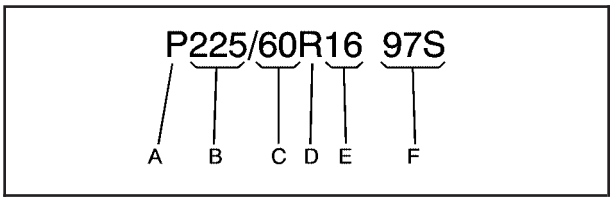
(E) Tire Inflation: The temporary use tire or compact spare tire should be inflated to 60 psi (420 kPa). For more information on tire pressure and inflation see *Inflation - Tire Pressure on page 5-56*.

(F) Tire Size : A combination of letters and numbers define a tire's width, height, aspect ratio, construction type, and service description. The letter T as the first character in the tire size means the tire is for temporary use only.

(G) TPC Spec (Tire Performance Criteria Specification): Original equipment tires designed to GM's specific tire performance criteria have a TPC specification code molded onto the sidewall. GM's TPC specifications meet or exceed all federal safety guidelines.

Tire Size

The following illustration shows an example of a typical passenger vehicle tire size.



(A) Passenger (P-Metric) Tire: The United States version of a metric tire sizing system. The letter P as the first character in the tire size means a passenger vehicle tire engineered to standards set by the U.S. Tire and Rim Association.

(B) Tire Width: The three-digit number indicates the tire section width in millimeters from sidewall to sidewall.

(C) Aspect Ratio: A two-digit number that indicates the tire height-to-width measurements. For example, if the tire size aspect ratio is 60, as shown in item C of the illustration, it would mean that the tire's sidewall is 60 percent as high as it is wide.

(D) Construction Code: A letter code is used to indicate the type of ply construction in the tire. The letter R means radial ply construction; the letter D means diagonal or bias ply construction; and the letter B means belted-bias ply construction.

(E) Rim Diameter: Diameter of the wheel in inches.

(F) Service Description: These characters represent the load range and speed rating of the tire. The load index represents the load carry capacity a tire is certified to carry. The load index can range from 1 to 279. The speed rating is the maximum speed a tire is certified to carry a load. Speed ratings range from A to Z.

Tire Terminology and Definitions

Air Pressure: The amount of air inside the tire pressing outward on each square inch of the tire. Air pressure is expressed in pounds per square inch (psi) or kilopascal (kPa).

Accessory Weight: This means the combined weight of optional accessories. Some examples of optional accessories are, automatic transmission, power steering, power brakes, power windows, power seats, and air conditioning.

Aspect Ratio: The relationship of a tire's height to its width.

Belt: A rubber coated layer of cords that is located between the plies and the tread. Cords may be made from steel or other reinforcing materials.

Bead: The tire bead contains steel wires wrapped by steel cords that hold the tire onto the rim.

Bias Ply Tire: A pneumatic tire in which the plies are laid at alternate angles less than 90 degrees to the centerline of the tread.

Cold Tire Pressure: The amount of air pressure in a tire, measured in pounds per square inch (psi) or kilopascals (kPa) before a tire has built up heat from driving. See *Inflation - Tire Pressure on page 5-56*.

Curb Weight: The weight of a motor vehicle with standard and optional equipment including the maximum capacity of fuel, oil, and coolant, but without passengers and cargo.

DOT Markings: A code molded into the sidewall of a tire signifying that the tire is in compliance with the U.S. Department of Transportation (DOT) motor vehicle safety standards. The DOT code includes the Tire Identification Number (TIN), an alphanumeric designator which can also identify the tire manufacturer, production plant, brand, and date of production.

GVWR: Gross Vehicle Weight Rating. See *Loading Your Vehicle on page 4-20*.

GAWR FRT: Gross Axle Weight Rating for the front axle. See *Loading Your Vehicle on page 4-20*.

GAWR RR: Gross Axle Weight Rating for the rear axle. See *Loading Your Vehicle on page 4-20*.

Intended Outboard Sidewall: The side of an asymmetrical tire, that must always face outward when mounted on a vehicle.

Kilopascal (kPa): The metric unit for air pressure.

Light Truck (LT-Metric) Tire: A tire used on light duty trucks and some multipurpose passenger vehicles.

Load Index: An assigned number ranging from 1 to 279 that corresponds to the load carrying capacity of a tire.

Maximum Inflation Pressure: The maximum air pressure to which a cold tire can be inflated. The maximum air pressure is molded onto the sidewall.

Maximum Load Rating: The load rating for a tire at the maximum permissible inflation pressure for that tire.

Maximum Loaded Vehicle Weight: The sum of curb weight, accessory weight, vehicle capacity weight, and production options weight.

Normal Occupant Weight: The number of occupants a vehicle is designed to seat multiplied by 150 lbs (68 kg). See *Loading Your Vehicle on page 4-20*.

Occupant Distribution: Designated seating positions.

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

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

Recommended Inflation Pressure: Vehicle manufacturer's recommended tire inflation pressure as shown on the tire placard. See *Inflation - Tire Pressure on page 5-56* and *Loading Your Vehicle on page 4-20*.

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

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

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

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

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

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

Treadwear Indicators: Narrow bands, sometimes called wear bars, that show across the tread of a tire when only 1/16 inch (1.6 mm) of tread remains. See *When It Is Time for New Tires on page 5-63*.

UTQGS (Uniform Tire Quality Grading Standards): A tire information system that provides consumers with ratings for a tire's traction, temperature, and treadwear. Ratings are determined by tire manufacturers using government testing procedures. The ratings are molded into the sidewall of the tire. See *Uniform Tire Quality Grading on page 5-66*.

Vehicle Capacity Weight: The number of designated seating positions multiplied by 150 lbs (68 kg) plus the rated cargo load. See *Loading Your Vehicle on page 4-20*.

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

Vehicle Placard: A label permanently attached to a vehicle showing the vehicle's capacity weight and the original equipment tire size and recommended inflation pressure. See "Tire and Loading Information Label" under *Loading Your Vehicle on page 4-20*.

Inflation - Tire Pressure

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

Notice: **Do not let anyone tell you that under-inflation or over-inflation is all right. It is not. If your tires do not have enough air (under-inflation), you can get the following:**

- **Too much flexing**
- **Too much heat**
- **Tire overloading**
- **Premature or irregular wear**
- **Poor handling**
- **Reduced fuel economy**

If your tires have too much air (over-inflation), you can get the following:

- **Unusual wear**
- **Poor handling**
- **Rough ride**
- **Needless damage from road hazards**

A vehicle specific Tire and Loading Information label is attached to your vehicle. This label shows your vehicle's original equipment tires and the correct inflation pressures for your tires when they are cold. The recommended cold tire inflation pressure, shown on the label, is the minimum amount of air pressure needed to support your vehicle's maximum load carrying capacity.

For additional information regarding how much weight your vehicle can carry, and an example of the Tire and Loading Information label, see *Loading Your Vehicle on page 4-20*. How you load your vehicle affects vehicle handling and ride comfort. Never load your vehicle with more weight than it was designed to carry.

When to Check

Check your tires once a month or more. Do not forget to check the compact spare tire, it should be at 60 psi (420 kPa). For additional information regarding the compact spare tire, see *Compact Spare Tire on page 5-96*.

How to Check

Use a good quality pocket-type gage to check tire pressure. You cannot tell if your tires are properly inflated simply by looking at them. Radial tires may look properly inflated even when they are under-inflated. Check the tire's inflation pressure when the tires are cold. Cold means your vehicle has been sitting for at least three hours or driven no more than 1 mile (1.6 km).

Remove the valve cap from the tire valve stem. Press the tire gage firmly onto the valve to get a pressure measurement. If the cold tire inflation pressure matches the recommended pressure on the Tire and Loading Information label, no further adjustment is necessary. If the inflation pressure is low, add air until you reach the recommended amount.

If you overfill the tire, release air by pushing on the metal stem in the center of the tire valve. Re-check the tire pressure with the tire gage.

Be sure to put the valve caps back on the valve stems. They help prevent leaks by keeping out dirt and moisture.

Tire Pressure Monitor System

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

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

As an added safety feature, your vehicle has been equipped with a tire pressure monitoring system (TPMS) that illuminates a low tire pressure telltale when one or more of your tires is significantly under-inflated.

Accordingly, when the low tire pressure telltale illuminates, you should stop and check your tires as soon as possible, and inflate them to the proper pressure. Driving on a significantly under-inflated tire causes the tire to overheat and can lead to tire failure.

Under-inflation also reduces fuel efficiency and tire tread life, and may affect the vehicle's handling and stopping ability.

Please note that the TPMS is not a substitute for proper tire maintenance, and it is the driver's responsibility to maintain correct tire pressure, even if under-inflation has not reached the level to trigger illumination of the TPMS low tire pressure telltale.

Your vehicle has also been equipped with a TPMS malfunction indicator to indicate when the system is not operating properly. The TPMS malfunction indicator is combined with the low tire pressure telltale. When the system detects a malfunction, the telltale will flash for approximately one minute and then remain continuously illuminated. This sequence will continue upon subsequent vehicle start-ups as long as the malfunction exists.

When the malfunction indicator is illuminated, the system may not be able to detect or signal low tire pressure as intended. TPMS malfunctions may occur for a variety of reasons, including the installation of replacement or alternate tires or wheels on the vehicle that prevent the TPMS from functioning properly. Always check the TPMS malfunction telltale after replacing one or more tires or wheels on your vehicle to ensure that the replacement or alternate tires and wheels allow the TPMS to continue to function properly.

See *Tire Pressure Monitor Operation on page 5-59* for additional information.

Federal Communications Commission (FCC) and Industry and Science Canada

The Tire Pressure Monitor System (TPMS) operates on a radio frequency and complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.

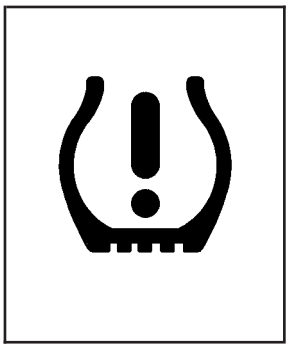
The TPMS operates on a radio frequency and complies with RSS-210 of Industry and Science Canada. Operation is subject to the following two conditions:

1. This device may not cause interference.
2. This device must accept any interference received, including interference that may cause undesired operation of the device.

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

Tire Pressure Monitor Operation

The Tire Pressure Monitor System (TPMS) is designed to warn the driver when a low tire pressure condition exists. TPMS sensors are mounted onto each tire and wheel assembly, excluding the spare tire and wheel assembly. The TPMS sensors monitor the air pressure in the vehicle's tires and transmits the tire pressure readings to a receiver located in the vehicle.



When a low tire pressure condition is detected, the TPMS illuminates the low tire pressure warning light located on the instrument panel cluster.

At the same time a message to check the pressure in a specific tire appears on the Driver Information Center (DIC) display. The low tire pressure warning light and the DIC warning message come on at each ignition cycle until the tires are inflated to the correct inflation pressure. Using the DIC, tire pressure levels can be viewed by the driver. For additional information and details about the DIC operation and displays see *DIC Operation and Displays on page 3-50* and *DIC Warnings and Messages on page 3-56*.

The low tire pressure warning light may come on in cool weather when the vehicle is first started, and then turn off as you start to drive. This could be an early indicator that the air pressure in the tire(s) are getting low and need to be inflated to the proper pressure.

A Tire and Loading Information label, attached to your vehicle, shows the size of your vehicle's original equipment tires and the correct inflation pressure for your vehicle's tires when they are cold. See *Loading Your Vehicle on page 4-20*, for an example of the Tire and Loading Information label and its location on your vehicle. Also see *Inflation - Tire Pressure on page 5-56*.

Your vehicle's TPMS can warn you about a low tire pressure condition but it does not replace normal tire maintenance. See *Tire Inspection and Rotation on page 5-62* and *Tires on page 5-49*.

Notice: **Liquid tire sealants could damage the Tire Pressure Monitor System (TPMS) sensors. Sensor damage caused by using a tire sealant is not covered by your warranty. Do not use liquid tire sealants.**

TPMS Malfunction Light and Message

The TPMS will not function properly if one or more of the TPMS sensors are missing or inoperable. When the system detects a malfunction, the low tire warning light flashes for about one minute and then stays on for the remainder of the ignition cycle. A DIC warning message is also displayed. The low tire warning light and DIC warning message come on at each ignition cycle until the problem is corrected. Some of the conditions that can cause the malfunction light and DIC message to come on are:

- One of the road tires has been replaced with the spare tire. The spare tire does not have a TPMS sensor. The TPMS malfunction light and DIC message should go off once you re-install the road tire containing the TPMS sensor.
- The TPMS sensor matching process was started but not completed or not completed successfully after rotating the vehicle's tires. The DIC message and TPMS malfunction light should go off once the TPMS sensor matching process is performed successfully. See "TPMS Sensor Matching Process" later in this section.
- One or more TPMS sensors are missing or damaged. The DIC message and the TPMS malfunction light should go off when the TPMS sensors are installed and the sensor matching process is performed successfully. See your dealer/retailer for service.
- Replacement tires or wheels do not match your vehicle's original equipment tires or wheels. Tires and wheels other than those recommended for your vehicle could prevent the TPMS from functioning properly. See *Buying New Tires on page 5-64*.
- 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 it cannot detect or signal a low tire condition. See your dealer/retailer for service if the TPMS malfunction light and DIC message comes on and stays on.

TPMS Sensor Matching Process

Each TPMS sensor has a unique identification code. Any time you rotate your vehicle's tires or replace one or more of the TPMS sensors, the identification codes will need to be matched to the new tire/wheel position. The sensors are matched to the tire/wheel positions in the following order: driver side front tire, passenger side front tire, passenger side rear tire, and driver side rear tire using a TPMS diagnostic tool. See your dealer/retailer for service.

The TPMS sensors can also be matched to each tire/wheel position by increasing or decreasing the tire's air pressure. If increasing the tire's air pressure, do not exceed the maximum inflation pressure indicated on the tire's sidewall.

To decrease air-pressure out of a tire you can use the pointed end of the valve cap, a pencil-style air pressure gage, or a key.

You have two minutes to match the first tire/wheel position, and five minutes overall to match all four tire/wheel positions. If it takes longer than two minutes, to match the first tire and wheel, or more than five minutes to match all four tire and wheel positions the matching process stops and you need to start over.

The TPMS sensor matching process is outlined below:

1. Set the parking brake.
2. Turn the ignition switch to ON/RUN with the engine off.
3. Press the Remote Keyless Entry (RKE) transmitter's LOCK and UNLOCK buttons at the same time for approximately five seconds. The horn sounds twice to signal the receiver is in relearn mode and TIRE LEARNING ACTIVE message displays on the DIC screen.
4. Start with the driver side front tire.
5. Remove the valve cap from the valve cap stem. Activate the TPMS sensor by increasing or decreasing the tire's air pressure for five seconds, or until a horn chirp sounds. The horn chirp, which may take up to 30 seconds to sound, confirms that the sensor identification code has been matched to this tire and wheel position.
6. Proceed to the passenger side front tire, and repeat the procedure in Step 5.
7. Proceed to the passenger side rear tire, and repeat the procedure in Step 5.
8. Proceed to the driver side rear tire, and repeat the procedure in Step 5. The horn sounds two times to indicate the sensor identification code has been matched to the driver side rear tire, and the TPMS sensor matching process is no longer active. The TIRE LEARNING ACTIVE message on the DIC display screen goes off.
9. Turn the ignition switch to LOCK/OFF.
10. Set all four tires to the recommended air pressure level as indicated on the Tire and Loading Information label.
11. Put the valve caps back on the valve stems.

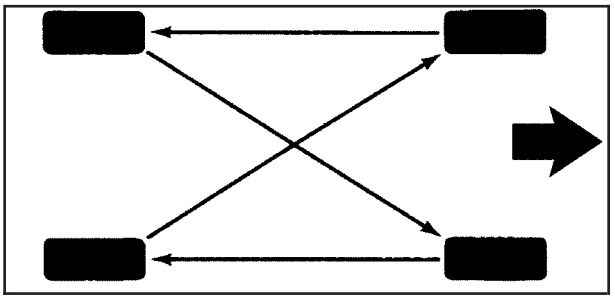
Tire Inspection and Rotation

We recommend that you regularly inspect your vehicle's tires, including the spare tire, for signs of wear or damage. See *When It Is Time for New Tires on page 5-63* for more information.

Tires should be rotated every 5,000 to 8,000 miles (8 000 to 13 000 km). See *Scheduled Maintenance on page 6-4*.

The purpose of a regular tire rotation is to achieve a uniform wear for all tires on the vehicle. This will ensure that your vehicle continues to perform most like it did when the tires were new.

Any time you notice unusual wear, rotate your tires as soon as possible and check wheel alignment. Also check for damaged tires or wheels. See *When It Is Time for New Tires on page 5-63* and *Wheel Replacement on page 5-68*.



When rotating your vehicle's tires, always use the correct rotation pattern shown here.

Do not include the compact spare tire in the tire rotation.

After the tires have been rotated, adjust the front and rear inflation pressures as shown on the Tire and Loading Information label. See *Inflation - Tire Pressure on page 5-56* and *Loading Your Vehicle on page 4-20*.

Reset the Tire Pressure Monitor System. See *Tire Pressure Monitor Operation on page 5-59*.

Make certain that all wheel nuts are properly tightened. See "Wheel Nut Torque" under *Capacities and Specifications on page 5-116*.

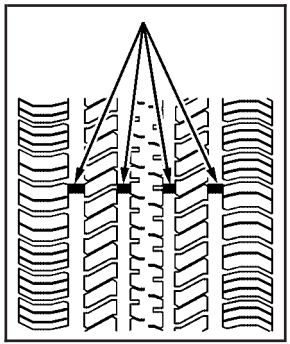
⚠CAUTION:

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 you change a wheel, remove any rust or dirt from places where the wheel attaches to the vehicle. In an emergency, you can use a cloth or a paper towel to do this; but be sure to use a scraper or wire brush later, if needed, to get all the rust or dirt off. See *Changing a Flat Tire on page 5-80*.

Make sure the spare tire is stored securely. Push, pull, and then try to rotate or turn the tire. If it moves, tighten the cable. See *Storing a Flat or Spare Tire and Tools on page 5-92*.

When It Is Time for New Tires

Various factors, such as maintenance, temperatures, driving speeds, vehicle loading, and road conditions influence when you need new tires.



One way to tell when it is time for new tires is to check the treadwear indicators, which will appear when your tires have only 1/16 inch (1.6 mm) or less of tread remaining.

You need new tires if any of the following statements are true:

- You can see the indicators at three or more places around the tire.
- You can see cord or fabric showing through the tire's rubber.
- The tread or sidewall is cracked, cut, or snagged deep enough to show cord or fabric.
- The tire has a bump, bulge, or split.
- The tire has a puncture, cut, or other damage that cannot be repaired well because of the size or location of the damage.

The rubber in tires degrades over time, even if they are not being used. This is also true for the spare tire, if your vehicle has one. Multiple conditions affect how fast this aging takes place, including temperatures, loading conditions, and inflation pressure maintenance. With proper care and maintenance tires will typically wear out before they degrade due to age. If you are unsure about the need to replace your tires as they get older, consult the tire manufacturer for more information.

Buying New Tires

GM has developed and matched specific tires for your vehicle. The original equipment tires installed on your vehicle, when it was new, were designed to meet General Motors Tire Performance Criteria Specification (TPC Spec) system rating. If you need replacement tires, GM strongly recommends that you get tires with the same TPC Spec rating. This way, your vehicle will continue to have tires that are designed to give the same performance and vehicle safety, during normal use, as the original tires.

GM's exclusive TPC Spec system considers over a dozen critical specifications that impact the overall performance of your vehicle, including brake system performance, ride and handling, traction control, and tire pressure monitoring performance. GM's TPC Spec number is molded onto the tire's sidewall near the tire size. If the tires have an all-season tread design, the TPC Spec number will be followed by an MS for mud and snow. See *Tire Sidewall Labeling on page 5-50* for additional information.

GM recommends replacing tires in sets of four. This is because uniform tread depth on all tires will help keep your vehicle performing most like it did when the tires were new. Replacing less than a full set of tires can affect the braking and handling performance of your vehicle. See *Tire Inspection and Rotation on page 5-62* for information on proper tire rotation.

⚠CAUTION:

Mixing tires could cause you to lose control while driving. If you mix tires of different sizes, brands, or types (radial and bias-belted tires), the vehicle may not handle properly, and you could have a crash. Using tires of different sizes, brands, or types may also cause damage to your vehicle. Be sure to use the correct size, brand, and type of tires on all wheels. It is all right to drive with your compact spare temporarily, as it was developed for use on your vehicle. See *Compact Spare Tire on page 5-96*.

⚠CAUTION:

If you use bias-ply tires on your vehicle, the wheel rim flanges could develop cracks after many miles of driving. A tire and/or wheel could fail suddenly, causing a crash. Use only radial-ply tires with the wheels on your vehicle.

If you must replace your vehicle's tires with those that do not have a TPC Spec number, make sure they are the same size, load range, speed rating, and construction type (radial and bias-belted tires) as your vehicle's original tires.

Vehicles that have a tire pressure monitoring system could give an inaccurate low-pressure warning if non-TPC Spec rated tires are installed on your vehicle. Non-TPC Spec rated tires may give a low-pressure warning that is higher or lower than the proper warning level you would get with TPC Spec rated tires. See *Tire Pressure Monitor System on page 5-57*.

Your vehicle's original equipment tires are listed on the Tire and Loading Information Label. See *Loading Your Vehicle on page 4-20*, for more information about the Tire and Loading Information Label and its location on your vehicle.

Different Size Tires and Wheels

If you add wheels or tires that are a different size than your original equipment wheels and tires, this could affect the way your vehicle performs, including its braking, ride and handling characteristics, stability, and resistance to rollover. Additionally, if your vehicle has electronic systems such as anti-lock brakes, rollover airbags, traction control, and electronic stability control, the performance of these systems can be affected.

⚠CAUTION:

If you add different sized wheels, your vehicle may not provide an acceptable level of performance and safety if tires not recommended for those wheels are selected. You may increase the chance that you will crash and suffer serious injury. Only use GM specific wheel and tire systems developed for your vehicle, and have them properly installed by a GM certified technician.

See *Buying New Tires on page 5-64* and *Accessories and Modifications on page 5-3* for additional information.

Uniform Tire Quality Grading

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

Treadwear 200 Traction AA Temperature A

The following information relates to the system developed by the United States National Highway Traffic Safety Administration (NHTSA), which grades tires by treadwear, traction, and temperature performance. This applies only to vehicles sold in the United States. The grades are molded on the sidewalls of most passenger car tires. The Uniform Tire Quality Grading (UTQG) system does not apply to deep tread, winter-type snow tires, space-saver, or temporary use spare tires, tires with nominal rim diameters of 10 to 12 inches (25 to 30 cm), or to some limited-production tires.

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

Treadwear

The treadwear grade is a comparative rating based on the wear rate of the tire when tested under controlled conditions on a specified government test course. For example, a tire graded 150 would wear one and a half (1.5) times as well on the government course as a tire graded 100. The relative performance of tires depends upon the actual conditions of their use, however, and may depart significantly from the norm due to variations in driving habits, service practices, and differences in road characteristics and climate.

Traction – AA, A, B, C

The traction grades, from highest to lowest, are AA, A, B, and C. Those grades represent the tire's ability to stop on wet pavement as measured under controlled conditions on specified government test surfaces of asphalt and concrete. A tire marked C may have poor traction performance.

Warning: **The traction grade assigned to this tire is based on straight-ahead braking traction tests, and does not include acceleration, cornering, hydroplaning, or peak traction characteristics.**

Temperature – A, B, C

The temperature grades are A (the highest), B, and C, representing the tire's resistance to the generation of heat and its ability to dissipate heat when tested under controlled conditions on a specified indoor laboratory test wheel. Sustained high temperature can cause the material of the tire to degenerate and reduce tire life, and excessive temperature can lead to sudden tire failure. The grade C corresponds to a level of performance which all passenger car tires must meet under the Federal Motor Vehicle Safety Standard No. 109. Grades B and A represent higher levels of performance on the laboratory test wheel than the minimum required by law.

Warning: **The temperature grade for this tire is established for a tire that is properly inflated and not overloaded. Excessive speed, underinflation, or excessive loading, either separately or in combination, can cause heat buildup and possible tire failure.**

Wheel Alignment and Tire Balance

The tires and wheels on your vehicle were aligned and balanced carefully at the factory to give you the longest tire life and best overall performance. Adjustments to wheel alignment and tire balancing will not be necessary on a regular basis. However, if you notice unusual tire wear or your vehicle pulling to one side or the other, the alignment might need to be checked. If you notice your vehicle vibrating when driving on a smooth road, the tires and wheels might need to be rebalanced. See your dealer/retailer 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 (except some aluminum wheels, which can sometimes be repaired). See your dealer/retailer if any of these conditions exist.

Your dealer/retailer will know the kind of wheel you need.

Each new wheel should have the same load-carrying capacity, diameter, width, offset, and be mounted the same way as the one it replaces.

If you need to replace any of your wheels, wheel bolts, wheel nuts, or Tire Pressure Monitor System (TPMS) sensors, replace them only with new GM original equipment parts. This way, you will be sure to have the right wheel, wheel bolts, wheel nuts, and TPMS sensors for your vehicle.

⚠CAUTION:

Using the wrong replacement wheels, wheel bolts, or wheel nuts on your vehicle can be dangerous. It could affect the braking and handling of your vehicle, make your tires lose air and make you lose control. You could have a collision in which you or others could be injured. 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 tire or tire chain clearance to the body and chassis.**

See *Changing a Flat Tire on page 5-80* for more information.

Used Replacement Wheels

⚠CAUTION:

Putting a used wheel on the vehicle is dangerous. You cannot know how it has been used or how far it has been driven. It could fail suddenly and cause a crash. If you have to replace a wheel, use a new GM original equipment wheel.

Tire Chains

⚠CAUTION:

Do not use tire chains. There is not enough clearance. Tire chains used on a vehicle without the proper amount of clearance can cause damage to the brakes, suspension or other vehicle parts. The area damaged by the tire chains could cause you to lose control of the vehicle and you or others may be injured in a crash.

Use another type of traction device only if its manufacturer recommends it for use on the vehicle and tire size combination and road conditions. Follow that manufacturer's instructions. To help avoid damage to the vehicle, drive slowly, readjust or remove the device if it is contacting the vehicle, and do not spin the vehicle's wheels. If you do find traction devices that will fit, install them on the front tires.

If a Tire Goes Flat

It is unusual for a tire to blowout while you are driving, especially if you maintain your vehicle's tires properly. If air goes out of a tire, it is much more likely to leak out slowly. But if you should ever have a blowout, here are a few tips about what to expect and what to do:

If a front tire fails, the flat tire creates a drag that pulls the vehicle toward that side. Take your foot off the accelerator pedal and grip the steering wheel firmly. Steer to maintain lane position, and then gently brake to a stop well out of the traffic lane.

A rear blowout, particularly on a curve, acts much like a skid and may require the same correction you would use in a skid. In any rear blowout remove your foot from the accelerator pedal. Get the vehicle under control by steering the way you want the vehicle to go. It may be very bumpy and noisy, but you can still steer. Gently brake to a stop, well off the road if possible.

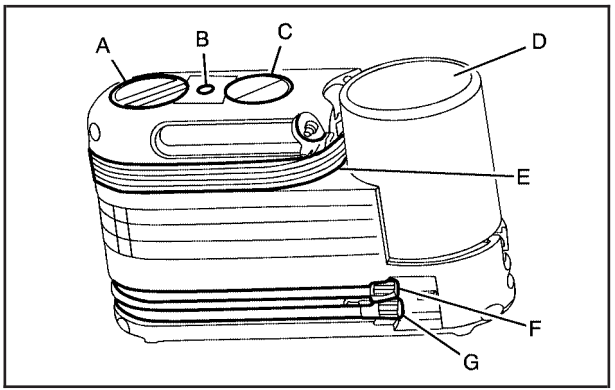
⚠CAUTION:

Lifting a vehicle and getting under it to do maintenance or repairs is dangerous without the appropriate safety equipment and training. The jack provided with your vehicle is designed only for changing a flat tire. If it is used for anything else, you or others could be badly injured or killed if the vehicle slips off the jack. Use the jack provided with your vehicle only for changing a flat tire.

If a tire goes flat, the next part shows how to use the jacking equipment to change a flat tire safely.

Tire Sealant and Compressor Kit

Your vehicle is equipped with a tire sealant and compressor kit that is capable of temporarily sealing a puncture up to a 6 mm in the tread area of the tire. There is no jack or spare tire. The kit inflates with liquid sealant and air. The tire sealant and compressor kit can also be used to inflate an underinflated tire. After the tire is inflated to the recommended pressure, see *Inflation - Tire Pressure on page 5-56*, the vehicle must be driven for five miles (8 km) to distribute the sealant in the tire and seal the puncture. See “Using the Tire Sealant and Compressor Kit to Temporarily Seal and Inflate a Punctured Tire” later in this section. Be sure to read and follow all of the tire sealant and compressor kit instructions. The kit includes:



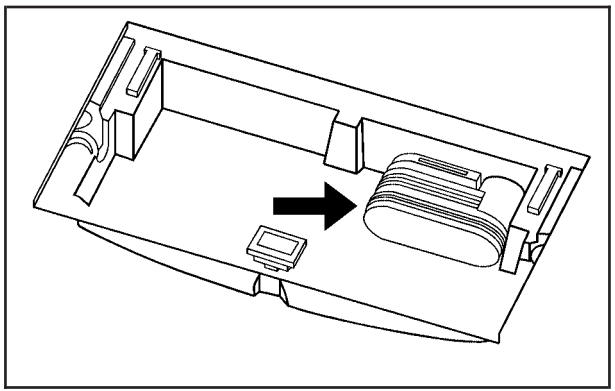
A. Selector Switch
B. On/Off Button
C. Air Pressure Gage
D. Tire Sealant Canister
E. Air Compressor Accessory Plug
F. Sealant/Air Hose (Clear)
G. Air Only Hose

After temporarily sealing the tire, it is recommended to take your vehicle to an authorized dealer/retailer as soon as possible. If the sealant is removed within 100 miles (161 km) of driving, it is easier to clean from the tire and you are less likely to require a replacement tire.

Accessing the Tire Sealant and Compressor Kit

To access the tire sealant and compressor kit:

1. Open the liftgate. See *Liftgate on page 2-12* for more information
2. Open the storage compartment door of the convenience center that is nearest the liftgate.



3. The tire sealant and compressor kit is located on the passenger side of the storage compartment.
4. Remove the tire sealant and compressor kit from the storage compartment.

Tire Sealant

Read and follow the safe handling instructions on the instructional label adhered to the sealant canister.

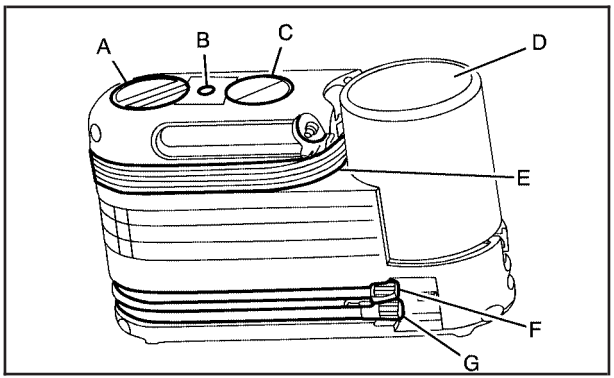
The sealant can temporarily seal a puncture up to 6 mm in the tread area of the tire. The sealant cannot seal sidewall damage, large punctures, or a tire that has become unseated from the wheel. See *Roadside Assistance Program on page 7-8*.

The sealant can only be used to seal one tire. After usage, the tire sealant canister and sealant/air hose assembly must be replaced at a dealer/retailer. See “Removal and Installation of Sealant Canister” later in this section.

Check the tire sealant expiration date on the sealant canister. The sealant canister should be replaced before its expiration date. Replacement canisters are available at your local dealer/retailer. See “Removal and Installation of Sealant Canister” later in this section.

Using the Tire Sealant and Compressor Kit to Temporarily Seal and Inflate a Punctured Tire

Follow the directions closely for correct sealant usage.



A. Selector Switch
B. On/Off Button
C. Air Pressure Gage
D. Tire Sealant Canister
E. Air Compressor Accessory Plug
F. Sealant/Air Hose (Clear)
G. Air Only Hose

1. Do a safety check. See *If a Tire Goes Flat on page 5-70*.
2. Inspect the punctured tire.

   The sealant can temporarily seal a puncture up to 6 mm in the tread area of the tire. The sealant cannot seal sidewall damage, large punctures, or a tire that has become unseated from the wheel. See *Roadside Assistance Program on page 7-8*.

   Do not remove any objects that have penetrated the tire.
3. Place the tire sealant and compressor kit on the ground and unwrap the sealant/air hose (F) from the side of the compressor.
4. Remove the valve stem cap from the flat tire by turning it counterclockwise.
5. Attach the sealant/air hose (F) onto the tire valve stem. Turn it clockwise until it is tight.

6. Unwrap and plug the air compressor accessory plug (E) into an accessory power outlet in the vehicle. See *Accessory Power Outlet(s) on page 3-20*.

⚠CAUTION:

Idling the engine in a closed-in place or with the climate control system off can cause deadly carbon monoxide (CO). See *Engine Exhaust on page 2-38*.

7. Start the vehicle. See *Starting the Engine on page 2-28*. The vehicle must be running while using the air compressor.

⚠CAUTION:

Overinflation could cause the tire to rupture, and you or others could be injured. Be sure to read the inflator instructions, and inflate the tire to its recommended pressure. Do not exceed 36 psi (248 kPa).

8. Turn the selector switch (A) counterclockwise to the sealant and air position.
9. Push the On/Off button (B).

   The tire sealant and compressor kit will inject sealant and air into the tire. Sealant may leak from the puncture until the vehicle is driven and the hole has sealed.

   The pressure gage (C) will initially show a high pressure while the compressor pushes the sealant into the tire. Once the sealant is completely dispersed into the tire, the pressure will quickly drop and start to rise again as the tire inflates with air only.
10. Inflate the tire to the recommended inflation pressure using the air pressure gage (E) on the top of the unit. The recommended inflation pressure can be found on the Tire and Loading Information label. See *Inflation - Tire Pressure on page 5-56*.

    The pressure gage reading is slightly high while the compressor is on. Turn the compressor off to get an accurate reading. The compressor may be turned on and off until the correct pressure is reached.

Notice: **If the recommended pressure cannot be reached after 15 minutes, the vehicle should not be driven farther. Damage to the tire is severe and the sealant will not be effective. Remove the air compressor plug from the accessory power outlet and unscrew the inflating hose from the tire valve. See *Roadside Assistance Program on page 7-8* for more information.**

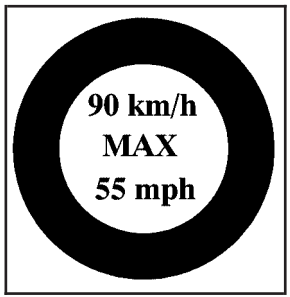
11. Turn the compressor off by pushing the On/Off switch (B).

    Steps 12 through 20 must be done immediately after Step 11.

    The tire is not sealed and will continue to leak air until the vehicle is driven and the sealant is distributed in the tire.

    Be careful while handling the tire sealant and compressor kit as they could be hot after usage.

12. Unplug the air compressor accessory plug (E) from the accessory power outlet in the vehicle.
13. Disconnect the sealant/air hose (F) from the tire valve stem by turning it counterclockwise and replace the tire valve stem cap.
14. Wrap the sealant/air hose (F) around the air compressor channel to stow it in its original location.
15. Stow the air compressor accessory plug (E) back into place.



16. If the flat tire was able to inflate to the recommended inflation pressure, remove the maximum speed label from the sealant canister (B).
17. Place it in a highly visible location such as the inside of the upper left corner of the windshield or to the face of the radio/clock.

    The maximum speed label reminds you to drive cautiously and not to exceed 55 mph (90 km/h) until you have the damaged tire inspected and repaired.

⚠CAUTION:

Storing the tire sealant and compressor kit or other equipment in the passenger compartment of the vehicle could cause injury. In a sudden stop or collision, loose equipment could strike someone. Store the tire sealant and compressor kit in its original location.

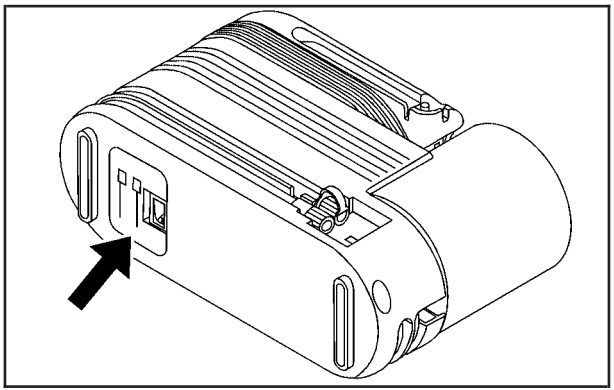
18. Return the equipment to its original storage location in your vehicle.
19. Immediately drive the vehicle 5 miles (8 km) to distribute the sealant evenly in the tire.
20. Stop at a safe location and check the tire pressure, refer to Steps 1 through 8 under “Using the Tire Sealant and Compressor Kit without Sealant to Inflate an Underinflated Tire (Not Punctured)” later in this section.

    If the tire pressure has fallen more then 10 psi (68 kPa), below the recommended inflation pressure, stop driving the vehicle. The tire is too severely damaged and the tire sealant and compressor kit cannot seal the tire. See *Roadside Assistance Program on page 7-8* for more information.

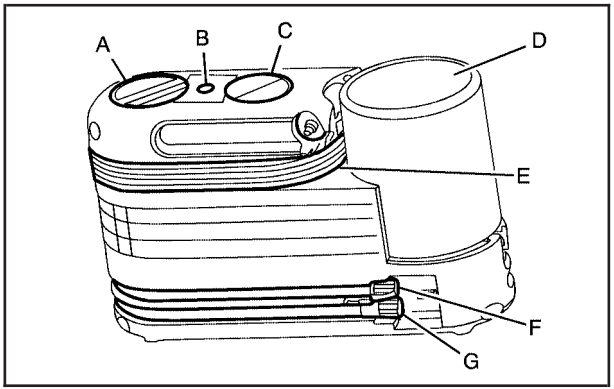
    If the tire pressure has not dropped more than 10 psi (68 kPa) from the recommended inflation pressure, you can inflate the tire back up to the recommended inflation pressure.
21. Wipe off any sealant from the wheel, tire and vehicle.
22. Dispose of the sealant canister (D) and sealant/air hose (F) assembly at a local dealer/retailer or in accordance with your local state codes and practices.
23. After temporarily sealing a tire with the tire sealant and compressor kit, take your vehicle to an authorized dealer/retailer to have the tire inspected and repaired or replaced.

Using the Air Compressor without Sealant to Inflate an Underinflated Tire (Not Punctured)

To use the air compressor to inflate a tire with air only and not sealant:



Your tire sealant and compressor kit has an accessory adapter located in a compartment on the bottom of its housing that may be used to inflate air mattresses, balls, etc.



A. Selector Switch
B. On/Off Button
C. Air Pressure Gage
D. Tire Sealant Canister
E. Air Compressor Accessory Plug
F. Sealant/Air Hose (Clear)
G. Air Only Hose

1. Do a safety check. See *If a Tire Goes Flat on page 5-70*.
2. Unwrap the air only hose (G) from the bottom of the air compressor.
3. Remove the tire valve stem cap by turning it counterclockwise.

4. Attach the air only hose (G) onto the valve stem by turning clockwise.
5. Remove the air compressor accessory plug (E) from the unit.
6. Plug the air compressor accessory plug (E) into an accessory power outlet in the vehicle. See *Accessory Power Outlet(s) on page 3-20* for more information.

   Do not slam the door or close the window on the compressor accessory plug cord.

⚠CAUTION:

Idling the engine in a closed-in place or with the climate control system off can cause deadly carbon monoxide (CO). See *Engine Exhaust on page 2-38*.

7. Start the vehicle. See *Starting the Engine on page 2-28*. The vehicle must be running while using the air compressor.

⚠CAUTION:

Overinflation could cause the tire to rupture, and you or others could be injured. Be sure to read the inflator instructions, and inflate the tire to its recommended pressure. Do not exceed 36 psi (248 kPa).

8. Turn the selector switch (A) clockwise to the air only position.

   The tire sealant and compressor kit will inflate the tire with air only.
9. Push the On/Off button (B).
10. Inflate the tire to the recommended inflation pressure using the air pressure gage (E) on the top of the unit. See *Inflation - Tire Pressure on page 5-56*.

    The pressure gage reading is slightly high while the compressor is on. Turn the compressor off to get an accurate pressure reading. The compressor may be turned on and off until the correct pressure is reached.

11. Turn off the air compressor by pushing the On/Off button (B).

    Be careful while handling the tire sealant and compressor kit as they could be hot after usage.

12. Unplug the air compressor accessory plug and wrap it back into place.

⚠CAUTION:

Storing the tire sealant and compressor kit or other equipment in the passenger compartment of the vehicle could cause injury. In a sudden stop or collision, loose equipment could strike someone. Store the tire sealant and compressor kit in its original location.

13. Disconnect the air only hose (G) from the tire valve stem by turning it counterclockwise.
14. Wrap the air only hose (G) around the side of the air compressor channel to stow it back in its original location.
15. Return the equipment to its original storage location of your vehicle.

Removal and Installation of the Sealant Canister

To remove the sealant canister, do the following:

1. Unwrap the sealant/air hose from the compressor.
2. Push the canister release button.
3. Pull up and remove the canister.
4. Replace with a new canister. See your dealer/retailer for the new canister.
5. Push the new canister into place.

Changing a Flat Tire

If a tire goes flat, avoid further tire and wheel damage by driving slowly to a level place. Turn on your vehicle's hazard warning flashers. See *Hazard Warning Flashers on page 3-6* for more information.

⚠CAUTION:

Changing a tire can be dangerous. The vehicle can slip off the jack and roll over or fall on you or other people. You and they could be badly injured or even killed. Find a level place to change your tire. To help prevent the vehicle from moving:

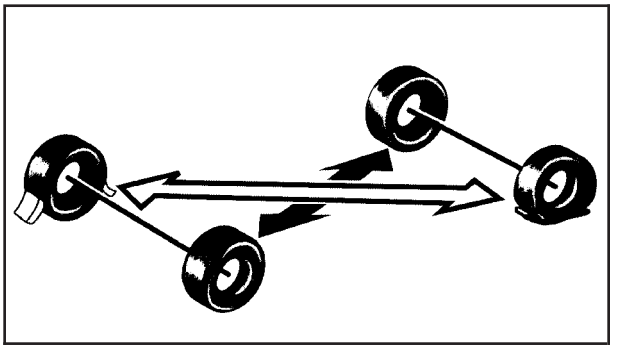
1. **Set the parking brake firmly.**
2. **Put the shift lever in P (Park).**
3. **Turn off the engine and do not restart while the vehicle is raised.**
4. **Do not allow passengers to remain in the vehicle.**

CAUTION: (Continued)

CAUTION: (Continued)

To be even more certain the vehicle will not move, you should put blocks at the front and rear of the tire farthest away from the one being changed. That would be the tire, on the other side, at the opposite end of the vehicle.

When your vehicle has a flat tire, use the following example as a guide to assist you in the placement of wheel blocks.

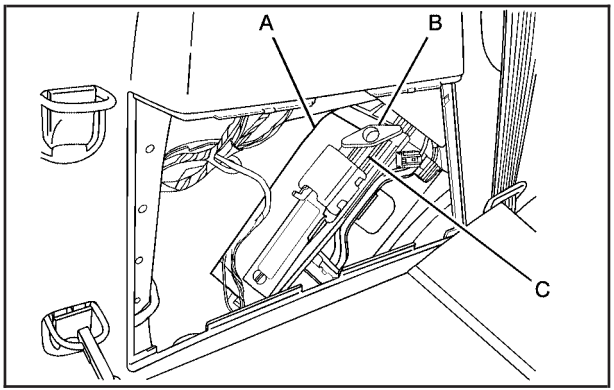


The following information tells you how to use the jack and change a tire.

Removing the Spare Tire and Tools

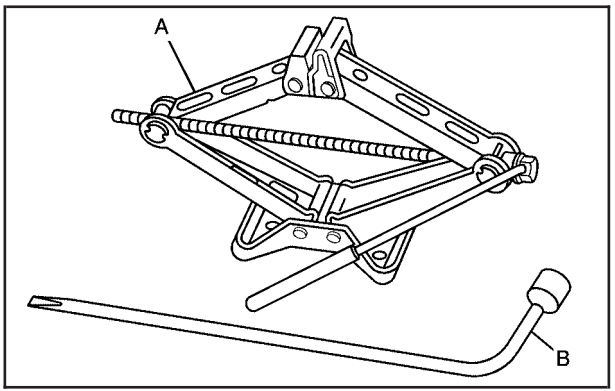
The tools needed to remove the spare tire are located in the storage compartment on the driver side, at the rear of the vehicle.

1. Open the jack storage compartment by pulling on the latch tab, located toward the rear of the vehicle, and pulling the cover off.



A. Tool Bag
B. Wing Bolt
C. Jack

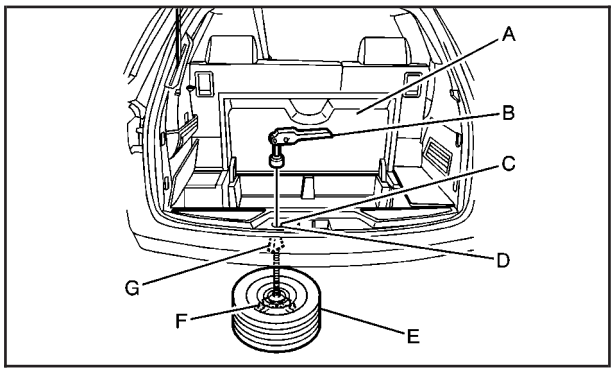
2. Remove the wing bolt (B) by turning it counterclockwise
3. Push the jack (C) up out of the holding bracket.
4. Turn the jack on its side, with the bottom facing toward you.
5. Pull the jack straight out, bottom first.



The tools you will be using include the jack (A) and lug wrench (B).

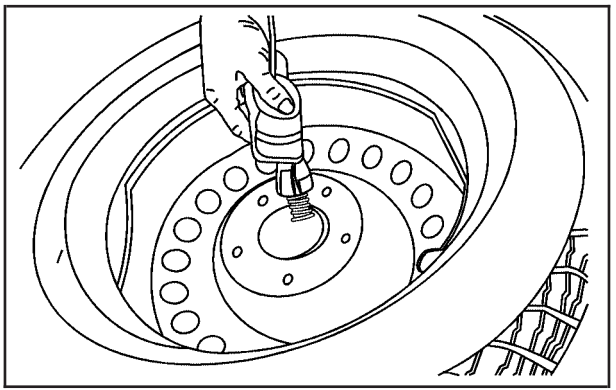
Removing the Spare Tire

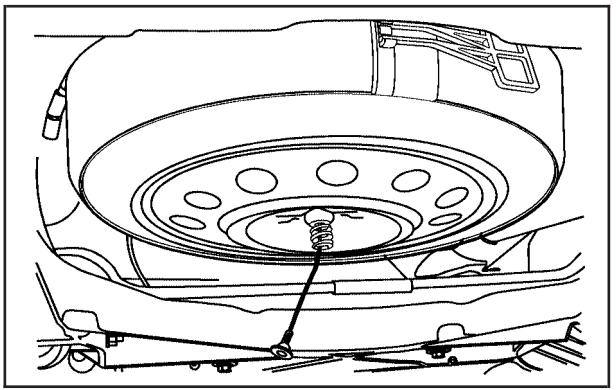
The compact spare tire is located under the vehicle, in front of the rear bumper. See *Compact Spare Tire on page 5-96* for more information about the compact spare.



A. Rear Convenience Center
B. Lug Wrench
C. Storage Compartment Cap Hole
D. Hoist Shaft
E. Compact Spare Tire
F. Retainer
G. Hoist Shaft Assembly

1. Open the storage compartment door of the convenience center that is nearest the liftgate and remove the cap on the bottom of the storage compartment.
2. Flip the carpet cutout that is located through the hole of the storage compartment.
3. Attach the lug wrench into the hoist shaft.
4. Turn the lug wrench counterclockwise to lower the spare tire to the ground. Continue turning the wrench until the spare tire can be pulled out from under the vehicle.





5. Tilt the retainer and slip it through the wheel opening to remove the spare tire from the cable.
6. Turn the wrench clockwise to raise the cable back up after removing the spare tire.

   Do not store a full-size or a flat road tire under the vehicle. See *Storing a Flat or Spare Tire and Tools on page 5-92*.

To continue changing the flat tire, see *Removing the Flat Tire and Installing the Spare Tire on page 5-84*.

If the spare tire will not lower, the secondary latch could be engaged.

Do the following to check the cable:

1. Check under the vehicle to see if the cable is visible.
2. If it is not visible, see *Secondary Latch System on page 5-89*.

   If it is visible, first try to tighten the cable by turning the lug wrench clockwise until you hear two clicks or feel it skip twice. You cannot over-tighten the cable.
3. Loosen the cable by turning the wrench counterclockwise three or four turns.

4. If the spare tire has not lowered, tighten the cable all the way and then loosen it at least two times.

   If the spare tire did lower to the ground, continue with Step 5 under “Removing the Spare Tire (Vehicles with the Rear Convenience Center)” listed previously.

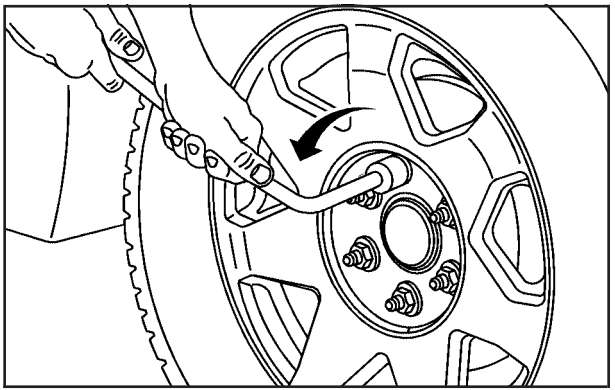
5. If you still cannot lower the spare tire to the ground, see *Secondary Latch System on page 5-89*.

Removing the Flat Tire and Installing the Spare Tire

1. Do a safety check before proceeding. See *Changing a Flat Tire on page 5-80* for more information.
2. If the vehicle has a wheel cover, loosen the plastic nut caps with the wheel wrench. They will not come off. Then, using the flat end of the wheel wrench, pry along the edge of the cover until it comes off. Be careful; the edges may be sharp. Do not try to remove the cover with your bare hands.

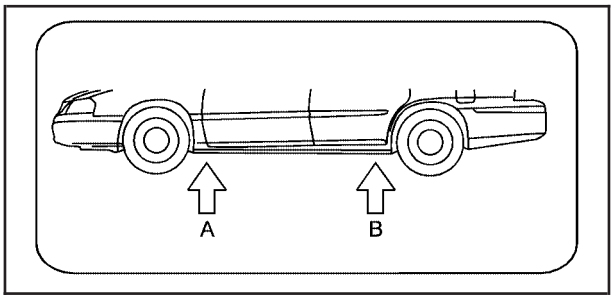
   Store the wheel cover securely in the rear of the vehicle until you have the flat tire repaired or replaced.

   If your vehicle has aluminum wheels, remove the wheel nut caps using the wheel wrench.



3. Loosen the wheel nuts — but do not remove them — using the lug wrench. For wheels with a wheel lock key, use the wheel lock key between the lock nut and lug wrench. The key is supplied in the front passenger door pocket.

Notice: **If your vehicle has wheel locks and an impact wrench is used to remove the wheel nuts, the lock nut or wheel lock key could be damaged. Do not use an impact wrench to remove the wheel nuts if your vehicle has wheel locks.**



4. To identify the appropriate jacking location, find the triangle (A) about 12 inches (30.5 cm) from the front tire or (B) about 10.5 inches (27 cm) from the rear tire.

   The triangle is located near each wheel on the vehicle's exterior.

Notice: **If a jack is used to raise the vehicle without positioning it correctly, your vehicle could be damaged. When raising your vehicle on a jack, avoid contact with the rear axle control arms.**

5. Do not raise the vehicle yet. Put the compact spare tire near you.

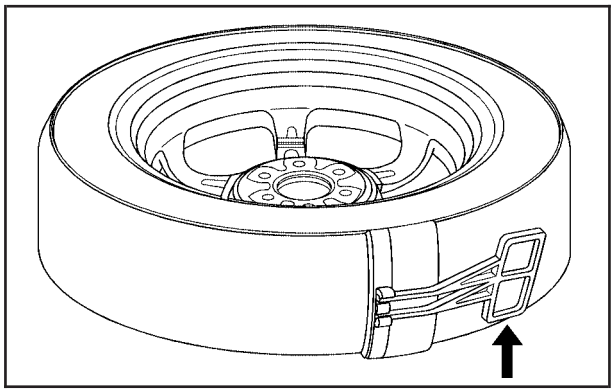
⚠CAUTION:

Getting under a vehicle when it is jacked up 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.

⚠CAUTION:

Raising your 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.

6. Attach the lug wrench to the jack, and turn the wrench clockwise to raise the jack head 3 inches (7.6 cm).
7. Place the jack under the vehicle as identified in Step 3. Raise the vehicle by turning the lug wrench clockwise in the jack. Raise the vehicle far enough off the ground so that there is enough room for the spare tire to fit under the wheel well.
8. Remove all the wheel nuts and the flat tire.



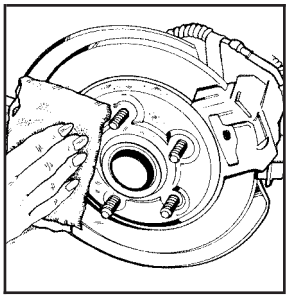
9. Remove the plastic spare tire heat shield by pulling the rubber latch. Store the plastic spare tire heat shield. See *Storing a Flat or Spare Tire and Tools on page 5-92* for more information.

⚠CAUTION:

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 you change a wheel, remove any rust or dirt from places where the wheel attaches to the vehicle. In an emergency, you can use a cloth or a paper towel to do this; but be sure to use a scraper or wire brush later, if needed, to get all the rust or dirt off. See *Changing a Flat Tire on page 5-80*.

⚠CAUTION:

Never use oil or grease on studs or nuts. Because the nuts might come loose. The vehicle's wheel could fall off, causing a crash.

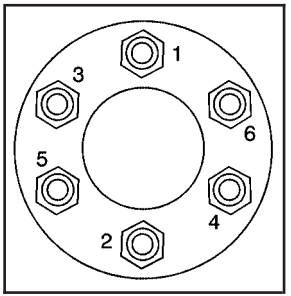


10. Remove any rust or dirt from the wheel bolts, mounting surfaces, and spare wheel.
11. Place the spare tire on the wheel mounting surface.
12. Put the nuts on by hand by turning the clockwise until the wheel is held against the mounting surface. Make sure the rounded end is toward the wheel.
13. Lower the vehicle by attaching the lug wrench to the jack and turning the wrench counterclockwise. Lower the jack completely.

⚠CAUTION:

Incorrect or improperly tightened wheel nuts can cause the wheel to come loose and even come off. This could lead to a crash. If you have to replace them, be sure to get new original equipment wheel nuts. Stop somewhere as soon as you can and have the nuts tightened with a torque wrench to the proper torque specification. See *Capacities and Specifications on page 5-116* for wheel nut torque specification.

Notice: **Improperly tightened wheel nuts can lead to brake pulsation and rotor damage. To avoid expensive brake repairs, evenly tighten the wheel nuts in the proper sequence and to the proper torque specification. See *Capacities and Specifications on page 5-116* for the wheel nut torque specification.**



14. Tighten the wheel nuts firmly in a crisscross sequence, as shown.

Notice: **Wheel covers will not fit on your vehicle's compact spare. If you try to put a wheel cover on the compact spare, the cover or the spare could be damaged.**

Secondary Latch System

Your vehicle has an underbody mounted tire hoist assembly that has a secondary latch system. It is designed to stop the compact spare tire from suddenly falling off your vehicle if the cable holding the spare tire is damaged. For the secondary latch to work, the tire must be stowed with the valve stem pointing down. See *Storing a Flat or Spare Tire and Tools on page 5-92* for instructions on storing the spare tire correctly.

⚠CAUTION:

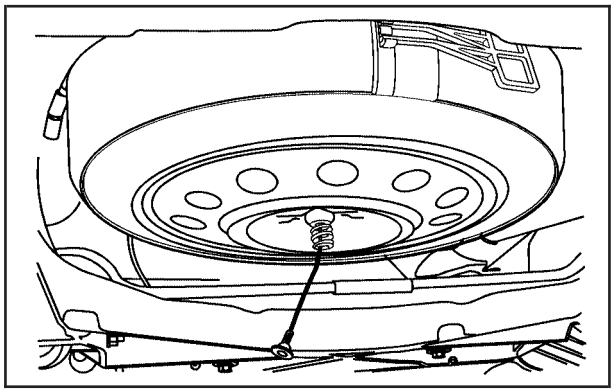
Before beginning this procedure read all the instructions. Failure to read and follow the instructions could damage the hoist assembly and you and others could get hurt. Read and follow the instructions listed next.

To release the spare tire from the secondary latch:

⚠CAUTION:

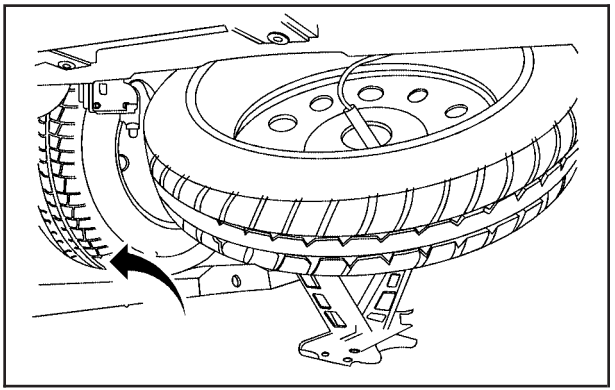
Someone standing too close during the procedure could be injured by the jack. If the spare tire does not slide off the jack completely, make sure no one is behind you or on either side of you as you pull the jack out from the under spare.

1. If the cable is not visible, start this procedure at Step 3.

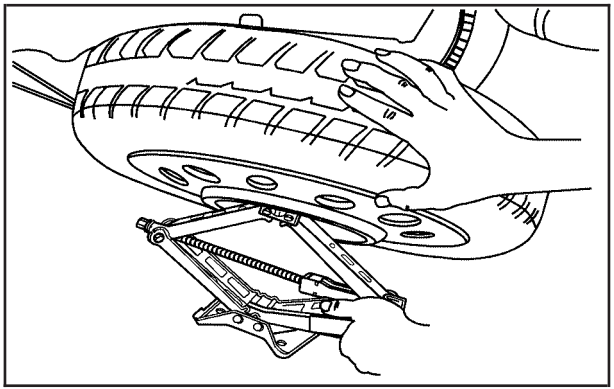


All-Wheel-Drive Vehicle shown

2. Turn the lug wrench counterclockwise until approximately 6 inches (15 cm) of cable is exposed.
3. Attach the lug wrench to the jack and raise the jack at least 10 turns.
4. Place the jack under the vehicle, ahead of the rear bumper. Position the center lift point of the jack under the center of the spare tire.
5. Turn the lug wrench clockwise to raise the jack until it lifts the secondary latch spring.
6. Keep raising the jack until the spare tire stops moving upward and is held firmly in place. This lets you know that the secondary latch has released and the spare tire is balancing on the jack.



7. Lower the jack by turning the lug wrench counterclockwise. Keep lowering the jack until the spare tire slides off the jack.



8. Disconnect the lug wrench from the jack and carefully remove the jack. Use one hand to push against the spare tire while firmly pulling the jack out from under the spare tire with the other hand.
9. Tilt the retainer and slip it through the wheel opening when the spare tire has been completely lowered.
10. Turn the lug wrench clockwise to raise the cable back up if the cable is hanging.

Have the hoist shaft assembly inspected as soon as you can. You will not be able to store a spare tire using the hoist assembly until it has been repaired or replaced.

Storing a Flat or Spare Tire and Tools

Storing the Spare Tire

⚠CAUTION:

The underbody-mounted spare tire needs to be stored with the valve stem pointing down. If the spare tire is stored with the valve stem pointing upwards, its secondary latch will not work properly and the spare tire could loosen and suddenly fall from your vehicle. If this happened when your vehicle was being driven, the tire might contact a person or another vehicle, causing injury and, of course, damage to itself as well. Be sure the underbody-mounted spare tire is stored with its valve stem pointing down.

⚠CAUTION:

Storing a jack, a tire, or other equipment in the passenger compartment of the vehicle could cause injury. In a sudden stop or collision, loose equipment could strike someone. Store all these in the proper place.

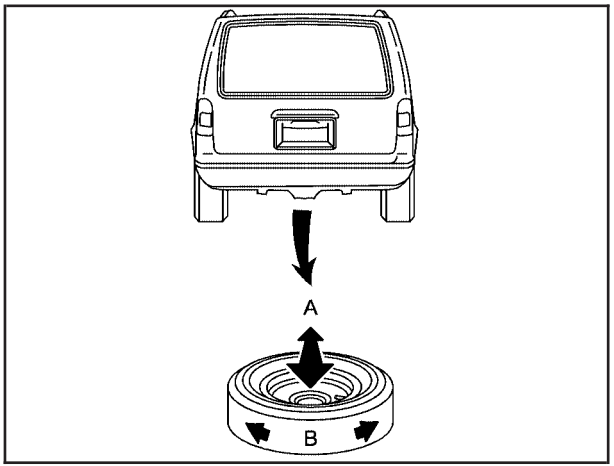
To store the spare tire:

1. Lay the compact spare tire near the rear of the vehicle with the valve stem down.
2. Reinstall the plastic spare tire heat shield on the compact spare tire.
3. Slide the cable retainer through the center of the wheel and start to raise the compact spare tire.

   Make sure the retainer is fully seated across the underside of the wheel.
4. When the compact spare tire is almost in the stored position, turn the tire so the valve is towards the rear of the vehicle.

   This position helps when checking the air pressure in the compact spare tire.

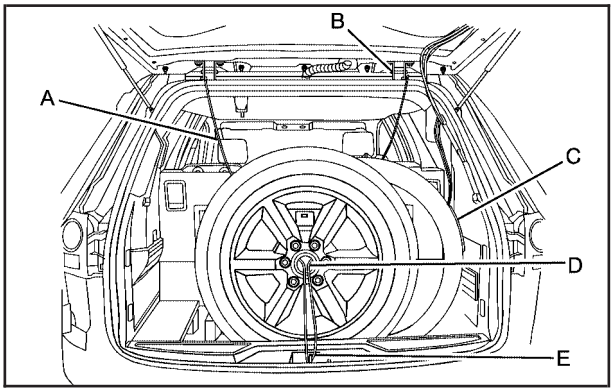
5. Raise the tire fully against the underside of the vehicle. Continue turning the lug wrench until you feel more than two clicks. This indicates that the compact spare tire is secure and the cable is tight. The spare tire hoist cannot be overtightened.



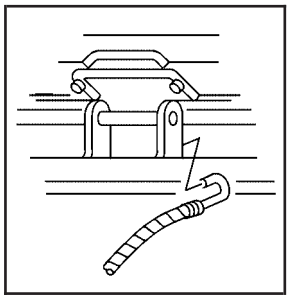
6. Make sure the tire is stored securely. Push, pull (A), and then try to turn (B) the tire. If the tire moves, use the lug wrench to tighten the cable.

Storing the Flat Tire

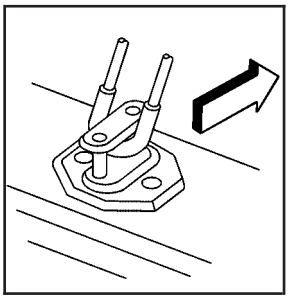
1. Remove the cable package from the jack storage area.
2. Remove the small center cap by tapping the back of the cap with the extension of the shaft, if the vehicle has aluminum wheels.
3. Put the flat tire in the rear storage area with the valve stem pointing toward the rear of the vehicle.



4. Pull the cable (A) through the door striker (E), the center of the wheel (D), and the plastic spare tire heat shield (C), as shown.



5. Hook the cable onto the outside portion of the liftgate hinges (B).

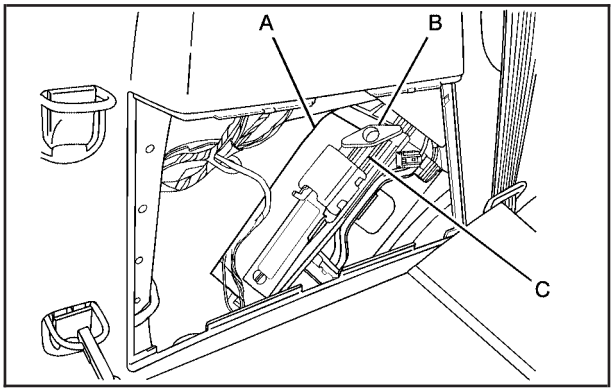


8. Make sure the metal tube is centered at the striker. Push the tube towards the front of the vehicle.

6. Hook the other end of the cable onto the outside portion of the liftgate hinge (A).
7. Pull on the cable to make sure it is secure.

9. Close the liftgate and make sure it is latched properly.

Storing the Tools



A. Tool Bag
B. Wing Bolt
C. Jack

Put back all tools as they were stored in the jack storage compartment and put the compartment cover back on.

1. Ensure that the bottom of the jack is facing toward you.
2. Turn the jack (C) on it's side and place down on the holding bracket.
3. Reinstall the wing bolt (B) by turning clockwise.
4. To replace the cover, line up the tab at the front of the cover with the notch in the cover opening. Push the cover in place and make sure that the rear clips are in the slots and push the cover closed.

Store the center cap or the plastic bolt-on wheel covers until a full size tire is put back on the vehicle. When you replace the compact spare with a full-size tire, reinstall the bolt-on wheel covers or the center cap. Hand-tighten them over the wheel nuts, using the lug wrench.

Compact Spare Tire

Although the compact spare tire 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 tire is correctly inflated. The compact spare is made to perform well at speeds up to 65 mph (105 km/h) for distances up to 3,000 miles (5 000 km), so you can finish your trip and have the full-size tire repaired or replaced at your convenience. Of course, it is best to replace the spare with a full-size tire as soon as possible. The spare tire will last longer and be in good shape in case it is needed again.

Notice: **When the compact spare is installed, do not take your vehicle through an automatic car wash with guide rails. The compact spare can get caught on the rails. That can damage the tire and wheel, and maybe other parts of your vehicle.**

Do not use the compact spare on other vehicles.

And do not mix the compact spare tire or wheel with other wheels or tires. They will not fit. Keep the spare tire and its wheel together.

The All-Wheel Drive (AWD) system will be automatically disabled when you use the compact spare. To restore the AWD and prevent excessive wear on the clutch in your AWD, replace the compact spare tire with a full-size tire as soon as possible.

Notice: **Tire chains will not fit your compact spare. Using them can damage your vehicle and can damage the chains too. Do not use tire chains on your compact spare.**

Appearance Care

Interior Cleaning

Your vehicle's interior will continue to look its best if it is cleaned often. Although not always visible, dust and dirt can accumulate on your upholstery. Dirt can damage carpet, fabric, leather, and plastic surfaces. Regular vacuuming is recommended to remove particles from your upholstery. It is important to keep your upholstery from becoming and remaining heavily soiled. Soils should be removed as quickly as possible. Your vehicle's interior may experience extremes of heat that could cause stains to set rapidly.

Lighter colored interiors may require more frequent cleaning. Use care because newspapers and garments that transfer color to your home furnishings may also transfer color to your vehicle's interior.

When cleaning your vehicle's interior, only use cleaners specifically designed for the surfaces being cleaned. Permanent damage may result from using cleaners on surfaces for which they were not intended. Use glass cleaner only on glass. Remove any accidental over-spray from other surfaces immediately. To prevent over-spray, apply cleaner directly to the cleaning cloth.

Notice: **If you use abrasive cleaners when cleaning glass surfaces on your vehicle, you could scratch the glass and/or cause damage to the rear window defogger. When cleaning the glass on your vehicle, use only a soft cloth and glass cleaner.**

Many cleaners contain solvents that may become concentrated in your vehicle's breathing space. Before using cleaners, read and adhere to all safety instructions on the label. While cleaning your vehicle's interior, maintain adequate ventilation by opening your vehicle's doors and windows.

Dust may be removed from small buttons and knobs using a small brush with soft bristles.

Your dealer/retailer has a product for cleaning your vehicle's glass. Should it become necessary, you can also obtain a product from your dealer/retailer to remove odors from your vehicle's upholstery.

Do not clean your vehicle using:

- A knife or any other sharp object to remove a soil from any interior surface.
- A stiff brush. It can cause damage to your vehicle's interior surfaces.
- Heavy pressure or aggressive rubbing with a cleaning cloth. Use of heavy pressure can damage your interior and does not improve the effectiveness of soil removal.
- Laundry detergents or dishwashing soaps with degreasers can leave residue that streaks and attracts dirt. For liquid cleaners, about 20 drops per gallon (3.78 L) of water is a good guide. Use only mild, neutral-pH soaps.
- Too much cleaner that saturates the upholstery.
- Organic solvents such as naptha, alcohol, etc. that can damage your vehicle's interior.

Fabric/Carpet

Use a vacuum cleaner with a soft brush attachment frequently to remove dust and loose dirt. A canister vacuum with a beater bar in the nozzle may only be used on floor carpet and carpeted floor mats. For any soil, always try to remove it first with plain water or club soda. Before cleaning, gently remove as much of the soil as possible using one of the following techniques:

- For liquids: gently blot the remaining soil with a paper towel. Allow the soil to absorb into the paper towel until no more can be removed.
- For solid dry soils: remove as much as possible and then vacuum.

To clean:

1. Saturate a lint-free, clean white cloth with water or club soda.
2. Wring the cloth to remove excess moisture.
3. Start on the outside edge of the soil and gently rub toward the center. Continue cleaning, using a clean area of the cloth each time it becomes soiled.
4. Continue to gently rub the soiled area until the cleaning cloth remains clean.
5. If the soil is not completely removed, use a mild soap solution and repeat the cleaning process that was used with plain water.

If any of the soil remains, a commercial fabric cleaner or spot lifter may be necessary. When a commercial upholstery cleaner or spot lifter is to be used, test a small hidden area for colorfastness first. If the locally cleaned area gives any impression that a ring formation may result, clean the entire surface.

After the cleaning process has been completed, a paper towel can be used to blot excess moisture from the fabric or carpet.

Leather

A soft cloth dampened with water can be used to remove dust. If a more thorough cleaning is necessary, a soft cloth dampened with a mild soap solution can be used. Allow the leather to dry naturally. Do not use heat to dry. Never use steam to clean leather. Never use spot lifters or spot removers on leather. Many commercial leather cleaners and coatings that are sold to preserve and protect leather may permanently change the appearance and feel of your leather and are not recommended. Do not use silicone or wax-based products, or those containing organic solvents to clean your vehicle's interior because they can alter the appearance by increasing the gloss in a non-uniform manner. Never use shoe polish on leather.

Instrument Panel, Vinyl, and Other Plastic Surfaces

A soft cloth dampened with water may be used to remove dust. If a more thorough cleaning is necessary, a clean soft cloth dampened with a mild soap solution can be used to gently remove dust and dirt. Never use spot lifters or removers on plastic surfaces. Many commercial cleaners and coatings that are sold to preserve and protect soft plastic surfaces may permanently change the appearance and feel of your interior and are not recommended. Do not use silicone or wax-based products, or those containing organic solvents to clean your vehicle's interior because they can alter the appearance by increasing the gloss in a non-uniform manner.

Some commercial products may increase gloss on your instrument panel. The increase in gloss may cause annoying reflections in the windshield and even make it difficult to see through the windshield under certain conditions.

Care of Safety Belts

Keep belts clean and dry.

⚠CAUTION:

Do not bleach or dye safety belts. If you do, 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.

Weatherstrips

Silicone grease on weatherstrips will make them last longer, seal better, and not stick or squeak. Apply silicone grease with a clean cloth. During very cold, damp weather frequent application may be required. See *Recommended Fluids and Lubricants on page 6-12*.

Washing Your Vehicle

The best way to preserve your vehicle's finish is to keep it clean by washing it often.

Notice: **Certain cleaners contain chemicals that can damage the emblems or nameplates on your vehicle. Check the cleaning product label. If it states that it should not be used on plastic parts, do not use it on your vehicle or damage may occur and it would not be covered by the warranty.**

Do not wash the vehicle in direct sunlight. Use a car washing soap. Do not use cleaning agents that are petroleum based or that contain acid or abrasives, as they can damage the paint, metal or plastic on your vehicle. Approved cleaning products can be obtained from your dealer/retailer. See *Vehicle Care/Appearance Materials on page 5-104*. Follow all manufacturers' directions regarding correct product usage, necessary safety precautions and appropriate disposal of any vehicle care product.

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.

High pressure car washes may cause water to enter the vehicle. Avoid using high pressure washes closer than 12 inches (30 cm) to the surface of the vehicle. Use of power washers exceeding 1,200 psi (8 274 kPa) can result in damage or removal of paint and decals.

Cleaning Exterior Lamps/Lenses

Use only lukewarm or cold water, a soft cloth and a car washing soap to clean exterior lamps and lenses. Follow instructions under *Washing Your Vehicle on page 5-100*.

Finish Care

Occasional waxing or mild polishing of your vehicle by hand may be necessary to remove residue from the paint finish. You can get approved cleaning products from your dealer/retailer. See *Vehicle Care/Appearance Materials on page 5-104*.

If your vehicle has a basecoat/clearcoat paint finish, the clearcoat gives more depth and gloss to the colored basecoat. Always use waxes and polishes that are non-abrasive and made for a basecoat/clearcoat paint finish.

Notice: **Machine compounding or aggressive polishing on a basecoat/clearcoat paint finish may damage it. Use only non-abrasive waxes and polishes that are made for a basecoat/clearcoat paint finish on your vehicle.**

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 your 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.

Exterior painted surfaces are subject to aging, weather and chemical fallout that can take their toll over a period of years. You can help to keep the paint finish looking new by keeping your vehicle garaged or covered whenever possible.

Protecting Exterior Bright Metal Parts

Bright metal parts should be cleaned regularly to keep their luster. Washing with water is all that is usually needed. However, you may use chrome polish on chrome or stainless steel trim, if necessary.

Use special care with aluminum trim. To avoid damaging protective trim, never use auto or chrome polish, steam or caustic soap to clean aluminum. A coating of wax, rubbed to high polish, is recommended for all bright metal parts.

Windshield, Backglass, and Wiper Blades

Clean the outside of the windshield and backglass with glass cleaner.

Clean the rubber blades using a lint free cloth or paper towel soaked with windshield washer fluid or a mild detergent. Wash the windshield thoroughly when you clean the blades. Bugs, road grime, sap and a buildup of vehicle wash/wax treatments may cause wiper streaking. Replace the wiper blades if they are worn or damaged.

Wipers can be damaged by:

- Extreme dusty conditions
- Sand and salt
- Heat and sun
- Snow and ice, without proper removal

Aluminum or Chrome-Plated Wheels and Trim

Your vehicle may have either aluminum or chrome-plated wheels.

Keep the wheels clean using a soft clean cloth with mild soap and water. Rinse with clean water. After rinsing thoroughly, dry with a soft clean towel. A wax may then be applied.

Notice: **Chrome wheels and other chrome trim may be damaged if you do not wash your vehicle after driving on roads that have been sprayed with magnesium, calcium or sodium chloride. These chlorides are used on roads for conditions such as ice and dust. Always wash your vehicle's chrome with soap and water after exposure.**

Notice: **If you use strong soaps, chemicals, abrasive polishes, cleaners, brushes, or cleaners that contain acid on aluminum or chrome-plated wheels, you could damage the surface of the wheel(s). The repairs would not be covered by your warranty. Use only approved cleaners on aluminum or chrome-plated wheels.**

The surface of these wheels is similar to the painted surface of your vehicle. Do not use strong soaps, chemicals, abrasive polishes, abrasive cleaners, cleaners with acid, or abrasive cleaning brushes on them because you could damage the surface. Do not use chrome polish on aluminum wheels.

Notice: **Using chrome polish on aluminum wheels could damage the wheels. The repairs would not be covered by your warranty. Use chrome polish on chrome wheels only.**

Use chrome polish only on chrome-plated wheels, but avoid any painted surface of the wheel, and buff off immediately after application.

Notice: **If you drive your vehicle through an automatic car wash that has silicone carbide tire cleaning brushes, you could damage the aluminum or chrome-plated wheels. The repairs would not be covered by your warranty. Never drive a vehicle equipped with aluminum or chrome-plated wheels through an automatic car wash that uses silicone carbide tire cleaning brushes.**

Tires

To clean the tires, use a stiff brush with tire cleaner.

Notice: **Using petroleum-based tire dressing products on your vehicle may damage the paint finish and/or tires. When applying a tire dressing, always wipe off any overspray from all painted surfaces on your vehicle.**

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 warranty.

Finish Damage

Any stone chips, fractures or deep scratches in the finish should be repaired right away. Bare metal will corrode quickly and may develop into major repair expense.

Minor chips and scratches can be repaired with touch-up materials available from your dealer/retailer. Larger areas of finish damage can be corrected in your dealer's/retailer's body and paint shop.

Underbody Maintenance

Chemicals used for ice and snow removal and dust control can collect on the underbody. If these are not removed, corrosion and rust can develop on the underbody parts such as fuel lines, frame, floor pan, and exhaust system even though they have corrosion protection.

At least every spring, flush these materials from the underbody with plain water. Clean any areas where mud and debris can collect. Dirt packed in close areas of the frame should be loosened before being flushed. Your dealer/retailer or an underbody car washing system can do this for you.

Chemical Paint Spotting

Some weather and atmospheric conditions can create a chemical fallout. Airborne pollutants can fall upon and attack painted surfaces on the vehicle. This damage can take two forms: blotchy, ring-shaped discolorations, and small, irregular dark spots etched into the paint surface.

Although no defect in the paint job causes this, we will repair, at no charge to the owner, the surfaces of new vehicles damaged by this fallout condition within 12 months or 12,000 miles (20 000 km) of purchase, whichever occurs first.

Vehicle Care/Appearance Materials

Description	Usage
Polishing Cloth	Interior and exterior polishing cloth.
Tar and Road Oil Remover	Removes tar, road oil, and asphalt.
Chrome Cleaner and Polish	Use on chrome or stainless steel.
White Sidewall Tire Cleaner	Removes soil and black marks from whitewalls and raised white lettering.
Vinyl Cleaner	Cleans vinyl.
Glass Cleaner	Removes dirt, grime, smoke and fingerprints.
Chrome Wheel Cleaner	Removes dirt and grime from chrome wheels.
Finish Enhancer	Removes dust, fingerprints, and surface contaminants. Spray on and wipe off.
Swirl Remover Polish	Removes swirl marks, fine scratches, and other light surface contamination.

Description	Usage
Cleaner Wax	Removes light scratches and protects finish.
Foaming Tire Shine Low Gloss	Cleans, shines, and protects tires. No wiping necessary.
Wash Wax Concentrate	Medium foaming shampoo. Cleans and lightly waxes. Biodegradable and phosphate free.
Spot Lifter	Quickly removes spots and stains from carpets, vinyl, and cloth upholstery.
Odor Eliminator	Odorless spray odor eliminator used on fabrics, vinyl, leather and carpet.

Vehicle Identification

Vehicle Identification Number (VIN)

This is the legal identifier for your vehicle. It appears on a plate in the front corner of the instrument panel, on the driver side. It can be seen through the windshield from outside the vehicle. The VIN also appears on the Certification/Tire and Service Parts labels and the certificates of title and registration.

Engine Identification

The eighth character in the VIN is the engine code. This code helps identify the vehicle's engine, specifications, and replacement parts. See "Engine Specifications" under *Capacities and Specifications on page 5-116* for your vehicle's engine code.

Service Parts Identification Label

This label is on the inside of the glove box. It is very helpful if you ever need to order parts. The label has the following information:

- Vehicle Identification Number (VIN)
- Model designation
- Paint information
- Production options and special equipment

Do not remove this label from the vehicle.

Electrical System

High Voltage Devices and Wiring

⚠CAUTION:

Exposure to high voltage can cause shock, burns, and even death. The high voltage systems in your vehicle can only be serviced by technicians with special training.

High voltage devices are identified by labels. Do not remove, open, take apart, or modify these devices. High voltage cable or wiring has orange covering. Do not probe, tamper with, cut, or modify high voltage cable or wiring.

Add-On Electrical Equipment

Notice: **Do not add anything electrical to your vehicle unless you check with your dealer/retailer first. Some electrical equipment can damage your vehicle and the damage would not be covered by your warranty. Some add-on electrical equipment can keep other components from working as they should.**

Add-on equipment can drain your vehicle's battery, even if your vehicle is not operating.

Your vehicle has an airbag system. Before attempting to add anything electrical to your vehicle, see *Servicing Your Airbag-Equipped Vehicle on page 1-74*.

Windshield Wiper Fuses

The windshield wiper motor is protected by a circuit breaker and a fuse. If the motor overheats due to heavy snow or ice, the wiper will stop until the motor cools. If the overload is caused by some electrical problem, have it fixed.

Power Windows and Other Power Options

Circuit breakers in the fuse block protect the power windows and other power accessories. When the current load is too heavy, the circuit breaker opens and closes, protecting the circuit until the problem is fixed or goes away.

Fuses and Circuit Breakers

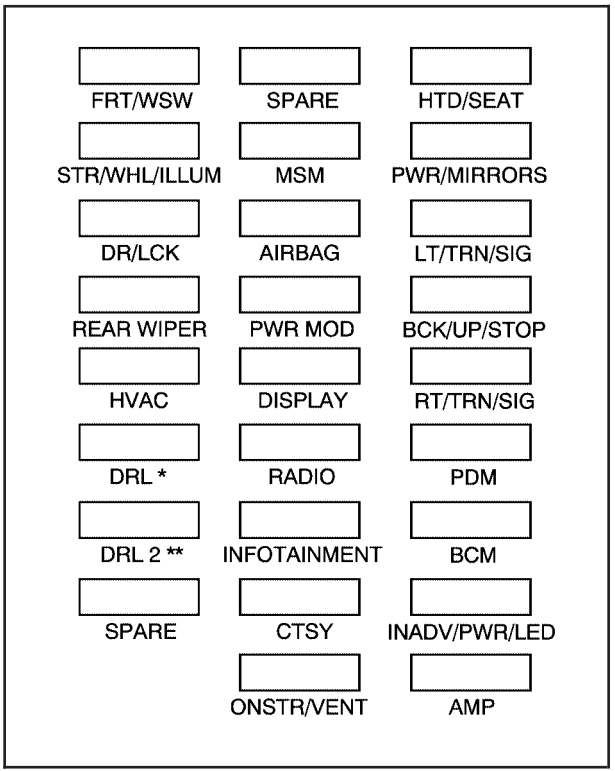
The wiring circuits in your vehicle are protected from short circuits by a combination of fuses, circuit breakers and fusible thermal links. This greatly reduces the chance of fires caused by electrical problems.

Look at the silver-colored band inside the fuse. If the band is broken or melted, replace the fuse. Be sure you 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 you can.

Instrument Panel Fuse Block

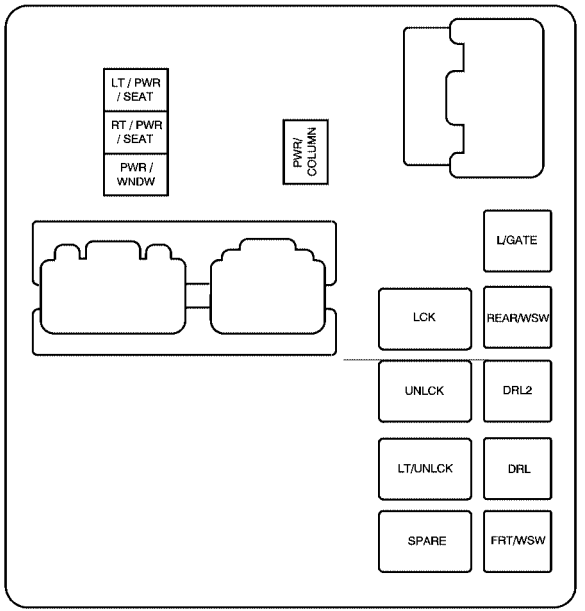
The instrument panel fuse block is located under the instrument panel on the passenger side of the vehicle. Pull down on the cover to access the fuse block.



Fuse Side

Fuses	Usage
FRT/WSW	Front Windshield Wiper
SPARE	Spare
HTD/SEAT	Front Heated Seats
STR/WHL/ ILLUM	Steering Wheel Illumination
MSM	Memory Seat Module
PWR/MIRRORS	Power Mirrors
DR/LCK	Door Locks
AIRBAG	Airbag System
LT/TRN/SIG	Driver Side Turn Signal
REAR WIPER	Rear Window Wiper
PWR MOD	PassKey Module, Body Control Module
BCK/UP/STOP	Back-up Lamps, Stoplamps
HVAC	Climate Control System

Fuses	Usage
DISPLAY	Display
RT/TRN/SIG	Passenger Side Turn Signal
DRL*	Daytime Running Lamps
RADIO	Radio
PDM	Power Mirrors, Liftgate Release
DRL 2**	Not Used
INFOTAINMENT	Infotainment System
BCM	Body Control Module
SPARE	Spare
CTSY	Dome Lamps
INADV/ PWR/LED	Interior Lamps
ONSTR/VENT	Emissions
AMP	Audio Amplifier

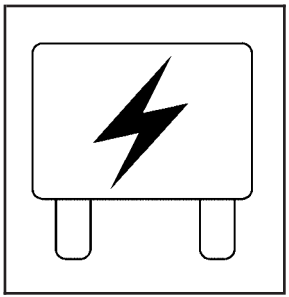


Relay Side

Relays	Usage
LT/PWR/SEAT	Driver Side Power Seat Relay
RT/PWR/SEAT	Passenger Side Power Seat Relay
PWR/WNDW	Power Windows Relay
PWR/COLUMN	Power Steering Column Relay
L/GATE	Liftgate Relay
LCK	Power Lock Relay
REAR/WSW	Rear Window Washer Relay
UNLCK	Power Unlock Relay
DRL2	Daytime Running Lamps 2 Relay
LT/UNLCK	Driver Side Unlock Relay
DRL	Daytime Running Lamps Relay
SPARE	Spare
FRT/WSW	Front Windshield Washer Relay

Underhood Fuse Block

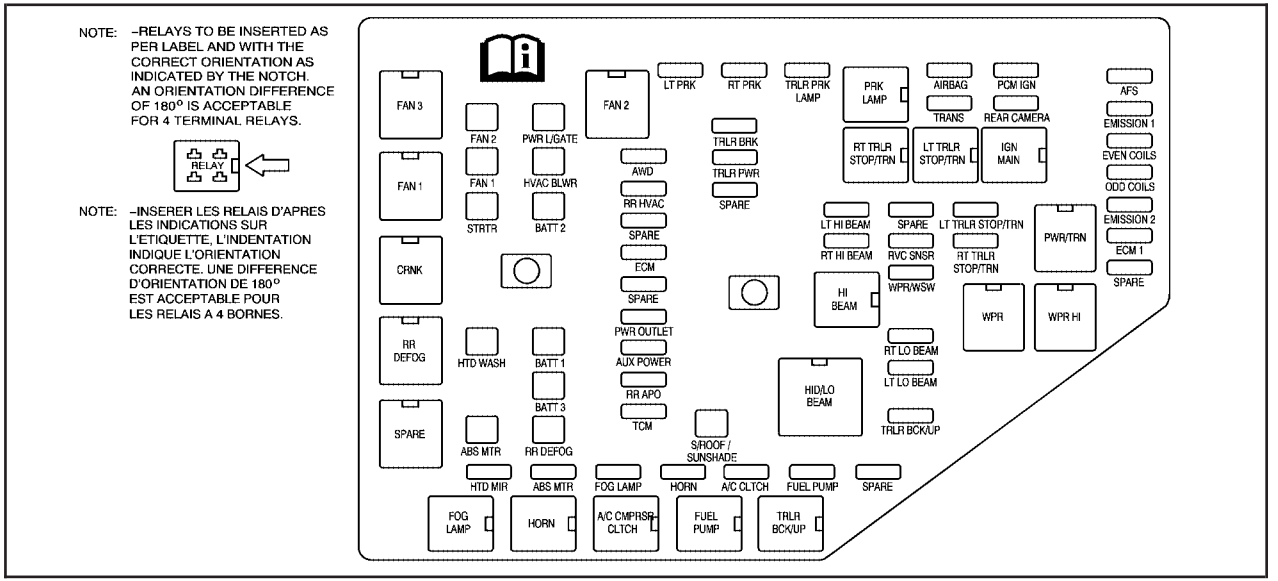
The underhood fuse block is located in the engine compartment, on the passenger side of the vehicle.



Lift the cover for access to the fuse/relay block.

Notice: **Spilling liquid on any electrical components on your vehicle may damage it. Always keep the covers on any electrical component.**

To remove fuses, hold the end of the fuse between your thumb and index finger and pull straight out.



Fuses	Usage
LT PRK	Left Parking Lamp
RT PRK	Right Parking Lamp
TRLR PRK LAMP	Trailer Parking Lamps
AIRBAG	Airbag System
PCM IGN	Powertrain Control Module Ignition
AFS	Adaptive Forward Lighting System
TRANS	Transmission
REAR CAMERA	Rear Camera
EMISSION 1	Antilock Brakes System 2
TRLR BRK	Trailer Brake
AWD	All-Wheel-Drive System
TRLR PWR	Trailer Power
EVEN COILS	Even Injector Coils
RR HVAC	Rear Climate Control System
SPARE	Spare
ODD COILS	Odd Injector Coils

Fuses	Usage
SPARE	Spare
LT HI BEAM	Left High-Beam Headlamp
SPARE	Spare
LT TRLR STOP/TRN	Trailer Left Stoplamp and Turn Signal
EMISSION 2	Emission 2
ECM	Engine Control Module
RT HI BEAM	Right High-Beam Headlamp
RVC SNSR	Regulated Voltage Control Sensor
RT TRLR STOP/TRN	Trailer Right Stoplamp and Turn Signal
ECM 1	Engine Control Module 1
SPARE	Spare
WPR/WSW	Windshield Wiper/Washer
SPARE	Spare
PWR OUTLET	Power Outlet
AUX POWER	Auxiliary Power
RT LO BEAM	Right Low-Beam Headlamp

Fuses	Usage
RR APO	Rear Accessory Power Outlet
LT LO BEAM	Left Low-Beam Headlamp
TCM	Transmission Control Module
TRLR BCK/UP	Trailer Back-up Lamps
HTD MIR	Heated Outside Rearview Mirror
ABS MTR	Antilock Brake System Motor
FOG LAMP	Fog Lamps
HORN	Horn
A/C CLTCH	Air Conditioning Clutch
FUEL PUMP	Fuel Pump
SPARE	Spare

J-Case Fuses	Usage
FAN 2	Cooling Fan 2
PWR L/GATE	Power Liftgate
FAN 1	Cooling Fan 1
HVAC BLWR	Climate Control System Blower
STRTR	Starter
BATT 2	Battery 2
HTD WASH	Heated Windshield Washer System
BATT 1	Battery 1
BATT 3	Battery 3
ABS MTR	Antilock Brake System Motor
RR DEFOG	Rear Defogger
S/ROOF/ SUNSHADE	Sunroof, Sunshade

Relays	Usage
FAN 3	Cooling Fan 3
FAN 2	Cooling Fan 2
PRK LAMP	Park Lamp
FAN 1	Cooling Fan 1
RT TRLR STOP/TRN	Trailer Right Stoplamp and Turn Signal
LT TRLR STOP/TRN	Trailer Left Stoplamp and Turn Signal
IGN	Ignition Main
CRNK	Switched Power
PWR/TRN	Powertrain
HI BEAM	High-Beam Headlamps

Relays	Usage
WPR	Windshield Wiper
WPR HI	Windshield Wiper High Speed
RR DEFOG	Rear Window Defogger
HID/LO BEAM	High Intensity Discharge (HID) Low-Beam Headlamps
SPARE	Spare
FOG LAMP	Fog Lamps
HORN	Horn
A/C CMPRSR CLTCH	Air Conditioning Compressor Clutch
FUEL PUMP	Fuel Pump
TRLR BCK/UP	Trailer Back-up Lamps

Capacities and Specifications

The following approximate capacities are given in English and metric conversions. See *Recommended Fluids and Lubricants on page 6-12* for more information.

Application	Capacities	
	English	Metric
Air Conditioning Refrigerant R134a	For the air conditioning system refrigerant charge amount, see the refrigerant caution label located under the hood. See your dealer/retailer for more information.	
Cooling System	12.2 qt	11.6 L
Engine Oil with Filter	5.5 qt	5.2 L
Fuel Tank	22.0 gal	83.3 L
Transmission Fluid	9.5 qt	9.0 L
Wheel Nut Torque	140 lb ft	190 N•m
All capacities are approximate. When adding, be sure to fill to the approximate level, as recommended in this manual. Recheck fluid level after filling.		

Engine Specifications

Engine	VIN Code	Transmission	Spark Plug Gap
3.6L V6	7	Automatic	0.043 inches (1.10 mm)

Section 6 Maintenance Schedule

Maintenance Schedule 6-2
Introduction 6-2
Maintenance Requirements 6-2
Your Vehicle and the Environment 6-2
Using the Maintenance Schedule 6-2
Scheduled Maintenance 6-4
Additional Required Services 6-6
Maintenance Footnotes 6-7
Owner Checks and Services 6-8
At Each Fuel Fill 6-8
At Least Once a Month 6-9
At Least Once a Year 6-9
Recommended Fluids and Lubricants 6-12
Maintenance Replacement Parts 6-13
Engine Drive Belt Routing 6-14
Maintenance Record 6-15

Maintenance Schedule

Introduction

Important: Keep engine oil at the proper level and change as recommended.

Have you purchased the GM Protection Plan? The Plan supplements your new vehicle warranties. See your Warranty and Owner Assistance booklet or your dealer/retailer for details.

Maintenance Requirements

Notice: **Maintenance intervals, checks, inspections, replacement parts, and recommended fluids and lubricants as prescribed in this manual are necessary to keep your vehicle in good working condition. Any damage caused by failure to follow scheduled maintenance might not be covered by warranty.**

Your Vehicle and the Environment

Proper vehicle maintenance not only helps to keep your vehicle in good working condition, but also helps the environment. All recommended maintenance is important. Improper vehicle maintenance can even affect the quality of the air we breathe. Improper fluid levels or the wrong tire inflation can increase the level of emissions from your vehicle. To help protect our environment, and to keep your vehicle in good condition, be sure to maintain your vehicle properly.

Using the Maintenance Schedule

We want to help you keep your vehicle in good working condition. But we do not know exactly how you will drive it. You might drive very short distances only a few times a week. Or you might drive long distances all the time in very hot, dusty weather. You might use your vehicle in making deliveries. Or you might drive it to work, to do errands, or in many other ways.

Because of all the different ways people use their vehicles, maintenance needs vary. You might need more frequent checks and replacements. So please read the following and note how you drive. If you have any questions on how to keep your vehicle in good condition, see your dealer/retailer.

This schedule is for vehicles that:

- carry passengers and cargo within recommended limits. You will find these limits on the Tire and Loading Information label. See *Loading Your Vehicle on page 4-20*.
- are driven on reasonable road surfaces within legal driving limits.
- use the recommended fuel. See *Gasoline Octane on page 5-5*.

The services in *Scheduled Maintenance on page 6-4* should be performed when indicated. See *Additional Required Services on page 6-6* and *Maintenance Footnotes on page 6-7* for further information.

⚠CAUTION:

Performing maintenance work on a vehicle can be dangerous. In trying to do some jobs, you can be seriously injured. Do your own maintenance work only if you have the required know-how and the proper tools and equipment for the job. If you have any doubt, see your dealer/retailer to have a qualified technician do the work. See *Doing Your Own Service Work on page 5-4*.

Some maintenance services can be complex. So, unless you are technically qualified and have the necessary equipment, you should have your dealer/retailer do these jobs.

When you go to your dealer/retailer for your service needs, you will know that trained and supported service technicians will perform the work using genuine parts.

If you want to purchase service information, see *Service Publications Ordering Information on page 7-16*.

Owner Checks and Services on page 6-8 tells you what should be checked, when to check it, and what you can easily do to help keep your vehicle in good condition.

The proper replacement parts, fluids, and lubricants to use are listed in *Recommended Fluids and Lubricants on page 6-12* and *Maintenance Replacement Parts on page 6-13*. When your vehicle is serviced, make sure these are used. All parts should be replaced and all necessary repairs done before you or anyone else drives the vehicle. We recommend the use of genuine parts from your dealer/retailer.

Scheduled Maintenance

When the CHANGE ENGINE OIL SOON message comes on, it means that service is required for your vehicle. Have your vehicle serviced as soon as possible within the next 600 miles (1 000 km). It is possible that, if you are driving under the best conditions, the engine oil life system might not indicate that vehicle service is necessary for over a year. However, the engine oil and filter must be changed at least once a year and at this time the system must be reset. Your dealer/retailer has trained service technicians who will perform this work using genuine parts and reset the system.

If the engine oil life system is ever reset accidentally, you must service your vehicle within 3,000 miles (5 000 km) since your last service. Remember to reset the oil life system whenever the oil is changed. See *Engine Oil Life System on page 5-16* for information on the Engine Oil Life System and resetting the system.

When the CHANGE ENGINE OIL SOON message appears, certain services, checks, and inspections are required. Required services are described in the following for “Maintenance I” and “Maintenance II.” Generally, it is recommended that your first service be Maintenance I, your second service be Maintenance II, and that you alternate Maintenance I and Maintenance II thereafter. However, in some cases, Maintenance II may be required more often.

Maintenance I — Use Maintenance I if the CHANGE ENGINE OIL SOON message comes on within 10 months since the vehicle was purchased or Maintenance II was performed.

Maintenance II — Use Maintenance II if the previous service performed was Maintenance I. Always use Maintenance II whenever the message comes on 10 months or more since the last service or if the message has not come on at all for one year.

Scheduled Maintenance

Service	Maintenance I	Maintenance II
Change engine oil and filter. See *Engine Oil on page 5-13*. Reset oil life system. See *Engine Oil Life System on page 5-16*. *An Emission Control Service.*	•	•
Visually check for any leaks or damage. *See footnote (g).*	•	•
Inspect engine air cleaner filter. If necessary, replace filter. See *Engine Air Cleaner/Filter on page 5-18*. *See footnote (l).*		•
Rotate tires and check inflation pressures and wear. See *Tire Inspection and Rotation on page 5-62* and "Tire Wear Inspection" in *At Least Once a Month on page 6-9*.	•	•
Inspect brake system. *See footnote (a).*	•	•
Check engine coolant and windshield washer fluid levels and add fluid as needed.	•	•
Perform any needed additional services. See "Additional Required Services" in this section.	•	•
Inspect suspension and steering components. *See footnote (b).*		•
Inspect engine cooling system. *See footnote (c).*		•
Inspect wiper blades. *See footnote (d).*		•
Inspect restraint system components. *See footnote (e).*		•
Lubricate body components. *See footnote (f).*		•
Check transmission fluid level and add fluid as needed.		•
Inspect throttle system. *See footnote (j).*		•

Additional Required Services

The following services should be performed at the first maintenance service (I or II) after the indicated miles (kilometers) shown for each item.

Additional Required Services

Service and Miles (Kilometers)	25,000 (40 000)	50,000 (80 000)	75,000 (120 000)	100,000 (160 000)	125,000 (200 000)	150,000 (240 000)
Inspect fuel system for damage or leaks.	•	•	•	•	•	•
Inspect exhaust system for loose or damaged components.	•	•	•	•	•	•
Replace engine air cleaner filter. See *Engine Air Cleaner/Filter on page 5-18*.		•		•		•
Change automatic transmission fluid (severe service). *See footnote (h).*		•		•		•
Change automatic transmission fluid (normal service).				•		
Replace spark plugs and inspect spark plug wires. *An Emission Control Service.*				•		
Engine cooling system service (or every five years, whichever occurs first). *An Emission Control Service. See footnote (i).*						•
Inspect engine accessory drive belt. *An Emission Control Service. See footnote (k).*						•

Maintenance Footnotes

(a) *Visually inspect brake lines and hoses for proper hook-up, binding, leaks, cracks, chafing, etc. Inspect disc brake pads for wear and rotors for surface condition. Inspect other brake parts, including calipers, parking brake, etc. Check parking brake adjustment.*

(b) *Visually inspect front and rear suspension and steering system for damaged, loose, or missing parts or signs of wear. Inspect power steering lines and hoses for proper hook-up, binding, leaks, cracks, chafing, etc.*

(c) *Visually inspect hoses and have them replaced if they are cracked, swollen, or deteriorated. Inspect all pipes, fittings and clamps; replace with genuine parts as needed. To help ensure proper operation, a pressure test of the cooling system and pressure cap and cleaning the outside of the radiator and air conditioning condenser is recommended at least once a year.*

(d) *Inspect wiper blades for wear, cracking, or contamination. Clean the windshield and wiper blades, if contaminated. Replace wiper blades that are worn or damaged. See Windshield Wiper Blade Replacement on page 5-48* and *Windshield, Backglass, and Wiper Blades on page 5-102* for more information.

(e) *Make sure the safety belt reminder light and safety belt assemblies are working properly. 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. Have any torn or frayed safety belts replaced. Also see Checking the Restraint Systems on page 1-76*.

(f) *Lubricate all key lock cylinders, hood latch assemblies, secondary latches, pivots, spring anchor and release pawl, hood and door hinges, rear folding seats, and liftgate hinges. 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.*

(g) *A fluid loss in any vehicle system could indicate a problem. Have the system inspected and repaired and the fluid level checked. Add fluid if needed.*

(h) *Change automatic transmission fluid if the vehicle is mainly driven under one or more of these conditions:*

- *In heavy city traffic where the outside temperature regularly reaches 90°F (32°C) or higher.*
- *In hilly or mountainous terrain.*
- *When doing frequent trailer towing.*
- *Uses such as found in taxi, police, or delivery service.*

(i) *Drain, flush, and refill cooling system. This service can be complex; you should have your dealer/retailer perform this service. See Engine Coolant on page 5-20 for what to use. Inspect hoses. Clean radiator, condenser, pressure cap, and filler neck. Pressure test the cooling system and pressure cap.*

(j) *Check system for interference or binding and for damaged or missing parts. Replace parts as needed. Replace any components that have high effort or excessive wear. Do not lubricate accelerator or cruise control cables.*

(k) *Visually inspect belt for fraying, excessive cracks, or obvious damage. Replace belt if necessary.*

(l) *If you drive regularly under dusty conditions, inspect the filter at each engine oil change.*

Owner Checks and Services

These owner checks and services should be performed at the intervals specified to help ensure the safety, dependability, and emission control performance of your vehicle. Your dealer/retailer can assist you with these checks and services.

Be sure any necessary repairs are completed at once. Whenever any fluids or lubricants are added to your vehicle, make sure they are the proper ones, as shown in *Recommended Fluids and Lubricants on page 6-12*.

At Each Fuel Fill

It is important to perform these underhood checks at each fuel fill.

Engine Oil Level Check

Notice: **It is important to check the engine oil regularly and keep it at the proper level. Failure to keep the engine oil at the proper level can cause damage to the engine not covered by your warranty.**

Check the engine oil level and add the proper oil if necessary. See *Engine Oil on page 5-13*.

Engine Coolant Level Check

Check the engine coolant level and add DEX-COOL® coolant mixture if necessary. See *Engine Coolant on page 5-20*.

Windshield Washer Fluid Level Check

Check the windshield washer fluid level in the windshield washer fluid reservoir and add the proper fluid if necessary.

At Least Once a Month

Tire Inflation Check

Inspect your vehicle's tires and make sure they are inflated to the correct pressures. Do not forget to check the spare tire. See *Inflation - Tire Pressure on page 5-56*. Check to make sure the spare tire is stored securely. See *Changing a Flat Tire on page 5-80*.

Tire Wear Inspection

Tire rotation may be required for high mileage highway drivers prior to the Engine Oil Life System service notification. Check the tires for wear and, if necessary, rotate the tires. See *Tire Inspection and Rotation on page 5-62*.

At Least Once a Year

Starter Switch Check

⚠CAUTION:

When you are doing this inspection, the vehicle could move suddenly. If the vehicle moves, you or others could be injured.

1. Before you start, be sure you have enough room around the vehicle.
2. Firmly apply both the parking brake and the regular brake. See *Parking Brake on page 2-35*.

   Do not use the accelerator pedal, and be ready to turn off the engine immediately if it starts.
3. Try to start the engine in each gear. The vehicle should start only in PARK (P) or NEUTRAL (N). If the vehicle starts in any other position, contact your dealer/retailer for service.

Automatic Transmission Shift Lock Control System Check

⚠CAUTION:

When you are doing this inspection, the vehicle could move suddenly. If the vehicle moves, you or others could be injured.

1. Before you start, be sure you have enough room around the vehicle. It should be parked on a level surface.
2. Firmly apply the parking brake. See *Parking Brake on page 2-35*.

   Be ready to apply the regular brake immediately if the vehicle begins to move.
3. With the engine off, turn the ignition to ON/RUN, but do not start the engine. Without applying the regular brake, try to move the shift lever out of PARK (P) with normal effort. If the shift lever moves out of PARK (P), contact your dealer/retailer 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 PARK (P).
- The ignition key should come out only in LOCK/OFF.

Contact your dealer/retailer if service is required.

Parking Brake and Automatic Transmission Park (P) Mechanism Check

⚠CAUTION:

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

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

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

Contact your dealer/retailer if service is required.

Underbody Flushing Service

At least every spring, use plain water to flush any corrosive materials from the underbody. Take care to clean thoroughly any areas where mud and other debris can collect.

Recommended Fluids and Lubricants

Fluids and lubricants identified below by name, part number, or specification can be obtained from your dealer/retailer.

Usage	Fluid/Lubricant
Engine Oil	Engine oil which meets GM Standard GM6094M and displays the American Petroleum Institute Certified for Gasoline Engines starburst symbol. To determine the proper viscosity for your vehicle's engine, see *Engine Oil on page 5-13*.
Engine Coolant	50/50 mixture of clean, drinkable water and use only DEX-COOL® Coolant. See *Engine Coolant on page 5-20*.
Hydraulic Brake System	Delco® Supreme 11 Brake Fluid or equivalent DOT-3 brake fluid.
Windshield Washer	Optikleen Washer Solvent.
Power Steering System	GM Power Steering Fluid (GM Part No. U.S. 89021184, in Canada 89021186).
Automatic Transmission	DEXRON®-VI Automatic Transmission Fluid.

Usage	Fluid/Lubricant
Key Lock Cylinders	Multi-Purpose Lubricant, Superlube (GM Part No. U.S. 12346241, in Canada 10953474).
Carrier Assembly — Differential (Rear Drive Module) and Transfer Case (Power Transfer Unit)	SAE 75W-90 Synthetic Axle Lubricant (GM Part No. U.S. 89021677, in Canada 89021678) meeting GM Specification 9986115.
Hood Latch Assembly, Secondary Latch, Pivots, Spring Anchor, and Release Pawl	Lubriplate Lubricant Aerosol (GM Part No. U.S. 12346293, in Canada 992723) or lubricant meeting requirements of NLGI #2, Category LB or GC-LB.
Hood and Door Hinges and Rear Folding Seat	Multi-Purpose Lubricant, Superlube (GM Part No. U.S. 12346241, in Canada 10953474).
Weatherstrip Conditioning	Weatherstrip Lubricant (GM Part No. U.S. 3634770, in Canada 10953518) or Dielectric Silicone Grease (GM Part No. U.S. 12345579, in Canada 992887).

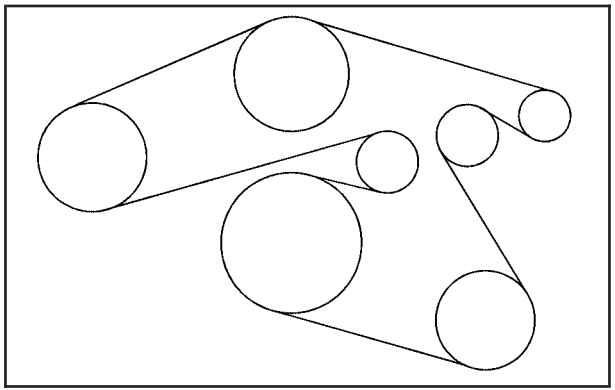
Maintenance Replacement Parts

Replacement parts identified below by name, part number, or specification can be obtained from your dealer/retailer.

Part	GM Part Number	ACDelco Part Number
Engine Air Cleaner/Filter	15278634	—
Engine Oil Filter	89017524	PF48
Spark Plugs	12611882	41-107
Windshield Wiper Blades		
Right – 20.8 inches (53. cm)	15254804	—
Left – 24.6 inches (62.5 cm)	15254805	—
Rear– 11.6 inches (30.0 cm)	25820122	—

Engine Drive Belt Routing

3.6L V6 Engine



Maintenance Record

After the scheduled services are performed, record the date, odometer reading, who performed the service, and the type of services performed in the boxes provided. See *Maintenance Requirements on page 6-2*. Any additional information from *Owner Checks and Services on page 6-8* can be added on the following record pages. You should retain all maintenance receipts.

Maintenance Record

Date	Odometer Reading	Serviced By	Maintenance I or Maintenance II	Services Performed

Maintenance Record (cont'd)

Date	Odometer Reading	Serviced By	Maintenance I or Maintenance II	Services Performed

Maintenance Record (cont'd)

Date	Odometer Reading	Serviced By	Maintenance I or Maintenance II	Services Performed

Maintenance Record (cont'd)

Date	Odometer Reading	Serviced By	Maintenance I or Maintenance II	Services Performed

Section 7 Customer Assistance Information

Customer Assistance and Information 7-2
Customer Satisfaction Procedure 7-2
Online Owner Center 7-5
Customer Assistance for Text Telephone (TTY) Users 7-6
Customer Assistance Offices 7-6
GM Mobility Reimbursement Program 7-7
Roadside Assistance Program 7-8
Scheduling Service Appointments 7-10
Courtesy Transportation 7-10
Collision Damage Repair 7-12

Reporting Safety Defects 7-15
Reporting Safety Defects to the United States Government 7-15
Reporting Safety Defects to the Canadian Government 7-15
Reporting Safety Defects to General Motors 7-16
Service Publications Ordering Information 7-16

Vehicle Data Recording and Privacy 7-17
Event Data Recorders 7-18
OnStar® 7-19
Navigation System 7-19
Radio Frequency Identification (RFID) 7-19

Customer Assistance and Information

Customer Satisfaction Procedure

Your satisfaction and goodwill are important to your dealer and to Buick. Normally, any concerns with the sales transaction or the operation of your vehicle will be resolved by your GM dealer's sales or service departments. Sometimes, however, despite the best intentions of all concerned, misunderstandings can occur. If your concern has not been resolved to your satisfaction, the following steps should be taken:

STEP ONE: Discuss your concern with a member of dealership management. Normally, concerns can be quickly resolved at that level. If the matter has already been reviewed with the sales, service, or parts manager, contact the owner of the dealership or the general manager.

STEP TWO: If after contacting a member of dealership management, it appears your concern cannot be resolved by the dealership without further help, in the U.S., contact the Buick Customer Assistance Center by calling 1-800-521-7300. In Canada, contact General Motors of Canada Customer Communication Centre by calling 1-800-263-3777 (English) or 1-800-263-7854 (French).

We encourage you to call the toll-free number in order to give your inquiry prompt attention. Please have the following information available to give the Customer Assistance Representative:

- Vehicle Identification Number. This is available from the vehicle registration or title, or the plate at the top left of the instrument panel.
- Dealership name and location
- Vehicle delivery date and present mileage

When contacting Buick, please remember that your concern will likely be resolved at a dealer's facility. That is why we suggest you follow Step One first if you have a concern.

STEP THREE — U.S. Owners: Both General Motors and your dealer are committed to making sure you are completely satisfied with your new vehicle. However, in the United States, if you continue to remain unsatisfied after following the procedure outlined in Steps One and Two, you should file with the BBB Auto Line Program to enforce your rights.

The BBB Auto Line Program is an out of court program administered by the Council of Better Business Bureaus to settle automotive disputes regarding vehicle repairs or the interpretation of the New Vehicle Limited Warranty. Although you may be required to resort to this informal dispute resolution program prior to filing a court action, use of the program is free of charge and your case will generally be heard within 40 days. If you do not agree with the decision given in your case, you may reject it and proceed with any other venue for relief available to you.

You may contact the BBB Auto Line Program using the toll-free telephone number or write them at the following address:

BBB Auto Line Program
Council of Better Business Bureaus, Inc.
4200 Wilson Boulevard
Suite 800
Arlington, VA 22203-1838

Telephone: 1-800-955-5100

This program is available in all 50 states and the District of Columbia. Eligibility is limited by vehicle age, mileage and other factors. General Motors reserves the right to change eligibility limitations and/or discontinue its participation in this program.

STEP THREE — Canadian Owners: In the event that you do not feel your concerns have been addressed after following the procedure outlined in Steps one and two, General Motors of Canada Limited wants you to be aware of its participation in a no-charge Mediation/Arbitration program. General Motors of Canada Limited has committed to binding arbitration of owner disputes involving factory-related vehicle service claims. The program provides for the review of the facts involved by an impartial third party arbiter, and may include an informal hearing before the arbiter. The program is designed so that the entire dispute settlement process, from the time you file your complaint to the final decision, should be completed in approximately 70 days. We believe our impartial program offers advantages over courts in most jurisdictions because it is informal, quick, and free of charge.

For further information concerning eligibility in the Canadian Motor Vehicle Arbitration Plan (CAMVAP), call toll-free 1-800-207-0685. Alternatively you may call the General Motors Customer Communication Centre, 1-800-263-3777 (English), 1-800-263-7854 (French), or you may write to the Mediation/Arbitration Program at the following address. Your inquiry should be accompanied by your Vehicle Identification Number (VIN).

Mediation/Arbitration Program
c/o Customer Communication Centre
General Motors of Canada Limited
Mail Code: CA1-163-005
1908 Colonel Sam Drive
Oshawa, Ontario L1H 8P7

Online Owner Center

(United States only)

The Owner Center is a resource for your GM ownership needs. Specific vehicle information can be found in one place.

The Online Owner Center allows you to:

- Get e-mail service reminders.
- Access information about your specific vehicle, including tips and videos and an electronic version of this owner manual.
- Keep track of your vehicle's service history and maintenance schedule.
- Find GM dealers/retailers for service nationwide.
- Receive special promotions and privileges only available to members.

Refer to www.MyGMLink.com on the web for updated information and to register your vehicle.

My GM Canada (Canada only)

My GM Canada is a password-protected section of gmcanada.com where you can save information on GM vehicles, get personalized offers, and use handy tools and forms with greater ease.

Here are a few of the valuable tools and services you will have access to:

- My Showroom: Find and save information on vehicles and current offers in your area.
- My Dealers/Retailers: Save details such as address and phone number for each of your preferred GM Dealers or Retailers.
- My Driveway: Receive service reminders and helpful advice on owning and maintaining your vehicle.
- My Preferences: Manage your profile, subscribe to E-News and use tools and forms with greater ease.

To sign up to My GM Canada, visit the My GM Canada section within www.gmcanada.com.

Customer Assistance for Text Telephone (TTY) Users

To assist customers who are deaf, hard of hearing, or speech-impaired and who use Text Telephones (TTYs), Buick has TTY equipment available at its Customer Assistance Center. Any TTY user can communicate with Buick by dialing: 1-800-83-BUICK. TTY users in Canada can dial 1-800-263-3830.

Customer Assistance Offices

Buick encourages customers to call the toll-free number for assistance. However, if a customer wishes to write or e-mail Buick, the letter should be addressed to:

United States — Customer Assistance

Buick Customer Assistance Center
P.O. Box 33136
Detroit, MI 48232-5136

www.Buick.com
1-800-521-7300
1-800-832-8425 (For Text Telephone devices (TTYs))
Roadside Assistance: 1-800-252-1112
Fax Number: 313-381-0022

From Puerto Rico:
1-800-496-9992 (English)
1-800-496-9993 (Spanish)
Fax Number: 313-381-0022

From U.S. Virgin Islands
1-800-496-9994
Fax Number: 313-381-0022

Canada — Customer Assistance

General Motors of Canada Limited
Customer Communication Centre, CA1-163-005
1908 Colonel Sam Drive
Oshawa, Ontario L1H 8P7

www.gmcanada.com
1-800-263-3777 (English)
1-800-263-7854 (French)
1-800-263-3830 (For Text Telephone devices (TTYs))
Roadside Assistance: 1-800-268-6800

Overseas — Customer Assistance

Please contact the local General Motors Business Unit.

Mexico, Central America and Caribbean Islands/Countries (Except Puerto Rico and U.S. Virgin Islands) — Customer Assistance

General Motors de Mexico, S. de R.L. de C.V.
Customer Assistance Center
Paseo de la Reforma # 2740
Col. Lomas de Bezares
C.P. 11910, Mexico, D.F.
01-800-508-0000
Long Distance: 011-52-53 29 0 800

GM Mobility Reimbursement Program

This program, available to qualified applicants, can reimburse you up to $1,000 of the cost of eligible aftermarket adaptive equipment required for your vehicle, such as hand controls or a wheelchair/scooter lift.

The offer is available for a very limited period of time from the date of vehicle purchase/lease. For more details, or to determine your vehicle's eligibility, visit gmmobility.com or call the GM Mobility Assistance Center at 1-800-323-9935. Text telephone (TTY) users, call 1-800-833-9935.

General Motors of Canada also has a Mobility Program. Call 1-800-GM-DRIVE (463-7483) for details. TTY users call 1-800-263-3830.

Roadside Assistance Program

For vehicles purchased in the U.S., call **1-800-252-1112; (Text Telephone (TTY): 1-888-889-2438)**.

For vehicles purchased in Canada, call **1-800-268-6800**.

Service is available 24 hours a day, 365 days a year.

As the owner of a new Buick vehicle, you are automatically enrolled in the Buick Roadside Assistance program.

Who is Covered?

Roadside Assistance coverage is for the vehicle operator, regardless of ownership. In Canada, a person driving the vehicle without the consent of the owner is not eligible for coverage.

Services Provided

The following services are provided in the U.S. and Canada up to 5 years/100,000 miles (160 000 km), whichever occurs first, and, in Canada only, up to a maximum coverage of $100.

- **Fuel Delivery:** Delivery of enough fuel for the vehicle to get to the nearest service station (approximately $5 in Canada). In Canada, service to provide diesel may be restricted. For safety reasons, propane and other alternative fuels will not be provided through this service.
- **Lock-out Service:** Lock-out service will be covered at no charge if you are unable to gain entry into your vehicle. A remote unlock may be available if you have an active OnStar® subscription. To ensure security, the driver must present personal identification before lock-out service is provided. In Canada, the vehicle registration is also required.
- **Emergency Tow From a Public Roadway or Highway:** Tow to the nearest dealership for warranty service or in the event of a vehicle-disabling crash. Winch-out assistance is provided when the vehicle is mired in sand, mud, or snow.
- **Flat Tire Change:** Installation of a spare tire in good condition, when equipped and properly inflated, is covered at no charge. The customer is responsible for the repair or replacement of the tire if not covered by a warrantable failure.
- **Jump Start:** A battery jump start is covered at no charge if the vehicle does not start.
- **Trip Routing Service (Canada only):** Upon request, Roadside Assistance will send you detailed, computer personalized maps, highlighting your choice of either the most direct route or the most scenic route to your destination, anywhere in North America, along with helpful travel information pertaining to your trip.

  Please allow three weeks before your planned departure date. Trip routing requests will be limited to six per calendar year.

- **Trip Interruption Benefits and Assistance (Canada only):** In the event of a warranty related vehicle disablement, while en route and over 250 kilometres from the original point of departure, you may qualify for trip interruption expense assistance. This assistance covers reasonable reimbursement of up to a maximum of $500 (Canadian) for (A) meals (maximum of $50/day), (B) lodging (maximum of $100/night) and (C) alternate ground transportation (maximum of $40/day). This benefit is to assist you with some of the unplanned expense you may incur while waiting for your vehicle to be repaired.

  Pre-authorization, original detailed receipts, and a copy of the repair order are required.

  Once authorization has been given, your advisor will help you make any necessary arrangements and explain how to claim for trip interruption expense assistance.

- **Alternative Service (Canada only):** There may be times when Roadside Assistance cannot provide timely assistance. Your advisor may authorize you to secure local emergency road service, and you will be reimbursed up to $100 upon submission of the original receipt to Roadside Assistance.

In many instances, mechanical failures may be covered. However, any cost for parts and labor for non-warranty repairs are the responsibility of the driver.

Buick and General Motors of Canada Limited reserve the right to limit services or reimbursement to an owner or driver when, in their sole discretion, the claims become excessive in frequency or type of occurrence.

Calling For Assistance

For prompt and efficient assistance when calling, please provide the following to the Roadside Assistance Representative:

- Your name, home address, and home telephone number
- Telephone number of your location
- Location of the vehicle
- Model, year, color, and license plate number of the vehicle
- Odometer reading, Vehicle Identification Number (VIN), and delivery date of the vehicle
- Description of the problem

Towing and Road Service Exclusions

Specifically excluded from Roadside Assistance coverage are towing or services for vehicles operated on a non-public roadway or highway, fines, impound towing caused by a violation of local, Municipal, State, Provincial, or Federal law, and mounting, dismounting or changing of snow tires, chains, or other traction devices.

Roadside Assistance is not part of or included in the coverage provided by the New Vehicle Limited Warranty. Buick and General Motors of Canada Limited reserve the right to make any changes or discontinue the Roadside Assistance program at any time without notification.

Scheduling Service Appointments

When your vehicle requires warranty service, contact your dealer/retailer and request an appointment. By scheduling a service appointment and advising your service consultant of your transportation needs, your dealer/retailer can help minimize your inconvenience.

If your vehicle cannot be scheduled into the service department immediately, keep driving it until it can be scheduled for service, unless, of course, the problem is safety-related. If it is, please call your dealership/retailer, let them know this, and ask for instructions.

If the dealer/retailer requests that you simply drop the vehicle off for service, you are urged to do so as early in the work day as possible to allow for the same day repair.

Courtesy Transportation

To enhance your ownership experience, we and our participating dealers are proud to offer Courtesy Transportation, a customer support program for vehicles with the Bumper to Bumper (Base Warranty Coverage period in Canada) and extended powertrain warranty in both the U.S. and Canada.

Several courtesy transportation options are available to assist in reducing your inconvenience when warranty repairs are required.

Courtesy Transportation is not a part of the New Vehicle Limited Warranty. A separate booklet entitled “Warranty and Owner Assistance Information” furnished with each new vehicle provides detailed warranty coverage information.

Transportation Options

Warranty service can generally be completed while you wait. However, if you are unable to wait, GM helps to minimize your inconvenience by providing several transportation options. Depending on the circumstances, your dealer can offer you one of the following:

Shuttle Service

Shuttle service is the preferred means of offering Courtesy Transportation. Dealers may provide you with shuttle service to get you to your destination with minimal interruption of your daily schedule. This includes one-way or round trip shuttle service within reasonable time and distance parameters of the dealer's area.

Public Transportation or Fuel Reimbursement

If your vehicle requires overnight warranty repairs, and public transportation is used instead of the dealer's shuttle service, the expense must be supported by original receipts and can only be up to the maximum amount allowed by GM for shuttle service. In addition, for U.S. customers, should you arrange transportation through a friend or relative, limited reimbursement for reasonable fuel expenses may be available.

Claim amounts should reflect actual costs and be supported by original receipts. See your dealer for information regarding the allowance amounts for reimbursement of fuel or other transportation costs.

Courtesy Rental Vehicle

Your dealer may arrange to provide you with a courtesy rental vehicle or reimburse you for a rental vehicle that you obtain if your vehicle is kept for an overnight warranty repair. Rental reimbursement will be limited and must be supported by original receipts. This requires that you sign and complete a rental agreement and meet state/provincial, local, and rental vehicle provider requirements. Requirements vary and may include minimum age requirements, insurance coverage, credit card, etc. You are responsible for fuel usage charges and may also be responsible for taxes, levies, usage fees, excessive mileage, or rental usage beyond the completion of the repair.

It may not be possible to provide a like-vehicle as a courtesy rental.

Additional Program Information

All program options, such as shuttle service, may not be available at every dealer. Please contact your dealer for specific information about availability. All Courtesy Transportation arrangements will be administered by appropriate dealer personnel.

General Motors reserves the right to unilaterally modify, change or discontinue Courtesy Transportation at any time and to resolve all questions of claim eligibility pursuant to the terms and conditions described herein at its sole discretion.

Collision Damage Repair

If your vehicle is involved in a collision and it is damaged, have the damage repaired by a qualified technician using the proper equipment and quality replacement parts. Poorly performed collision repairs diminish your vehicle's resale value, and safety performance can be compromised in subsequent collisions.

Collision Parts

Genuine GM Collision parts are new parts made with the same materials and construction methods as the parts with which your vehicle was originally built. Genuine GM Collision parts are your best choice to ensure that your vehicle's designed appearance, durability, and safety are preserved. The use of Genuine GM parts can help maintain your GM New Vehicle Warranty.

Recycled original equipment parts may also be used for repair. These parts are typically removed from vehicles that were total losses in prior crashes. In most cases, the parts being recycled are from undamaged sections of the vehicle. A recycled original equipment GM part, may be an acceptable choice to maintain your vehicle's originally designed appearance and safety performance, however, the history of these parts is not known. Such parts are not covered by your GM New Vehicle Limited Warranty, and any related failures are not covered by that warranty.

Aftermarket collision parts are also available. These are made by companies other than GM and may not have been tested for your vehicle. As a result, these parts may fit poorly, exhibit premature durability/corrosion problems, and may not perform properly in subsequent collisions. Aftermarket parts are not covered by your GM New Vehicle Limited Warranty, and any vehicle failure related to such parts are not covered by that warranty.

Repair Facility

We recommend that you choose a collision repair facility that meets your needs before you ever need collision repairs. Your dealer/retailer may have a collision repair center with GM-trained technicians and state of the art equipment, or be able to recommend a collision repair center that has GM-trained technicians and comparable equipment.

Insuring Your Vehicle

Protect your investment in your GM vehicle with comprehensive and collision insurance coverage. There are significant differences in the quality of coverage afforded by various insurance policy terms. Many insurance policies provide reduced protection to your GM vehicle by limiting compensation for damage repairs by using aftermarket collision parts. Some insurance companies will not specify aftermarket collision parts. When purchasing insurance, we recommend that you assure your vehicle will be repaired with GM original equipment collision parts. If such insurance coverage is not available from your current insurance carrier, consider switching to another insurance carrier.

If your vehicle is leased, the leasing company may require you to have insurance that assures repairs with Genuine GM Original Equipment Manufacturer (OEM) parts or Genuine Manufacturer replacement parts. Read your lease carefully, as you may be charged at the end of your lease for poor quality repairs.

If a Crash Occurs

Here is what to do if you are involved in a crash.

- Check to make sure that you are all right. If you are uninjured, make sure that no one else in your vehicle, or the other vehicle, is injured.
- If there has been an injury, call emergency services for help. Do not leave the scene of a crash until all matters have been taken care of. Move your vehicle only if its position puts you in danger or you are instructed to move it by a police officer.
- Give only the necessary and requested information to police and other parties involved in the crash. Do not discuss your personal condition, mental frame of mind, or anything unrelated to the crash. This will help guard against post-crash legal action.
- If you need roadside assistance, call GM Roadside Assistance. See *Roadside Assistance Program on page 7-8* for more information.
- If your vehicle cannot be driven, know where the towing service will be taking it. Get a card from the tow truck operator or write down the driver's name, the service's name, and the phone number.
- Remove any valuables from your vehicle before it is towed away. Make sure this includes your insurance information and registration if you keep these items in your vehicle.

- Gather the important information you will need from the other driver. Things like name, address, phone number, driver's license number, vehicle license plate, vehicle make, model and model year, Vehicle Identification Number (VIN), insurance company and policy number, and a general description of the damage to the other vehicle.
- If possible, call your insurance company from the scene of the crash. They will walk you through the information they will need. If they ask for a police report, phone or go to the police department headquarters the next day and you can get a copy of the report for a nominal fee. In some states/provinces with "no fault" insurance laws, a report may not be necessary. This is especially true if there are no injuries and both vehicles are driveable.
- Choose a reputable collision repair facility for your vehicle. Whether you select a dealer/retailer or a private collision repair facility to fix the damage, make sure you are comfortable with them. Remember, you will have to feel comfortable with their work for a long time.
- Once you have an estimate, read it carefully and make sure you understand what work will be performed on your vehicle. If you have a question, ask for an explanation. Reputable shops welcome this opportunity.

Managing the Vehicle Damage Repair Process

In the event that your vehicle requires damage repairs, GM recommends that you take an active role in its repair. If you have a pre-determined repair facility of choice, take your vehicle there, or have it towed there. Specify to the facility that any required replacement collision parts be original equipment parts, either new Genuine GM parts or recycled original GM parts. Remember, recycled parts will not be covered by your GM vehicle warranty.

Insurance pays the bill for the repair, but you must live with the repair. Depending on your policy limits, your insurance company may initially value the repair using aftermarket parts. Discuss this with your repair professional, and insist on Genuine GM parts. Remember if your vehicle is leased you may be obligated to have the vehicle repaired with Genuine GM parts, even if your insurance coverage does not pay the full cost.

If another party's insurance company is paying for the repairs, you are not obligated to accept a repair valuation based on that insurance company's collision policy repair limits, as you have no contractual limits with that company. In such cases, you can have control of the repair and parts choices as long as cost stays within reasonable limits.

Reporting Safety Defects

Reporting Safety Defects to the United States Government

If you believe that your vehicle has a defect which could cause a crash or could cause injury or death, you should immediately inform the National Highway Traffic Safety Administration (NHTSA) in addition to notifying General Motors.

If NHTSA receives similar complaints, it may open an investigation, and if it finds that a safety defect exists in a group of vehicles, it may order a recall and remedy campaign. However, NHTSA cannot become involved in individual problems between you, your dealer/retailer, or General Motors.

To contact NHTSA, you may call the Vehicle Safety Hotline toll-free at 1-888-327-4236 (TTY: 1-800-424-9153); go to http://www.safercar.gov; or write to:

Administrator, NHTSA
400 Seventh Street, SW.
Washington D.C., 20590

You can also obtain other information about motor vehicle safety from http://www.safercar.gov.

Reporting Safety Defects to the Canadian Government

If you live in Canada, and you believe that your vehicle has a safety defect, notify Transport Canada immediately, in addition to notifying General Motors of Canada Limited. Call them at 1-800-333-0510 or write to:

Transport Canada
Road Safety Branch
2780 Sheffield Road
Ottawa, Ontario K1B 3V9

Reporting Safety Defects to General Motors

In addition to notifying NHTSA (or Transport Canada) in a situation like this, please notify General Motors.

Call 1-800-521-7300, or write:

Buick Customer Assistance Center
P.O. Box 33136
Detroit, MI 48232-5136

In Canada, call 1-800-263-3777 (English) or 1-800-263-7854 (French), or write:

General Motors of Canada Limited
Customer Communication Centre, CA1-163-005
1908 Colonel Sam Drive
Oshawa, Ontario L1H 8P7

Service Publications Ordering Information

Service Manuals

Service Manuals have the diagnosis and repair information on engines, transmission, axle suspension, brakes, electrical, steering, body, etc.

Service Bulletins

Service Bulletins' give additional technical service information needed to knowledgeably service General Motors cars and trucks. Each bulletin contains instructions to assist in the diagnosis and service of your vehicle.

Owner Information

Owner publications are written specifically for owners and intended to provide basic operational information about the vehicle. The owner manual includes the Maintenance Schedule for all models.

In-Portfolio: Includes a Portfolio, Owner Manual, and Warranty Booklet.

RETAIL SELL PRICE: $35.00 (U.S.) plus processing fee

Without Portfolio: Owner Manual only.

RETAIL SELL PRICE: $25.00 (U.S.) plus processing fee

Current and Past Model Order Forms

Technical Service Bulletins and Manuals are available for current and past model GM vehicles. To request an order form, specify year and model name of the vehicle.

ORDER TOLL FREE: 1-800-551-4123
Monday-Friday 8:00 AM - 6:00 PM
Eastern Time

For Credit Card Orders Only
(VISA-MasterCard-Discover), visit Helm, Inc. on the World Wide Web at: www.helminc.com

Or you can write to:

Helm, Incorporated
P.O. Box 07130
Detroit, MI 48207

Prices are subject to change without notice and without incurring obligation. Allow ample time for delivery.

Note to Canadian Customers: All listed prices are quoted in U.S. funds. Canadian residents are to make checks payable in U.S. funds.

Vehicle Data Recording and Privacy

Your GM vehicle has a number of sophisticated computers that record information about the vehicle's performance and how it is driven. For example, your vehicle uses computer modules to monitor and control engine and transmission performance, to monitor the conditions for airbag deployment and deploy airbags in a crash and, if so equipped, to provide antilock braking to help the driver control the vehicle. These modules may store data to help your dealer/retailer technician service your vehicle. Some modules may also store data about how you operate the vehicle, such as rate of fuel consumption or average speed. These modules may also retain the owner's personal preferences, such as radio pre-sets, seat positions, and temperature settings.

Event Data Recorders

This vehicle has an Event Data Recorder (EDR). The main purpose of an EDR is to record, in certain crash or near crash-like situations, such as an airbag deployment or hitting a road obstacle, data that will assist in understanding how a vehicle's systems performed. The EDR is designed to record data related to vehicle dynamics and safety systems for a short period of time, typically 30 seconds or less. The EDR in this vehicle is designed to record such data as:

- How various systems in your vehicle were operating
- Whether or not the driver and passenger safety belts were buckled/fastened
- How far, if at all, the driver was pressing the accelerator and/or brake pedal
- How fast the vehicle was traveling

This data can help provide a better understanding of the circumstances in which crashes and injuries occur.

Important: EDR data is recorded by your vehicle only if a non-trivial crash situation occurs; no data is recorded by the EDR under normal driving conditions and no personal data (e.g., name, gender, age, and crash location) is recorded. However, other parties, such as law enforcement, could combine the EDR data with the type of personally identifying data routinely acquired during a crash investigation.

To read data recorded by an EDR, special equipment is required, and access to the vehicle or the EDR is needed. In addition to the vehicle manufacturer, other parties, such as law enforcement, that have the special equipment, can read the information if they have access to the vehicle or the EDR.

GM will not access this data or share it with others except: with the consent of the vehicle owner or, if the vehicle is leased, with the consent of the lessee; in response to an official request of police or similar government office; as part of GM's defense of litigation through the discovery process; or, as required by law. Data that GM collects or receives may also be used for GM research needs or may be made available to others for research purposes, where a need is shown and the data is not tied to a specific vehicle or vehicle owner.

OnStar®

If your vehicle has OnStar and you subscribe to the OnStar services, please refer to the OnStar Terms and Conditions for information on data collection and use. See also *OnStar® System on page 2-47* in this manual for more information.

Navigation System

If your 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 system operating manual for information on stored data and for deletion instructions.

Radio Frequency Identification (RFID)

RFID technology is used in some vehicles for functions such as tire pressure monitoring and ignition system security, as well as in connection with conveniences such as key fobs for remote door locking/unlocking and starting, and in-vehicle transmitters for garage door openers. RFID technology in GM vehicles does not use or record personal information or link with any other GM system containing personal information.

NOTES

A

Accessories and Modifications 5-3
Accessory Power Outlets 3-20
Adaptive Forward Lighting System 3-16
Adding Equipment to Your Airbag-Equipped Vehicle 1-74
Additives, Fuel 5-6
Add-On Electrical Equipment 5-107
Air Cleaner/Filter, Engine 5-18
Air Conditioning 3-22
Airbag
  Passenger Status Indicator 3-37
  Readiness Light 3-36
Airbag System 1-59
  Adding Equipment to Your Airbag-Equipped Vehicle 1-74
  How Does an Airbag Restrain? 1-67
  Passenger Sensing System 1-69
  Servicing Your Airbag-Equipped Vehicle 1-74
  What Makes an Airbag Inflate? 1-67
  What Will You See After an Airbag Inflates? 1-68
  When Should an Airbag Inflate? 1-65
  Where Are the Airbags? 1-62
All-Wheel Drive 5-43
All-Wheel-Drive (AWD) System 4-7
Analog Clock 3-22
Antilock Brake System (ABS) 4-4
Anti-lock Brake, System Warning Light 3-42
Appearance Care
  Aluminum or Chrome-Plated Wheels 5-102
  Care of Safety Belts 5-99
  Chemical Paint Spotting 5-104
  Cleaning Exterior Lamps/Lenses 5-100
  Fabric/Carpet 5-98
  Finish Care 5-101
  Finish Damage 5-103
  Instrument Panel, Vinyl, and Other Plastic Surfaces 5-99
  Interior Cleaning 5-96
  Leather 5-98
  Sheet Metal Damage 5-103
  Tires 5-103
  Underbody Maintenance 5-104
  Vehicle Care/Appearance Materials 5-104
  Washing Your Vehicle 5-100
  Weatherstrips 5-99
  Windshield, Backglass, and Wiper Blades 5-102
Appointments, Scheduling Service 7-10
Audio System 3-74
  Audio Steering Wheel Controls 3-119
  Navigation/Radio System, see Navigation Manual 3-107
  Radio Reception 3-120
  Rear Seat Audio (RSA) 3-117
  Setting the Clock 3-75
  Theft-Deterrent Feature 3-118

Audio System(s) 3-78
Automatic Transmission
Fluid 5-19
Operation 2-30

B

Battery 5-37
Electric Power Management 3-19
Run-Down Protection 3-20
Brake
Emergencies 4-5
Brakes 5-34
System Warning Light 3-41
Braking 4-3
Braking in Emergencies 4-5
Break-In, New Vehicle 2-26
Bulb Replacement 5-45
Halogen Bulbs 5-45
Headlamp Aiming 5-44
High Intensity Discharge (HID) Lighting 5-45
License Plate Lamps 5-47
Replacement Bulbs 5-47
Taillamps, Turn Signal, Stoplamps and
Sidemarker Lamps 5-46
Buying New Tires 5-64

C

Calibration 2-40
California Fuel 5-6
California Perchlorate Materials Requirements 5-4
California Proposition 65 Warning 5-4
Canadian Owners ii
Capacities and Specifications 5-116
Carbon Monoxide 2-14, 2-38, 4-16
Care of
Safety Belts 5-99
Cargo Cover 2-59
Cargo Management System 2-59
Cargo Tie Downs 2-59
CD, MP3 ..... 3-96, 3-101
Center Console Storage Area 2-56
Chains, Tire 5-69
Charging System Light 3-39
Check
Engine Light 3-45
Checking Things Under the Hood 5-10
Chemical Paint Spotting 5-104
Child Restraints
Child Restraint Systems 1-41
Infants and Young Children 1-37
Lower Anchors and Tethers for Children 1-45

Child Restraints (cont.)
Older Children 1-34
Securing a Child Restraint in a Rear Seat Position 1-53
Securing a Child Restraint in the Right Front Seat Position 1-56
Where to Put the Restraint 1-44
Cleaning
Aluminum or Chrome-Plated Wheels 5-102
Exterior Lamps/Lenses 5-100
Fabric/Carpet 5-98
Finish Care 5-101
Instrument Panel, Vinyl, and Other Plastic Surfaces 5-99
Interior 5-96
Leather 5-98
Tires 5-103
Underbody Maintenance 5-104
Washing Your Vehicle 5-100
Weatherstrips 5-99
Windshield, Backglass, and Wiper Blades 5-102
Climate Control System
Dual Automatic 3-22
Outlet Adjustment 3-29
Rear Air Conditioning and Heating System 3-30
Rear Air Conditioning and Heating System, Electronic 3-31
Clock 3-22
Clock, Setting 3-75
Collision Damage Repair 7-12
Compact Spare Tire 5-96
Compass 2-40
Compressor Kit, Tire Sealant 5-71
Content Theft-Deterrent 2-22
Control of a Vehicle 4-3
Convenience Net 2-58
Coolant
Engine 5-20
Engine Temperature Gage 3-43
Engine Temperature Warning Light 3-43
Cooling System 5-26
Cruise Control 3-12
Cruise Control Light 3-48
Cupholders 2-55
Customer Assistance Information
Courtesy Transportation 7-10
Customer Assistance for Text Telephone (TTY) Users 7-6
Customer Assistance Offices 7-6
Customer Satisfaction Procedure 7-2
GM Mobility Reimbursement Program 7-7
Reporting Safety Defects to General Motors 7-16
Reporting Safety Defects to the Canadian Government 7-15
Reporting Safety Defects to the United States Government 7-15
Roadside Assistance Program 7-8
Service Publications Ordering Information 7-16

D

Daytime Running Lamps/Automatic Headlamp System 3-16
Defensive Driving 4-2
Delayed Entry Lighting 3-18
Delayed Exit Lighting 3-19
Delayed Headlamps 3-15
Delayed Locking 2-11
Diesel
Running Out of Fuel 2-39
Disc, MP3 ..... 3-96, 3-101
Doing Your Own Service Work 5-4
Dome Lamp Override 3-17
Dome Lamps 3-17
Door
Delayed Locking 2-11
Locks 2-10
Power Door Locks 2-10
Programmable Automatic Door Locks 2-11
Rear Door Security Locks 2-11
Driver Information Center (DIC) 3-50
DIC Operation and Displays 3-50
DIC Vehicle Customization 3-65
DIC Warnings and Messages 3-56
Driving
At Night 4-12
Before a Long Trip 4-14
Defensive 4-2
Drunken 4-2
Driving (cont.)
Highway Hypnosis 4-14
Hill and Mountain Roads 4-15
In Rain and on Wet Roads 4-13
Rocking Your Vehicle to Get it Out 4-20
Winter 4-16
Dual Automatic Climate Control System 3-22
DVD
Rear Seat Entertainment System 3-107

E

EDR 7-17
Electrical System
Add-On Equipment 5-107
Fuses and Circuit Breakers 5-108
Instrument Panel Fuse Block 5-108
Power Windows and Other Power Options 5-107
Underhood Fuse Block 5-111
Windshield Wiper Fuses 5-107
Electronic Immobilizer
PASS-Key® III+ 2-24
Electronic Immobilizer Operation
PASS-Key® III+ 2-24
Engine
Air Cleaner/Filter 5-18
Check and Service Engine Soon Light 3-45
Coolant 5-20
Coolant Heater 2-29

Engine (cont.)
Coolant Temperature Gage 3-43
Coolant Temperature Warning Light 3-43
Drive Belt Routing 6-14
Engine Compartment Overview 5-12
Exhaust 2-38
Oil 5-13
Oil Life System 5-16
Overheated Protection Operating Mode 5-25
Overheating 5-23
Starting 2-28
Entry Lighting 3-18
Event Data Recorders 7-18
Extender, Safety Belt 1-33
Exterior Lamps 3-14

F

Filter
Engine Air Cleaner 5-18
Finish Damage 5-103
Flashers, Hazard Warning 3-6
Flash-to-Pass 3-9
Flat Tire 5-70
Flat Tire, Changing 5-80
Flat Tire, Storing 5-92
Floor Mats 2-57
Fluid
Automatic Transmission 5-19
Power Steering 5-32
Windshield Washer 5-33
Fog Lamp
Fog 3-17
Fog Lamp Light 3-48
Fuel 5-5
Additives 5-6
California Fuel 5-6
Filling a Portable Fuel Container 5-10
Filling the Tank 5-8
Fuels in Foreign Countries 5-7
Gage 3-49
Gasoline Octane 5-5
Gasoline Specifications 5-5
Running Out of 2-39
Fuses
Fuses and Circuit Breakers 5-108
Instrument Panel Fuse Block 5-108
Underhood Fuse Block 5-111
Windshield Wiper 5-107

G

Gage
- Engine Coolant Temperature 3-43
- Fuel 3-49
- Speedometer 3-35
- Tachometer 3-35
- Voltmeter Gage 3-40

Garage Door Opener 2-50
Gasoline
- Octane 5-5
- Specifications 5-5

Glove Box 2-55
GM Mobility Reimbursement Program 7-7

H

Hazard Warning Flashers 3-6
Head Restraints 1-8
Headlamp
- Aiming 5-44

Headlamps
- Adaptive Forward Lighting System 3-16
- Bulb Replacement 5-45
- Daytime Running Lamps/Automatic Headlamp System 3-16
- Delayed 3-15
- Exterior Lamps 3-14
- Flash-to-Pass 3-9
- Halogen Bulbs 5-45

Headlamps (cont.)
- High Intensity Discharge (HID) Lighting 5-45
- High/Low Beam Changer 3-9

Heated Seats 1-4
Heater
- Engine Coolant 2-29

Heater 3-22
High Voltage Devices and Wiring 5-106
Highbeam On Light 3-48
Highway Hypnosis 4-14
Hill and Mountain Roads 4-15
Hood
- Checking Things Under 5-10
- Release 5-11

Horn 3-6
How to Wear Safety Belts Properly 1-20

I

Ignition Positions 2-26
Infants and Young Children, Restraints 1-37
Inflation - Tire Pressure 5-56
Inflator Kit, Tire 5-71
Instrument Panel
- Brightness 3-17
- Cluster 3-34
- Overview 3-4
- Storage Area 2-55

J

Jump Starting 5-38

K

Keyless Entry System 2-4
Keys 2-3

L

Labeling, Tire Sidewall 5-50
Lamps
Dome 3-17
Dome Lamp Override 3-17
Reading 3-19
Lap-Shoulder Belt 1-28
LATCH System
Child Restraints 1-45
License Plate Lamps 5-47
Liftgate
Carbon Monoxide 2-12
Liftgate, Power 2-14
Light
Airbag Readiness 3-36
Anti-lock Brake System (ABS) Warning 3-42
Brake System Warning 3-41
Charging System 3-39
Cruise Control 3-48
Light (cont.)
Engine Coolant Temperature Warning 3-43
Fog Lamp 3-48
Highbeam On 3-48
Malfunction Indicator 3-45
Oil Pressure 3-47
Passenger Airbag Status Indicator 3-37
Safety Belt Reminders 3-35
Security 3-48
StabiliTrak® Indicator 3-42
Tire Pressure 3-44
Tow/Haul Mode 3-49
Lighting
Delayed Entry 3-18
Delayed Exit 3-19
Entry 3-18
Parade Dimming 3-19
Lights
Exterior Lamps 3-14
Flash-to-Pass 3-9
High/Low Beam Changer 3-9
Loading Your Vehicle 4-20
Lockout Protection 2-12
Locks
Delayed Locking 2-11
Door 2-10
Lockout Protection 2-12
Power Door 2-10
Programmable Automatic Door Locks 2-11
Rear Door Security Locks 2-11
Loss of Control 4-10

Luggage Carrier 2-58
Lumbar
Manual Controls 1-3
Power Controls 1-3

M

Maintenance Schedule
Additional Required Services 6-6
At Each Fuel Fill 6-8
At Least Once a Month 6-9
At Least Once a Year 6-9
Introduction 6-2
Maintenance Footnotes 6-7
Maintenance Record 6-15
Maintenance Replacement Parts 6-13
Maintenance Requirements 6-2
Owner Checks and Services 6-8
Recommended Fluids and Lubricants 6-12
Scheduled Maintenance 6-4
Using 6-2
Your Vehicle and the Environment 6-2
Malfunction Indicator Light 3-45
Manual Lumbar Controls 1-3
Manual, Using ii
Memory Seat and Mirrors 1-4
Message
DIC Warnings and Messages 3-56
Mirrors
Automatic Dimming Rearview with OnStar® and Compass 2-40
Outside Convex Mirror 2-44
Outside Heated Mirrors 2-44
Outside Power Foldaway Mirrors 2-42
Outside Power Mirrors 2-42
Park Tilt 2-43
MP3 ..... 3-96, 3-101
MyGMLink.com 7-5

N

Navigation System, Privacy 7-19
Navigation/Radio System, see Navigation Manual 3-107
New Vehicle Break-In 2-26

O

Odometer 3-35
Off-Road Recovery 4-10
Oil
  Engine 5-13
  Pressure Light 3-47
Oil, Engine Oil Life System 5-16
Older Children, Restraints 1-34
Online Owner Center 7-5
OnStar, Privacy 7-19
OnStar® System, see OnStar® Manual 2-47
Operation, Universal Home Remote System 2-50
Orange Covered Wiring 5-106
Other Warning Devices 3-6
Outlet Adjustment 3-29
Outlets
  Accessory Power 3-20
Outside
  Convex Mirror 2-44
  Heated Mirrors 2-44
  Power Foldaway Mirrors 2-42
  Power Mirrors 2-42
Overheated Engine Protection Operating Mode 5-25
Owner Checks and Services 6-8
Owners, Canadian ii

P

Paint, Damage 5-103
Parade Dimming 3-19
Park
  Shifting Into 2-36
  Shifting Out of 2-37
Park Aid 2-44, 2-47
Park Brake 2-35
Park Tilt Mirrors 2-43
Parking
  Assist 2-44
  Over Things That Burn 2-38
Passenger Airbag Status Indicator 3-37
Passenger Sensing System 1-69
Passing 4-10
PASS-KEY® III+ Electronic Immobilizer 2-24
PASS-Key® III+ Electronic Immobilizer
  Operation 2-24
Perchlorate Materials Requirements, California 5-4
Power
  Door Locks 2-10
  Electrical System 5-107
  Liftgate 2-14
  Lumbar Controls 1-3

Power (cont.)
Outlet 115 Volt Alternating Current 3-21
Retained Accessory (RAP) 2-27
Seat 1-2
Steering Fluid 5-32
Tilt Wheel and Telescopic Steering Column 3-7
Windows 2-19
Privacy 7-17
Event Data Recorders 7-18
Navigation System 7-19
OnStar 7-19
Radio Frequency Identification 7-19
Programmable Automatic Door Locks 2-11

R

Radiator Pressure Cap 5-23
Radio Frequency Identification (RFID), Privacy 7-19
Radio(s) 3-78
Radios
Navigation/Radio System, see Navigation Manual 3-107
Rear Seat Audio 3-117
Reception 3-120
Setting the Clock 3-75
Theft-Deterrent 3-118
Reading Lamps 3-19
Rear Air Conditioning and Heating System 3-30
Rear Air Conditioning and Heating System and Electronic Climate Controls 3-31
Rear Door Security Locks 2-11
Rear Seat Armrest 2-58
Rear Seat Audio (RSA) 3-117
Rear Seat Entertainment System 3-107
Rear Seat Operation 1-9
Rear Vision Camera 2-47
Rear Windshield Washer/Wiper 3-11
Rearview Mirror, Automatic Dimming with OnStar® and Compass 2-40
Reclining Seatbacks 1-6
Recommended Fluids and Lubricants 6-12
Recreational Vehicle Towing 4-25
Remote Keyless Entry (RKE) System 2-4
Remote Keyless Entry (RKE) System, Operation ... 2-5
Remote Vehicle Start 2-7
Removing the Flat Tire and Installing the Spare Tire 5-84
Removing the Spare Tire and Tools 5-81
Replacement Bulbs 5-47
Replacement Parts, Maintenance 6-13
Replacement, Windshield 5-47
Reporting Safety Defects
Canadian Government 7-15
General Motors 7-16
United States Government 7-15

Restraint System Check
Checking the Restraint Systems 1-76
Replacing Restraint System Parts
After a Crash 1-77
Retained Accessory Power (RAP) 2-27
Roadside
Assistance Program 7-8
Rocking Your Vehicle to Get it Out 4-20
Routing, Engine Drive Belt 6-14
Running Out of Fuel 2-39

S

Safety Belt
Reminder Light 3-35
Safety Belts
Care of 5-99
How to Wear Safety Belts Properly 1-20
Lap-Shoulder Belt 1-28
Safety Belt Extender 1-33
Safety Belt Use During Pregnancy 1-33
Safety Belts Are for Everyone 1-15
Safety Warnings and Symbols iii
Scheduled Maintenance 6-4
Seats
Head Restraints 1-8
Heated Seats 1-4
Manual Lumbar 1-3
Seats (cont.)
Memory, Mirrors 1-4
Power Lumbar 1-3
Power Seats 1-2
Rear Seat Operation 1-9
Reclining Seatbacks 1-6
Third Row Seat 1-11
Second Row Center Console 2-56
Secondary Latch System 5-89
Securing a Child Restraint
Rear Seat Position 1-53
Right Front Seat Position 1-56
Security Light 3-48
Service 5-3
Accessories and Modifications 5-3
Adding Equipment to the Outside of
Your Vehicle 5-5
California Perchlorate Materials Requirements 5-4
California Proposition 65 Warning 5-4
Doing Your Own Work 5-4
Engine Soon Light 3-45
Publications Ordering Information 7-16
Service, Scheduling Appointments 7-10
Servicing Your Airbag-Equipped Vehicle 1-74
Setting the Clock 3-75
Sheet Metal Damage 5-103
Shifting Into Park 2-36
Shifting Out of Park 2-37
Signals, Turn and Lane-Change 3-8

Spare Tire
Compact 5-96
Installing 5-84
Removing 5-81
Storing 5-92
Specifications, Capacities 5-116
Speedometer 3-35
StabiliTrak® Indicator Light 3-42
Stabilitrak® System 4-5
Start Vehicle, Remote 2-7
Starting the Engine 2-28
Steering 4-8
Steering Wheel Controls, Audio 3-119
Steering Wheel, Power Tilt Wheel and
Telescopic Steering Column 3-7
Steering Wheel, Tilt and Telescopic 3-7
Storage Areas
Cargo Management System 2-59
Center Console Storage Area 2-56
Convenience Net 2-58
Cupholders 2-55
Glove Box 2-55
Instrument Panel Storage Area 2-55
Luggage Carrier 2-58
Rear Seat Armrest 2-58
Second Row Center Console 2-56
Stuck in Sand, Mud, Ice, or Snow 4-19
Sun Visors 2-21
Sunroof 2-60

T

Tachometer 3-35
Taillamps
Turn Signal, Stoplamps and
Sidemarker Lamps 5-46
Telescopic Steering Column, Power Tilt Wheel 3-7
Telescopic Wheel 3-7
Theft-Deterrent, Radio 3-118
Theft-Deterrent Systems 2-22
Content Theft-Deterrent 2-22
PASS-Key® III+ Electronic Immobilizer 2-24
PASS-Key® III+ Electronic Immobilizer
Operation 2-24
Tilt Wheel 3-7
Time, Setting 3-75
Tire
Pressure Light 3-44
Tires 5-49
Aluminum or Chrome-Plated Wheels,
Cleaning 5-102
Buying New Tires 5-64
Chains 5-69
Changing a Flat Tire 5-80
Cleaning 5-103
Compact Spare Tire 5-96
Different Size 5-66
If a Tire Goes Flat 5-70

Tires (cont.)
Inflation - Tire Pressure 5-56
Inspection and Rotation 5-62
Installing the Spare Tire 5-84
Pressure Monitor Operation 5-59
Pressure Monitor System 5-57
Removing the Flat Tire 5-84
Removing the Spare Tire and Tools 5-81
Secondary Latch System 5-89
Storing a Flat or Spare Tire and Tools 5-92
Tire Sealant and Compressor Kit 5-71
Tire Sidewall Labeling 5-50
Tire Terminology and Definitions 5-53
Uniform Tire Quality Grading 5-66
Wheel Alignment and Tire Balance 5-68
Wheel Replacement 5-68
When It Is Time for New Tires 5-63
Tow/Haul Mode 2-34
Tow/Haul Mode Light 3-49
Towing
Recreational Vehicle 4-25
Towing a Trailer 4-29
Your Vehicle 4-25
Traction
Stabilitrak® System 4-5
Transmission
Fluid, Automatic 5-19
Transmission Operation, Automatic 2-30
Turn and Lane-Change Signals 3-8
Turn Signal/Multifunction Lever 3-8

U

Ultrasonic Rear Parking Assist (URPA) 2-44
Uniform Tire Quality Grading 5-66
Universal Home Remote System 2-50
Operation 2-50
Using this Manual ii

V

Vehicle
Control 4-3
Damage Warnings iv
Loading 4-20
Symbols iv
Vehicle Customization, DIC 3-65
Vehicle Data Recording and Privacy 7-17
Vehicle Identification
Number (VIN) 5-105
Service Parts Identification Label 5-106
Vehicle, Remote Start 2-7
Ventilation Adjustment 3-29
Visors 2-21
Voltage Devices, High and Wiring 5-106
Voltmeter Gage 3-40

W

Warning Lights, Gages and Indicators 3-33
Warnings
  DIC Warnings and Messages 3-56
  Hazard Warning Flashers 3-6
  Other Warning Devices 3-6
  Safety and Symbols iii
  Vehicle Damage iv
Wheels
  Alignment and Tire Balance 5-68
  Different Size 5-66
  Replacement 5-68
Where to Put the Restraint 1-44
Windows 2-18
  Power 2-19
Windshield
  Backglass, and Wiper Blades, Cleaning 5-102
  Replacement 5-47
Windshield (cont.)
  Washer 3-10
  Washer Fluid 5-33
  Wiper Blade Replacement 5-48
  Wiper Fuses 5-107
  Wipers 3-9
Windshield, Rear Washer/Wiper 3-11
Winter Driving 4-16
Wiring, High Voltage Devices 5-106

X

XM Radio Messages 3-106

Y

Your Vehicle and the Environment 6-2